Identity 1: CCV Identity 2: Quality Control 2:24 PM July 30, 1996
Task name : OPTIMA
Sample Weight : 1.0000 Solution Volume : 1.00
On-Peak Integrations : 3 Off-Peak Integrations : 1

	Zr (ppm)	Sr (ppm)	Bi (ppm)	Si (ppm)	Al (ppm)	Co (ppm)	Cu (ppm)	Li (ppm)
Mean	4.962	4.949	4.990	4.824	5.082	5.224	4.976	5.049
S.D.	0.007	0.016	0.028	0.010	0.023	0.023	0.018	0.048
% R.S.D.	0.145	0.328	0.563	0.204	0.458	0.447	0.365	0.958

	Zn (ppm)	Ni (ppm)	La (ppm)	Fe (ppm)	Ca (ppm)	Cr (ppm)	Nd (ppm)	U (ppm)
Mean	5.283	5.165	5.144	5.244	5.017	5.216	5.382	9.397
S.D.	0.005	0.008	0.010	0.042	0.009	0.010	0.014	0.006
% R.S.D.	0.090	0.146	0.202	0.810	0.176	0.197	0.269	0.065

	Ce (ppm)	Sm (ppm)	Ba (ppm)	P (ppm)	S (ppm)	Mg (ppm)	As (ppm)	Na (ppm)
Mean	4.993	4.946	4.935	5.539	5.468	5.049	5.224	4.971
S.D.	0.023	0.013	0.017	0.051	0.014	0.009	0.022	0.044
% R.S.D.	0.464	0.253	0.348	0.928	0.249	0.178	0.420	0.893

	Mo (ppm)	Se (ppm)	Ag (ppm)	Pb (ppm)	Ti (ppm)	Cd (ppm)	B (ppm)	K (ppm)
Mean	5.115	4.990	5.106	5.207	4.911	5.144	5.264	5.271
S.D.	0.015	0.044	0.010	0.010	0.012	0.005	0.003	0.036
% R.S.D.	0.297	0.882	0.200	0.189	0.235	0.096	0.061	0.681

	Mn (ppm)	Sb (ppm)	V (ppm)	Be (ppm)	Tl (ppm)
Mean	5.199	4.793	5.111	5.215	5.042
S.D.	0.010	0.055	0.007	0.004	0.021
% R.S.D.	0.200	1.155	0.142	0.086	0.420

07/30/96 14:12 ☎509 372 2929 WESTINGHOUSE →→→ MO-924 200W 022

Identity 1: CCB Identity 2: Quality Control 8:29 PM July 31, 1996
Task name : OPTIMA
Sample Weight : 1.0000 Solution Volume : 1.00
On-Peak Integrations : 3 Off-Peak Integrations : 1

	Zr (ppm)	Sr (ppm)	Bi (ppm)	Si (ppm)	Al (ppm)	Co (ppm)	Cu (ppm)	Li (ppm)
Mean	0.001	-0.000	-0.005	0.005	0.010	0.004	0.001	-0.000
S.D.	0.001	0.000	0.002	0.002	0.006	0.003	0.000	0.000
% R.S.D.	122.616	754.983	51.011	47.261	59.679	75.300	40.972	1296991.740

	Zn (ppm)	Ni (ppm)	La (ppm)	Fe (ppm)	Ca (ppm)	Cr (ppm)	Nd (ppm)	U (ppm)
Mean	0.001	0.002	0.000	0.007	0.010	0.002	0.012	0.080
S.D.	0.001	0.002	0.001	0.003	0.000	0.001	0.009	0.067
% R.S.D.	84.262	136.723	2185.116	42.439	3.710	83.680	76.344	84.205

	Ce (ppm)	Sm (ppm)	Ba (ppm)	P (ppm)	S (ppm)	Mg (ppm)	As (ppm)	Na (ppm)
Mean	0.000	-0.010	0.000	-0.008	0.007	0.002	-0.011	0.026
S.D.	0.016	0.017	0.000	0.004	0.004	0.001	0.001	0.001
% R.S.D.	3165.053	175.376	550.000	43.343	57.266	51.962	5.763	4.680

	Mo (ppm)	Se (ppm)	Ag (ppm)	Pb (ppm)	Ti (ppm)	Cd (ppm)	B (ppm)	K (ppm)
Mean	-0.001	0.012	0.002	-0.006	0.001	0.000	0.002	0.069
S.D.	0.000	0.012	0.001	0.012	0.000	0.000	0.001	0.016
% R.S.D.	52.040	96.173	52.710	195.338	12.540	173.270	56.716	23.472

	Mn (ppm)	Sb (ppm)	V (ppm)	Be (ppm)	Tl (ppm)
Mean	-0.000	-0.050	-0.001	-0.000	0.064
S.D.	0.000	0.026	0.000	0.000	0.027
% R.S.D.	162.850	50.961	35.403	108.250	41.890

FILE # 0960802G.TXT

LABCORE Data Entry Template for Worklist# 10839

Analyst: B. GOECKE **Instrument:** ~~ICP01~~ ECP01 **Book#** 58584A

Method: LA-505-~~151~~ 164/161 Rev/Mod B-1

Worklist Comment: ICP AW-101 (SOLID ACID DIGEST)

S	Type	Sample#	R	A	Test	Matrix	Group#	Project
1	ICV				@ICP-QC	QC		
2	ICB				@ICP-QC	QC		
3	LLS				@ICP-QC	QC		
4	ICSA				@ICP-QC	QC		
5	ICSAB				@ICP-QC	QC		
6	PREPSTDTJA				@ICP-A01	SOLID		
7	PREPBLKTJA				@ICP-A01	SOLID		
8	SERDIL	S96T001735	0	A	@ICP-A01	SOLID		
9	SAMPLE	S96T001735	0	A	@ICP-A01	SOLID	96000103	AW-101 PUSH
		Analytes Requested:			AG-A-01 , AL-A-01 , AS-A-01 , B-A-01 , BA-A-01 , BE-A-01 , BI-A-01 , CA-A-01 , CD-A-01 , CE-A-01 , CO-A-01 , CR-A-01 , CU-A-01 , FE-A-01 , K-A-01 , LA-A-01 , LI-A-01 , MG-A-01 , MN-A-01 , MO-A-01 , NA-A-01 , ND-A-01 , NI-A-01 , P-A-01 , PB-A-01 , S-A-01 , SB-A-01 , SE-A-01 , SI-A-01 , SM-A-01 , SR-A-01 , TI-A-01 , TL-A-01 , U-A-01 , V-A-01 , ZN-A-01 , ZR-A-01			
10	DUP	S96T001735	0	A	@ICP-A01	SOLID		
11	CCV				@ICP-QC	QC		
12	CCB				@ICP-QC	QC		
13	SERDIL	S96T001751	0	A	@ICP-A01	SOLID		
14	SAMPLE	S96T001751	0	A	@ICP-A01	SOLID	96000103	AW-101 PUSH
		Analytes Requested:			AG-A-01 , AL-A-01 , AS-A-01 , B-A-01 , BA-A-01 , BE-A-01 , BI-A-01 , CA-A-01 , CD-A-01 , CE-A-01 , CO-A-01 , CR-A-01 , CU-A-01 , FE-A-01 , K-A-01 , LA-A-01 , LI-A-01 ,			

Data Entry Comments: Sample result calculation:

S96T001952 $Cr = 0.1727 \frac{ug}{mL} \times \frac{1}{4.600 \frac{g}{L} \times \frac{1L}{1000mL}} = 3.75e+1 \frac{ug}{g}$

S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

Note: 4.600 g/L is sample prep dilution factor which can be found in sample prep worklist.

LABCORE Data Entry Template for Worklist# 10839

S	Type	Sample#	R	A	Test	Matrix	Group#	Project
					MG-A-01 , MN-A-01 , MO-A-01 , NA-A-01 , ND-A-01 , NI-A-01 , P-A-01 , PB-A-01 , S-A-01 , SB-A-01 , SE-A-01 , SI-A-01 , SM-A-01 , SR-A-01 , TI-A-01 , TL-A-01 , U-A-01 , V-A-01 , ZN-A-01 , ZR-A-01			
15	DUP	S96T001751	0	A	@ICP-A01	SOLID		
16	SERDIL	S96T001756	0	A	@ICP-A01	SOLID		
17	SAMPLE	S96T001756	0	A	@ICP-A01	SOLID	96000103	AW-101 PUSH
		Analytes Requested:			AG-A-01 , AL-A-01 , AS-A-01 , B-A-01 , BA-A-01 , BE-A-01 , BI-A-01 , CA-A-01 , CD-A-01 , CE-A-01 , CO-A-01 , CR-A-01 , CU-A-01 , FE-A-01 , K-A-01 , LA-A-01 , LI-A-01 , MG-A-01 , MN-A-01 , MO-A-01 , NA-A-01 , ND-A-01 , NI-A-01 , P-A-01 , PB-A-01 , S-A-01 , SB-A-01 , SE-A-01 , SI-A-01 , SM-A-01 , SR-A-01 , TI-A-01 , TL-A-01 , U-A-01 , V-A-01 , ZN-A-01 , ZR-A-01			
18	DUP	S96T001756	0	A	@ICP-A01	SOLID		
19	SERDIL	S96T001772	0	A	@ICP-A01	SOLID		
20	SAMPLE	S96T001772	0	A	@ICP-A01	SOLID	96000103	AW-101 PUSH
		Analytes Requested:			AG-A-01 , AL-A-01 , AS-A-01 , B-A-01 , BA-A-01 , BE-A-01 , BI-A-01 , CA-A-01 , CD-A-01 , CE-A-01 , CO-A-01 , CR-A-01 , CU-A-01 , FE-A-01 , K-A-01 , LA-A-01 , LI-A-01 , MG-A-01 , MN-A-01 , MO-A-01 , NA-A-01 , ND-A-01 , NI-A-01 , P-A-01 , PB-A-01 , S-A-01 , SB-A-01 , SE-A-01 , SI-A-01 , SM-A-01 , SR-A-01 , TI-A-01 , TL-A-01 , U-A-01 , V-A-01 , ZN-A-01 , ZR-A-01			
21	DUP	S96T001772	0	A	@ICP-A01	SOLID		
22	CCV				@ICP-QC	QC		
23	CCB				@ICP-QC	QC		
24	SERDIL	S96T001952	0	A	@ICP-A01	SOLID		
25	SAMPLE	S96T001952	0	A	@ICP-A01	SOLID	96000103	AW-101 PUSH
		Analytes Requested:			AG-A-01 , AL-A-01 , AS-A-01 , B-A-01 , BA-A-01 , BE-A-01 , BI-A-01 , CA-A-01 , CD-A-01 , CE-A-01 , CO-A-01 , CR-A-01 , CU-A-01 , FE-A-01 , K-A-01 , LA-A-01 , LI-A-01 , MG-A-01 , MN-A-01 , MO-A-01 , NA-A-01 , ND-A-01 , NI-A-01 ,			

Data Entry Comments:

S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

LABCORE Data Entry Template for Worklist# 10839

S	Type	Sample#	R	A	Test	Matrix	Group#	Project
					P-A-01 , PB-A-01 , S-A-01 , SB-A-01 , SE-A-01 , SI-A-01 , SM-A-01 , SR-A-01 , TI-A-01 , TL-A-01 , U-A-01 , V-A-01 , ZN-A-01 , ZR-A-01			
26	DUP	S96T001952	0	A	@ICP-A01	SOLID		
27	SPK-PREDIG	S96T001952	0	A	@ICP-A01	SOLID		
28	SERDIL	S96T002032	0	A	@ICP-A01	SOLID		
29	SAMPLE	S96T002032	0	A	@ICP-A01	SOLID	96000103	AW-101 PUSH
		Analytes Requested:			AG-A-01 , AL-A-01 , AS-A-01 , B-A-01 , BA-A-01 , BE-A-01 , BI-A-01 , CA-A-01 , CD-A-01 , CE-A-01 , CO-A-01 , CR-A-01 , CU-A-01 , FE-A-01 , K-A-01 , LA-A-01 , LI-A-01 , MG-A-01 , MN-A-01 , MO-A-01 , NA-A-01 , ND-A-01 , NI-A-01 , P-A-01 , PB-A-01 , S-A-01 , SB-A-01 , SE-A-01 , SI-A-01 , SM-A-01 , SR-A-01 , TI-A-01 , TL-A-01 , U-A-01 , V-A-01 , ZN-A-01 , ZR-A-01			
30	DUP	S96T002032	0	A	@ICP-A01	SOLID		
31	ICSA				@ICP-QC	QC		
32	ICSAB				@ICP-QC	QC		
33	CCV				@ICP-QC	QC		
34	CCB				@ICP-QC	QC		

Final page for worklist # 10839

Reviewed by: Karl R. Perry 8/6/96

Analyst Signature	Date	D.F.
PREP 5270TSA	DIRECT	1
PREP 6010 TSA	DIRECT	1
S96T001735-L	5-5-1-2-1-5-L	10
1735	5-5	2
1735-D	5-5	2
S96T001751-L	5-5-2-8	10
1751	5-5	2
1751-D	5-5	2
S96T001756-L	5-5-2-8	10
1756	5-5	2
1756-D	5-5	2
S96T001772-L	5-5-2-8	10
1772	5-5	2
1772-D	5-5	2
S96T001952-L	5-5-2-8	10
1952	5-5	2
1952-D	5-5	2
1952-S	5-5	2
S96T002032-L	5-5-2-8	10
2032	5-5	2
2032-D	5-5	2

Data Entry Comments: Spike recovery calculation:

S96T001952 $Cr = \frac{4.401 - 0.1727}{5} \times 100 = 84.6\%$

S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

Note: Spike true value is 3.0 ppm for all elements except for Ag = 1.0 ppm and U = 10.0 ppm

Analysis Report Summary Fri 08-02-96 09:08:01 PM page 1

#	Sample Name	File	Method	Date	Time	OpID	Type	Mode
1	ICV	960802G	ICP2	08/02/96	19:15	BJG	Q	CONC
2	ICB	960802G	ICP2	08/02/96	19:18	BJG	Q	CONC
3	LLS	960802G	ICP2	08/02/96	19:23	BJG	Q	CONC
4	ICSA	960802G	ICP2	08/02/96	19:25	BJG	Q	CONC
5	ICSAB	960802G	ICP2	08/02/96	19:28	BJG	Q	CONC
6	PREPSTDTJA	960802G	ICP2	08/02/96	19:35	BJG	S	CONC
7	PREPBLKTJA	960802G	ICP2	08/02/96	19:39	BJG	S	CONC
8	S96T001735_L	960802G	ICP2	08/02/96	19:42	BJG	S	CONC
9	S96T001735	960802G	ICP2	08/02/96	19:45	BJG	S	CONC
10	S96T001735_D	960802G	ICP2	08/02/96	19:48	BJG	S	CONC
11	CCV	960802G	ICP2	08/02/96	19:51	BJG	Q	CONC
12	CCB	960802G	ICP2	08/02/96	19:54	BJG	Q	CONC
13	S96T001751_L	960802G	ICP2	08/02/96	19:57	BJG	S	CONC
14	S96T001751	960802G	ICP2	08/02/96	20:00	BJG	S	CONC
15	S96T001751_D	960802G	ICP2	08/02/96	20:03	BJG	S	CONC
16	S96T001756_L	960802G	ICP2	08/02/96	20:06	BJG	S	CONC
17	S96T001756	960802G	ICP2	08/02/96	20:09	BJG	S	CONC
18	S96T001756_D	960802G	ICP2	08/02/96	20:11	BJG	S	CONC
19	S96T001772_L	960802G	ICP2	08/02/96	20:14	BJG	S	CONC
20	S96T001772	960802G	ICP2	08/02/96	20:17	BJG	S	CONC
21	S96T001772_D	960802G	ICP2	08/02/96	20:20	BJG	S	CONC
22	CCV	960802G	ICP2	08/02/96	20:32	BJG	Q	CONC
23	CCB	960802G	ICP2	08/02/96	20:35	BJG	Q	CONC
24	S96T001952_L	960802G	ICP2	08/02/96	20:38	BJG	S	CONC
25	S96T001952	960802G	ICP2	08/02/96	20:40	BJG	S	CONC
26	S96T001952_D	960802G	ICP2	08/02/96	20:43	BJG	S	CONC
27	S96T001952_S	960802G	ICP2	08/02/96	20:46	BJG	S	CONC
28	S96T002032_L	960802G	ICP2	08/02/96	20:49	BJG	S	CONC
29	S96T002032	960802G	ICP2	08/02/96	20:52	BJG	S	CONC
30	S96T002032_D	960802G	ICP2	08/02/96	20:54	BJG	S	CONC
31	ICSA	960802G	ICP2	08/02/96	20:57	BJG	Q	CONC
32	ICSAB	960802G	ICP2	08/02/96	20:59	BJG	Q	CONC
33	CCV	960802G	ICP2	08/02/96	21:02	BJG	Q	CONC
34	CCB	960802G	ICP2	08/02/96	21:05	BJG	Q	CONC

8-2-96

AW-101 ACID DIGEST

Sal - Sal

S96T001735, 1751, 1756, 1772, 1952, 2032

FILE# 08608026.TXT

SIGNATURE ABOVE REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 1876 TO 1881.

Analysis Report Averages Fri 08-02-96 09:08:01 PM page 2

#	Sample Name	Ag	Al	As	B	Ba	Be
1	ICV	5.039	4.956	5.202	5.062	5.022	5.228
2	ICB	.0004	.0001	.0006	.0024	.0002	-.0001
3	LLS	.0202	.0990	.2146	.1062	.1024	.0106
4	ICSA	.0018	248.3	-.0494	-.0037	.0018	.0000
5	ICSAB	.9820	246.4	-.0376	-.0025	.4871	.4878
6	PREPSTDTJA	.9357	4.817	4.742	4.347	4.733	5.052
7	PREPBLKTJA	-.0010	.1178	.0128	.5007	.0009	-.0002
8	S96T001735_L	.0370	208.1	.0232	.8313	.0064	.0022
9	S96T001735	.0448	195.0	-.1403	.7663	.0052	.0064
10	S96T001735_D	.0441	202.6	-.1302	.7219	.0054	.0071
11	CCV	5.200	5.096	5.357	5.127	5.212	5.361
12	CCB	.0018	.0046	.0154	.0000	.0003	-.0001
13	S96T001751_L	.0591	54.31	.0176	.6965	.0011	.0009
14	S96T001751	.0569	51.38	-.0406	.6419	.0014	.0045
15	S96T001751_D	.0606	56.48	-.0680	.8631	.0014	.0049
16	S96T001756_L	.0611	48.46	.0916	.7256	.0011	.0039
17	S96T001756	.0523	44.75	-.0404	.6361	.0013	.0041
18	S96T001756_D	.0585	57.87	-.0915	.8650	.0012	.0051
19	S96T001772_L	.0422	59.52	.0896	.8134	.0003	.0035
20	S96T001772	.0545	55.28	-.0400	.7988	.0010	.0048
21	S96T001772_D	.0558	79.30	-.1239	.7413	.0011	.0069
22	CCV	5.032	4.917	5.127	4.986	4.996	5.150
23	CCB	-.0016	-.0194	.0003	-.0005	.0000	-.0000
24	S96T001952_L	.0440	46.29	-.1724	.7967	-.0006	.0030
25	S96T001952	.0523	43.59	-.0845	.7436	.0007	.0041
26	S96T001952_D	.0546	47.59	-.0743	.6753	.0008	.0044
27	S96T001952_S	.7710	46.49	4.328	5.027	4.232	4.346
28	S96T002032_L	.0269	80.36	-.3398	.7873	-.0005	.0050
29	S96T002032	.0541	75.99	-.1797	.7399	.0012	.0068
30	S96T002032_D	.0532	71.57	-.1205	.7123	.0012	.0065
31	ICSA	.0003	248.5	-.0697	-.0066	.0018	.0001
32	ICSAB	.9680	244.9	-.0669	-.0033	.4798	.4843
33	CCV	5.013	4.927	5.186	5.046	4.977	5.215
34	CCB	-.0014	-.0062	.0010	-.0005	.0001	.0003

#	Sample Name	Bi	Ca	Cd	Ce	Co	Cr
1	ICV	5.201	5.112	5.066	5.203	5.074	5.122
2	ICB	.0354	.0045	.0004	.0044	.0001	.0014
3	LLS	.2378	.2215	.0113	.2066	.0417	.0213
4	ICSA	.0116	257.1	.0018	.0106	.0014	.0093
5	ICSAB	.0362	255.7	.9497	.0142	.4773	.4919
6	PREPSTDTJA	4.672	4.820	4.594	4.978	4.738	4.682
7	PREPBLKTJA	.0314	.2931	.0001	.0038	.0023	.0060
8	S96T001735_L	.5192	.5687	.0208	.0245	.0010	2.893
9	S96T001735	.0841	.4206	.0149	.0199	.0051	2.675
10	S96T001735_D	.0684	.4429	.0182	-.0075	.0085	2.759
11	CCV	5.328	5.321	5.219	5.381	5.248	5.298
12	CCB	.0432	.0014	.0001	.0113	-.0005	.0011
13	S96T001751_L	.2398	.6980	.0099	.0274	-.0187	.2537
14	S96T001751	.0563	.4337	.0042	-.0069	.0045	.2403
15	S96T001751_D	.1198	.5466	.0056	.0045	-.0004	.2598

Identity 1: s96t002265_L Identity 2: 2ml-8ml-2ml-8ml 1:28 PM July 30, 1996
Task name : OPTIMA
Sample Weight : 1.0000 Solution Volume : 25.00
On-Peak Integrations : 3 Off-Peak Integrations : 1

	Zr (ppm)	Sr (ppm)	Bi (ppm)	Si (ppm)	Al (ppm)	Co (ppm)	Cu (ppm)	Li (ppm)
Mean	0.255	0.015	-0.578	2.539	81.646	0.058	0.046	0.014
S.D.	0.023	0.002	0.047	0.066	0.156	0.051	0.008	0.002
% R.S.D.	8.853	10.345	8.176	2.595	0.191	87.540	16.531	12.632

	Zn (ppm)	Ni (ppm)	La (ppm)	Fe (ppm)	Ca (ppm)	Cr (ppm)	Nd (ppm)	U (ppm)
Mean	0.809	0.097	0.026	1.279	2.734	1.821	0.483	4.545
S.D.	0.006	0.017	0.021	0.087	0.006	0.013	0.061	0.557
% R.S.D.	0.733	17.889	79.164	6.769	0.209	0.687	12.641	12.248

	Ce (ppm)	Sm (ppm)	Ba (ppm)	P (ppm)	S (ppm)	Mg (ppm)	As (ppm)	Na (ppm)
Mean	-0.166	-0.595	0.026	5.306	4.803	0.283	0.177	793.366
S.D.	0.124	0.105	0.002	0.366	0.152	0.003	0.131	4.527
% R.S.D.	74.887	17.611	9.184	6.895	3.170	0.947	74.234	0.571

	Mo (ppm)	Se (ppm)	Ag (ppm)	Pb (ppm)	Ti (ppm)	Cd (ppm)	B (ppm)	K (ppm)
Mean	0.151	3.041	0.093	0.697	-0.057	-0.007	0.596	114.155
S.D.	0.021	0.219	0.020	0.223	0.008	0.016	0.025	0.322
% R.S.D.	14.148	7.206	21.020	31.999	13.597	224.949	4.256	0.282

	Mn (ppm)	Sb (ppm)	V (ppm)	Be (ppm)	Tl (ppm)
Mean	1.066	1.480	-0.029	0.016	1.907
S.D.	0.009	0.239	0.022	0.006	0.551
% R.S.D.	0.867	16.145	77.671	36.416	28.879

07/30/96 14:05 ☎509 372 2929 WESTINGHOUSE →→→ MO-924 200W 010

Identity 1: s96t002265_d Identity 2: 2ml-8ml 1:34 PM July 30, 1996
Task name : OPTIMA
Sample Weight : 1.0000 Solution Volume : 5.00
On-Peak Integrations : 3 Off-Peak Integrations : 1

	Zr (ppm)	Sr (ppm)	Bi (ppm)	Si (ppm)	Al (ppm)	Co (ppm)	Cu (ppm)	Li (ppm)
Mean	0.246	0.013	-0.067	2.971	60.892	0.046	0.031	0.006
S.D.	0.004	0.000	0.039	0.010	0.091	0.010	0.002	0.000
% R.S.D.	1.545	1.364	58.100	0.350	0.149	21.888	4.961	5.652

	Zn (ppm)	Ni (ppm)	La (ppm)	Fe (ppm)	Ca (ppm)	Cr (ppm)	Nd (ppm)	U (ppm)
Mean	0.228	0.152	0.021	1.180	1.561	1.546	0.124	3.789
S.D.	0.002	0.010	0.011	0.022	0.001	0.017	0.057	0.087
% R.S.D.	0.795	6.893	52.289	1.845	0.057	1.105	45.714	2.299

	Ce (ppm)	Sm (ppm)	Ba (ppm)	P (ppm)	S (ppm)	Mg (ppm)	As (ppm)	Na (ppm)
Mean	-0.001	-0.091	0.020	4.241	4.280	0.272	0.128	577.344
S.D.	0.048	0.018	0.001	0.188	0.005	0.000	0.027	2.407
% R.S.D.	4253.794	20.327	3.046	4.425	0.118	0.000	21.368	0.417

	Mo (ppm)	Se (ppm)	Ag (ppm)	Pb (ppm)	Ti (ppm)	Cd (ppm)	B (ppm)	K (ppm)
Mean	0.115	0.497	0.057	0.283	-0.007	0.026	0.825	85.997
S.D.	0.002	0.065	0.003	0.067	0.001	0.005	0.004	0.295
% R.S.D.	2.007	13.143	5.979	23.668	17.740	18.626	0.506	0.343

	Mn (ppm)	Sb (ppm)	V (ppm)	Be (ppm)	Tl (ppm)
Mean	0.965	0.413	0.023	0.010	0.587
S.D.	0.003	0.116	0.004	0.001	0.054
% R.S.D.	0.346	28.204	18.062	6.793	9.167

07/30/96 14:06 ☎509 372 2929 WESTINGHOUSE →→→ MO-824 200W 012

Identity 1: s96t002265_s Identity 2: 2ml-8ml 1:38 PM July 30, 1996
Task name : OPTIMA
Sample Weight : 1.0000 Solution Volume : 5.00
On-Peak Integrations : 3 Off-Peak Integrations : 1

	Zr (ppm)	Sr (ppm)	Bi (ppm)	Si (ppm)	Al (ppm)	Co (ppm)	Cu (ppm)	Li (ppm)
Mean	4.574	4.341	4.153	10.154	58.943	4.654	4.203	4.309
S.D.	0.002	0.013	0.047	0.043	0.221	0.027	0.013	0.021
% R.S.D.	0.047	0.305	1.130	0.427	0.375	0.575	0.305	0.491

	Zn (ppm)	Ni (ppm)	La (ppm)	Fe (ppm)	Ca (ppm)	Cr (ppm)	Nd (ppm)	U (ppm)
Mean	4.714	4.697	4.512	5.490	5.904	5.877	4.608	11.535
S.D.	0.012	0.023	0.008	0.064	0.010	0.017	0.017	0.090
% R.S.D.	0.257	0.486	0.188	1.174	0.166	0.291	0.378	0.779

	Ce (ppm)	Sm (ppm)	Ba (ppm)	P (ppm)	S (ppm)	Mg (ppm)	As (ppm)	Na (ppm)
Mean	4.520	4.234	4.322	8.286	8.489	4.538	4.553	513.164
S.D.	0.021	0.003	0.013	0.186	0.074	0.013	0.033	2.448
% R.S.D.	0.461	0.068	0.304	2.241	0.866	0.278	0.719	0.477

	Mo (ppm)	Se (ppm)	Ag (ppm)	Pb (ppm)	Ti (ppm)	Cd (ppm)	B (ppm)	K (ppm)
Mean	4.521	4.745	0.906	4.738	4.299	4.443	5.462	80.959
S.D.	0.036	0.054	0.001	0.053	0.013	0.017	0.022	0.237
% R.S.D.	0.804	1.140	0.116	1.119	0.310	0.376	0.402	0.293

	Mn (ppm)	Sb (ppm)	V (ppm)	Be (ppm)	Tl (ppm)
Mean	5.365	4.359	4.431	4.465	4.817
S.D.	0.015	0.122	0.013	0.010	0.019
% R.S.D.	0.289	2.795	0.292	0.228	0.389

Identity 1: CCV Identity 2: Quality Control 1:59 PM July 30, 1996
Task name : OPTIMA
Sample Weight : 1.0000 Solution Volume : 1.00
On-Peak Integrations : 3 Off-Peak Integrations : 1

	Zr (ppm)	Sr (ppm)	Bi (ppm)	Si (ppm)	Al (ppm)	Co (ppm)	Cu (ppm)	Li (ppm)
Mean	4.927	4.921	4.982	4.791	5.068	5.163	4.966	5.107
S.D.	0.014	0.011	0.044	0.017	0.014	0.029	0.012	0.036
% R.S.D.	0.284	0.233	0.890	0.356	0.268	0.569	0.238	0.714

	Zn (ppm)	Ni (ppm)	La (ppm)	Fe (ppm)	Ca (ppm)	Cr (ppm)	Nd (ppm)	U (ppm)
Mean	5.231	5.109	5.090	5.185	4.988	5.144	5.346	9.418
S.D.	0.019	0.027	0.022	0.015	0.012	0.031	0.018	0.047
% R.S.D.	0.360	0.521	0.424	0.289	0.237	0.612	0.342	0.504

	Ce (ppm)	Sm (ppm)	Ba (ppm)	P (ppm)	S (ppm)	Mg (ppm)	As (ppm)	Na (ppm)
Mean	4.959	4.932	4.915	5.518	5.360	4.988	5.166	5.004
S.D.	0.022	0.012	0.013	0.105	0.012	0.023	0.017	0.033
% R.S.D.	0.442	0.245	0.257	1.900	0.227	0.454	0.321	0.650

	Mo (ppm)	Se (ppm)	Ag (ppm)	Pb (ppm)	Ti (ppm)	Cd (ppm)	B (ppm)	K (ppm)
Mean	5.053	4.897	5.069	5.195	4.876	5.097	5.240	5.278
S.D.	0.028	0.018	0.019	0.046	0.012	0.024	0.002	0.020
% R.S.D.	0.552	0.372	0.370	0.877	0.246	0.477	0.045	0.384

	Mn (ppm)	Sb (ppm)	V (ppm)	Be (ppm)	Tl (ppm)
Mean	5.138	4.797	5.061	5.175	5.010
S.D.	0.026	0.023	0.016	0.020	0.026
% R.S.D.	0.501	0.472	0.320	0.391	0.515

07/30/96 14:07 ☎509 372 2929 WESTINGHOUSE →→→ MO-924 200W 014

Identity 1: CCB Identity 2: Quality Control 2:02 PM July 30, 1996
Task name : OPTIMA
Sample Weight : 1.0000 Solution Volume : 1.00
On-Peak Integrations : 3 Off-Peak Integrations : 1

	Zr (ppm)	Sr (ppm)	Bi (ppm)	Si (ppm)	Al (ppm)	Co (ppm)	Cu (ppm)	Li (ppm)
Mean	-0.001	0.000	-0.033	-0.019	-0.061	0.005	-0.002	0.000
S.D.	0.001	0.000	0.009	0.002	0.006	0.002	0.000	0.000
% R.S.D.	132.743	27.273	27.100	9.335	9.884	43.186	5.569	137.680

	Zn (ppm)	Ni (ppm)	La (ppm)	Fe (ppm)	Ca (ppm)	Cr (ppm)	Nd (ppm)	U (ppm)
Mean	-0.002	-0.007	-0.000	-0.007	0.009	0.000	0.001	-0.013
S.D.	0.001	0.002	0.002	0.002	0.000	0.001	0.007	0.040
% R.S.D.	31.805	34.755	454.651	26.540	3.751	321.739	1245.373	307.641

	Ce (ppm)	Sm (ppm)	Ba (ppm)	P (ppm)	S (ppm)	Mg (ppm)	As (ppm)	Na (ppm)
Mean	-0.006	-0.007	0.000	-0.002	0.002	0.000	0.014	-0.087
S.D.	0.009	0.010	0.000	0.010	0.004	0.000	0.005	0.004
% R.S.D.	160.004	149.183	58.751	479.550	218.803	86.602	34.999	4.260

	Mo (ppm)	Se (ppm)	Ag (ppm)	Pb (ppm)	Tl (ppm)	Cd (ppm)	B (ppm)	K (ppm)
Mean	0.002	0.127	0.003	-0.003	-0.003	-0.001	0.009	0.026
S.D.	0.001	0.018	0.001	0.018	0.000	0.001	0.002	0.012
% R.S.D.	81.441	14.509	24.032	670.921	6.620	101.987	22.439	45.729

	Mn (ppm)	Sb (ppm)	V (ppm)	Be (ppm)	Tl (ppm)
Mean	-0.000	0.017	0.001	0.001	0.105
S.D.	0.000	0.011	0.001	0.000	0.019
% R.S.D.	86.430	65.367	51.493	14.955	18.525

07/30/96 14:08 ☎509 372 2929 WESTINGHOUSE →→→ MO-924 200W ☑015

Identity 1: s96t002266_L Identity 2: 2ml-8ml-2ml-8ml 2:06 PM July 30, 1996
Task name : OPTIMA
Sample Weight : 1.0000 Solution Volume : 25.00
On-Peak Integrations : 3 Off-Peak Integrations : 1

	Zr (ppm)	Sr (ppm)	Bi (ppm)	Si (ppm)	Al (ppm)	Co (ppm)	Cu (ppm)	Li (ppm)
Mean	0.477	0.025	-0.579	2.648	89.233	0.116	-0.007	-0.005
S.D.	0.027	0.002	0.078	0.067	0.141	0.051	0.010	0.005
% R.S.D.	5.604	6.383	13.418	2.523	0.158	43.714	153.093	85.587

	Zn (ppm)	Ni (ppm)	La (ppm)	Fe (ppm)	Ca (ppm)	Cr (ppm)	Nd (ppm)	U (ppm)
Mean	1.270	0.194	0.151	2.338	3.075	3.665	0.138	9.303
S.D.	0.016	0.054	0.037	0.039	0.006	0.030	0.107	0.613
% R.S.D.	1.300	27.597	24.413	1.665	0.186	0.813	77.242	6.587

	Ce (ppm)	Sm (ppm)	Ba (ppm)	P (ppm)	S (ppm)	Mg (ppm)	As (ppm)	Na (ppm)
Mean	-0.549	0.154	0.039	19.782	6.355	0.461	0.252	888.924
S.D.	0.190	0.168	0.005	0.888	0.152	0.000	0.114	5.002
% R.S.D.	34.625	109.393	12.990	4.490	2.390	0.000	45.204	0.563

	Mo (ppm)	Se (ppm)	Ag (ppm)	Pb (ppm)	Ti (ppm)	Cd (ppm)	B (ppm)	K (ppm)
Mean	0.156	2.643	0.129	0.808	-0.024	0.023	0.663	126.399
S.D.	0.012	0.046	0.016	0.103	0.012	0.014	0.023	0.621
% R.S.D.	7.898	1.756	12.340	12.810	50.105	63.334	3.432	0.492

	Mn (ppm)	Sb (ppm)	V (ppm)	Be (ppm)	Tl (ppm)
Mean	1.933	1.074	-0.002	0.001	2.351
S.D.	0.005	0.175	0.010	0.007	0.306
% R.S.D.	0.236	16.330	627.725	651.897	13.005

07/30/96 14:08 ☎509 372 2929 WESTINGHOUSE →→→ MO-924 200W 016

Identity 1: s96t002266 Identity 2: 2ml-8ml 2:09 PM July 30, 1996
Task name : OPTIMA
Sample Weight : 1.0000 Solution Volume : 5.00
On-Peak Integrations : 3 Off-Peak Integrations : 1

	Zr (ppm)	Sr (ppm)	Bi (ppm)	Si (ppm)	Al (ppm)	Co (ppm)	Cu (ppm)	Li (ppm)
Mean	0.471	0.025	-0.105	2.790	90.319	0.040	0.036	0.001
S.D.	0.002	0.000	0.045	0.008	0.089	0.010	0.002	0.001
% R.S.D.	0.393	1.480	43.370	0.287	0.098	25.269	5.486	78.904

	Zn (ppm)	Ni (ppm)	La (ppm)	Fe (ppm)	Ca (ppm)	Cr (ppm)	Nd (ppm)	U (ppm)
Mean	0.218	0.272	0.035	2.169	2.169	3.507	0.081	7.421
S.D.	0.002	0.007	0.004	0.020	0.002	0.004	0.013	0.180
% R.S.D.	0.969	2.643	12.167	0.929	0.109	0.125	16.621	2.422

	Ce (ppm)	Sm (ppm)	Ba (ppm)	P (ppm)	S (ppm)	Mg (ppm)	As (ppm)	Na (ppm)
Mean	-0.066	0.029	0.038	16.727	5.901	0.428	0.077	876.617
S.D.	0.041	0.029	0.001	0.797	0.115	0.001	0.018	3.858
% R.S.D.	61.144	97.049	2.713	4.766	1.953	0.332	22.859	0.440

	Mo (ppm)	Se (ppm)	Ag (ppm)	Pb (ppm)	Ti (ppm)	Cd (ppm)	B (ppm)	K (ppm)
Mean	0.175	0.876	0.109	0.279	-0.000	0.041	0.545	125.812
S.D.	0.011	0.007	0.003	0.041	0.001	0.002	0.002	0.735
% R.S.D.	6.165	0.768	2.887	14.773	722.894	5.874	0.427	0.584

	Mn (ppm)	Sb (ppm)	V (ppm)	Be (ppm)	Tl (ppm)
Mean	1.913	0.136	0.001	0.007	0.342
S.D.	0.001	0.051	0.003	0.001	0.055
% R.S.D.	0.049	37.039	346.581	10.417	16.138

07/30/96 14:09 ☎509 372 2929 WESTINGHOUSE →→→ MO-924 200W ☑017

Identity 1: s96t002266_D Identity 2: 2ml-8ml 2:12 PM July 30, 1996
Task name : OPTIMA
Sample Weight : 1.0000 Solution Volume : 5.00
On-Peak Integrations : 3 Off-Peak Integrations : 1

	Zr (ppm)	Sr (ppm)	Bi (ppm)	Si (ppm)	Al (ppm)	Co (ppm)	Cu (ppm)	Li (ppm)
Mean	0.356	0.019	-0.109	2.225	64.262	0.017	0.040	0.001
S.D.	0.002	0.001	0.096	0.004	0.104	0.000	0.002	0.000
% R.S.D.	0.522	3.297	88.256	0.187	0.162	0.087	3.841	19.202

	Zn (ppm)	Ni (ppm)	La (ppm)	Fe (ppm)	Ca (ppm)	Cr (ppm)	Nd (ppm)	U (ppm)
Mean	0.144	0.198	0.002	1.595	1.762	2.584	0.091	5.063
S.D.	0.002	0.009	0.013	0.013	0.003	0.005	0.015	0.115
% R.S.D.	1.404	4.778	521.196	0.796	0.152	0.204	16.541	2.263

	Ce (ppm)	Sm (ppm)	Ba (ppm)	P (ppm)	S (ppm)	Mg (ppm)	As (ppm)	Na (ppm)
Mean	-0.006	-0.116	0.029	10.763	4.365	0.342	0.051	635.241
S.D.	0.020	0.032	0.001	0.591	0.121	0.001	0.010	2.301
% R.S.D.	313.183	27.422	2.106	5.492	2.768	0.156	19.461	0.362

	Mo (ppm)	Se (ppm)	Ag (ppm)	Pb (ppm)	Ti (ppm)	Cd (ppm)	B (ppm)	K (ppm)
Mean	0.120	0.895	0.083	0.265	-0.006	0.025	0.774	89.952
S.D.	0.004	0.028	0.001	0.069	0.002	0.002	0.004	0.341
% R.S.D.	3.166	3.181	0.634	25.970	33.601	8.419	0.565	0.379

	Mn (ppm)	Sb (ppm)	V (ppm)	Be (ppm)	Tl (ppm)
Mean	1.400	0.290	0.009	0.007	0.500
S.D.	0.005	0.111	0.001	0.001	0.028
% R.S.D.	0.370	38.290	14.344	10.700	5.658

07/30/96 14:10 ☎509 372 2929 WESTINGHOUSE →→→ MO-924 200W ☑018

Identity 1: s96t002267_L Identity 2: 2ml-8ml-2ml-8ml 2:15 PM July 30, 1996
Task name : OPTIMA
Sample Weight : 1.0000 Solution Volume : 25.00
On-Peak Integrations : 3 Off-Peak Integrations : 1

	Zr (ppm)	Sr (ppm)	Bi (ppm)	Si (ppm)	Al (ppm)	Co (ppm)	Cu (ppm)	Li (ppm)
Mean	0.226	0.018	-0.558	1.890	87.001	0.292	0.012	0.037
S.D.	0.014	0.002	0.307	0.108	0.141	0.051	0.009	0.004
% R.S.D.	6.013	10.189	55.042	5.698	0.162	17.346	80.513	9.798

	Zn (ppm)	Ni (ppm)	La (ppm)	Fe (ppm)	Ca (ppm)	Cr (ppm)	Nd (ppm)	U (ppm)
Mean	0.499	0.032	0.026	1.101	2.768	1.286	0.507	4.148
S.D.	0.024	0.085	0.076	0.102	0.011	0.062	0.160	0.591
% R.S.D.	4.709	264.778	290.871	9.219	0.387	4.801	31.506	14.257

	Ce (ppm)	Sm (ppm)	Ba (ppm)	P (ppm)	S (ppm)	Mg (ppm)	As (ppm)	Na (ppm)
Mean	0.298	-0.302	0.028	3.783	4.905	0.264	0.193	850.354
S.D.	0.206	0.113	0.003	0.251	0.098	0.005	0.165	3.226
% R.S.D.	69.084	37.255	11.866	6.647	2.007	2.026	85.785	0.379

	Mo (ppm)	Se (ppm)	Ag (ppm)	Pb (ppm)	Ti (ppm)	Cd (ppm)	B (ppm)	K (ppm)
Mean	0.178	3.057	0.131	0.899	-0.050	0.002	0.644	145.236
S.D.	0.025	0.280	0.020	0.357	0.015	0.026	0.019	0.821
% R.S.D.	14.150	9.165	15.542	39.717	29.561	1224.377	2.994	0.565

	Mn (ppm)	Sb (ppm)	V (ppm)	Be (ppm)	Tl (ppm)
Mean	0.731	1.132	0.068	0.020	2.317
S.D.	0.008	0.321	0.021	0.004	0.688
% R.S.D.	1.091	28.337	30.523	17.253	29.696

07/30/96 14:10 ☎509 372 2929 WESTINGHOUSE →→→ MO-924 200W 019

Identity 1: s96t002267 Identity 2: 2ml-8ml 2:18 PM July 30, 1996
Task name : OPTIMA
Sample Weight : 1.0000 Solution Volume : 5.00
On-Peak Integrations : 3 Off-Peak Integrations : 1

	Zr (ppm)	Sr (ppm)	Bi (ppm)	Si (ppm)	Al (ppm)	Co (ppm)	Cu (ppm)	Li (ppm)
Mean	0.223	0.011	-0.165	2.104	88.084	0.058	0.030	0.027
S.D.	0.005	0.001	0.009	0.008	0.040	0.010	0.001	0.001
% R.S.D.	2.433	5.782	5.292	0.403	0.045	17.408	3.557	3.819

	Zn (ppm)	Ni (ppm)	La (ppm)	Fe (ppm)	Ca (ppm)	Cr (ppm)	Nd (ppm)	U (ppm)
Mean	0.246	0.136	0.011	1.088	1.748	1.252	0.005	3.162
S.D.	0.005	0.007	0.004	0.011	0.002	0.017	0.016	0.205
% R.S.D.	2.214	5.071	36.758	1.004	0.096	1.381	298.646	6.480

	Ce (ppm)	Sm (ppm)	Ba (ppm)	P (ppm)	S (ppm)	Mg (ppm)	As (ppm)	Na (ppm)
Mean	-0.066	-0.071	0.015	4.063	4.633	0.249	0.137	819.011
S.D.	0.077	0.054	0.001	0.288	0.037	0.001	0.031	10.804
% R.S.D.	116.669	75.496	9.917	7.090	0.790	0.569	22.731	1.319

	Mo (ppm)	Se (ppm)	Ag (ppm)	Pb (ppm)	Ti (ppm)	Cd (ppm)	B (ppm)	K (ppm)
Mean	0.170	0.735	0.062	0.383	-0.009	0.026	0.612	142.358
S.D.	0.010	0.082	0.003	0.049	0.002	0.002	0.008	2.446
% R.S.D.	6.151	11.178	4.715	12.920	22.137	7.944	1.263	1.718

	Mn (ppm)	Sb (ppm)	V (ppm)	Be (ppm)	Tl (ppm)
Mean	0.733	0.352	0.017	0.012	0.442
S.D.	0.003	0.127	0.005	0.001	0.133
% R.S.D.	0.456	35.950	33.071	5.666	30.203

07/30/96 14:11 ☎509 372 2929 WESTINGHOUSE →→→ MO-924 200W ☑020

Identity 1: s96t002267_d Identity 2: 2ml-8ml 2:21 PM July 30, 1996
Task name : OPTIMA
Sample Weight : 1.0000 Solution Volume : 5.00
On-Peak Integrations : 3 Off-Peak Integrations : 1

	Zr (ppm)	Sr (ppm)	Bi (ppm)	Si (ppm)	Al (ppm)	Co (ppm)	Cu (ppm)	Li (ppm)
Mean	0.234	0.013	-0.059	2.363	90.466	0.035	0.071	0.027
S.D.	0.002	0.000	0.027	0.007	0.201	0.018	0.002	0.000
% R.S.D.	0.713	1.397	44.955	0.300	0.222	50.581	3.160	0.723

	Zn (ppm)	Ni (ppm)	La (ppm)	Fe (ppm)	Ca (ppm)	Cr (ppm)	Nd (ppm)	U (ppm)
Mean	0.224	0.159	0.011	1.112	1.584	1.319	0.103	3.295
S.D.	0.003	0.007	0.011	0.009	0.003	0.002	0.037	0.103
% R.S.D.	1.170	4.272	99.134	0.765	0.217	0.183	35.775	3.121

	Ce (ppm)	Sm (ppm)	Ba (ppm)	P (ppm)	S (ppm)	Mg (ppm)	As (ppm)	Na (ppm)
Mean	0.053	-0.042	0.018	4.201	4.708	0.253	0.070	835.721
S.D.	0.040	0.024	0.001	0.061	0.028	0.001	0.009	6.024
% R.S.D.	75.285	56.868	5.097	1.443	0.588	0.212	13.565	0.721

	Mo (ppm)	Se (ppm)	Ag (ppm)	Pb (ppm)	Ti (ppm)	Cd (ppm)	B (ppm)	K (ppm)
Mean	0.187	0.659	0.067	0.306	-0.006	0.029	0.877	143.615
S.D.	0.004	0.029	0.004	0.066	0.002	0.001	0.012	1.358
% R.S.D.	2.135	4.356	5.408	21.468	34.475	2.772	1.387	0.946

	Mn (ppm)	Sb (ppm)	V (ppm)	Be (ppm)	Tl (ppm)
Mean	0.772	0.294	0.012	0.010	0.396
S.D.	0.006	0.140	0.004	0.001	0.058
% R.S.D.	0.749	47.514	32.934	6.791	14.733

07/30/96 14:11 ☎509 372 2929 WESTINGHOUSE →→→ MO-924 200W 021

TABLE 3: CORE 139 SAMPLE EXTRUSION RESULTS FOR TANK AW-101

Segment	Solid (g)	Liquid (g)	Sample Description
10	28.3	359.1	Approximately 2 inches of white solids were extruded; solids resembled salt slurry and were subsampled as upper half segment (jar #9893). Collected 250 mls of yellow, clear drainable liquid (jar #9994). No organic layer was observed. Dose rate through drill string was 1.8 R/hr.
11	24.3	367.7	Approximately 2 inches of white solids were extruded; solids resembled salt slurry and were subsampled as upper half segment (jar #10031). Collected 250 mls of yellow, clear drainable liquid (jar #10036). No organic layer was observed. Dose rate through drill string was 1.7 R/hr
12	20.4	160.6	Approximately 1 inch of white solids were extruded; solids resembled a salt slurry and were subsampled as upper half segment (jar #10034). Collected 250 mls of yellow, clear drainable liquid (jar #10037). No organic layer was observed. Dose rate through drill string was 1.9 R/hr
13	25.9	369.4	Approximately 2 inches of white solids were extruded; solids resembled a salt slurry and were subsampled as upper half segment (jar #9914). Collected 250 mls of yellow, clear drainable liquid (jar #10038). No organic layer was observed. Dose rate through drill string was 2.1 R/hr
14	26.8	369.1	Approximately 2 inches of white solids were extruded; solids resembled a salt slurry and were subsampled as upper half segment (jar #9915). Collected 250 mls of yellow, clear drainable liquid (jar #10040). No organic layer was observed. Dose rate through drill string was 2 R/hr.
15	34.7	370.4	Approximately 4 inches of white solids were extruded; solids resembled a salt slurry and were subsampled as upper half segment (jar #9916). Collected 250 mls of yellow, clear drainable liquid (jar #10041). No organic layer observed. Dose rate through drill string was 2.1 R/hr
16	0	0	Sampler empty.
16R	18.9	371.8	Approximately 1.5 inches of white solids were extruded; solids resembled a salt slurry and were subsampled as lower half segment (jar #10208). Collected 250 mls of yellow, clear drainable liquid (jar #10195). No organic layer observed. Dose rate through drill string was 2.1 R/hr.
16R1	20.8	374.3	Approximately 2 inches of white solids were extruded; solids resembled a salt slurry and were subsampled as lower half segment (jar #10207). Collected 250 mls of yellow, opaque drainable liquid (jar #10211). No organic layer observed. Dose rate through drill string was 2.2 R/hr.
16R2	40.6	365.3	Approximately 3 inches of white solids were extruded; solids resembled a salt slurry and were subsampled as upper half segment (jar #10210). Collected 250 mls of yellow, clear drainable liquid (jar #10212). No organic layer observed. Dose rate through the drill string was 1.5 R/hr.
17R	208.7	156.6	Approximately 15 inches of dark gray solids were extruded; solids resembled a salt slurry and were subsampled as upper half (jar #10073) and lower half (jar #10074) segments. Collected 100 mls of dark gray, opaque drainable liquid (jar #10071). No organic layer observed. Dose rate through the drill string was 2 R/hr.
19	438.3	0	Approximately 19 inches of gray/black solids were extruded; solids resembled a wet salt and were subsampled as upper half (jar #10218) and lower half (jar #10091) segments. A portion was subsampled (jar #10237) and sent to PNNL. Dose rate through the drill string was 1.7 R/hr.
21	429.3	0	Approximately 19 inches of dark gray solids were extruded; solids resembled a wet salt and were subsampled as upper half (jar #10213) and lower half (jar #10215) segments. A portion was subsample (jar #10234) and sent to PNNL. Dose rate through the drill string was 1.8 R/hr.

Identity 1: CCB Identity 2: Quality Control 2:28 PM July 30, 1996
Task name : OPTIMA
Sample Weight : 1.0000 Solution Volume : 1.00
On-Peak Integrations : 3 Off-Peak Integrations : 1

	Zr (ppm)	Sr (ppm)	Bi (ppm)	Si (ppm)	Al (ppm)	Co (ppm)	Cu (ppm)	Li (ppm)
Mean	0.002	0.000	-0.023	-0.012	-0.057	0.007	-0.002	0.001
S.D.	0.003	0.000	0.009	0.002	0.006	0.003	0.001	0.001
% R.S.D.	135.207	106.588	39.055	20.652	11.250	49.999	34.148	126.678

	Zn (ppm)	Ni (ppm)	La (ppm)	Fe (ppm)	Ca (ppm)	Cr (ppm)	Nd (ppm)	U (ppm)
Mean	-0.002	-0.001	-0.004	-0.005	0.009	0.002	0.008	0.089
S.D.	0.000	0.003	0.002	0.000	0.000	0.001	0.003	0.080
% R.S.D.	22.072	417.065	58.564	6.745	3.999	82.503	43.305	89.144

	Ce (ppm)	Sm (ppm)	Ba (ppm)	P (ppm)	S (ppm)	Mg (ppm)	As (ppm)	Na (ppm)
Mean	-0.000	0.014	0.000	0.019	0.003	0.000	0.020	-0.089
S.D.	0.017	0.016	0.000	0.012	0.004	0.000	0.005	0.008
% R.S.D.	7790.741	110.496	129.709	59.760	161.830	57.735	27.293	8.496

	Mo (ppm)	Se (ppm)	Ag (ppm)	Pb (ppm)	Ti (ppm)	Cd (ppm)	B (ppm)	K (ppm)
Mean	0.002	0.126	0.008	0.012	-0.001	0.000	0.009	-0.001
S.D.	0.001	0.006	0.001	0.017	0.001	0.001	0.002	0.019
% R.S.D.	61.490	4.769	10.592	135.154	52.563	259.441	26.380	2334.530

	Mn (ppm)	Sb (ppm)	V (ppm)	Be (ppm)	Tl (ppm)
Mean	-0.000	0.032	0.001	0.001	0.075
S.D.	0.000	0.005	0.001	0.000	0.035
% R.S.D.	386.006	16.544	57.416	37.752	47.442

07/30/96 14:13 ☎509 372 2929 WESTINGHOUSE →→→ MO-924 200W ☑023

Identity 1: s96t002268_L Identity 2: 2ml-8ml-2ml-8ml 2:31 PM July 30, 1996
Task name : OPTIMA
Sample Weight : 1.0000 Solution Volume : 25.00
On-Peak Integrations : 3 Off-Peak Integrations : 1

	Zr (ppm)	Sr (ppm)	Bi (ppm)	Si (ppm)	Al (ppm)	Co (ppm)	Cu (ppm)	Li (ppm)
Mean	0.388	0.018	-0.408	3.209	89.753	0.057	0.035	0.043
S.D.	0.021	0.001	0.150	0.079	0.190	0.051	0.010	0.004
% R.S.D.	5.303	5.094	36.838	2.470	0.212	88.023	27.003	8.246

	Zn (ppm)	Ni (ppm)	La (ppm)	Fe (ppm)	Ca (ppm)	Cr (ppm)	Nd (ppm)	U (ppm)
Mean	0.773	0.299	0.040	2.995	3.333	2.072	0.025	7.544
S.D.	0.004	0.061	0.063	0.109	0.008	0.042	0.100	0.074
% R.S.D.	0.580	20.259	157.279	3.635	0.232	2.004	404.977	0.978

	Ce (ppm)	Sm (ppm)	Ba (ppm)	P (ppm)	S (ppm)	Mg (ppm)	As (ppm)	Na (ppm)
Mean	-0.552	0.024	0.023	5.463	6.981	0.365	0.362	907.950
S.D.	0.055	0.090	0.002	0.698	0.128	0.005	0.112	3.550
% R.S.D.	9.911	379.244	8.206	12.778	1.836	1.468	30.925	0.391

	Mo (ppm)	Se (ppm)	Ag (ppm)	Pb (ppm)	Ti (ppm)	Cd (ppm)	B (ppm)	K (ppm)
Mean	0.186	3.559	0.119	1.143	-0.029	0.016	0.669	133.553
S.D.	0.038	0.042	0.003	0.406	0.013	0.017	0.044	0.869
% R.S.D.	20.681	1.190	2.183	35.502	45.056	111.520	6.528	0.651

	Mn (ppm)	Sb (ppm)	V (ppm)	Be (ppm)	Tl (ppm)
Mean	1.419	1.572	-0.024	0.015	1.186
S.D.	0.009	0.288	0.031	0.003	0.137
% R.S.D.	0.654	18.322	128.611	23.297	11.543

07/30/96 14:13 ☎509 372 2929 WESTINGHOUSE →→→ MO-924 200W 024

Identity 1: s96t002268 Identity 2: 2ml-8ml 2:34 PM July 30, 1996
Task name : OPTIMA
Sample Weight : 1.0000 Solution Volume : 5.00
On-Peak Integrations : 3 Off-Peak Integrations : 1

	Zr (ppm)	Sr (ppm)	Bi (ppm)	Si (ppm)	Al (ppm)	Co (ppm)	Cu (ppm)	Li (ppm)
Mean	0.392	0.021	-0.067	3.315	90.277	0.052	0.075	0.046
S.D.	0.003	0.000	0.041	0.002	0.112	0.018	0.002	0.001
% R.S.D.	0.839	1.523	61.160	0.055	0.124	33.875	2.360	2.299

	Zn (ppm)	Ni (ppm)	La (ppm)	Fe (ppm)	Ca (ppm)	Cr (ppm)	Nd (ppm)	U (ppm)
Mean	0.275	0.226	0.038	2.917	2.082	1.950	0.026	6.655
S.D.	0.001	0.009	0.011	0.019	0.007	0.019	0.034	0.167
% R.S.D.	0.250	3.944	29.643	0.662	0.356	0.987	132.185	2.516

	Ce (ppm)	Sm (ppm)	Ba (ppm)	P (ppm)	S (ppm)	Mg (ppm)	As (ppm)	Na (ppm)
Mean	-0.095	-0.019	0.025	5.311	6.570	0.342	0.113	874.777
S.D.	0.035	0.029	0.001	0.262	0.087	0.001	0.016	5.846
% R.S.D.	36.884	152.880	3.812	4.929	1.320	0.272	14.186	0.668

	Mo (ppm)	Se (ppm)	Ag (ppm)	Pb (ppm)	Ti (ppm)	Cd (ppm)	B (ppm)	K (ppm)
Mean	0.168	0.922	0.089	0.385	0.002	0.038	0.599	131.191
S.D.	0.003	0.037	0.002	0.048	0.002	0.003	0.007	1.026
% R.S.D.	1.844	4.032	2.114	12.590	115.099	7.542	1.137	0.782

	Mn (ppm)	Sb (ppm)	V (ppm)	Be (ppm)	Tl (ppm)
Mean	1.408	0.464	0.004	0.010	0.570
S.D.	0.001	0.028	0.001	0.000	0.059
% R.S.D.	0.065	6.043	15.556	0.211	10.416

07/30/96 14:14 ☎509 372 2929 WESTINGHOUSE →→→ MO-924 200W ☑025

Identity 1: s96t002268_D Identity 2: 2ml-8ml 2:37 PM July 30, 1996
Task name : OPTIMA
Sample Weight : 1.0000 Solution Volume : 5.00
On-Peak Integrations : 3 Off-Peak Integrations : 1

	Zr (ppm)	Sr (ppm)	Bi (ppm)	Si (ppm)	Al (ppm)	Co (ppm)	Cu (ppm)	Li (ppm)
Mean	0.359	0.022	-0.155	1.150	85.082	0.052	0.079	0.046
S.D.	0.002	0.000	0.030	0.003	0.034	0.000	0.001	0.000
% R.S.D.	0.629	1.436	19.373	0.265	0.041	0.006	0.834	0.431

	Zn (ppm)	Ni (ppm)	La (ppm)	Fe (ppm)	Ca (ppm)	Cr (ppm)	Nd (ppm)	U (ppm)
Mean	0.269	0.216	0.005	2.515	2.518	1.971	0.145	5.958
S.D.	0.006	0.007	0.008	0.014	0.003	0.009	0.022	0.023
% R.S.D.	2.257	3.098	157.340	0.558	0.135	0.454	14.866	0.379

	Ce (ppm)	Sm (ppm)	Ba (ppm)	P (ppm)	S (ppm)	Mg (ppm)	As (ppm)	Na (ppm)
Mean	0.124	-0.063	0.028	5.993	6.626	0.373	0.055	817.611
S.D.	0.006	0.002	0.000	0.273	0.152	0.001	0.008	2.986
% R.S.D.	5.090	3.806	0.528	4.563	2.292	0.144	14.864	0.365

	Mo (ppm)	Se (ppm)	Ag (ppm)	Pb (ppm)	Ti (ppm)	Cd (ppm)	B (ppm)	K (ppm)
Mean	0.150	0.851	0.097	0.380	-0.006	0.033	0.724	120.868
S.D.	0.003	0.048	0.002	0.060	0.001	0.002	0.008	0.500
% R.S.D.	1.845	5.619	1.613	15.911	20.647	4.813	1.078	0.414

	Mn (ppm)	Sb (ppm)	V (ppm)	Be (ppm)	Tl (ppm)
Mean	1.363	0.334	0.016	0.008	0.553
S.D.	0.005	0.130	0.004	0.001	0.032
% R.S.D.	0.360	39.069	27.743	8.733	5.799

07/30/96 14:14 ☎509 372 2929 WESTINGHOUSE →→→ MO-924 200W 026

Identity 1: ICSA Identity 2: Quality Control 2:41 PM July 30, 1996
Task name : OPTIMA
Sample Weight : 1.0000 Solution Volume : 1.00
On-Peak Integrations : 3 Off-Peak Integrations : 1

	Zr (ppm)	Sr (ppm)	Bi (ppm)	Si (ppm)	Al (ppm)	Co (ppm)	Cu (ppm)	Li (ppm)
Mean	0.001	0.002	-0.045	-0.001	206.039	0.008	-0.001	0.001
S.D.	0.001	0.000	0.013	0.001	0.375	0.002	0.000	0.000
% R.S.D.	79.537	3.268	30.275	70.087	0.182	26.853	26.559	5.597

	Zn (ppm)	Ni (ppm)	La (ppm)	Fe (ppm)	Ca (ppm)	Cr (ppm)	Nd (ppm)	U (ppm)
Mean	-0.007	-0.003	0.002	98.516	100.524	0.005	0.028	-0.005
S.D.	0.000	0.001	0.002	0.152	0.214	0.002	0.012	0.031
% R.S.D.	0.693	42.936	92.836	0.154	0.213	40.754	41.777	678.634

	Ce (ppm)	Sm (ppm)	Ba (ppm)	P (ppm)	S (ppm)	Mg (ppm)	As (ppm)	Na (ppm)
Mean	0.014	0.017	0.004	0.025	0.085	99.088	0.047	192.744
S.D.	0.005	0.005	0.000	0.006	0.002	0.308	0.008	1.320
% R.S.D.	35.058	30.906	3.959	25.498	2.531	0.311	16.633	0.685

	Mo (ppm)	Se (ppm)	Ag (ppm)	Pb (ppm)	Ti (ppm)	Cd (ppm)	B (ppm)	K (ppm)
Mean	-0.003	0.170	0.005	0.013	-0.002	-0.000	0.016	-0.018
S.D.	0.002	0.012	0.001	0.020	0.000	0.001	0.000	0.019
% R.S.D.	79.184	7.142	13.545	147.532	6.989	2338.345	1.925	102.371

	Mn (ppm)	Sb (ppm)	V (ppm)	Be (ppm)	Tl (ppm)
Mean	0.013	0.031	0.002	0.003	0.122
S.D.	0.001	0.001	0.001	0.000	0.013
% R.S.D.	4.775	4.446	47.532	4.144	10.734

07/30/96 14:15 ☎509 372 2929 WESTINGHOUSE →→→ MO-924 200W ☑027

Identity 1: ICSAB Identity 2: Quality Control 2:45 PM July 30, 1996
Task name : OPTIMA
Sample Weight : 1.0000 Solution Volume : 1.00
On-Peak Integrations : 3 Off-Peak Integrations : 1

	Zr (ppm)	Sr (ppm)	Bi (ppm)	Si (ppm)	Al (ppm)	Co (ppm)	Cu (ppm)	Li (ppm)
Mean	-0.002	0.002	-0.083	-0.003	207.630	0.522	0.493	0.939
S.D.	0.001	0.000	0.004	0.003	0.286	0.002	0.002	0.010
% R.S.D.	49.856	5.036	4.765	100.630	0.138	0.386	0.410	1.024

	Zn (ppm)	Ni (ppm)	La (ppm)	Fe (ppm)	Ca (ppm)	Cr (ppm)	Mo (ppm)	U (ppm)
Mean	1.026	1.009	0.006	98.479	101.179	0.518	0.015	0.034
S.D.	0.001	0.004	0.003	0.093	0.044	0.003	0.005	0.051
% R.S.D.	0.070	0.444	54.214	0.095	0.043	0.622	34.613	151.258

	Ce (ppm)	Sm (ppm)	Ba (ppm)	P (ppm)	S (ppm)	Mg (ppm)	As (ppm)	Na (ppm)
Mean	-0.013	0.015	0.497	0.035	0.090	99.886	0.052	191.572
S.D.	0.016	0.008	0.001	0.006	0.007	0.382	0.002	1.715
% R.S.D.	127.468	54.170	0.245	16.858	7.361	0.382	3.285	0.895

	Mo (ppm)	Se (ppm)	Ag (ppm)	Pb (ppm)	Ti (ppm)	Cd (ppm)	B (ppm)	K (ppm)
Mean	0.000	0.191	1.059	1.064	-0.002	1.010	0.017	0.000
S.D.	0.000	0.002	0.001	0.011	0.001	0.003	0.001	0.005
% R.S.D.	2281.898	0.845	0.060	1.020	24.823	0.260	3.157	1101.874

	Mn (ppm)	Sb (ppm)	V (ppm)	Be (ppm)	Tl (ppm)
Mean	0.527	0.022	0.508	0.504	0.085
S.D.	0.002	0.012	0.001	0.001	0.018
% R.S.D.	0.343	54.796	0.116	0.181	21.749

07/30/96 14:16 ☎509 372 2929 WESTINGHOUSE →→→ MO-924 200W 028

Identity 1: CCV Identity 2: Quality Control 2:48 PM July 30, 1996
Task name : OPTIMA
Sample Weight : 1.0000 Solution Volume : 1.00
On-Peak Integrations : 3 Off-Peak Integrations : 1

	Zr (ppm)	Sr (ppm)	Bi (ppm)	Si (ppm)	Al (ppm)	Co (ppm)	Cu (ppm)	Li (ppm)
Mean	4.985	4.956	5.016	4.835	5.103	5.251	4.978	5.006
S.D.	0.011	0.013	0.035	0.011	0.013	0.008	0.012	0.017
% R.S.D.	0.212	0.261	0.703	0.235	0.256	0.154	0.231	0.345

	Zn (ppm)	Ni (ppm)	La (ppm)	Fe (ppm)	Ca (ppm)	Cr (ppm)	Nd (ppm)	U (ppm)
Mean	5.315	5.189	5.156	5.287	5.029	5.252	5.391	9.483
S.D.	0.011	0.017	0.014	0.019	0.013	0.022	0.033	0.008
% R.S.D.	0.214	0.324	0.279	0.363	0.261	0.414	0.617	0.082

	Ce (ppm)	Sm (ppm)	Ba (ppm)	P (ppm)	S (ppm)	Mg (ppm)	As (ppm)	Na (ppm)
Mean	4.982	4.962	4.941	5.646	5.470	5.072	5.229	4.931
S.D.	0.017	0.012	0.014	0.128	0.030	0.010	0.040	0.017
% R.S.D.	0.345	0.250	0.286	2.273	0.543	0.206	0.771	0.352

	Mo (ppm)	Se (ppm)	Ag (ppm)	Pb (ppm)	Ti (ppm)	Cd (ppm)	B (ppm)	K (ppm)
Mean	5.124	4.915	5.143	5.264	4.927	5.169	5.278	5.215
S.D.	0.011	0.032	0.008	0.026	0.011	0.005	0.011	0.027
% R.S.D.	0.220	0.656	0.155	0.493	0.229	0.105	0.202	0.509

	Mn (ppm)	Sb (ppm)	V (ppm)	Be (ppm)	Tl (ppm)
Mean	5.225	4.773	5.136	5.230	5.048
S.D.	0.012	0.031	0.010	0.013	0.017
% R.S.D.	0.221	0.653	0.195	0.246	0.337

07/30/96 14:16 ☎509 372 2929 WESTINGHOUSE →→→ MO-924 200W 029

Identity 1: CCB Identity 2: Quality Control 2:50 PM July 30, 1996
Task name : OPTIMA
Sample Weight : 1.0000 Solution Volume : 1.00
On-Peak Integrations : 3 Off-Peak Integrations : 1

	Zr (ppm)	Sr (ppm)	Bi (ppm)	Si (ppm)	Al (ppm)	Co (ppm)	Cu (ppm)	Li (ppm)
Mean	0.001	0.000	-0.025	-0.011	-0.061	-0.001	-0.002	0.000
S.D.	0.001	0.000	0.004	0.001	0.006	0.002	0.000	0.000
% R.S.D.	53.816	24.744	15.885	5.996	9.510	172.647	15.306	58.054

	Zn (ppm)	Ni (ppm)	La (ppm)	Fe (ppm)	Ca (ppm)	Cr (ppm)	Nd (ppm)	U (ppm)
Mean	-0.002	-0.001	0.001	-0.007	0.020	0.001	-0.001	0.031
S.D.	0.000	0.000	0.001	0.003	0.001	0.003	0.006	0.021
% R.S.D.	22.349	42.084	99.444	47.017	7.438	441.430	565.552	66.645

	Ce (ppm)	Sm (ppm)	Ba (ppm)	P (ppm)	S (ppm)	Mg (ppm)	As (ppm)	Na (ppm)
Mean	-0.030	0.004	0.000	-0.033	-0.001	0.005	0.001	-0.083
S.D.	0.002	0.005	0.000	0.007	0.003	0.001	0.004	0.002
% R.S.D.	6.377	107.136	183.303	21.155	447.782	28.768	418.861	2.587

	Mo (ppm)	Se (ppm)	Ag (ppm)	Pb (ppm)	Ti (ppm)	Cd (ppm)	B (ppm)	K (ppm)
Mean	0.000	0.158	0.003	0.006	-0.001	-0.001	0.008	-0.071
S.D.	0.001	0.015	0.000	0.014	0.000	0.000	0.000	0.012
% R.S.D.	4595749.737	9.420	7.778	210.796	25.240	43.408	4.997	17.207

	Mn (ppm)	Sb (ppm)	V (ppm)	Be (ppm)	Tl (ppm)
Mean	-0.000	0.084	-0.000	0.000	0.041
S.D.	0.000	0.024	0.001	0.000	0.005
% R.S.D.	40.963	28.754	141.891	162.465	11.977

07/30/96 14:17 ☎509 372 2929 WESTINGHOUSE →→→ MO-924 200W ☑030

LABCORE Data Entry Template for Worklist# 10335

Analyst: DKSato **Instrument:** ICP01 **Book#** 57B48B

Method: LA-505-151/~~161~~ Rev/Mod D-3

Worklist Comment: DK 7-30-96 ICP AW-101 (DIRECT)

S	Type	Sample#	R	A	Test	Matrix	Group#	Project
1	ICV				@ICP-QC	QC		
2	ICB				@ICP-QC	QC		
3	LLS				@ICP-QC	QC		
4	ICSA				@ICP-QC	QC		
5	ICSAB				@ICP-QC	QC		
~~6~~	~~PREPBLKARL~~ DK 7-30-96				@ICP-D01	LIQUID		
7	SERDIL	S96T002695	0	D	@ICP-D01	LIQUID		
8	SAMPLE	S96T002695	0	D	@ICP-D01	LIQUID	96000462	AW-101 PUSH

Analytes Requested: AG-D-01 , AL-D-01 , AS-D-01 , B-D-01 , BA-D-01 , BE-D-01 , BI-D-01 , CA-D-01 , CD-D-01 , CE-D-01 , CO-D-01 , CR-D-01 , CU-D-01 , FE-D-01 , K-D-01 , LA-D-01 , LI-D-01 , MG-D-01 , MN-D-01 , MO-D-01 , NA-D-01 , ND-D-01 , NI-D-01 , P-D-01 , PB-D-01 , S-D-01 , SB-D-01 , SE-D-01 , SI-D-01 , SM-D-01 , SR-D-01 , TI-D-01 , TL-D-01 , U-D-01 , V-D-01 , ZN-D-01 , ZR-D-01

9	DUP	S96T002695	0	D	@ICP-D01	LIQUID		
10	SPK	S96T002695	0	D	@ICP-D01	LIQUID		
11	CCV				@ICP-QC	QC		
12	CCB				@ICP-QC	QC		
13	SERDIL	S96T002704	0	D	@ICP-D01	LIQUID		
14	SAMPLE	S96T002704	0	D	@ICP-D01	LIQUID	96000462	AW-101 PUSH

Analytes Requested: AG-D-01 , AL-D-01 , AS-D-01 , B-D-01 , BA-D-01 , BE-D-01 , BI-D-01 , CA-D-01 , CD-D-01 , CE-D-01 , CO-D-01 , CR-D-01 , CU-D-01 , FE-D-01 , K-D-01 , LA-D-01 , LI-D-01 ,

Data Entry Comments: Raw data is final result in ug/ml

S96T002695 Cr = 1.14e+2 ug/ml

S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

LABCORE Data Entry Template for Worklist# 10335

S	Type	Sample#	R	A	Test	Matrix	Group#	Project
					MG-D-01 , MN-D-01 , MO-D-01 , NA-D-01 , ND-D-01 , NI-D-01 , P-D-01 , PB-D-01 , S-D-01 , SB-D-01 , SE-D-01 , SI-D-01 , SM-D-01 , SR-D-01 , TI-D-01 , TL-D-01 , U-D-01 , V-D-01 , ZN-D-01 , ZR-D-01			
15	DUP	S96T002704	0	D	@ICP-D01	LIQUID		
16	SPK	S96T002704	0	D	@ICP-D01	LIQUID		
17	SERDIL	S96T002712	0	D	@ICP-D01	LIQUID		
18	SAMPLE	S96T002712	0	D	@ICP-D01	LIQUID	96000462	AW-101 PUSH
		Analytes Requested:			AG-D-01 , AL-D-01 , AS-D-01 , B-D-01 , BA-D-01 , BE-D-01 , BI-D-01 , CA-D-01 , CD-D-01 , CE-D-01 , CO-D-01 , CR-D-01 , CU-D-01 , FE-D-01 , K-D-01 , LA-D-01 , LI-D-01 , MG-D-01 , MN-D-01 , MO-D-01 , NA-D-01 , ND-D-01 , NI-D-01 , P-D-01 , PB-D-01 , S-D-01 , SB-D-01 , SE-D-01 , SI-D-01 , SM-D-01 , SR-D-01 , TI-D-01 , TL-D-01 , U-D-01 , V-D-01 , ZN-D-01 , ZR-D-01			
19	DUP	S96T002712	0	D	@ICP-D01	LIQUID		
20	SPK	S96T002712	0	D	@ICP-D01	LIQUID		
21	ICSA				@ICP-QC	QC		
22	ICSAB				@ICP-QC	QC		
23	CCV				@ICP-QC	QC		
24	CCB				@ICP-QC	QC		

Final page for worklist # 10335

Analyst Signature	Date	Analyst Signature	Date
DK Lot	07-30-96	Reviewed by: Saul R. Parry	8/7/96
S96T002695_L , 025-30-2.8, DF6005		S96T002712_L , 025 Al-30-2.8, DF6005	
S96T002695 , 025-30 1201		S96T002712 , 025-30 1201	
S96T002695_D , 025-30 1201		S96T002712_D , 025-30 1201	
S96T002695_Q , 025-30 1201 , 025 ml sample + 6 ml SSTS + 24 ml HNO3		S96T002712_Q , 025-30 1201 , 025 ml sample + 6 ml SSTS + 24 ml HNO3	
S96T002704_L , 025-30-2.8, DF6005			
S96T002704 , 025-30 1201			
S96T002704_D , 025-30 1201			
S96T002704_Q , 025-30 1201 , 025 ml + 6 ml SSTS + 24 ml HNO3			

Data Entry Comments:

Spike recovery calculation:

S96T002695 $Cr = \left(\frac{1316.000}{1201}\right) - \left(\frac{114.920}{1201}\right) \times 100 = 100\ \%$

S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

Note: Spike ~~tran~~ value is 1.0 ppm for all elements except for U = 2.0 ppm.

File #: 960730C

WHC-SD-WM-DP-192, REV. 0

Identity 1: ICV Identity 2: Quality Control 8:25 PM July 30, 1996
Task name : OPTIMA
Sample Weight : 1.0000 Solution Volume : 1.00
On-Peak Integrations : 3 Off-Peak Integrations : 1

	Zr (ppm)	Sr (ppm)	Bi (ppm)	Si (ppm)	Al (ppm)	Co (ppm)	Cu (ppm)	Li (ppm)
Mean	4.900	4.932	4.922	4.743	4.895	5.044	4.999	5.135
S.D.	0.007	0.008	0.010	0.006	0.010	0.007	0.010	0.027
% R.S.D.	0.147	0.156	0.208	0.128	0.212	0.141	0.202	0.531

	Zn (ppm)	Ni (ppm)	La (ppm)	Fe (ppm)	Ca (ppm)	Cr (ppm)	Nd (ppm)	U (ppm)
Mean	5.089	4.972	4.933	5.005	4.892	5.026	5.033	9.532
S.D.	0.005	0.008	0.011	0.013	0.008	0.014	0.023	0.023
% R.S.D.	0.104	0.151	0.227	0.252	0.162	0.277	0.450	0.237

	Ce (ppm)	Sm (ppm)	Ba (ppm)	P (ppm)	S (ppm)	Mg (ppm)	As (ppm)	Na (ppm)
Mean	5.005	4.983	4.954	5.475	5.167	4.881	5.058	5.070
S.D.	0.011	0.008	0.009	0.219	0.116	0.008	0.005	0.031
% R.S.D.	0.224	0.164	0.185	3.998	2.247	0.161	0.109	0.602

	Mo (ppm)	Se (ppm)	Ag (ppm)	Pb (ppm)	Ti (ppm)	Cd (ppm)	B (ppm)	K (ppm)
Mean	5.045	4.819	4.947	4.958	4.889	4.960	5.043	5.199
S.D.	0.013	0.012	0.005	0.014	0.007	0.008	0.009	0.028
% R.S.D.	0.255	0.239	0.102	0.288	0.139	0.154	0.174	0.539

	Mn (ppm)	Sb (ppm)	V (ppm)	Be (ppm)	Tl (ppm)
Mean	5.000	4.733	4.982	5.125	4.883
S.D.	0.009	0.029	0.011	0.006	0.003
% R.S.D.	0.182	0.622	0.216	0.108	0.055

JK Lado
07-30-96
GW-101 S96T002695
S96T002704
S96T002712
Worklist # 10335

SIGNATURE ABOVE REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 1697 TO 1719.

Identity 1: ICB Identity 2: Quality Control 8:28 PM July 30, 1996
Task name : OPTIMA
Sample Weight : 1.0000 Solution Volume : 1.00
On-Peak Integrations : 3 Off-Peak Integrations : 1

	Zr (ppm)	Sr (ppm)	Bi (ppm)	Si (ppm)	Al (ppm)	Co (ppm)	Cu (ppm)	Li (ppm)
Mean	-0.001	0.000	-0.012	-0.009	-0.015	0.008	-0.001	0.000
S.D.	0.000	0.000	0.006	0.003	0.004	0.004	0.000	0.000
% R.S.D.	27.654	0.000	47.489	29.739	23.728	49.446	71.091	107.135

	Zn (ppm)	Ni (ppm)	La (ppm)	Fe (ppm)	Ca (ppm)	Cr (ppm)	Nd (ppm)	U (ppm)
Mean	-0.000	0.001	-0.004	-0.006	-0.000	0.002	0.004	-0.055
S.D.	0.000	0.002	0.001	0.001	0.000	0.001	0.005	0.009
% R.S.D.	139.381	318.620	37.161	19.688	11.547	43.442	128.825	16.208

	Ce (ppm)	Sm (ppm)	Ba (ppm)	P (ppm)	S (ppm)	Mg (ppm)	As (ppm)	Na (ppm)
Mean	0.007	0.021	0.000	0.021	0.002	0.000	-0.004	0.009
S.D.	0.003	0.003	0.000	0.013	0.004	0.000	0.003	0.003
% R.S.D.	46.566	12.526	12.500	59.289	210.151	173.206	88.166	35.255

	Mo (ppm)	Se (ppm)	Ag (ppm)	Pb (ppm)	Ti (ppm)	Cd (ppm)	B (ppm)	K (ppm)
Mean	0.001	0.027	0.000	-0.001	-0.001	-0.000	0.005	0.141
S.D.	0.000	0.004	0.000	0.016	0.000	0.001	0.001	0.008
% R.S.D.	44.607	16.296	77.750	1139.435	88.990	864.498	24.482	5.543

	Mn (ppm)	Sb (ppm)	V (ppm)	Be (ppm)	Tl (ppm)
Mean	0.000	0.053	0.002	0.001	0.024
S.D.	0.000	0.020	0.000	0.000	0.011
% R.S.D.	74.020	38.129	6.479	0.167	47.241

Identity 1: LLS Identity 2: Quality Control 8:31 PM July 30, 1996
Task name : OPTIMA
Sample Weight : 1.0000 Solution Volume : 1.00
On-Peak Integrations : 3 Off-Peak Integrations : 1

	Zr (ppm)	Sr (ppm)	Bi (ppm)	Si (ppm)	Al (ppm)	Co (ppm)	Cu (ppm)	Li (ppm)
Mean	0.023	0.021	0.191	0.107	0.087	0.040	0.019	0.021
S.D.	0.001	0.000	0.004	0.003	0.004	0.002	0.000	0.000
% R.S.D.	4.873	0.926	2.184	2.770	5.027	4.955	1.354	0.512

	Zn (ppm)	Ni (ppm)	La (ppm)	Fe (ppm)	Ca (ppm)	Cr (ppm)	Nd (ppm)	U (ppm)
Mean	0.021	0.042	0.101	0.100	0.185	0.018	0.209	0.530
S.D.	0.000	0.002	0.001	0.002	0.000	0.002	0.003	0.046
% R.S.D.	2.317	5.367	0.827	1.758	0.113	9.592	1.291	8.631

	Ce (ppm)	Sm (ppm)	Ba (ppm)	P (ppm)	S (ppm)	Mg (ppm)	As (ppm)	Na (ppm)
Mean	0.194	0.239	0.101	0.477	0.213	0.202	0.202	0.210
S.D.	0.013	0.008	0.000	0.009	0.005	0.001	0.001	0.002
% R.S.D.	6.877	3.330	0.162	1.993	2.266	0.453	0.698	1.031

	Mo (ppm)	Se (ppm)	Ag (ppm)	Pb (ppm)	Ti (ppm)	Cd (ppm)	B (ppm)	K (ppm)
Mean	0.100	0.253	0.018	0.189	0.021	0.009	0.106	0.632
S.D.	0.001	0.016	0.001	0.008	0.001	0.001	0.001	0.010
% R.S.D.	1.175	6.299	5.744	4.496	2.912	8.598	0.959	1.601

	Mn (ppm)	Sb (ppm)	V (ppm)	Be (ppm)	Tl (ppm)
Mean	0.020	0.155	0.103	0.011	0.454
S.D.	0.000	0.045	0.001	0.001	0.023
% R.S.D.	0.864	28.931	1.282	5.272	5.095

Identity 1: ICSA Identity 2: Quality Control 8:34 PM July 30, 1996
Task name : OPTIMA
Sample Weight : 1.0000 Solution Volume : 1.00
On-Peak Integrations : 3 Off-Peak Integrations : 1

	Zr (ppm)	Sr (ppm)	Bi (ppm)	Si (ppm)	Al (ppm)	Co (ppm)	Cu (ppm)	Li (ppm)
Mean	-0.000	0.002	-0.024	0.011	198.564	0.001	-0.001	0.000
S.D.	0.001	0.000	0.004	0.002	0.507	0.002	0.000	0.000
% R.S.D.	558.692	3.535	18.130	16.620	0.255	377.724	43.538	107.136

	Zn (ppm)	Ni (ppm)	La (ppm)	Fe (ppm)	Ca (ppm)	Cr (ppm)	Nd (ppm)	U (ppm)
Mean	-0.006	0.000	-0.001	92.735	99.325	0.001	-0.033	-0.038
S.D.	0.000	0.002	0.003	0.016	0.133	0.003	0.011	0.021
% R.S.D.	1.907	1464.610	279.085	0.018	0.134	224.026	32.352	54.775

	Ce (ppm)	Sm (ppm)	Ba (ppm)	P (ppm)	S (ppm)	Mg (ppm)	As (ppm)	Na (ppm)
Mean	-0.013	0.036	0.004	0.035	0.030	96.416	0.010	200.544
S.D.	0.009	0.007	0.000	0.003	0.002	0.175	0.003	0.471
% R.S.D.	66.084	18.362	3.117	9.000	6.007	0.181	25.066	0.235

	Mo (ppm)	Se (ppm)	Ag (ppm)	Pb (ppm)	Ti (ppm)	Cd (ppm)	B (ppm)	K (ppm)
Mean	-0.002	0.026	0.001	0.016	-0.001	-0.000	0.012	-0.073
S.D.	0.002	0.012	0.001	0.004	0.000	0.001	0.002	0.006
% R.S.D.	77.265	47.077	103.265	26.944	55.422	313.000	14.752	8.393

	Mn (ppm)	Sb (ppm)	V (ppm)	Be (ppm)	Tl (ppm)
Mean	0.012	0.018	0.001	0.003	0.005
S.D.	0.000	0.010	0.001	0.000	0.025
% R.S.D.	3.609	57.023	88.008	5.191	482.305

Identity 1: ICSAB Identity 2: Quality Control 8:37 PM July 30, 1996
Task name : OPTIMA
Sample Weight : 1.0000 Solution Volume : 1.00
On-Peak Integrations : 3 Off-Peak Integrations : 1

	Zr (ppm)	Sr (ppm)	Bi (ppm)	Si (ppm)	Al (ppm)	Co (ppm)	Cu (ppm)	Li (ppm)
Mean	-0.005	0.002	-0.030	0.006	197.973	0.489	0.503	0.981
S.D.	0.001	0.000	0.005	0.002	0.945	0.003	0.003	0.011
% R.S.D.	13.460	4.055	17.989	29.534	0.478	0.699	0.619	1.070

	Zn (ppm)	Ni (ppm)	La (ppm)	Fe (ppm)	Ca (ppm)	Cr (ppm)	Nd (ppm)	U (ppm)
Mean	0.973	0.958	-0.004	92.765	99.373	0.496	-0.002	-0.075
S.D.	0.003	0.005	0.001	0.105	0.161	0.001	0.007	0.036
% R.S.D.	0.270	0.484	20.847	0.113	0.162	0.178	304.030	47.610

	Ce (ppm)	Sm (ppm)	Ba (ppm)	P (ppm)	S (ppm)	Mg (ppm)	As (ppm)	Na (ppm)
Mean	0.036	0.012	0.504	0.052	0.034	96.942	0.034	197.314
S.D.	0.007	0.007	0.002	0.016	0.017	0.438	0.003	2.173
% R.S.D.	19.119	55.119	0.421	30.629	49.284	0.451	8.225	1.102

	Mo (ppm)	Se (ppm)	Ag (ppm)	Pb (ppm)	Ti (ppm)	Cd (ppm)	B (ppm)	K (ppm)
Mean	0.000	0.059	1.009	0.971	-0.001	0.967	0.013	0.009
S.D.	0.001	0.011	0.002	0.010	0.000	0.002	0.002	0.015
% R.S.D.	227.271	18.826	0.200	1.040	43.389	0.222	13.710	177.888

	Mn (ppm)	Sb (ppm)	V (ppm)	Be (ppm)	Tl (ppm)
Mean	0.499	0.021	0.491	0.493	0.103
S.D.	0.001	0.018	0.002	0.002	0.013
% R.S.D.	0.175	87.915	0.336	0.376	12.735

Identity 1: S96T002695_L Identity 2: .025-30-2-8 ml 8:44 PM July 30, 1996
Task name : OPTIMA
Sample Weight : 1.0000 Solution Volume : 6005.00
On-Peak Integrations : 3 Off-Peak Integrations : 1

	Zr (ppm)	Sr (ppm)	Bi (ppm)	Si (ppm)	Al (ppm)	Co (ppm)	Cu (ppm)	Li (ppm)
Mean	18.668	1.663	-96.338	119.787	31322.419	13.633	-4.943	12.102
S.D.	2.257	0.222	41.614	20.601	110.974	11.824	1.218	1.281
% R.S.D.	12.088	13.323	43.196	17.198	0.354	86.730	24.632	10.584

	Zn (ppm)	Ni (ppm)	La (ppm)	Fe (ppm)	Ca (ppm)	Cr (ppm)	Nd (ppm)	U (ppm)
Mean	3.309	-10.209	-14.087	31.412	-41.513	104.143	-38.265	96.838
S.D.	1.381	10.249	8.451	9.264	1.254	2.517	61.501	73.817
% R.S.D.	41.724	100.389	59.988	29.493	3.020	2.417	160.726	76.228

	Ce (ppm)	Sm (ppm)	Ba (ppm)	P (ppm)	S (ppm)	Mg (ppm)	As (ppm)	Na (ppm)
Mean	82.378	-31.289	3.338	406.749	436.891	16.353	-20.960	263537.100
S.D.	13.997	10.098	0.918	95.073	15.275	2.518	13.200	1693.437
% R.S.D.	16.991	32.272	27.491	23.374	3.496	15.396	62.979	0.643

	Mo (ppm)	Se (ppm)	Ag (ppm)	Pb (ppm)	Ti (ppm)	Cd (ppm)	B (ppm)	K (ppm)
Mean	70.984	-76.731	3.163	44.447	-4.851	2.694	64.810	36876.057
S.D.	1.069	46.499	2.177	49.796	2.502	3.369	3.769	318.252
% R.S.D.	1.506	60.599	68.835	112.036	51.572	125.033	5.815	0.863

	Mn (ppm)	Sb (ppm)	V (ppm)	Be (ppm)	Tl (ppm)
Mean	0.022	30.473	19.847	5.722	295.658
S.D.	2.164	193.734	3.860	0.009	70.989
% R.S.D.	9741.789	635.762	19.449	0.166	24.010

Identity 1: S96T002695 Identity 2: .025-30 ml 8:48 PM July 30, 1996
Task name : OPTIMA
Sample Weight : 1.0000 Solution Volume : 1201.00
On-Peak Integrations : 3 Off-Peak Integrations : 1

	Zr (ppm)	Sr (ppm)	Bi (ppm)	Si (ppm)	Al (ppm)	Co (ppm)	Cu (ppm)	Li (ppm)
Mean	16.505	0.051	5.826	182.633	32438.803	-0.007	-1.593	10.507
S.D.	0.776	0.044	13.181	1.457	74.656	0.004	0.262	0.270
% R.S.D.	4.701	86.603	226.251	0.798	0.230	63.490	16.441	2.566

	Zn (ppm)	Ni (ppm)	La (ppm)	Fe (ppm)	Ca (ppm)	Cr (ppm)	Nd (ppm)	U (ppm)
Mean	9.320	18.498	-5.060	12.538	-6.380	114.920	6.357	59.350
S.D.	0.369	2.897	2.602	2.548	0.167	0.496	1.840	32.506
% R.S.D.	3.955	15.661	51.426	20.321	2.620	0.431	28.940	54.770

	Ce (ppm)	Sm (ppm)	Ba (ppm)	P (ppm)	S (ppm)	Mg (ppm)	As (ppm)	Na (ppm)
Mean	-21.681	32.585	-0.036	274.025	465.742	0.073	-16.904	258776.946
S.D.	8.189	4.134	0.124	13.210	6.671	0.252	3.764	962.833
% R.S.D.	37.770	12.688	346.410	4.821	1.432	346.411	22.264	0.372

	Mo (ppm)	Se (ppm)	Ag (ppm)	Pb (ppm)	Ti (ppm)	Cd (ppm)	B (ppm)	K (ppm)
Mean	65.861	88.900	-1.813	41.447	0.534	0.862	54.120	35991.160
S.D.	2.106	19.505	0.557	20.457	0.223	0.494	1.810	362.803
% R.S.D.	3.197	21.940	30.740	49.358	41.763	57.249	3.344	1.008

	Mn (ppm)	Sb (ppm)	V (ppm)	Be (ppm)	Tl (ppm)
Mean	3.375	9.457	-1.333	3.908	15.345
S.D.	0.221	14.742	0.854	0.167	3.318
% R.S.D.	6.534	155.889	64.059	4.281	21.622

Identity 1: S96T002695_D Identity 2: .025-30 ml 8:51 PM July 30, 1996
Task name : OPTIMA
Sample Weight : 1.0000 Solution Volume : 1201.00
On-Peak Integrations : 3 Off-Peak Integrations : 1

	Zr (ppm)	Sr (ppm)	Bi (ppm)	Si (ppm)	Al (ppm)	Co (ppm)	Cu (ppm)	Li (ppm)
Mean	15.911	0.230	8.515	185.541	33123.671	5.460	-0.914	11.288
S.D.	1.431	0.133	4.645	3.545	269.865	2.364	0.177	0.349
% R.S.D.	8.991	57.735	54.547	1.911	0.815	43.304	19.317	3.089

	Zn (ppm)	Ni (ppm)	La (ppm)	Fe (ppm)	Ca (ppm)	Cr (ppm)	Nd (ppm)	U (ppm)
Mean	10.351	16.950	-2.264	9.945	-2.424	120.152	6.562	-6.564
S.D.	0.402	1.551	0.964	1.729	1.113	1.077	3.712	43.371
% R.S.D.	3.885	9.151	42.607	17.386	45.919	0.896	56.574	660.742

	Ce (ppm)	Sm (ppm)	Ba (ppm)	P (ppm)	S (ppm)	Mg (ppm)	As (ppm)	Na (ppm)
Mean	-1.788	20.667	0.405	274.073	456.162	0.073	-7.199	267635.176
S.D.	15.524	11.999	0.161	7.072	5.624	0.333	2.626	1880.492
% R.S.D.	868.017	58.057	39.787	2.580	1.233	458.257	36.479	0.703

	Mo (ppm)	Se (ppm)	Ag (ppm)	Pb (ppm)	Ti (ppm)	Cd (ppm)	B (ppm)	K (ppm)
Mean	66.849	63.012	-1.541	62.113	-0.701	0.321	52.839	37525.392
S.D.	0.748	16.928	0.680	15.724	0.511	0.676	1.265	282.643
% R.S.D.	1.119	26.865	44.120	25.314	72.918	210.422	2.394	0.753

	Mn (ppm)	Sb (ppm)	V (ppm)	Be (ppm)	Tl (ppm)
Mean	4.756	50.500	-0.422	3.518	19.422
S.D.	0.433	5.325	0.564	0.325	24.447
% R.S.D.	9.112	10.544	133.496	9.226	125.872

Identity 1: S96T002695_A Identity 2: .025sam+6sst5+24hno3 8:55 PM July 30, 1996
Task name : OPTIMA
Sample Weight : 1.0000 Solution Volume : 1201.00
On-Peak Integrations : 3 Off-Peak Integrations : 1

	Zr (ppm)	Sr (ppm)	Bi (ppm)	Si (ppm)	Al (ppm)	Co (ppm)	Cu (ppm)	Li (ppm)
Mean	1196.185	1197.218	1177.489	1371.860	32359.129	1203.177	1221.137	1210.316
S.D.	4.350	1.835	6.736	5.438	70.512	4.090	2.350	5.372
% R.S.D.	0.364	0.153	0.572	0.396	0.218	0.340	0.192	0.444

	Zn (ppm)	Ni (ppm)	La (ppm)	Fe (ppm)	Ca (ppm)	Cr (ppm)	Nd (ppm)	U (ppm)
Mean	1215.957	1204.336	1194.414	1217.830	1170.941	1316.688	1265.610	2174.660
S.D.	3.054	3.811	8.485	5.451	1.727	6.665	9.893	30.781
% R.S.D.	0.251	0.316	0.710	0.448	0.148	0.506	0.782	1.415

	Ce (ppm)	Sm (ppm)	Ba (ppm)	P (ppm)	S (ppm)	Mg (ppm)	As (ppm)	Na (ppm)
Mean	1249.290	1191.125	1202.945	1560.971	1670.918	1151.893	1197.601	249399.276
S.D.	3.393	4.043	1.920	14.880	13.381	1.758	14.269	897.472
% R.S.D.	0.272	0.339	0.160	0.953	0.801	0.153	1.191	0.360

	Mo (ppm)	Se (ppm)	Ag (ppm)	Pb (ppm)	Ti (ppm)	Cd (ppm)	B (ppm)	K (ppm)
Mean	1260.650	1180.664	1071.167	1296.806	1176.936	1185.644	1252.940	36175.222
S.D.	6.959	14.028	2.225	21.422	1.338	2.992	2.055	165.856
% R.S.D.	0.552	1.188	0.208	1.652	0.114	0.252	0.164	0.458

	Mn (ppm)	Sb (ppm)	V (ppm)	Be (ppm)	Tl (ppm)
Mean	1206.145	1192.843	1207.869	1220.336	1246.161
S.D.	3.380	33.987	3.527	2.157	11.957
% R.S.D.	0.280	2.849	0.292	0.177	0.959

Identity 1: CCV Identity 2: Quality Control 9:05 PM July 30, 1996
Task name : OPTIMA
Sample Weight : 1.0000 Solution Volume : 1.00
On-Peak Integrations : 3 Off-Peak Integrations : 1

	Zr (ppm)	Sr (ppm)	Bi (ppm)	Si (ppm)	Al (ppm)	Co (ppm)	Cu (ppm)	Li (ppm)
Mean	4.910	4.989	4.912	4.721	4.923	4.965	5.094	5.268
S.D.	0.004	0.006	0.010	0.004	0.014	0.012	0.010	0.040
% R.S.D.	0.086	0.117	0.201	0.091	0.283	0.238	0.189	0.753

	Zn (ppm)	Ni (ppm)	La (ppm)	Fe (ppm)	Ca (ppm)	Cr (ppm)	Nd (ppm)	U (ppm)
Mean	4.973	4.920	4.984	4.973	4.936	4.927	5.169	9.794
S.D.	0.007	0.015	0.018	0.020	0.005	0.020	0.035	0.014
% R.S.D.	0.140	0.308	0.355	0.404	0.103	0.408	0.678	0.145

	Ce (ppm)	Sm (ppm)	Ba (ppm)	P (ppm)	S (ppm)	Mg (ppm)	As (ppm)	Na (ppm)
Mean	5.073	5.086	5.036	5.638	5.182	4.793	5.045	5.192
S.D.	0.015	0.007	0.007	0.099	0.045	0.006	0.033	0.037
% R.S.D.	0.287	0.146	0.146	1.748	0.866	0.134	0.653	0.718

	Mo (ppm)	Se (ppm)	Ag (ppm)	Pb (ppm)	Ti (ppm)	Cd (ppm)	B (ppm)	K (ppm)
Mean	4.984	4.894	4.867	4.962	4.895	4.916	5.040	5.208
S.D.	0.019	0.022	0.007	0.032	0.002	0.004	0.012	0.021
% R.S.D.	0.372	0.444	0.135	0.646	0.039	0.086	0.246	0.397

	Mn (ppm)	Sb (ppm)	V (ppm)	Be (ppm)	Tl (ppm)
Mean	4.934	4.698	4.940	5.142	4.853
S.D.	0.010	0.026	0.005	0.006	0.018
% R.S.D.	0.209	0.545	0.096	0.110	0.371

Identity 1: CCB Identity 2: Quality Control 9:09 PM July 30, 1996
Task name : OPTIMA
Sample Weight : 1.0000 Solution Volume : 1.00
On-Peak Integrations : 3 Off-Peak Integrations : 1

	Zr (ppm)	Sr (ppm)	Bi (ppm)	Si (ppm)	Al (ppm)	Co (ppm)	Cu (ppm)	Li (ppm)
Mean	-0.002	0.000	-0.031	-0.013	-0.012	0.005	-0.001	0.001
S.D.	0.001	0.000	0.006	0.002	0.005	0.002	0.000	0.000
% R.S.D.	44.597	16.667	19.120	13.883	41.086	43.058	32.597	27.369

	Zn (ppm)	Ni (ppm)	La (ppm)	Fe (ppm)	Ca (ppm)	Cr (ppm)	Nd (ppm)	U (ppm)
Mean	-0.001	-0.005	-0.005	-0.001	-0.000	-0.002	0.013	-0.124
S.D.	0.000	0.002	0.003	0.002	0.000	0.002	0.005	0.036
% R.S.D.	15.832	40.983	54.266	237.058	60.000	102.366	41.042	28.966

	Ce (ppm)	Sm (ppm)	Ba (ppm)	P (ppm)	S (ppm)	Mg (ppm)	As (ppm)	Na (ppm)
Mean	0.012	0.001	0.001	-0.011	-0.004	-0.000	-0.002	0.004
S.D.	0.007	0.005	0.000	0.010	0.001	0.000	0.005	0.003
% R.S.D.	62.543	373.187	36.410	96.369	33.783	86.602	291.086	91.627

	Mo (ppm)	Se (ppm)	Ag (ppm)	Pb (ppm)	Ti (ppm)	Cd (ppm)	B (ppm)	K (ppm)
Mean	-0.000	0.015	0.002	-0.005	-0.002	-0.001	0.003	0.056
S.D.	0.001	0.017	0.001	0.014	0.000	0.000	0.000	0.001
% R.S.D.	234.164	111.736	23.858	280.249	26.378	37.356	3.764	2.512

	Mn (ppm)	Sb (ppm)	V (ppm)	Be (ppm)	Tl (ppm)
Mean	-0.001	0.054	0.003	0.000	0.034
S.D.	0.000	0.011	0.000	0.000	0.019
% R.S.D.	61.282	20.992	13.145	46.992	55.143

Identity 1: S96T002704_L Identity 2: .025-30-2-8 ml 9:12 PM July 30, 1996
Task name : OPTIMA
Sample Weight : 1.0000 Solution Volume : 6005.00
On-Peak Integrations : 3 Off-Peak Integrations : 1

	Zr (ppm)	Sr (ppm)	Bi (ppm)	Si (ppm)	Al (ppm)	Co (ppm)	Cu (ppm)	Li (ppm)
Mean	26.913	2.175	-78.834	142.259	31676.304	6.803	-3.898	15.454
S.D.	1.503	0.222	23.915	16.810	128.084	11.806	2.991	0.640
% R.S.D.	5.583	10.189	30.336	11.817	0.404	173.554	76.737	4.144

	Zn (ppm)	Ni (ppm)	La (ppm)	Fe (ppm)	Ca (ppm)	Cr (ppm)	Nd (ppm)	U (ppm)
Mean	3.126	-0.592	-2.744	34.103	-51.960	133.238	90.115	162.661
S.D.	4.743	8.821	17.695	11.081	0.000	5.300	17.659	85.163
% R.S.D.	151.738	1489.619	644.959	32.494	0.000	3.977	19.596	52.356

	Ce (ppm)	Sm (ppm)	Ba (ppm)	P (ppm)	S (ppm)	Mg (ppm)	As (ppm)	Na (ppm)
Mean	175.817	81.296	4.054	330.571	448.860	6.904	3.402	261613.273
S.D.	3.748	15.643	0.575	58.389	29.119	0.629	31.995	995.742
% R.S.D.	2.132	19.242	14.182	17.663	6.487	9.116	940.543	0.381

	Mo (ppm)	Se (ppm)	Ag (ppm)	Pb (ppm)	Ti (ppm)	Cd (ppm)	B (ppm)	K (ppm)
Mean	75.923	164.379	10.523	77.601	-4.361	-4.863	69.737	37304.420
S.D.	11.123	48.661	1.609	87.761	3.469	0.936	5.361	174.216
% R.S.D.	14.650	29.603	15.294	113.093	79.560	19.248	7.688	0.467

	Mn (ppm)	Sb (ppm)	V (ppm)	Be (ppm)	Tl (ppm)
Mean	3.775	119.565	13.715	5.730	454.355
S.D.	2.168	93.479	3.796	1.436	124.385
% R.S.D.	57.433	78.183	27.677	25.059	27.376

Identity 1: S96T002704 Identity 2: .025-30 ml 9:15 PM July 30, 1996
Task name : OPTIMA
Sample Weight : 1.0000 Solution Volume : 1201.00
On-Peak Integrations : 3 Off-Peak Integrations : 1

	Zr (ppm)	Sr (ppm)	Bi (ppm)	Si (ppm)	Al (ppm)	Co (ppm)	Cu (ppm)	Li (ppm)
Mean	15.649	0.230	-1.511	190.615	32229.080	6.824	-0.633	11.345
S.D.	0.599	0.077	12.543	0.290	45.333	2.362	0.477	0.128
% R.S.D.	3.830	33.333	830.331	0.152	0.141	34.611	75.219	1.129

	Zn (ppm)	Ni (ppm)	La (ppm)	Fe (ppm)	Ca (ppm)	Cr (ppm)	Nd (ppm)	U (ppm)
Mean	11.941	19.758	-1.695	8.208	-6.297	120.574	18.873	-1.016
S.D.	0.680	4.066	2.598	1.314	0.000	1.433	11.317	12.662
% R.S.D.	5.697	20.579	153.211	16.005	0.000	1.188	59.962	1246.739

	Ce (ppm)	Sm (ppm)	Ba (ppm)	P (ppm)	S (ppm)	Mg (ppm)	As (ppm)	Na (ppm)
Mean	9.332	14.987	0.632	277.876	446.302	-0.291	-3.465	251629.352
S.D.	3.548	3.307	0.090	2.973	10.312	0.000	2.929	114.871
% R.S.D.	38.022	22.066	14.245	1.070	2.311	0.000	84.526	0.046

	Mo (ppm)	Se (ppm)	Ag (ppm)	Pb (ppm)	Ti (ppm)	Cd (ppm)	B (ppm)	K (ppm)
Mean	67.158	53.232	-1.470	63.912	-0.605	-0.326	57.658	35682.567
S.D.	0.701	9.791	0.527	5.930	0.427	0.187	0.828	157.714
% R.S.D.	1.044	18.392	35.857	9.278	70.545	57.394	1.436	0.442

	Mn (ppm)	Sb (ppm)	V (ppm)	Be (ppm)	Tl (ppm)
Mean	3.007	42.941	2.345	4.090	38.169
S.D.	0.215	7.586	0.210	0.163	10.201
% R.S.D.	7.154	17.666	8.937	3.991	26.725

Identity 1: S96T002704_D Identity 2: .025-30 ml 9:18 PM July 30, 1996
Task name : OPTIMA
Sample Weight : 1.0000 Solution Volume : 1201.00
On-Peak Integrations : 3 Off-Peak Integrations : 1

	Zr (ppm)	Sr (ppm)	Bi (ppm)	Si (ppm)	Al (ppm)	Co (ppm)	Cu (ppm)	Li (ppm)
Mean	14.537	-0.102	2.140	183.564	33166.223	1.376	-2.135	11.428
S.D.	1.422	0.117	14.451	2.040	64.731	2.357	0.591	0.242
% R.S.D.	9.783	114.564	675.220	1.112	0.195	171.341	27.658	2.119

	Zn (ppm)	Ni (ppm)	La (ppm)	Fe (ppm)	Ca (ppm)	Cr (ppm)	Nd (ppm)	U (ppm)
Mean	10.909	13.829	-7.953	1.282	-16.632	115.181	-14.403	-78.694
S.D.	0.424	3.953	2.944	2.283	0.048	1.098	3.176	64.488
% R.S.D.	3.890	28.583	37.016	177.993	0.290	0.953	22.050	81.947

	Ce (ppm)	Sm (ppm)	Ba (ppm)	P (ppm)	S (ppm)	Mg (ppm)	As (ppm)	Na (ppm)
Mean	-33.461	6.742	-0.334	281.739	457.330	-0.436	-16.963	266261.640
S.D.	18.141	15.338	0.271	17.351	2.708	0.252	4.035	1952.006
% R.S.D.	54.215	227.477	81.127	6.159	0.592	57.735	23.784	0.733

	Mo (ppm)	Se (ppm)	Ag (ppm)	Pb (ppm)	Ti (ppm)	Cd (ppm)	B (ppm)	K (ppm)
Mean	64.997	56.452	-3.651	60.886	-1.333	1.293	55.497	37611.055
S.D.	0.913	9.650	0.803	2.639	0.741	0.673	0.466	294.389
% R.S.D.	1.405	17.095	21.999	4.335	55.574	52.013	0.841	0.783

	Mn (ppm)	Sb (ppm)	V (ppm)	Be (ppm)	Tl (ppm)
Mean	2.024	24.198	-4.618	3.795	39.321
S.D.	0.370	40.854	1.625	0.171	35.012
% R.S.D.	18.297	168.834	35.184	4.516	89.041

Identity 1: S96T002704_A Identity 2: .025sam+6sst5+24hno3 9:21 PM July 30, 1996
Task name : OPTIMA
Sample Weight : 1.0000 Solution Volume : 1201.00
On-Peak Integrations : 3 Off-Peak Integrations : 1

	Zr (ppm)	Sr (ppm)	Bi (ppm)	Si (ppm)	Al (ppm)	Co (ppm)	Cu (ppm)	Li (ppm)
Mean	1196.063	1205.304	1176.100	1387.997	32687.680	1184.055	1235.089	1230.381
S.D.	3.177	0.044	11.404	6.267	28.046	4.728	2.220	7.667
% R.S.D.	0.266	0.004	0.970	0.452	0.086	0.399	0.180	0.623

	Zn (ppm)	Ni (ppm)	La (ppm)	Fe (ppm)	Ca (ppm)	Cr (ppm)	Nd (ppm)	U (ppm)
Mean	1198.409	1194.216	1201.272	1204.572	1164.625	1302.246	1249.487	2330.778
S.D.	5.351	10.813	6.107	4.668	0.804	7.340	4.511	49.073
% R.S.D.	0.447	0.905	0.508	0.388	0.069	0.564	0.361	2.105

	Ce (ppm)	Sm (ppm)	Ba (ppm)	P (ppm)	S (ppm)	Mg (ppm)	As (ppm)	Na (ppm)
Mean	1211.322	1225.492	1214.617	1656.019	1703.813	1136.000	1209.067	255695.886
S.D.	14.826	8.005	1.178	42.062	22.218	3.239	8.953	1397.893
% R.S.D.	1.224	0.653	0.097	2.540	1.304	0.285	0.740	0.547

	Mo (ppm)	Se (ppm)	Ag (ppm)	Pb (ppm)	Ti (ppm)	Cd (ppm)	B (ppm)	K (ppm)
Mean	1252.256	1227.968	1046.191	1287.494	1180.950	1173.558	1239.504	36916.039
S.D.	5.538	35.369	4.959	11.040	2.112	6.172	9.774	222.421
% R.S.D.	0.442	2.880	0.474	0.857	0.179	0.526	0.789	0.603

	Mn (ppm)	Sb (ppm)	V (ppm)	Be (ppm)	Tl (ppm)
Mean	1192.998	1173.826	1195.411	1214.739	1169.675
S.D.	2.062	2.475	3.806	2.325	36.273
% R.S.D.	0.173	0.211	0.318	0.191	3.101

Identity 1: S96T002712_L Identity 2: .025-30-2-8 ml 9:24 PM July 30, 1996
Task name : OPTIMA
Sample Weight : 1.0000 Solution Volume : 6005.00
On-Peak Integrations : 3 Off-Peak Integrations : 1

	Zr (ppm)	Sr (ppm)	Bi (ppm)	Si (ppm)	Al (ppm)	Co (ppm)	Cu (ppm)	Li (ppm)
Mean	13.495	0.896	-110.693	159.312	31752.322	34.123	-6.852	13.917
S.D.	9.327	0.887	10.867	10.719	30.355	11.802	3.136	2.309
% R.S.D.	69.117	98.974	9.817	6.728	0.096	34.587	45.766	16.589

	Zn (ppm)	Ni (ppm)	La (ppm)	Fe (ppm)	Ca (ppm)	Cr (ppm)	Nd (ppm)	U (ppm)
Mean	1.560	-5.514	-28.313	-1.098	-46.109	104.799	41.827	-80.054
S.D.	1.599	7.260	4.848	7.618	0.418	6.724	20.231	381.640
% R.S.D.	102.498	131.671	17.121	693.557	0.906	6.416	48.368	476.730

	Ce (ppm)	Sm (ppm)	Ba (ppm)	P (ppm)	S (ppm)	Mg (ppm)	As (ppm)	Na (ppm)
Mean	15.425	30.053	2.325	273.651	449.664	8.358	-29.537	267207.087
S.D.	68.674	77.907	1.867	81.343	38.008	1.090	20.819	3371.332
% R.S.D.	445.207	259.232	80.310	29.725	8.453	13.044	70.485	1.262

	Mo (ppm)	Se (ppm)	Ag (ppm)	Pb (ppm)	Ti (ppm)	Cd (ppm)	B (ppm)	K (ppm)
Mean	72.218	256.913	59.854	-16.700	-6.080	-5.941	57.449	37046.419
S.D.	7.010	10.351	6.716	30.199	1.874	1.628	10.379	519.424
% R.S.D.	9.707	4.029	11.221	180.836	30.821	27.404	18.067	1.402

	Mn (ppm)	Sb (ppm)	V (ppm)	Be (ppm)	Tl (ppm)
Mean	0.048	204.940	4.392	7.128	413.841
S.D.	2.181	108.795	7.199	1.465	158.031
% R.S.D.	4564.981	53.086	163.934	20.552	38.187

Identity 1: S96T002712 Identity 2: .025-30 ml 9:27 PM July 30, 1996
Task name : OPTIMA
Sample Weight : 1.0000 Solution Volume : 1201.00
On-Peak Integrations : 3 Off-Peak Integrations : 1

	Zr (ppm)	Sr (ppm)	Bi (ppm)	Si (ppm)	Al (ppm)	Co (ppm)	Cu (ppm)	Li (ppm)
Mean	10.906	0.461	-23.505	209.815	32386.873	12.303	-0.608	12.323
S.D.	0.745	0.077	1.927	1.238	78.939	0.005	0.127	0.222
% R.S.D.	6.829	16.667	8.199	0.590	0.244	0.039	20.964	1.800

	Zn (ppm)	Ni (ppm)	La (ppm)	Fe (ppm)	Ca (ppm)	Cr (ppm)	Nd (ppm)	U (ppm)
Mean	9.078	15.246	-10.256	6.830	-5.823	115.291	28.808	-166.099
S.D.	0.379	0.752	2.606	0.491	0.097	2.228	6.139	37.250
% R.S.D.	4.174	4.934	25.406	7.188	1.657	1.932	21.309	22.426

	Ce (ppm)	Sm (ppm)	Ba (ppm)	P (ppm)	S (ppm)	Mg (ppm)	As (ppm)	Na (ppm)
Mean	23.730	-0.348	0.727	253.255	468.390	-0.145	-12.262	255198.817
S.D.	6.973	5.625	0.169	11.446	11.831	0.126	5.131	1576.063
% R.S.D.	29.386	1614.177	23.242	4.520	2.526	86.602	41.847	0.618

	Mo (ppm)	Se (ppm)	Ag (ppm)	Pb (ppm)	Ti (ppm)	Cd (ppm)	B (ppm)	K (ppm)
Mean	68.207	62.555	3.550	57.587	-1.877	2.801	54.581	35431.401
S.D.	0.185	11.944	0.490	6.274	0.381	1.042	0.680	259.322
% R.S.D.	0.272	19.093	13.789	10.895	20.317	37.195	1.246	0.732

	Mn (ppm)	Sb (ppm)	V (ppm)	Be (ppm)	Tl (ppm)
Mean	2.276	51.239	4.757	4.164	93.735
S.D.	0.438	10.081	0.945	0.440	16.064
% R.S.D.	19.226	19.674	19.861	10.574	17.138

Identity 1: S96T002712_D Identity 2: .025-30 ml 9:30 PM July 30, 1996
Task name : OPTIMA
Sample Weight : 1.0000 Solution Volume : 1201.00
On-Peak Integrations : 3 Off-Peak Integrations : 1

	Zr (ppm)	Sr (ppm)	Bi (ppm)	Si (ppm)	Al (ppm)	Co (ppm)	Cu (ppm)	Li (ppm)
Mean	14.953	0.026	-3.731	228.029	33664.696	0.000	-1.374	11.846
S.D.	1.347	0.044	10.091	2.739	38.696	0.005	0.495	0.396
% R.S.D.	9.007	173.205	270.509	1.201	0.115	2503.676	36.020	3.345

	Zn (ppm)	Ni (ppm)	La (ppm)	Fe (ppm)	Ca (ppm)	Cr (ppm)	Nd (ppm)	U (ppm)
Mean	9.294	13.736	-3.955	-1.662	-19.557	115.416	7.102	6.629
S.D.	0.217	0.590	0.995	1.543	0.048	1.483	10.158	40.800
% R.S.D.	2.333	4.297	25.155	92.846	0.247	1.285	143.028	615.498

	Ce (ppm)	Sm (ppm)	Ba (ppm)	P (ppm)	S (ppm)	Mg (ppm)	As (ppm)	Na (ppm)
Mean	-19.544	27.585	0.107	288.338	468.370	-0.581	-8.459	264258.962
S.D.	7.401	6.425	0.143	13.986	7.595	0.126	2.956	977.695
% R.S.D.	37.869	23.291	133.333	4.851	1.622	21.651	34.942	0.370

	Mo (ppm)	Se (ppm)	Ag (ppm)	Pb (ppm)	Ti (ppm)	Cd (ppm)	B (ppm)	K (ppm)
Mean	67.713	74.865	0.771	68.889	-0.370	2.160	54.500	36461.358
S.D.	1.508	14.216	0.611	28.982	0.417	0.989	1.247	68.513
% R.S.D.	2.227	18.988	79.248	42.070	112.749	45.798	2.287	0.188

	Mn (ppm)	Sb (ppm)	V (ppm)	Be (ppm)	Tl (ppm)
Mean	2.267	-37.565	-0.118	4.091	-2.856
S.D.	0.212	34.314	0.169	0.166	7.081
% R.S.D.	9.362	91.345	143.105	4.048	247.902

Identity 1: S96T002712_A Identity 2: .025sam+6sst5+24hno3 9:33 PM July 30, 1996
Task name : OPTIMA
Sample Weight : 1.0000 Solution Volume : 1201.00
On-Peak Integrations : 3 Off-Peak Integrations : 1

	Zr (ppm)	Sr (ppm)	Bi (ppm)	Si (ppm)	Al (ppm)	Co (ppm)	Cu (ppm)	Li (ppm)
Mean	1202.228	1200.161	1165.114	1456.512	35662.809	1190.873	1223.008	1195.303
S.D.	1.677	2.173	6.683	4.240	61.917	0.002	1.798	4.236
% R.S.D.	0.140	0.181	0.574	0.291	0.174	0.000	0.147	0.354

	Zn (ppm)	Ni (ppm)	La (ppm)	Fe (ppm)	Ca (ppm)	Cr (ppm)	Nd (ppm)	U (ppm)
Mean	1205.667	1196.072	1204.117	1207.055	1162.088	1320.822	1258.766	2366.800
S.D.	0.629	8.976	5.180	9.903	1.378	2.662	1.654	15.626
% R.S.D.	0.052	0.750	0.430	0.820	0.119	0.202	0.131	0.660

	Ce (ppm)	Sm (ppm)	Ba (ppm)	P (ppm)	S (ppm)	Mg (ppm)	As (ppm)	Na (ppm)
Mean	1222.047	1217.583	1207.285	1722.606	1742.460	1143.983	1190.252	269301.263
S.D.	3.080	3.808	1.867	67.484	40.507	2.907	4.027	690.989
% R.S.D.	0.252	0.313	0.155	3.918	2.325	0.254	0.338	0.257

	Mo (ppm)	Se (ppm)	Ag (ppm)	Pb (ppm)	Tl (ppm)	Cd (ppm)	B (ppm)	K (ppm)
Mean	1251.331	1183.161	1035.063	1261.876	1179.102	1179.821	1245.121	38607.015
S.D.	7.658	13.919	0.962	7.308	2.479	0.937	3.546	189.546
% R.S.D.	0.612	1.176	0.093	0.579	0.210	0.079	0.285	0.491

	Mn (ppm)	Sb (ppm)	V (ppm)	Be (ppm)	Ti (ppm)
Mean	1202.627	1154.273	1199.220	1216.266	1189.255
S.D.	2.931	28.514	2.013	2.930	2.130
% R.S.D.	0.244	2.470	0.168	0.241	0.179

Identity 1: ICSA Identity 2: Quality Control 9:39 PM July 30, 1996
Task name : OPTIMA
Sample Weight : 1.0000 Solution Volume : 1.00
On-Peak Integrations : 3 Off-Peak Integrations : 1

	Zr (ppm)	Sr (ppm)	Bi (ppm)	Si (ppm)	Al (ppm)	Co (ppm)	Cu (ppm)	Li (ppm)
Mean	-0.000	0.002	-0.038	0.005	199.204	0.004	0.001	0.001
S.D.	0.000	0.000	0.006	0.002	0.275	0.002	0.000	0.000
% R.S.D.	1382.565	4.092	15.586	35.232	0.138	51.226	76.776	0.072

	Zn (ppm)	Ni (ppm)	La (ppm)	Fe (ppm)	Ca (ppm)	Cr (ppm)	Nd (ppm)	U (ppm)
Mean	-0.005	0.001	-0.000	95.711	99.892	0.007	-0.002	-0.053
S.D.	0.000	0.001	0.001	0.210	0.219	0.002	0.009	0.035
% R.S.D.	2.960	240.779	327.206	0.220	0.219	31.121	386.832	65.857

	Ce (ppm)	Sm (ppm)	Ba (ppm)	P (ppm)	S (ppm)	Mg (ppm)	As (ppm)	Na (ppm)
Mean	0.029	0.050	0.004	0.055	0.051	99.093	0.043	188.864
S.D.	0.010	0.005	0.000	0.013	0.025	0.345	0.011	0.901
% R.S.D.	35.583	9.680	4.090	23.001	49.588	0.348	26.602	0.477

	Mo (ppm)	Se (ppm)	Ag (ppm)	Pb (ppm)	Ti (ppm)	Cd (ppm)	B (ppm)	K (ppm)
Mean	0.003	0.031	0.012	0.016	-0.001	0.001	0.016	0.139
S.D.	0.001	0.018	0.000	0.006	0.001	0.001	0.001	0.015
% R.S.D.	30.135	57.846	3.033	36.687	62.128	52.278	3.980	10.466

	Mn (ppm)	Sb (ppm)	V (ppm)	Be (ppm)	Tl (ppm)
Mean	0.012	0.046	0.003	0.003	0.030
S.D.	0.001	0.044	0.001	0.000	0.018
% R.S.D.	6.085	96.197	34.545	7.657	59.723

Identity 1: ICSAB Identity 2: Quality Control 9:42 PM July 30, 1996
Task name : OPTIMA
Sample Weight : 1.0000 Solution Volume : 1.00
On-Peak Integrations : 3 Off-Peak Integrations : 1

	Zr (ppm)	Sr (ppm)	Bi (ppm)	Si (ppm)	Al (ppm)	Co (ppm)	Cu (ppm)	Li (ppm)
Mean	0.001	0.002	-0.027	0.005	196.578	0.501	0.487	0.929
S.D.	0.003	0.000	0.012	0.005	0.702	0.002	0.004	0.019
% R.S.D.	332.099	10.926	42.901	91.224	0.357	0.389	0.741	2.098

	Zn (ppm)	Ni (ppm)	La (ppm)	Fe (ppm)	Ca (ppm)	Cr (ppm)	Nd (ppm)	U (ppm)
Mean	0.990	0.973	0.002	94.231	99.539	0.500	-0.013	0.078
S.D.	0.003	0.002	0.004	0.083	0.096	0.003	0.006	0.098
% R.S.D.	0.253	0.218	203.997	0.088	0.097	0.602	44.623	126.303

	Ce (ppm)	Sm (ppm)	Ba (ppm)	P (ppm)	S (ppm)	Mg (ppm)	As (ppm)	Na (ppm)
Mean	0.002	0.049	0.492	0.061	0.063	99.639	0.035	188.345
S.D.	0.026	0.020	0.003	0.023	0.015	0.585	0.005	3.676
% R.S.D.	1313.563	41.077	0.515	37.852	23.245	0.587	14.871	1.951

	Mo (ppm)	Se (ppm)	Ag (ppm)	Pb (ppm)	Ti (ppm)	Cd (ppm)	B (ppm)	K (ppm)
Mean	-0.002	-0.007	1.019	0.992	0.000	0.976	0.016	0.161
S.D.	0.002	0.009	0.002	0.004	0.001	0.003	0.001	0.043
% R.S.D.	105.046	117.178	0.196	0.429	2921.395	0.350	6.114	26.621

	Mn (ppm)	Sb (ppm)	V (ppm)	Be (ppm)	Tl (ppm)
Mean	0.506	-0.004	0.493	0.492	0.020
S.D.	0.002	0.016	0.002	0.001	0.039
% R.S.D.	0.453	434.469	0.353	0.247	191.953

Identity 1: CCV Identity 2: Quality Control 9:48 PM July 30, 1996
Task name : OPTIMA
Sample Weight : 1.0000 Solution Volume : 1.00
On-Peak Integrations : 3 Off-Peak Integrations : 1

	Zr (ppm)	Sr (ppm)	Bi (ppm)	Si (ppm)	Al (ppm)	Co (ppm)	Cu (ppm)	Li (ppm)
Mean	4.910	4.985	4.919	4.712	4.918	4.981	5.076	5.181
S.D.	0.007	0.010	0.023	0.006	0.011	0.011	0.012	0.032
% R.S.D.	0.151	0.209	0.458	0.133	0.218	0.220	0.235	0.622

	Zn (ppm)	Ni (ppm)	La (ppm)	Fe (ppm)	Ca (ppm)	Cr (ppm)	Nd (ppm)	U (ppm)
Mean	4.979	4.925	4.970	4.970	4.930	4.972	5.137	9.667
S.D.	0.008	0.014	0.015	0.023	0.007	0.001	0.023	0.006
% R.S.D.	0.158	0.285	0.304	0.464	0.139	0.028	0.446	0.058

	Ce (ppm)	Sm (ppm)	Ba (ppm)	P (ppm)	S (ppm)	Mg (ppm)	As (ppm)	Na (ppm)
Mean	5.053	5.084	5.030	5.818	5.249	4.808	5.032	5.124
S.D.	0.018	0.012	0.011	0.159	0.044	0.007	0.027	0.029
% R.S.D.	0.361	0.231	0.216	2.731	0.832	0.140	0.542	0.559

	Mo (ppm)	Se (ppm)	Ag (ppm)	Pb (ppm)	Ti (ppm)	Cd (ppm)	B (ppm)	K (ppm)
Mean	4.990	4.885	4.870	4.934	4.905	4.921	5.012	5.071
S.D.	0.013	0.041	0.004	0.016	0.009	0.008	0.002	0.030
% R.S.D.	0.269	0.831	0.072	0.317	0.193	0.162	0.031	0.592

	Mn (ppm)	Sb (ppm)	V (ppm)	Be (ppm)	Tl (ppm)
Mean	4.941	4.673	4.950	5.138	4.851
S.D.	0.002	0.052	0.003	0.007	0.020
% R.S.D.	0.036	1.103	0.060	0.127	0.408

Identity 1: CCB Identity 2: Quality Control 9:53 PM July 30, 1996
Task name : OPTIMA
Sample Weight : 1.0000 Solution Volume : 1.00
On-Peak Integrations : 3 Off-Peak Integrations : 1

	Zr (ppm)	Sr (ppm)	Bi (ppm)	Si (ppm)	Al (ppm)	Co (ppm)	Cu (ppm)	Li (ppm)
Mean	0.000	0.001	-0.014	-0.011	-0.013	0.005	-0.000	0.001
S.D.	0.001	0.001	0.012	0.005	0.020	0.002	0.001	0.001
% R.S.D.	1504.401	81.160	86.705	47.693	153.629	43.187	1846.926	59.888

	Zn (ppm)	Ni (ppm)	La (ppm)	Fe (ppm)	Ca (ppm)	Cr (ppm)	Nd (ppm)	U (ppm)
Mean	-0.001	-0.002	-0.005	0.003	-0.001	0.003	0.015	-0.034
S.D.	0.001	0.002	0.001	0.010	0.007	0.001	0.001	0.033
% R.S.D.	166.734	107.472	27.390	287.504	620.547	28.672	7.360	99.872

	Ce (ppm)	Sm (ppm)	Ba (ppm)	P (ppm)	S (ppm)	Mg (ppm)	As (ppm)	Na (ppm)
Mean	0.033	-0.013	0.001	0.030	0.007	0.004	-0.005	0.025
S.D.	0.012	0.007	0.001	0.013	0.005	0.007	0.004	0.016
% R.S.D.	36.033	59.427	57.227	41.812	68.831	161.231	84.245	66.227

	Mo (ppm)	Se (ppm)	Ag (ppm)	Pb (ppm)	Ti (ppm)	Cd (ppm)	B (ppm)	K (ppm)
Mean	-0.001	0.018	0.002	-0.004	-0.001	0.000	0.003	0.116
S.D.	0.002	0.024	0.001	0.008	0.001	0.001	0.001	0.011
% R.S.D.	332.977	132.845	40.810	178.020	123.915	391.183	27.784	9.690

	Mn (ppm)	Sb (ppm)	V (ppm)	Be (ppm)	Tl (ppm)
Mean	-0.000	0.069	0.002	0.001	0.024
S.D.	0.000	0.023	0.001	0.001	0.029
% R.S.D.	470.959	33.947	31.960	139.543	121.761

JK Lato
07-30-96

LABCORE Data Entry Template for Worklist# 10336

Analyst: JK Sato **Instrument:** ICP01 JK 8-7-96 **Book#** 58B48a

Method: LA-505-~~151~~/161 Rev/Mod B-1
JK 8-7-96

Worklist Comment: ICP AW-101 (DIRECT)

S	Type	Sample#	R	A	Test	Matrix	Group#	Project
1	ICV				@ICP-QC	QC		
2	ICB				@ICP-QC	QC		
3	LLS				@ICP-QC	QC		
4	ICSA				@ICP-QC	QC		
5	ICSAB				@ICP-QC	QC		
6	~~PREPBLKTUA~~ JK 8-7-96				@ICP-D01	LIQUID		
7	SERDIL	S96T001950	0	D	@ICP-D01	LIQUID		
8	SAMPLE	S96T001950	0	D	@ICP-D01	LIQUID	96000103	AW-101 PUSH

Analytes Requested: AG-D-01 , AL-D-01 , AS-D-01 , B-D-01 , BA-D-01 , BE-D-01 , BI-D-01 , CA-D-01 , CD-D-01 , CE-D-01 , CO-D-01 , CR-D-01 , CU-D-01 , FE-D-01 , K-D-01 , LA-D-01 , LI-D-01 , MG-D-01 , MN-D-01 , MO-D-01 , NA-D-01 , ND-D-01 , NI-D-01 , P-D-01 , PB-D-01 , S-D-01 , SB-D-01 , SE-D-01 , SI-D-01 , SM-D-01 , SR-D-01 , TI-D-01 , TL-D-01 , U-D-01 , V-D-01 , ZN-D-01 , ZR-D-01

9	DUP	S96T001950	0	D	@ICP-D01	LIQUID		
10	SPK	S96T001950	0	D	@ICP-D01	LIQUID		
11	CCV				@ICP-QC	QC		
12	CCB				@ICP-QC	QC		
13	SERDIL	S96T001960	0	D	@ICP-D01	LIQUID		
14	SAMPLE	S96T001960	0	D	@ICP-D01	LIQUID	96000103	AW-101 PUSH

Analytes Requested: AG-D-01 , AL-D-01 , AS-D-01 , B-D-01 , BA-D-01 , BE-D-01 , BI-D-01 , CA-D-01 , CD-D-01 , CE-D-01 , CO-D-01 , CR-D-01 , CU-D-01 , FE-D-01 , K-D-01 , LA-D-01 , LI-D-01 ,

Data Entry Comments: Raw data is final result in ug/ml

S96T001950 Cr = 1.20e+2 ug/ml

S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

LABCORE Data Entry Template for Worklist# 10336

S	Type	Sample#	R	A	Test	Matrix	Group#	Project
					MG-D-01 , MN-D-01 , MO-D-01 , NA-D-01 , ND-D-01 , NI-D-01 , P-D-01 , PB-D-01 , S-D-01 , SB-D-01 , SE-D-01 , SI-D-01 , SM-D-01 , SR-D-01 , TI-D-01 , TL-D-01 , U-D-01 , V-D-01 , ZN-D-01 , ZR-D-01			
15	DUP	S96T001960	0	D	@ICP-D01	LIQUID		
16	SPK	S96T001960	0	D	@ICP-D01	LIQUID		
17	SERDIL	S96T001964	0	D	@ICP-D01	LIQUID		
18	SAMPLE	S96T001964	0	D	@ICP-D01	LIQUID	96000103	AW-101 PUSH
		Analytes Requested:			AG-D-01 , AL-D-01 , AS-D-01 , B-D-01 , BA-D-01 , BE-D-01 , BI-D-01 , CA-D-01 , CD-D-01 , CE-D-01 , CO-D-01 , CR-D-01 , CU-D-01 , FE-D-01 , K-D-01 , LA-D-01 , LI-D-01 , MG-D-01 , MN-D-01 , MO-D-01 , NA-D-01 , ND-D-01 , NI-D-01 , P-D-01 , PB-D-01 , S-D-01 , SB-D-01 , SE-D-01 , SI-D-01 , SM-D-01 , SR-D-01 , TI-D-01 , TL-D-01 , U-D-01 , V-D-01 , ZN-D-01 , ZR-D-01			
19	DUP	S96T001964	0	D	@ICP-D01	LIQUID		
20	SPK	S96T001964	0	D	@ICP-D01	LIQUID		
21	CCV				@ICP-QC	QC		
22	CCB				@ICP-QC	QC		
23	SERDIL	S96T001968	0	D	@ICP-D01	LIQUID		
24	SAMPLE	S96T001968	0	D	@ICP-D01	LIQUID	96000103	AW-101 PUSH
		Analytes Requested:			AG-D-01 , AL-D-01 , AS-D-01 , B-D-01 , BA-D-01 , BE-D-01 , BI-D-01 , CA-D-01 , CD-D-01 , CE-D-01 , CO-D-01 , CR-D-01 , CU-D-01 , FE-D-01 , K-D-01 , LA-D-01 , LI-D-01 , MG-D-01 , MN-D-01 , MO-D-01 , NA-D-01 , ND-D-01 , NI-D-01 , P-D-01 , PB-D-01 , S-D-01 , SB-D-01 , SE-D-01 , SI-D-01 , SM-D-01 , SR-D-01 , TI-D-01 , TL-D-01 , U-D-01 , V-D-01 , ZN-D-01 , ZR-D-01			
25	DUP	S96T001968	0	D	@ICP-D01	LIQUID		
26	SPK	S96T001968	0	D	@ICP-D01	LIQUID		
27	SERDIL	S96T002028	0	D	@ICP-D01	LIQUID		

Data Entry Comments:

S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

LABCORE Data Entry Template for Worklist# 10336

S	Type	Sample#	R	A	Test	Matrix	Group#	Project
28	SAMPLE	S96T002028	0	D	@ICP-D01	LIQUID	96000103	AW-101 PUSH

Analytes Requested: AG-D-01 , AL-D-01 , AS-D-01 , B-D-01 , BA-D-01 , BE-D-01 , BI-D-01 , CA-D-01 , CD-D-01 , CE-D-01 , CO-D-01 , CR-D-01 , CU-D-01 , FE-D-01 , K-D-01 , LA-D-01 , LI-D-01 , MG-D-01 , MN-D-01 , MO-D-01 , NA-D-01 , ND-D-01 , NI-D-01 , P-D-01 , PB-D-01 , S-D-01 , SB-D-01 , SE-D-01 , SI-D-01 , SM-D-01 , SR-D-01 , TI-D-01 , TL-D-01 , U-D-01 , V-D-01 , ZN-D-01 , ZR-D-01

29	DUP	S96T002028	0	D	@ICP-D01	LIQUID		
30	SPK	S96T002028	0	D	@ICP-D01	LIQUID		
31	CCV				@ICP-QC	QC		
32	CCB				@ICP-QC	QC		
33	SERDIL	S96T001705	0	D	@ICP-D01	LIQUID		
34	SAMPLE	S96T001705	0	D	@ICP-D01	LIQUID	96000103	AW-101 PUSH

Analytes Requested: AG-D-01 , AL-D-01 , AS-D-01 , B-D-01 , BA-D-01 , BE-D-01 , BI-D-01 , CA-D-01 , CD-D-01 , CE-D-01 , CO-D-01 , CR-D-01 , CU-D-01 , FE-D-01 , K-D-01 , LA-D-01 , LI-D-01 , MG-D-01 , MN-D-01 , MO-D-01 , NA-D-01 , ND-D-01 , NI-D-01 , P-D-01 , PB-D-01 , S-D-01 , SB-D-01 , SE-D-01 , SI-D-01 , SM-D-01 , SR-D-01 , TI-D-01 , TL-D-01 , U-D-01 , V-D-01 , ZN-D-01 , ZR-D-01

~~35~~	~~DUP~~	~~S96T001705~~	~~0~~	~~D~~	~~@ICP-D01~~	~~LIQUID~~		
~~36~~	~~SPK~~	~~S96T001705~~	~~0~~	~~D~~	~~@ICP-D01~~	~~LIQUID~~		
37	ICSA				@ICP-QC	QC		
38	ICSAB				@ICP-QC	QC		
39	CCV				@ICP-QC	QC		
40	CCB				@ICP-QC	QC		

SP 8/8/96

Data Entry Comments: Run out of sample #S96T001705, No dup + spike was done.

S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

LABCORE Data Entry Template for Worklist# 10336

S Type	Sample#	R	A	Test	Matrix	Group#	Project

Final page for worklist # 10336

JK 08-07-96
Analyst Signature Date

Reviewed by: Saul M. Perez 8/19/96
Analyst Signature Date

596T001950_L	,025-15-2-8	DF3005	
596T001950	,025-15	601	
596T001950_D	,025-15	601	
596T001950_Q	,025-15	601	
596T001960_L	,025-15-2-8	DF3005	
596T001960	,025-15	601	
596T001960_D	,025-15	601	
596T001960_Q	,025-15	601	
596T001964_L	,025-15-2-8	DF3005	
596T001964	,025-15	601	
596T001964_D	,025-15	601	
596T001964_Q	,025-15	601	
596T001968_L	,025-15-2-8	DF3005	
596T001968	,025-15	601	
596T001968_D	,025-15	601	
596T001968_Q	,025-15	601	
596T002028_L	,025-15-2-8	DF3005	
596T002028	,025-15	601	
596T002028_D	,025-15	601	
596T002028_Q	,025-15	601	
596T001705_L	2-8	DF 5	
596T001705	direct	1	
596T001705	direct	1	

Data Entry Comments: All post spikes: ,025 ml sample + 3 ml SSTS + 12 ml HNO_3

Spike recovery calculation:

$$596T001950 \quad C_x = \frac{\left(\frac{722.8}{601}\right) - \left(\frac{119.6}{601}\right)}{1} \times 100 = 100.4\ \%$$

S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

Note: Spike true value is 1.0 ppm for all elements except for U = 2.0 ppm

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#	Sample Name	File	Method	Date	Time	OpID	Type	Mode
1	ICV	960807B	ICP2	08/07/96	15:54	DKS	Q	CONC
2	ICB	960807B	ICP2	08/07/96	15:58	DKS	Q	CONC
3	LLS	960807B	ICP2	08/07/96	16:02	DKS	Q	CONC
4	ICSA	960807B	ICP2	08/07/96	16:04	DKS	Q	CONC
5	ICSAB	960807B	ICP2	08/07/96	16:07	DKS	Q	CONC
6	S96T001950_L	960807B	ICP2	08/07/96	16:13	DKS	S	CONC
7	S96T001950_	960807B	ICP2	08/07/96	16:16	DKS	S	CONC
8	S96T001950_D	960807B	ICP2	08/07/96	16:21	DKS	S	CONC
9	S96T001950_A	960807B	ICP2	08/07/96	16:24	DKS	S	CONC
10	CCV	960807B	ICP2	08/07/96	16:28	DKS	Q	CONC
11	CCB	960807B	ICP2	08/07/96	16:32	DKS	Q	CONC
12	S96T001960_L	960807B	ICP2	08/07/96	16:35	DKS	S	CONC
13	S96T001960_	960807B	ICP2	08/07/96	16:39	DKS	S	CONC
14	S96T001960_D	960807B	ICP2	08/07/96	16:42	DKS	S	CONC
15	S96T001960_A	960807B	ICP2	08/07/96	16:46	DKS	S	CONC
16	S96T001964_L	960807B	ICP2	08/07/96	16:49	DKS	S	CONC
17	S96T001964_	960807B	ICP2	08/07/96	16:52	DKS	S	CONC
18	S96T001964_D	960807B	ICP2	08/07/96	16:56	DKS	S	CONC
19	S96T001964_A	960807B	ICP2	08/07/96	16:59	DKS	S	CONC
20	CCV_1	960807B	ICP2	08/07/96	17:04	DKS	Q	CONC
21	CCB_1	960807B	ICP2	08/07/96	17:07	DKS	Q	CONC
22	S96T001968_L	960807B	ICP2	08/07/96	17:10	DKS	S	CONC
23	S96T001968_	960807B	ICP2	08/07/96	17:13	DKS	S	CONC
24	S96T001968_D	960807B	ICP2	08/07/96	17:16	DKS	S	CONC
25	S96T001968_A	960807B	ICP2	08/07/96	17:20	DKS	S	CONC
26	S96T002028_L	960807B	ICP2	08/07/96	17:23	DKS	S	CONC
27	S96T002028_	960807B	ICP2	08/07/96	17:26	DKS	S	CONC
28	S96T002028_D	960807B	ICP2	08/07/96	17:29	DKS	S	CONC
29	S96T002028_A	960807B	ICP2	08/07/96	17:33	DKS	S	CONC
30	CCV_2	960807B	ICP2	08/07/96	17:39	DKS	Q	CONC
31	CCB_2	960807B	ICP2	08/07/96	17:42	DKS	Q	CONC
32	S96T001705_L	960807B	ICP2	08/07/96	17:46	DKS	S	CONC
33	S96T001705_	960807B	ICP2	08/07/96	17:49	DKS	S	CONC
34	S96T001705_D	960807B	ICP2	08/07/96	17:52	DKS	S	CONC
35	ICSA	960807B	ICP2	08/07/96	18:03	DKS	Q	CONC
36	ICSAB	960807B	ICP2	08/07/96	18:07	DKS	Q	CONC
37	CCV_3	960807B	ICP2	08/07/96	18:11	DKS	Q	CONC
38	CCB_3	960807B	ICP2	08/07/96	18:15	DKS	Q	CONC

DK [illegible]
08-07-96
GW-101

S96T001950
S96T001960
S96T001964
S96T001968
S96T002028
S96T001705

Worklist #10336

SIGNATURE ABOVE REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 1724 TO 1730.

Analysis Report Averages Wed 08-07-96 06:18:11 PM page 2

#	Sample Name	Ag	Al	As	B	Ba	Be
1	ICV	5.040	4.918	5.192	5.001	4.979	5.158
2	ICB	.0001	-.0063	.0063	.0033	-.0001	-.0000
3	LLS	.0223	.0967	.2073	.1068	.0989	.0106
4	ICSA	.0043	248.0	-.0824	-.0041	.0017	.0002
5	ICSAB	.9591	246.2	-.0903	-.0009	.4765	.4777
6	S96T001950_L	17.91	33280.	-49.86	79.15	-.0539	3.101
7	S96T001950	18.21	32580.	-48.44	66.16	.1296	2.923
8	S96T001950_D	16.78	29960.	-51.24	61.07	.1644	2.626
9	S96T001950_A	581.9	31270.	570.6	642.8	584.6	609.2
10	CCV	4.965	4.968	5.099	4.945	4.904	5.123
11	CCB	.0020	-.0014	.0043	-.0014	.0000	.0000
12	S96T001960_L	17.77	31860.	-47.10	69.25	-.0398	2.978
13	S96T001960	17.64	31290.	-45.50	65.60	.1612	2.824
14	S96T001960_D	17.67	32130.	-53.26	70.40	.0994	2.924
15	S96T001960_A	577.9	31400.	549.5	640.2	578.2	602.2
16	S96T001964_L	24.70	32660.	-50.18	62.25	.1951	2.598
17	S96T001964	18.23	31980.	-54.49	61.64	.1722	2.922
18	S96T001964_D	17.88	32040.	-53.11	65.60	.1352	2.923
19	S96T001964_A	579.4	32460.	575.2	643.6	585.5	609.3
20	CCV_1	4.996	4.993	5.140	4.974	4.977	5.159
21	CCB_1	.0019	.0062	.0093	.0028	-.0000	.0002
22	S96T001968_L	17.62	34230.	-21.46	62.20	-.0003	3.223
23	S96T001968	18.42	33560.	-53.47	65.03	.0621	3.047
24	S96T001968_D	17.94	32170.	-44.22	68.99	.1451	2.823
25	S96T001968_A	577.6	33920.	559.7	648.1	580.0	606.0
26	S96T002028_L	30.60	30990.	-48.51	69.27	.0074	3.096
27	S96T002028	17.95	31060.	-52.17	65.32	.1077	2.825
28	S96T002028_D	18.02	30440.	-52.88	60.79	.1914	2.749
29	S96T002028_A	565.4	30010.	572.7	628.1	574.2	599.2
30	CCV_2	4.972	4.945	5.123	4.959	4.893	5.105
31	CCB_2	.0008	-.0053	-.0027	.0038	.0001	.0001
32	S96T001705_L	.0032	.0936	.0441	1.458	.0016	-.0008
33	S96T001705	.0008	.1003	-.0042	1.422	.0018	.0000
34	S96T001705_D	-.0225	-.0190	-.0262	1.048	-.0003	.0001
35	ICSA	.0032	242.9	-.0904	-.0047	.0018	.0002
36	ICSAB	.9109	242.7	-.0821	-.0056	.4410	.4495
37	CCV_3	5.021	4.969	5.122	4.904	4.915	5.122
38	CCB_3	.0002	-.0084	.0022	.0005	.0002	.0001

#	Sample Name	Bi	Ca	Cd	Ce	Co	Cr
1	ICV	5.125	5.161	5.100	5.144	5.147	5.165
2	ICB	.0055	-.0029	.0000	-.0034	.0013	-.0002
3	LLS	.2254	.2220	.0106	.2013	.0442	.0208
4	ICSA	.0145	251.4	.0015	.0095	.0012	.0089
5	ICSAB	-.0003	251.1	.9430	.0087	.4735	.4834
6	S96T001950_L	-17.39	-68.89	1.398	-1.320	-.4250	120.8
7	S96T001950	27.57	-.0127	1.288	-1.834	1.357	119.6
8	S96T001950_D	-2.246	-8.822	1.432	-2.256	1.152	110.3
9	S96T001950_A	615.4	612.3	605.5	604.2	607.8	722.8
10	CCV	5.020	5.120	5.058	5.022	5.105	5.113
11	CCB	.0302	-.0008	.0002	-.0019	-.0002	.0003

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#	Sample Name	Bi	Ca	Cd	Ce	Co	Cr
12	S96T001960_L	19.19	-57.24	5.353	-11.62	4.627	117.0
13	S96T001960	23.59	-4.369	3.437	-1.346	1.939	116.0
14	S96T001960_D	5.847	-7.306	3.147	-5.992	2.074	116.8
15	S96T001960_A	583.3	614.9	604.0	601.6	605.2	721.4
16	S96T001964_L	-2.877	-50.59	4.689	-6.649	-4.962	114.6
17	S96T001964	1.920	-.4051	3.865	2.131	1.735	117.1
18	S96T001964_D	-6.972	-3.930	3.396	-2.512	.7195	116.5
19	S96T001964_A	610.1	619.9	608.8	610.2	609.6	727.9
20	CCV_1	5.033	5.146	5.100	5.100	5.144	5.149
21	CCB_1	-.0200	-.0005	.0000	.0065	.0019	.0008
22	S96T001968_L	59.02	-55.28	5.710	-19.46	5.754	129.6
23	S96T001968	16.53	-3.501	3.559	-3.868	1.297	124.1
24	S96T001968_D	8.021	-2.817	3.213	-2.231	1.376	120.4
25	S96T001968_A	596.5	616.4	608.5	601.1	609.7	735.8
26	S96T002028_L	102.0	-51.14	2.674	15.05	1.802	115.6
27	S96T002028	-8.421	1.178	2.762	-5.968	-.5754	113.0
28	S96T002028_D	-7.901	-5.744	2.881	3.268	.7933	112.6
29	S96T002028_A	594.7	609.6	603.1	595.3	604.8	714.2
30	CCV_2	4.953	5.134	5.072	5.017	5.116	5.131
31	CCB_2	.0164	-.0017	.0003	-.0045	.0028	.0006
32	S96T001705_L	-.0456	1.693	.0007	-.0033	.0049	.0223
33	S96T001705	.0044	1.865	.0007	-.0032	.0005	.0181
34	S96T001705_D	-.0088	1.537	-.0092	-.1352	.0013	.0211
35	ICSA	.0132	254.1	.0004	.0144	.0019	.0100
36	ICSAB	.0084	255.0	.8968	.0080	.4516	.4624
37	CCV_3	5.061	5.258	5.136	5.053	5.175	5.190
38	CCB_3	-.0049	.0015	.0011	.0051	.0018	.0008

#	Sample Name	Cu	Eu	Fe	K	La	Li
1	ICV	5.165	-.0018	5.114	4.908	5.035	4.960
2	ICB	.0000	.0001	-.0006	.0825	-.0019	.0005
3	LLS	.0219	.0006	.1042	.4951	.0994	.0207
4	ICSA	-.0100	-.0438	94.24	-.1257	-.0060	.0016
5	ICSAB	.4793	-.0429	93.75	.2192	-.0058	.9933
6	S96T001950_L	2.674	-1.226	6.164	38780.	-3.836	3.634
7	S96T001950	.0723	.1917	7.640	38400.	-.9632	6.894
8	S96T001950_D	.8781	.6464	6.408	35020.	-.7023	6.530
9	S96T001950_A	611.1	-.1421	607.3	36860.	597.1	607.5
10	CCV	5.131	-.0029	5.063	5.013	4.940	4.927
11	CCB	.0007	.0001	-.0003	.0891	-.0008	-.0001
12	S96T001960_L	2.670	-1.538	6.433	36170.	-4.046	7.261
13	S96T001960	1.559	.2044	8.830	36370.	-.3302	8.925
14	S96T001960_D	.6160	-.0079	8.877	36970.	-1.179	8.853
15	S96T001960_A	601.7	.1494	606.9	36120.	591.7	599.1
16	S96T001964_L	-1.516	3.081	3.410	36980.	-1.645	17.77
17	S96T001964	.1835	.7112	5.123	37090.	-.2424	14.95
18	S96T001964_D	.5983	.4020	4.910	37210.	-.7826	14.66
19	S96T001964_A	610.8	-.3000	604.8	37810.	602.8	613.9
20	CCV_1	5.176	-.0031	5.104	5.063	5.026	4.938
21	CCB_1	.0007	.0002	.0006	.0210	-.0004	.0001
22	S96T001968_L	3.258	.6168	4.411	40480.	-4.522	12.33
23	S96T001968	.7276	.6318	7.185	39970.	-1.189	11.03

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#	Sample Name	Cu	Eu	Fe	K	La	Li
24	S96T001968_D	.4532	.7558	7.551	38310.	-1.166	10.88
25	S96T001968_A	603.5	.0226	606.0	40180.	594.5	605.9
26	S96T002028_L	5.312	.1377	10.08	37150.	-2.065	11.61
27	S96T002028_	.2000	.3257	10.12	37030.	-.8799	11.25
28	S96T002028_D	.7386	.4631	10.38	36270.	-.1817	11.17
29	S96T002028_A	595.9	-.0103	604.2	35770.	588.9	596.4
30	CCV_2	5.097	-.0022	5.071	4.899	4.940	4.860
31	CCB_2	.0009	.0009	.0000	-.0039	-.0010	.0008
32	S96T001705_L	.0055	.0044	.0005	.4643	-.0028	.0042
33	S96T001705_	-.0008	.0028	.0027	.4477	-.0002	.0037
34	S96T001705_D	-.0016	.0110	-.0074	.0091	-.0229	.0125
35	ICSA	-.0091	-.0529	93.68	.1429	-.0049	.0039
36	ICSAB	.4416	-.0526	93.60	.0187	-.0064	.9637
37	CCV_3	5.092	-.0013	5.102	4.929	4.959	4.838
38	CCB_3	.0006	.0013	.0012	.1559	-.0003	.0014

#	Sample Name	Mg	Mn	Mo	Na	Nd	Ni
1	ICV	4.870	5.018	5.109	4.991	5.086	5.066
2	ICB	-.0001	.0001	.0000	-.0004	.0017	-.0012
3	LLS	.2086	.0200	.0966	.2132	.2064	.0476
4	ICSA	253.4	-.0068	-.0081	200.2	.0037	.0018
5	ICSAB	251.4	.4474	-.0070	199.2	.0029	.9190
6	S96T001950_L	-4.560	3.133	73.00	270400.	4.920	32.07
7	S96T001950_	-.5224	3.420	67.40	262400.	1.535	14.24
8	S96T001950_D	4.987	3.161	60.45	239800.	2.386	10.41
9	S96T001950_A	581.1	583.8	672.1	247000.	618.5	607.4
10	CCV	4.923	4.974	5.075	4.917	5.110	5.025
11	CCB	.0007	.0001	.0013	-.0009	.0033	-.0020
12	S96T001960_L	20.37	2.571	64.57	256900.	5.081	1.401
13	S96T001960_	6.825	3.174	64.32	250700.	3.860	8.231
14	S96T001960_D	.9836	3.044	66.61	258300.	1.254	9.946
15	S96T001960_A	576.3	581.7	669.4	246100.	610.8	610.2
16	S96T001964_L	-4.728	3.808	71.19	260900.	-2.608	25.49
17	S96T001964_	.1442	2.658	66.13	255400.	.5967	14.16
18	S96T001964_D	-3.621	2.471	66.52	256500.	-.5737	12.45
19	S96T001964_A	585.4	583.7	675.3	256800.	622.3	607.5
20	CCV_1	4.948	5.013	5.116	4.932	5.176	5.064
21	CCB_1	.0018	.0001	.0007	.0004	.0020	.0035
22	S96T001968_L	11.25	4.305	77.06	277400.	11.00	8.518
23	S96T001968_	.4878	3.772	69.90	270900.	.3501	16.46
24	S96T001968_D	-2.487	3.449	67.72	258400.	1.187	12.11
25	S96T001968_A	570.0	584.7	681.0	269500.	611.8	610.7
26	S96T002028_L	35.78	3.325	69.08	252400.	15.10	8.529
27	S96T002028_	-3.380	3.257	64.72	248400.	.0661	11.56
28	S96T002028_D	1.908	4.064	63.23	243400.	2.967	12.59
29	S96T002028_A	570.6	578.1	666.7	236400.	607.1	600.6
30	CCV_2	4.924	4.988	5.075	4.879	5.090	5.028
31	CCB_2	-.0008	.0005	-.0008	.0105	.0040	.0030
32	S96T001705_L	.3519	.0115	-.0007	24.39	.0164	.0056
33	S96T001705_	.3245	.0115	.0089	25.35	-.0011	.0035
34	S96T001705_D	.2449	.0139	.0076	18.98	.0017	-.0129
35	ICSA	249.3	-.0059	-.0062	192.5	.0074	-.0013

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#	Sample Name	Mg	Mn	Mo	Na	Nd	Ni
36	ICSAB	249.0	.4267	-.0104	193.9	.0067	.8844
37	CCV_3	4.929	5.046	5.127	4.891	5.115	5.075
38	CCB_3	.0087	.0005	.0027	.0109	.0046	.0001

#	Sample Name	P	Pb	S	Sb	Se	Si
1	ICV	5.089	5.097	4.983	4.839	4.930	4.804
2	ICB	-.0035	-.0113	-.0104	-.0133	-.0049	.0046
3	LLS	.4065	.2010	.2066	.1064	.1983	.1484
4	ICSA	.0217	.0227	-.0310	.0047	-.0466	-.0077
5	ICSAB	.0250	.9744	-.0276	-.0132	-.0459	-.0016
6	S96T001950_L	237.1	43.00	461.1	-5.546	9.464	278.5
7	S96T001950_	276.4	58.12	461.1	-2.322	10.21	285.7
8	S96T001950_D	244.2	55.62	432.2	-1.029	13.03	267.2
9	S96T001950_A	850.5	656.8	1072.	572.4	613.0	881.6
10	CCV	5.073	5.002	5.103	4.773	5.003	4.779
11	CCB	-.0102	-.0081	-.0044	-.0047	.0023	.0077
12	S96T001960_L	263.0	76.99	408.5	-23.11	-11.52	271.0
13	S96T001960_	248.2	62.11	435.3	-.9492	11.34	259.7
14	S96T001960_D	255.9	55.21	450.1	-.4822	3.075	263.1
15	S96T001960_A	862.5	665.9	1061.	569.7	623.9	852.3
16	S96T001964_L	269.2	40.58	408.9	-16.11	32.21	305.4
17	S96T001964_	251.9	62.03	450.6	1.090	17.17	270.9
18	S96T001964_D	253.9	54.29	457.9	-5.454	13.87	266.0
19	S96T001964_A	848.1	667.1	1082.	568.5	616.4	856.9
20	CCV_1	5.069	5.065	5.100	4.816	5.060	4.799
21	CCB_1	.0065	-.0047	-.0051	-.0044	-.0068	.0121
22	S96T001968_L	252.7	78.79	446.5	22.81	30.44	295.4
23	S96T001968_	264.6	60.02	471.1	-1.166	14.35	277.9
24	S96T001968_D	276.1	58.17	461.5	1.044	13.57	272.2
25	S96T001968_A	872.8	672.3	1105.	573.2	631.4	866.8
26	S96T002028_L	281.0	74.13	445.7	7.928	-19.02	293.3
27	S96T002028_	233.3	58.28	442.5	.9154	19.60	270.1
28	S96T002028_D	264.9	57.16	432.6	-2.219	16.75	267.2
29	S96T002028_A	820.4	660.2	1045.	576.3	622.7	841.3
30	CCV_2	5.098	5.056	5.126	4.792	4.979	4.780
31	CCB_2	-.0020	-.0161	-.0005	-.0046	.0077	.0132
32	S96T001705_L	.1091	-.0556	2.958	.0098	.0558	4.023
33	S96T001705_	.0811	-.0141	3.348	-.0017	.0350	4.126
34	S96T001705_D	.1148	-.0153	3.349	-.0470	.1063	3.375
35	ICSA	.0200	.0458	-.0236	.0033	-.0170	.0086
36	ICSAB	.0213	.9456	-.0158	-.0075	-.0247	.0096
37	CCV_3	5.169	5.128	5.157	4.803	5.011	4.825
38	CCB_3	.0030	.0074	.0013	.0026	.0182	.0133

#	Sample Name	Sm	Sr	Th	Ti	Tl	U
1	ICV	4.897	4.948	.0315	4.899	4.924	9.619
2	ICB	.0005	.0001	-.0023	-.0000	-.0149	.0052
3	LLS	.2076	.0204	-.0011	.0208	.4053	.5390
4	ICSA	-.0114	.0016	.0023	.0014	.0148	.0556
5	ICSAB	-.0091	.0016	-.0078	.0016	.0063	.0547

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#	Sample Name	Sm	Sr	Th	Ti	Tl	U
6	S96T001950_L	-36.55	-.3033	12.18	-.6896	-77.50	-104.7
7	S96T001950_	-1.485	.0630	-1.640	.1388	-20.03	-.1180
8	S96T001950_D	4.168	.1241	-2.609	.5725	-.0223	24.15
9	S96T001950_A	598.0	588.1	-2.051	583.6	595.2	1195.
10	CCV	4.954	4.892	.0084	4.852	4.903	9.966
11	CCB	-.0023	.0001	-.0018	-.0000	.0012	.0023
12	S96T001960_L	-27.02	-.3063	9.443	.7705	-30.51	-75.29
13	S96T001960_	2.012	.0623	-.3247	.2913	-.2740	9.226
14	S96T001960_D	-4.143	.0008	-.5073	-.1519	-11.76	-6.440
15	S96T001960_A	595.3	581.3	-.8665	577.3	563.7	1196.
16	S96T001964_L	42.93	.7722	-16.68	-.0986	-22.49	191.9
17	S96T001964_	9.517	.1853	-1.139	-.3062	-16.30	42.05
18	S96T001964_D	2.278	.1241	-1.299	-.1604	-5.663	22.68
19	S96T001964_A	601.7	589.9	3.950	583.2	572.1	1200.
20	CCV_1	5.052	4.957	.0138	4.910	4.980	10.09
21	CCB_1	.0008	.0000	.0031	.0015	.0062	.0054
22	S96T001968_L	-.2165	.3110	4.554	-.0173	-40.04	66.87
23	S96T001968_	6.331	.1548	-2.231	.4258	-4.045	32.12
24	S96T001968_D	8.987	.1533	-4.558	.4125	-13.00	48.50
25	S96T001968_A	600.2	583.9	-2.223	580.0	567.4	1213.
26	S96T002028_L	5.019	.1567	17.00	.0573	-42.50	28.45
27	S96T002028_	1.525	.0934	-1.345	-.1562	5.184	12.11
28	S96T002028_D	4.655	.0925	-.7458	.1388	-8.039	24.18
29	S96T002028_A	591.1	578.0	4.035	576.1	566.8	1185.
30	CCV_2	4.961	4.883	.0108	4.855	4.927	9.941
31	CCB_2	.0139	.0003	-.0040	.0005	.0007	.0587
32	S96T001705_L	.0486	.0059	-.0100	.0024	-.0686	.2101
33	S96T001705_	.0207	.0061	-.0056	-.0008	-.0154	.1605
34	S96T001705_D	.1514	.0064	-.1060	-.0008	-.0549	.6576
35	ICSA	.0156	.0016	.0010	.0017	.0047	.1000
36	ICSAB	.0239	.0017	-.0064	.0017	.0151	.1086
37	CCV_3	4.977	4.900	.0162	4.892	5.015	9.971
38	CCB_3	.0142	.0004	-.0019	.0010	-.0060	.0704

#	Sample Name	V	Y	Zn	Zr
1	ICV	5.098	.0065	5.211	4.964
2	ICB	.0006	.0000	.0004	.0002
3	LLS	.1047	.0006	.0220	.0214
4	ICSA	-.0021	.0062	-.0007	-.0046
5	ICSAB	.4733	.0063	.9643	-.0039
6	S96T001950_L	-3.844	-1.133	59.01	10.98
7	S96T001950_	.0233	-.0471	58.98	15.72
8	S96T001950_D	1.442	.2253	54.25	15.55
9	S96T001950_A	608.4	.7641	679.1	611.3
10	CCV	5.091	.0062	5.200	4.946
11	CCB	.0002	-.0001	-.0002	.0001
12	S96T001960_L	-2.207	-.9102	23.02	12.23
13	S96T001960_	.5646	-.0039	23.07	15.18
14	S96T001960_D	-.4136	-.0915	23.66	15.65
15	S96T001960_A	604.9	1.093	644.2	608.2
16	S96T001964_L	8.532	2.038	27.19	22.36
17	S96T001964_	2.069	.4061	26.95	16.70

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#	Sample Name	V	Y	Zn	Zr
18	S96T001964_D	.8767	.0846	26.16	16.10
19	S96T001964_A	609.7	.7621	648.7	615.4
20	CCV_1	5.134	.0063	5.221	5.011
21	CCB_1	-.0000	-.0001	.0009	.0001
22	S96T001968_L	3.116	.4427	27.43	18.81
23	S96T001968_	1.750	.1748	24.46	17.65
24	S96T001968_D	2.287	.4034	22.96	17.37
25	S96T001968_A	607.9	1.039	648.7	611.7
26	S96T002028_L	2.045	-.0121	25.21	14.71
27	S96T002028_	.5621	.0891	23.21	15.69
28	S96T002028_D	1.098	.1782	22.55	15.41
29	S96T002028_A	602.0	.8153	640.3	603.2
30	CCV_2	5.094	.0066	5.212	4.949
31	CCB_2	.0032	.0007	.0006	.0016
32	S96T001705_L	.0098	.0015	.5067	.0039
33	S96T001705_	.0041	.0009	.4864	.0026
34	S96T001705_D	.0276	.0064	.4560	.0265
35	ICSA	.0038	.0074	-.0021	-.0010
36	ICSAB	.4540	.0076	.9273	.0001
37	CCV_3	5.143	.0072	5.280	4.986
38	CCB_3	.0038	.0008	.0008	.0022

DK
08-07-96

LABCORE Data Entry Template for Worklist# 10337

Analyst: K Sato **Instrument:** ICP01 **Book#** 578480

Method: LA-505-151/~~161~~ Rev/Mod 3

Worklist Comment: ICP AW-101 (DIRECT) 7-30-96

S	Type	Sample#	R	A	Test	Matrix	Group#	Project
1	ICV				@ICP-QC	QC		
2	ICB				@ICP-QC	QC		
3	LLS				@ICP-QC	QC		
4	ICSA				@ICP-QC	QC		
5	ICSAB				@ICP-QC	QC		
~~6~~	~~PREPBLKARL~~ 7-30-96				@ICP-D01	LIQUID		
7	SERDIL	S96T002439	0	D	@ICP-D01	LIQUID		
8	SAMPLE	S96T002439	0	D	@ICP-D01	LIQUID	96000462	AW-101 PUSH
		Analytes Requested:			AG-D-01 , AL-D-01 , AS-D-01 , B-D-01 , BA-D-01 , BE-D-01 , BI-D-01 , CA-D-01 , CD-D-01 , CE-D-01 , CO-D-01 , CR-D-01 , CU-D-01 , FE-D-01 , K-D-01 , LA-D-01 , LI-D-01 , MG-D-01 , MN-D-01 , MO-D-01 , NA-D-01 , ND-D-01 , NI-D-01 , P-D-01 , PB-D-01 , S-D-01 , SB-D-01 , SE-D-01 , SI-D-01 , SM-D-01 , SR-D-01 , TI-D-01 , TL-D-01 , U-D-01 , V-D-01 , ZN-D-01 , ZR-D-01			
9	DUP	S96T002439	0	D	@ICP-D01	LIQUID		
10	SPK	S96T002439	0	D	@ICP-D01	LIQUID		
11	CCV				@ICP-QC	QC		
12	CCB				@ICP-QC	QC		
13	SERDIL	S96T002454	0	D	@ICP-D01	LIQUID		
14	SAMPLE	S96T002454	0	D	@ICP-D01	LIQUID	96000462	AW-101 PUSH
		Analytes Requested:			AG-D-01 , AL-D-01 , AS-D-01 , B-D-01 , BA-D-01 , BE-D-01 , BI-D-01 , CA-D-01 , CD-D-01 , CE-D-01 , CO-D-01 , CR-D-01 , CU-D-01 , FE-D-01 , K-D-01 , LA-D-01 , LI-D-01 ,			

Data Entry Comments: Raw data is final result in ug/ml

S96T002439 Cr = 1.32e+2 ug/ml

S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

LABCORE Data Entry Template for Worklist# 10337

S	Type	Sample#	R	A	Test	Matrix	Group#	Project
					MG-D-01 , MN-D-01 , MO-D-01 , NA-D-01 , ND-D-01 , NI-D-01 , P-D-01 , PB-D-01 , S-D-01 , SB-D-01 , SE-D-01 , SI-D-01 , SM-D-01 , SR-D-01 , TI-D-01 , TL-D-01 , U-D-01 , V-D-01 , ZN-D-01 , ZR-D-01			
15	DUP	S96T002454	0	D	@ICP-D01	LIQUID		
16	SPK	S96T002454	0	D	@ICP-D01	LIQUID		
17	SERDIL	S96T002462	0	D	@ICP-D01	LIQUID		
18	SAMPLE	S96T002462	0	D	@ICP-D01	LIQUID	96000462	AW-101 PUSH
		Analytes Requested:			AG-D-01 , AL-D-01 , AS-D-01 , B-D-01 , BA-D-01 , BE-D-01 , BI-D-01 , CA-D-01 , CD-D-01 , CE-D-01 , CO-D-01 , CR-D-01 , CU-D-01 , FE-D-01 , K-D-01 , LA-D-01 , LI-D-01 , MG-D-01 , MN-D-01 , MO-D-01 , NA-D-01 , ND-D-01 , NI-D-01 , P-D-01 , PB-D-01 , S-D-01 , SB-D-01 , SE-D-01 , SI-D-01 , SM-D-01 , SR-D-01 , TI-D-01 , TL-D-01 , U-D-01 , V-D-01 , ZN-D-01 , ZR-D-01			
19	DUP	S96T002462	0	D	@ICP-D01	LIQUID		
20	SPK	S96T002462	0	D	@ICP-D01	LIQUID		
21	CCV				@ICP-QC	QC		
22	CCB				@ICP-QC	QC		
23	SERDIL	S96T002679	0	D	@ICP-D01	LIQUID		
24	SAMPLE	S96T002679	0	D	@ICP-D01	LIQUID	96000462	AW-101 PUSH
		Analytes Requested:			AG-D-01 , AL-D-01 , AS-D-01 , B-D-01 , BA-D-01 , BE-D-01 , BI-D-01 , CA-D-01 , CD-D-01 , CE-D-01 , CO-D-01 , CR-D-01 , CU-D-01 , FE-D-01 , K-D-01 , LA-D-01 , LI-D-01 , MG-D-01 , MN-D-01 , MO-D-01 , NA-D-01 , ND-D-01 , NI-D-01 , P-D-01 , PB-D-01 , S-D-01 , SB-D-01 , SE-D-01 , SI-D-01 , SM-D-01 , SR-D-01 , TI-D-01 , TL-D-01 , U-D-01 , V-D-01 , ZN-D-01 , ZR-D-01			
25	DUP	S96T002679	0	D	@ICP-D01	LIQUID		
26	SPK	S96T002679	0	D	@ICP-D01	LIQUID		
27	SERDIL	S96T002687	0	D	@ICP-D01	LIQUID		

Data Entry Comments:

S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

LABCORE Data Entry Template for Worklist# 10337

S	Type	Sample#	R	A	Test	Matrix	Group#	Project
28	SAMPLE	S96T002687	0	D	@ICP-D01	LIQUID	96000462	AW-101 PUSH

Analytes Requested: AG-D-01 , AL-D-01 , AS-D-01 , B-D-01 , BA-D-01 , BE-D-01 , BI-D-01 , CA-D-01 , CD-D-01 , CE-D-01 , CO-D-01 , CR-D-01 , CU-D-01 , FE-D-01 , K-D-01 , LA-D-01 , LI-D-01 , MG-D-01 , MN-D-01 , MO-D-01 , NA-D-01 , ND-D-01 , NI-D-01 , P-D-01 , PB-D-01 , S-D-01 , SB-D-01 , SE-D-01 , SI-D-01 , SM-D-01 , SR-D-01 , TI-D-01 , TL-D-01 , U-D-01 , V-D-01 , ZN-D-01 , ZR-D-01

S	Type	Sample#	R	A	Test	Matrix
29	DUP	S96T002687	0	D	@ICP-D01	LIQUID
30	SPK	S96T002687	0	D	@ICP-D01	LIQUID
31	ICSA				@ICP-QC	QC
32	ICSAB				@ICP-QC	QC
33	CCV				@ICP-QC	QC
34	CCB				@ICP-QC	QC

Final page for worklist # 10337

Analyst Signature	Date
JK Lee	07-30-96

Analyst Signature	Date
Reviewed by: Sal M. Parng	8/7/96

596T002439_L,	.025-30-28,	DF6005
596T002439	.025-30	1201
596T002439_D	.025-30	1201
596T002439_Q	.025-30	1201, .025 ml sample + 6 ml SS75 + 24 ml HNO3
596T002454_L,	.025-30-28,	DF6005
596T002454	.025-30	1201
596T002454_D	.025-30	1201
596T002454_Q	.025-30	1201, .025 ml sample + 6 ml SS75 + 24 ml HNO3
596T002462_L,	.025-30-28,	DF6005
596T002462	.025-30	1201
596T002462_D	.025-30	1201
596T002462_Q	.025-30	1201, .025 ml sample + 6 ml SS75 + 24 ml HNO3
596T002479_L,	.025-30-28,	DF6005
596T002479	.025-30	1201
596T002479_D	.025-30	1201
596T002479_Q	.025-30	1201, .025 ml sample + 6 ml SS75 + 24 ml HNO3
596T002487_L,	.025-30-28,	DF6005
596T002487	.025-30	1201
596T002487_D	.025-30	1201
596T002487_Q	.025-30	1201, .025 ml sample + 6 ml SS75 + 24 ml HNO3

Data Entry Comments: Spike recovery calculation:

596T002439 $C_r = \left(\frac{1309.959}{1201}\right) - \left(\frac{132.375}{1201}\right) \times 100 = 98.05\%$

S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

Note: Spike true value is 1.0 ppm for all elements except for U = 2.0 ppm.

File #: 960730B

Identity 1: ICV Identity 2: Quality Control 4:11 PM July 30, 1996
Task name : OPTIMA
Sample Weight : 1.0000 Solution Volume : 1.00
On-Peak Integrations : 3 Off-Peak Integrations : 1

	Zr (ppm)	Sr (ppm)	Bi (ppm)	Si (ppm)	Al (ppm)	Co (ppm)	Cu (ppm)	Li (ppm)
Mean	4.926	4.963	4.947	4.746	4.902	5.044	5.010	5.075
S.D.	0.006	0.007	0.027	0.009	0.011	0.019	0.011	0.026
% R.S.D.	0.126	0.148	0.552	0.185	0.215	0.372	0.218	0.504

	Zn (ppm)	Ni (ppm)	La (ppm)	Fe (ppm)	Ca (ppm)	Cr (ppm)	Nd (ppm)	U (ppm)
Mean	5.079	4.999	4.959	5.032	4.912	5.040	5.075	9.441
S.D.	0.008	0.007	0.012	0.008	0.007	0.014	0.025	0.009
% R.S.D.	0.150	0.141	0.239	0.156	0.140	0.284	0.497	0.093

	Ce (ppm)	Sm (ppm)	Ba (ppm)	P (ppm)	S (ppm)	Mg (ppm)	As (ppm)	Na (ppm)
Mean	5.063	4.997	4.982	5.317	5.087	4.900	5.094	5.020
S.D.	0.011	0.013	0.008	0.065	0.014	0.002	0.015	0.025
% R.S.D.	0.216	0.257	0.166	1.230	0.283	0.048	0.299	0.500

	Mo (ppm)	Se (ppm)	Ag (ppm)	Pb (ppm)	Ti (ppm)	Cd (ppm)	B (ppm)	K (ppm)
Mean	5.066	4.845	4.933	4.991	4.916	4.995	5.041	5.121
S.D.	0.007	0.019	0.005	0.025	0.006	0.012	0.010	0.034
% R.S.D.	0.136	0.391	0.099	0.500	0.118	0.247	0.205	0.658

	Mn (ppm)	Sb (ppm)	V (ppm)	Be (ppm)	Tl (ppm)
Mean	5.015	4.777	5.005	5.153	4.893
S.D.	0.006	0.040	0.003	0.003	0.005
% R.S.D.	0.123	0.830	0.058	0.062	0.106

JK Lab
07-30-96
Qcs-101

596T002439
596T002454
596T002462
596T002679
596T002687

Worklist # 10337

SIGNATURE ABOVE REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 1734 TO ~~1741~~ 1766. LAD 11-7-96

Identity 1: ICB Identity 2: Quality Control 4:15 PM July 30, 1996
Task name : OPTIMA
Sample Weight : 1.0000 Solution Volume : 1.00
On-Peak Integrations : 3 Off-Peak Integrations : 1

	Zr (ppm)	Sr (ppm)	Bi (ppm)	Si (ppm)	Al (ppm)	Co (ppm)	Cu (ppm)	Li (ppm)
Mean	0.001	0.000	0.005	-0.007	-0.013	0.009	-0.001	-0.000
S.D.	0.002	0.001	0.005	0.001	0.003	0.002	0.000	0.001
% R.S.D.	134.010	132.288	88.722	14.777	25.632	21.586	28.683	225.102

	Zn (ppm)	Ni (ppm)	La (ppm)	Fe (ppm)	Ca (ppm)	Cr (ppm)	Nd (ppm)	U (ppm)
Mean	0.000	-0.001	-0.003	0.000	-0.000	-0.001	0.009	-0.013
S.D.	0.000	0.002	0.002	0.002	0.000	0.001	0.008	0.043
% R.S.D.	130.706	278.295	58.044	77049.125	456.211	100.468	85.964	326.281

	Ce (ppm)	Sm (ppm)	Ba (ppm)	P (ppm)	S (ppm)	Mg (ppm)	As (ppm)	Na (ppm)
Mean	-0.010	0.005	0.000	0.037	-0.002	0.001	-0.008	0.004
S.D.	0.013	0.010	0.001	0.009	0.003	0.000	0.006	0.001
% R.S.D.	127.330	195.329	197.998	23.735	150.736	62.915	79.946	34.627

	Mo (ppm)	Se (ppm)	Ag (ppm)	Pb (ppm)	Tl (ppm)	Cd (ppm)	B (ppm)	K (ppm)
Mean	-0.001	-0.034	-0.001	-0.003	-0.001	-0.001	0.006	0.119
S.D.	0.001	0.003	0.001	0.003	0.000	0.000	0.001	0.013
% R.S.D.	93.665	9.062	152.272	109.941	41.567	0.149	25.483	11.240

	Mn (ppm)	Sb (ppm)	V (ppm)	Be (ppm)	Tl (ppm)
Mean	0.000	0.009	0.001	0.001	0.026
S.D.	0.001	0.004	0.000	0.001	0.013
% R.S.D.	128.568	41.579	26.481	69.855	50.016

Identity 1: LLS Identity 2: Quality Control 4:18 PM July 30, 1996
Task name : OPTIMA
Sample Weight : 1.0000 Solution Volume : 1.00
On-Peak Integrations : 3 Off-Peak Integrations : 1

	Zr (ppm)	Sr (ppm)	Bi (ppm)	Si (ppm)	Al (ppm)	Co (ppm)	Cu (ppm)	Li (ppm)
Mean	0.023	0.021	0.214	0.111	0.095	0.042	0.020	0.020
S.D.	0.001	0.000	0.009	0.002	0.001	0.005	0.000	0.000
% R.S.D.	3.826	0.472	4.348	1.387	0.873	12.393	0.253	0.864

	Zn (ppm)	Ni (ppm)	La (ppm)	Fe (ppm)	Ca (ppm)	Cr (ppm)	Nd (ppm)	U (ppm)
Mean	0.022	0.038	0.103	0.103	0.186	0.021	0.197	0.470
S.D.	0.000	0.003	0.003	0.005	0.000	0.001	0.010	0.055
% R.S.D.	1.033	7.469	2.864	4.426	0.132	4.814	4.949	11.626

	Ce (ppm)	Sm (ppm)	Ba (ppm)	P (ppm)	S (ppm)	Mg (ppm)	As (ppm)	Na (ppm)
Mean	0.197	0.241	0.101	0.477	0.210	0.205	0.201	0.211
S.D.	0.010	0.010	0.000	0.003	0.003	0.001	0.007	0.003
% R.S.D.	5.271	3.967	0.294	0.630	1.585	0.312	3.521	1.569

	Mo (ppm)	Se (ppm)	Ag (ppm)	Pb (ppm)	Ti (ppm)	Cd (ppm)	B (ppm)	K (ppm)
Mean	0.103	0.223	0.019	0.220	0.021	0.010	0.106	0.642
S.D.	0.001	0.016	0.001	0.006	0.000	0.000	0.001	0.008
% R.S.D.	1.289	7.218	4.687	2.733	1.505	4.663	0.969	1.218

	Mn (ppm)	Sb (ppm)	V (ppm)	Be (ppm)	Tl (ppm)
Mean	0.020	0.161	0.105	0.011	0.425
S.D.	0.000	0.015	0.001	0.000	0.027
% R.S.D.	0.857	9.130	0.634	3.306	6.357

Identity 1: ICSA Identity 2: Quality Control 4:21 PM July 30, 1996
Task name : OPTIMA
Sample Weight : 1.0000 Solution Volume : 1.00
On-Peak Integrations : 3 Off-Peak Integrations : 1

	Zr (ppm)	Sr (ppm)	Bi (ppm)	Si (ppm)	Al (ppm)	Co (ppm)	Cu (ppm)	Li (ppm)
Mean	-0.000	0.002	-0.022	0.015	197.137	0.002	0.000	0.000
S.D.	0.002	0.000	0.002	0.004	0.292	0.003	0.000	0.000
% R.S.D.	1646.223	6.005	10.744	26.318	0.148	207.186	112.386	133.007

	Zn (ppm)	Ni (ppm)	La (ppm)	Fe (ppm)	Ca (ppm)	Cr (ppm)	Nd (ppm)	U (ppm)
Mean	-0.005	0.004	0.003	93.489	99.846	0.004	-0.013	-0.052
S.D.	0.000	0.001	0.003	0.108	0.120	0.002	0.007	0.061
% R.S.D.	5.661	32.015	111.227	0.116	0.120	54.779	49.488	116.468

	Ce (ppm)	Sm (ppm)	Ba (ppm)	P (ppm)	S (ppm)	Mg (ppm)	As (ppm)	Na (ppm)
Mean	0.006	0.030	0.004	0.007	0.016	97.087	0.018	196.068
S.D.	0.015	0.012	0.000	0.021	0.021	0.327	0.008	1.203
% R.S.D.	264.100	39.964	6.005	297.219	132.781	0.337	42.338	0.613

	Mo (ppm)	Se (ppm)	Ag (ppm)	Pb (ppm)	Ti (ppm)	Cd (ppm)	B (ppm)	K (ppm)
Mean	0.002	0.019	0.002	0.004	-0.000	-0.001	0.014	-0.053
S.D.	0.001	0.004	0.001	0.009	0.000	0.001	0.001	0.018
% R.S.D.	46.904	21.143	47.724	221.505	71.056	134.486	9.313	32.885

	Mn (ppm)	Sb (ppm)	V (ppm)	Be (ppm)	Tl (ppm)
Mean	0.012	0.028	-0.001	0.003	-0.009
S.D.	0.000	0.015	0.000	0.000	0.026
% R.S.D.	3.758	51.739	25.512	4.635	280.265

Identity 1: ICSAB Identity 2: Quality Control 4:24 PM July 30, 1996
Task name : OPTIMA
Sample Weight : 1.0000 Solution Volume : 1.00
On-Peak Integrations : 3 Off-Peak Integrations : 1

	Zr (ppm)	Sr (ppm)	Bi (ppm)	Si (ppm)	Al (ppm)	Co (ppm)	Cu (ppm)	Li (ppm)
Mean	-0.004	0.002	-0.030	-0.000	197.645	0.490	0.501	0.964
S.D.	0.001	0.000	0.006	0.003	0.566	0.002	0.001	0.005
% R.S.D.	13.733	2.632	19.498	1540.567	0.286	0.400	0.200	0.475

	Zn (ppm)	Ni (ppm)	La (ppm)	Fe (ppm)	Ca (ppm)	Cr (ppm)	Nd (ppm)	U (ppm)
Mean	0.971	0.961	-0.002	92.712	99.686	0.503	-0.008	-0.081
S.D.	0.000	0.005	0.001	0.175	0.247	0.004	0.007	0.035
% R.S.D.	0.024	0.493	63.010	0.189	0.248	0.752	91.660	43.303

	Ce (ppm)	Sm (ppm)	Ba (ppm)	P (ppm)	S (ppm)	Mg (ppm)	As (ppm)	Na (ppm)
Mean	0.026	0.021	0.505	0.034	0.005	97.303	0.019	194.703
S.D.	0.007	0.004	0.001	0.002	0.011	0.279	0.001	0.970
% R.S.D.	27.181	20.139	0.243	6.123	210.205	0.287	6.390	0.498

	Mo (ppm)	Se (ppm)	Ag (ppm)	Pb (ppm)	Ti (ppm)	Cd (ppm)	B (ppm)	K (ppm)
Mean	0.000	0.062	1.006	0.959	-0.001	0.973	0.014	-0.009
S.D.	0.001	0.007	0.002	0.015	0.000	0.003	0.002	0.009
% R.S.D.	410.161	11.517	0.171	1.522	27.368	0.277	12.039	91.911

	Mn (ppm)	Sb (ppm)	V (ppm)	Be (ppm)	Tl (ppm)
Mean	0.498	0.037	0.493	0.495	0.098
S.D.	0.001	0.031	0.001	0.001	0.011
% R.S.D.	0.264	84.276	0.129	0.200	10.884

Identity 1: S96T002439_L Identity 2: .025-30-2-8 ml 4:28 PM July 30, 1996
Task name : OPTIMA
Sample Weight : 1.0000 Solution Volume : 6005.00
On-Peak Integrations : 3 Off-Peak Integrations : 1

	Zr (ppm)	Sr (ppm)	Bi (ppm)	Si (ppm)	Al (ppm)	Co (ppm)	Cu (ppm)	Li (ppm)
Mean	13.534	1.663	70.696	221.409	35063.237	20.501	-0.665	6.925
S.D.	1.264	0.443	29.078	7.337	31.981	20.458	2.631	1.827
% R.S.D.	9.339	26.647	41.132	3.314	0.091	99.790	395.744	26.387

	Zn (ppm)	Ni (ppm)	La (ppm)	Fe (ppm)	Ca (ppm)	Cr (ppm)	Nd (ppm)	U (ppm)
Mean	7.588	14.411	-11.425	7.604	-51.542	131.192	25.445	-253.546
S.D.	3.963	6.691	12.980	20.789	1.822	5.289	36.956	177.802
% R.S.D.	52.233	46.428	113.614	273.389	3.534	4.032	145.238	70.126

	Ce (ppm)	Sm (ppm)	Ba (ppm)	P (ppm)	S (ppm)	Mg (ppm)	As (ppm)	Na (ppm)
Mean	24.032	78.876	1.908	354.667	444.108	13.445	-42.039	290032.925
S.D.	50.322	29.381	0.806	52.737	9.689	1.259	20.162	1377.155
% R.S.D.	209.398	37.250	42.274	14.869	2.182	9.363	47.961	0.475

	Mo (ppm)	Se (ppm)	Ag (ppm)	Pb (ppm)	Ti (ppm)	Cd (ppm)	B (ppm)	K (ppm)
Mean	86.107	190.596	1.019	95.194	-2.189	8.090	77.555	42308.179
S.D.	6.503	81.993	1.626	11.432	1.912	2.466	6.068	162.604
% R.S.D.	7.552	43.019	159.581	12.010	87.332	30.480	7.824	0.384

	Mn (ppm)	Sb (ppm)	V (ppm)	Be (ppm)	Tl (ppm)
Mean	1.949	417.243	14.132	6.152	146.708
S.D.	1.065	54.783	4.881	0.846	81.689
% R.S.D.	54.660	13.130	34.541	13.745	55.681

Identity 1: 9961002439 Identity 2: .025-30 ml 4:33 PM July 30, 1996
Task name : OPTIMA
Sample Weight : 1.0000 Solution Volume : 1201.00
On-Peak Integrations : 3 Off-Peak Integrations : 1

	Zr (ppm)	Sr (ppm)	Bi (ppm)	Si (ppm)	Al (ppm)	Co (ppm)	Cu (ppm)	Li (ppm)
Mean	16.266	0.537	5.159	257.946	35511.507	9.557	1.414	9.719
S.D.	0.446	0.077	6.050	3.063	57.089	4.724	0.461	0.168
% R.S.D.	2.741	14.286	117.283	1.188	0.161	49.427	32.576	1.725

	Zn (ppm)	Ni (ppm)	La (ppm)	Fe (ppm)	Ca (ppm)	Cr (ppm)	Nd (ppm)	U (ppm)
Mean	10.786	21.344	-4.540	9.295	-4.040	132.375	20.155	-35.731
S.D.	0.377	2.255	1.710	2.894	0.145	2.095	7.313	28.413
% R.S.D.	3.500	10.563	37.662	31.136	3.583	1.583	36.282	79.518

	Ce (ppm)	Sm (ppm)	Ba (ppm)	P (ppm)	S (ppm)	Mg (ppm)	As (ppm)	Na (ppm)
Mean	39.497	23.088	1.061	304.547	493.133	0.727	-2.766	275816.600
S.D.	7.341	5.664	0.216	8.688	4.505	0.126	6.320	518.449
% R.S.D.	18.586	24.532	20.318	2.853	0.914	17.321	228.464	0.188

	Mo (ppm)	Se (ppm)	Ag (ppm)	Pb (ppm)	Ti (ppm)	Cd (ppm)	B (ppm)	K (ppm)
Mean	74.626	40.713	0.906	62.281	-0.479	3.560	66.109	40415.707
S.D.	1.390	9.931	0.367	20.223	0.287	0.373	0.378	134.512
% R.S.D.	1.862	24.392	40.531	32.470	59.901	10.484	0.572	0.333

	Mn (ppm)	Sb (ppm)	V (ppm)	Be (ppm)	Tl (ppm)
Mean	3.259	-8.579	3.123	3.895	39.481
S.D.	0.217	30.925	1.157	0.161	14.270
% R.S.D.	6.664	360.480	37.055	4.145	36.145

Identity 1: S96T002439_D Identity 2: .025-30 ml 4:36 PM July 30, 1996
Task name : OPTIMA
Sample Weight : 1.0000 Solution Volume : 1201.00
On-Peak Integrations : 3 Off-Peak Integrations : 1

	Zr (ppm)	Sr (ppm)	Bi (ppm)	Si (ppm)	Al (ppm)	Co (ppm)	Cu (ppm)	Li (ppm)
Mean	18.844	0.128	14.427	247.406	33000.962	8.175	-0.332	8.494
S.D.	1.804	0.193	12.906	2.125	65.769	0.013	0.424	0.378
% R.S.D.	9.575	150.997	89.452	0.859	0.199	0.160	127.894	4.450

	Zn (ppm)	Ni (ppm)	La (ppm)	Fe (ppm)	Ca (ppm)	Cr (ppm)	Nd (ppm)	U (ppm)
Mean	9.134	19.354	-3.913	5.153	-6.659	118.134	-12.993	96.801
S.D.	0.335	0.404	4.297	2.480	0.386	2.312	16.583	102.030
% R.S.D.	3.667	2.090	109.831	48.115	5.797	1.957	127.628	105.402

	Ce (ppm)	Sm (ppm)	Ba (ppm)	P (ppm)	S (ppm)	Mg (ppm)	As (ppm)	Na (ppm)
Mean	-6.065	33.396	0.274	263.529	432.616	0.945	-5.479	262182.624
S.D.	28.426	21.900	0.394	9.553	10.755	0.252	6.640	1865.369
% R.S.D.	468.711	65.577	143.676	3.625	2.486	26.647	121.191	0.711

	Mo (ppm)	Se (ppm)	Ag (ppm)	Pb (ppm)	Ti (ppm)	Cd (ppm)	B (ppm)	K (ppm)
Mean	64.072	38.792	-1.878	39.450	0.595	0.973	59.030	38228.253
S.D.	0.701	26.198	1.589	5.678	0.597	1.227	0.456	289.175
% R.S.D.	1.094	67.535	84.609	14.394	100.324	126.052	0.772	0.756

	Mn (ppm)	Sb (ppm)	V (ppm)	Be (ppm)	Tl (ppm)
Mean	2.996	18.423	-0.861	4.008	44.294
S.D.	0.217	16.685	0.821	0.013	66.939
% R.S.D.	7.249	90.563	95.317	0.328	151.126

Identity 1: S96T002439_A Identity 2: .025sam+6sst5+24hno3 4:39 PM July 30, 1996
Task name : OPTIMA
Sample Weight : 1.0000 Solution Volume : 1201.00
On-Peak Integrations : 3 Off-Peak Integrations : 1

	Zr (ppm)	Sr (ppm)	Bi (ppm)	Si (ppm)	Al (ppm)	Co (ppm)	Cu (ppm)	Li (ppm)
Mean	1209.711	1215.515	1211.428	1441.929	32432.794	1200.427	1239.206	1221.942
S.D.	2.865	3.081	7.884	2.892	48.441	6.251	1.477	3.686
% R.S.D.	0.237	0.253	0.651	0.201	0.149	0.521	0.119	0.302

	Zn (ppm)	Ni (ppm)	La (ppm)	Fe (ppm)	Ca (ppm)	Cr (ppm)	Nd (ppm)	U (ppm)
Mean	1203.542	1213.749	1206.930	1205.652	1180.020	1309.959	1251.445	2338.388
S.D.	3.355	6.639	3.916	4.918	2.809	11.855	11.950	15.866
% R.S.D.	0.279	0.547	0.324	0.408	0.238	0.905	0.955	0.678

	Ce (ppm)	Sm (ppm)	Ba (ppm)	P (ppm)	S (ppm)	Mg (ppm)	As (ppm)	Na (ppm)
Mean	1204.668	1232.058	1222.928	1553.237	1644.567	1147.426	1199.312	253999.977
S.D.	11.365	8.937	3.123	82.188	41.198	3.525	9.658	757.830
% R.S.D.	0.943	0.725	0.255	5.291	2.505	0.307	0.805	0.298

	Mo (ppm)	Se (ppm)	Ag (ppm)	Pb (ppm)	Ti (ppm)	Cd (ppm)	B (ppm)	K (ppm)
Mean	1261.885	1162.784	1061.456	1262.680	1190.261	1186.732	1248.999	37807.766
S.D.	4.921	4.990	2.074	22.756	2.170	2.794	4.490	225.214
% R.S.D.	0.390	0.429	0.195	1.802	0.182	0.235	0.359	0.596

	Mn (ppm)	Sb (ppm)	V (ppm)	Be (ppm)	Tl (ppm)
Mean	1202.616	1121.146	1201.771	1224.548	1168.983
S.D.	2.249	42.206	1.024	2.891	5.471
% R.S.D.	0.187	3.765	0.085	0.236	0.468

Identity 1: CCV Identity 2: Quality Control 4:45 PM July 30, 1996
Task name : OPTIMA
Sample Weight : 1.0000 Solution Volume : 1.00
On-Peak Integrations : 3 Off-Peak Integrations : 1

	Zr (ppm)	Sr (ppm)	Bi (ppm)	Si (ppm)	Al (ppm)	Co (ppm)	Cu (ppm)	Li (ppm)
Mean	4.937	4.972	4.981	4.767	4.923	5.076	5.013	5.085
S.D.	0.009	0.019	0.020	0.003	0.007	0.007	0.021	0.031
% R.S.D.	0.185	0.378	0.408	0.063	0.150	0.140	0.410	0.605

	Zn (ppm)	Ni (ppm)	La (ppm)	Fe (ppm)	Ca (ppm)	Cr (ppm)	Nd (ppm)	U (ppm)
Mean	5.114	5.008	4.953	5.026	4.911	5.071	5.008	9.557
S.D.	0.008	0.006	0.009	0.012	0.013	0.017	0.037	0.019
% R.S.D.	0.158	0.120	0.172	0.234	0.264	0.340	0.741	0.203

	Ce (ppm)	Sm (ppm)	Ba (ppm)	P (ppm)	S (ppm)	Mg (ppm)	As (ppm)	Na (ppm)
Mean	5.073	4.997	4.987	5.437	5.190	4.929	5.104	5.052
S.D.	0.007	0.009	0.021	0.091	0.038	0.006	0.013	0.020
% R.S.D.	0.132	0.176	0.424	1.679	0.730	0.119	0.257	0.405

	Mo (ppm)	Se (ppm)	Ag (ppm)	Pb (ppm)	Ti (ppm)	Cd (ppm)	B (ppm)	K (ppm)
Mean	5.092	4.941	4.958	4.991	4.934	5.010	5.038	5.149
S.D.	0.006	0.037	0.008	0.017	0.012	0.007	0.005	0.018
% R.S.D.	0.109	0.741	0.155	0.337	0.243	0.148	0.103	0.358

	Mn (ppm)	Sb (ppm)	V (ppm)	Be (ppm)	Tl (ppm)
Mean	5.026	4.695	5.021	5.163	4.882
S.D.	0.006	0.046	0.010	0.012	0.007
% R.S.D.	0.122	0.983	0.200	0.239	0.141

Identity 1: CCB Identity 2: Quality Control 4:49 PM July 30, 1996
Task name : OPTIMA
Sample Weight : 1.0000 Solution Volume : 1.00
On-Peak Integrations : 3 Off-Peak Integrations : 1

	Zr (ppm)	Sr (ppm)	Si (ppm)	Si (ppm)	Al (ppm)	Co (ppm)	Cu (ppm)	Li (ppm)
Mean	0.001	0.000	-0.000	-0.008	-0.016	0.003	-0.001	0.000
S.D.	0.001	0.000	0.007	0.004	0.006	0.003	0.000	0.000
% R.S.D.	125.029	34.641	1863.741	45.192	38.180	99.863	44.687	519.328

	Zn (ppm)	Ni (ppm)	La (ppm)	Fe (ppm)	Ca (ppm)	Cr (ppm)	Nd (ppm)	U (ppm)
Mean	-0.000	-0.006	-0.003	0.000	-0.001	0.000	0.011	0.017
S.D.	0.001	0.003	0.001	0.002	0.000	0.001	0.004	0.057
% R.S.D.	234.581	48.895	24.288	2064.140	9.677	418.181	41.609	330.823

	Ce (ppm)	Sm (ppm)	Ba (ppm)	P (ppm)	S (ppm)	Mg (ppm)	As (ppm)	Na (ppm)
Mean	0.012	0.020	0.000	0.026	-0.007	-0.000	-0.000	0.010
S.D.	0.014	0.012	0.000	0.006	0.000	0.000	0.004	0.005
% R.S.D.	117.725	60.333	75.043	22.589	4.289	57.735	906.907	44.609

	Mo (ppm)	Se (ppm)	Ag (ppm)	Pb (ppm)	Ti (ppm)	Cd (ppm)	B (ppm)	K (ppm)
Mean	0.000	-0.042	0.002	-0.019	-0.000	-0.002	0.005	0.148
S.D.	0.000	0.006	0.001	0.004	0.000	0.000	0.001	0.014
% R.S.D.	458.223	14.449	45.884	23.016	87.228	6.893	12.638	9.658

	Mn (ppm)	Sb (ppm)	V (ppm)	Be (ppm)	Tl (ppm)
Mean	-0.000	0.036	0.000	0.000	0.047
S.D.	0.000	0.032	0.000	0.000	0.026
% R.S.D.	3.267	90.078	34.313	41.548	55.516

Identity 1: S96T002454_L Identity 2: .025-30-2-8 ml 4:53 PM July 30, 1996
Task name : OPTIMA
Sample Weight : 1.0000 Solution Volume : 6005.00
On-Peak Integrations : 3 Off-Peak Integrations : 1

	Zr (ppm)	Sr (ppm)	Bi (ppm)	Si (ppm)	Al (ppm)	Co (ppm)	Cu (ppm)	Li (ppm)
Mean	6.607	0.512	10.999	173.143	32808.379	13.695	-2.405	4.274
S.D.	2.984	0.222	45.532	24.229	61.836	11.830	3.472	0.968
% R.S.D.	45.158	43.301	413.955	13.993	0.188	86.382	144.377	22.651

	Zn (ppm)	Ni (ppm)	La (ppm)	Fe (ppm)	Ca (ppm)	Cr (ppm)	Nd (ppm)	U (ppm)
Mean	6.416	2.974	-17.138	19.025	-54.328	106.896	59.372	-381.813
S.D.	5.824	7.642	9.806	4.321	0.241	3.994	18.195	131.746
% R.S.D.	90.766	256.939	57.220	22.711	0.444	3.736	30.646	34.505

	Ce (ppm)	Sm (ppm)	Ba (ppm)	P (ppm)	S (ppm)	Mg (ppm)	As (ppm)	Na (ppm)
Mean	-5.065	-19.460	1.490	219.155	378.184	7.631	-30.845	274534.062
S.D.	23.620	30.101	1.017	41.297	18.660	0.629	16.508	886.112
% R.S.D.	466.341	154.676	68.235	18.844	4.934	8.248	53.518	0.323

	Mo (ppm)	Se (ppm)	Ag (ppm)	Pb (ppm)	Ti (ppm)	Cd (ppm)	B (ppm)	K (ppm)
Mean	68.206	63.554	5.554	3.926	-6.891	-10.274	71.239	38457.988
S.D.	14.967	106.354	2.795	77.399	3.269	1.866	10.644	209.757
% R.S.D.	21.943	167.345	50.325	1971.368	47.435	18.166	14.941	0.545

	Mn (ppm)	Sb (ppm)	V (ppm)	Be (ppm)	Tl (ppm)
Mean	-0.536	144.583	2.072	5.184	128.227
S.D.	1.081	268.228	3.633	0.840	71.865
% R.S.D.	201.807	185.519	175.335	16.213	56.045

Identity 1: S96T002454 Identity 2: .025-30 ml 4:56 PM July 30, 1996
Task name : OPTIMA
Sample Weight : 1.0000 Solution Volume : 1201.00
On-Peak Integrations : 3 Off-Peak Integrations : 1

	Zr (ppm)	Sr (ppm)	Bi (ppm)	Si (ppm)	Al (ppm)	Co (ppm)	Cu (ppm)	Li (ppm)
Mean	12.981	0.512	1.808	204.660	33048.256	8.203	0.159	6.090
S.D.	1.960	0.089	15.590	3.018	57.252	0.009	0.550	0.128
% R.S.D.	15.096	17.321	862.174	1.475	0.173	0.107	345.583	2.104

	Zn (ppm)	Ni (ppm)	La (ppm)	Fe (ppm)	Ca (ppm)	Cr (ppm)	Nd (ppm)	U (ppm)
Mean	10.004	12.530	-6.274	11.484	-4.764	118.749	25.751	-118.244
S.D.	0.361	0.609	1.717	1.306	0.048	1.333	3.461	68.398
% R.S.D.	3.612	4.863	27.365	11.370	1.013	1.123	13.439	57.845

	Ce (ppm)	Sm (ppm)	Ba (ppm)	P (ppm)	S (ppm)	Mg (ppm)	As (ppm)	Na (ppm)
Mean	34.918	-12.555	1.276	264.163	432.696	0.363	-4.507	264185.301
S.D.	13.464	13.098	0.289	8.554	6.025	0.218	6.229	2473.685
% R.S.D.	38.559	104.326	22.662	3.238	1.392	60.000	138.225	0.936

	Mo (ppm)	Se (ppm)	Ag (ppm)	Pb (ppm)	Ti (ppm)	Cd (ppm)	B (ppm)	K (ppm)
Mean	63.701	7.826	2.086	54.306	-2.232	2.693	57.820	37552.648
S.D.	1.873	17.541	0.648	7.374	0.712	0.650	1.106	213.194
% R.S.D.	2.940	224.153	31.079	13.579	31.885	24.118	1.914	0.568

	Mn (ppm)	Sb (ppm)	V (ppm)	Be (ppm)	Tl (ppm)
Mean	3.270	73.445	2.483	3.409	113.359
S.D.	0.223	8.190	0.731	0.009	27.681
% R.S.D.	6.822	11.151	29.454	0.258	24.419

Identity 1: S96T002454_D Identity 2: .025-30 ml 4:59 PM July 30, 1996
Task name : OPTIMA
Sample Weight : 1.0000 Solution Volume : 1201.00
On-Peak Integrations : 3 Off-Peak Integrations : 1

	Zr (ppm)	Sr (ppm)	Bi (ppm)	Si (ppm)	Al (ppm)	Co (ppm)	Cu (ppm)	Li (ppm)
Mean	15.298	0.179	6.455	199.784	31527.619	9.550	-0.530	5.171
S.D.	1.166	0.117	9.223	4.064	86.900	2.358	0.612	0.128
% R.S.D.	7.621	65.465	142.889	2.034	0.276	24.693	115.447	2.480

	Zn (ppm)	Ni (ppm)	La (ppm)	Fe (ppm)	Ca (ppm)	Cr (ppm)	Nd (ppm)	U (ppm)
Mean	10.004	12.113	-5.081	6.905	-7.021	114.460	10.520	15.649
S.D.	0.396	0.938	3.552	0.195	0.128	1.538	1.255	44.777
% R.S.D.	3.963	7.746	69.907	2.829	1.818	1.344	11.934	286.127

	Ce (ppm)	Sm (ppm)	Ba (ppm)	P (ppm)	S (ppm)	Mg (ppm)	As (ppm)	Na (ppm)
Mean	8.914	10.425	0.334	304.509	428.194	-0.073	-3.646	248050.359
S.D.	11.568	8.865	0.243	33.737	2.692	0.218	8.738	2990.695
% R.S.D.	129.766	85.036	72.931	11.079	0.629	299.999	239.628	1.206

	Mo (ppm)	Se (ppm)	Ag (ppm)	Pb (ppm)	Ti (ppm)	Cd (ppm)	B (ppm)	K (ppm)
Mean	67.528	-19.622	0.912	60.504	-1.111	1.510	55.807	35140.326
S.D.	1.301	25.988	0.369	20.502	0.864	0.816	0.358	528.913
% R.S.D.	1.926	132.444	40.404	33.884	77.770	54.004	0.642	1.505

	Mn (ppm)	Sb (ppm)	V (ppm)	Be (ppm)	Tl (ppm)
Mean	3.381	49.645	2.635	3.236	104.493
S.D.	0.216	48.176	0.736	0.165	30.645
% R.S.D.	6.403	97.041	27.938	5.092	29.327

Identity 1: S96T002454_A Identity 2: .025sam+6sst5+24hno3 5:05 PM July 30, 1996
Task name : OPTIMA
Sample Weight : 1.0000 Solution Volume : 1201.00
On-Peak Integrations : 3 Off-Peak Integrations : 1

	Zr (ppm)	Sr (ppm)	Bi (ppm)	Si (ppm)	Al (ppm)	Co (ppm)	Cu (ppm)	Li (ppm)
Mean	1217.113	1209.988	1210.588	1413.068	32619.358	1246.826	1212.848	1177.367
S.D.	1.788	3.513	25.340	4.171	40.028	2.360	4.249	6.810
% R.S.D.	0.147	0.290	2.093	0.295	0.123	0.189	0.350	0.578

	Zn (ppm)	Ni (ppm)	La (ppm)	Fe (ppm)	Ca (ppm)	Cr (ppm)	Nd (ppm)	U (ppm)
Mean	1254.800	1233.964	1201.251	1240.037	1172.294	1353.539	1214.106	2280.695
S.D.	2.416	4.829	2.929	17.339	4.984	1.848	25.977	70.911
% R.S.D.	0.193	0.391	0.244	1.398	0.425	0.137	2.140	3.109

	Ce (ppm)	Sm (ppm)	Ba (ppm)	P (ppm)	S (ppm)	Mg (ppm)	As (ppm)	Na (ppm)
Mean	1222.351	1208.813	1207.022	1574.216	1686.113	1192.036	1230.733	244347.075
S.D.	17.551	10.919	4.800	89.614	38.639	1.559	6.145	1164.299
% R.S.D.	1.436	0.903	0.398	5.693	2.292	0.131	0.499	0.476

	Mo (ppm)	Se (ppm)	Ag (ppm)	Pb (ppm)	Ti (ppm)	Cd (ppm)	B (ppm)	K (ppm)
Mean	1311.510	1159.352	1103.598	1268.624	1201.502	1218.901	1260.293	35781.963
S.D.	1.438	27.857	4.215	4.810	2.370	1.806	3.556	256.543
% R.S.D.	0.110	2.403	0.382	0.379	0.197	0.148	0.282	0.717

	Mn (ppm)	Sb (ppm)	V (ppm)	Be (ppm)	Tl (ppm)
Mean	1235.149	1233.196	1229.207	1236.537	1273.924
S.D.	1.519	26.986	1.079	3.401	31.739
% R.S.D.	0.123	2.188	0.088	0.275	2.491

Identity 1: S96T002462_L Identity 2: .025-30-2-8 ml 5:09 PM July 30, 1996
Task name : OPTIMA
Sample Weight : 1.0000 Solution Volume : 6005.00
On-Peak Integrations : 3 Off-Peak Integrations : 1

	Zr (ppm)	Sr (ppm)	Bi (ppm)	Si (ppm)	Al (ppm)	Co (ppm)	Cu (ppm)	Li (ppm)
Mean	29.450	-0.000	30.275	235.034	31729.940	-0.063	-0.957	6.092
S.D.	14.720	1.152	54.033	23.888	78.788	20.404	3.734	2.515
% R.S.D.	49.984	328034362500.000	178.472	10.164	0.248	32611.575	390.205	41.285

	Zn (ppm)	Ni (ppm)	La (ppm)	Fe (ppm)	Ca (ppm)	Cr (ppm)	Nd (ppm)	U (ppm)
Mean	7.670	14.804	-11.086	-50.567	-40.955	124.241	69.722	495.654
S.D.	0.299	17.241	13.187	22.359	0.638	11.913	30.676	489.363
% R.S.D.	3.904	116.467	118.955	44.217	1.559	9.589	43.998	98.731

	Ce (ppm)	Sm (ppm)	Ba (ppm)	P (ppm)	S (ppm)	Mg (ppm)	As (ppm)	Na (ppm)
Mean	-28.083	114.845	0.477	294.640	410.485	6.904	-22.228	261409.628
S.D.	122.311	88.572	2.557	168.590	46.959	1.259	22.085	3889.490
% R.S.D.	435.540	77.123	536.045	57.219	11.440	18.232	99.357	1.488

	Mo (ppm)	Se (ppm)	Ag (ppm)	Pb (ppm)	Ti (ppm)	Cd (ppm)	B (ppm)	K (ppm)
Mean	70.367	-40.604	49.773	101.466	1.814	-6.992	60.542	36730.051
S.D.	1.415	97.513	11.126	38.742	4.928	5.210	4.863	340.263
% R.S.D.	2.010	240.155	22.353	38.182	271.702	74.504	8.033	0.926

	Mn (ppm)	Sb (ppm)	V (ppm)	Be (ppm)	Tl (ppm)
Mean	-0.023	184.770	-8.858	3.869	-210.632
S.D.	1.034	153.737	6.067	0.879	285.183
% R.S.D.	4418.292	83.204	68.486	22.719	135.394

Identity 1: S96T002462 Identity 2: .025-30 ml 5:12 PM July 30, 1996
Task name : OPTIMA
Sample Weight : 1.0000 Solution Volume : 1201.00
On-Peak Integrations : 3 Off-Peak Integrations : 1

	Zr (ppm)	Sr (ppm)	Bi (ppm)	Si (ppm)	Al (ppm)	Co (ppm)	Cu (ppm)	Li (ppm)
Mean	10.732	0.589	-6.154	197.078	31658.649	4.116	0.941	8.524
S.D.	1.048	0.044	5.256	1.370	70.584	4.090	0.683	0.194
% R.S.D.	9.768	7.531	85.394	0.695	0.223	99.371	72.572	2.271

	Zn (ppm)	Ni (ppm)	La (ppm)	Fe (ppm)	Ca (ppm)	Cr (ppm)	Nd (ppm)	U (ppm)
Mean	8.466	14.315	-15.347	5.855	-2.145	111.516	24.340	-166.782
S.D.	0.363	1.817	0.991	2.469	0.128	0.871	5.203	27.475
% R.S.D.	4.284	12.693	6.459	42.168	5.951	0.781	21.376	16.474

	Ce (ppm)	Sm (ppm)	Ba (ppm)	P (ppm)	S (ppm)	Mg (ppm)	As (ppm)	Na (ppm)
Mean	47.728	-4.084	1.359	244.215	417.835	-0.218	-10.246	253720.424
S.D.	10.454	9.358	0.279	6.449	8.085	0.252	10.619	384.790
% R.S.D.	21.904	229.122	20.553	2.641	1.935	115.470	103.646	0.152

	Mo (ppm)	Se (ppm)	Ag (ppm)	Pb (ppm)	Ti (ppm)	Cd (ppm)	B (ppm)	K (ppm)
Mean	62.467	19.480	4.600	60.794	-1.970	2.262	56.780	36103.109
S.D.	2.592	10.101	0.678	13.522	0.160	0.375	0.175	171.721
% R.S.D.	4.150	51.854	14.743	22.243	8.107	16.564	0.308	0.476

	Mn (ppm)	Sb (ppm)	V (ppm)	Be (ppm)	Tl (ppm)
Mean	2.773	54.429	2.689	3.402	71.405
S.D.	0.003	17.760	0.214	0.282	15.225
% R.S.D.	0.114	32.631	7.974	8.294	21.323

Identity 1: S96T002462_D Identity 2: .025-30 ml 5:15 PM July 30, 1996
Task name : OPTIMA
Sample Weight : 1.0000 Solution Volume : 1201.00
On-Peak Integrations : 3 Off-Peak Integrations : 1

	Zr (ppm)	Sr (ppm)	Bi (ppm)	Si (ppm)	Al (ppm)	Co (ppm)	Cu (ppm)	Li (ppm)
Mean	11.334	0.384	-5.993	202.382	31739.670	10.935	-0.858	7.294
S.D.	1.036	0.133	12.826	4.050	54.656	2.369	0.220	0.145
% R.S.D.	9.142	34.641	214.022	2.001	0.172	21.666	25.691	1.992

	Zn (ppm)	Ni (ppm)	La (ppm)	Fe (ppm)	Ca (ppm)	Cr (ppm)	Nd (ppm)	U (ppm)
Mean	9.336	13.918	-10.810	6.825	-8.498	117.233	6.673	-141.131
S.D.	0.472	0.996	3.530	1.532	0.048	4.517	6.711	48.586
% R.S.D.	5.053	7.156	32.659	22.441	0.568	3.853	100.577	34.426

	Ce (ppm)	Sm (ppm)	Ba (ppm)	P (ppm)	S (ppm)	Mg (ppm)	As (ppm)	Na (ppm)
Mean	13.993	-2.304	0.739	261.801	427.403	-0.145	-5.863	249214.181
S.D.	9.895	7.830	0.169	19.996	12.102	0.252	6.403	1455.382
% R.S.D.	70.718	339.836	22.867	7.638	2.832	173.205	109.211	0.584

	Mo (ppm)	Se (ppm)	Ag (ppm)	Pb (ppm)	Ti (ppm)	Cd (ppm)	B (ppm)	K (ppm)
Mean	65.923	22.210	0.473	64.734	-2.100	0.966	58.504	35756.550
S.D.	0.107	9.821	1.056	3.785	0.231	1.461	2.204	205.906
% R.S.D.	0.162	44.220	223.532	5.847	11.017	151.210	3.767	0.576

	Mn (ppm)	Sb (ppm)	V (ppm)	Be (ppm)	Tl (ppm)
Mean	2.900	7.259	1.500	3.310	17.482
S.D.	0.211	25.611	1.048	0.166	13.317
% R.S.D.	7.282	352.803	69.838	5.018	76.175

Identity 1: S96T002462_A Identity 2: .025sam+6sst5+24hno3 5:19 PM July 30, 1996
Task name : OPTIMA
Sample Weight : 1.0000 Solution Volume : 1201.00
On-Peak Integrations : 3 Off-Peak Integrations : 1

	Zr (ppm)	Sr (ppm)	Bi (ppm)	Si (ppm)	Al (ppm)	Co (ppm)	Cu (ppm)	Li (ppm)
Mean	1204.776	1196.271	1192.608	1408.883	32946.360	1222.270	1204.897	1174.852
S.D.	2.720	1.804	6.956	3.681	44.894	6.260	2.407	4.473
% R.S.D.	0.226	0.151	0.583	0.261	0.136	0.512	0.200	0.381

	Zn (ppm)	Ni (ppm)	La (ppm)	Fe (ppm)	Ca (ppm)	Cr (ppm)	Nd (ppm)	U (ppm)
Mean	1235.928	1224.154	1195.013	1216.724	1163.159	1342.941	1204.479	2248.120
S.D.	1.738	2.899	6.431	14.163	2.051	1.265	4.401	55.311
% R.S.D.	0.141	0.237	0.538	1.164	0.176	0.094	0.365	2.460

	Ce (ppm)	Sm (ppm)	Ba (ppm)	P (ppm)	S (ppm)	Mg (ppm)	As (ppm)	Na (ppm)
Mean	1212.076	1188.187	1195.827	1535.223	1666.763	1172.549	1233.653	249355.072
S.D.	6.384	1.760	2.064	41.639	17.556	1.659	16.386	1005.776
% R.S.D.	0.527	0.148	0.173	2.712	1.053	0.141	1.328	0.403

	Mo (ppm)	Se (ppm)	Ag (ppm)	Pb (ppm)	Ti (ppm)	Cd (ppm)	B (ppm)	K (ppm)
Mean	1286.883	1162.094	1077.408	1248.929	1185.434	1203.572	1254.355	36779.785
S.D.	2.330	9.126	1.363	27.748	2.107	2.598	2.256	199.941
% R.S.D.	0.181	0.785	0.126	2.222	0.178	0.216	0.180	0.544

	Mn (ppm)	Sb (ppm)	V (ppm)	Be (ppm)	Tl (ppm)
Mean	1222.278	1128.482	1216.020	1222.440	1243.553
S.D.	2.063	30.794	2.090	1.285	16.985
% R.S.D.	0.169	2.729	0.172	0.105	1.366

Identity 1: CCV Identity 2: Quality Control 5:25 PM July 30, 1996
Task name : OPTIMA
Sample Weight : 1.0000 Solution Volume : 1.00
On-Peak Integrations : 3 Off-Peak Integrations : 1

	Zr (ppm)	Sr (ppm)	Bi (ppm)	Si (ppm)	Al (ppm)	Co (ppm)	Cu (ppm)	Li (ppm)
Mean	4.958	5.008	4.980	4.770	4.939	5.066	5.063	5.148
S.D.	0.013	0.016	0.004	0.003	0.009	0.017	0.017	0.008
% R.S.D.	0.253	0.328	0.081	0.058	0.178	0.345	0.329	0.154

	Zn (ppm)	Ni (ppm)	La (ppm)	Fe (ppm)	Ca (ppm)	Cr (ppm)	Nd (ppm)	U (ppm)
Mean	5.080	5.026	4.992	5.058	4.948	5.043	5.097	9.644
S.D.	0.009	0.003	0.013	0.012	0.014	0.004	0.013	0.035
% R.S.D.	0.185	0.057	0.269	0.243	0.289	0.087	0.262	0.364

	Ce (ppm)	Sm (ppm)	Ba (ppm)	P (ppm)	S (ppm)	Mg (ppm)	As (ppm)	Na (ppm)
Mean	5.081	5.073	5.033	4.988	4.965	4.907	5.096	5.096
S.D.	0.013	0.013	0.017	0.099	0.027	0.010	0.005	0.008
% R.S.D.	0.263	0.254	0.344	1.987	0.539	0.197	0.090	0.153

	Mo (ppm)	Se (ppm)	Ag (ppm)	Pb (ppm)	Tl (ppm)	Cd (ppm)	B (ppm)	K (ppm)
Mean	5.077	4.934	4.941	5.007	4.948	5.011	5.065	5.172
S.D.	0.020	0.046	0.007	0.023	0.013	0.016	0.025	0.013
% R.S.D.	0.391	0.933	0.151	0.458	0.258	0.311	0.495	0.259

	Mn (ppm)	Sb (ppm)	V (ppm)	Be (ppm)	Tl (ppm)
Mean	5.022	4.795	5.020	5.182	4.879
S.D.	0.010	0.061	0.011	0.012	0.031
% R.S.D.	0.196	1.277	0.219	0.230	0.629

Identity 1: CCB Identity 2: Quality Control 5:28 PM July 30, 1996
Task name : OPTIMA
Sample Weight : 1.0000 Solution Volume : 1.00
On-Peak Integrations : 3 Off-Peak Integrations : 1

	Zr (ppm)	Sr (ppm)	Bi (ppm)	Si (ppm)	Al (ppm)	Co (ppm)	Cu (ppm)	Li (ppm)
Mean	-0.001	0.000	-0.008	-0.013	-0.010	0.003	-0.001	0.000
S.D.	0.002	0.000	0.013	0.003	0.004	0.003	0.001	0.000
% R.S.D.	134.157	45.826	162.675	23.509	35.668	99.696	113.648	275.341

	Zn (ppm)	Ni (ppm)	La (ppm)	Fe (ppm)	Ca (ppm)	Cr (ppm)	Nd (ppm)	U (ppm)
Mean	-0.001	-0.005	-0.003	-0.003	-0.000	0.004	0.015	-0.052
S.D.	0.000	0.002	0.002	0.002	0.000	0.001	0.001	0.044
% R.S.D.	29.780	32.423	49.247	88.265	18.750	11.977	10.076	84.724

	Ce (ppm)	Sm (ppm)	Ba (ppm)	P (ppm)	S (ppm)	Mg (ppm)	As (ppm)	Na (ppm)
Mean	0.014	0.005	0.001	0.023	-0.009	0.000	-0.012	0.009
S.D.	0.014	0.009	0.000	0.007	0.006	0.000	0.006	0.005
% R.S.D.	97.571	157.826	34.021	28.725	62.120	173.206	46.124	53.302

	Mo (ppm)	Se (ppm)	Ag (ppm)	Pb (ppm)	Ti (ppm)	Cd (ppm)	B (ppm)	K (ppm)
Mean	0.001	-0.018	0.003	0.003	-0.001	-0.001	0.004	0.090
S.D.	0.001	0.008	0.001	0.009	0.001	0.000	0.001	0.007
% R.S.D.	46.627	41.891	30.351	301.941	39.908	11.515	14.847	8.257

	Mn (ppm)	Sb (ppm)	V (ppm)	Be (ppm)	Tl (ppm)
Mean	-0.000	0.080	0.002	0.000	0.021
S.D.	0.000	0.036	0.000	0.000	0.024
% R.S.D.	153.151	45.354	14.570	42.886	114.288

Identity 1: S96T002679_L Identity 2: .025-30-2-8 ml 5:32 PM July 30, 1996
Task name : OPTIMA
Sample Weight : 1.0000 Solution Volume : 6005.00
On-Peak Integrations : 3 Off-Peak Integrations : 1

	Zr (ppm)	Sr (ppm)	Bi (ppm)	Si (ppm)	Al (ppm)	Co (ppm)	Cu (ppm)	Li (ppm)
Mean	3.605	1.791	6.188	121.977	30491.720	13.716	-3.435	12.103
S.D.	4.915	0.799	31.327	20.509	64.267	11.805	3.283	0.968
% R.S.D.	136.366	44.607	506.247	16.814	0.211	86.062	95.570	7.999

	Zn (ppm)	Ni (ppm)	La (ppm)	Fe (ppm)	Ca (ppm)	Cr (ppm)	Nd (ppm)	U (ppm)
Mean	4.727	-0.151	-28.532	-2.641	-56.974	115.694	17.211	-551.790
S.D.	1.597	10.676	12.984	0.921	0.418	4.761	34.597	96.670
% R.S.D.	33.788	7075.493	45.507	34.867	0.733	4.115	201.022	17.519

	Ce (ppm)	Sm (ppm)	Ba (ppm)	P (ppm)	S (ppm)	Mg (ppm)	As (ppm)	Na (ppm)
Mean	12.436	103.157	1.490	350.129	396.431	8.358	-5.031	249121.457
S.D.	40.705	21.870	0.575	117.713	23.035	0.000	11.184	897.858
% R.S.D.	327.314	21.201	38.575	33.620	5.811	0.000	222.298	0.360

	Mo (ppm)	Se (ppm)	Ag (ppm)	Pb (ppm)	Ti (ppm)	Cd (ppm)	B (ppm)	K (ppm)
Mean	77.774	118.351	10.784	128.687	-6.256	3.225	69.545	35196.789
S.D.	1.927	88.632	2.109	10.119	2.050	2.476	5.147	202.861
% R.S.D.	2.478	74.889	19.557	7.863	32.768	76.788	7.400	0.576

	Mn (ppm)	Sb (ppm)	V (ppm)	Be (ppm)	Tl (ppm)
Mean	3.240	222.256	12.698	5.162	408.489
S.D.	2.859	195.642	1.169	0.816	111.067
% R.S.D.	88.259	88.025	9.207	15.805	27.190

Identity 1: S96T002679 Identity 2: .025-30 ml 5:35 PM July 30, 1996
Task name : OPTIMA
Sample Weight : 1.0000 Solution Volume : 1201.00
On-Peak Integrations : 3 Off-Peak Integrations : 1

	Zr (ppm)	Sr (ppm)	Bi (ppm)	Si (ppm)	Al (ppm)	Co (ppm)	Cu (ppm)	Li (ppm)
Mean	15.977	-0.026	-10.559	180.764	30985.068	-4.104	-1.352	10.984
S.D.	0.256	0.044	3.862	2.622	39.403	0.003	0.209	0.145
% R.S.D.	1.599	173.205	36.578	1.450	0.127	0.072	15.487	1.321

	Zn (ppm)	Ni (ppm)	La (ppm)	Fe (ppm)	Ca (ppm)	Cr (ppm)	Nd (ppm)	U (ppm)
Mean	7.993	15.992	2.305	5.808	-5.433	111.964	-3.179	89.187
S.D.	0.159	0.934	1.702	2.398	0.048	1.100	4.984	22.926
% R.S.D.	1.994	5.843	73.849	41.293	0.888	0.983	156.790	25.706

	Ce (ppm)	Sm (ppm)	Ba (ppm)	P (ppm)	S (ppm)	Mg (ppm)	As (ppm)	Na (ppm)
Mean	-13.633	25.997	0.107	245.930	415.217	-0.509	-4.332	244736.539
S.D.	8.697	7.224	0.156	14.071	5.931	0.218	2.574	1460.119
% R.S.D.	63.794	27.789	145.297	5.722	1.428	42.857	59.406	0.597

	Mo (ppm)	Se (ppm)	Ag (ppm)	Pb (ppm)	Ti (ppm)	Cd (ppm)	B (ppm)	K (ppm)
Mean	62.096	10.478	-0.689	52.680	0.080	2.053	50.810	34220.371
S.D.	1.283	11.086	0.121	10.692	0.292	0.560	1.912	264.928
% R.S.D.	2.066	105.804	17.627	20.297	366.267	27.297	3.763	0.774

	Mn (ppm)	Sb (ppm)	V (ppm)	Be (ppm)	Tl (ppm)
Mean	2.495	36.666	-1.549	3.721	20.498
S.D.	0.219	14.809	0.552	0.003	15.206
% R.S.D.	8.779	40.390	35.642	0.081	74.182

Identity 1: S96T002679_D Identity 2: .025-30 ml 5:38 PM July 30, 1996
Task name : OPTIMA
Sample Weight : 1.0000 Solution Volume : 1201.00
On-Peak Integrations : 3 Off-Peak Integrations : 1

	Zr (ppm)	Sr (ppm)	Bi (ppm)	Si (ppm)	Al (ppm)	Co (ppm)	Cu (ppm)	Li (ppm)
Mean	17.196	0.230	-4.673	187.483	31667.919	-0.009	0.234	11.710
S.D.	0.659	0.077	5.890	4.204	62.017	0.002	0.279	0.256
% R.S.D.	3.830	33.333	126.045	2.242	0.196	17.834	118.907	2.186

	Zn (ppm)	Ni (ppm)	La (ppm)	Fe (ppm)	Ca (ppm)	Cr (ppm)	Nd (ppm)	U (ppm)
Mean	6.896	13.991	0.604	8.087	-7.773	113.008	4.018	78.085
S.D.	0.314	1.350	1.691	0.496	0.048	6.570	14.833	12.652
% R.S.D.	4.559	9.652	280.178	6.137	0.621	5.814	369.195	16.203

	Ce (ppm)	Sm (ppm)	Ba (ppm)	P (ppm)	S (ppm)	Mg (ppm)	As (ppm)	Na (ppm)
Mean	11.682	10.736	0.513	251.172	426.945	-0.145	-5.854	252733.384
S.D.	3.861	1.268	0.074	21.419	4.669	0.126	4.282	1107.510
% R.S.D.	33.047	11.815	14.523	8.528	1.094	86.602	73.153	0.438

	Mo (ppm)	Se (ppm)	Ag (ppm)	Pb (ppm)	Ti (ppm)	Cd (ppm)	B (ppm)	K (ppm)
Mean	62.960	39.334	0.220	33.157	-0.390	1.512	49.752	35012.797
S.D.	1.176	13.579	0.321	7.726	0.611	0.495	0.347	130.265
% R.S.D.	1.868	34.523	145.907	23.302	156.736	32.748	0.697	0.372

	Mn (ppm)	Sb (ppm)	V (ppm)	Be (ppm)	Tl (ppm)
Mean	2.749	6.948	-0.422	2.958	19.016
S.D.	0.374	10.502	0.833	0.166	16.548
% R.S.D.	13.601	151.156	197.453	5.605	87.023

Identity 1: S96T002679_A Identity 2: .025sam+6sst5+24hno3 5:42 PM July 30, 1996
Task name : OPTIMA
Sample Weight : 1.0000 Solution Volume : 1201.00
On-Peak Integrations : 3 Off-Peak Integrations : 1

	Zr (ppm)	Sr (ppm)	Bi (ppm)	Si (ppm)	Al (ppm)	Co (ppm)	Cu (ppm)	Li (ppm)
Mean	1195.052	1204.767	1164.607	1369.441	32608.929	1209.997	1220.113	1213.558
S.D.	0.608	3.197	20.161	4.980	89.916	4.723	3.305	12.105
% R.S.D.	0.051	0.265	1.731	0.364	0.276	0.390	0.271	0.997

	Zn (ppm)	Ni (ppm)	La (ppm)	Fe (ppm)	Ca (ppm)	Cr (ppm)	Nd (ppm)	U (ppm)
Mean	1212.433	1201.036	1185.935	1188.973	1163.103	1315.206	1219.794	2194.780
S.D.	3.404	1.055	0.018	3.078	2.030	8.761	6.796	39.708
% R.S.D.	0.281	0.088	0.002	0.259	0.175	0.666	0.557	1.809

	Ce (ppm)	Sm (ppm)	Ba (ppm)	P (ppm)	S (ppm)	Mg (ppm)	As (ppm)	Na (ppm)
Mean	1256.433	1191.514	1208.119	1510.520	1655.234	1156.361	1223.214	250860.338
S.D.	7.390	4.557	4.103	71.703	12.242	1.413	5.861	2263.354
% R.S.D.	0.588	0.382	0.340	4.747	0.740	0.122	0.479	0.902

	Mo (ppm)	Se (ppm)	Ag (ppm)	Pb (ppm)	Ti (ppm)	Cd (ppm)	B (ppm)	K (ppm)
Mean	1276.389	1187.520	1051.425	1244.920	1183.645	1183.277	1237.511	35977.602
S.D.	1.390	27.578	2.845	23.063	0.919	7.295	3.316	286.443
% R.S.D.	0.109	2.322	0.271	1.853	0.078	0.617	0.268	0.796

	Mn (ppm)	Sb (ppm)	V (ppm)	Be (ppm)	Tl (ppm)
Mean	1200.521	1189.665	1202.291	1218.720	1204.462
S.D.	1.886	29.743	2.444	3.306	27.311
% R.S.D.	0.157	2.500	0.203	0.271	2.267

Identity 1: S96T002687_L Identity 2: .025-30-2-8 ml 5:45 PM July 30, 1996
Task name : OPTIMA
Sample Weight : 1.0000 Solution Volume : 6005.00
On-Peak Integrations : 3 Off-Peak Integrations : 1

	Zr (ppm)	Sr (ppm)	Bi (ppm)	Si (ppm)	Al (ppm)	Co (ppm)	Cu (ppm)	Li (ppm)
Mean	25.156	1.408	-45.376	186.351	31212.689	27.258	-3.911	11.822
S.D.	2.603	0.222	38.817	2.731	10.322	11.820	0.803	0.242
% R.S.D.	10.349	15.746	85.546	1.466	0.033	43.365	20.534	2.047

	Zn (ppm)	Ni (ppm)	La (ppm)	Fe (ppm)	Ca (ppm)	Cr (ppm)	Nd (ppm)	U (ppm)
Mean	8.546	-1.702	2.948	2.093	-49.453	112.963	16.899	249.425
S.D.	2.915	9.540	14.701	15.123	0.418	4.677	23.473	30.050
% R.S.D.	34.107	560.483	498.744	722.569	0.845	4.140	138.902	12.047

	Ce (ppm)	Sm (ppm)	Ba (ppm)	P (ppm)	S (ppm)	Mg (ppm)	As (ppm)	Na (ppm)
Mean	40.405	51.164	2.146	458.976	459.886	7.995	-23.397	260673.035
S.D.	11.596	4.844	0.358	53.864	16.106	0.629	7.618	405.749
% R.S.D.	28.699	9.468	16.667	11.736	3.502	7.873	32.562	0.156

	Mo (ppm)	Se (ppm)	Ag (ppm)	Pb (ppm)	Ti (ppm)	Cd (ppm)	B (ppm)	K (ppm)
Mean	69.441	99.875	29.088	40.036	-1.070	3.786	68.990	37265.463
S.D.	5.580	53.457	2.185	63.744	0.817	2.810	2.442	83.031
% R.S.D.	8.036	53.524	7.512	159.215	76.355	74.224	3.540	0.223

	Mn (ppm)	Sb (ppm)	V (ppm)	Be (ppm)	Tl (ppm)
Mean	3.764	436.378	15.597	6.694	137.771
S.D.	2.867	94.187	6.068	0.829	45.056
% R.S.D.	76.166	21.584	38.908	12.380	32.704

Identity 1: S96T002687 Identity 2: .025-30 ml 5:49 PM July 30, 1996
Task name : OPTIMA
Sample Weight : 1.0000 Solution Volume : 1201.00
On-Peak Integrations : 3 Off-Peak Integrations : 1

	Zr (ppm)	Sr (ppm)	Bi (ppm)	Si (ppm)	Al (ppm)	Co (ppm)	Cu (ppm)	Li (ppm)
Mean	14.784	0.614	22.365	197.564	31419.491	8.190	-0.349	12.744
S.D.	0.789	0.077	3.112	3.311	45.194	0.005	0.424	0.252
% R.S.D.	5.336	12.500	13.915	1.676	0.144	0.058	121.478	1.974

	Zn (ppm)	Ni (ppm)	La (ppm)	Fe (ppm)	Ca (ppm)	Cr (ppm)	Nd (ppm)	U (ppm)
Mean	11.924	18.167	-5.664	7.021	-5.266	111.588	18.817	-20.415
S.D.	0.377	3.345	1.963	1.486	0.048	3.630	12.111	37.007
% R.S.D.	3.165	18.411	34.650	21.163	0.916	3.253	64.360	181.273

	Ce (ppm)	Sm (ppm)	Ba (ppm)	P (ppm)	S (ppm)	Mg (ppm)	As (ppm)	Na (ppm)
Mean	37.299	7.934	1.061	254.575	448.127	-0.218	-7.785	249538.286
S.D.	14.170	9.250	0.233	22.650	3.819	0.126	3.661	2954.291
% R.S.D.	37.989	116.587	21.932	8.897	0.852	57.735	47.020	1.184

	Mo (ppm)	Se (ppm)	Ag (ppm)	Pb (ppm)	Ti (ppm)	Cd (ppm)	B (ppm)	K (ppm)
Mean	65.799	20.030	3.848	60.496	-0.520	1.293	56.144	35386.617
S.D.	0.321	13.857	0.967	8.757	0.335	0.188	0.489	513.556
% R.S.D.	0.488	69.181	25.132	14.475	64.569	14.516	0.870	1.451

	Mn (ppm)	Sb (ppm)	V (ppm)	Be (ppm)	Tl (ppm)
Mean	2.758	38.048	6.119	3.421	53.222
S.D.	0.378	28.473	1.356	0.005	30.489
% R.S.D.	13.708	74.835	22.168	0.137	57.287

Identity 1: S96T002687_D Identity 2: .025-30 ml 5:52 PM July 30, 1996
Task name : OPTIMA
Sample Weight : 1.0000 Solution Volume : 1201.00
On-Peak Integrations : 3 Off-Peak Integrations : 1

	Zr (ppm)	Sr (ppm)	Bi (ppm)	Si (ppm)	Al (ppm)	Co (ppm)	Cu (ppm)	Li (ppm)
Mean	15.030	-0.128	-11.357	199.872	31227.955	-1.369	-2.331	11.263
S.D.	1.164	0.117	6.219	2.183	28.548	2.362	0.262	0.128
% R.S.D.	7.745	91.652	54.760	1.092	0.091	172.516	11.228	1.137

	Zn (ppm)	Ni (ppm)	La (ppm)	Fe (ppm)	Ca (ppm)	Cr (ppm)	Nd (ppm)	U (ppm)
Mean	10.952	14.802	-0.543	4.408	-8.080	103.780	-0.390	46.200
S.D.	0.471	1.789	2.597	3.915	0.048	2.148	2.086	53.473
% R.S.D.	4.300	12.089	478.424	88.822	0.597	2.070	534.140	115.744

	Ce (ppm)	Sm (ppm)	Ba (ppm)	P (ppm)	S (ppm)	Mg (ppm)	As (ppm)	Na (ppm)
Mean	-31.924	32.323	-0.155	266.897	438.112	-0.581	-6.542	253143.281
S.D.	14.188	11.860	0.180	19.681	2.487	0.126	5.140	483.058
% R.S.D.	44.444	36.692	116.151	7.374	0.568	21.651	78.578	0.191

	Mo (ppm)	Se (ppm)	Ag (ppm)	Pb (ppm)	Ti (ppm)	Cd (ppm)	B (ppm)	K (ppm)
Mean	64.009	8.692	-0.904	59.016	-0.541	0.216	52.391	35519.006
S.D.	0.855	8.960	1.164	12.278	0.292	1.494	1.161	95.366
% R.S.D.	1.336	103.078	128.643	20.805	53.897	691.232	2.216	0.268

	Mn (ppm)	Sb (ppm)	V (ppm)	Be (ppm)	Tl (ppm)
Mean	1.502	54.715	-0.827	2.764	15.296
S.D.	0.216	28.524	0.287	0.439	27.524
% R.S.D.	14.378	52.131	34.765	15.898	179.936

Identity 1: S96T002687_a Identity 2: .025sam+6sst5+24hno3 5:55 PM July 30, 1996
Task name : OPTIMA
Sample Weight : 1.0000 Solution Volume : 1201.00
On-Peak Integrations : 3 Off-Peak Integrations : 1

	Zr (ppm)	Sr (ppm)	Bi (ppm)	Si (ppm)	Al (ppm)	Co (ppm)	Cu (ppm)	Li (ppm)
Mean	1201.033	1217.972	1206.335	1395.438	32239.291	1200.435	1239.145	1242.371
S.D.	3.107	1.642	2.883	2.416	6.113	6.247	2.965	4.992
% R.S.D.	0.259	0.135	0.239	0.173	0.019	0.520	0.239	0.402

	Zn (ppm)	Ni (ppm)	La (ppm)	Fe (ppm)	Ca (ppm)	Cr (ppm)	Nd (ppm)	U (ppm)
Mean	1199.504	1195.792	1200.111	1175.836	1174.465	1298.539	1246.263	2277.374
S.D.	0.937	3.183	2.612	15.075	2.067	2.719	14.665	49.872
% R.S.D.	0.078	0.266	0.218	1.282	0.176	0.209	1.177	2.190

	Ce (ppm)	Sm (ppm)	Ba (ppm)	P (ppm)	S (ppm)	Mg (ppm)	As (ppm)	Na (ppm)
Mean	1242.345	1229.027	1225.920	1621.324	1682.673	1143.324	1205.443	257538.246
S.D.	14.190	8.871	2.262	70.907	26.938	2.590	21.342	639.140
% R.S.D.	1.142	0.722	0.185	4.373	1.601	0.227	1.770	0.248

	Mo (ppm)	Se (ppm)	Ag (ppm)	Pb (ppm)	Ti (ppm)	Cd (ppm)	B (ppm)	K (ppm)
Mean	1266.513	1193.117	972.878	1226.139	1188.377	1175.831	1235.170	37085.424
S.D.	1.497	24.820	2.478	19.268	2.378	8.213	1.983	81.897
% R.S.D.	0.118	2.080	0.255	1.571	0.200	0.699	0.161	0.221

	Mn (ppm)	Sb (ppm)	V (ppm)	Be (ppm)	Tl (ppm)
Mean	1187.994	1158.258	1194.828	1219.017	1187.483
S.D.	2.829	34.325	1.978	1.461	22.254
% R.S.D.	0.238	2.963	0.166	0.120	1.874

WHC-SD-WM-DP-192, REV. 0

Identity 1: ICSA Identity 2: Quality Control 6:02 PM July 30, 1996
Task name : OPTIMA
Sample Weight : 1.0000 Solution Volume : 1.00
On-Peak Integrations : 3 Off-Peak Integrations : 1

	Zr (ppm)	Sr (ppm)	Bi (ppm)	Si (ppm)	Al (ppm)	Co (ppm)	Cu (ppm)	Li (ppm)
Mean	0.001	0.002	-0.010	0.008	198.613	0.008	0.000	0.000
S.D.	0.002	0.000	0.008	0.001	0.762	0.003	0.000	0.000
% R.S.D.	168.158	4.681	81.819	18.058	0.384	40.561	95.017	74.755

	Zn (ppm)	Ni (ppm)	La (ppm)	Fe (ppm)	Ca (ppm)	Cr (ppm)	Nd (ppm)	U (ppm)
Mean	-0.004	0.003	-0.002	94.267	99.971	0.003	-0.018	-0.006
S.D.	0.000	0.002	0.002	0.162	0.202	0.003	0.006	0.068
% R.S.D.	3.422	66.699	98.973	0.172	0.202	77.377	31.578	1167.350

	Ce (ppm)	Sm (ppm)	Ba (ppm)	P (ppm)	S (ppm)	Mg (ppm)	As (ppm)	Na (ppm)
Mean	0.017	0.041	0.004	0.053	0.039	100.505	0.016	192.983
S.D.	0.023	0.015	0.000	0.013	0.008	0.436	0.007	2.133
% R.S.D.	129.684	36.221	8.525	25.366	19.605	0.433	44.169	1.105

	Mo (ppm)	Se (ppm)	Ag (ppm)	Pb (ppm)	Ti (ppm)	Cd (ppm)	B (ppm)	K (ppm)
Mean	0.001	-0.004	0.017	-0.002	-0.000	-0.001	0.014	0.126
S.D.	0.000	0.005	0.001	0.010	0.001	0.002	0.001	0.027
% R.S.D.	60.003	113.655	6.342	403.643	485.806	111.349	4.652	21.097

	Mn (ppm)	Sb (ppm)	V (ppm)	Be (ppm)	Tl (ppm)
Mean	0.012	0.024	0.004	0.003	0.093
S.D.	0.000	0.035	0.001	0.000	0.036
% R.S.D.	1.924	148.223	20.212	7.146	39.047

WHC-SD-WM-DP-192, REV. 0

Identity 1: ICSAB Identity 2: Quality Control 6:06 PM July 30, 1996
Task name : OPTIMA
Sample Weight : 1.0000 Solution Volume : 1.00
On-Peak Integrations : 3 Off-Peak Integrations : 1

	Zr (ppm)	Sr (ppm)	Bi (ppm)	Si (ppm)	Al (ppm)	Co (ppm)	Cu (ppm)	Li (ppm)
Mean	0.002	0.002	-0.022	0.018	199.608	0.507	0.493	0.945
S.D.	0.001	0.000	0.017	0.004	0.340	0.004	0.002	0.010
% R.S.D.	43.980	3.030	76.206	19.810	0.170	0.776	0.434	1.085

	Zn (ppm)	Ni (ppm)	La (ppm)	Fe (ppm)	Ca (ppm)	Cr (ppm)	Nd (ppm)	U (ppm)
Mean	1.000	0.983	-0.000	93.968	100.230	0.510	-0.026	0.157
S.D.	0.001	0.005	0.003	0.206	0.072	0.004	0.004	0.044
% R.S.D.	0.136	0.462	1146.912	0.219	0.072	0.746	14.388	28.157

	Ce (ppm)	Sm (ppm)	Ba (ppm)	P (ppm)	S (ppm)	Mg (ppm)	As (ppm)	Na (ppm)
Mean	0.007	0.047	0.500	0.057	0.067	101.118	0.030	191.912
S.D.	0.011	0.009	0.002	0.010	0.020	0.327	0.004	1.822
% R.S.D.	159.099	19.257	0.356	17.868	29.716	0.323	14.449	0.949

	Mo (ppm)	Se (ppm)	Ag (ppm)	Pb (ppm)	Ti (ppm)	Cd (ppm)	B (ppm)	K (ppm)
Mean	0.001	0.013	1.025	1.003	0.001	0.993	0.016	0.140
S.D.	0.001	0.014	0.001	0.022	0.000	0.003	0.001	0.006
% R.S.D.	65.993	115.486	0.078	2.233	47.939	0.325	4.230	4.599

	Mn (ppm)	Sb (ppm)	V (ppm)	Be (ppm)	Tl (ppm)
Mean	0.510	0.043	0.498	0.497	0.032
S.D.	0.001	0.003	0.002	0.002	0.031
% R.S.D.	0.142	6.168	0.422	0.345	96.796

Identity 1: CCB Identity 2: Quality Control 6:16 PM July 30, 1996
Task name : OPTIMA
Sample Weight : 1.0000 Solution Volume : 1.00
On-Peak Integrations : 3 Off-Peak Integrations : 1

	Zr (ppm)	Sr (ppm)	Bi (ppm)	Si (ppm)	Al (ppm)	Co (ppm)	Cu (ppm)	Li (ppm)
Mean	-0.000	0.000	-0.007	-0.009	-0.014	0.007	-0.001	0.000
S.D.	0.001	0.000	0.008	0.002	0.009	0.000	0.000	0.000
% R.S.D.	160.633	34.641	115.151	21.225	67.830	0.005	30.184	21.652

	Zn (ppm)	Ni (ppm)	La (ppm)	Fe (ppm)	Ca (ppm)	Cr (ppm)	Nd (ppm)	U (ppm)
Mean	-0.002	-0.005	-0.004	0.000	-0.000	0.002	0.010	-0.020
S.D.	0.000	0.002	0.000	0.000	0.000	0.001	0.005	0.003
% R.S.D.	5.767	53.233	0.032	0.151	270.417	47.331	53.105	13.100

	Ce (ppm)	Sm (ppm)	Ba (ppm)	P (ppm)	S (ppm)	Mg (ppm)	As (ppm)	Na (ppm)
Mean	0.015	0.008	0.000	0.015	0.005	-0.000	-0.000	0.011
S.D.	0.006	0.003	0.000	0.005	0.005	0.000	0.003	0.002
% R.S.D.	41.417	32.993	20.000	32.408	94.079	0.000	708.360	20.002

	Mo (ppm)	Se (ppm)	Ag (ppm)	Pb (ppm)	Ti (ppm)	Cd (ppm)	B (ppm)	K (ppm)
Mean	-0.001	0.018	0.003	-0.018	-0.001	-0.002	0.003	0.081
S.D.	0.001	0.006	0.000	0.007	0.000	0.000	0.001	0.011
% R.S.D.	111.360	30.286	6.807	40.890	17.481	16.491	35.028	13.747

	Mn (ppm)	Sb (ppm)	V (ppm)	Be (ppm)	Tl (ppm)
Mean	0.000	0.012	0.001	0.001	0.031
S.D.	0.000	0.011	0.000	0.000	0.007
% R.S.D.	7317.669	90.495	36.547	33.476	23.849

07-30-96

FILE No: 960731A.DAT

LABCORE Data Entry Template for Worklist# 10340

Analyst: J. WORRELL **Instrument:** ICP01 _____ **Book#** 576 486

Method: LA-505-151/~~161~~ Rev/Mod D-3
JW 7-31-96

Worklist Comment: ICP AW-101 (DIRECT)

S	Type	Sample#	R	A	Test	Matrix	Group#	Project
1	ICV				@ICP-QC	QC		
2	ICB				@ICP-QC	QC		
3	LLS				@ICP-QC	QC		
4	ICSA				@ICP-QC	QC		
5	ICSAB				@ICP-QC	QC		
6	~~PREPBLKTOA~~ JW 7-31-96				@ICP-D01	LIQUID		
7	SERDIL	S96T002527	0	D	@ICP-D01	LIQUID		
8	SAMPLE	S96T002527	0	D	@ICP-D01	LIQUID	96000462	AW-101 PUSH
		Analytes Requested:			AG-D-01 , AL-D-01 , AS-D-01 , B-D-01 , BA-D-01 , BE-D-01 , BI-D-01 , CA-D-01 , CD-D-01 , CE-D-01 , CO-D-01 , CR-D-01 , CU-D-01 , FE-D-01 , K-D-01 , LA-D-01 , LI-D-01 , MG-D-01 , MN-D-01 , MO-D-01 , NA-D-01 , ND-D-01 , NI-D-01 , P-D-01 , PB-D-01 , S-D-01 , SB-D-01 , SE-D-01 , SI-D-01 , SM-D-01 , SR-D-01 , TI-D-01 , TL-D-01 , U-D-01 , V-D-01 , ZN-D-01 , ZR-D-01			
9	DUP	S96T002527	0	D	@ICP-D01	LIQUID		
10	SPK	S96T002527	0	D	@ICP-D01	LIQUID		
11	CCV				@ICP-QC	QC		
12	CCB				@ICP-QC	QC		
		SP 8/7/96						
~~13~~	~~SERDIL~~	~~S96T002558~~	~~0~~	~~D~~	~~@ICP-D01~~	~~LIQUID~~		
~~14~~	~~SAMPLE~~	~~S96T002558~~	0	D	@ICP-D01	LIQUID	96000462	AW-101 PUSH
		Analytes Requested:			AG-D-01 , AL-D-01 , AS-D-01 , B-D-01 , BA-D-01 , BE-D-01 , BI-D-01 , CA-D-01 , CD-D-01 , CE-D-01 , CO-D-01 , CR-D-01 , CU-D-01 , FE-D-01 , K-D-01 , LA-D-01 , LI-D-01 ,			

Data Entry Comments: Raw data is final result in ug/ml

S96T002527 Al = 2.84 e + 4 ug/ml

S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

176'7

LABCORE Data Entry Template for Worklist# 10340

S	Type	Sample#	R	A	Test	Matrix	Group#	Project
					MG-D-01 , MN-D-01 , MO-D-01 , NA-D-01 , ND-D-01 , NI-D-01 , P-D-01 , PB-D-01 , S-D-01 , SB-D-01 , SE-D-01 , SI-D-01 , SM-D-01 , SR-D-01 , TI-D-01 , TL-D-01 , U-D-01 , V-D-01 , ZN-D-01 , ZR-D-01			
					SP 8/7/96			
~~15~~	~~DUP~~	~~S96T002558~~	0	D	@ICP-D01	LIQUID		
~~16~~	~~SPK~~	~~S96T002558~~	0	D	@ICP-D01	LIQUID		
17	SERDIL	S96T002575	0	D	@ICP-D01	LIQUID		
18	SAMPLE	S96T002575	0	D	@ICP-D01	LIQUID	96000462	AW-101 PUSH
		Analytes Requested:			AG-D-01 , AL-D-01 , AS-D-01 , B-D-01 , BA-D-01 , BE-D-01 , BI-D-01 , CA-D-01 , CD-D-01 , CE-D-01 , CO-D-01 , CR-D-01 , CU-D-01 , FE-D-01 , K-D-01 , LA-D-01 , LI-D-01 , MG-D-01 , MN-D-01 , MO-D-01 , NA-D-01 , ND-D-01 , NI-D-01 , P-D-01 , PB-D-01 , S-D-01 , SB-D-01 , SE-D-01 , SI-D-01 , SM-D-01 , SR-D-01 , TI-D-01 , TL-D-01 , U-D-01 , V-D-01 , ZN-D-01 , ZR-D-01			
19	DUP	S96T002575	0	D	@ICP-D01	LIQUID		
20	SPK	S96T002575	0	D	@ICP-D01	LIQUID		
21	CCV				@ICP-QC	QC		
22	CCB				@ICP-QC	QC		
23	SERDIL	S96T002422	0	D	@ICP-D01	LIQUID		
24	SAMPLE	S96T002422	0	D	@ICP-D01	LIQUID	96000462	AW-101 PUSH
		Analytes Requested:			AG-D-01 , AL-D-01 , AS-D-01 , B-D-01 , BA-D-01 , BE-D-01 , BI-D-01 , CA-D-01 , CD-D-01 , CE-D-01 , CO-D-01 , CR-D-01 , CU-D-01 , FE-D-01 , K-D-01 , LA-D-01 , LI-D-01 , MG-D-01 , MN-D-01 , MO-D-01 , NA-D-01 , ND-D-01 , NI-D-01 , P-D-01 , PB-D-01 , S-D-01 , SB-D-01 , SE-D-01 , SI-D-01 , SM-D-01 , SR-D-01 , TI-D-01 , TL-D-01 , U-D-01 , V-D-01 , ZN-D-01 , ZR-D-01			
25	DUP	S96T002422	0	D	@ICP-D01	LIQUID		
26	SPK	S96T002422	0	D	@ICP-D01	LIQUID		
27	SERDIL	S96T002430	0	D	@ICP-D01	LIQUID		

Data Entry Comments:

S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

1768

LABCORE Data Entry Template for Worklist# 10340

S	Type	Sample#	R	A	Test	Matrix	Group#	Project
28	SAMPLE	S96T002430	0	D	@ICP-D01	LIQUID	96000462	AW-101 PUSH

Analytes Requested: AG-D-01 , AL-D-01 , AS-D-01 , B-D-01 , BA-D-01 , BE-D-01 , BI-D-01 , CA-D-01 , CD-D-01 , CE-D-01 , CO-D-01 , CR-D-01 , CU-D-01 , FE-D-01 , K-D-01 , LA-D-01 , LI-D-01 , MG-D-01 , MN-D-01 , MO-D-01 , NA-D-01 , ND-D-01 , NI-D-01 , P-D-01 , PB-D-01 , S-D-01 , SB-D-01 , SE-D-01 , SI-D-01 , SM-D-01 , SR-D-01 , TI-D-01 , TL-D-01 , U-D-01 , V-D-01 , ZN-D-01 , ZR-D-01

29	DUP	S96T002430	0	D	@ICP-D01	LIQUID		
30	SPK	S96T002430	0	D	@ICP-D01	LIQUID		
31	CCV				@ICP-QC	QC		
32	CCB				@ICP-QC	QC		
33	SERDIL	S96T002584	0	D	@ICP-D01	LIQUID		
34	SAMPLE	S96T002584	0	D	@ICP-D01	LIQUID	96000462	AW-101 PUSH

Analytes Requested: AG-D-01 , AL-D-01 , AS-D-01 , B-D-01 , BA-D-01 , BE-D-01 , BI-D-01 , CA-D-01 , CD-D-01 , CE-D-01 , CO-D-01 , CR-D-01 , CU-D-01 , FE-D-01 , K-D-01 , LA-D-01 , LI-D-01 , MG-D-01 , MN-D-01 , MO-D-01 , NA-D-01 , ND-D-01 , NI-D-01 , P-D-01 , PB-D-01 , S-D-01 , SB-D-01 , SE-D-01 , SI-D-01 , SM-D-01 , SR-D-01 , TI-D-01 , TL-D-01 , U-D-01 , V-D-01 , ZN-D-01 , ZR-D-01

35	DUP	S96T002584	0	D	@ICP-D01	LIQUID		
36	SPK	S96T002584	0	D	@ICP-D01	LIQUID		
37	ICSA				@ICP-QC	QC		
38	ICSAB				@ICP-QC	QC		
39	CCV				@ICP-QC	QC		
40	CCB				@ICP-QC	QC		

Data Entry Comments:

S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

07/31/96 15:31 ☎509 372 2929 WESTINGHOUSE →→→ MO-924 200W 003

LABCORE Data Entry Template for Worklist# 10340

S Type	Sample#	R	A	Test	Matrix	Group#	Project

Final page for worklist # 10340

Analyst Signature: J. Worrell Date: 7-31-96

Reviewed by: Saul M. Parra Analyst Signature Date: 8/19/96

			DF
S96T002527	DIL SX	.025ml - 30ml - 2ml - 8ml	6005
	SAM	.025 - 30	1201
	DUP	.025 - 30	1201
	PSPK	.025 - 2 - 28	1201
~~S96T002558~~	DIL SX	.025 - 30 ~~- 2 - 8~~	6005
	SAM	.025 - 30	1201
	DUP	.025 - 30	1201
	PSPK	.025 - 2 - 28	1201
S96T002575	DIL SX	.025 - 30 - 2 - 8	6005
	SAM	.025 - 30	1201
	DUP	.025 - 30	1201
	PSPK	.025 - 2 - 28	1201
S96T002422	DIL SX	.025 - 30 - 2 - 8	6005
	SAM	.025 - 30	1201
	DUP	.025 - 30	1201
	PSPK	.025 - 2 - 28	1201
S96T002430	DIL SX	.025 - 30 - 2 - 8	6005
	SAM	.025 - 30	1201
	DUP	.025 - 30	1201
	PSPK	.025 - 2 - 28	1201
S96T002584	DIL SX	.025 - 30 - 2 - 8	6005
	SAM	.025 - 30	1201
	DUP	.025 - 30	1201
	PSPK	.02 - 2 - 28	1201

SP 8/7/96

Data Entry Comments:

Spike recovery calculation:

S96T002527 $Cr = \frac{\left(\frac{487.031}{1201}\right) - \left(\frac{92.972}{1201}\right)}{0.333} \times 100 = 98.5\%$

S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

Note: Spike true value is 0.333 ppm for all elements except for U = 0.666 ppm.

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Identity 1: ICV Identity 2: Quality Control 12:42 PM July 31, 1996
Task name : OPTIMA
Sample Weight : 1.0000 Solution Volume : 1.00
On-Peak Integrations : 3 Off-Peak Integrations : 1

	Zr (ppm)	Sr (ppm)	Bi (ppm)	Si (ppm)	Al (ppm)	Co (ppm)	Cu (ppm)	Li (ppm)
Mean	4.945	4.986	4.970	4.916	4.881	4.994	5.018	5.083
S.D.	0.010	0.011	0.018	0.010	0.010	0.020	0.016	0.028
% R.S.D.	0.201	0.213	0.365	0.203	0.210	0.408	0.321	0.554

	Zn (ppm)	Ni (ppm)	La (ppm)	Fe (ppm)	Ca (ppm)	Cr (ppm)	Nd (ppm)	U (ppm)
Mean	5.034	4.950	5.034	5.046	4.939	4.965	5.234	9.383
S.D.	0.005	0.020	0.006	0.015	0.013	0.011	0.024	0.011
% R.S.D.	0.091	0.408	0.119	0.288	0.266	0.229	0.465	0.118

	Ce (ppm)	Sm (ppm)	Ba (ppm)	P (ppm)	S (ppm)	Mg (ppm)	As (ppm)	Na (ppm)
Mean	5.090	5.035	4.995	4.966	4.910	4.766	5.018	5.015
S.D.	0.002	0.013	0.012	0.100	0.029	0.006	0.011	0.026
% R.S.D.	0.033	0.263	0.246	2.013	0.596	0.130	0.217	0.510

	Mo (ppm)	Se (ppm)	Ag (ppm)	Pb (ppm)	Ti (ppm)	Cd (ppm)	B (ppm)	K (ppm)
Mean	5.003	5.060	4.857	4.938	4.866	4.969	5.116	4.989
S.D.	0.005	0.010	0.007	0.030	0.008	0.010	0.015	0.033
% R.S.D.	0.095	0.204	0.152	0.598	0.159	0.201	0.293	0.663

	Mn (ppm)	Sb (ppm)	V (ppm)	Be (ppm)	Tl (ppm)
Mean	4.953	4.697	4.984	5.151	4.807
S.D.	0.007	0.039	0.007	0.008	0.013
% R.S.D.	0.149	0.835	0.149	0.146	0.279

Joh Worrell FILE No: 960731A.DAT
7-31-96
SST-5 S 70848B
SP 8/7/96
S9~~0700~~ 2527, ~~2558~~, 75, 2422, 30, 2584 AW-101 DIRECT

SIGNATURE ABOVE REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 1771 TO 1808.

07/31/96 15:32 ☎509 372 2929 WESTINGHOUSE →→→ MO-924 200W 005

Identity 1: ICB Identity 2: Quality Control 12:45 PM July 31, 1996
Task name : OPTIMA
Sample Weight : 1.0000 Solution Volume : 1.00
On-Peak Integrations : 3 Off-Peak Integrations : 1

	Zr (ppm)	Sr (ppm)	Bi (ppm)	Si (ppm)	Al (ppm)	Co (ppm)	Cu (ppm)	Li (ppm)
Mean	-0.002	0.000	-0.012	0.005	0.000	-0.008	0.000	0.000
S.D.	0.001	0.001	0.004	0.006	0.004	0.000	0.001	0.001
% R.S.D.	59.115	108.235	32.759	111.814	20531.465	0.055	225.579	204.285

	Zn (ppm)	Ni (ppm)	La (ppm)	Fe (ppm)	Ca (ppm)	Cr (ppm)	Nd (ppm)	U (ppm)
Mean	-0.001	0.004	-0.000	-0.004	0.001	-0.001	0.007	-0.095
S.D.	0.001	0.002	0.001	0.000	0.000	0.001	0.007	0.033
% R.S.D.	119.663	47.996	3183.737	6.356	47.728	174.296	101.259	34.902

	Ce (ppm)	Sm (ppm)	Ba (ppm)	P (ppm)	S (ppm)	Mg (ppm)	As (ppm)	Na (ppm)
Mean	-0.005	0.014	0.000	-0.023	-0.001	0.000	-0.001	-0.031
S.D.	0.009	0.007	0.001	0.012	0.002	0.000	0.007	0.005
% R.S.D.	194.451	49.177	135.714	50.336	318.337	99.216	692.038	15.746

	Mo (ppm)	Se (ppm)	Ag (ppm)	Pb (ppm)	Ti (ppm)	Cd (ppm)	B (ppm)	K (ppm)
Mean	0.001	0.032	0.001	-0.041	0.001	-0.006	0.001	-0.199
S.D.	0.002	0.017	0.001	0.013	0.001	0.001	0.001	0.019
% R.S.D.	350.247	52.585	72.892	31.238	101.483	18.760	77.824	9.680

	Mn (ppm)	Sb (ppm)	V (ppm)	Be (ppm)	Tl (ppm)
Mean	0.001	0.042	-0.001	0.000	-0.036
S.D.	0.001	0.023	0.001	0.000	0.020
% R.S.D.	63.722	55.571	85.365	163.659	56.066

07/31/96 15:33 ☎509 372 2929 WESTINGHOUSE →→→ MO-924 200W 006

Identity 1: LLS Identity 2: Quality Control 12:50 PM July 31, 1996
Task name : OPTIMA
Sample Weight : 1.0000 Solution Volume : 1.00
On-Peak Integrations : 3 Off-Peak Integrations : 1

	Zr (ppm)	Sr (ppm)	Bi (ppm)	Si (ppm)	Al (ppm)	Co (ppm)	Cu (ppm)	Li (ppm)
Mean	0.018	0.021	0.176	0.110	0.096	0.045	0.021	0.020
S.D.	0.000	0.000	0.014	0.003	0.004	0.000	0.000	0.000
% R.S.D.	1.346	0.473	7.672	2.987	4.300	0.008	0.878	1.355

	Zn (ppm)	Ni (ppm)	La (ppm)	Fe (ppm)	Ca (ppm)	Cr (ppm)	Nd (ppm)	U (ppm)
Mean	0.021	0.043	0.103	0.110	0.192	0.019	0.222	0.356
S.D.	0.001	0.003	0.002	0.002	0.000	0.002	0.006	0.027
% R.S.D.	3.278	6.284	2.119	2.103	0.189	8.024	2.658	7.669

	Ce (ppm)	Sm (ppm)	Ba (ppm)	P (ppm)	S (ppm)	Mg (ppm)	As (ppm)	Na (ppm)
Mean	0.202	0.201	0.102	0.381	0.198	0.192	0.194	0.189
S.D.	0.007	0.005	0.000	0.023	0.002	0.001	0.005	0.001
% R.S.D.	3.373	2.627	0.187	6.075	0.971	0.310	2.491	0.649

	Mo (ppm)	Se (ppm)	Ag (ppm)	Pb (ppm)	Ti (ppm)	Cd (ppm)	B (ppm)	K (ppm)
Mean	0.098	0.242	0.019	0.197	0.020	0.003	0.104	0.405
S.D.	0.001	0.008	0.001	0.011	0.000	0.000	0.001	0.003
% R.S.D.	1.301	3.485	4.207	5.371	0.618	18.050	1.000	0.693

	Mn (ppm)	Sb (ppm)	V (ppm)	Be (ppm)	Tl (ppm)
Mean	0.020	0.099	0.101	0.010	0.400
S.D.	0.000	0.014	0.000	0.000	0.016
% R.S.D.	2.306	14.293	0.115	1.352	3.879

07/31/96 15:33 ☎509 372 2929 WESTINGHOUSE →→→ MO-924 200W 007

Identity 1: ICSA Identity 2: Quality Control 12:53 PM July 31, 1996
Task name : OPTIMA
Sample Weight : 1.0000 Solution Volume : 1.00
On-Peak Integrations : 3 Off-Peak Integrations : 1

	Zr (ppm)	Sr (ppm)	Bi (ppm)	Si (ppm)	Al (ppm)	Co (ppm)	Cu (ppm)	Li (ppm)
Mean	-0.002	0.002	-0.017	0.016	195.119	0.002	0.002	0.001
S.D.	0.001	0.000	0.003	0.001	0.406	0.002	0.000	0.000
% R.S.D.	61.403	3.066	19.420	3.550	0.208	79.854	13.707	34.000

	Zn (ppm)	Ni (ppm)	La (ppm)	Fe (ppm)	Ca (ppm)	Cr (ppm)	Nd (ppm)	U (ppm)
Mean	-0.005	0.005	0.003	96.587	101.812	0.003	0.007	-0.094
S.D.	0.001	0.002	0.000	0.123	0.157	0.003	0.019	0.056
% R.S.D.	12.763	49.408	1.513	0.127	0.154	108.053	256.584	59.762

	Ce (ppm)	Sm (ppm)	Ba (ppm)	P (ppm)	S (ppm)	Mg (ppm)	As (ppm)	Na (ppm)
Mean	0.044	0.037	0.004	0.002	-0.008	106.559	0.032	191.059
S.D.	0.012	0.012	0.000	0.013	0.011	0.085	0.006	1.148
% R.S.D.	27.341	32.661	5.044	763.288	142.959	0.080	17.567	0.601

	Mo (ppm)	Se (ppm)	Ag (ppm)	Pb (ppm)	Ti (ppm)	Cd (ppm)	B (ppm)	K (ppm)
Mean	-0.001	0.025	0.002	-0.005	0.000	-0.007	0.013	-0.096
S.D.	0.002	0.010	0.001	0.005	0.000	0.000	0.000	0.007
% R.S.D.	396.195	38.840	34.965	100.274	60.239	2.699	1.529	7.337

	Mn (ppm)	Sb (ppm)	V (ppm)	Be (ppm)	Tl (ppm)
Mean	0.009	-0.066	-0.001	0.003	-0.024
S.D.	0.001	0.028	0.001	0.000	0.028
% R.S.D.	6.629	41.829	131.632	0.246	116.861

07/31/96 15:34 ☎509 372 2929 WESTINGHOUSE →→→ MO-924 200W ☑008

Identity 1: ICSAB Identity 2: Quality Control 12:56 PM July 31, 1996
Task name : OPTIMA
Sample Weight : 1.0000 Solution Volume : 1.00
On-Peak Integrations : 3 Off-Peak Integrations : 1

	Zr (ppm)	Sr (ppm)	Bi (ppm)	Si (ppm)	Al (ppm)	Co (ppm)	Cu (ppm)	Li (ppm)
Mean	-0.004	0.002	-0.047	0.014	195.264	0.491	0.490	0.931
S.D.	0.001	0.000	0.005	0.001	0.115	0.002	0.001	0.001
% R.S.D.	16.972	1.767	11.374	10.231	0.059	0.393	0.126	0.084

	Zn (ppm)	Ni (ppm)	La (ppm)	Fe (ppm)	Ca (ppm)	Cr (ppm)	Nd (ppm)	U (ppm)
Mean	0.983	0.971	0.001	94.805	101.294	0.494	0.027	0.028
S.D.	0.002	0.006	0.001	0.060	0.136	0.003	0.005	0.013
% R.S.D.	0.254	0.617	109.727	0.063	0.135	0.507	19.545	46.264

	Ce (ppm)	Sm (ppm)	Ba (ppm)	P (ppm)	S (ppm)	Mg (ppm)	As (ppm)	Na (ppm)
Mean	0.016	0.035	0.496	0.027	-0.003	107.380	0.028	189.063
S.D.	0.002	0.001	0.001	0.010	0.007	0.220	0.005	0.124
% R.S.D.	14.606	2.999	0.140	37.611	215.937	0.205	17.860	0.065

	Mo (ppm)	Se (ppm)	Ag (ppm)	Pb (ppm)	Ti (ppm)	Cd (ppm)	B (ppm)	K (ppm)
Mean	-0.002	-0.010	1.004	0.963	0.000	0.972	0.013	-0.058
S.D.	0.001	0.012	0.002	0.005	0.000	0.002	0.002	0.006
% R.S.D.	50.666	110.560	0.191	0.507	74.196	0.178	11.629	11.103

	Mn (ppm)	Sb (ppm)	V (ppm)	Be (ppm)	Tl (ppm)
Mean	0.499	0.009	0.492	0.494	-0.011
S.D.	0.002	0.011	0.001	0.001	0.004
% R.S.D.	0.388	134.348	0.261	0.195	33.871

07/31/96 15:34 ☎509 372 2929 WESTINGHOUSE →→→ MO-924 200W 009

Identity 1: s96t002527_L Identity 2: .025ml-30ml-2ml-8ml 12:59 PM July 31, 1996
Task name : OPTIMA
Sample Weight : 1.0000 Solution Volume : 6005.00
On-Peak Integrations : 3 Off-Peak Integrations : 1

	Zr (ppm)	Sr (ppm)	Bi (ppm)	Si (ppm)	Al (ppm)	Co (ppm)	Cu (ppm)	Li (ppm)
Mean	9.620	-0.257	-59.799	412.992	28664.150	-19.993	1.605	8.043
S.D.	12,091	1.156	86.232	15.630	116.003	11.536	3.142	1.886
% R.S.D.	125.682	450.000	144.203	3.785	0.405	57.703	195.715	23.445

	Zn (ppm)	Ni (ppm)	La (ppm)	Fe (ppm)	Ca (ppm)	Cr (ppm)	Nd (ppm)	U (ppm)
Mean	271.622	25.648	-14.444	66.836	70.298	79.554	-40.380	-151.066
S.D.	2.411	7.639	13.270	37.156	31.860	6.042	41.281	255.548
% R.S.D.	0.888	29.786	91.873	55.592	45.321	7.594	102.231	169.163

	Ce (ppm)	Sm (ppm)	Ba (ppm)	P (ppm)	S (ppm)	Mg (ppm)	As (ppm)	Na (ppm)
Mean	-55.856	135.937	-0.359	162.771	408.913	52.135	37.083	244170.647
S.D.	89.266	63.071	1.997	46.122	5.971	31.145	18.074	763.916
% R.S.D.	159.815	46.397	556.776	28.336	1.460	59.739	48.741	0.313

	Mo (ppm)	Se (ppm)	Ag (ppm)	Pb (ppm)	Ti (ppm)	Cd (ppm)	B (ppm)	K (ppm)
Mean	45.061	-81.093	-4.110	-113.464	3.834	-48.046	41.105	34601.858
S.D.	5.017	86.539	6.682	67.952	2.568	5.619	8.901	212.505
% R.S.D.	11.134	106.715	162.585	59.889	66.981	11.696	21.653	0.614

	Mn (ppm)	Sb (ppm)	V (ppm)	Be (ppm)	Tl (ppm)
Mean	1.185	220.168	-22.120	-0.022	-360.184
S.D.	0.053	149.742	3.312	1.679	141.943
% R.S.D.	4.488	68.012	14.972	7500.666	39.408

07/31/96 15:35 ☎509 372 2929 WESTINGHOUSE →→→ MO-924 200W 010

Identity 1: s96t002527 Identity 2: .025ml-30ml 1:04 PM July 31, 1996
Task name : OPTIMA
Sample Weight : 1.0000 Solution Volume : 1201.00
On-Peak Integrations : 3 Off-Peak Integrations : 1

	Zr (ppm)	Sr (ppm)	Bi (ppm)	Si (ppm)	Al (ppm)	Co (ppm)	Cu (ppm)	Li (ppm)
Mean	9.951	0.180	-9.622	380.640	28444.159	-5.329	1.169	8.290
S.D.	0.913	0.000	16.015	4.399	42.152	0.003	0.676	0.047
% R.S.D.	9.176	0.000	166.448	1.156	0.148	0.056	57.826	0.573

	Zn (ppm)	Ni (ppm)	La (ppm)	Fe (ppm)	Ca (ppm)	Cr (ppm)	Nd (ppm)	U (ppm)
Mean	8.702	15.681	-5.199	6.938	-11.929	92.972	3.296	-55.104
S.D.	0.716	3.062	1.714	2.667	0.194	2.161	6.113	23.127
% R.S.D.	8.228	19.529	32.974	38.440	1.626	2.324	185.483	41.970

	Ce (ppm)	Sm (ppm)	Ba (ppm)	P (ppm)	S (ppm)	Mg (ppm)	As (ppm)	Na (ppm)
Mean	19.485	-7.114	0.490	199.706	352.088	0.274	5.023	234239.706
S.D.	11.544	6.734	0.041	10.371	4.968	0.119	3.132	1999.434
% R.S.D.	59.247	94.663	8.449	5.193	1.411	43.301	62.353	0.854

	Mo (ppm)	Se (ppm)	Ag (ppm)	Pb (ppm)	Ti (ppm)	Cd (ppm)	B (ppm)	K (ppm)
Mean	56.597	8.243	2.175	14.272	-0.433	-6.407	46.578	34433.674
S.D.	2.618	19.749	0.544	17.012	0.403	0.666	0.723	315.550
% R.S.D.	4.626	239.597	25.014	119.204	93.145	10.403	1.552	0.916

	Mn (ppm)	Sb (ppm)	V (ppm)	Be (ppm)	Tl (ppm)
Mean	1.734	-2.238	-1.819	2.936	12.614
S.D.	0.003	43.883	1.045	0.167	9.876
% R.S.D.	0.153	1961.053	57.436	5.686	78.294

07/31/96 15:35 ☎509 372 2929 WESTINGHOUSE →→→ MO-924 200W 011

Identity 1: s96t002527_d Identity 2: .025ml-30ml 1:07 PM July 31, 1996
Task name : OPTIMA
Sample Weight : 1.0000 Solution Volume : 1201.00
On-Peak Integrations : 3 Off-Peak Integrations : 1

	Zr (ppm)	Sr (ppm)	Bi (ppm)	Si (ppm)	Al (ppm)	Co (ppm)	Cu (ppm)	Li (ppm)
Mean	11.867	0.231	-14.558	401.011	30159.733	2.675	0.605	9.110
S.D.	1.044	0.160	8.298	5.341	97.019	3.999	0.751	0.207
% R.S.D.	8.795	69.389	57.000	1.332	0.322	149.484	124.194	2.275

	Zn (ppm)	Ni (ppm)	La (ppm)	Fe (ppm)	Ca (ppm)	Cr (ppm)	Nd (ppm)	U (ppm)
Mean	9.175	15.014	-0.595	9.327	-15.122	97.306	17.714	-47.573
S.D.	0.100	3.175	0.994	3.488	0.194	2.823	13.697	59.845
% R.S.D.	1.092	21.148	167.108	37.400	1.283	2.901	77.321	125.795

	Ce (ppm)	Sm (ppm)	Ba (ppm)	P (ppm)	S (ppm)	Mg (ppm)	As (ppm)	Na (ppm)
Mean	17.273	2.862	0.538	197.260	371.578	0.069	2.964	243776.131
S.D.	13.240	8.109	0.251	20.709	5.918	0.119	4.898	2367.231
% R.S.D.	76.653	283.369	46.667	10.498	1.593	173.205	165.258	0.971

	Mo (ppm)	Se (ppm)	Ag (ppm)	Pb (ppm)	Ti (ppm)	Cd (ppm)	B (ppm)	K (ppm)
Mean	57.378	24.542	1.494	20.662	-0.521	-6.727	52.453	35973.695
S.D.	1.457	16.449	0.664	12.507	0.594	0.667	0.384	340.008
% R.S.D.	2.539	67.024	44.422	60.531	113.879	9.921	0.731	0.945

	Mn (ppm)	Sb (ppm)	V (ppm)	Be (ppm)	Tl (ppm)
Mean	1.982	-28.505	-1.226	2.842	1.960
S.D.	0.419	24.995	1.020	0.165	35.194
% R.S.D.	21.169	87.686	83.166	5.817	1795.740

07/31/96 15:36 ☎509 372 2929 WESTINGHOUSE →→→ MO-924 200W 012

Identity 1: s96t002527_a Identity 2: .025ml-2ml-28ml 1:10 PM July 31, 1996
Task name : OPTIMA
Sample Weight : 1.0000 Solution Volume : 1201.00
On-Peak Integrations : 3 Off-Peak Integrations : 1

	Zr (ppm)	Sr (ppm)	Bi (ppm)	Si (ppm)	Al (ppm)	Co (ppm)	Cu (ppm)	Li (ppm)
Mean	397.886	392.887	376.661	835.269	29868.604	397.491	395.497	390.863
S.D.	1.058	0.957	13.154	5.038	95.147	2.311	1.435	1.886
% R.S.D.	0.266	0.244	3.492	0.603	0.319	0.581	0.363	0.482

	Zn (ppm)	Ni (ppm)	La (ppm)	Fe (ppm)	Ca (ppm)	Cr (ppm)	Nd (ppm)	U (ppm)
Mean	404.070	404.814	393.068	411.048	379.183	487.031	422.537	666.569
S.D.	0.503	0.977	1.985	5.919	1.013	2.588	3.956	17.569
% R.S.D.	0.125	0.241	0.505	1.440	0.267	0.531	0.936	2.636

	Ce (ppm)	Sm (ppm)	Ba (ppm)	P (ppm)	S (ppm)	Mg (ppm)	As (ppm)	Na (ppm)
Mean	442.405	400.608	392.652	581.832	761.762	364.491	392.306	238416.463
S.D.	8.064	5.212	1.030	21.381	5.177	0.547	3.997	1016.419
% R.S.D.	1.823	1.301	0.262	3.675	0.680	0.150	1.019	0.426

	Mo (ppm)	Se (ppm)	Ag (ppm)	Pb (ppm)	Ti (ppm)	Cd (ppm)	B (ppm)	K (ppm)
Mean	452.404	363.887	309.918	399.317	382.802	383.471	447.418	35274.998
S.D.	3.000	10.391	0.890	9.303	1.248	2.723	3.066	162.838
% R.S.D.	0.663	2.855	0.287	2.330	0.326	0.710	0.685	0.462

	Mn (ppm)	Sb (ppm)	V (ppm)	Be (ppm)	Tl (ppm)
Mean	393.065	369.464	395.452	401.302	436.158
S.D.	1.473	25.225	1.171	2.856	8.572
% R.S.D.	0.375	6.828	0.296	0.712	1.965

07/31/96 15:36 ☎509 372 2929 WESTINGHOUSE →→→ MO-924 200W 013

Identity 1: s96t002558_L Identity 2: .025ml-30ml-2ml-8ml 1:20 PM July 31, 1996
Task name : OPTIMA
Sample Weight : 1.0000 Solution Volume : 6005.00
On-Peak Integrations : 3 Off-Peak Integrations : 1

	Zr (ppm)	Sr (ppm)	Bi (ppm)	Si (ppm)	Al (ppm)	Co (ppm)	Cu (ppm)	Li (ppm)
Mean	13.542	1.284	3.101	273.219	30971.019	-19.996	5.996	25.460
S.D.	5.246	0.385	5.013	21.349	34.219	11.568	1.966	0.857
% R.S.D.	38.742	30.000	161.662	7.814	0.110	57.854	32.799	3.365

	Zn (ppm)	Ni (ppm)	La (ppm)	Fe (ppm)	Ca (ppm)	Cr (ppm)	Nd (ppm)	U (ppm)
Mean	209.220	51.209	-20.187	-5.439	30.526	84.120	34.837	-123.650
S.D.	2.818	11.827	9.924	19.329	0.000	6.734	44.167	193.619
% R.S.D.	1.347	23.096	49.163	355.374	0.000	8.006	126.780	156.586

	Ce (ppm)	Sm (ppm)	Ba (ppm)	P (ppm)	S (ppm)	Mg (ppm)	As (ppm)	Na (ppm)
Mean	-4.650	118.846	1.255	-12.109	467.090	2.401	-30.133	263725.772
S.D.	52.143	34.308	1.120	55.429	20.277	0.594	22.424	2986.556
% R.S.D.	1121.415	28.868	89.214	457.771	4.341	24.744	74.415	1.132

	Mo (ppm)	Se (ppm)	Ag (ppm)	Pb (ppm)	Ti (ppm)	Cd (ppm)	B (ppm)	K (ppm)
Mean	50.469	70.832	16.008	-116.958	4.989	-44.291	38.582	35530.345
S.D.	13.874	25.399	2.067	37.385	1.498	3.704	3.035	416.929
% R.S.D.	27.489	35.858	12.915	31.965	30.026	8.363	7.865	1.173

	Mn (ppm)	Sb (ppm)	V (ppm)	Be (ppm)	Tl (ppm)
Mean	1.217	23.648	-18.666	3.783	-28.944
S.D.	1.820	59.298	4.010	1.449	118.381
% R.S.D.	149.606	250.749	21.482	38.293	409.002

07/31/96 15:38 ☎509 372 2929 WESTINGHOUSE →→→ MO-924 200W 016

Identity 1: s96t002558 Identity 2: .025ml-30ml 1:23 PM July 31, 1996
Task name : OPTIMA
Sample Weight : 1.0000 Solution Volume : 1201.00
On-Peak Integrations : 3 Off-Peak Integrations : 1

	Zr (ppm)	Sr (ppm)	Bi (ppm)	Si (ppm)	Al (ppm)	Co (ppm)	Cu (ppm)	Li (ppm)
Mean	12.404	0.180	-15.691	217.955	31428.895	1.349	0.965	22.194
S.D.	0.395	0.077	8.863	3.947	49.412	2.313	0.122	0.126
% R.S.D.	3.181	42.857	56.488	1.811	0.157	171.506	12.666	0.567

	Zn (ppm)	Ni (ppm)	La (ppm)	Fe (ppm)	Ca (ppm)	Cr (ppm)	Nd (ppm)	U (ppm)
Mean	10.306	17.151	-1.198	2.595	-12.770	109.243	11.603	-105.203
S.D.	0.581	1.200	1.004	2.775	0.049	2.526	13.808	21.806
% R.S.D.	5.641	6.995	83.800	106.919	0.380	2.313	119.002	20.728

	Ce (ppm)	Sm (ppm)	Ba (ppm)	P (ppm)	S (ppm)	Mg (ppm)	As (ppm)	Na (ppm)
Mean	14.065	18.839	0.466	217.635	403.415	0.343	-5.530	253936.272
S.D.	3.394	1.338	0.036	12.910	6.298	0.206	7.883	1138.300
% R.S.D.	24.132	7.101	7.692	5.932	1.561	60.000	142.530	0.448

	Mo (ppm)	Se (ppm)	Ag (ppm)	Pb (ppm)	Ti (ppm)	Cd (ppm)	B (ppm)	K (ppm)
Mean	60.202	-31.327	1.828	7.780	-1.046	-7.154	51.547	35678.146
S.D.	1.004	18.696	0.239	3.023	0.361	0.321	0.946	258.868
% R.S.D.	1.667	59.681	13.060	38.855	34.482	4.489	1.835	0.726

	Mn (ppm)	Sb (ppm)	V (ppm)	Be (ppm)	Tl (ppm)
Mean	2.846	-37.162	-3.034	3.214	9.579
S.D.	0.369	20.932	0.771	0.164	10.169
% R.S.D.	12.970	56.327	25.407	5.108	106.156

07/31/96 15:39 ☎509 372 2929 WESTINGHOUSE →→→ MO-924 200W ☑017

Identity 1: s96t002558_A Identity 2: .025ml-2ml-28ml 1:26 PM July 31, 1996
Task name : OPTIMA
Sample Weight : 1.0000 Solution Volume : 1201.00
On-Peak Integrations : 3 Off-Peak Integrations : 1

	Zr (ppm)	Sr (ppm)	Bi (ppm)	Si (ppm)	Al (ppm)	Co (ppm)	Cu (ppm)	Li (ppm)
Mean	12.480	0.257	-30.484	207.699	29702.151	4.011	1.134	21.072
S.D.	1.294	0.133	9.495	5.695	67.072	2.313	0.525	0.143
% R.S.D.	10.370	51.962	31.146	2.742	0.226	57.661	46.283	0.676

	Zn (ppm)	Ni (ppm)	La (ppm)	Fe (ppm)	Ca (ppm)	Cr (ppm)	Nd (ppm)	U (ppm)
Mean	10.139	17.940	-1.751	10.957	-14.030	103.672	23.629	-60.618
S.D.	0.600	3.419	0.029	1.899	0.128	0.775	12.670	60.780
% R.S.D.	5.913	19.058	1.631	17.333	0.915	0.747	53.619	100.268

	Ce (ppm)	Sm (ppm)	Ba (ppm)	P (ppm)	S (ppm)	Mg (ppm)	As (ppm)	Na (ppm)
Mean	28.374	-7.049	0.765	212.723	395.392	-0.137	7.545	237680.383
S.D.	13.061	11.241	0.254	3.191	7.224	0.119	1.500	2831.297
% R.S.D.	46.033	159.462	33.256	1.500	1.827	86.602	19.885	1.191

	Mo (ppm)	Se (ppm)	Ag (ppm)	Pb (ppm)	Ti (ppm)	Cd (ppm)	B (ppm)	K (ppm)
Mean	58.400	22.577	1.288	30.979	-0.343	-4.167	49.519	33733.675
S.D.	1.442	13.335	0.632	4.533	0.555	0.665	0.647	538.496
% R.S.D.	2.469	59.063	49.108	14.633	161.927	15.966	1.307	1.596

	Mn (ppm)	Sb (ppm)	V (ppm)	Be (ppm)	Tl (ppm)
Mean	2.596	49.509	0.525	3.125	2.624
S.D.	0.206	21.996	1.360	0.159	37.610
% R.S.D.	7.923	44.428	258.975	5.093	1433.541

07/31/96 15:40 ☎509 372 2929 WESTINGHOUSE →→→ MO-924 200W ☑019

Identity 1: CCV Identity 2: Quality Control 1:13 PM July 31, 1996
Task name : OPTIMA
Sample Weight : 1.0000 Solution Volume : 1.00
On-Peak Integrations : 3 Off-Peak Integrations : 1

	Zr (ppm)	Sr (ppm)	Bi (ppm)	Si (ppm)	Al (ppm)	Co (ppm)	Cu (ppm)	Li (ppm)
Mean	4.967	5.003	4.992	4.957	4.917	5.052	5.010	5.023
S.D.	0.020	0.020	0.006	0.014	0.021	0.015	0.014	0.034
% R.S.D.	0.406	0.405	0.124	0.288	0.436	0.305	0.275	0.684

	Zn (ppm)	Ni (ppm)	La (ppm)	Fe (ppm)	Ca (ppm)	Cr (ppm)	Nd (ppm)	U (ppm)
Mean	5.089	5.002	5.040	5.107	4.945	5.030	5.246	9.422
S.D.	0.014	0.028	0.013	0.012	0.022	0.026	0.025	0.012
% R.S.D.	0.284	0.552	0.253	0.232	0.438	0.511	0.479	0.128

	Ce (ppm)	Sm (ppm)	Ba (ppm)	P (ppm)	S (ppm)	Mg (ppm)	As (ppm)	Na (ppm)
Mean	5.133	5.037	5.000	5.044	4.980	4.822	5.099	4.997
S.D.	0.012	0.015	0.020	0.162	0.069	0.017	0.032	0.041
% R.S.D.	0.230	0.304	0.396	3.210	1.389	0.360	0.632	0.813

	Mo (ppm)	Se (ppm)	Ag (ppm)	Pb (ppm)	Ti (ppm)	Cd (ppm)	B (ppm)	K (ppm)
Mean	5.047	5.080	4.899	4.946	4.893	5.002	5.120	5.001
S.D.	0.013	0.037	0.013	0.032	0.019	0.028	0.011	0.049
% R.S.D.	0.262	0.720	0.264	0.653	0.392	0.563	0.212	0.982

	Mn (ppm)	Sb (ppm)	V (ppm)	Be (ppm)	Tl (ppm)
Mean	5.000	4.711	5.021	5.170	4.806
S.D.	0.019	0.044	0.020	0.018	0.002
% R.S.D.	0.379	0.931	0.399	0.351	0.038

07/31/96 15:37 ☎509 372 2929 WESTINGHOUSE →→→ MO-924 200W ☑014

Identity 1: CCB Identity 2: Quality Control 1:16 PM July 31, 1996
Task name : OPTIMA
Sample Weight : 1.0000 Solution Volume : 1.00
On-Peak Integrations : 3 Off-Peak Integrations : 1

	Zr (ppm)	Sr (ppm)	Bi (ppm)	Si (ppm)	Al (ppm)	Co (ppm)	Cu (ppm)	Li (ppm)
Mean	-0.002	0.000	-0.016	0.013	-0.005	-0.003	0.000	0.000
S.D.	0.000	0.000	0.010	0.002	0.002	0.004	0.000	0.000
% R.S.D.	13.592	64.291	60.518	13.123	49.205	115.706	54.597	1212.000

	Zn (ppm)	Ni (ppm)	La (ppm)	Fe (ppm)	Ca (ppm)	Cr (ppm)	Nd (ppm)	U (ppm)
Mean	-0.001	0.002	-0.000	-0.001	0.004	-0.002	-0.000	-0.045
S.D.	0.000	0.001	0.002	0.001	0.000	0.000	0.004	0.010
% R.S.D.	53.604	46.327	11738.181	126.854	2.125	27.970	1548.685	22.541

	Ce (ppm)	Sm (ppm)	Ba (ppm)	P (ppm)	S (ppm)	Mg (ppm)	As (ppm)	Na (ppm)
Mean	-0.025	0.029	0.000	-0.005	0.008	0.001	-0.005	-0.026
S.D.	0.006	0.002	0.000	0.014	0.002	0.000	0.003	0.001
% R.S.D.	25.290	6.964	173.205	268.461	21.648	15.000	63.193	4.812

	Mo (ppm)	Se (ppm)	Ag (ppm)	Pb (ppm)	Ti (ppm)	Cd (ppm)	B (ppm)	K (ppm)
Mean	0.002	0.038	0.008	-0.020	0.001	-0.007	0.003	-0.192
S.D.	0.001	0.004	0.000	0.014	0.000	0.000	0.001	0.010
% R.S.D.	63.834	9.589	4.101	69.934	8.733	0.007	44.166	5.063

	Mn (ppm)	Sb (ppm)	V (ppm)	Be (ppm)	Tl (ppm)
Mean	0.000	-0.003	-0.003	0.000	-0.024
S.D.	0.000	0.034	0.001	0.000	0.003
% R.S.D.	43.376	1052.841	22.107	492.058	11.511

07/31/96 15:37 ☎509 372 2929 WESTINGHOUSE →→→ MO-924 200W 015

Identity 1: s96t002575_L Identity 2: .025ml-30ml-2ml-8ml 1:30 PM July 31, 1996
Task name : OPTIMA
Sample Weight : 1.0000 Solution Volume : 6005.00
On-Peak Integrations : 3 Off-Peak Integrations : 1

	Zr (ppm)	Sr (ppm)	Bi (ppm)	Si (ppm)	Al (ppm)	Co (ppm)	Cu (ppm)	Li (ppm)
Mean	10.904	-0.514	-69.319	232.947	31789.400	-26.678	0.005	7.352
S.D.	9.389	0.802	24.921	6.077	68.826	19.985	1.090	0.950
% R.S.D.	86.103	156.125	35.951	2.609	0.217	74.913	22643.535	12.928

	Zn (ppm)	Ni (ppm)	La (ppm)	Fe (ppm)	Ca (ppm)	Cr (ppm)	Nd (ppm)	U (ppm)
Mean	174.783	27.001	5.734	9.756	42.709	89.850	26.480	-31.096
S.D.	2.704	9.137	18.113	10.549	0.840	11.479	44.122	366.568
% R.S.D.	1.547	33.841	315.890	108.126	1.967	12.775	166.625	1178.815

	Ce (ppm)	Sm (ppm)	Ba (ppm)	P (ppm)	S (ppm)	Mg (ppm)	As (ppm)	Na (ppm)
Mean	-64.558	242.504	-1.136	38.655	435.991	1.715	39.232	261646.706
S.D.	80.200	54.751	1.567	24.245	26.796	0.000	10.369	1303.693
% R.S.D.	124.229	22.577	137.951	62.722	6.146	0.000	26.431	0.498

	Mo (ppm)	Se (ppm)	Ag (ppm)	Pb (ppm)	Ti (ppm)	Cd (ppm)	B (ppm)	K (ppm)
Mean	62.484	47.776	-4.095	-68.981	4.337	-46.961	46.782	36517.167
S.D.	3.412	103.349	2.619	56.928	1.522	3.194	5.712	283.919
% R.S.D.	5.460	216.320	63.949	82.528	35.107	6.801	12.209	0.777

	Mn (ppm)	Sb (ppm)	V (ppm)	Be (ppm)	Tl (ppm)
Mean	2.423	-300.216	-19.952	-0.483	-128.298
S.D.	1.068	289.524	1.813	0.047	140.219
% R.S.D.	44.089	96.438	9.088	9.765	109.292

07/31/96 15:40 ☎509 372 2929 WESTINGHOUSE →→→ MO-924 200W 020

Identity 1: s96t002575 Identity 2: .025ml-30ml 1:33 PM July 31, 1996
Task name : OPTIMA
Sample Weight : 1.0000 Solution Volume : 1201.00
On-Peak Integrations : 3 Off-Peak Integrations : 1

	Zr (ppm)	Sr (ppm)	Bi (ppm)	Si (ppm)	Al (ppm)	Co (ppm)	Cu (ppm)	Li (ppm)
Mean	14.818	-0.205	-12.961	202.843	32016.100	-4.003	-0.353	7.269
S.D.	1.620	0.154	7.712	5.120	69.603	4.614	0.828	0.252
% R.S.D.	10.931	75.000	59.501	2.524	0.217	115.268	234.324	3.461

	Zn (ppm)	Ni (ppm)	La (ppm)	Fe (ppm)	Ca (ppm)	Cr (ppm)	Nd (ppm)	U (ppm)
Mean	17.414	22.223	4.033	8.552	-12.742	108.093	-2.448	11.368
S.D.	0.206	1.813	2.653	0.644	0.049	0.967	13.120	59.512
% R.S.D.	1.182	8.159	65.790	7.526	0.381	0.895	535.853	523.494

	Ce (ppm)	Sm (ppm)	Ba (ppm)	P (ppm)	S (ppm)	Mg (ppm)	As (ppm)	Na (ppm)
Mean	-25.785	22.299	-0.120	215.516	412.025	-0.274	1.606	256015.336
S.D.	12.480	11.698	0.207	11.092	7.091	0.000	2.902	2097.036
% R.S.D.	48.400	52.457	173.205	5.147	1.721	0.000	180.659	0.819

	Mo (ppm)	Se (ppm)	Ag (ppm)	Pb (ppm)	Ti (ppm)	Cd (ppm)	B (ppm)	K (ppm)
Mean	63.506	44.891	0.479	30.968	0.187	-4.804	49.018	36523.989
S.D.	1.025	13.697	0.859	10.792	0.463	1.030	0.140	388.001
% R.S.D.	1.614	30.512	179.445	34.848	246.941	21.440	0.286	1.062

	Mn (ppm)	Sb (ppm)	V (ppm)	Be (ppm)	Tl (ppm)
Mean	3.323	-59.594	-4.065	2.944	-32.003
S.D.	0.210	19.276	0.221	0.162	21.570
% R.S.D.	6.323	32.346	5.429	5.503	67.399

07/31/96 15:41 ☎509 372 2929 WESTINGHOUSE →→→ MO-924 200W 021

Identity 1: s96t002575_d Identity 2: .025ml-30ml 1:35 PM July 31, 1996
Task name : OPTIMA
Sample Weight : 1.0000 Solution Volume : 1201.00
On-Peak Integrations : 3 Off-Peak Integrations : 1

	Zr (ppm)	Sr (ppm)	Bi (ppm)	Si (ppm)	Al (ppm)	Co (ppm)	Cu (ppm)	Li (ppm)
Mean	10.061	0.231	-10.286	179.961	29937.240	4.023	0.551	7.519
S.D.	0.789	0.160	10.923	6.630	63.226	2.304	0.791	0.289
% R.S.D.	7.840	69.389	106.200	3.684	0.211	57.268	143.398	3.845

	Zn (ppm)	Ni (ppm)	La (ppm)	Fe (ppm)	Ca (ppm)	Cr (ppm)	Nd (ppm)	U (ppm)
Mean	15.688	18.234	-1.795	10.540	-15.318	103.125	16.648	-155.929
S.D.	0.682	2.351	3.005	1.425	0.000	0.968	10.214	53.693
% R.S.D.	4.346	12.892	167.431	13.519	0.000	0.938	61.350	34.435

	Ce (ppm)	Sm (ppm)	Ba (ppm)	P (ppm)	S (ppm)	Mg (ppm)	As (ppm)	Na (ppm)
Mean	12.648	-17.257	0.490	188.394	388.312	-0.206	2.019	239629.931
S.D.	13.184	9.771	0.352	10.554	12.091	0.119	1.442	1074.531
% R.S.D.	104.240	56.623	71.817	5.602	3.114	57.735	71.386	0.448

	Mo (ppm)	Se (ppm)	Ag (ppm)	Pb (ppm)	Ti (ppm)	Cd (ppm)	B (ppm)	K (ppm)
Mean	57.198	-19.816	1.753	13.765	-1.843	-6.090	44.868	34091.456
S.D.	0.750	19.369	0.715	5.203	0.460	0.491	1.866	81.685
% R.S.D.	1.312	97.743	40.786	37.798	24.956	8.056	4.159	0.240

	Mn (ppm)	Sb (ppm)	V (ppm)	Be (ppm)	Tl (ppm)
Mean	3.958	31.002	-1.301	2.733	-29.776
S.D.	0.364	22.977	1.042	0.287	20.038
% R.S.D.	9.186	74.116	80.071	10.495	67.297

07/31/96 15:41 ☎509 372 2929 WESTINGHOUSE →→→ MO-924 200W 022

Identity 1: s96t002575_A Identity 2: .025ml-2ml-28ml 1:39 PM July 31, 1996
Task name : OPTIMA
Sample Weight : 1.0000 Solution Volume : 1201.00
On-Peak Integrations : 3 Off-Peak Integrations : 1

	Zr (ppm)	Sr (ppm)	Bi (ppm)	Si (ppm)	Al (ppm)	Co (ppm)	Cu (ppm)	Li (ppm)
Mean	411.745	404.266	373.459	611.205	33729.984	405.495	407.167	397.769
S.D.	1.597	0.782	6.776	1.139	88.574	2.312	1.097	1.713
% R.S.D.	0.388	0.193	1.814	0.186	0.263	0.570	0.270	0.431

	Zn (ppm)	Ni (ppm)	La (ppm)	Fe (ppm)	Ca (ppm)	Cr (ppm)	Nd (ppm)	U (ppm)
Mean	419.864	417.939	403.998	413.428	382.528	517.345	433.228	676.774
S.D.	0.832	5.025	1.732	5.063	0.669	3.904	6.849	16.076
% R.S.D.	0.198	1.202	0.429	1.225	0.175	0.755	1.581	2.375

	Ce (ppm)	Sm (ppm)	Ba (ppm)	P (ppm)	S (ppm)	Mg (ppm)	As (ppm)	Na (ppm)
Mean	433.969	394.619	404.191	625.337	849.325	372.628	398.426	260971.736
S.D.	10.218	6.596	0.852	41.006	18.838	0.632	12.440	1366.605
% R.S.D.	2.354	1.672	0.211	6.557	2.218	0.170	3.122	0.524

	Mo (ppm)	Se (ppm)	Ag (ppm)	Pb (ppm)	Ti (ppm)	Cd (ppm)	B (ppm)	K (ppm)
Mean	468.987	427.574	317.556	423.623	392.509	391.795	457.804	37386.716
S.D.	3.168	14.146	5.142	14.361	0.132	1.820	0.642	147.836
% R.S.D.	0.676	3.308	1.619	3.390	0.034	0.465	0.140	0.395

	Mn (ppm)	Sb (ppm)	V (ppm)	Be (ppm)	Tl (ppm)
Mean	405.334	322.933	405.316	413.184	406.998
S.D.	1.292	22.956	0.209	1.586	13.101
% R.S.D.	0.319	7.109	0.052	0.384	3.219

07/31/96 15:42 ☎509 372 2929 WESTINGHOUSE →→→ MO-924 200W 025

Identity 1: CCV Identity 2: Quality Control 1:42 PM July 31, 1996
Task name : OPTIMA
Sample Weight : 1.0000 Solution Volume : 1.00
On-Peak Integrations : 3 Off-Peak Integrations : 1

	Zr (ppm)	Sr (ppm)	Bi (ppm)	Si (ppm)	Al (ppm)	Co (ppm)	Cu (ppm)	Li (ppm)
Mean	4.944	4.965	4.953	4.914	4.876	5.012	4.989	5.001
S.D.	0.006	0.005	0.010	0.002	0.001	0.011	0.008	0.014
% R.S.D.	0.126	0.091	0.197	0.050	0.030	0.214	0.163	0.277

	Zn (ppm)	Ni (ppm)	La (ppm)	Fe (ppm)	Ca (ppm)	Cr (ppm)	Nd (ppm)	U (ppm)
Mean	5.068	4.972	5.034	5.093	4.930	4.992	5.265	9.314
S.D.	0.002	0.004	0.019	0.013	0.007	0.001	0.029	0.037
% R.S.D.	0.041	0.075	0.380	0.246	0.150	0.020	0.558	0.401

	Ce (ppm)	Sm (ppm)	Ba (ppm)	P (ppm)	S (ppm)	Mg (ppm)	As (ppm)	Na (ppm)
Mean	5.081	4.999	4.967	5.013	4.914	4.790	5.071	5.013
S.D.	0.006	0.010	0.005	0.117	0.035	0.005	0.013	0.025
% R.S.D.	0.125	0.199	0.100	2.338	0.713	0.108	0.262	0.498

	Mo (ppm)	Se (ppm)	Ag (ppm)	Pb (ppm)	Ti (ppm)	Cd (ppm)	B (ppm)	K (ppm)
Mean	4.994	5.005	4.894	4.966	4.857	4.987	5.140	5.079
S.D.	0.009	0.022	0.005	0.044	0.004	0.004	0.017	0.031
% R.S.D.	0.173	0.431	0.102	0.893	0.075	0.090	0.329	0.602

	Mn (ppm)	Sb (ppm)	V (ppm)	Be (ppm)	Tl (ppm)
Mean	4.982	4.678	5.004	5.153	4.811
S.D.	0.005	0.021	0.004	0.002	0.013
% R.S.D.	0.104	0.452	0.084	0.045	0.280

07/31/96 15:42 ☎509 372 2929 WESTINGHOUSE →→→ MO-924 200W 024

Identity 1: CCB Identity 2: Quality Control 1:45 PM July 31, 1996
Task name : OPTIMA
Sample Weight : 1.0000 Solution Volume : 1.00
On-Peak Integrations : 3 Off-Peak Integrations : 1

	Zr (ppm)	Sr (ppm)	Bi (ppm)	Si (ppm)	Al (ppm)	Co (ppm)	Cu (ppm)	Li (ppm)
Mean	0.001	0.000	-0.001	0.013	0.006	0.001	0.000	0.000
S.D.	0.001	0.000	0.007	0.001	0.009	0.002	0.000	0.000
% R.S.D.	53.480	0.000	1390.883	10.945	158.438	174.187	137.730	149.998

	Zn (ppm)	Ni (ppm)	La (ppm)	Fe (ppm)	Ca (ppm)	Cr (ppm)	Nd (ppm)	U (ppm)
Mean	-0.001	0.005	0.001	-0.002	0.002	-0.004	0.011	0.034
S.D.	0.000	0.002	0.000	0.002	0.000	0.000	0.005	0.025
% R.S.D.	42.924	36.269	0.801	126.959	2.279	0.756	50.456	73.687

	Ce (ppm)	Sm (ppm)	Ba (ppm)	P (ppm)	S (ppm)	Mg (ppm)	As (ppm)	Na (ppm)
Mean	-0.006	0.016	0.000	-0.009	0.002	0.000	0.001	-0.006
S.D.	0.004	0.006	0.000	0.010	0.002	0.000	0.003	0.001
% R.S.D.	73.474	36.339	63.812	109.817	109.825	43.301	195.890	19.249

	Mo (ppm)	Se (ppm)	Ag (ppm)	Pb (ppm)	Ti (ppm)	Cd (ppm)	B (ppm)	K (ppm)
Mean	0.002	0.021	0.005	-0.021	0.001	-0.006	0.002	-0.155
S.D.	0.001	0.006	0.000	0.008	0.000	0.001	0.001	0.006
% R.S.D.	45.397	27.074	8.723	37.192	28.363	12.552	71.384	4.134

	Mn (ppm)	Sb (ppm)	V (ppm)	Be (ppm)	Tl (ppm)
Mean	0.001	-0.065	-0.002	0.000	-0.031
S.D.	0.000	0.009	0.000	0.000	0.028
% R.S.D.	46.071	13.139	21.830	43.013	92.324

07/31/96 15:43 ☎509 372 2929 WESTINGHOUSE →→→ MO-924 200W ☑025

Identity 1: s96t002422_L Identity 2: .025ml-30ml-2ml-8ml 1:48 PM July 31, 1996
Task name : OPTIMA
Sample Weight : 1.0000 Solution Volume : 6005.00
On-Peak Integrations : 3 Off-Peak Integrations : 1

	Zr (ppm)	Sr (ppm)	Bi (ppm)	Si (ppm)	Al (ppm)	Co (ppm)	Cu (ppm)	Li (ppm)
Mean	1.339	1.798	-184.765	251.996	30714.949	-26.664	11.623	13.938
S.D.	9.107	0.802	37.097	11.955	105.669	0.044	3.836	2.071
% R.S.D.	680.180	44.607	20.078	4.744	0.344	0.164	33.000	14.861

	Zn (ppm)	Ni (ppm)	La (ppm)	Fe (ppm)	Ca (ppm)	Cr (ppm)	Nd (ppm)	U (ppm)
Mean	239.210	41.140	-0.065	16.292	22.825	111.293	99.767	-140.865
S.D.	2.706	14.169	8.559	9.865	2.114	8.483	45.912	340.715
% R.S.D.	1.131	34.440	13182.835	60.554	9.264	7.622	46.019	241.873

	Ce (ppm)	Sm (ppm)	Ba (ppm)	P (ppm)	S (ppm)	Mg (ppm)	As (ppm)	Na (ppm)
Mean	166.601	-132.529	3.647	162.764	397.454	2.401	22.539	262903.511
S.D.	92.292	71.585	1.805	57.897	41.909	0.594	10.960	1803.001
% R.S.D.	55.397	54.015	49.507	35.571	10.544	24.744	48.626	0.686

	Mo (ppm)	Se (ppm)	Ag (ppm)	Pb (ppm)	Ti (ppm)	Cd (ppm)	B (ppm)	K (ppm)
Mean	67.592	35.476	23.506	50.708	-0.053	-35.226	40.379	35525.508
S.D.	6.499	86.670	4.875	91.190	2.880	0.932	3.699	240.955
% R.S.D.	9.615	244.305	20.739	179.834	5477.480	2.647	9.161	0.678

	Mn (ppm)	Sb (ppm)	V (ppm)	Be (ppm)	Tl (ppm)
Mean	3.679	77.146	-12.791	1.404	-61.053
S.D.	1.032	78.290	9.313	0.829	180.343
% R.S.D.	28.037	101.483	72.810	59.026	295.387

07/31/96 15:44 ☎509 372 2929 WESTINGHOUSE →→→ MO-924 200W 026

Identity 1: s96t002422 Identity 2: .025ml-30ml 1:53 PM July 31, 1996
Task name : OPTIMA
Sample Weight : 1.0000 Solution Volume : 1201.00
On-Peak Integrations : 3 Off-Peak Integrations : 1

	Zr (ppm)	Sr (ppm)	Bi (ppm)	Si (ppm)	Al (ppm)	Co (ppm)	Cu (ppm)	Li (ppm)
Mean	13.006	0.231	-24.122	217.592	30930.832	2.679	0.679	9.109
S.D.	0.690	0.044	14.541	1.874	30.009	4.002	0.400	0.095
% R.S.D.	5.308	19.245	60.281	0.861	0.097	149.411	58.920	1.044

	Zn (ppm)	Ni (ppm)	La (ppm)	Fe (ppm)	Ca (ppm)	Cr (ppm)	Nd (ppm)	U (ppm)
Mean	9.430	20.279	-1.182	9.871	-7.421	106.946	-9.951	-72.970
S.D.	0.740	1.384	0.993	1.725	0.084	2.538	4.627	7.419
% R.S.D.	7.846	6.824	84.049	17.470	1.132	2.373	46.500	10.167

	Ce (ppm)	Sm (ppm)	Ba (ppm)	P (ppm)	S (ppm)	Mg (ppm)	As (ppm)	Na (ppm)
Mean	10.114	9.238	0.538	196.059	399.367	-0.274	-2.375	247427.270
S.D.	0.759	3.437	0.036	14.709	7.127	0.000	7.501	2069.352
% R.S.D.	7.504	37.202	6.667	7.502	1.785	0.000	315.861	0.836

	Mo (ppm)	Se (ppm)	Ag (ppm)	Pb (ppm)	Ti (ppm)	Cd (ppm)	B (ppm)	K (ppm)
Mean	62.305	-55.750	1.832	28.008	-0.943	-2.673	56.765	35465.225
S.D.	2.296	13.200	0.425	7.552	0.345	0.640	1.023	379.173
% R.S.D.	3.686	23.678	23.201	26.963	36.611	23.954	1.803	1.069

	Mn (ppm)	Sb (ppm)	V (ppm)	Be (ppm)	Tl (ppm)
Mean	2.960	-18.874	-0.761	3.219	5.426
S.D.	0.213	13.069	0.847	0.164	9.651
% R.S.D.	7.205	69.243	111.252	5.085	177.862

07/31/96 15:44 ☎509 372 2929 WESTINGHOUSE →→ MO-924 200W ☑027

Identity 1: s96t002422_d Identity 2: .025ml-30ml 1:56 PM July 31, 1996
Task name : OPTIMA
Sample Weight : 1.0000 Solution Volume : 1201.00
On-Peak Integrations : 3 Off-Peak Integrations : 1

	Zr (ppm)	Sr (ppm)	Bi (ppm)	Si (ppm)	Al (ppm)	Co (ppm)	Cu (ppm)	Li (ppm)
Mean	11.181	0.180	-17.601	213.961	30004.754	2.682	1.070	9.083
S.D.	1.368	0.133	15.793	2.168	80.617	0.009	0.713	0.190
% R.S.D.	12.239	74.231	89.729	1.013	0.269	0.322	66.671	2.092

	Zn (ppm)	Ni (ppm)	La (ppm)	Fe (ppm)	Ca (ppm)	Cr (ppm)	Nd (ppm)	U (ppm)
Mean	9.825	20.408	2.257	12.376	-10.893	107.898	17.648	-99.029
S.D.	0.767	2.652	2.023	1.661	0.097	2.579	9.793	67.297
% R.S.D.	7.805	12.992	89.650	13.424	0.890	2.391	55.492	67.957

	Ce (ppm)	Sm (ppm)	Ba (ppm)	P (ppm)	S (ppm)	Mg (ppm)	As (ppm)	Na (ppm)
Mean	15.410	10.171	0.454	192.418	401.225	-0.206	-7.568	237959.862
S.D.	15.287	16.473	0.333	26.270	6.062	0.119	5.585	155.180
% R.S.D.	99.202	161.957	73.355	13.653	1.511	57.735	73.792	0.065

	Mo (ppm)	Se (ppm)	Ag (ppm)	Pb (ppm)	Ti (ppm)	Cd (ppm)	B (ppm)	K (ppm)
Mean	60.022	16.931	1.420	6.707	-0.357	-5.022	55.846	33967.987
S.D.	1.408	9.895	0.930	6.643	0.493	0.739	1.403	30.453
% R.S.D.	2.345	58.444	65.515	99.051	138.094	14.716	2.512	0.090

	Mn (ppm)	Sb (ppm)	V (ppm)	Be (ppm)	Tl (ppm)
Mean	2.107	-48.684	-2.614	3.310	-37.398
S.D.	0.008	11.702	1.876	0.293	29.228
% R.S.D.	0.376	24.036	71.779	8.860	78.153

07/31/96 15:45 ☎509 372 2929 WESTINGHOUSE →→→ MO-924 200W 028

Identity 1: s96t002422_A Identity 2: .025ml-2ml-28ml 1:59 PM July 31, 1996
Task name : OPTIMA
Sample Weight : 1.0000 Solution Volume : 1201.00
On-Peak Integrations : 3 Off-Peak Integrations : 1

	Zr (ppm)	Sr (ppm)	Bi (ppm)	Si (ppm)	Al (ppm)	Co (ppm)	Cu (ppm)	Li (ppm)
Mean	418.252	406.500	381.764	643.453	32530.703	402.809	409.958	403.862
S.D.	1.425	0.875	9.946	4.574	81.013	0.010	0.896	2.021
% R.S.D.	0.341	0.215	2.605	0.711	0.249	0.002	0.219	0.500

	Zn (ppm)	Ni (ppm)	La (ppm)	Fe (ppm)	Ca (ppm)	Cr (ppm)	Nd (ppm)	U (ppm)
Mean	415.869	420.646	405.787	416.119	390.821	517.085	450.677	815.971
S.D.	0.329	7.698	4.574	0.967	0.480	3.031	19.807	75.488
% R.S.D.	0.079	1.830	1.127	0.232	0.123	0.586	4.395	9.251

	Ce (ppm)	Sm (ppm)	Ba (ppm)	P (ppm)	S (ppm)	Mg (ppm)	As (ppm)	Na (ppm)
Mean	407.947	444.357	406.355	620.354	824.823	375.110	399.481	257802.017
S.D.	19.568	15.019	0.869	32.564	3.882	0.119	4.775	1205.798
% R.S.D.	4.797	3.380	0.214	5.249	0.471	0.032	1.195	0.468

	Mo (ppm)	Se (ppm)	Ag (ppm)	Pb (ppm)	Ti (ppm)	Cd (ppm)	B (ppm)	K (ppm)
Mean	461.417	433.100	305.505	415.534	396.131	393.933	469.066	37016.294
S.D.	2.007	5.739	2.099	14.861	0.699	3.375	2.308	151.079
% R.S.D.	0.435	1.325	0.687	3.576	0.176	0.857	0.492	0.408

	Mn (ppm)	Sb (ppm)	V (ppm)	Be (ppm)	Tl (ppm)
Mean	408.256	353.638	402.761	414.818	309.242
S.D.	1.661	24.326	1.426	0.443	42.045
% R.S.D.	0.407	6.879	0.354	0.107	13.596

07/31/96 15:45 ☎509 372 2929 WESTINGHOUSE →→→ MO-924 200W 029

Identity 1: s96t002430_L Identity 2: .025ml-30ml-2ml-8ml 2:02 PM July 31, 1996
Task name : OPTIMA
Sample Weight : 1.0000 Solution Volume : 6005.00
On-Peak Integrations : 3 Off-Peak Integrations : 1

	Zr (ppm)	Sr (ppm)	Bi (ppm)	Si (ppm)	Al (ppm)	Co (ppm)	Cu (ppm)	Li (ppm)
Mean	14.822	0.385	9.492	215.395	29978.365	-13.340	2.814	10.921
S.D.	5.859	0.222	38.047	10.932	67.077	11.566	1.590	0.000
% R.S.D.	39.528	57.735	400.825	5.075	0.224	86.703	56.498	0.001

	Zn (ppm)	Ni (ppm)	La (ppm)	Fe (ppm)	Ca (ppm)	Cr (ppm)	Nd (ppm)	U (ppm)
Mean	5.466	9.769	14.376	-1.656	-54.607	102.352	-35.238	-7.130
S.D.	0.293	6.159	13.158	9.262	0.642	3.656	40.640	184.081
% R.S.D.	5.366	63.049	91.527	559.344	1.175	3.572	115.332	2581.684

	Ce (ppm)	Sm (ppm)	Ba (ppm)	P (ppm)	S (ppm)	Mg (ppm)	As (ppm)	Na (ppm)
Mean	64.496	140.546	1.315	119.967	429.925	-1.372	4.651	251715.766
S.D.	40.468	25.861	0.988	30.577	7.624	0.000	17.720	1868.072
% R.S.D.	62.745	18.400	75.103	25.488	1.773	0.000	380.999	0.742

	Mo (ppm)	Se (ppm)	Ag (ppm)	Pb (ppm)	Ti (ppm)	Cd (ppm)	B (ppm)	K (ppm)
Mean	53.774	-34.093	57.616	-106.809	1.370	-34.151	40.496	34830.353
S.D.	4.536	108.785	0.613	45.763	0.861	4.240	1.079	321.280
% R.S.D.	8.435	319.081	1.065	42.846	62.860	12.416	2.663	0.922

	Mn (ppm)	Sb (ppm)	V (ppm)	Be (ppm)	Tl (ppm)
Mean	1.887	-256.790	-14.251	2.847	46.262
S.D.	2.137	104.908	3.088	1.670	61.399
% R.S.D.	113.215	40.854	21.665	58.661	132.721

07/31/96 15:46 ☎509 372 2929 WESTINGHOUSE →→→ MO-924 200W ☑030

Identity 1: s96t002430 Identity 2: .025ml-30ml 2:06 PM July 31, 1996
Task name : OPTIMA
Sample Weight : 1.0000 Solution Volume : 1201.00
On-Peak Integrations : 3 Off-Peak Integrations : 1

	Zr (ppm)	Sr (ppm)	Bi (ppm)	Si (ppm)	Al (ppm)	Co (ppm)	Cu (ppm)	Li (ppm)
Mean	10.320	-0.180	-36.073	194.309	30350.617	-5.317	-0.399	9.796
S.D.	1.917	0.160	2.978	5.681	52.336	4.011	0.742	0.218
% R.S.D.	18.571	89.214	8.254	2.924	0.172	75.428	185.679	2.224

	Zn (ppm)	Ni (ppm)	La (ppm)	Fe (ppm)	Ca (ppm)	Cr (ppm)	Nd (ppm)	U (ppm)
Mean	8.456	17.562	-2.941	5.212	-8.121	104.531	-5.674	-144.961
S.D.	0.542	1.974	1.976	2.542	0.097	0.876	15.521	73.049
% R.S.D.	6.406	11.240	67.183	48.765	1.194	0.838	273.530	50.392

	Ce (ppm)	Sm (ppm)	Ba (ppm)	P (ppm)	S (ppm)	Mg (ppm)	As (ppm)	Na (ppm)
Mean	-8.243	5.466	-0.036	204.652	385.581	-0.137	6.773	244145.929
S.D.	19.773	12.593	0.285	6.091	0.477	0.119	1.495	1999.260
% R.S.D.	239.860	230.375	793.725	2.976	0.124	86.602	22.080	0.819

	Mo (ppm)	Se (ppm)	Ag (ppm)	Pb (ppm)	Ti (ppm)	Cd (ppm)	B (ppm)	K (ppm)
Mean	57.438	9.418	3.937	11.731	-1.290	-4.594	49.630	34727.298
S.D.	0.832	7.681	0.667	11.266	0.746	0.553	1.635	436.944
% R.S.D.	1.449	81.560	16.931	96.040	57.802	12.035	3.295	1.258

	Mn (ppm)	Sb (ppm)	V (ppm)	Be (ppm)	Tl (ppm)
Mean	2.969	-8.827	-3.579	3.304	-47.538
S.D.	0.221	18.085	0.554	0.484	13.154
% R.S.D.	7.446	204.883	15.465	14.661	27.671

07/31/96 15:46 ☎509 372 2929 WESTINGHOUSE →→→ MO-924 200W 031

Identity 1: s96t002430_D Identity 2: .025ml-30ml 2:09 PM July 31, 1996
Task name : OPTIMA
Sample Weight : 1.0000 Solution Volume : 1201.00
On-Peak Integrations : 3 Off-Peak Integrations : 1

	Zr (ppm)	Sr (ppm)	Bi (ppm)	Si (ppm)	Al (ppm)	Co (ppm)	Cu (ppm)	Li (ppm)
Mean	15.096	0.077	-12.825	234.624	34013.116	-2.659	1.591	10.914
S.D.	1.189	0.160	6.800	4.893	156.916	2.309	0.514	0.238
% R.S.D.	7.876	208.167	53.021	2.086	0.461	86.826	32.311	2.179

	Zn (ppm)	Ni (ppm)	La (ppm)	Fe (ppm)	Ca (ppm)	Cr (ppm)	Nd (ppm)	U (ppm)
Mean	10.623	25.677	-0.027	3.996	-10.109	121.969	14.273	-59.981
S.D.	0.306	2.038	0.020	3.396	0.336	2.002	6.437	41.206
% R.S.D.	2.882	7.935	73.993	84.988	3.324	1.642	45.100	68.699

	Ce (ppm)	Sm (ppm)	Ba (ppm)	P (ppm)	S (ppm)	Mg (ppm)	As (ppm)	Na (ppm)
Mean	6.131	7.619	0.311	229.801	442.174	0.069	9.093	266569.135
S.D.	16.754	8.369	0.216	2.133	9.771	0.119	4.339	3642.790
% R.S.D.	273.278	109.842	69.551	0.928	2.210	173.205	47.723	1.367

	Mo (ppm)	Se (ppm)	Ag (ppm)	Pb (ppm)	Ti (ppm)	Cd (ppm)	B (ppm)	K (ppm)
Mean	65.850	25.702	3.197	50.267	0.252	-5.872	60.485	38566.663
S.D.	1.626	5.436	0.714	4.097	0.587	0.847	1.320	572.388
% R.S.D.	2.468	21.151	22.321	8.150	232.734	14.421	2.183	1.484

	Mn (ppm)	Sb (ppm)	V (ppm)	Be (ppm)	Tl (ppm)
Mean	2.961	5.529	-0.370	3.600	14.020
S.D.	0.558	16.786	0.929	0.280	23.680
% R.S.D.	18.841	303.614	251.119	7.783	168.901

07/31/96 15:47 ☎509 372 2929 WESTINGHOUSE →→→ MO-924 200W 032

Identity 1: s96t002430_A Identity 2: .025ml-2ml-8ml 2:13 PM July 31, 1996
Task name : OPTIMA
Sample Weight : 1.0000 Solution Volume : 1201.00
On-Peak Integrations : 3 Off-Peak Integrations : 1

	Zr (ppm)	Sr (ppm)	Bi (ppm)	Si (ppm)	Al (ppm)	Co (ppm)	Cu (ppm)	Li (ppm)
Mean	413.222	399.771	379.189	640.087	34852.124	400.156	403.859	396.478
S.D.	2.135	0.380	13.195	1.839	110.405	4.622	0.685	2.543
% R.S.D.	0.517	0.095	3.480	0.287	0.317	1.155	0.170	0.641

	Zn (ppm)	Ni (ppm)	La (ppm)	Fe (ppm)	Ca (ppm)	Cr (ppm)	Nd (ppm)	U (ppm)
Mean	416.703	421.815	406.309	414.290	384.805	525.420	442.672	700.066
S.D.	1.150	4.421	3.992	1.962	0.590	1.309	8.781	23.119
% R.S.D.	0.276	1.048	0.982	0.474	0.153	0.249	1.984	3.302

	Ce (ppm)	Sm (ppm)	Ba (ppm)	P (ppm)	S (ppm)	Mg (ppm)	As (ppm)	Na (ppm)
Mean	415.322	414.263	399.719	591.974	842.933	372.766	411.017	268376.267
S.D.	6.345	5.321	0.055	3.083	13.870	0.902	6.822	1887.101
% R.S.D.	1.528	1.285	0.014	0.521	1.645	0.242	1.660	0.703

	Mo (ppm)	Se (ppm)	Ag (ppm)	Pb (ppm)	Ti (ppm)	Cd (ppm)	B (ppm)	K (ppm)
Mean	465.562	368.547	317.559	421.073	390.824	392.756	468.009	39100.770
S.D.	0.826	11.353	8.569	8.390	0.527	0.667	2.492	318.246
% R.S.D.	0.177	3.080	2.699	1.992	0.135	0.170	0.532	0.814

	Mn (ppm)	Sb (ppm)	V (ppm)	Be (ppm)	Tl (ppm)
Mean	407.170	388.855	402.093	411.001	371.479
S.D.	2.156	4.063	1.415	0.720	17.997
% R.S.D.	0.530	1.045	0.352	0.175	4.845

07/31/96 15:48 ☎509 372 2929 WESTINGHOUSE →→→ MO-924 200W 033

Identity 1: CCV Identity 2: Quality Control 3:07 PM July 31, 1996
Task name : OPTIMA
Sample Weight : 1.0000 Solution Volume : 1.00
On-Peak Integrations : 3 Off-Peak Integrations : 1

	Zr (ppm)	Sr (ppm)	Bi (ppm)	Si (ppm)	Al (ppm)	Co (ppm)	Cu (ppm)	Li (ppm)
Mean	4.897	4.957	4.872	4.827	4.829	4.881	5.020	5.108
S.D.	0.006	0.003	0.026	0.004	0.002	0.020	0.012	0.049
% R.S.D.	0.114	0.052	0.529	0.076	0.039	0.417	0.244	0.952

	Zn (ppm)	Ni (ppm)	La (ppm)	Fe (ppm)	Ca (ppm)	Cr (ppm)	Nd (ppm)	U (ppm)
Mean	4.910	4.858	5.013	5.015	4.920	4.856	5.386	9.439
S.D.	0.015	0.016	0.013	0.014	0.001	0.027	0.015	0.013
% R.S.D.	0.314	0.338	0.260	0.283	0.030	0.552	0.274	0.133

	Ce (ppm)	Sm (ppm)	Ba (ppm)	P (ppm)	S (ppm)	Mg (ppm)	As (ppm)	Na (ppm)
Mean	5.069	5.050	4.986	4.839	4.803	4.644	4.956	5.037
S.D.	0.004	0.003	0.005	0.120	0.041	0.013	0.014	0.043
% R.S.D.	0.076	0.052	0.103	2.483	0.848	0.273	0.283	0.856

	Mo (ppm)	Se (ppm)	Ag (ppm)	Pb (ppm)	Ti (ppm)	Cd (ppm)	B (ppm)	K (ppm)
Mean	4.866	4.991	4.781	4.883	4.798	4.868	5.085	5.000
S.D.	0.013	0.026	0.008	0.031	0.006	0.008	0.012	0.045
% R.S.D.	0.277	0.527	0.175	0.627	0.124	0.160	0.233	0.907

	Mn (ppm)	Sb (ppm)	V (ppm)	Be (ppm)	Tl (ppm)
Mean	4.866	4.614	4.905	5.095	4.773
S.D.	0.016	0.030	0.010	0.004	0.007
% R.S.D.	0.324	0.655	0.212	0.077	0.156

07/31/96 15:48 ☎509 372 2929 WESTINGHOUSE →→→ MO-924 200W 034

Identity 1: CCB Identity 2: Quality Control 3:10 PM July 31, 1996
Task name : OPTIMA
Sample Weight : 1.0000 Solution Volume : 1.00
On-Peak Integrations : 3 Off-Peak Integrations : 1

	Zr (ppm)	Sr (ppm)	Bi (ppm)	Si (ppm)	Al (ppm)	Co (ppm)	Cu (ppm)	Li (ppm)
Mean	-0.001	0.001	-0.003	0.004	0.000	-0.003	0.001	0.001
S.D.	0.000	0.000	0.005	0.001	0.003	0.002	0.000	0.000
% R.S.D.	27.543	35.539	143.792	17.257	865.504	57.821	13.642	41.614

	Zn (ppm)	Ni (ppm)	La (ppm)	Fe (ppm)	Ca (ppm)	Cr (ppm)	Nd (ppm)	U (ppm)
Mean	-0.000	0.003	0.001	-0.005	0.006	0.001	0.010	-0.053
S.D.	0.000	0.001	0.002	0.001	0.002	0.000	0.003	0.008
% R.S.D.	142.482	35.362	176.207	19.600	27.354	39.651	31.001	15.913

	Ce (ppm)	Sm (ppm)	Ba (ppm)	P (ppm)	S (ppm)	Mg (ppm)	As (ppm)	Na (ppm)
Mean	0.024	0.004	0.001	0.003	0.009	0.001	-0.005	-0.021
S.D.	0.001	0.002	0.000	0.005	0.004	0.000	0.001	0.001
% R.S.D.	2.708	64.814	32.192	154.033	42.018	48.039	13.030	5.774

	Mo (ppm)	Se (ppm)	Ag (ppm)	Pb (ppm)	Ti (ppm)	Cd (ppm)	B (ppm)	K (ppm)
Mean	0.003	0.025	0.003	-0.023	0.001	-0.006	0.003	-0.227
S.D.	0.001	0.007	0.001	0.002	0.001	0.001	0.002	0.009
% R.S.D.	26.647	27.741	16.080	10.054	62.556	13.580	62.494	3.763

	Mn (ppm)	Sb (ppm)	V (ppm)	Be (ppm)	Tl (ppm)
Mean	0.001	-0.006	-0.001	0.001	-0.030
S.D.	0.000	0.034	0.001	0.000	0.009
% R.S.D.	65.348	588.461	141.774	62.891	29.127

07/31/96 15:49 ☎509 372 2929 WESTINGHOUSE →→→ MO-924 200W 035

Identity 1: s96t002584_L Identity 2: .025ml-~~10ml~~ 30ml-2ml-8ml 3:16 PM July 31, 1996
Task name : OPTIMA JW 7-31-96
Sample Weight : 1.0000 Solution Volume : 6005.00
On-Peak Integrations : 3 Off-Peak Integrations : 1

	Zr (ppm)	Sr (ppm)	Bi (ppm)	Si (ppm)	Al (ppm)	Co (ppm)	Cu (ppm)	Li (ppm)
Mean	7.900	0.771	-85.277	190.333	29048.513	-13.310	5.486	22.308
S.D.	1.960	0.445	33.564	14.555	41.371	11.574	2.467	0.238
% R.S.D.	24.815	57.735	39.358	7.647	0.142	86.958	44.966	1.065

	Zn (ppm)	Ni (ppm)	La (ppm)	Fe (ppm)	Ca (ppm)	Cr (ppm)	Nd (ppm)	U (ppm)
Mean	190.007	20.266	22.892	15.230	11.762	91.781	66.450	-236.811
S.D.	3.478	5.016	17.888	8.172	12.882	12.453	31.385	164.049
% R.S.D.	1.830	24.751	78.141	53.661	109.518	13.568	47.231	69.274

	Ce (ppm)	Sm (ppm)	Ba (ppm)	P (ppm)	S (ppm)	Mg (ppm)	As (ppm)	Na (ppm)
Mean	126.406	25.826	2.272	34.739	400.025	0.686	-12.025	246117.635
S.D.	46.976	29.591	0.548	41.522	30.367	0.000	18.658	965.997
% R.S.D.	37.163	114.579	24.119	119.525	7.591	0.000	155.153	0.392

	Mo (ppm)	Se (ppm)	Ag (ppm)	Pb (ppm)	Ti (ppm)	Cd (ppm)	B (ppm)	K (ppm)
Mean	53.172	-89.184	8.153	-74.339	-0.775	-36.829	45.266	35418.545
S.D.	3.122	95.764	3.308	17.288	1.017	0.930	2.724	93.753
% R.S.D.	5.871	107.377	40.576	23.256	131.230	2.526	6.018	0.265

	Mn (ppm)	Sb (ppm)	V (ppm)	Be (ppm)	Tl (ppm)
Mean	5.541	-403.416	-10.152	4.244	-86.334
S.D.	1.067	60.672	2.209	0.808	102.501
% R.S.D.	19.254	15.040	21.760	19.029	118.726

07/31/96 15:50 ☎509 372 2929 WESTINGHOUSE →→→ MO-924 200W 036

Identity 1: s96t002584 Identity 2: .025ml-30ml 3:20 PM July 31, 1996
Task name : OPTIMA
Sample Weight : 1.0000 Solution Volume : 1201.00
On-Peak Integrations : 3 Off-Peak Integrations : 1

	Zr (ppm)	Sr (ppm)	Bi (ppm)	Si (ppm)	Al (ppm)	Co (ppm)	Cu (ppm)	Li (ppm)
Mean	13.265	-0.000	18.070	184.539	29634.032	-3.994	0.467	19.180
S.D.	1.298	0.118	11.465	4.517	33.543	2.316	0.393	0.285
% R.S.D.	9.782	77651632701000.000	63.447	2.448	0.113	57.987	84.296	1.487

	Zn (ppm)	Ni (ppm)	La (ppm)	Fe (ppm)	Ca (ppm)	Cr (ppm)	Nd (ppm)	U (ppm)
Mean	8.198	20.785	1.124	10.089	-8.681	99.914	8.172	-61.294
S.D.	0.295	1.984	1.015	4.335	0.084	3.017	7.415	43.271
% R.S.D.	3.602	9.546	90.288	42.966	0.968	3.020	90.744	70.596

	Ce (ppm)	Sm (ppm)	Ba (ppm)	P (ppm)	S (ppm)	Mg (ppm)	As (ppm)	Na (ppm)
Mean	-2.324	20.632	0.167	205.810	387.303	-0.480	-7.052	237388.974
S.D.	11.254	11.656	0.204	18.322	8.207	0.206	3.951	2465.227
% R.S.D.	484.249	56.495	121.848	8.902	2.119	42.857	56.031	1.038

	Mo (ppm)	Se (ppm)	Ag (ppm)	Pb (ppm)	Tl (ppm)	Cd (ppm)	B (ppm)	K (ppm)
Mean	59.120	-53.146	-1.167	12.173	0.069	-5.767	50.739	34817.712
S.D.	2.357	27.046	1.055	12.115	0.613	0.185	1.292	448.228
% R.S.D.	3.986	50.889	90.420	99.528	892.769	3.202	2.547	1.287

	Mn (ppm)	Sb (ppm)	V (ppm)	Be (ppm)	Tl (ppm)
Mean	2.469	-26.345	-2.864	3.125	-58.622
S.D.	0.366	22.981	1.488	0.169	22.735
% R.S.D.	14.817	87.231	51.961	5.421	38.782

07/31/96 15:50 ☎509 372 2929 WESTINGHOUSE →→→ MO-924 200W ☑037

Identity 1: s96t002584_D Identity 2: .025ml-30ml 3:22 PM July 31, 1996
Task name : OPTIMA
Sample Weight : 1.0000 Solution Volume : 1201.00
On-Peak Integrations : 3 Off-Peak Integrations : 1

	Zr (ppm)	Sr (ppm)	Bi (ppm)	Si (ppm)	Al (ppm)	Co (ppm)	Cu (ppm)	Li (ppm)
Mean	12.729	0.026	-27.126	173.109	28416.154	-5.335	0.528	18.523
S.D.	1.624	0.154	5.543	3.373	10.998	0.005	0.471	0.082
% R.S.D.	12.757	600.000	20.434	1.948	0.039	0.100	89.220	0.444

	Zn (ppm)	Ni (ppm)	La (ppm)	Fe (ppm)	Ca (ppm)	Cr (ppm)	Nd (ppm)	U (ppm)
Mean	8.055	20.998	-0.001	9.101	-9.801	97.337	7.533	-5.745
S.D.	0.157	4.409	0.019	1.803	0.049	0.543	6.030	41.669
% R.S.D.	1.944	20.995	3323.555	19.814	0.495	0.558	80.054	725.249

	Ce (ppm)	Sm (ppm)	Ba (ppm)	P (ppm)	S (ppm)	Mg (ppm)	As (ppm)	Na (ppm)
Mean	15.117	41.367	0.155	211.056	387.001	-0.206	-10.063	229043.751
S.D.	10.159	8.661	0.170	5.105	2.088	0.119	2.488	1556.524
% R.S.D.	67.205	20.937	109.057	2.419	0.539	57.735	24.725	0.680

	Mo (ppm)	Se (ppm)	Ag (ppm)	Pb (ppm)	Ti (ppm)	Cd (ppm)	B (ppm)	K (ppm)
Mean	57.799	-13.773	0.886	-11.046	0.181	-5.125	45.730	33130.884
S.D.	1.159	20.236	1.238	2.676	0.498	0.924	2.735	350.052
% R.S.D.	2.005	146.923	139.761	24.225	274.955	18.024	5.982	1.057

	Mn (ppm)	Sb (ppm)	V (ppm)	Be (ppm)	Tl (ppm)
Mean	2.095	40.849	-1.225	2.943	-10.703
S.D.	0.005	46.449	0.814	0.163	14.162
% R.S.D.	0.232	113.708	66.431	5.548	132.318

07/31/96 15:51 ☎509 372 2929 WESTINGHOUSE →→→ MO-924 200W ☑038

Identity 1: s96t002584_A Identity 2: .025ml-2ml-28ml 3:26 PM July 31, 1996
Task name : OPTIMA
Sample Weight : 1.0000 Solution Volume : 1201.00
On-Peak Integrations : 3 Off-Peak Integrations : 1

	Zr (ppm)	Sr (ppm)	Bi (ppm)	Si (ppm)	Al (ppm)	Co (ppm)	Cu (ppm)	Li (ppm)
Mean	411.655	404.548	374.741	609.588	33753.135	392.152	409.380	418.894
S.D.	1.037	0.513	7.678	1.523	38.190	2.308	1.493	3.071
% R.S.D.	0.252	0.127	2.049	0.250	0.113	0.589	0.365	0.733

	Zn (ppm)	Ni (ppm)	La (ppm)	Fe (ppm)	Ca (ppm)	Cr (ppm)	Nd (ppm)	U (ppm)
Mean	406.676	413.549	406.879	411.037	389.528	508.305	431.735	690.512
S.D.	0.060	0.602	6.077	4.748	1.169	2.555	6.915	43.937
% R.S.D.	0.015	0.146	1.493	1.155	0.300	0.503	1.602	6.363

	Ce (ppm)	Sm (ppm)	Ba (ppm)	P (ppm)	S (ppm)	Mg (ppm)	As (ppm)	Na (ppm)
Mean	415.306	416.052	405.554	627.360	843.586	367.663	401.547	270455.336
S.D.	12.470	6.509	0.431	29.537	9.595	0.478	2.718	1995.480
% R.S.D.	3.003	1.564	0.106	4.708	1.137	0.130	0.677	0.738

	Mo (ppm)	Se (ppm)	Ag (ppm)	Pb (ppm)	Ti (ppm)	Cd (ppm)	B (ppm)	K (ppm)
Mean	461.356	407.004	287.011	425.397	391.553	384.859	457.154	39676.318
S.D.	0.453	7.621	1.549	26.888	0.289	1.849	3.238	329.198
% R.S.D.	0.098	1.873	0.540	6.321	0.074	0.480	0.708	0.830

	Mn (ppm)	Sb (ppm)	V (ppm)	Be (ppm)	Tl (ppm)
Mean	402.749	390.631	398.028	409.764	337.973
S.D.	1.299	20.011	0.825	0.290	13.158
% R.S.D.	0.322	5.123	0.207	0.071	3.893

07/31/96 15:52 ☎509 372 2929 WESTINGHOUSE →→→ MO-924 200W ☑039

Identity 1: ICSA Identity 2: Quality Control 3:29 PM July 31, 1996
Task name : OPTIMA
Sample Weight : 1.0000 Solution Volume : 1.00
On-Peak Integrations : 3 Off-Peak Integrations : 1

	Zr (ppm)	Sr (ppm)	Bi (ppm)	Si (ppm)	Al (ppm)	Co (ppm)	Cu (ppm)	Li (ppm)
Mean	-0.000	0.002	-0.039	0.020	195.369	-0.002	0.002	0.001
S.D.	0.001	0.000	0.004	0.003	0.604	0.002	0.000	0.000
% R.S.D.	852.040	4.537	9.157	13.629	0.309	98.087	16.665	6.762

	Zn (ppm)	Ni (ppm)	La (ppm)	Fe (ppm)	Ca (ppm)	Cr (ppm)	Nd (ppm)	U (ppm)
Mean	-0.005	0.004	0.001	94.702	101.045	-0.003	0.002	-0.061
S.D.	0.000	0.002	0.001	0.081	0.135	0.002	0.013	0.022
% R.S.D.	7.716	61.676	87.004	0.086	0.134	69.447	549.208	35.500

	Ce (ppm)	Sm (ppm)	Ba (ppm)	P (ppm)	S (ppm)	Mg (ppm)	As (ppm)	Na (ppm)
Mean	0.010	0.032	0.004	0.023	-0.008	103.640	0.021	194.498
S.D.	0.004	0.006	0.000	0.021	0.014	0.406	0.007	1.149
% R.S.D.	38.324	18.586	2.040	89.421	191.196	0.392	32.979	0.591

	Mo (ppm)	Se (ppm)	Ag (ppm)	Pb (ppm)	Ti (ppm)	Cd (ppm)	B (ppm)	K (ppm)
Mean	-0.002	0.011	0.016	-0.036	0.000	-0.007	0.009	-0.222
S.D.	0.001	0.013	0.001	0.011	0.000	0.001	0.001	0.011
% R.S.D.	44.605	117.594	3.638	31.046	12.685	7.498	12.228	5.175

	Mn (ppm)	Sb (ppm)	V (ppm)	Be (ppm)	Tl (ppm)
Mean	0.009	-0.054	-0.001	0.002	-0.004
S.D.	0.001	0.017	0.001	0.000	0.005
% R.S.D.	6.842	30.847	35.439	5.709	125.110

07/31/96 15:52 ☎509 372 2929 WESTINGHOUSE →→→ MO-924 200W 040

Identity 1: ICSAB Identity 2: Quality Control 3:31 PM July 31, 1996
Task name : OPTIMA
Sample Weight : 1.0000 Solution Volume : 1.00
On-Peak Integrations : 3 Off-Peak Integrations : 1

	Zr (ppm)	Sr (ppm)	Bi (ppm)	Si (ppm)	Al (ppm)	Co (ppm)	Cu (ppm)	Li (ppm)
Mean	-0.004	0.002	-0.040	0.017	193.675	0.472	0.495	0.946
S.D.	0.001	0.000	0.004	0.003	0.184	0.005	0.001	0.004
% R.S.D.	20.443	2.830	9.130	16.126	0.095	1.076	0.161	0.474

	Zn (ppm)	Ni (ppm)	La (ppm)	Fe (ppm)	Ca (ppm)	Cr (ppm)	Nd (ppm)	U (ppm)
Mean	0.955	0.950	0.007	94.317	100.561	0.484	0.002	-0.026
S.D.	0.002	0.010	0.001	0.114	0.053	0.004	0.003	0.029
% R.S.D.	0.202	1.035	12.444	0.121	0.052	0.825	180.157	112.692

	Ce (ppm)	Sm (ppm)	Ba (ppm)	P (ppm)	S (ppm)	Mg (ppm)	As (ppm)	Na (ppm)
Mean	0.033	0.010	0.497	0.012	0.007	103.435	0.028	191.086
S.D.	0.012	0.009	0.001	0.007	0.010	0.392	0.007	0.795
% R.S.D.	36.855	89.324	0.125	62.945	130.772	0.379	24.857	0.416

	Mo (ppm)	Se (ppm)	Ag (ppm)	Pb (ppm)	Ti (ppm)	Cd (ppm)	B (ppm)	K (ppm)
Mean	-0.001	0.001	0.990	0.935	0.000	0.949	0.011	-0.116
S.D.	0.002	0.023	0.001	0.026	0.000	0.004	0.001	0.015
% R.S.D.	165.866	3739.860	0.072	2.741	29.408	0.420	4.918	12.718

	Mn (ppm)	Sb (ppm)	V (ppm)	Be (ppm)	Tl (ppm)
Mean	0.491	-0.019	0.485	0.489	0.012
S.D.	0.001	0.011	0.001	0.001	0.013
% R.S.D.	0.131	57.946	0.293	0.149	107.131

07/31/96 15:53 ☎509 372 2929 WESTINGHOUSE →→→ MO-924 200W ☑041

Identity 1: CCV Identity 2: Quality Control 3:34 PM July 31, 1996
Task name : OPTIMA
Sample Weight : 1.0000 Solution Volume : 1.00
On-Peak Integrations : 3 Off-Peak Integrations : 1

	Zr (ppm)	Sr (ppm)	Bi (ppm)	Si (ppm)	Al (ppm)	Co (ppm)	Cu (ppm)	Li (ppm)
Mean	4.909	4.923	4.915	4.856	4.858	4.917	4.981	5.018
S.D.	0.013	0.023	0.026	0.007	0.018	0.000	0.021	0.025
% R.S.D.	0.275	0.473	0.529	0.143	0.361	0.000	0.413	0.503

	Zn (ppm)	Ni (ppm)	La (ppm)	Fe (ppm)	Ca (ppm)	Cr (ppm)	Nd (ppm)	U (ppm)
Mean	5.003	4.929	5.038	5.109	4.925	4.926	5.369	9.348
S.D.	0.005	0.015	0.020	0.014	0.020	0.003	0.056	0.006
% R.S.D.	0.091	0.295	0.399	0.268	0.400	0.065	1.051	0.069

	Ce (ppm)	Sm (ppm)	Ba (ppm)	P (ppm)	S (ppm)	Mg (ppm)	As (ppm)	Na (ppm)
Mean	4.977	4.983	4.940	4.965	4.870	4.716	4.960	5.011
S.D.	0.020	0.020	0.027	0.113	0.070	0.007	0.026	0.015
% R.S.D.	0.397	0.406	0.540	2.274	1.440	0.138	0.530	0.298

	Mo (ppm)	Se (ppm)	Ag (ppm)	Pb (ppm)	Ti (ppm)	Cd (ppm)	B (ppm)	K (ppm)
Mean	4.890	4.942	4.855	4.932	4.802	4.923	5.119	5.104
S.D.	0.009	0.042	0.003	0.031	0.017	0.006	0.012	0.019
% R.S.D.	0.192	0.840	0.063	0.622	0.363	0.130	0.237	0.372

	Mn (ppm)	Sb (ppm)	V (ppm)	Be (ppm)	Tl (ppm)
Mean	4.944	4.599	4.956	5.115	4.794
S.D.	0.005	0.025	0.007	0.017	0.010
% R.S.D.	0.108	0.541	0.142	0.342	0.211

07/31/96 15:54 ☎509 372 2929 WESTINGHOUSE →→→ MO-924 200W 042

Identity 1: CCB Identity 2: Quality Control 3:37 PM July 31, 1996
Task name : OPTIMA
Sample Weight : 1.0000 Solution Volume : 1.00
On-Peak Integrations : 3 Off-Peak Integrations : 1

	Zr (ppm)	Sr (ppm)	Bi (ppm)	Si (ppm)	Al (ppm)	Co (ppm)	Cu (ppm)	Li (ppm)
Mean	-0.002	0.000	-0.007	0.002	0.002	0.002	0.000	0.001
S.D.	0.001	0.000	0.007	0.001	0.005	0.000	0.001	0.000
% R.S.D.	36.237	32.825	100.418	58.819	327.150	0.110	145.859	22.877

	Zn (ppm)	Ni (ppm)	La (ppm)	Fe (ppm)	Ca (ppm)	Cr (ppm)	Nd (ppm)	U (ppm)
Mean	-0.000	0.002	-0.001	-0.000	0.005	-0.000	0.007	-0.063
S.D.	0.001	0.004	0.003	0.004	0.001	0.001	0.006	0.019
% R.S.D.	214.213	164.082	588.730	846.455	21.453	256.112	91.774	30.410

	Ce (ppm)	Sm (ppm)	Ba (ppm)	P (ppm)	S (ppm)	Mg (ppm)	As (ppm)	Na (ppm)
Mean	0.010	0.001	0.001	-0.027	0.000	0.003	-0.006	0.007
S.D.	0.005	0.005	0.000	0.003	0.004	0.001	0.004	0.001
% R.S.D.	51.752	331.428	15.997	11.965	1232.352	34.423	71.299	17.320

	Mo (ppm)	Se (ppm)	Ag (ppm)	Pb (ppm)	Ti (ppm)	Cd (ppm)	B (ppm)	K (ppm)
Mean	0.002	0.006	0.006	-0.037	0.000	-0.007	0.006	-0.054
S.D.	0.001	0.006	0.001	0.007	0.001	0.000	0.002	0.010
% R.S.D.	70.004	110.108	12.817	17.683	151.278	2.324	29.967	18.096

	Mn (ppm)	Sb (ppm)	V (ppm)	Be (ppm)	Tl (ppm)
Mean	0.001	-0.012	-0.001	0.000	-0.042
S.D.	0.000	0.016	0.001	0.000	0.009
% R.S.D.	34.344	133.684	44.714	508.392	21.603

07/31/96 15:54 ☎509 372 2929 WESTINGHOUSE →→→ MO-924 200W 043

File No: 960731D.DAT

LABCORE Data Entry Template for Worklist# 10496

Analyst: JOHN WORRELL **Instrument:** ICP01 **Book#** 58B48A

Method: LA-505-151/~~161~~ Rev/Mod D-3
JW 7-31-96

Worklist Comment: ICP AW-101 (DIRECT)

S	Type	Sample#	R	A	Test	Matrix	Group#	Project
1	ICV				@ICP-QC	QC		
2	ICB				@ICP-QC	QC		
3	LLS				@ICP-QC	QC		
4	ICSA				@ICP-QC	QC		
5	ICSAB				@ICP-QC	QC		
6	SERDIL	S96T001715	0	D	@ICP-D01	LIQUID		
7	SAMPLE	S96T001715	0	D	@ICP-D01	LIQUID	96000103	AW-101 PUSH
		Analytes Requested:			AG-D-01 , AL-D-01 , AS-D-01 , B-D-01 , BA-D-01 , BE-D-01 , BI-D-01 , CA-D-01 , CD-D-01 , CE-D-01 , CO-D-01 , CR-D-01 , CU-D-01 , FE-D-01 , K-D-01 , LA-D-01 , LI-D-01 , MG-D-01 , MN-D-01 , MO-D-01 , NA-D-01 , ND-D-01 , NI-D-01 , P-D-01 , PB-D-01 , S-D-01 , SB-D-01 , SE-D-01 , SI-D-01 , SM-D-01 , SR-D-01 , TI-D-01 , TL-D-01 , U-D-01 , V-D-01 , ZN-D-01 , ZR-D-01			
8	DUP	S96T001715	0	D	@ICP-D01	LIQUID		
9	SPK	S96T001715	0	D	@ICP-D01	LIQUID		
10	CCV				@ICP-QC	QC		
11	CCB				@ICP-QC	QC		
12	SERDIL	S96T001747	0	D	@ICP-D01	LIQUID		
13	SAMPLE	S96T001747	0	D	@ICP-D01	LIQUID	96000103	AW-101 PUSH
		Analytes Requested:			AG-D-01 , AL-D-01 , AS-D-01 , B-D-01 , BA-D-01 , BE-D-01 , BI-D-01 , CA-D-01 , CD-D-01 , CE-D-01 , CO-D-01 , CR-D-01 , CU-D-01 , FE-D-01 , K-D-01 , LA-D-01 , LI-D-01 , MG-D-01 , MN-D-01 , MO-D-01 , NA-D-01 , ND-D-01 , NI-D-01 , P-D-01 , PB-D-01 , S-D-01 , SB-D-01 , SE-D-01 , SI-D-01 ,			

Data Entry Comments: Raw data is final result in ug/ml

S96T001715 Al = 4.42 e+4 ug/ml

S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

LABCORE Data Entry Template for Worklist# 10496

S	Type	Sample#	R	A	Test	Matrix	Group#	Project
					SM-D-01 , SR-D-01 , TI-D-01 , TL-D-01 , U-D-01 , V-D-01 , ZN-D-01 , ZR-D-01			
14	DUP	S96T001747	0	D	@ICP-D01	LIQUID		
15	SPK	S96T001747	0	D	@ICP-D01	LIQUID		
16	SERDIL	S96T001764	0	D	@ICP-D01	LIQUID		
17	SAMPLE	S96T001764	0	D	@ICP-D01	LIQUID	96000103	AW-101 PUSH
		Analytes Requested:			AG-D-01 , AL-D-01 , AS-D-01 , B-D-01 , BA-D-01 , BE-D-01 , BI-D-01 , CA-D-01 , CD-D-01 , CE-D-01 , CO-D-01 , CR-D-01 , CU-D-01 , FE-D-01 , K-D-01 , LA-D-01 , LI-D-01 , MG-D-01 , MN-D-01 , MO-D-01 , NA-D-01 , ND-D-01 , NI-D-01 , P-D-01 , PB-D-01 , S-D-01 , SB-D-01 , SE-D-01 , SI-D-01 , SM-D-01 , SR-D-01 , TI-D-01 , TL-D-01 , U-D-01 , V-D-01 , ZN-D-01 , ZR-D-01			
18	DUP	S96T001764	0	D	@ICP-D01	LIQUID		
19	SPK	S96T001764	0	D	@ICP-D01	LIQUID		
20	CCV				@ICP-QC	QC		
21	CCB				@ICP-QC	QC		
22	SERDIL	S96T002146	0	D	@ICP-D01	LIQUID		
23	SAMPLE	S96T002146	0	D	@ICP-D01	LIQUID	96000103	AW-101 PUSH
		Analytes Requested:			AG-D-01 , AL-D-01 , AS-D-01 , B-D-01 , BA-D-01 , BE-D-01 , BI-D-01 , CA-D-01 , CD-D-01 , CE-D-01 , CO-D-01 , CR-D-01 , CU-D-01 , FE-D-01 , K-D-01 , LA-D-01 , LI-D-01 , MG-D-01 , MN-D-01 , MO-D-01 , NA-D-01 , ND-D-01 , NI-D-01 , P-D-01 , PB-D-01 , S-D-01 , SB-D-01 , SE-D-01 , SI-D-01 , SM-D-01 , SR-D-01 , TI-D-01 , TL-D-01 , U-D-01 , V-D-01 , ZN-D-01 , ZR-D-01			
24	DUP	S96T002146	0	D	@ICP-D01	LIQUID		
25	SPK	S96T002146	0	D	@ICP-D01	LIQUID		
26	ICSA				@ICP-QC	QC		
27	ICSAB				@ICP-QC	QC		

Data Entry Comments:

S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

LABCORE Data Entry Template for Worklist# 10496

S	Type	Sample#	R	A	Test	Matrix	Group#	Project
28	CCV				@ICP-QC	QC		
29	CCB				@ICP-QC	QC		

Final page for worklist # 10496

Josh Wowell 7-31-96
Analyst Signature Date

Reviewed by:
Saul M. Parra 8/19/96
Analyst Signature Date

			DIL
S9670001715	DIL 5X	.025 ml-30 ml-2 ml-8 ml	6005
	SAM	.025-30	1201
	DUP	.025-30	1201
	PSPK	.025-2-28	1201
S9670001747	DIL 5X	.025 ml-30-2-8	6005
	SAM	.025-30	1201
	DUP	.025-30	1201
	PSPK	.025-2-28	1201
S9670001764	DIL 5X	.025-30-2-8	6005
	SAM	.025-30	1201
	DUP	.025-30	1201
	PSPK	.025-2-28	1201
S9670002146	DIL 5X	.025-30-2-8	6005
	SAM	.025-30	1201
	DUP	.025-30	1201
	PSPK	.025-30	1201

Data Entry Comments: Spike recovery calculation:

S9670001715 $Cr = \underbrace{\left(\frac{430.767}{1201}\right) - \left(\frac{24.038}{1201}\right)}_{0.333} \times 100 = 101.7\ \%$

S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

Note: Spike true value is 0.333 ppm for all ~~other~~ elements except for U = 0.666 ppm.

WHC-SD-WM-DP-192, REV. 0

Identity 1: ICV Identity 2: Quality Control 8:36 PM July 31, 1996
Task name : OPTIMA
Sample Weight : 1.0000 Solution Volume : 1.00
On-Peak Integrations : 3 Off-Peak Integrations : 1

	Zr (ppm)	Sr (ppm)	Bi (ppm)	Si (ppm)	Al (ppm)	Co (ppm)	Cu (ppm)	Li (ppm)
Mean	4.906	5.011	4.937	4.758	4.957	4.987	5.130	5.172
S.D.	0.003	0.003	0.006	0.009	0.012	0.012	0.013	0.018
% R.S.D.	0.063	0.055	0.128	0.188	0.235	0.233	0.252	0.357

	Zn (ppm)	Ni (ppm)	La (ppm)	Fe (ppm)	Ca (ppm)	Cr (ppm)	Nd (ppm)	U (ppm)
Mean	5.020	4.931	4.977	4.948	4.939	4.943	5.077	9.839
S.D.	0.015	0.022	0.014	0.002	0.007	0.026	0.044	0.023
% R.S.D.	0.296	0.455	0.283	0.040	0.141	0.533	0.859	0.234

	Ce (ppm)	Sm (ppm)	Ba (ppm)	P (ppm)	S (ppm)	Mg (ppm)	As (ppm)	Na (ppm)
Mean	5.117	5.101	5.051	4.789	4.889	4.778	5.072	5.109
S.D.	0.016	0.009	0.006	0.134	0.066	0.013	0.005	0.022
% R.S.D.	0.311	0.183	0.125	2.800	1.353	0.264	0.098	0.423

	Mo (ppm)	Se (ppm)	Ag (ppm)	Pb (ppm)	Ti (ppm)	Cd (ppm)	B (ppm)	K (ppm)
Mean	4.996	5.037	4.819	4.916	4.893	4.934	5.014	5.043
S.D.	0.009	0.031	0.009	0.026	0.002	0.010	0.007	0.037
% R.S.D.	0.184	0.606	0.188	0.524	0.047	0.200	0.142	0.739

	Mn (ppm)	Sb (ppm)	V (ppm)	Be (ppm)	Tl (ppm)
Mean	4.925	4.631	4.997	5.142	4.847
S.D.	0.007	0.045	0.003	0.006	0.008
% R.S.D.	0.148	0.969	0.069	0.114	0.169

John Worell
7-31-96

FILE No. 960731 D.DAT
SST-5 58B48A

5967001715, 1747, 1764 & 2146 AW101 DIRECT

SIGNATURE ABOVE REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 1812 TO 1840.

Identity 1: ICB Identity 2: Quality Control 8:39 PM July 31, 1996
Task name : OPTIMA
Sample Weight : 1.0000 Solution Volume : 1.00
On-Peak Integrations : 3 Off-Peak Integrations : 1

	Zr (ppm)	Sr (ppm)	Bi (ppm)	Si (ppm)	Al (ppm)	Co (ppm)	Cu (ppm)	Li (ppm)
Mean	0.002	0.000	-0.004	0.008	0.009	-0.000	0.001	0.000
S.D.	0.001	0.000	0.015	0.005	0.007	0.002	0.001	0.000
% R.S.D.	51.691	71.320	381.370	66.150	82.927	20591.917	120.051	236.501

	Zn (ppm)	Ni (ppm)	La (ppm)	Fe (ppm)	Ca (ppm)	Cr (ppm)	Nd (ppm)	U (ppm)
Mean	0.001	0.003	0.001	0.003	0.010	-0.001	0.001	0.073
S.D.	0.000	0.003	0.001	0.001	0.000	0.003	0.001	0.039
% R.S.D.	19.494	80.743	57.626	28.344	2.557	344.365	101.210	53.563

	Ce (ppm)	Sm (ppm)	Ba (ppm)	P (ppm)	S (ppm)	Mg (ppm)	As (ppm)	Na (ppm)
Mean	-0.002	0.011	0.000	-0.008	0.002	0.000	-0.005	0.011
S.D.	0.014	0.010	0.000	0.007	0.004	0.000	0.003	0.003
% R.S.D.	800.603	86.701	194.925	84.610	206.225	100.000	52.504	30.541

	Mo (ppm)	Se (ppm)	Ag (ppm)	Pb (ppm)	Ti (ppm)	Cd (ppm)	B (ppm)	K (ppm)
Mean	-0.001	-0.002	0.002	-0.021	0.001	0.001	0.005	-0.014
S.D.	0.000	0.016	0.001	0.004	0.001	0.001	0.001	0.022
% R.S.D.	37.485	642.541	53.900	18.920	59.382	75.712	20.592	153.970

	Mn (ppm)	Sb (ppm)	V (ppm)	Be (ppm)	Tl (ppm)
Mean	0.000	-0.032	-0.001	-0.000	0.067
S.D.	0.000	0.032	0.001	0.000	0.025
% R.S.D.	93.483	99.253	103.648	89.876	37.547

Identity 1: LLS Identity 2: Quality Control 8:45 PM July 31, 1996
Task name : OPTIMA
Sample Weight : 1.0000 Solution Volume : 1.00
On-Peak Integrations : 3 Off-Peak Integrations : 1

	Zr (ppm)	Sr (ppm)	Bi (ppm)	Si (ppm)	Al (ppm)	Co (ppm)	Cu (ppm)	Li (ppm)
Mean	0.023	0.021	0.184	0.115	0.112	0.044	0.021	0.020
S.D.	0.001	0.000	0.005	0.003	0.006	0.002	0.000	0.000
% R.S.D.	2.523	0.311	2.707	2.525	5.793	4.444	0.818	0.580

	Zn (ppm)	Ni (ppm)	La (ppm)	Fe (ppm)	Ca (ppm)	Cr (ppm)	Nd (ppm)	U (ppm)
Mean	0.023	0.043	0.102	0.108	0.188	0.023	0.198	0.506
S.D.	0.000	0.004	0.002	0.003	0.000	0.002	0.004	0.035
% R.S.D.	1.699	8.866	2.150	2.400	0.129	7.994	2.191	6.967

	Ce (ppm)	Sm (ppm)	Ba (ppm)	P (ppm)	S (ppm)	Mg (ppm)	As (ppm)	Na (ppm)
Mean	0.198	0.221	0.101	0.397	0.214	0.202	0.190	0.223
S.D.	0.010	0.008	0.000	0.013	0.003	0.001	0.009	0.003
% R.S.D.	5.137	3.779	0.137	3.319	1.374	0.268	4.648	1.441

	Mo (ppm)	Se (ppm)	Ag (ppm)	Pb (ppm)	Ti (ppm)	Cd (ppm)	B (ppm)	K (ppm)
Mean	0.101	0.210	0.019	0.203	0.021	0.010	0.106	0.620
S.D.	0.001	0.005	0.001	0.012	0.000	0.001	0.001	0.005
% R.S.D.	1.153	2.182	3.190	5.983	0.613	5.354	0.746	0.770

	Mn (ppm)	Sb (ppm)	V (ppm)	Be (ppm)	Tl (ppm)
Mean	0.021	0.073	0.101	0.011	0.416
S.D.	0.001	0.006	0.001	0.000	0.012
% R.S.D.	3.019	8.507	0.530	2.201	2.905

Identity 1: ICSA Identity 2: Quality Control 3:49 PM July 31, 1996
Task name : OPTIMA
Sample Weight : 1.0000 Solution Volume : 1.00
On-Peak Integrations : 3 Off-Peak Integrations : 1

	Zr (ppm)	Sr (ppm)	Bi (ppm)	Si (ppm)	Al (ppm)	Co (ppm)	Cu (ppm)	Li (ppm)
Mean	0.004	0.002	-0.036	0.021	198.954	-0.006	0.000	-0.000
S.D.	0.002	0.000	0.011	0.002	0.627	0.002	0.001	0.000
% R.S.D.	46.774	7.616	30.937	9.671	0.315	30.393	517.602	617.931

	Zn (ppm)	Ni (ppm)	La (ppm)	Fe (ppm)	Ca (ppm)	Cr (ppm)	Nd (ppm)	U (ppm)
Mean	-0.003	0.003	0.006	95.461	101.211	0.006	-0.022	0.136
S.D.	0.000	0.000	0.001	0.221	0.257	0.001	0.012	0.069
% R.S.D.	5.072	10.290	13.611	0.232	0.254	18.832	51.627	50.922

	Ce (ppm)	Sm (ppm)	Ba (ppm)	P (ppm)	S (ppm)	Mg (ppm)	As (ppm)	Na (ppm)
Mean	-0.038	0.046	0.003	0.042	0.009	102.645	0.006	192.384
S.D.	0.024	0.012	0.000	0.006	0.014	0.222	0.008	1.716
% R.S.D.	62.929	26.968	10.910	13.512	155.162	0.216	148.658	0.892

	Mo (ppm)	Se (ppm)	Ag (ppm)	Pb (ppm)	Ti (ppm)	Cd (ppm)	B (ppm)	K (ppm)
Mean	0.000	0.012	-0.000	0.006	0.002	0.002	0.013	0.025
S.D.	0.001	0.007	0.001	0.005	0.001	0.001	0.001	0.025
% R.S.D.	708.257	57.227	223.351	84.971	45.716	25.736	9.680	98.752

	Mn (ppm)	Sb (ppm)	V (ppm)	Be (ppm)	Tl (ppm)
Mean	0.012	-0.091	-0.002	0.002	-0.010
S.D.	0.000	0.020	0.001	0.000	0.034
% R.S.D.	1.798	22.036	42.971	10.201	336.258

Identity 1: ICSAB Identity 2: Quality Control 8:51 PM July 31, 1996
Task name : OPTIMA
Sample Weight : 1.0000 Solution Volume : 1.00
On-Peak Integrations : 3 Off-Peak Integrations : 1

	Zr (ppm)	Sr (ppm)	Bi (ppm)	Si (ppm)	Al (ppm)	Co (ppm)	Cu (ppm)	Li (ppm)
Mean	0.001	0.002	-0.037	0.019	199.029	0.481	0.499	0.957
S.D.	0.002	0.000	0.005	0.001	0.891	0.005	0.003	0.013
% R.S.D.	137.242	9.096	12.673	7.695	0.448	1.067	0.596	1.321

	Zn (ppm)	Ni (ppm)	La (ppm)	Fe (ppm)	Ca (ppm)	Cr (ppm)	Nd (ppm)	U (ppm)
Mean	0.972	0.975	0.006	92.900	100.439	0.494	-0.031	0.154
S.D.	0.001	0.003	0.002	0.196	0.254	0.003	0.014	0.090
% R.S.D.	0.137	0.268	25.686	0.211	0.253	0.665	45.603	58.620

	Ce (ppm)	Sm (ppm)	Ba (ppm)	P (ppm)	S (ppm)	Mg (ppm)	As (ppm)	Na (ppm)
Mean	-0.028	0.030	0.504	0.011	-0.005	101.062	-0.002	193.423
S.D.	0.020	0.017	0.002	0.006	0.014	0.122	0.012	2.429
% R.S.D.	70.540	55.675	0.370	58.692	275.476	0.120	624.800	1.256

	Mo (ppm)	Se (ppm)	Ag (ppm)	Pb (ppm)	Ti (ppm)	Cd (ppm)	B (ppm)	K (ppm)
Mean	-0.003	0.063	0.998	0.956	0.002	0.974	0.012	-0.028
S.D.	0.001	0.020	0.001	0.015	0.000	0.002	0.001	0.030
% R.S.D.	28.122	31.425	0.062	1.601	28.372	0.210	9.375	107.134

	Mn (ppm)	Sb (ppm)	V (ppm)	Be (ppm)	Tl (ppm)
Mean	0.502	-0.070	0.485	0.494	0.007
S.D.	0.000	0.010	0.002	0.001	0.031
% R.S.D.	0.075	13.583	0.314	0.256	431.523

Identity 1: s96t001715_L Identity 2: .025ml-30ml-2ml-8ml 8:57 PM July 31, 1996
Task name : OPTIMA
Sample Weight : 1.0000 Solution Volume : 6005.00
On-Peak Integrations : 3 Off-Peak Integrations : 1

	Zr (ppm)	Sr (ppm)	Bi (ppm)	Si (ppm)	Al (ppm)	Co (ppm)	Cu (ppm)	Li (ppm)
Mean	20.519	-0.642	-19.944	365.769	44057.158	6.682	89.559	1.421
S.D.	9.755	1.176	45.343	5.425	55.376	20.155	2.679	3.085
% R.S.D.	47.543	183.303	227.355	1.483	0.126	301.610	2.991	217.119

	Zn (ppm)	Ni (ppm)	La (ppm)	Fe (ppm)	Ca (ppm)	Cr (ppm)	Nd (ppm)	U (ppm)
Mean	322.313	13.259	23.045	83.236	52.562	30.627	5.008	345.167
S.D.	1.547	6.230	8.675	15.435	5.657	2.810	63.173	500.254
% R.S.D.	0.480	46.991	37.646	18.544	10.763	9.176	1261.348	144.931

	Ce (ppm)	Sm (ppm)	Ba (ppm)	P (ppm)	S (ppm)	Mg (ppm)	As (ppm)	Na (ppm)
Mean	-6.061	117.997	0.958	318.642	399.950	33.674	-133.863	233763.502
S.D.	103.471	95.188	2.097	90.493	21.688	4.427	27.406	3328.182
% R.S.D.	1707.061	80.670	218.928	28.399	5.423	13.148	20.473	1.424

	Mo (ppm)	Se (ppm)	Ag (ppm)	Pb (ppm)	Ti (ppm)	Cd (ppm)	B (ppm)	K (ppm)
Mean	51.309	96.527	3.836	89.110	4.078	4.854	50.623	29226.718
S.D.	2.945	35.053	9.838	62.259	2.165	3.366	6.259	332.427
% R.S.D.	5.740	36.314	256.475	69.868	53.080	69.346	12.364	1.137

	Mn (ppm)	Sb (ppm)	V (ppm)	Be (ppm)	Tl (ppm)
Mean	2.412	-163.435	-4.172	1.955	442.957
S.D.	1.034	19.324	2.782	0.837	272.689
% R.S.D.	42.852	11.824	66.696	42.838	61.561

Identity 1: s96t001715 Identity 2: .025ml-30ml 9:00 PM July 31, 1996
Task name : OPTIMA
Sample Weight : 1.0000 Solution Volume : 1201.00
On-Peak Integrations : 3 Off-Peak Integrations : 1

	Zr (ppm)	Sr (ppm)	Bi (ppm)	Si (ppm)	Al (ppm)	Co (ppm)	Cu (ppm)	Li (ppm)
Mean	14.002	-0.154	-24.125	364.035	44222.644	2.677	84.268	1.148
S.D.	1.601	0.133	6.250	1.957	61.388	4.657	0.379	0.094
% R.S.D.	11.435	86.603	25.906	0.538	0.139	173.970	0.450	8.224

	Zn (ppm)	Ni (ppm)	La (ppm)	Fe (ppm)	Ca (ppm)	Cr (ppm)	Nd (ppm)	U (ppm)
Mean	94.268	6.774	0.052	17.071	4.289	24.038	-23.352	107.347
S.D.	0.586	0.210	0.987	1.242	0.336	0.642	6.877	32.211
% R.S.D.	0.621	3.094	1895.300	7.275	7.843	2.669	29.448	30.006

	Ce (ppm)	Sm (ppm)	Ba (ppm)	P (ppm)	S (ppm)	Mg (ppm)	As (ppm)	Na (ppm)
Mean	-2.916	-0.201	-0.036	261.538	380.843	0.992	-21.149	222387.873
S.D.	10.396	5.174	0.236	11.858	1.782	0.246	9.134	62.521
% R.S.D.	356.502	2568.868	655.744	4.534	0.468	24.744	43.189	0.028

	Mo (ppm)	Se (ppm)	Ag (ppm)	Pb (ppm)	Ti (ppm)	Cd (ppm)	B (ppm)	K (ppm)
Mean	56.623	3.537	-0.125	123.811	0.365	3.351	57.747	27979.057
S.D.	1.074	18.490	0.482	1.488	0.170	0.563	0.488	71.263
% R.S.D.	1.896	522.791	386.739	1.202	46.521	16.797	0.844	0.255

	Mn (ppm)	Sb (ppm)	V (ppm)	Be (ppm)	Tl (ppm)
Mean	1.482	-92.559	-0.727	3.166	26.971
S.D.	0.378	20.913	0.601	0.291	16.939
% R.S.D.	25.521	22.595	82.686	9.181	62.806

Identity 1: s96t001715_d Identity 2: .025ml-30ml 9:02 PM July 31, 1996
Task name : OPTIMA
Sample Weight : 1.0000 Solution Volume : 1201.00
On-Peak Integrations : 3 Off-Peak Integrations : 1

	Zr (ppm)	Sr (ppm)	Bi (ppm)	Si (ppm)	Al (ppm)	Co (ppm)	Cu (ppm)	Li (ppm)
Mean	13.398	-0.385	-10.549	320.979	39294.104	1.337	73.408	0.449
S.D.	0.943	0.000	5.045	2.417	35.061	4.038	0.270	0.287
% R.S.D.	7.041	0.000	47.823	0.753	0.089	302.050	0.367	63.990

	Zn (ppm)	Ni (ppm)	La (ppm)	Fe (ppm)	Ca (ppm)	Cr (ppm)	Nd (ppm)	U (ppm)
Mean	84.753	9.394	1.749	18.604	3.840	20.940	-21.360	66.204
S.D.	0.487	0.958	1.992	1.145	1.352	2.154	13.459	22.379
% R.S.D.	0.574	10.199	113.892	6.154	35.197	10.285	63.010	33.803

	Ce (ppm)	Sm (ppm)	Ba (ppm)	P (ppm)	S (ppm)	Mg (ppm)	As (ppm)	Na (ppm)
Mean	-42.717	-8.137	-0.695	216.070	342.831	2.056	-21.962	197662.644
S.D.	7.979	5.604	0.041	6.801	6.680	1.351	5.177	319.617
% R.S.D.	18.679	68.871	5.973	3.148	1.948	65.699	23.572	0.162

	Mo (ppm)	Se (ppm)	Ag (ppm)	Pb (ppm)	Ti (ppm)	Cd (ppm)	B (ppm)	K (ppm)
Mean	48.927	29.360	-3.233	103.264	1.326	3.133	51.543	24863.261
S.D.	1.400	6.462	0.667	15.779	0.358	0.187	1.609	41.663
% R.S.D.	2.861	22.009	20.622	15.281	26.986	5.966	3.122	0.168

	Mn (ppm)	Sb (ppm)	V (ppm)	Be (ppm)	Tl (ppm)
Mean	0.863	-52.272	-2.806	2.301	26.818
S.D.	0.431	26.474	0.694	0.003	2.229
% R.S.D.	49.965	50.646	24.724	0.129	8.310

Identity 1: s96t001715_A Identity 2: .025ml-2ml-28ml 9:05 PM July 31, 1996
Task name : OPTIMA
Sample Weight : 1.0000 Solution Volume : 1201.00
On-Peak Integrations : 3 Off-Peak Integrations : 1

	Zr (ppm)	Sr (ppm)	Bi (ppm)	Si (ppm)	Al (ppm)	Co (ppm)	Cu (ppm)	Li (ppm)
Mean	413.139	403.641	376.726	741.604	41917.329	407.522	487.994	394.705
S.D.	1.900	0.464	11.565	1.452	32.983	2.332	0.613	1.284
% R.S.D.	0.460	0.115	3.070	0.196	0.079	0.572	0.126	0.325

	Zn (ppm)	Ni (ppm)	La (ppm)	Fe (ppm)	Ca (ppm)	Cr (ppm)	Nd (ppm)	U (ppm)
Mean	502.032	416.044	408.243	424.834	395.533	430.767	376.624	948.111
S.D.	1.443	3.619	2.983	11.476	0.611	3.692	8.004	20.647
% R.S.D.	0.287	0.870	0.731	2.701	0.154	0.857	2.125	2.178

	Ce (ppm)	Sm (ppm)	Ba (ppm)	P (ppm)	S (ppm)	Mg (ppm)	As (ppm)	Na (ppm)
Mean	365.775	425.703	403.495	613.940	774.158	389.089	397.475	207390.648
S.D.	6.293	2.665	0.239	21.949	10.383	0.740	1.464	701.049
% R.S.D.	1.720	0.626	0.059	3.575	1.341	0.190	0.368	0.338

	Mo (ppm)	Se (ppm)	Ag (ppm)	Pb (ppm)	Ti (ppm)	Cd (ppm)	B (ppm)	K (ppm)
Mean	458.245	399.652	307.144	508.418	401.158	406.823	455.496	26073.031
S.D.	2.909	9.966	0.209	23.251	0.084	1.944	0.887	60.595
% R.S.D.	0.635	2.494	0.068	4.573	0.021	0.478	0.195	0.232

	Mn (ppm)	Sb (ppm)	V (ppm)	Be (ppm)	Tl (ppm)
Mean	410.930	361.515	408.434	415.006	404.976
S.D.	0.863	15.650	0.288	0.167	9.468
% R.S.D.	0.210	4.329	0.070	0.040	2.338

Identity 1: CCV Identity 2: Quality Control 9:08 PM July 31, 1996
Task name : OPTIMA
Sample Weight : 1.0000 Solution Volume : 1.00
On-Peak Integrations : 3 Off-Peak Integrations : 1

	Zr (ppm)	Sr (ppm)	Bi (ppm)	Si (ppm)	Al (ppm)	Co (ppm)	Cu (ppm)	Li (ppm)
Mean	4.939	5.021	4.959	4.805	4.991	5.049	5.123	5.129
S.D.	0.008	0.015	0.018	0.010	0.028	0.005	0.022	0.058
% R.S.D.	0.156	0.291	0.367	0.198	0.553	0.102	0.430	1.129

	Zn (ppm)	Ni (ppm)	La (ppm)	Fe (ppm)	Ca (ppm)	Cr (ppm)	Nd (ppm)	U (ppm)
Mean	5.098	4.986	4.996	4.993	4.953	5.031	5.060	9.762
S.D.	0.005	0.011	0.006	0.017	0.012	0.014	0.013	0.038
% R.S.D.	0.099	0.219	0.129	0.349	0.234	0.288	0.261	0.385

	Ce (ppm)	Sm (ppm)	Ba (ppm)	P (ppm)	S (ppm)	Mg (ppm)	As (ppm)	Na (ppm)
Mean	5.089	5.076	5.051	5.052	5.028	4.848	5.114	5.113
S.D.	0.017	0.013	0.018	0.076	0.026	0.002	0.016	0.047
% R.S.D.	0.336	0.258	0.349	1.501	0.523	0.044	0.304	0.916

	Mo (ppm)	Se (ppm)	Ag (ppm)	Pb (ppm)	Ti (ppm)	Cd (ppm)	B (ppm)	K (ppm)
Mean	5.053	5.011	4.876	4.969	4.928	4.992	5.029	5.055
S.D.	0.016	0.045	0.009	0.028	0.008	0.008	0.010	0.041
% R.S.D.	0.311	0.903	0.188	0.565	0.155	0.157	0.200	0.803

	Mn (ppm)	Sb (ppm)	V (ppm)	Be (ppm)	Tl (ppm)
Mean	4.995	4.690	5.042	5.166	4.879
S.D.	0.007	0.004	0.003	0.007	0.020
% R.S.D.	0.148	0.080	0.058	0.137	0.412

Identity 1: CCB Identity 2: Quality Control 9:11 PM July 31, 1996
Task name : OPTIMA
Sample Weight : 1.0000 Solution Volume : 1.00
On-Peak Integrations : 3 Off-Peak Integrations : 1

	Zr (ppm)	Sr (ppm)	Bi (ppm)	Si (ppm)	Al (ppm)	Co (ppm)	Cu (ppm)	Li (ppm)
Mean	0.003	0.000	-0.017	0.008	0.007	-0.003	0.000	0.000
S.D.	0.002	0.000	0.007	0.003	0.002	0.002	0.001	0.000
% R.S.D.	64.352	130.931	43.997	32.463	32.623	57.319	174.611	519.757

	Zn (ppm)	Ni (ppm)	La (ppm)	Fe (ppm)	Ca (ppm)	Cr (ppm)	Nd (ppm)	U (ppm)
Mean	0.001	0.003	0.005	0.002	0.010	-0.004	-0.006	0.091
S.D.	0.000	0.001	0.002	0.001	0.000	0.002	0.006	0.057
% R.S.D.	15.806	33.231	45.971	39.918	1.342	42.237	92.010	63.316

	Ce (ppm)	Sm (ppm)	Ba (ppm)	P (ppm)	S (ppm)	Mg (ppm)	As (ppm)	Na (ppm)
Mean	-0.023	0.015	0.000	-0.013	0.010	0.001	-0.015	0.013
S.D.	0.017	0.013	0.000	0.004	0.004	0.000	0.006	0.005
% R.S.D.	73.323	84.008	328.295	31.548	36.930	12.372	41.409	36.459

	Mo (ppm)	Se (ppm)	Ag (ppm)	Pb (ppm)	Ti (ppm)	Cd (ppm)	B (ppm)	K (ppm)
Mean	-0.000	0.022	0.013	-0.003	0.002	0.000	0.004	-0.053
S.D.	0.001	0.013	0.001	0.015	0.001	0.001	0.001	0.011
% R.S.D.	1036.162	60.368	9.835	571.715	55.379	599.568	15.564	20.516

	Mn (ppm)	Sb (ppm)	V (ppm)	Be (ppm)	Tl (ppm)
Mean	-0.000	-0.004	-0.003	-0.000	0.013
S.D.	0.000	0.003	0.000	0.000	0.025
% R.S.D.	140.427	65.615	17.712	118.229	187.669

Identity 1: s96t001747_L Identity 2: .025ml-30ml-2ml-8ml 9:16 PM July 31, 1996
Task name : OPTIMA
Sample Weight : 1.0000 Solution Volume : 6005.00
On-Peak Integrations : 3 Off-Peak Integrations : 1

	Zr (ppm)	Sr (ppm)	Bi (ppm)	Si (ppm)	Al (ppm)	Co (ppm)	Cu (ppm)	Li (ppm)
Mean	19.648	-1.283	-57.529	285.453	31137.090	-6.769	6.827	4.168
S.D.	4.548	0.222	46.678	15.719	85.291	11.660	1.688	1.931
% R.S.D.	23.147	17.321	81.138	5.507	0.274	172.253	24.726	46.337

	Zn (ppm)	Ni (ppm)	La (ppm)	Fe (ppm)	Ca (ppm)	Cr (ppm)	Nd (ppm)	U (ppm)
Mean	122.369	32.264	0.158	22.774	36.863	102.995	-45.577	337.999
S.D.	2.086	3.904	4.919	5.259	0.243	13.567	43.931	110.698
% R.S.D.	1.705	12.101	3123.302	23.093	0.659	13.172	96.390	32.751

	Ce (ppm)	Sm (ppm)	Ba (ppm)	P (ppm)	S (ppm)	Mg (ppm)	As (ppm)	Na (ppm)
Mean	-81.127	-1.843	-0.719	253.650	462.194	6.380	-85.397	252499.316
S.D.	24.029	29.222	0.783	28.732	22.434	0.000	11.749	958.428
% R.S.D.	29.618	1585.931	108.972	11.327	4.854	0.000	13.759	0.380

	Mo (ppm)	Se (ppm)	Ag (ppm)	Pb (ppm)	Ti (ppm)	Cd (ppm)	B (ppm)	K (ppm)
Mean	66.887	273.445	32.800	26.317	6.864	3.788	61.525	34920.106
S.D.	4.611	74.062	3.929	40.206	2.053	1.619	1.895	219.521
% R.S.D.	6.894	27.085	11.980	152.779	29.905	42.733	3.080	0.629

	Mn (ppm)	Sb (ppm)	V (ppm)	Be (ppm)	Tl (ppm)
Mean	3.677	-151.331	-12.708	1.951	108.980
S.D.	1.871	163.327	5.434	0.841	96.952
% R.S.D.	50.894	107.927	42.763	43.122	88.963

Identity 1: s96t001747 Identity 2: .025ml-30ml 9:19 PM July 31, 1996
Task name : OPTIMA
Sample Weight : 1.0000 Solution Volume : 1201.00
On-Peak Integrations : 3 Off-Peak Integrations : 1

	Zr (ppm)	Sr (ppm)	Bi (ppm)	Si (ppm)	Al (ppm)	Co (ppm)	Cu (ppm)	Li (ppm)
Mean	15.253	-0.231	-4.709	250.500	31360.705	-1.345	0.528	3.840
S.D.	0.263	0.000	6.919	1.282	12.782	2.330	0.162	0.142
% R.S.D.	1.724	0.000	146.938	0.512	0.041	173.248	30.590	3.686

	Zn (ppm)	Ni (ppm)	La (ppm)	Fe (ppm)	Ca (ppm)	Cr (ppm)	Nd (ppm)	U (ppm)
Mean	10.919	22.445	-2.283	9.874	1.121	115.758	-5.739	6.666
S.D.	0.465	2.113	1.718	1.914	0.097	0.639	7.048	3.623
% R.S.D.	4.259	9.415	75.223	19.384	8.660	0.552	122.804	54.350

	Ce (ppm)	Sm (ppm)	Ba (ppm)	P (ppm)	S (ppm)	Mg (ppm)	As (ppm)	Na (ppm)
Mean	-7.495	-2.182	0.024	214.895	426.634	-0.071	-12.882	240033.781
S.D.	3.338	3.912	0.170	19.949	10.986	0.123	5.130	974.949
% R.S.D.	44.538	179.328	708.872	9.283	2.575	173.204	39.823	0.406

	Mo (ppm)	Se (ppm)	Ag (ppm)	Pb (ppm)	Ti (ppm)	Cd (ppm)	B (ppm)	K (ppm)
Mean	60.597	48.682	0.897	57.655	0.421	3.782	60.071	33672.462
S.D.	1.629	9.934	0.861	9.550	0.139	0.750	1.620	163.820
% R.S.D.	2.688	20.407	95.974	16.564	33.138	19.818	2.697	0.487

	Mn (ppm)	Sb (ppm)	V (ppm)	Be (ppm)	Tl (ppm)
Mean	3.371	-62.019	-1.020	2.959	24.443
S.D.	0.001	4.746	0.609	0.438	2.166
% R.S.D.	0.015	7.653	59.727	14.787	8.862

Identity 1: s96t001747_D Identity 2: .025ml-30ml 9:22 PM July 31, 1996
Task name : OPTIMA
Sample Weight : 1.0000 Solution Volume : 1201.00
On-Peak Integrations : 3 Off-Peak Integrations : 1

	Zr (ppm)	Sr (ppm)	Bi (ppm)	Si (ppm)	Al (ppm)	Co (ppm)	Cu (ppm)	Li (ppm)
Mean	24.755	-0.642	-8.190	328.549	39746.761	-1.375	-0.990	4.861
S.D.	0.146	0.044	7.886	3.198	213.797	2.332	0.059	0.047
% R.S.D.	0.588	6.928	96.292	0.973	0.538	169.545	5.973	0.976

	Zn (ppm)	Ni (ppm)	La (ppm)	Fe (ppm)	Ca (ppm)	Cr (ppm)	Nd (ppm)	U (ppm)
Mean	12.416	23.163	6.407	13.091	0.673	136.738	-17.599	243.751
S.D.	0.445	3.674	4.531	2.716	0.084	0.698	6.123	26.579
% R.S.D.	3.585	15.863	70.729	20.746	12.500	0.511	34.792	10.904

	Ce (ppm)	Sm (ppm)	Ba (ppm)	P (ppm)	S (ppm)	Mg (ppm)	As (ppm)	Na (ppm)
Mean	-66.270	39.863	-0.838	243.969	540.382	-0.284	-17.235	291833.596
S.D.	4.817	2.063	0.110	9.750	11.786	0.123	6.894	1937.991
% R.S.D.	7.269	5.176	13.093	3.996	2.181	43.301	39.999	0.664

	Mo (ppm)	Se (ppm)	Ag (ppm)	Pb (ppm)	Ti (ppm)	Cd (ppm)	B (ppm)	K (ppm)
Mean	76.723	43.289	-3.073	44.745	1.764	5.626	74.227	40019.749
S.D.	1.860	13.720	0.551	11.638	0.359	0.324	1.874	226.936
% R.S.D.	2.424	31.694	17.919	26.010	20.359	5.763	2.525	0.567

	Mn (ppm)	Sb (ppm)	V (ppm)	Be (ppm)	Tl (ppm)
Mean	3.718	-97.925	-5.454	3.180	10.959
S.D.	0.377	38.383	0.521	0.290	20.117
% R.S.D.	10.153	39.197	9.557	9.109	183.568

Identity 1: s96t001747_A Identity 2: .025ml-2ml-28ml 9:25 PM July 31, 1996
Task name : OPTIMA
Sample Weight : 1.0000 Solution Volume : 1201.00
On-Peak Integrations : 3 Off-Peak Integrations : 1

	Zr (ppm)	Sr (ppm)	Bi (ppm)	Si (ppm)	Al (ppm)	Co (ppm)	Cu (ppm)	Li (ppm)
Mean	422.962	406.746	384.159	761.577	40916.629	406.179	415.176	402.089
S.D.	2.330	0.154	21.479	6.263	107.683	2.328	0.779	4.476
% R.S.D.	0.551	0.038	5.591	0.822	0.263	0.573	0.188	1.113

	Zn (ppm)	Ni (ppm)	La (ppm)	Fe (ppm)	Ca (ppm)	Cr (ppm)	Nd (ppm)	U (ppm)
Mean	424.056	429.472	407.665	415.978	395.730	550.719	392.360	938.026
S.D.	1.905	3.679	1.007	4.821	0.304	1.940	12.300	35.648
% R.S.D.	0.449	0.857	0.247	1.159	0.077	0.352	3.135	3.800

	Ce (ppm)	Sm (ppm)	Ba (ppm)	P (ppm)	S (ppm)	Mg (ppm)	As (ppm)	Na (ppm)
Mean	375.471	423.507	407.566	697.632	941.506	385.246	405.725	305600.643
S.D.	9.450	5.415	0.644	12.302	13.381	1.109	4.026	3110.614
% R.S.D.	2.517	1.278	0.158	1.763	1.421	0.288	0.992	1.018

	Mo (ppm)	Se (ppm)	Ag (ppm)	Pb (ppm)	Ti (ppm)	Cd (ppm)	B (ppm)	K (ppm)
Mean	488.607	484.402	367.003	497.911	402.316	409.312	477.195	42277.362
S.D.	0.694	10.313	3.183	6.009	0.651	2.624	3.253	487.726
% R.S.D.	0.142	2.129	0.867	1.207	0.162	0.641	0.682	1.154

	Mn (ppm)	Sb (ppm)	V (ppm)	Be (ppm)	Tl (ppm)
Mean	409.057	413.703	408.838	414.236	409.248
S.D.	1.080	33.340	0.686	1.006	18.914
% R.S.D.	0.264	8.059	0.168	0.243	4.622

Identity 1: s96t001764_L Identity 2: .025ml-30ml-2ml-8ml 9:28 PM July 31, 1996
Task name : OPTIMA
Sample Weight : 1.0000 Solution Volume : 6005.00
On-Peak Integrations : 3 Off-Peak Integrations : 1

	Zr (ppm)	Sr (ppm)	Bi (ppm)	Si (ppm)	Al (ppm)	Co (ppm)	Cu (ppm)	Li (ppm)
Mean	26.120	-1.412	-113.366	268.563	32317.322	-47.187	-3.473	3.757
S.D.	5.984	0.588	103.418	24.464	113.500	11.631	4.595	1.547
% R.S.D.	22.908	41.660	91.225	9.109	0.351	24.649	132.295	41.181

	Zn (ppm)	Ni (ppm)	La (ppm)	Fe (ppm)	Ca (ppm)	Cr (ppm)	Nd (ppm)	U (ppm)
Mean	60.293	29.196	8.948	31.948	5.186	111.793	-96.286	784.359
S.D.	2.841	5.536	9.992	8.681	0.243	6.312	41.275	201.054
% R.S.D.	4.713	18.963	111.667	27.173	4.681	5.646	42.867	25.633

	Ce (ppm)	Sm (ppm)	Ba (ppm)	P (ppm)	S (ppm)	Mg (ppm)	As (ppm)	Na (ppm)
Mean	-146.626	116.025	-1.796	143.637	455.016	0.709	-72.110	260547.034
S.D.	65.522	35.916	1.078	55.017	14.126	0.614	20.105	2501.713
% R.S.D.	44.687	30.955	60.000	38.303	3.104	86.603	27.881	0.960

	Mo (ppm)	Se (ppm)	Ag (ppm)	Pb (ppm)	Ti (ppm)	Cd (ppm)	B (ppm)	K (ppm)
Mean	49.480	312.097	28.373	-19.924	5.404	7.583	51.477	35589.355
S.D.	4.131	39.673	9.575	56.197	3.912	5.221	11.264	439.448
% R.S.D.	8.349	12.712	33.749	282.050	72.395	68.844	21.882	1.235

	Mn (ppm)	Sb (ppm)	V (ppm)	Be (ppm)	Tl (ppm)
Mean	1.776	-218.035	-23.171	0.098	250.680
S.D.	1.851	68.399	7.465	1.459	130.613
% R.S.D.	104.210	31.371	32.219	1496.106	52.104

WHC-SD-WM-DP-192, REV. 0

Identity 1: s96t001764 Identity 2: .025ml-30ml 9:32 PM July 31, 1996
Task name : OPTIMA
Sample Weight : 1.0000 Solution Volume : 1201.00
On-Peak Integrations : 3 Off-Peak Integrations : 1

	Zr (ppm)	Sr (ppm)	Bi (ppm)	Si (ppm)	Al (ppm)	Co (ppm)	Cu (ppm)	Li (ppm)
Mean	17.154	-0.077	-13.631	235.154	31639.373	1.330	0.792	5.910
S.D.	1.295	0.077	4.079	2.652	36.971	0.001	0.923	0.094
% R.S.D.	7.549	100.000	29.921	1.128	0.117	0.106	116.551	1.597

	Zn (ppm)	Ni (ppm)	La (ppm)	Fe (ppm)	Ca (ppm)	Cr (ppm)	Nd (ppm)	U (ppm)
Mean	13.113	20.991	6.351	11.813	6.756	111.776	6.409	125.944
S.D.	0.844	3.884	1.712	0.187	0.128	0.954	3.336	11.070
% R.S.D.	6.440	18.501	26.955	1.585	1.902	0.853	52.058	8.789

	Ce (ppm)	Sm (ppm)	Ba (ppm)	P (ppm)	S (ppm)	Mg (ppm)	As (ppm)	Na (ppm)
Mean	-12.599	-1.471	-0.096	229.431	419.756	0.071	-21.177	247698.519
S.D.	11.045	4.993	0.136	24.341	3.146	0.123	9.881	1462.364
% R.S.D.	87.667	339.569	141.973	10.609	0.749	173.206	46.656	0.590

	Mo (ppm)	Se (ppm)	Ag (ppm)	Pb (ppm)	Tl (ppm)	Cd (ppm)	B (ppm)	K (ppm)
Mean	63.345	45.125	1.533	50.618	1.534	4.650	58.012	34420.096
S.D.	1.679	6.741	0.728	14.888	0.450	0.858	1.187	290.366
% R.S.D.	2.651	14.940	47.471	29.412	29.356	18.460	2.046	0.844

	Mn (ppm)	Sb (ppm)	V (ppm)	Be (ppm)	Tl (ppm)
Mean	3.727	-18.976	-1.166	3.357	73.003
S.D.	0.374	12.563	0.735	0.166	13.205
% R.S.D.	10.025	66.204	63.006	4.944	18.088

JW 7-31-96

WHC-SD-WM-DP-192, REV. 0

Identity 1: s96t001764 Identity 2: .025ml-30ml 9:34 PM July 31, 1996
Task name : OPTIMA
Sample Weight : 1.0000 Solution Volume : 1201.00
On-Peak Integrations : 3 Off-Peak Integrations : 1

	Zr (ppm)	Sr (ppm)	Bi (ppm)	Si (ppm)	Al (ppm)	Co (ppm)	Cu (ppm)	Li (ppm)
Mean	17.081	-0.334	-9.974	241.508	33304.886	-0.007	-0.081	5.907
S.D.	0.266	0.044	4.345	1.711	197.072	2.328	0.209	0.250
% R.S.D.	1.558	13.323	43.568	0.708	0.592	32398.078	259.960	4.230

	Zn (ppm)	Ni (ppm)	La (ppm)	Fe (ppm)	Ca (ppm)	Cr (ppm)	Nd (ppm)	U (ppm)
Mean	12.731	23.208	2.320	16.179	-0.841	120.366	-5.990	64.544
S.D.	0.670	0.761	1.985	4.537	0.084	2.953	7.373	15.847
% R.S.D.	5.260	3.280	85.540	28.046	10.000	2.454	123.098	24.552

	Ce (ppm)	Sm (ppm)	Ba (ppm)	P (ppm)	S (ppm)	Mg (ppm)	As (ppm)	Na (ppm)
Mean	-31.683	1.350	-0.539	229.477	438.269	-0.142	-23.755	250642.599
S.D.	8.541	3.381	0.072	7.323	3.813	0.123	2.332	2076.591
% R.S.D.	26.958	250.364	13.333	3.191	0.870	86.602	9.817	0.829

	Mo (ppm)	Se (ppm)	Ag (ppm)	Pb (ppm)	Tl (ppm)	Cd (ppm)	B (ppm)	K (ppm)
Mean	64.567	18.328	-2.061	66.783	0.907	3.890	63.011	34724.130
S.D.	1.247	6.955	0.205	8.000	0.083	0.188	1.184	427.707
% R.S.D.	1.932	37.950	9.963	11.979	9.142	4.839	1.880	1.232

	Mn (ppm)	Sb (ppm)	V (ppm)	Be (ppm)	Tl (ppm)
Mean	2.991	-68.763	-4.783	2.966	27.530
S.D.	0.375	24.664	0.359	0.167	19.368
% R.S.D.	12.527	35.868	7.503	5.626	70.354

Identity 1: s96t001764_A Identity 2: .025ml-2ml-28ml 9:39 PM July 31, 1996
Task name : OPTIMA
Sample Weight : 1.0000 Solution Volume : 1201.00
On-Peak Integrations : 3 Off-Peak Integrations : 1

	Zr (ppm)	Sr (ppm)	Bi (ppm)	Si (ppm)	Al (ppm)	Co (ppm)	Cu (ppm)	Li (ppm)
Mean	410.098	400.356	391.990	631.974	30770.219	400.811	408.384	397.340
S.D.	1.981	0.946	10.900	2.901	240.930	6.988	1.005	3.185
% R.S.D.	0.483	0.236	2.781	0.459	0.783	1.743	0.246	0.802

	Zn (ppm)	Ni (ppm)	La (ppm)	Fe (ppm)	Ca (ppm)	Cr (ppm)	Nd (ppm)	U (ppm)
Mean	425.143	422.434	401.324	408.929	390.213	516.804	403.319	832.101
S.D.	2.978	3.316	1.715	4.812	0.634	2.873	2.931	23.766
% R.S.D.	0.700	0.785	0.427	1.177	0.162	0.556	0.727	2.856

	Ce (ppm)	Sm (ppm)	Ba (ppm)	P (ppm)	S (ppm)	Mg (ppm)	As (ppm)	Na (ppm)
Mean	409.294	374.460	400.621	619.306	838.963	385.815	393.193	235231.181
S.D.	11.067	10.158	0.612	6.727	9.908	1.739	14.652	2251.146
% R.S.D.	2.704	2.713	0.153	1.086	1.181	0.451	3.726	0.957

	Mo (ppm)	Se (ppm)	Ag (ppm)	Pb (ppm)	Ti (ppm)	Cd (ppm)	B (ppm)	K (ppm)
Mean	467.044	453.326	359.680	444.288	396.236	406.715	457.291	33057.109
S.D.	4.647	3.647	3.662	24.495	1.405	1.229	2.513	276.558
% R.S.D.	0.995	0.804	1.018	5.513	0.354	0.302	0.549	0.837

	Mn (ppm)	Sb (ppm)	V (ppm)	Be (ppm)	Tl (ppm)
Mean	409.075	282.006	408.747	410.784	419.627
S.D.	2.407	13.024	1.945	1.413	18.483
% R.S.D.	0.588	4.618	0.476	0.344	4.405

Identity 1: CCV Identity 2: Quality Control 9:42 PM July 31, 1996
Task name : OPTIMA
Sample Weight : 1.0000 Solution Volume : 1.00
On-Peak Integrations : 3 Off-Peak Integrations : 1

	Zr (ppm)	Sr (ppm)	Bi (ppm)	Si (ppm)	Al (ppm)	Co (ppm)	Cu (ppm)	Li (ppm)
Mean	4.950	5.024	5.007	4.841	4.999	5.118	5.110	5.129
S.D.	0.008	0.010	0.016	0.009	0.011	0.012	0.017	0.046
% R.S.D.	0.161	0.194	0.316	0.196	0.218	0.237	0.329	0.895

	Zn (ppm)	Ni (ppm)	La (ppm)	Fe (ppm)	Ca (ppm)	Cr (ppm)	Nd (ppm)	U (ppm)
Mean	5.167	5.041	4.999	5.019	4.956	5.078	5.032	9.724
S.D.	0.007	0.008	0.004	0.010	0.008	0.004	0.012	0.011
% R.S.D.	0.142	0.163	0.072	0.203	0.159	0.081	0.239	0.109

	Ce (ppm)	Sm (ppm)	Ba (ppm)	P (ppm)	S (ppm)	Mg (ppm)	As (ppm)	Na (ppm)
Mean	5.091	5.062	5.042	5.105	5.039	4.909	5.158	5.128
S.D.	0.012	0.006	0.012	0.103	0.025	0.005	0.021	0.051
% R.S.D.	0.226	0.123	0.235	2.021	0.488	0.105	0.415	0.986

	Mo (ppm)	Se (ppm)	Ag (ppm)	Pb (ppm)	Ti (ppm)	Cd (ppm)	B (ppm)	K (ppm)
Mean	5.107	5.081	4.928	5.008	4.949	5.036	5.060	5.121
S.D.	0.005	0.027	0.002	0.043	0.004	0.004	0.008	0.054
% R.S.D.	0.100	0.530	0.037	0.860	0.082	0.078	0.162	1.064

	Mn (ppm)	Sb (ppm)	V (ppm)	Be (ppm)	Tl (ppm)
Mean	5.038	4.718	5.082	5.185	4.835
S.D.	0.004	0.020	0.002	0.007	0.011
% R.S.D.	0.087	0.416	0.044	0.129	0.235

WHC-SD-WM-DP-192, REV. 0

Identity 1: CCB Identity 2: Quality Control 9:45 PM July 31, 1996
Task name : OPTIMA
Sample Weight : 1.0000 Solution Volume : 1.00
On-Peak Integrations : 3 Off-Peak Integrations : 1

	Zr (ppm)	Sr (ppm)	Bi (ppm)	Si (ppm)	Al (ppm)	Co (ppm)	Cu (ppm)	Li (ppm)
Mean	0.004	-0.000	-0.013	0.006	-0.006	-0.004	-0.001	-0.000
S.D.	0.001	0.000	0.009	0.001	0.004	0.002	0.000	0.000
% R.S.D.	18.728	360.555	63.937	24.255	80.741	43.018	43.484	341.197

	Zn (ppm)	Ni (ppm)	La (ppm)	Fe (ppm)	Ca (ppm)	Cr (ppm)	Nd (ppm)	U (ppm)
Mean	0.000	0.000	0.002	0.002	0.010	0.001	-0.005	0.149
S.D.	0.000	0.001	0.001	0.002	0.000	0.001	0.010	0.043
% R.S.D.	338.884	200.880	59.134	71.721	2.617	213.700	220.008	28.872

	Ce (ppm)	Sm (ppm)	Ba (ppm)	P (ppm)	S (ppm)	Mg (ppm)	As (ppm)	Na (ppm)
Mean	-0.036	0.037	-0.000	-0.003	0.009	0.000	-0.018	0.015
S.D.	0.012	0.007	0.000	0.014	0.002	0.000	0.004	0.002
% R.S.D.	34.189	19.308	113.797	408.820	22.418	0.000	20.459	15.748

	Mo (ppm)	Se (ppm)	Ag (ppm)	Pb (ppm)	Ti (ppm)	Cd (ppm)	B (ppm)	K (ppm)
Mean	-0.002	0.023	0.002	-0.008	0.001	0.001	0.002	-0.006
S.D.	0.001	0.011	0.001	0.005	0.000	0.000	0.000	0.004
% R.S.D.	53.934	46.366	46.997	67.179	47.142	50.746	18.718	57.300

	Mn (ppm)	Sb (ppm)	V (ppm)	Be (ppm)	Tl (ppm)
Mean	-0.000	-0.026	-0.003	-0.000	0.032
S.D.	0.000	0.065	0.001	0.000	0.005
% R.S.D.	1189.300	252.716	48.209	464.239	15.455

Identity 1: s96t002146_L Identity 2: .025ml-30ml-2ml-8ml 9:48 PM July 31, 1996
Task name : OPTIMA
Sample Weight : 1.0000 Solution Volume : 6005.00
On-Peak Integrations : 3 Off-Peak Integrations : 1

	Zr (ppm)	Sr (ppm)	Bi (ppm)	Si (ppm)	Al (ppm)	Co (ppm)	Cu (ppm)	Li (ppm)
Mean	28.787	-0.642	-6.356	299.910	31460.472	-26.986	6.784	4.576
S.D.	5.230	0.222	84.163	18.334	62.525	23.314	1.089	0.624
% R.S.D.	18.170	34.641	1324.054	6.113	0.199	86.393	16.047	13.643

	Zn (ppm)	Ni (ppm)	La (ppm)	Fe (ppm)	Ca (ppm)	Cr (ppm)	Nd (ppm)	U (ppm)
Mean	261.065	40.844	0.288	51.031	112.139	104.338	-5.210	620.473
S.D.	2.082	7.624	9.972	17.187	3.042	11.885	43.232	146.438
% R.S.D.	0.797	18.667	3467.534	33.680	2.713	11.390	829.844	23.601

	Ce (ppm)	Sm (ppm)	Ba (ppm)	P (ppm)	S (ppm)	Mg (ppm)	As (ppm)	Na (ppm)
Mean	-38.726	114.783	-0.359	231.099	467.693	3.190	-48.909	261702.737
S.D.	42.814	26.463	0.622	15.332	22.902	0.000	18.387	2133.835
% R.S.D.	110.557	23.055	173.205	6.635	4.897	0.000	37.594	0.815

	Mo (ppm)	Se (ppm)	Ag (ppm)	Pb (ppm)	Ti (ppm)	Cd (ppm)	B (ppm)	K (ppm)
Mean	65.971	173.337	16.973	-15.603	6.272	2.167	57.278	36459.361
S.D.	1.400	31.699	0.609	72.843	2.493	0.008	4.644	450.151
% R.S.D.	2.122	18.288	3.586	466.847	39.755	0.382	8.108	1.235

	Mn (ppm)	Sb (ppm)	V (ppm)	Be (ppm)	Tl (ppm)
Mean	2.331	-54.004	-8.046	1.988	343.434
S.D.	1.096	117.956	4.838	0.809	69.801
% R.S.D.	47.030	218.420	60.131	40.711	20.325

Identity 1: s96t002146 Identity 2: .025ml-30ml 9:51 PM July 31, 1996
Task name : OPTIMA
Sample Weight : 1.0000 Solution Volume : 1201.00
On-Peak Integrations : 3 Off-Peak Integrations : 1

	Zr (ppm)	Sr (ppm)	Bi (ppm)	Si (ppm)	Al (ppm)	Co (ppm)	Cu (ppm)	Li (ppm)
Mean	14.544	-0.180	-17.320	255.302	31845.992	-0.004	0.346	5.065
S.D.	1.088	0.118	10.017	1.378	66.070	2.327	0.639	0.295
% R.S.D.	7.482	65.465	57.833	0.540	0.207	51823.459	184.589	5.817

	Zn (ppm)	Ni (ppm)	La (ppm)	Fe (ppm)	Ca (ppm)	Cr (ppm)	Nd (ppm)	U (ppm)
Mean	9.328	15.451	5.168	4.315	-5.970	112.052	-15.189	42.944
S.D.	0.332	2.024	1.992	2.941	0.886	2.927	3.301	32.845
% R.S.D.	3.559	13.098	38.543	68.163	14.838	2.612	21.735	76.483

	Ce (ppm)	Sm (ppm)	Ba (ppm)	P (ppm)	S (ppm)	Mg (ppm)	As (ppm)	Na (ppm)
Mean	-26.420	-4.288	-0.108	201.868	406.355	0.142	-38.722	251497.988
S.D.	13.964	7.995	0.165	3.511	10.005	0.123	3.186	590.929
% R.S.D.	52.853	186.420	152.753	1.739	2.462	86.603	8.228	0.235

	Mo (ppm)	Se (ppm)	Ag (ppm)	Pb (ppm)	Ti (ppm)	Cd (ppm)	B (ppm)	K (ppm)
Mean	60.719	45.809	-0.408	8.601	0.481	4.758	60.161	36097.022
S.D.	0.694	4.934	0.625	11.214	0.225	0.375	1.727	97.531
% R.S.D.	1.143	10.771	152.926	130.387	46.834	7.873	2.871	0.270

	Mn (ppm)	Sb (ppm)	V (ppm)	Be (ppm)	Tl (ppm)
Mean	3.623	-36.826	-3.699	3.155	28.886
S.D.	0.220	22.439	0.387	0.004	24.966
% R.S.D.	6.078	60.933	10.472	0.137	86.429

Identity 1: s96t002146_D Identity 2: .025ml-30ml 9:54 PM July 31, 1996
Task name : OPTIMA
Sample Weight : 1.0000 Solution Volume : 1201.00
On-Peak Integrations : 3 Off-Peak Integrations : 1

	Zr (ppm)	Sr (ppm)	Bi (ppm)	Si (ppm)	Al (ppm)	Co (ppm)	Cu (ppm)	Li (ppm)
Mean	17.696	-0.128	-14.605	268.733	33156.038	5.375	0.379	5.526
S.D.	1.178	0.089	13.687	3.134	119.213	4.035	0.440	0.287
% R.S.D.	6.658	69.282	93.715	1.166	0.360	75.072	116.025	5.197

	Zn (ppm)	Ni (ppm)	La (ppm)	Fe (ppm)	Ca (ppm)	Cr (ppm)	Nd (ppm)	U (ppm)
Mean	9.744	19.437	0.030	13.132	-13.202	117.565	-3.137	58.274
S.D.	0.723	1.585	1.004	0.830	0.222	0.945	6.074	47.084
% R.S.D.	7.422	8.152	3343.288	6.318	1.685	0.804	193.624	80.799

	Ce (ppm)	Sm (ppm)	Ba (ppm)	P (ppm)	S (ppm)	Mg (ppm)	As (ppm)	Na (ppm)
Mean	-19.331	8.366	-0.323	228.263	427.086	-0.000	-18.141	258411.940
S.D.	17.107	9.154	0.311	18.775	6.038	0.000	4.639	2433.192
% R.S.D.	88.495	109.418	96.225	8.225	1.414	0.000	25.572	0.942

	Mo (ppm)	Se (ppm)	Ag (ppm)	Pb (ppm)	Ti (ppm)	Cd (ppm)	B (ppm)	K (ppm)
Mean	64.323	43.214	-1.027	11.777	1.137	2.053	65.411	37424.991
S.D.	2.440	13.013	0.908	2.667	0.612	0.972	0.944	441.851
% R.S.D.	3.794	30.114	88.366	22.647	53.851	47.338	1.444	1.181

	Mn (ppm)	Sb (ppm)	V (ppm)	Be (ppm)	Tl (ppm)
Mean	4.126	-64.563	-2.953	3.443	21.761
S.D.	0.005	11.572	1.507	0.292	19.589
% R.S.D.	0.130	17.923	51.040	8.491	90.019

Identity 1: s96t002146_A Identity 2: .025ml-2ml-28ml 9:57 PM July 31, 1996
Task name : OPTIMA
Sample Weight : 1.0000 Solution Volume : 1201.00
On-Peak Integrations : 3 Off-Peak Integrations : 1

	Zr (ppm)	Sr (ppm)	Bi (ppm)	Si (ppm)	Al (ppm)	Co (ppm)	Cu (ppm)	Li (ppm)
Mean	414.297	399.740	399.339	667.098	33182.016	410.223	408.518	394.639
S.D.	0.267	0.734	18.004	2.844	75.170	2.325	1.173	4.069
% R.S.D.	0.064	0.184	4.509	0.426	0.227	0.567	0.287	1.031

	Zn (ppm)	Ni (ppm)	La (ppm)	Fe (ppm)	Ca (ppm)	Cr (ppm)	Nd (ppm)	U (ppm)
Mean	423.747	419.044	403.061	416.541	382.445	531.052	397.444	873.213
S.D.	0.930	3.598	1.701	8.338	0.785	3.563	6.100	47.552
% R.S.D.	0.219	0.859	0.422	2.002	0.205	0.671	1.535	5.446

	Ce (ppm)	Sm (ppm)	Ba (ppm)	P (ppm)	S (ppm)	Mg (ppm)	As (ppm)	Na (ppm)
Mean	382.871	420.687	400.190	596.933	819.177	385.886	394.201	253369.761
S.D.	11.341	7.720	0.862	29.519	13.170	0.370	3.458	2344.792
% R.S.D.	2.962	1.835	0.216	4.945	1.608	0.096	0.877	0.925

	Mo (ppm)	Se (ppm)	Ag (ppm)	Pb (ppm)	Ti (ppm)	Cd (ppm)	B (ppm)	K (ppm)
Mean	469.854	414.726	356.030	462.002	396.623	408.229	465.925	36755.154
S.D.	0.560	14.429	1.016	7.273	0.505	3.248	2.247	345.838
% R.S.D.	0.119	3.479	0.285	1.574	0.127	0.796	0.482	0.941

	Mn (ppm)	Sb (ppm)	V (ppm)	Be (ppm)	Tl (ppm)
Mean	413.074	288.704	408.572	412.318	466.461
S.D.	1.766	10.075	1.234	0.862	31.121
% R.S.D.	0.428	3.490	0.302	0.209	6.672

Identity 1: ICSA Identity 2: Quality Control 10:00 PM July 31, 1996
Task name : OPTIMA
Sample Weight : 1.0000 Solution Volume : 1.00
On-Peak Integrations : 3 Off-Peak Integrations : 1

	Zr (ppm)	Sr (ppm)	Bi (ppm)	Si (ppm)	Al (ppm)	Co (ppm)	Cu (ppm)	Li (ppm)
Mean	0.003	0.001	-0.019	0.021	199.027	-0.006	-0.000	-0.000
S.D.	0.000	0.000	0.004	0.002	0.305	0.002	0.000	0.000
% R.S.D.	12.371	4.348	20.363	8.549	0.153	30.355	72.112	0.122

	Zn (ppm)	Ni (ppm)	La (ppm)	Fe (ppm)	Ca (ppm)	Cr (ppm)	Nd (ppm)	U (ppm)
Mean	-0.004	0.006	0.006	95.391	101.178	0.002	-0.025	0.093
S.D.	0.000	0.002	0.001	0.129	0.008	0.002	0.007	0.003
% R.S.D.	5.643	33.408	12.453	0.136	0.008	109.408	26.265	3.252

	Ce (ppm)	Sm (ppm)	Ba (ppm)	P (ppm)	S (ppm)	Mg (ppm)	As (ppm)	Na (ppm)
Mean	-0.039	0.029	0.003	0.044	-0.002	101.364	0.012	193.676
S.D.	0.003	0.004	0.000	0.002	0.004	0.066	0.005	1.256
% R.S.D.	7.073	12.352	0.000	4.001	191.230	0.065	41.964	0.649

	Mo (ppm)	Se (ppm)	Ag (ppm)	Pb (ppm)	Ti (ppm)	Cd (ppm)	B (ppm)	K (ppm)
Mean	-0.000	0.064	0.006	-0.008	0.001	0.003	0.011	0.031
S.D.	0.001	0.011	0.000	0.009	0.000	0.001	0.001	0.013
% R.S.D.	154.561	16.470	7.338	113.702	17.873	31.357	5.532	42.358

	Mn (ppm)	Sb (ppm)	V (ppm)	Be (ppm)	Tl (ppm)
Mean	0.012	-0.060	-0.003	0.003	-0.002
S.D.	0.000	0.027	0.000	0.000	0.011
% R.S.D.	3.993	45.351	4.438	0.017	556.251

Identity 1: ICSAB Identity 2: Quality Control 10:02 PM July 31, 1996
Task name : OPTIMA
Sample Weight : 1.0000 Solution Volume : 1.00
On-Peak Integrations : 3 Off-Peak Integrations : 1

	Zr (ppm)	Sr (ppm)	Bi (ppm)	Si (ppm)	Al (ppm)	Co (ppm)	Cu (ppm)	Li (ppm)
Mean	0.001	0.002	-0.049	0.017	198.176	0.481	0.499	0.946
S.D.	0.000	0.000	0.003	0.004	0.292	0.008	0.001	0.007
% R.S.D.	35.443	3.333	6.470	25.306	0.147	1.612	0.184	0.709

	Zn (ppm)	Ni (ppm)	La (ppm)	Fe (ppm)	Ca (ppm)	Cr (ppm)	Nd (ppm)	U (ppm)
Mean	0.968	0.965	0.004	92.903	100.210	0.497	-0.026	0.160
S.D.	0.003	0.007	0.001	0.264	0.076	0.003	0.006	0.029
% R.S.D.	0.287	0.750	36.070	0.284	0.076	0.697	23.862	18.245

	Ce (ppm)	Sm (ppm)	Ba (ppm)	P (ppm)	S (ppm)	Mg (ppm)	As (ppm)	Na (ppm)
Mean	-0.009	0.035	0.503	0.015	-0.003	100.344	-0.005	191.495
S.D.	0.011	0.006	0.000	0.003	0.004	0.218	0.007	1.346
% R.S.D.	113.171	15.668	0.079	17.426	129.282	0.217	138.156	0.703

	Mo (ppm)	Se (ppm)	Ag (ppm)	Pb (ppm)	Ti (ppm)	Cd (ppm)	B (ppm)	K (ppm)
Mean	-0.002	0.019	0.997	0.969	0.001	0.975	0.012	-0.001
S.D.	0.001	0.008	0.001	0.019	0.000	0.005	0.001	0.013
% R.S.D.	79.623	40.834	0.113	1.952	23.937	0.549	11.422	1133.635

	Mn (ppm)	Sb (ppm)	V (ppm)	Be (ppm)	Tl (ppm)
Mean	0.498	-0.143	0.489	0.493	0.060
S.D.	0.001	0.026	0.002	0.001	0.008
% R.S.D.	0.209	17.863	0.486	0.267	13.742

Identity 1: CCV Identity 2: Quality Control 10:05 PM July 31, 1996
Task name : OPTIMA
Sample Weight : 1.0000 Solution Volume : 1.00
On-Peak Integrations : 3 Off-Peak Integrations : 1

	Zr (ppm)	Sr (ppm)	Bi (ppm)	Si (ppm)	Al (ppm)	Co (ppm)	Cu (ppm)	Li (ppm)
Mean	4.911	4.998	4.933	4.748	4.964	4.940	5.144	5.144
S.D.	0.007	0.007	0.027	0.009	0.008	0.006	0.013	0.041
% R.S.D.	0.145	0.146	0.545	0.196	0.153	0.118	0.255	0.798

	Zn (ppm)	Ni (ppm)	La (ppm)	Fe (ppm)	Ca (ppm)	Cr (ppm)	Nd (ppm)	U (ppm)
Mean	5.016	4.923	5.010	5.011	4.967	4.936	5.193	9.822
S.D.	0.002	0.008	0.008	0.018	0.009	0.020	0.039	0.028
% R.S.D.	0.045	0.153	0.159	0.353	0.182	0.400	0.747	0.285

	Ce (ppm)	Sm (ppm)	Ba (ppm)	P (ppm)	S (ppm)	Mg (ppm)	As (ppm)	Na (ppm)
Mean	5.032	5.098	5.047	4.999	4.915	4.765	5.045	5.141
S.D.	0.008	0.011	0.010	0.050	0.054	0.012	0.010	0.020
% R.S.D.	0.159	0.210	0.194	1.005	1.102	0.242	0.196	0.398

	Mo (ppm)	Se (ppm)	Ag (ppm)	Pb (ppm)	Ti (ppm)	Cd (ppm)	B (ppm)	K (ppm)
Mean	4.948	5.000	4.828	4.911	4.879	4.930	5.050	5.089
S.D.	0.007	0.046	0.005	0.030	0.003	0.008	0.003	0.035
% R.S.D.	0.150	0.919	0.112	0.621	0.060	0.172	0.059	0.696

	Mn (ppm)	Sb (ppm)	V (ppm)	Be (ppm)	Tl (ppm)
Mean	4.937	4.667	4.998	5.151	4.816
S.D.	0.012	0.009	0.010	0.008	0.015
% R.S.D.	0.248	0.201	0.191	0.163	0.307

Identity 1: CCB Identity 2: Quality Control 10:07 PM July 31, 1996
Task name : OPTIMA
Sample Weight : 1.0000 Solution Volume : 1.00
On-Peak Integrations : 3 Off-Peak Integrations : 1

	Zr (ppm)	Sr (ppm)	Bi (ppm)	Si (ppm)	Al (ppm)	Co (ppm)	Cu (ppm)	Li (ppm)
Mean	-0.001	0.000	0.006	0.005	0.010	-0.004	0.001	0.000
S.D.	0.000	0.000	0.015	0.002	0.005	0.002	0.000	0.000
% R.S.D.	31.834	62.450	276.878	41.809	46.808	43.273	28.791	63.100

	Zn (ppm)	Ni (ppm)	La (ppm)	Fe (ppm)	Ca (ppm)	Cr (ppm)	Nd (ppm)	U (ppm)
Mean	0.001	0.002	-0.003	0.003	0.011	0.002	-0.002	0.013
S.D.	0.000	0.002	0.003	0.002	0.000	0.001	0.006	0.037
% R.S.D.	17.852	131.773	86.080	72.932	3.561	29.937	274.339	275.677

	Ce (ppm)	Sm (ppm)	Ba (ppm)	P (ppm)	S (ppm)	Mg (ppm)	As (ppm)	Na (ppm)
Mean	0.007	-0.007	0.000	-0.013	0.004	0.001	-0.018	0.041
S.D.	0.007	0.006	0.000	0.015	0.005	0.000	0.005	0.002
% R.S.D.	90.542	87.213	102.317	117.657	106.423	31.492	28.734	5.085

	Mo (ppm)	Se (ppm)	Ag (ppm)	Pb (ppm)	Ti (ppm)	Cd (ppm)	B (ppm)	K (ppm)
Mean	0.001	0.047	0.003	-0.002	0.001	-0.000	0.005	0.034
S.D.	0.001	0.013	0.001	0.002	0.000	0.000	0.001	0.009
% R.S.D.	71.335	27.420	21.318	98.044	30.163	173.145	10.669	26.412

	Mn (ppm)	Sb (ppm)	V (ppm)	Be (ppm)	Tl (ppm)
Mean	0.000	-0.004	-0.002	-0.000	0.038
S.D.	0.000	0.038	0.001	0.000	0.028
% R.S.D.	507.490	872.039	32.789	89.975	73.005

FILE No: 960731C.DAT

LABCORE Data Entry Template for Worklist# 10565

Analyst: J. WORRELL **Instrument:** ICP01 _____ **Book#** 58848A

Method: LA-505-151/~~161~~ Rev/Mod D-3
JW 7-31-96

Worklist Comment: ICP AW-101 (DIRECT)

S	Type	Sample#	R	A	Test	Matrix	Group#	Project
1	ICV				@ICP-QC	QC		
2	ICB				@ICP-QC	QC		
3	LLS				@ICP-QC	QC		
4	ICSA				@ICP-QC	QC		
5	ICSAB				@ICP-QC	QC		
6	~~SERDIL~~	~~S96T001573~~	0	D	@ICP-D01	LIQUID		
7	~~SAMPLE~~	~~S96T001573~~	0	D	@ICP-D01	LIQUID	96000103	AW-101 PUSH
		Analytes Requested:			AG-D-01 , AL-D-01 , AS-D-01 , B-D-01 , BA-D-01 , BE-D-01 , BI-D-01 , CA-D-01 , CD-D-01 , CE-D-01 , CO-D-01 , CR-D-01 , CU-D-01 , FE-D-01 , K-D-01 , LA-D-01 , LI-D-01 , MG-D-01 , MN-D-01 , MO-D-01 , NA-D-01 , ND-D-01 , NI-D-01 , P-D-01 , PB-D-01 , S-D-01 , SB-D-01 , SE-D-01 , SI-D-01 , SM-D-01 , SR-D-01 , TI-D-01 , TL-D-01 , U-D-01 , V-D-01 , ZN-D-01 , ZR-D-01			
8	~~DUP~~	~~S96T001573~~	0	D	@ICP-D01	LIQUID		
9	~~SPK~~	~~S96T001573~~	0	D	@ICP-D01	LIQUID		
10	~~CCV~~				@ICP-QC	QC		
11	~~CCB~~				@ICP-QC	QC		
12	SERDIL	S96T001768	0	D	@ICP-D01	LIQUID		
13	SAMPLE	S96T001768	0	D	@ICP-D01	LIQUID	96000103	AW-101 PUSH
		Analytes Requested:			AG-D-01 , AL-D-01 , AS-D-01 , B-D-01 , BA-D-01 , BE-D-01 , BI-D-01 , CA-D-01 , CD-D-01 , CE-D-01 , CO-D-01 , CR-D-01 , CU-D-01 , FE-D-01 , K-D-01 , LA-D-01 , LI-D-01 , MG-D-01 , MN-D-01 , MO-D-01 , NA-D-01 , ND-D-01 , NI-D-01 , P-D-01 , PB-D-01 , S-D-01 , SB-D-01 , SE-D-01 , SI-D-01 ,			

JW 7-31-96

Data Entry Comments: Raw data is final result in ug/ml

S96T001768 Al = 1.13e+4 ug/ml

S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

WHC-SD-WM-DP-192, REV. 0

LABCORE Data Entry Template for Worklist# 10565

S	Type	Sample#	R	A	Test	Matrix	Group#	Project
					SM-D-01 , SR-D-01 , TI-D-01 , TL-D-01 , U-D-01 , V-D-01 , ZN-D-01 , ZR-D-01			
14	DUP	S96T001768	0	D	@ICP-D01	LIQUID		
15	SPK	S96T001768	0	D	@ICP-D01	LIQUID		
CCV CCB 16	SERDIL	S96T002767	0	D	@ICP-D01	LIQUID		
17	SAMPLE	S96T002767	0	D	@ICP-D01	LIQUID	96000103	AW-101 PUSH
	Analytes Requested:				AG-D-01 , AL-D-01 , AS-D-01 , B-D-01 , BA-D-01 , BE-D-01 , BI-D-01 , CA-D-01 , CD-D-01 , CE-D-01 , CO-D-01 , CR-D-01 , CU-D-01 , FE-D-01 , K-D-01 , LA-D-01 , LI-D-01 , MG-D-01 , MN-D-01 , MO-D-01 , NA-D-01 , ND-D-01 , NI-D-01 , P-D-01 , PB-D-01 , S-D-01 , SB-D-01 , SE-D-01 , SI-D-01 , SM-D-01 , SR-D-01 , TI-D-01 , TL-D-01 , U-D-01 , V-D-01 , ZN-D-01 , ZR-D-01			
18	DUP	S96T002767	0	D	@ICP-D01	LIQUID		
19	SPK	S96T002767	0	D	@ICP-D01	LIQUID		
~~20 CCV~~					@ICP-QC	QC		
~~21 CCB~~					@ICP-QC	QC		
22	SERDIL	S96T003236	0	D	@ICP-D01	LIQUID		
23	SAMPLE	S96T003236	0	D	@ICP-D01	LIQUID	96000462	AW-101 PUSH
	Analytes Requested:				AG-D-01 , AL-D-01 , AS-D-01 , B-D-01 , BA-D-01 , BE-D-01 , BI-D-01 , CA-D-01 , CD-D-01 , CE-D-01 , CO-D-01 , CR-D-01 , CU-D-01 , FE-D-01 , K-D-01 , LA-D-01 , LI-D-01 , MG-D-01 , MN-D-01 , MO-D-01 , NA-D-01 , ND-D-01 , NI-D-01 , P-D-01 , PB-D-01 , S-D-01 , SB-D-01 , SE-D-01 , SI-D-01 , SM-D-01 , SR-D-01 , TI-D-01 , TL-D-01 , U-D-01 , V-D-01 , ZN-D-01 , ZR-D-01			
24	DUP	S96T003236	0	D	@ICP-D01	LIQUID		
25	SPK	S96T003236	0	D	@ICP-D01	LIQUID		
CCV CCB 26	SERDIL	S96T003545	0	D	@ICP-D01	LIQUID		
27	SAMPLE	S96T003545	0	D	@ICP-D01	LIQUID	96000462	AW-101 PUSH

Data Entry Comments:

S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

07/08/96 06:13
A-0004-1

LABCORE Data Entry Template for Worklist# 10565

S	Type	Sample#	R	A	Test	Matrix	Group#	Project
		Analytes Requested:			AG-D-01 , AL-D-01 , AS-D-01 , B-D-01 , BA-D-01 , BE-D-01 , BI-D-01 , CA-D-01 , CD-D-01 , CE-D-01 , CO-D-01 , CR-D-01 , CU-D-01 , FE-D-01 , K-D-01 , LA-D-01 , LI-D-01 , MG-D-01 , MN-D-01 , MO-D-01 , NA-D-01 , ND-D-01 , NI-D-01 , P-D-01 , PB-D-01 , S-D-01 , SB-D-01 , SE-D-01 , SI-D-01 , SM-D-01 , SR-D-01 , TI-D-01 , TL-D-01 , U-D-01 , V-D-01 , ZN-D-01 , ZR-D-01			
28	DUP	S96T003545	0	D	@ICP-D01	LIQUID		
29	SPK	S96T003545	0	D	@ICP-D01	LIQUID		
30	ICSA				@ICP-QC	QC		
31	ICSAB				@ICP-QC	QC		
32	CCV				@ICP-QC	QC		
33	CCB				@ICP-QC	QC		

Final page for worklist # 10565

Analyst Signature: [signature] Date: 7-31-96

Reviewed by: Saul M. Perez Analyst Signature: [signature] Date: 8/19/96

			DF
S96T001768	DIL 5X	.025ml-2ml-2ml-8ml	6005
	SAM	.025-30	1201
	DUP	.025-30	1201
	PSPK	.025-2-28	1201
S96T002767	DIL 5X	.025-30-2-8	6005
	SAM	.025-30	1201
	DUP	.025-30	1201
	PSPK	.025-2-28	1201
S96T003236	DIL 5X	.025-30-2-8	6005
	SAM	.025-30	1201
	DUP	.025-30	1201
	PSPK	.025-2-28	1201
S96T003545	DIL 5X	.025-30-2-8	6005
	SAM	.025-30	120
	DUP	.025-30	120
	PSPK	.025-2-28	12

Data Entry Comments: Spike result calculation:

S96T001768 $Cr = \frac{\left(\frac{526.886}{1201}\right) - \left(\frac{113.749}{1201}\right)}{0.333} \times 100 = 103.3\%$

S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

Note: Spike true value is 0.333 ppm for all elements except for U = 0.666 ppm.

Identity 1: ICV Identity 2: Quality Control 6:42 PM July 31, 1996
Task name : OPTIMA
Sample Weight : 1.0000 Solution Volume : 1.00
On-Peak Integrations : 3 Off-Peak Integrations : 1

	Zr (ppm)	Sr (ppm)	Bi (ppm)	Si (ppm)	Al (ppm)	Co (ppm)	Cu (ppm)	Li (ppm)
Mean	4.935	4.966	4.960	4.816	4.926	5.054	5.074	5.077
S.D.	0.008	0.008	0.005	0.006	0.010	0.012	0.005	0.017
% R.S.D.	0.157	0.165	0.107	0.132	0.211	0.230	0.105	0.345

	Zn (ppm)	Ni (ppm)	La (ppm)	Fe (ppm)	Ca (ppm)	Cr (ppm)	Nd (ppm)	U (ppm)
Mean	5.159	5.029	4.999	5.052	4.947	5.059	5.121	9.636
S.D.	0.005	0.022	0.006	0.011	0.004	0.012	0.010	0.019
% R.S.D.	0.089	0.437	0.114	0.214	0.089	0.238	0.189	0.198

	Ce (ppm)	Sm (ppm)	Ba (ppm)	P (ppm)	S (ppm)	Mg (ppm)	As (ppm)	Na (ppm)
Mean	4.992	5.011	4.988	4.949	4.951	4.873	5.121	5.015
S.D.	0.024	0.007	0.006	0.158	0.039	0.012	0.018	0.013
% R.S.D.	0.478	0.150	0.122	3.193	0.783	0.247	0.350	0.256

	Mo (ppm)	Se (ppm)	Ag (ppm)	Pb (ppm)	Ti (ppm)	Cd (ppm)	B (ppm)	K (ppm)
Mean	5.039	4.954	4.943	5.051	4.902	5.018	5.081	5.161
S.D.	0.007	0.034	0.005	0.027	0.008	0.006	0.016	0.026
% R.S.D.	0.148	0.686	0.109	0.527	0.159	0.116	0.320	0.510

	Mn (ppm)	Sb (ppm)	V (ppm)	Be (ppm)	Tl (ppm)
Mean	5.046	4.638	5.075	5.165	4.868
S.D.	0.011	0.020	0.012	0.005	0.037
% R.S.D.	0.218	0.440	0.234	0.090	0.759

John Worrell
7-31-96

AW-101

SST-5 58B48A

FILENAME: 960731C

5947001768, 2767, 3236, 3545

SIGNATURE ABOVE REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 1344 TO 1872.

Identity 1: ICB Identity 2: Quality Control 6:45 PM July 31, 1996
Task name : OPTIMA
Sample Weight : 1.0000 Solution Volume : 1.00
On-Peak Integrations : 3 Off-Peak Integrations : 1

	Zr (ppm)	Sr (ppm)	Bi (ppm)	Si (ppm)	Al (ppm)	Co (ppm)	Cu (ppm)	Li (ppm)
Mean	0.004	-0.000	-0.011	0.010	-0.010	-0.002	0.000	-0.000
S.D.	0.000	0.000	0.007	0.002	0.003	0.000	0.000	0.000
% R.S.D.	4.950	866.025	64.706	19.198	30.586	0.213	166.842	709.170

	Zn (ppm)	Ni (ppm)	La (ppm)	Fe (ppm)	Ca (ppm)	Cr (ppm)	Nd (ppm)	U (ppm)
Mean	0.001	0.007	0.004	0.002	0.001	0.001	-0.007	0.167
S.D.	0.000	0.002	0.001	0.002	0.000	0.001	0.012	0.037
% R.S.D.	39.717	25.364	36.525	67.264	14.741	75.260	174.802	22.398

	Ce (ppm)	Sm (ppm)	Ba (ppm)	P (ppm)	S (ppm)	Mg (ppm)	As (ppm)	Na (ppm)
Mean	-0.024	0.029	-0.000	-0.017	0.003	0.001	-0.013	-0.003
S.D.	0.008	0.006	0.000	0.014	0.007	0.000	0.004	0.002
% R.S.D.	35.360	22.434	261.008	84.125	268.867	33.333	29.218	74.991

	Mo (ppm)	Se (ppm)	Ag (ppm)	Pb (ppm)	Ti (ppm)	Cd (ppm)	B (ppm)	K (ppm)
Mean	0.000	0.037	-0.001	-0.010	0.002	0.001	0.006	0.059
S.D.	0.001	0.009	0.000	0.007	0.000	0.001	0.001	0.024
% R.S.D.	368.515	23.903	33.838	70.278	8.115	125.134	18.622	41.143

	Mn (ppm)	Sb (ppm)	V (ppm)	Be (ppm)	Tl (ppm)
Mean	0.000	-0.038	-0.003	0.000	0.034
S.D.	0.000	0.027	0.000	0.000	0.016
% R.S.D.	46.531	71.377	14.040	76.244	47.054

WHC-SD-WM-DP-192, REV. 0
WHC-SD-WM-DP-192, REV. 0

Identity 1: LLS Identity 2: Quality Control 6:48 PM July 31, 1996
Task name : OPTIMA
Sample Weight : 1.0000 Solution Volume : 1.00
On-Peak Integrations : 3 Off-Peak Integrations : 1

	Zr (ppm)	Sr (ppm)	Bi (ppm)	Si (ppm)	Al (ppm)	Co (ppm)	Cu (ppm)	Li (ppm)
Mean	0.025	0.020	0.190	0.120	0.101	0.031	0.020	0.020
S.D.	0.001	0.000	0.008	0.001	0.003	0.003	0.000	0.000
% R.S.D.	2.212	0.181	4.425	0.824	2.892	10.735	0.860	0.387

	Zn (ppm)	Ni (ppm)	La (ppm)	Fe (ppm)	Ca (ppm)	Cr (ppm)	Nd (ppm)	U (ppm)
Mean	0.022	0.048	0.108	0.111	0.190	0.018	0.188	0.621
S.D.	0.001	0.002	0.003	0.004	0.001	0.002	0.003	0.025
% R.S.D.	2.993	5.005	2.766	3.711	0.299	9.444	1.772	4.009

	Ce (ppm)	Sm (ppm)	Ba (ppm)	P (ppm)	S (ppm)	Mg (ppm)	As (ppm)	Na (ppm)
Mean	0.172	0.227	0.102	0.403	0.202	0.200	0.188	0.202
S.D.	0.007	0.008	0.000	0.008	0.006	0.001	0.004	0.002
% R.S.D.	4.238	3.437	0.168	1.952	2.836	0.446	2.203	1.203

	Mo (ppm)	Se (ppm)	Ag (ppm)	Pb (ppm)	Ti (ppm)	Cd (ppm)	B (ppm)	K (ppm)
Mean	0.100	0.231	0.017	0.213	0.022	0.010	0.106	0.558
S.D.	0.002	0.009	0.001	0.020	0.000	0.001	0.001	0.006
% R.S.D.	1.719	3.742	3.034	9.546	1.922	7.676	0.620	1.132

	Mn (ppm)	Sb (ppm)	V (ppm)	Be (ppm)	Tl (ppm)
Mean	0.020	0.132	0.101	0.011	0.406
S.D.	0.001	0.032	0.001	0.000	0.022
% R.S.D.	3.173	24.024	0.631	3.467	5.423

Identity 1: ICSA Identity 2: Quality Control 6:51 PM July 31, 1996
Task name : OPTIMA
Sample Weight : 1.0000 Solution Volume : 1.00
On-Peak Integrations : 3 Off-Peak Integrations : 1

	Zr (ppm)	Sr (ppm)	Bi (ppm)	Si (ppm)	Al (ppm)	Co (ppm)	Cu (ppm)	Li (ppm)
Mean	0.002	0.002	-0.025	0.020	197.983	-0.004	0.001	0.000
S.D.	0.000	0.000	0.006	0.001	0.453	0.000	0.000	0.000
% R.S.D.	13.089	6.667	23.720	5.506	0.229	0.249	30.225	7.940

	Zn (ppm)	Ni (ppm)	La (ppm)	Fe (ppm)	Ca (ppm)	Cr (ppm)	Nd (ppm)	U (ppm)
Mean	-0.004	0.009	0.000	94.787	101.039	0.002	-0.026	0.061
S.D.	0.000	0.002	0.001	0.212	0.344	0.001	0.003	0.015
% R.S.D.	5.466	18.314	306.264	0.224	0.341	66.842	10.526	24.631

	Ce (ppm)	Sm (ppm)	Ba (ppm)	P (ppm)	S (ppm)	Mg (ppm)	As (ppm)	Na (ppm)
Mean	-0.014	0.031	0.003	0.033	-0.019	99.820	0.010	193.459
S.D.	0.009	0.005	0.000	0.013	0.017	0.329	0.007	0.465
% R.S.D.	67.035	16.148	5.062	40.026	89.440	0.329	66.267	0.240

	Mo (ppm)	Se (ppm)	Ag (ppm)	Pb (ppm)	Ti (ppm)	Cd (ppm)	B (ppm)	K (ppm)
Mean	-0.003	0.061	0.001	-0.009	0.001	0.002	0.013	-0.080
S.D.	0.001	0.011	0.000	0.003	0.000	0.001	0.001	0.012
% R.S.D.	40.783	17.621	52.641	34.544	0.431	60.001	9.140	15.244

	Mn (ppm)	Sb (ppm)	V (ppm)	Be (ppm)	Tl (ppm)
Mean	0.011	0.007	-0.001	0.003	-0.003
S.D.	0.001	0.018	0.001	0.000	0.011
% R.S.D.	7.636	241.249	38.485	4.987	406.182

Identity 1: ICSAB Identity 2: Quality Control 6:54 PM July 31, 1996
Task name : OPTIMA
Sample Weight : 1.0000 Solution Volume : 1.00
On-Peak Integrations : 3 Off-Peak Integrations : 1

	Zr (ppm)	Sr (ppm)	Bi (ppm)	Si (ppm)	Al (ppm)	Co (ppm)	Cu (ppm)	Li (ppm)
Mean	-0.003	0.002	-0.049	0.014	196.345	0.472	0.502	0.965
S.D.	0.002	0.000	0.004	0.001	0.764	0.002	0.001	0.008
% R.S.D.	59.233	3.704	8.415	3.714	0.389	0.411	0.285	0.874

	Zn (ppm)	Ni (ppm)	La (ppm)	Fe (ppm)	Ca (ppm)	Cr (ppm)	Nd (ppm)	U (ppm)
Mean	0.956	0.957	0.007	93.155	100.235	0.486	-0.012	0.053
S.D.	0.001	0.003	0.001	0.221	0.146	0.004	0.003	0.033
% R.S.D.	0.058	0.336	20.888	0.237	0.146	0.809	27.424	61.066

	Ce (ppm)	Sm (ppm)	Ba (ppm)	P (ppm)	S (ppm)	Mg (ppm)	As (ppm)	Na (ppm)
Mean	-0.015	0.022	0.502	0.028	-0.013	98.383	0.023	194.143
S.D.	0.007	0.007	0.001	0.013	0.002	0.137	0.007	1.655
% R.S.D.	47.080	32.726	0.157	44.957	13.793	0.140	29.997	0.852

	Mo (ppm)	Se (ppm)	Ag (ppm)	Pb (ppm)	Ti (ppm)	Cd (ppm)	B (ppm)	K (ppm)
Mean	-0.002	0.055	0.992	0.961	0.000	0.967	0.012	-0.071
S.D.	0.001	0.004	0.001	0.015	0.000	0.002	0.001	0.010
% R.S.D.	54.596	7.012	0.092	1.589	45.877	0.254	9.254	13.962

	Mn (ppm)	Sb (ppm)	V (ppm)	Be (ppm)	Tl (ppm)
Mean	0.496	-0.054	0.485	0.492	0.058
S.D.	0.001	0.009	0.003	0.000	0.024
% R.S.D.	0.134	17.352	0.528	0.074	42.259

Identity 1: s96t001768_L Identity 2: .025ml-30ml-2ml-8ml 6:59 PM July 31, 1996
Task name : OPTIMA
Sample Weight : 1.0000 Solution Volume : 6005.00
On-Peak Integrations : 3 Off-Peak Integrations : 1

	Zr (ppm)	Sr (ppm)	Bi (ppm)	Si (ppm)	Al (ppm)	Co (ppm)	Cu (ppm)	Li (ppm)
Mean	31.361	-1.027	-16.736	280.134	30700.941	-13.564	0.748	5.258
S.D.	2.615	0.222	45.931	9.816	87.711	20.189	0.782	0.624
% R.S.D.	8.339	21.651	274.441	3.504	0.286	148.839	104.669	11.873

	Zn (ppm)	Ni (ppm)	La (ppm)	Fe (ppm)	Ca (ppm)	Cr (ppm)	Nd (ppm)	U (ppm)
Mean	158.299	33.425	28.973	41.159	422.902	106.153	-62.355	868.071
S.D.	0.592	6.994	9.999	19.800	14.243	3.654	13.153	213.462
% R.S.D.	0.374	20.924	34.511	48.107	3.368	3.442	21.093	24.590

	Ce (ppm)	Sm (ppm)	Ba (ppm)	P (ppm)	S (ppm)	Mg (ppm)	As (ppm)	Na (ppm)
Mean	-73.643	91.904	-1.796	194.355	409.389	28.711	-63.464	250141.519
S.D.	46.698	39.761	0.539	115.281	34.017	12.537	61.788	152.546
% R.S.D.	63.412	43.263	30.000	59.315	8.309	43.667	97.360	0.061

	Mo (ppm)	Se (ppm)	Ag (ppm)	Pb (ppm)	Ti (ppm)	Cd (ppm)	B (ppm)	K (ppm)
Mean	53.450	133.355	1.488	104.561	5.435	7.042	68.428	35866.606
S.D.	2.945	60.683	1.584	0.328	1.814	1.614	3.674	107.638
% R.S.D.	5.510	45.505	106.480	0.314	33.376	22.923	5.369	0.300

	Mn (ppm)	Sb (ppm)	V (ppm)	Be (ppm)	Tl (ppm)
Mean	2.668	-197.372	-6.393	2.975	207.900
S.D.	1.094	112.987	4.593	1.415	144.223
% R.S.D.	41.001	57.246	71.842	47.568	69.371

WHC-SD-WM-DP-192, REV. 0

Identity 1: s96t001768 Identity 2: .025ml-30ml 7:02 PM July 31, 1996
Task name : OPTIMA
Sample Weight : 1.0000 Solution Volume : 1201.00
On-Peak Integrations : 3 Off-Peak Integrations : 1

	Zr (ppm)	Sr (ppm)	Bi (ppm)	Si (ppm)	Al (ppm)	Co (ppm)	Cu (ppm)	Li (ppm)
Mean	14.367	-0.180	-16.043	243.486	31268.369	2.686	-0.007	5.993
S.D.	1.578	0.118	1.988	2.773	57.709	2.325	0.125	0.170
% R.S.D.	10.981	65.465	12.391	1.139	0.185	86.585	1719.468	2.840

	Zn (ppm)	Ni (ppm)	La (ppm)	Fe (ppm)	Ca (ppm)	Cr (ppm)	Nd (ppm)	U (ppm)
Mean	12.915	22.631	1.740	13.135	-9.250	113.749	-31.929	47.124
S.D.	0.645	1.633	1.008	3.810	0.688	2.057	15.789	37.512
% R.S.D.	4.996	7.217	57.950	29.009	7.441	1.808	49.452	79.601

	Ce (ppm)	Sm (ppm)	Ba (ppm)	P (ppm)	S (ppm)	Mg (ppm)	As (ppm)	Na (ppm)
Mean	-15.376	6.813	-0.144	214.052	430.253	1.772	-19.689	242085.360
S.D.	6.318	5.801	0.190	34.280	5.833	0.747	2.535	1533.092
% R.S.D.	41.091	85.142	132.288	16.015	1.356	42.143	12.875	0.633

	Mo (ppm)	Se (ppm)	Ag (ppm)	Pb (ppm)	Ti (ppm)	Cd (ppm)	B (ppm)	K (ppm)
Mean	61.452	38.282	-1.235	65.926	1.040	2.377	62.842	34723.168
S.D.	3.884	12.470	0.721	5.043	0.226	0.562	2.067	240.951
% R.S.D.	6.321	32.574	58.388	7.650	21.729	23.652	3.289	0.694

	Mn (ppm)	Sb (ppm)	V (ppm)	Be (ppm)	Tl (ppm)
Mean	2.500	-46.090	-2.274	2.486	26.029
S.D.	0.435	14.011	0.943	0.161	27.923
% R.S.D.	17.384	30.399	41.481	6.459	107.275

Identity 1: s96t001768_d Identity 2: .025ml-30ml 7:05 PM July 31, 1996
Task name : OPTIMA
Sample Weight : 1.0000 Solution Volume : 1201.00
On-Peak Integrations : 3 Off-Peak Integrations : 1

	Zr (ppm)	Sr (ppm)	Bi (ppm)	Si (ppm)	Al (ppm)	Co (ppm)	Cu (ppm)	Li (ppm)
Mean	19.168	-0.257	10.498	268.653	33271.168	-6.744	-0.551	6.425
S.D.	1.357	0.160	7.465	3.994	96.401	0.005	0.576	0.378
% R.S.D.	7.080	62.450	71.109	1.487	0.290	0.080	104.614	5.877

	Zn (ppm)	Ni (ppm)	La (ppm)	Fe (ppm)	Ca (ppm)	Cr (ppm)	Nd (ppm)	U (ppm)
Mean	13.867	18.382	4.071	9.740	-12.417	120.015	0.731	140.569
S.D.	0.418	0.270	2.001	2.169	0.212	0.877	2.978	42.315
% R.S.D.	3.016	1.471	49.145	22.264	1.704	0.730	407.502	30.102

	Ce (ppm)	Sm (ppm)	Ba (ppm)	P (ppm)	S (ppm)	Mg (ppm)	As (ppm)	Na (ppm)
Mean	-19.197	26.341	-0.275	202.203	458.220	0.567	-16.693	257030.161
S.D.	13.662	9.313	0.272	21.265	7.127	0.123	4.211	1795.604
% R.S.D.	71.165	35.356	98.764	10.516	1.555	21.651	25.228	0.699

	Mo (ppm)	Se (ppm)	Ag (ppm)	Pb (ppm)	Ti (ppm)	Cd (ppm)	B (ppm)	K (ppm)
Mean	64.873	29.404	-1.913	18.763	1.586	0.867	63.691	36776.786
S.D.	0.644	15.585	0.731	9.266	0.740	0.816	1.772	249.158
% R.S.D.	0.992	53.002	38.223	49.384	46.656	94.223	2.782	0.677

	Mn (ppm)	Sb (ppm)	V (ppm)	Be (ppm)	Tl (ppm)
Mean	2.367	-55.057	-3.934	2.594	-28.924
S.D.	0.573	14.893	1.216	0.005	17.248
% R.S.D.	24.187	27.050	30.901	0.210	59.632

Identity 1: s96t001768_A Identity 2: .025ml-2ml-28ml 7:08 PM July 31, 1996
Task name : OPTIMA
Sample Weight : 1.0000 Solution Volume : 1201.00
On-Peak Integrations : 3 Off-Peak Integrations : 1

	Zr (ppm)	Sr (ppm)	Bi (ppm)	Si (ppm)	Al (ppm)	Co (ppm)	Cu (ppm)	Li (ppm)
Mean	412.822	403.179	379.513	663.908	33540.774	399.469	413.857	403.737
S.D.	1.737	1.034	12.662	5.474	81.421	2.322	1.654	4.647
% R.S.D.	0.421	0.256	3.337	0.824	0.243	0.581	0.400	1.151

	Zn (ppm)	Ni (ppm)	La (ppm)	Fe (ppm)	Ca (ppm)	Cr (ppm)	Nd (ppm)	U (ppm)
Mean	419.408	426.655	403.027	417.644	388.412	526.886	410.135	802.082
S.D.	1.371	7.333	2.942	3.096	3.302	2.213	0.886	71.403
% R.S.D.	0.327	1.719	0.730	0.741	0.850	0.420	0.216	8.902

	Ce (ppm)	Sm (ppm)	Ba (ppm)	P (ppm)	S (ppm)	Mg (ppm)	As (ppm)	Na (ppm)
Mean	376.575	419.413	404.872	633.140	866.024	384.819	397.341	260425.437
S.D.	18.000	10.654	1.274	1.884	12.885	2.309	5.704	2439.563
% R.S.D.	4.780	2.540	0.315	0.297	1.488	0.600	1.436	0.937

	Mo (ppm)	Se (ppm)	Ag (ppm)	Pb (ppm)	Tl (ppm)	Cd (ppm)	B (ppm)	K (ppm)
Mean	463.502	476.479	349.607	427.537	396.968	400.333	466.103	37899.552
S.D.	2.291	4.421	0.777	10.990	0.683	2.130	2.360	441.114
% R.S.D.	0.494	0.928	0.222	2.571	0.172	0.532	0.506	1.164

	Mn (ppm)	Sb (ppm)	V (ppm)	Be (ppm)	Tl (ppm)
Mean	407.206	318.996	404.726	413.169	391.507
S.D.	1.309	13.381	0.288	1.305	26.118
% R.S.D.	0.322	4.195	0.071	0.316	6.671

Identity 1: ICV Identity 2: Quality Control 7:11 PM July 31, 1996
Task name : OPTIMA
Sample Weight : 1.0000 Solution Volume : 1.00
On-Peak Integrations : 3 Off-Peak Integrations : 1

	Zr (ppm)	Sr (ppm)	Bi (ppm)	Si (ppm)	Al (ppm)	Co (ppm)	Cu (ppm)	Li (ppm)
Mean	4.909	4.974	4.936	4.749	4.909	4.937	5.116	5.128
S.D.	0.004	0.005	0.030	0.004	0.013	0.003	0.008	0.009
% R.S.D.	0.089	0.093	0.614	0.084	0.264	0.068	0.155	0.169

	Zn (ppm)	Ni (ppm)	La (ppm)	Fe (ppm)	Ca (ppm)	Cr (ppm)	Nd (ppm)	U (ppm)
Mean	5.023	4.940	4.996	4.981	4.947	4.952	5.193	9.877
S.D.	0.005	0.015	0.014	0.025	0.007	0.011	0.011	0.025
% R.S.D.	0.108	0.297	0.275	0.510	0.131	0.220	0.215	0.253

	Ce (ppm)	Sm (ppm)	Ba (ppm)	P (ppm)	S (ppm)	Mg (ppm)	As (ppm)	Na (ppm)
Mean	5.027	5.085	5.018	4.963	4.888	4.759	5.056	5.087
S.D.	0.017	0.007	0.005	0.070	0.012	0.008	0.020	0.014
% R.S.D.	0.329	0.130	0.101	1.417	0.237	0.159	0.391	0.272

	Mo (ppm)	Se (ppm)	Ag (ppm)	Pb (ppm)	Ti (ppm)	Cd (ppm)	B (ppm)	K (ppm)
Mean	4.939	4.963	4.843	4.898	4.866	4.937	5.047	5.122
S.D.	0.023	0.042	0.003	0.025	0.006	0.004	0.006	0.026
% R.S.D.	0.473	0.851	0.057	0.505	0.120	0.082	0.119	0.516

	Mn (ppm)	Sb (ppm)	V (ppm)	Be (ppm)	Tl (ppm)
Mean	4.948	4.720	5.004	5.144	4.852
S.D.	0.006	0.038	0.006	0.009	0.030
% R.S.D.	0.126	0.795	0.120	0.177	0.609

Identity 1: CCB Identity 2: Quality Control 7:14 PM July 31, 1996
Task name : OPTIMA
Sample Weight : 1.0000 Solution Volume : 1.00
On-Peak Integrations : 3 Off-Peak Integrations : 1

	Zr (ppm)	Sr (ppm)	Bi (ppm)	Si (ppm)	Al (ppm)	Co (ppm)	Cu (ppm)	Li (ppm)
Mean	0.000	0.000	0.006	0.006	0.001	0.004	0.001	0.000
S.D.	0.001	0.000	0.002	0.004	0.007	0.003	0.000	0.000
% R.S.D.	481.426	42.857	41.652	60.359	1123.044	75.055	40.582	41.240

	Zn (ppm)	Ni (ppm)	La (ppm)	Fe (ppm)	Ca (ppm)	Cr (ppm)	Nd (ppm)	U (ppm)
Mean	0.002	0.001	0.003	0.003	0.008	0.001	-0.001	0.033
S.D.	0.000	0.001	0.001	0.001	0.000	0.002	0.010	0.015
% R.S.D.	9.756	68.611	24.472	15.867	2.936	116.035	645.270	46.187

	Ce (ppm)	Sm (ppm)	Ba (ppm)	P (ppm)	S (ppm)	Mg (ppm)	As (ppm)	Na (ppm)
Mean	-0.010	0.002	0.000	-0.015	0.002	0.001	-0.005	0.015
S.D.	0.002	0.004	0.000	0.004	0.001	0.000	0.001	0.001
% R.S.D.	24.384	241.912	50.000	26.913	57.908	25.000	19.111	7.873

	Mo (ppm)	Se (ppm)	Ag (ppm)	Pb (ppm)	Ti (ppm)	Cd (ppm)	B (ppm)	K (ppm)
Mean	0.001	0.025	0.004	-0.017	0.001	0.001	0.006	-0.014
S.D.	0.001	0.013	0.000	0.003	0.000	0.001	0.001	0.017
% R.S.D.	80.789	52.034	0.042	15.996	17.931	83.886	20.167	123.970

	Mn (ppm)	Sb (ppm)	V (ppm)	Be (ppm)	Tl (ppm)
Mean	0.001	-0.015	-0.002	0.000	0.033
S.D.	0.001	0.028	0.001	0.000	0.010
% R.S.D.	88.363	188.063	37.826	68.113	30.427

WHC-SD-WM-DP-192, REV. 0

Identity 1: s96t002767_L Identity 2: .025ml-30ml-2ml-8ml 7:18 PM July 31, 1996
Task name : OPTIMA
Sample Weight : 1.0000 Solution Volume : 6005.00
On-Peak Integrations : 3 Off-Peak Integrations : 1

	Zr (ppm)	Sr (ppm)	Bi (ppm)	Si (ppm)	Al (ppm)	Co (ppm)	Cu (ppm)	Li (ppm)
Mean	20.998	0.898	-40.010	223.832	30101.346	6.705	8.263	10.026
S.D.	2.611	0.445	32.648	13.562	48.402	20.178	1.600	0.817
% R.S.D.	12.433	49.487	81.598	6.059	0.161	300.943	19.368	8.150

	Zn (ppm)	Ni (ppm)	La (ppm)	Fe (ppm)	Ca (ppm)	Cr (ppm)	Nd (ppm)	U (ppm)
Mean	230.329	28.050	8.660	50.020	114.242	117.241	23.067	177.543
S.D.	3.134	4.856	21.636	11.417	0.243	5.238	10.958	106.856
% R.S.D.	1.361	17.313	249.826	22.824	0.213	4.468	47.504	60.186

	Ce (ppm)	Sm (ppm)	Ba (ppm)	P (ppm)	S (ppm)	Mg (ppm)	As (ppm)	Na (ppm)
Mean	88.588	-22.060	2.395	198.926	452.347	3.190	-88.976	245375.308
S.D.	27.732	37.029	0.989	24.578	14.340	1.063	25.906	240.419
% R.S.D.	31.305	167.856	41.307	12.355	3.170	33.333	29.116	0.098

	Mo (ppm)	Se (ppm)	Ag (ppm)	Pb (ppm)	Ti (ppm)	Cd (ppm)	B (ppm)	K (ppm)
Mean	51.618	287.654	16.918	-11.497	5.874	7.562	64.103	34991.823
S.D.	7.462	34.776	1.208	84.872	0.419	6.141	2.932	100.728
% R.S.D.	14.456	12.090	7.138	738.236	7.127	81.218	4.574	0.288

	Mn (ppm)	Sb (ppm)	V (ppm)	Be (ppm)	Tl (ppm)
Mean	5.505	-490.054	-4.812	1.930	503.380
S.D.	0.013	161.732	4.468	1.646	16.105
% R.S.D.	0.233	33.003	92.850	85.313	3.199

Identity 1: s96t002767 Identity 2: .025ml-30ml 7:21 PM July 31, 1996
Task name : OPTIMA
Sample Weight : 1.0000 Solution Volume : 1201.00
On-Peak Integrations : 3 Off-Peak Integrations : 1

	Zr (ppm)	Sr (ppm)	Bi (ppm)	Si (ppm)	Al (ppm)	Co (ppm)	Cu (ppm)	Li (ppm)
Mean	19.342	-0.359	12.745	188.687	30975.025	-2.709	-0.552	6.075
S.D.	1.051	0.160	7.333	3.216	69.648	0.007	0.053	0.330
% R.S.D.	5.435	44.607	57.533	1.704	0.225	0.261	9.645	5.439

	Zn (ppm)	Ni (ppm)	La (ppm)	Fe (ppm)	Ca (ppm)	Cr (ppm)	Nd (ppm)	U (ppm)
Mean	9.897	20.516	2.358	8.327	-7.933	104.684	-5.739	147.585
S.D.	0.330	0.656	2.641	1.690	0.128	1.640	5.300	55.054
% R.S.D.	3.339	3.195	111.974	20.293	1.619	1.566	92.349	37.303

	Ce (ppm)	Sm (ppm)	Ba (ppm)	P (ppm)	S (ppm)	Mg (ppm)	As (ppm)	Na (ppm)
Mean	-57.155	16.581	-0.826	210.322	407.092	-0.000	-22.821	239849.885
S.D.	11.861	11.442	0.236	17.257	3.667	0.000	4.274	671.576
% R.S.D.	20.752	69.004	28.511	8.205	0.901	0.000	18.727	0.280

	Mo (ppm)	Se (ppm)	Ag (ppm)	Pb (ppm)	Ti (ppm)	Cd (ppm)	B (ppm)	K (ppm)
Mean	60.352	30.320	-3.706	25.658	2.007	4.111	49.347	34278.593
S.D.	0.826	5.913	1.041	4.702	0.523	1.229	0.422	123.375
% R.S.D.	1.369	19.501	28.099	18.327	26.067	29.903	0.854	0.360

	Mn (ppm)	Sb (ppm)	V (ppm)	Be (ppm)	Tl (ppm)
Mean	2.987	-60.401	-5.406	2.500	4.857
S.D.	0.006	15.717	1.357	0.172	16.648
% R.S.D.	0.216	26.021	25.106	6.886	342.786

Identity 1: s96t002767_d Identity 2: .025ml-30ml 7:24 PM July 31, 1996
Task name : OPTIMA
Sample Weight : 1.0000 Solution Volume : 1201.00
On-Peak Integrations : 3 Off-Peak Integrations : 1

	Zr (ppm)	Sr (ppm)	Bi (ppm)	Si (ppm)	Al (ppm)	Co (ppm)	Cu (ppm)	Li (ppm)
Mean	19.593	-0.231	-16.013	202.320	33079.127	-4.061	0.816	7.079
S.D.	1.083	0.077	7.266	3.307	59.662	2.323	0.259	0.386
% R.S.D.	5.527	33.333	45.375	1.634	0.180	57.206	31.731	5.454

	Zn (ppm)	Ni (ppm)	La (ppm)	Fe (ppm)	Ca (ppm)	Cr (ppm)	Nd (ppm)	U (ppm)
Mean	10.297	21.443	3.527	9.403	-10.427	116.620	-18.102	199.863
S.D.	0.373	1.485	2.008	2.773	0.146	3.024	7.692	57.384
% R.S.D.	3.626	6.928	56.930	29.494	1.397	2.593	42.495	28.712

	Ce (ppm)	Sm (ppm)	Ba (ppm)	P (ppm)	S (ppm)	Mg (ppm)	As (ppm)	Na (ppm)
Mean	-27.489	21.861	-0.287	228.971	430.659	-0.284	-14.483	256572.100
S.D.	14.678	11.213	0.307	12.199	8.232	0.123	3.036	957.834
% R.S.D.	53.395	51.290	106.800	5.328	1.911	43.301	20.963	0.373

	Mo (ppm)	Se (ppm)	Ag (ppm)	Pb (ppm)	Ti (ppm)	Cd (ppm)	B (ppm)	K (ppm)
Mean	63.834	43.371	-0.044	52.900	2.119	4.653	48.247	36492.833
S.D.	1.300	1.115	0.733	12.312	0.470	0.648	1.376	195.252
% R.S.D.	2.037	2.571	1665.559	23.274	22.157	13.935	2.851	0.535

	Mn (ppm)	Sb (ppm)	V (ppm)	Be (ppm)	Tl (ppm)
Mean	4.357	-43.846	-3.464	2.984	15.105
S.D.	0.210	24.404	0.710	0.170	27.135
% R.S.D.	4.809	55.658	20.492	5.703	179.641

WHC-SD-WM-DP-192, REV. 0

Identity 1: s96t002767_A Identity 2: .025ml-2ml-28ml 7:27 PM July 31, 1996
Task name : OPTIMA
Sample Weight : 1.0000 Solution Volume : 1201.00
On-Peak Integrations : 3 Off-Peak Integrations : 1

	Zr (ppm)	Sr (ppm)	Bi (ppm)	Si (ppm)	Al (ppm)	Co (ppm)	Cu (ppm)	Li (ppm)
Mean	416.994	402.203	387.056	621.010	35352.121	394.067	416.196	405.123
S.D.	1.089	1.036	6.766	4.149	97.896	4.660	0.606	1.454
% R.S.D.	0.261	0.258	1.748	0.668	0.277	1.183	0.146	0.359

	Zn (ppm)	Ni (ppm)	La (ppm)	Fe (ppm)	Ca (ppm)	Cr (ppm)	Nd (ppm)	U (ppm)
Mean	413.661	422.742	408.250	416.090	389.313	526.002	402.593	962.504
S.D.	0.117	1.991	0.013	4.242	1.173	3.490	10.609	27.303
% R.S.D.	0.028	0.471	0.003	1.020	0.301	0.664	2.635	2.837

	Ce (ppm)	Sm (ppm)	Ba (ppm)	P (ppm)	S (ppm)	Mg (ppm)	As (ppm)	Na (ppm)
Mean	366.681	421.958	404.812	621.648	833.970	376.778	396.467	274002.802
S.D.	3.999	5.362	1.071	19.503	12.452	1.095	13.985	796.599
% R.S.D.	1.091	1.271	0.265	3.137	1.493	0.291	3.527	0.291

	Mo (ppm)	Se (ppm)	Ag (ppm)	Pb (ppm)	Ti (ppm)	Cd (ppm)	B (ppm)	K (ppm)
Mean	464.296	436.338	347.489	449.655	395.402	401.311	449.323	39255.241
S.D.	0.635	20.332	3.328	15.958	0.921	3.986	1.598	125.490
% R.S.D.	0.137	4.660	0.958	3.549	0.233	0.993	0.356	0.320

	Mn (ppm)	Sb (ppm)	V (ppm)	Be (ppm)	Tl (ppm)
Mean	406.561	293.752	401.339	411.947	407.184
S.D.	1.714	37.548	2.494	0.718	11.187
% R.S.D.	0.422	12.782	0.621	0.174	2.747

Identity 1: s96t003236_L Identity 2: .025ml-30ml-2ml-8ml 7:32 PM July 31, 1996
Task name : OPTIMA
Sample Weight : 1.0000 Solution Volume : 6005.00
On-Peak Integrations : 3 Off-Peak Integrations : 1

	Zr (ppm)	Sr (ppm)	Bi (ppm)	Si (ppm)	Al (ppm)	Co (ppm)	Cu (ppm)	Li (ppm)
Mean	16.618	-0.513	5.558	173.156	30776.293	-20.201	3.149	11.660
S.D.	4.004	0.801	79.152	28.527	63.881	11.654	3.345	0.817
% R.S.D.	24.092	156.125	1424.061	16.474	0.208	57.690	106.213	7.010

	Zn (ppm)	Ni (ppm)	La (ppm)	Fe (ppm)	Ca (ppm)	Cr (ppm)	Nd (ppm)	U (ppm)
Mean	44.859	34.232	2.945	26.621	-52.556	111.298	-88.757	167.096
S.D.	4.135	13.413	13.152	7.526	0.728	3.960	64.424	132.465
% R.S.D.	9.218	39.184	446.560	28.270	1.386	3.558	72.585	79.275

	Ce (ppm)	Sm (ppm)	Ba (ppm)	P (ppm)	S (ppm)	Mg (ppm)	As (ppm)	Na (ppm)
Mean	-79.198	-34.562	-1.377	217.214	429.923	1.063	-87.808	254865.546
S.D.	49.916	41.185	0.989	48.778	33.935	0.000	13.164	3245.384
% R.S.D.	63.027	119.165	71.838	22.456	7.893	0.000	14.992	1.273

	Mo (ppm)	Se (ppm)	Ag (ppm)	Pb (ppm)	Ti (ppm)	Cd (ppm)	B (ppm)	K (ppm)
Mean	59.558	221.264	36.916	19.764	5.406	9.730	40.681	35570.233
S.D.	2.306	114.787	4.178	46.024	3.338	3.378	7.195	517.330
% R.S.D.	3.872	51.878	11.318	232.875	61.746	34.717	17.687	1.454

	Mn (ppm)	Sb (ppm)	V (ppm)	Be (ppm)	Tl (ppm)
Mean	3.771	-179.145	-10.629	0.018	219.663
S.D.	1.858	70.165	3.487	1.450	113.973
% R.S.D.	49.278	39.167	32.803	8215.616	51.886

Identity 1: s96t003236 Identity 2: .025ml-30ml 7:35 PM July 31, 1996
Task name : OPTIMA
Sample Weight : 1.0000 Solution Volume : 1201.00
On-Peak Integrations : 3 Off-Peak Integrations : 1

	Zr (ppm)	Sr (ppm)	Bi (ppm)	Si (ppm)	Al (ppm)	Co (ppm)	Cu (ppm)	Li (ppm)
Mean	16.985	-0.257	-12.516	165.903	31221.580	2.679	0.584	12.476
S.D.	1.088	0.044	7.436	0.871	59.005	4.663	0.158	0.170
% R.S.D.	6.407	17.321	59.412	0.525	0.189	174.053	27.083	1.364

	Zn (ppm)	Ni (ppm)	La (ppm)	Fe (ppm)	Ca (ppm)	Cr (ppm)	Nd (ppm)	U (ppm)
Mean	11.988	21.370	1.765	9.640	-10.623	114.532	-14.526	100.828
S.D.	0.575	2.102	2.632	1.493	0.049	1.481	2.673	30.826
% R.S.D.	4.797	9.834	149.148	15.490	0.457	1.293	18.405	30.573

	Ce (ppm)	Sm (ppm)	Ba (ppm)	P (ppm)	S (ppm)	Mg (ppm)	As (ppm)	Na (ppm)
Mean	-15.288	6.397	0.096	186.389	408.593	0.213	-23.337	242321.561
S.D.	6.845	7.992	0.220	5.782	1.266	0.213	2.186	1477.784
% R.S.D.	44.773	124.939	229.129	3.102	0.310	100.000	9.369	0.610

	Mo (ppm)	Se (ppm)	Ag (ppm)	Pb (ppm)	Ti (ppm)	Cd (ppm)	B (ppm)	K (ppm)
Mean	61.635	46.004	1.392	42.552	1.199	4.758	47.364	34571.155
S.D.	2.619	5.332	0.433	11.926	0.360	0.675	1.118	242.565
% R.S.D.	4.250	11.590	31.142	28.028	30.008	14.193	2.360	0.702

	Mn (ppm)	Sb (ppm)	V (ppm)	Be (ppm)	Tl (ppm)
Mean	3.370	-21.934	-1.871	2.876	31.256
S.D.	0.004	3.267	0.565	0.290	6.461
% R.S.D.	0.108	14.896	30.210	10.087	20.670

Identity 1: s96t003236~~A~~ D Identity 2: ~~.025ml-2ml-28ml~~ .025-30ml 7:38 PM July 31, 1996
Task name : OPTIMA
Sample Weight : 1.0000 Solution Volume : 1201.00
On-Peak Integrations : 3 Off-Peak Integrations : 1

	Zr (ppm)	Sr (ppm)	Bi (ppm)	Si (ppm)	Al (ppm)	Co (ppm)	Cu (ppm)	Li (ppm)
Mean	15.670	-0.282	1.865	164.987	30982.696	2.679	0.231	11.469
S.D.	0.801	0.044	9.241	0.466	45.590	2.330	0.323	0.047
% R.S.D.	5.110	15.746	495.438	0.282	0.147	86.979	139.421	0.412

	Zn (ppm)	Ni (ppm)	La (ppm)	Fe (ppm)	Ca (ppm)	Cr (ppm)	Nd (ppm)	U (ppm)
Mean	11.408	18.302	4.053	14.542	-10.848	111.978	-6.703	100.835
S.D.	0.417	3.001	0.990	2.293	0.222	2.386	2.761	32.477
% R.S.D.	3.657	16.397	24.418	15.770	2.051	2.131	41.188	32.208

	Ce (ppm)	Sm (ppm)	Ba (ppm)	P (ppm)	S (ppm)	Mg (ppm)	As (ppm)	Na (ppm)
Mean	-28.533	4.503	-0.216	230.669	408.261	-0.000	-21.124	238121.394
S.D.	9.355	6.607	0.144	8.000	3.021	0.000	4.564	955.351
% R.S.D.	32.787	146.717	66.667	3.468	0.740	0.000	21.604	0.401

	Mo (ppm)	Se (ppm)	Ag (ppm)	Pb (ppm)	Ti (ppm)	Cd (ppm)	B (ppm)	K (ppm)
Mean	63.773	8.750	0.082	77.593	0.363	3.135	47.329	33789.098
S.D.	1.058	14.658	0.320	7.752	0.161	0.676	0.600	149.281
% R.S.D.	1.659	167.521	392.395	9.991	44.294	21.557	1.267	0.442

	Mn (ppm)	Sb (ppm)	V (ppm)	Be (ppm)	Tl (ppm)
Mean	2.995	-61.797	-2.593	2.780	55.673
S.D.	0.377	30.338	0.679	0.169	24.336
% R.S.D.	12.575	49.092	26.184	6.086	43.711

Identity 1: s96t003236_A Identity 2: .025ml-2ml-28ml 7:44 PM July 31, 1996
Task name : OPTIMA
Sample Weight : 1.0000 Solution Volume : 1201.00
On-Peak Integrations : 3 Off-Peak Integrations : 1

	Zr (ppm)	Sr (ppm)	Bi (ppm)	Si (ppm)	Al (ppm)	Co (ppm)	Cu (ppm)	Li (ppm)
Mean	415.863	404.693	391.525	588.523	33933.533	399.453	414.437	411.908
S.D.	0.944	0.388	9.693	4.913	69.064	2.333	0.805	4.749
% R.S.D.	0.227	0.096	2.476	0.835	0.204	0.584	0.194	1.153

	Zn (ppm)	Ni (ppm)	La (ppm)	Fe (ppm)	Ca (ppm)	Cr (ppm)	Nd (ppm)	U (ppm)
Mean	422.494	424.522	407.088	410.216	382.980	526.218	400.661	926.932
S.D.	0.781	4.043	1.002	7.638	0.146	2.551	10.304	27.633
% R.S.D.	0.185	0.952	0.246	1.862	0.038	0.485	2.572	2.981

	Ce (ppm)	Sm (ppm)	Ba (ppm)	P (ppm)	S (ppm)	Mg (ppm)	As (ppm)	Na (ppm)
Mean	388.698	421.743	406.022	628.174	859.219	383.324	393.415	263206.709
S.D.	5.045	8.203	0.409	29.924	1.768	0.213	2.761	2882.791
% R.S.D.	1.298	1.945	0.101	4.764	0.206	0.056	0.702	1.095

	Mo (ppm)	Se (ppm)	Ag (ppm)	Pb (ppm)	Ti (ppm)	Cd (ppm)	B (ppm)	K (ppm)
Mean	471.931	495.076	331.416	417.423	399.152	405.204	447.158	36992.252
S.D.	1.854	8.942	0.863	20.787	0.136	3.096	1.304	473.947
% R.S.D.	0.393	1.806	0.260	4.980	0.034	0.764	0.292	1.281

	Mn (ppm)	Sb (ppm)	V (ppm)	Be (ppm)	Tl (ppm)
Mean	406.696	286.844	407.081	414.331	417.107
S.D.	0.573	9.805	0.352	0.862	14.752
% R.S.D.	0.141	3.418	0.087	0.208	3.537

Identity 1: CCV Identity 2: Quality Control 7:47 PM July 31, 1996
Task name : OPTIMA
Sample Weight : 1.0000 Solution Volume : 1.00
On-Peak Integrations : 3 Off-Peak Integrations : 1

	Zr (ppm)	Sr (ppm)	Bi (ppm)	Si (ppm)	Al (ppm)	Co (ppm)	Cu (ppm)	Li (ppm)
Mean	4.910	4.974	4.936	4.745	4.913	4.932	5.130	5.157
S.D.	0.012	0.015	0.023	0.011	0.012	0.016	0.014	0.050
% R.S.D.	0.250	0.300	0.472	0.241	0.249	0.322	0.282	0.965

	Zn (ppm)	Ni (ppm)	La (ppm)	Fe (ppm)	Ca (ppm)	Cr (ppm)	Nd (ppm)	U (ppm)
Mean	5.016	4.932	5.003	5.006	4.957	4.932	5.232	9.766
S.D.	0.006	0.025	0.023	0.010	0.011	0.016	0.012	0.007
% R.S.D.	0.119	0.515	0.453	0.203	0.216	0.319	0.227	0.072

	Ce (ppm)	Sm (ppm)	Ba (ppm)	P (ppm)	S (ppm)	Mg (ppm)	As (ppm)	Na (ppm)
Mean	4.989	5.089	5.025	4.767	4.786	4.749	5.038	5.114
S.D.	0.015	0.010	0.015	0.127	0.063	0.010	0.015	0.052
% R.S.D.	0.305	0.201	0.298	2.673	1.313	0.218	0.302	1.025

	Mo (ppm)	Se (ppm)	Ag (ppm)	Pb (ppm)	Ti (ppm)	Cd (ppm)	B (ppm)	K (ppm)
Mean	4.928	4.942	4.841	4.924	4.867	4.940	5.058	5.166
S.D.	0.005	0.015	0.007	0.021	0.013	0.007	0.004	0.057
% R.S.D.	0.099	0.309	0.148	0.418	0.257	0.133	0.077	1.111

	Mn (ppm)	Sb (ppm)	V (ppm)	Be (ppm)	Tl (ppm)
Mean	4.945	4.634	5.003	5.151	4.894
S.D.	0.012	0.049	0.012	0.009	0.008
% R.S.D.	0.248	1.048	0.232	0.171	0.169

Identity 1: CCB Identity 2: Quality Control 7:50 PM July 31, 1996
Task name : OPTIMA
Sample Weight : 1.0000 Solution Volume : 1.00
On-Peak Integrations : 3 Off-Peak Integrations : 1

	Zr (ppm)	Sr (ppm)	Bi (ppm)	Si (ppm)	Al (ppm)	Co (ppm)	Cu (ppm)	Li (ppm)
Mean	0.002	0.001	-0.018	0.010	0.005	-0.002	0.001	0.000
S.D.	0.001	0.001	0.007	0.004	0.010	0.000	0.001	0.001
% R.S.D.	76.488	97.628	36.601	36.322	209.727	0.225	84.842	227.157

	Zn (ppm)	Ni (ppm)	La (ppm)	Fe (ppm)	Ca (ppm)	Cr (ppm)	Nd (ppm)	U (ppm)
Mean	0.001	0.001	0.005	0.004	0.009	0.002	0.002	0.095
S.D.	0.001	0.001	0.002	0.001	0.000	0.002	0.009	0.039
% R.S.D.	53.533	89.558	45.235	36.039	4.466	106.786	617.597	41.608

	Ce (ppm)	Sm (ppm)	Ba (ppm)	P (ppm)	S (ppm)	Mg (ppm)	As (ppm)	Na (ppm)
Mean	-0.011	0.012	0.000	-0.010	0.005	0.001	-0.013	0.035
S.D.	0.010	0.007	0.000	0.010	0.002	0.000	0.002	0.002
% R.S.D.	92.606	56.747	110.151	102.160	29.385	62.450	14.792	6.001

	Mo (ppm)	Se (ppm)	Ag (ppm)	Pb (ppm)	Ti (ppm)	Cd (ppm)	B (ppm)	K (ppm)
Mean	0.000	0.021	0.009	-0.005	0.002	0.002	0.006	0.043
S.D.	0.002	0.007	0.001	0.005	0.001	0.001	0.002	0.010
% R.S.D.	437.664	32.761	9.624	86.288	62.514	61.627	31.653	22.451

	Mn (ppm)	Sb (ppm)	V (ppm)	Be (ppm)	Tl (ppm)
Mean	0.001	-0.031	-0.002	0.000	0.027
S.D.	0.001	0.016	0.001	0.001	0.016
% R.S.D.	155.577	50.928	41.565	352.952	58.032

Identity 1: s96t003545_L Identity 2: .025ml-30ml-2ml-8ml 7:54 PM July 31, 1996
Task name : OPTIMA
Sample Weight : 1.0000 Solution Volume : 6005.00
On-Peak Integrations : 3 Off-Peak Integrations : 1

	Zr (ppm)	Sr (ppm)	Bi (ppm)	Si (ppm)	Al (ppm)	Co (ppm)	Cu (ppm)	Li (ppm)
Mean	14.410	1.283	-79.104	210.471	29625.577	-6.756	7.019	16.838
S.D.	7.263	1.603	27.209	11.118	23.085	11.618	1.379	2.659
% R.S.D.	50.402	124.900	34.396	5.282	0.078	171.955	19.648	15.790

	Zn (ppm)	Ni (ppm)	La (ppm)	Fe (ppm)	Ca (ppm)	Cr (ppm)	Nd (ppm)	U (ppm)
Mean	23.227	30.677	-5.599	29.336	-76.520	100.569	5.818	236.872
S.D.	1.297	6.159	13.210	7.698	1.682	0.910	34.002	263.084
% R.S.D.	5.584	20.075	235.923	26.241	2.198	0.905	584.464	111.066

	Ce (ppm)	Sm (ppm)	Ba (ppm)	P (ppm)	S (ppm)	Mg (ppm)	As (ppm)	Na (ppm)
Mean	22.460	-32.221	1.916	178.570	393.971	2.127	-35.367	242186.593
S.D.	31.010	35.331	2.082	28.049	27.160	1.842	5.578	1988.798
% R.S.D.	138.069	109.654	108.658	15.707	6.894	86.603	15.771	0.821

	Mo (ppm)	Se (ppm)	Ag (ppm)	Pb (ppm)	Ti (ppm)	Cd (ppm)	B (ppm)	K (ppm)
Mean	57.420	157.673	25.546	8.141	5.200	12.975	54.599	34451.636
S.D.	5.101	88.943	3.948	48.474	4.177	0.940	8.130	245.197
% R.S.D.	8.884	56.410	15.454	595.409	80.331	7.248	14.890	0.712

	Mn (ppm)	Sb (ppm)	V (ppm)	Be (ppm)	Tl (ppm)
Mean	5.032	-249.177	8.913	3.849	173.240
S.D.	2.132	73.708	5.839	0.840	121.950
% R.S.D.	42.366	29.580	65.510	21.830	70.394

Identity 1: s96t003545 Identity 2: .025ml-30ml 8:02 PM July 31, 1996
Task name : OPTIMA
Sample Weight : 1.0000 Solution Volume : 1201.00
On-Peak Integrations : 3 Off-Peak Integrations : 1

	Zr (ppm)	Sr (ppm)	Bi (ppm)	Si (ppm)	Al (ppm)	Co (ppm)	Cu (ppm)	Li (ppm)
Mean	13.468	-0.385	-8.982	190.335	30220.343	-6.745	-0.869	14.657
S.D.	0.793	0.133	9.515	0.279	92.577	0.006	0.060	0.263
% R.S.D.	5.891	34.641	105.924	0.147	0.306	0.089	6.927	1.792

	Zn (ppm)	Ni (ppm)	La (ppm)	Fe (ppm)	Ca (ppm)	Cr (ppm)	Nd (ppm)	U (ppm)
Mean	15.208	20.723	1.785	4.953	-11.688	101.111	-14.872	146.199
S.D.	0.311	2.690	1.960	2.355	0.084	0.861	4.464	46.801
% R.S.D.	2.048	12.982	109.801	47.548	0.719	0.852	30.018	32.012

	Ce (ppm)	Sm (ppm)	Ba (ppm)	P (ppm)	S (ppm)	Mg (ppm)	As (ppm)	Na (ppm)
Mean	-44.353	25.223	-0.671	211.542	385.093	-0.000	-12.045	236592.837
S.D.	11.495	8.985	0.234	3.887	7.515	0.000	1.846	325.219
% R.S.D.	25.918	35.624	34.856	1.838	1.951	0.000	15.323	0.137

	Mo (ppm)	Se (ppm)	Ag (ppm)	Pb (ppm)	Ti (ppm)	Cd (ppm)	B (ppm)	K (ppm)
Mean	58.092	30.256	-0.465	38.985	1.263	4.112	45.378	33763.275
S.D.	1.780	8.078	0.436	12.005	0.211	0.675	1.010	87.514
% R.S.D.	3.064	26.699	93.967	30.794	16.710	16.418	2.225	0.259

	Mn (ppm)	Sb (ppm)	V (ppm)	Be (ppm)	Tl (ppm)
Mean	1.242	-12.076	-4.679	2.595	-5.921
S.D.	0.438	3.411	0.342	0.006	29.103
% R.S.D.	35.287	28.244	7.317	0.232	491.515

Identity 1: s96t003545_d Identity 2: .025ml-30ml 8:05 PM July 31, 1996
Task name : OPTIMA
Sample Weight : 1.0000 Solution Volume : 1201.00
On-Peak Integrations : 3 Off-Peak Integrations : 1

	Zr (ppm)	Sr (ppm)	Bi (ppm)	Si (ppm)	Al (ppm)	Co (ppm)	Cu (ppm)	Li (ppm)
Mean	9.650	0.051	-17.479	176.482	26718.258	0.004	1.345	15.399
S.D.	0.839	0.118	19.156	3.824	373.620	4.664	0.301	0.287
% R.S.D.	8.695	229.129	109.596	2.167	1.398	109539.881	22.407	1.861

	Zn (ppm)	Ni (ppm)	La (ppm)	Fe (ppm)	Ca (ppm)	Cr (ppm)	Nd (ppm)	U (ppm)
Mean	14.323	20.370	-3.442	4.988	-14.267	89.838	-1.899	-26.744
S.D.	0.152	1.013	3.568	4.985	0.049	2.817	2.294	27.196
% R.S.D.	1.061	4.972	103.663	99.938	0.340	3.136	120.806	101.690

	Ce (ppm)	Sm (ppm)	Ba (ppm)	P (ppm)	S (ppm)	Mg (ppm)	As (ppm)	Na (ppm)
Mean	0.398	-0.529	0.275	155.609	360.499	-0.142	-15.888	239600.190
S.D.	5.557	4.614	0.055	17.486	1.268	0.123	0.451	1829.397
% R.S.D.	1396.084	871.685	19.924	11.237	0.352	86.602	2.840	0.764

	Mo (ppm)	Se (ppm)	Ag (ppm)	Pb (ppm)	Ti (ppm)	Cd (ppm)	B (ppm)	K (ppm)
Mean	53.632	80.522	0.893	53.886	0.455	3.999	41.920	35551.093
S.D.	2.041	4.476	0.319	13.963	0.300	0.324	1.539	256.817
% R.S.D.	3.805	5.559	35.679	25.912	65.969	8.097	3.672	0.722

	Mn (ppm)	Sb (ppm)	V (ppm)	Be (ppm)	Tl (ppm)
Mean	0.889	-95.332	-1.059	2.191	65.254
S.D.	0.215	11.092	0.755	0.164	11.430
% R.S.D.	24.148	11.635	71.317	7.484	17.517

Identity 1: s96t003545_A Identity 2: .025ml-2ml-28ml 8:10 PM July 31, 1996
Task name : OPTIMA
Sample Weight : 1.0000 Solution Volume : 1201.00
On-Peak Integrations : 3 Off-Peak Integrations : 1

	Zr (ppm)	Sr (ppm)	Bi (ppm)	Si (ppm)	Al (ppm)	Co (ppm)	Cu (ppm)	Li (ppm)
Mean	408.951	398.302	386.567	607.032	32060.336	411.569	408.202	402.949
S.D.	0.664	0.546	8.671	2.471	130.151	2.331	0.823	2.002
% R.S.D.	0.162	0.137	2.243	0.407	0.406	0.566	0.202	0.497

	Zn (ppm)	Ni (ppm)	La (ppm)	Fe (ppm)	Ca (ppm)	Cr (ppm)	Nd (ppm)	U (ppm)
Mean	426.352	418.146	409.347	408.489	378.786	515.402	403.515	864.188
S.D.	0.234	1.969	2.617	9.241	0.465	2.699	11.555	7.346
% R.S.D.	0.055	0.471	0.639	2.262	0.123	0.524	2.864	0.850

	Ce (ppm)	Sm (ppm)	Ba (ppm)	P (ppm)	S (ppm)	Mg (ppm)	As (ppm)	Na (ppm)
Mean	392.128	421.844	399.663	608.720	802.735	382.044	403.315	245041.977
S.D.	3.345	1.027	0.648	14.747	6.579	0.213	3.335	959.266
% R.S.D.	0.853	0.243	0.162	2.423	0.820	0.056	0.827	0.391

	Mo (ppm)	Se (ppm)	Ag (ppm)	Pb (ppm)	Ti (ppm)	Cd (ppm)	B (ppm)	K (ppm)
Mean	463.684	408.756	311.754	448.839	394.111	405.311	447.833	35502.704
S.D.	4.372	8.075	1.062	12.208	0.638	0.989	2.214	130.946
% R.S.D.	0.943	1.975	0.341	2.720	0.162	0.244	0.494	0.369

	Mn (ppm)	Sb (ppm)	V (ppm)	Be (ppm)	Tl (ppm)
Mean	407.956	404.002	407.168	411.075	446.319
S.D.	0.943	10.903	0.807	1.578	7.576
% R.S.D.	0.231	2.699	0.198	0.384	1.697

Identity 1: ICSA Identity 2: Quality Control 8:13 PM July 31, 1996
Task name : OPTIMA
Sample Weight : 1.0000 Solution Volume : 1.00
On-Peak Integrations : 3 Off-Peak Integrations : 1

	Zr (ppm)	Sr (ppm)	Bi (ppm)	Si (ppm)	Al (ppm)	Co (ppm)	Cu (ppm)	Li (ppm)
Mean	0.006	0.002	-0.033	0.019	199.030	-0.004	-0.001	0.000
S.D.	0.000	0.000	0.011	0.003	0.040	0.003	0.000	0.000
% R.S.D.	8.316	4.879	31.973	16.074	0.020	79.379	76.260	172.864

	Zn (ppm)	Ni (ppm)	La (ppm)	Fe (ppm)	Ca (ppm)	Cr (ppm)	Nd (ppm)	U (ppm)
Mean	-0.004	0.007	0.005	95.715	101.436	0.001	-0.017	0.195
S.D.	0.000	0.001	0.001	0.260	0.200	0.001	0.011	0.001
% R.S.D.	12.452	15.464	17.793	0.272	0.197	120.715	62.495	0.515

	Ce (ppm)	Sm (ppm)	Ba (ppm)	P (ppm)	S (ppm)	Mg (ppm)	As (ppm)	Na (ppm)
Mean	-0.036	0.053	0.003	0.002	-0.020	103.810	0.008	189.863
S.D.	0.005	0.004	0.000	0.002	0.010	0.143	0.002	1.102
% R.S.D.	15.081	8.006	2.375	124.218	51.577	0.137	20.560	0.580

	Mo (ppm)	Se (ppm)	Ag (ppm)	Pb (ppm)	Ti (ppm)	Cd (ppm)	B (ppm)	K (ppm)
Mean	-0.001	0.053	0.011	-0.006	0.002	0.000	0.014	0.107
S.D.	0.001	0.006	0.001	0.003	0.000	0.001	0.001	0.006
% R.S.D.	72.157	11.470	5.447	41.735	4.112	138.484	6.617	5.132

	Mn (ppm)	Sb (ppm)	V (ppm)	Be (ppm)	Tl (ppm)
Mean	0.011	-0.061	-0.003	0.002	-0.017
S.D.	0.000	0.008	0.001	0.000	0.008
% R.S.D.	1.792	12.915	22.758	5.913	47.079

Identity 1: ICSAB Identity 2: Quality Control 8:16 PM July 31, 1996
Task name : OPTIMA
Sample Weight : 1.0000 Solution Volume : 1.00
On-Peak Integrations : 3 Off-Peak Integrations : 1

	Zr (ppm)	Sr (ppm)	Bi (ppm)	Si (ppm)	Al (ppm)	Co (ppm)	Cu (ppm)	Li (ppm)
Mean	-0.000	0.002	-0.063	0.018	198.972	0.485	0.498	0.950
S.D.	0.001	0.000	0.011	0.001	0.308	0.004	0.001	0.006
% R.S.D.	525.370	3.846	16.863	4.875	0.155	0.800	0.163	0.640

	Zn (ppm)	Ni (ppm)	La (ppm)	Fe (ppm)	Ca (ppm)	Cr (ppm)	Nd (ppm)	U (ppm)
Mean	0.978	0.970	0.007	93.179	100.688	0.500	-0.036	0.092
S.D.	0.002	0.005	0.000	0.077	0.171	0.001	0.004	0.031
% R.S.D.	0.156	0.554	0.195	0.083	0.170	0.236	10.968	33.656

	Ce (ppm)	Sm (ppm)	Ba (ppm)	P (ppm)	S (ppm)	Mg (ppm)	As (ppm)	Na (ppm)
Mean	-0.034	0.048	0.503	0.045	-0.001	101.520	-0.001	192.139
S.D.	0.009	0.007	0.000	0.011	0.001	0.382	0.002	1.088
% R.S.D.	27.532	15.317	0.035	25.606	69.180	0.376	448.853	0.566

	Mo (ppm)	Se (ppm)	Ag (ppm)	Pb (ppm)	Ti (ppm)	Cd (ppm)	B (ppm)	K (ppm)
Mean	-0.002	0.054	1.002	0.973	0.001	0.976	0.013	0.026
S.D.	0.001	0.013	0.002	0.007	0.000	0.003	0.001	0.019
% R.S.D.	59.148	23.601	0.205	0.691	23.937	0.331	5.787	71.990

	Mn (ppm)	Sb (ppm)	V (ppm)	Be (ppm)	Tl (ppm)
Mean	0.504	-0.033	0.488	0.495	0.006
S.D.	0.001	0.020	0.002	0.003	0.013
% R.S.D.	0.229	60.007	0.321	0.549	200.498

Identity 1: CCV Identity 2: Quality Control 8:19 PM July 31, 1996
Task name : OPTIMA
Sample Weight : 1.0000 Solution Volume : 1.00
On-Peak Integrations : 3 Off-Peak Integrations : 1

	Zr (ppm)	Sr (ppm)	Bi (ppm)	Si (ppm)	Al (ppm)	Co (ppm)	Cu (ppm)	Li (ppm)
Mean	4.909	4.985	4.941	4.762	4.961	4.976	5.107	5.096
S.D.	0.010	0.011	0.009	0.005	0.022	0.008	0.020	0.024
% R.S.D.	0.195	0.219	0.178	0.104	0.451	0.170	0.395	0.477

	Zn (ppm)	Ni (ppm)	La (ppm)	Fe (ppm)	Ca (ppm)	Cr (ppm)	Nd (ppm)	U (ppm)
Mean	5.034	4.951	4.988	5.026	4.959	4.960	5.140	9.877
S.D.	0.012	0.016	0.024	0.043	0.025	0.009	0.031	0.033
% R.S.D.	0.241	0.316	0.471	0.847	0.507	0.172	0.608	0.338

	Ce (ppm)	Sm (ppm)	Ba (ppm)	P (ppm)	S (ppm)	Mg (ppm)	As (ppm)	Na (ppm)
Mean	5.027	5.074	5.024	5.061	4.927	4.799	5.059	5.101
S.D.	0.009	0.014	0.014	0.163	0.059	0.008	0.009	0.055
% R.S.D.	0.188	0.274	0.281	3.226	1.190	0.173	0.177	1.074

	Mo (ppm)	Se (ppm)	Ag (ppm)	Pb (ppm)	Ti (ppm)	Cd (ppm)	B (ppm)	K (ppm)
Mean	4.971	4.957	4.838	4.972	4.882	4.956	5.021	5.042
S.D.	0.012	0.002	0.009	0.029	0.007	0.008	0.007	0.021
% R.S.D.	0.236	0.039	0.191	0.589	0.150	0.168	0.144	0.424

	Mn (ppm)	Sb (ppm)	V (ppm)	Be (ppm)	Tl (ppm)
Mean	4.953	4.684	5.006	5.142	4.867
S.D.	0.006	0.088	0.010	0.014	0.006
% R.S.D.	0.111	1.879	0.191	0.263	0.113

IC Analytical Summary - Cores 132 and 139
AW-101 PUSH

CORE NUMBER: 139
SEGMENT #: 7

SEGMENT PORTION: U Upper Half of Segment

Sample#	R	A#	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S96T002435		W	Bromide by Ion Chromatograph	ug/g	102.2	<1.26e-01	<9.82e+02	<1.02e3	n/a	n/a	n/a	981.9	n/a

Drainable Liquid: Drainable Liquid

Sample#	R	A#	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S96T002430			Bromide by Ion Chromatograph	ug/mL	98.81	<1.26e-01	8.91e+02	844.0	867.4	5.42	96.43	649.0	n/a

IC Analytical Summary - Cores 132 and 139
AW-101 PUSH

CORE NUMBER: 139
SEGMENT #: 8

SEGMENT PORTION: U Upper Half of Segment

Sample#	R	A#	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S96T002451		W	Bromide by Ion Chromatograph	ug/g	103.7	<1.26e-01	<9.26e+02	<9.00e2	n/a	n/a	106.8	925.8	n/a

Drainable Liquid: Drainable Liquid

Sample#	R	A#	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S96T002439			Bromide by Ion Chromatograph	ug/mL	98.81	<1.26e-01	<6.49e+02	<6.49e2	n/a	n/a	n/a	649.0	n/a

IC Analytical Summary - Cores 132 and 139
AW-101 PUSH

CORE NUMBER: 139
SEGMENT #: 10

SEGMENT PORTION: U Upper Half of Segment

Sample#	R	A#	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S96T002467		W	Bromide by Ion Chromatograph	ug/g	102.0	<1.26e-01	<8.90e+02	<9.03e2	n/a	n/a	103.7	890.5	n/a

Drainable Liquid: Drainable Liquid

Sample#	R	A#	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S96T002462			Bromide by Ion Chromatograph	ug/mL	95.92	<1.26e-01	<5.22e+02	<5.22e2	n/a	n/a	n/a	521.8	n/a

IC Analytical Summary - Cores 132 and 139
AW-101 PUSH

CORE NUMBER: 139
SEGMENT #: 11

SEGMENT PORTION: U Upper Half of Segment

Sample#	R	A#	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S96T002684		W	Bromide by Ion Chromatograph	ug/g	102.0	<1.26e-01	<5.27e+02	<5.16e2	n/a	n/a	n/a	527.1	n/a

Drainable Liquid: Drainable Liquid

Sample#	R	A#	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S96T002679			Bromide by Ion Chromatograph	ug/mL	102.9	<1.26e-01	<2.25e+02	<2.25e2	n/a	n/a	89.13	225.3	n/a

IC Analytical Summary - Cores 132 and 139
AW-101 PUSH

CORE NUMBER: 139
SEGMENT #: 12

SEGMENT PORTION: U Upper Half of Segment

Sample#	R	A#	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S96T002692		W	Bromide by Ion Chromatograph	ug/g	100.5	<1.26e-01	<9.77e+02	<9.62e2	n/a	n/a	100.0	977.4	n/a

Drainable Liquid: Drainable Liquid

Sample#	R	A#	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S96T002687			Bromide by Ion Chromatograph	ug/mL	100.3	<1.26e-01	1.11e+03	1.07e+03	1.09e+03	3.67	n/a	521.8	n/a

IC Analytical Summary - Cores 132 and 139
AW-101 PUSH

CORE NUMBER: 139
SEGMENT #: 13

SEGMENT PORTION: U Upper Half of Segment

Sample#	R	A#	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S96T002700		W	Bromide by Ion Chromatograph	ug/g	100.5	<1.26e-01	<1.04e+03	<1.07e3	n/a	n/a	n/a	1.04e+03	n/a

Drainable Liquid: Drainable Liquid

Sample#	R	A#	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S96T002695			Bromide by Ion Chromatograph	ug/mL	101.4	<1.26e-01	<3.31e+02	<3.31e2	n/a	n/a	97.96	330.9	n/a

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#	Sample Name	Bi	Ca	Cd	Ce	Co	Cr
16	S96T001756_L	.3619	.7315	.0056	.0638	.0218	.2027
17	S96T001756	.0356	.4818	.0061	-.0053	.0008	.1831
18	S96T001756_D	.0748	.3497	.0065	-.0133	.0011	.2334
19	S96T001772_L	.0348	.7826	.0077	-.0331	-.0051	.2353
20	S96T001772	.0401	.4197	.0059	-.0118	.0033	.2202
21	S96T001772_D	.0413	.4114	.0074	-.0158	.0021	.3049
22	CCV	5.129	5.135	5.063	5.152	5.087	5.132
23	CCB	.0230	.0001	.0001	-.0050	-.0020	-.0001
24	S96T001952_L	.1398	.5470	-.0054	-.0589	-.0301	.1760
25	S96T001952	-.0110	.3656	.0021	-.0252	-.0027	.1727
26	S96T001952_D	-.0235	.3598	.0042	-.0149	-.0036	.1869
27	S96T001952_S	4.244	6.073	4.202	4.455	4.293	4.401
28	S96T002032_L	.1577	.4543	.0143	-.0857	-.0216	.3057
29	S96T002032	.0254	.3293	.0104	-.0118	-.0001	.2979
30	S96T002032_D	.0141	.2801	.0056	-.0213	-.0066	.2809
31	ICSA	.0029	256.9	.0003	.0097	-.0013	.0084
32	ICSAB	.0057	251.3	.9416	.0008	.4684	.4835
33	CCV	5.124	5.083	5.054	5.158	5.087	5.102
34	CCB	-.0032	-.0018	.0004	-.0046	-.0024	-.0000

#	Sample Name	Cu	Eu	Fe	K	La	Li
1	ICV	5.283	-.0046	5.125	5.416	5.109	5.148
2	ICB	.0003	-.0002	.0009	.2573	.0014	-.0001
3	LLS	.0208	.0001	.1080	Q.7405	.1052	.0219
4	ICSA	-.0106	-.0612	96.23	.1011	-.0049	.0019
5	ICSAB	.4909	-.0576	95.47	.0417	-.0036	1.030
6	PREPSTDTJA	4.669	-.0052	4.927	5.027	4.832	4.809
7	PREPBLKTJA	.0076	-.0028	.1227	.2186	.0004	-.0029
8	S96T001735_L	.3291	.0022	22.14	132.0	.0197	11.53
9	S96T001735	.3147	-.0049	20.39	124.5	.0048	11.45
10	S96T001735_D	.3325	-.0038	16.13	123.7	.0014	12.01
11	CCV	5.425	-.0047	5.276	5.269	5.275	5.277
12	CCB	.0010	-.0003	.0014	.3911	.0027	.0006
13	S96T001751_L	.0428	-.0109	.2273	294.6	.0094	.1232
14	S96T001751	.0406	-.0046	.2060	280.3	.0001	.1320
15	S96T001751_D	.0217	-.0040	.1493	313.1	.0010	.1445
16	S96T001756_L	.0309	-.0114	.2149	359.3	.0131	.0089
17	S96T001756	.0227	-.0048	.2057	337.9	.0009	.0097
18	S96T001756_D	.0203	-.0034	.1777	349.8	-.0005	.0170
19	S96T001772_L	.0450	-.0076	.2854	342.0	-.0000	.0419
20	S96T001772	.0468	-.0042	.2573	320.2	-.0001	.0394
21	S96T001772_D	.0269	-.0042	.2260	260.0	-.0021	.0493
22	CCV	5.189	-.0020	5.092	4.854	5.063	5.011
23	CCB	.0000	.0003	-.0008	.2071	-.0012	.0005
24	S96T001952_L	.0207	-.0082	.1069	275.4	-.0081	.0037
25	S96T001952	.0160	-.0031	.1075	261.5	-.0033	.0104
26	S96T001952_D	.0295	-.0006	.1501	273.0	-.0013	.0141
27	S96T001952_S	4.239	-.0020	4.439	312.0	4.361	4.424
28	S96T002032_L	.0294	.0004	.2159	207.8	-.0151	.0497
29	S96T002032	.0308	-.0011	.2204	197.4	-.0027	.0526
30	S96T002032_D	.0181	-.0023	.1736	200.9	-.0043	.0572
31	ICSA	-.0113	-.0502	96.09	.1305	-.0056	.0024

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#	Sample Name	Cu	Eu	Fe	K	La	Li
32	ICSAB	.4866	-.0414	94.37	.1749	-.0063	1.022
33	CCV	5.241	-.0025	5.073	5.259	5.057	5.093
34	CCB	.0002	.0001	-.0002	.0783	-.0010	.0000

#	Sample Name	Mg	Mn	Mo	Na	Nd	Ni
1	ICV	4.932	4.976	5.083	5.092	5.185	5.067
2	ICB	.0006	-.0000	.0017	-.0027	.0023	-.0014
3	LLS	.2083	.0201	.0927	.2300	.2063	.0464
4	ICSA	255.0	-.0067	-.0071	205.4	.0068	-.0031
5	ICSAB	253.1	.4530	-.0109	204.6	.0066	.9222
6	PREPSTDTJA	4.461	4.568	4.763	6.097	4.826	4.708
7	PREPBLKTJA	.0516	.0008	-.0014	.9476	.0000	-.0080
8	S96T001735_L	5.124	.5135	.1335	662.5	.0036	.2019
9	S96T001735_	4.757	.4717	.1402	629.8	.0018	.2236
10	S96T001735_D	4.832	.4189	.1604	648.1	-.0021	.2558
11	CCV	5.078	5.142	5.245	5.208	5.361	5.196
12	CCB	.0052	-.0001	.0027	-.0064	.0029	.0029
13	S96T001751_L	.0956	.0097	.0681	797.0	-.0065	.0318
14	S96T001751_	.0679	.0129	.1042	760.1	.0038	.0177
15	S96T001751_D	.0505	.0129	.1158	831.8	.0038	.0121
16	S96T001756_L	.1499	.0065	.0715	803.4	.0083	-.0163
17	S96T001756_	.0755	.0088	.0894	753.5	-.0026	.0144
18	S96T001756_D	.0363	.0116	.1158	849.6	.0005	.0144
19	S96T001772_L	-.0312	.0095	.0819	835.7	-.0220	.0446
20	S96T001772_	.0259	.0102	.1131	784.7	-.0025	.0274
21	S96T001772_D	.0227	.0123	.1651	838.8	-.0122	.0198
22	CCV	4.908	4.988	5.056	5.002	5.122	5.046
23	CCB	.0055	-.0000	.0013	.0000	.0023	-.0007
24	S96T001952_L	.0660	.0046	.0626	832.8	.0186	.0129
25	S96T001952_	.0314	.0069	.0860	788.3	.0016	.0200
26	S96T001952_D	.0503	.0096	.0867	826.4	-.0028	.0284
27	S96T001952_S	4.077	4.077	4.386	891.0	4.328	4.278
28	S96T002032_L	.0056	.0153	.1259	843.1	-.0142	.0229
29	S96T002032_	.0375	.0146	.1517	801.0	.0000	.0400
30	S96T002032_D	.0407	.0144	.1387	815.3	-.0030	.0476
31	ICSA	255.0	-.0065	-.0129	203.4	.0027	.0040
32	ICSAB	251.1	.4469	-.0132	202.4	.0068	.9135
33	CCV	4.919	4.948	5.037	5.029	5.131	5.033
34	CCB	.0035	.0001	.0005	-.0088	.0039	.0016

#	Sample Name	P	Pb	S	Sb	Se	Si
1	ICV	5.265	5.013	5.012	4.819	4.948	4.793
2	ICB	-.0037	.0128	-.0088	.0063	-.0316	-.0023
3	LLS	.4364	.2281	.2105	.0991	.1773	.1462
4	ICSA	.0529	.0523	-.0224	.0143	-.0719	-.0074
5	ICSAB	.0295	1.034	-.0163	.0019	-.0495	-.0056
6	PREPSTDTJA	4.922	4.482	4.600	4.403	4.393	.3910
7	PREPBLKTJA	.0604	.0189	.0984	.0061	-.0056	.7333
8	S96T001735_L	2.177	.4080	1.163	.1148	-.0264	2.389
9	S96T001735_	2.023	.3487	1.131	.0122	-.0389	2.196

#	Sample Name	P	Pb	S	Sb	Se	Si
10	S96T001735_D	1.881	.4189	1.111	-.0104	-.0166	3.818
11	CCV	5.349	5.219	5.142	4.966	5.097	4.977
12	CCB	.0037	.0167	.0006	.0135	-.0125	.0040
13	S96T001751_L	4.329	.2446	.8984	.0372	-.2134	2.768
14	S96T001751	4.020	.1295	.8754	.0081	-.0096	2.666
15	S96T001751_D	4.228	.1470	.9515	.0072	-.0184	2.806
16	S96T001756_L	4.125	.2573	.6933	.0779	-.1358	1.362
17	S96T001756	3.709	.1174	.7549	.0103	-.0326	1.272
18	S96T001756_D	4.560	.1407	.9656	.0122	-.0203	2.856
19	S96T001772_L	5.087	.2369	.8888	.0980	-.0686	2.220
20	S96T001772	4.925	.1563	.9159	.0233	-.0509	2.051
21	S96T001772_D	5.581	.1556	1.248	.0176	-.0028	2.175
22	CCV	5.125	5.088	4.972	4.811	4.893	4.801
23	CCB	-.0128	-.0028	-.0031	-.0006	-.0247	.0037
24	S96T001952_L	2.911	.0275	.6901	-.0333	-.1509	2.289
25	S96T001952	2.731	.0833	.7266	-.0105	-.0386	2.197
26	S96T001952_D	2.664	.0871	.7766	.0046	-.0154	2.444
27	S96T001952_S	7.023	4.170	4.944	4.072	4.084	7.576
28	S96T002032_L	4.598	.1629	1.226	-.0988	.0126	2.445
29	S96T002032	4.481	.1823	1.270	-.0039	.0146	2.322
30	S96T002032_D	4.439	.1568	1.180	.0052	.0075	2.223
31	ICSA	.0069	.0299	-.0203	.0101	-.0590	-.0041
32	ICSAB	.0045	.9779	-.0154	-.0179	-.0530	-.0081
33	CCV	5.159	5.018	5.037	4.833	4.969	4.784
34	CCB	-.0008	-.0068	-.0005	.0106	-.0047	-.0004

#	Sample Name	Sm	Sr	Th	Ti	Tl	U
1	ICV	4.984	5.041	.0049	4.943	4.938	9.722
2	ICB	-.0069	.0001	-.0007	.0005	.0068	-.0235
3	LLS	.2073	.0210	-.0048	.0207	.4411	.5140
4	ICSA	-.0137	.0017	-.0047	.0013	.0366	-.0425
5	ICSAB	-.0148	.0017	-.0087	.0015	.0162	-.0423
6	PREPSTDTJA	4.716	4.732	.0039	4.685	4.472	9.187
7	PREPBLKTJA	-.0506	.0003	.0082	.0013	.0226	-.1602
8	S96T001735_L	-.0088	.0027	-.0455	.0940	.2465	.1544
9	S96T001735	-.0620	.0010	.0150	.0892	-.0096	-.2029
10	S96T001735_D	-.0565	.0019	.0034	.0912	.0372	-.1401
11	CCV	5.143	5.195	.0037	5.095	5.119	10.03
12	CCB	-.0065	.0001	.0010	.0000	.0168	-.0225
13	S96T001751_L	-.1839	-.0011	-.0198	.0076	.1204	-.6675
14	S96T001751	-.0827	.0002	.0148	.0021	.0455	-.3327
15	S96T001751_D	-.0745	-.0003	.0153	.0027	.0046	-.3288
16	S96T001756_L	-.1704	-.0011	.0719	-.0022	-.0086	-.6741
17	S96T001756	-.0788	-.0002	.0191	.0012	.0150	-.3765
18	S96T001756_D	-.0670	-.0001	.0079	.0016	.0697	-.2856
19	S96T001772_L	-.1190	-.0011	-.0141	-.0025	.3092	-.4780
20	S96T001772	-.0715	-.0003	.0077	.0021	-.0230	-.3303
21	S96T001772_D	-.0725	.0000	.0015	.0006	.0101	-.3144
22	CCV	4.934	4.974	.0208	4.930	4.907	9.665
23	CCB	.0040	.0001	-.0028	.0005	-.0182	.0021
24	S96T001952_L	-.1049	-.0021	.0079	.0076	-.3370	-.6233
25	S96T001952	-.0553	-.0001	.0005	.0020	-.0605	-.2742

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#	Sample Name	Sm	Sr	Th	Ti	Tl	U
26	S96T001952_D	-.0131	.0006	-.0033	.0015	-.0406	-.1460
27	S96T001952_S	4.248	4.237	.0233	4.203	3.935	8.160
28	S96T002032_L	-.0215	.0005	-.0281	-.0026	-.0739	-.1040
29	S96T002032_	-.0230	.0003	.0067	.0016	-.0245	-.1642
30	S96T002032_D	-.0378	.0002	.0054	.0020	-.0297	-.2128
31	ICSA	-.0011	.0017	.0102	.0013	.0151	-.0241
32	ICSAB	-.0052	.0017	-.0004	.0017	-.0485	-.0272
33	CCV	4.942	4.986	.0232	4.924	4.893	9.657
34	CCB	-.0012	.0001	-.0008	.0015	-.0298	-.0211

#	Sample Name	V	Y	Zn	Zr
1	ICV	5.086	.0054	5.146	4.987
2	ICB	-.0011	-.0001	.0005	-.0003
3	LLS	.1049	.0007	.0233	.0217
4	ICSA	-.0025	.0064	-.0001	-.0043
5	ICSAB	.4760	.0064	.9659	-.0041
6	PREPSTDTJA	4.638	.0040	4.521	4.696
7	PREPBLKTJA	-.0084	-.0019	.0289	-.0037
8	S96T001735_L	.0099	.0023	2.817	.0901
9	S96T001735_	-.0037	-.0020	2.518	.0708
10	S96T001735_D	-.0030	-.0018	2.596	.0732
11	CCV	5.251	.0059	5.296	5.146
12	CCB	-.0011	-.0001	.0007	-.0004
13	S96T001751_L	-.0333	-.0052	.2166	.0097
14	S96T001751_	-.0115	-.0028	.1625	.0199
15	S96T001751_D	-.0130	-.0024	.1425	.0242
16	S96T001756_L	-.0335	-.0036	.1747	.0029
17	S96T001756_	-.0137	-.0030	.1254	.0145
18	S96T001756_D	-.0093	-.0021	.1223	.0269
19	S96T001772_L	-.0222	-.0029	.1775	.0274
20	S96T001772_	-.0111	-.0027	.1279	.0233
21	S96T001772_D	-.0112	-.0025	.1613	.0348
22	CCV	5.060	.0064	5.147	4.957
23	CCB	.0006	.0000	-.0014	.0002
24	S96T001952_L	-.0231	-.0052	.1209	.0001
25	S96T001952_	-.0089	-.0027	.0802	.0187
26	S96T001952_D	-.0032	-.0004	.1356	.0238
27	S96T001952_S	4.186	.0037	4.361	4.278
28	S96T002032_L	-.0018	.0000	.1730	.0412
29	S96T002032_	-.0044	-.0013	.1769	.0358
30	S96T002032_D	-.0065	-.0019	.1292	.0325
31	ICSA	-.0002	.0069	-.0019	-.0049
32	ICSAB	.4706	.0065	.9559	-.0048
33	CCV	5.054	.0059	5.128	4.941
34	CCB	-.0009	-.0002	-.0004	-.0010

FILE # 08080214.TXT

LABCORE Data Entry Template for Worklist# 10840

Analyst: B. GOECKE **Instrument:** ~~ICP01~~ ICP02 **Book#** 58844

Method: LA-505-~~151~~ 161 Rev/Mod B-1

Worklist Comment: ICP AW-101 (SOLID ACID DIGEST)

S	Type	Sample#	R	A	Test	Matrix	Group#	Project
1	ICV				@ICP-QC	QC		
2	ICB				@ICP-QC	QC		
3	LLS				@ICP-QC	QC		
4	ICSA				@ICP-QC	QC		
5	ICSAB				@ICP-QC	QC		
6	PREPSTDTJA				@ICP-A01	SOLID		
7	PREPBLKTJA				@ICP-A01	SOLID		
8	SERDIL	S96T002683	0	A	@ICP-A01	SOLID		
9	SAMPLE	S96T002683	0	A	@ICP-A01	SOLID	96000462	AW-101 PUSH
		Analytes Requested:			AG-A-01 , AL-A-01 , AS-A-01 , B-A-01 , BA-A-01 , BE-A-01 , BI-A-01 , CA-A-01 , CD-A-01 , CE-A-01 , CO-A-01 , CR-A-01 , CU-A-01 , FE-A-01 , K-A-01 , LA-A-01 , LI-A-01 , MG-A-01 , MN-A-01 , MO-A-01 , NA-A-01 , ND-A-01 , NI-A-01 , P-A-01 , PB-A-01 , S-A-01 , SB-A-01 , SE-A-01 , SI-A-01 , SM-A-01 , SR-A-01 , TI-A-01 , TL-A-01 , U-A-01 , V-A-01 , ZN-A-01 , ZR-A-01			
10	DUP	S96T002683	0	A	@ICP-A01	SOLID		
✓11	SPK-PREDIG	S96T002683	0	A	@ICP-A01	SOLID		
12	CCV				@ICP-QC	QC		
13	CCB				@ICP-QC	QC		
14	SERDIL	S96T002691	0	A	@ICP-A01	SOLID		
15	SAMPLE	S96T002691	0	A	@ICP-A01	SOLID	96000462	AW-101 PUSH
		Analytes Requested:			AG-A-01 , AL-A-01 , AS-A-01 , B-A-01 , BA-A-01 ,			

Data Entry Comments: This batch needs to be re-prep. All elements failed in Spk-Predig. Prep personnel were notified.

SP 8/8/96

S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

LABCORE Data Entry Template for Worklist# 10840

S	Type	Sample#	R	A	Test	Matrix	Group#	Project
					BE-A-01 , BI-A-01 , CA-A-01 , CD-A-01 , CE-A-01 , CO-A-01 , CR-A-01 , CU-A-01 , FE-A-01 , K-A-01 , LA-A-01 , LI-A-01 , MG-A-01 , MN-A-01 , MO-A-01 , NA-A-01 , ND-A-01 , NI-A-01 , P-A-01 , PB-A-01 , S-A-01 , SB-A-01 , SE-A-01 , SI-A-01 , SM-A-01 , SR-A-01 , TI-A-01 , TL-A-01 , U-A-01 , V-A-01 , ZN-A-01 , ZR-A-01			
16	DUP	S96T002691	0	A	@ICP-A01	SOLID		
17	SERDIL	S96T002699	0	A	@ICP-A01	SOLID		
18	SAMPLE	S96T002699	0	A	@ICP-A01	SOLID	96000462	AW-101 PUSH
		Analytes Requested:			AG-A-01 , AL-A-01 , AS-A-01 , B-A-01 , BA-A-01 , BE-A-01 , BI-A-01 , CA-A-01 , CD-A-01 , CE-A-01 , CO-A-01 , CR-A-01 , CU-A-01 , FE-A-01 , K-A-01 , LA-A-01 , LI-A-01 , MG-A-01 , MN-A-01 , MO-A-01 , NA-A-01 , ND-A-01 , NI-A-01 , P-A-01 , PB-A-01 , S-A-01 , SB-A-01 , SE-A-01 , SI-A-01 , SM-A-01 , SR-A-01 , TI-A-01 , TL-A-01 , U-A-01 , V-A-01 , ZN-A-01 , ZR-A-01			
19	DUP	S96T002699	0	A	@ICP-A01	SOLID		
20	SERDIL	S96T002708	0	A	@ICP-A01	SOLID		
21	SAMPLE	S96T002708	0	A	@ICP-A01	SOLID	96000462	AW-101 PUSH
		Analytes Requested:			AG-A-01 , AL-A-01 , AS-A-01 , B-A-01 , BA-A-01 , BE-A-01 , BI-A-01 , CA-A-01 , CD-A-01 , CE-A-01 , CO-A-01 , CR-A-01 , CU-A-01 , FE-A-01 , K-A-01 , LA-A-01 , LI-A-01 , MG-A-01 , MN-A-01 , MO-A-01 , NA-A-01 , ND-A-01 , NI-A-01 , P-A-01 , PB-A-01 , S-A-01 , SB-A-01 , SE-A-01 , SI-A-01 , SM-A-01 , SR-A-01 , TI-A-01 , TL-A-01 , U-A-01 , V-A-01 , ZN-A-01 , ZR-A-01			
22	DUP	S96T002708	0	A	@ICP-A01	SOLID		
23	CCV				@ICP-QC	QC		
24	CCB				@ICP-QC	QC		
25	SERDIL	S96T002716	0	A	@ICP-A01	SOLID		
26	SAMPLE	S96T002716	0	A	@ICP-A01	SOLID	96000462	AW-101 PUSH
		Analytes Requested:			AG-A-01 , AL-A-01 , AS-A-01 , B-A-01 , BA-A-01 , BE-A-01 , BI-A-01 , CA-A-01 , CD-A-01 , CE-A-01 , CO-A-01 ,			

Data Entry Comments:

S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

LABCORE Data Entry Template for Worklist# 10840

S	Type	Sample#	R	A	Test	Matrix	Group#	Project
					CR-A-01 , CU-A-01 , FE-A-01 , K-A-01 , LA-A-01 , LI-A-01 , MG-A-01 , MN-A-01 , MO-A-01 , NA-A-01 , ND-A-01 , NI-A-01 , P-A-01 , PB-A-01 , S-A-01 , SB-A-01 , SE-A-01 , SI-A-01 , SM-A-01 , SR-A-01 , TI-A-01 , TL-A-01 , U-A-01 , V-A-01 , ZN-A-01 , ZR-A-01			
27	DUP	S96T002716	0	A	@ICP-A01	SOLID		
28	ICSA				@ICP-QC	QC		
29	ICSAB				@ICP-QC	QC		
30	CCV				@ICP-QC	QC		
31	CCB				@ICP-QC	QC		

Final page for worklist # 10840

Analyst Signature	Date	DF
[signature]	8-2-96	
DIRECT TSA	DIRECT	1
DIRECT BLK TSA	DIRECT	1
S96T00 2683-L	5-1-5-L-2-1-8-L	10
2683	5-5	2
2683-D	5-5	2
2683-S	5-5	2
S96T00 2691-L	5-5-2-8	10
2691	5-5	2
2691-D	5-5	2
S96T00 2699-L	5-5-2-8	10
2699	5-5	2
2699-D	5-5	2
S96T00 2708-L	5-5-2-8	10
2708	5-5	2
2708-D	5-5	2
S96T00 2716-L	5-5-2-8	10
2716	5-5	2
2716-D	5-5	2

Reviewed by:

Analyst Signature	Date
[signature]	8/12/96

Data Entry Comments:

S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

Analysis Report Summary Fri 08-02-96 10:43:06 PM page 1

#	Sample Name	File	Method	Date	Time	OpID	Type	Mode
1	ICV	960802H	ICP2	08/02/96	21:15	BJG	Q	CONC
2	ICB	960802H	ICP2	08/02/96	21:18	BJG	Q	CONC
3	LLS	960802H	ICP2	08/02/96	21:20	BJG	Q	CONC
4	ICSA	960802H	ICP2	08/02/96	21:23	BJG	Q	CONC
5	ICSAB	960802H	ICP2	08/02/96	21:26	BJG	Q	CONC
6	PREPSTDTJA	960802H	ICP2	08/02/96	21:29	BJG	S	CONC
7	PREPBLKTJA	960802H	ICP2	08/02/96	21:32	BJG	S	CONC
8	S96T002683_L	960802H	ICP2	08/02/96	21:35	BJG	S	CONC
9	S96T002683	960802H	ICP2	08/02/96	21:38	BJG	S	CONC
10	S96T002683_D	960802H	ICP2	08/02/96	21:41	BJG	S	CONC
11	S96T002683_S	960802H	ICP2	08/02/96	21:44	BJG	S	CONC
12	CCV	960802H	ICP2	08/02/96	21:47	BJG	Q	CONC
13	CCB	960802H	ICP2	08/02/96	21:50	BJG	Q	CONC
14	S96T002691_L	960802H	ICP2	08/02/96	21:53	BJG	S	CONC
15	S96T002691	960802H	ICP2	08/02/96	21:56	BJG	S	CONC
16	S96T002691_D	960802H	ICP2	08/02/96	21:58	BJG	S	CONC
17	S96T002699_L	960802H	ICP2	08/02/96	22:01	BJG	S	CONC
18	S96T002699	960802H	ICP2	08/02/96	22:04	BJG	S	CONC
19	S96T002699_D	960802H	ICP2	08/02/96	22:08	BJG	S	CONC
20	S96T002708_L	960802H	ICP2	08/02/96	22:11	BJG	S	CONC
21	S96T002708	960802H	ICP2	08/02/96	22:13	BJG	S	CONC
22	S96T002708_D	960802H	ICP2	08/02/96	22:16	BJG	S	CONC
23	CCV	960802H	ICP2	08/02/96	22:19	BJG	Q	CONC
24	CCB	960802H	ICP2	08/02/96	22:21	BJG	Q	CONC
25	S96T002716_L	960802H	ICP2	08/02/96	22:24	BJG	S	CONC
26	S96T002716	960802H	ICP2	08/02/96	22:26	BJG	S	CONC
27	S96T002716_D	960802H	ICP2	08/02/96	22:29	BJG	S	CONC
28	ICSA	960802H	ICP2	08/02/96	22:32	BJG	Q	CONC
29	ICSAB	960802H	ICP2	08/02/96	22:34	BJG	Q	CONC
30	CCV	960802H	ICP2	08/02/96	22:37	BJG	Q	CONC
31	CCB	960802H	ICP2	08/02/96	22:40	BJG	Q	CONC

8-2-96

4W-201 ACID DIGEST

SAL-SAL

S96T002683, 2691, 2699, 2708, 2716

FILE# 0960802H.TXT

SIGNATURE ABOVE REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 1885 TO 1891.

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#	Sample Name	Ag	Al	As	B	Ba	Be
1	ICV	5.043	4.928	5.140	5.007	4.991	5.164
2	ICB	-.0007	-.0088	-.0012	-.0057	.0001	.0002
3	LLS	.0193	.0915	.1865	.0987	.0993	.0104
4	ICSA	.0007	243.4	-.0298	-.0106	.0017	.0002
5	ICSAB	.9580	241.7	-.0415	-.0061	.4733	.4795
6	PREPSTDTJA	.9360	4.840	4.798	5.127	4.707	5.111
7	PREPBLKTJA	-.0021	.0822	-.0026	.3647	.0010	.0002
8	S96T002683_L	.0363	57.90	-.1184	.6830	-.0004	.0025
9	S96T002683	.0564	54.60	-.1108	.6601	.0011	.0049
10	S96T002683_D	.0495	55.14	-.0938	.1262	.0007	.0047
11	S96T002683_S	.0526	67.20	-.0811	.8773	.0008	.0065
12	CCV	5.085	4.989	5.242	5.054	5.048	5.272
13	CCB	.0004	-.0137	-.0132	-.0014	.0000	.0000
14	S96T002691_L	.0333	34.23	-.1647	.9296	.0018	-.0012
15	S96T002691	.0485	32.71	-.0592	.9257	.0010	.0028
16	S96T002691_D	.0520	47.01	-.1113	.6896	.0006	.0043
17	S96T002699_L	.0382	49.32	-.1139	.9864	.0004	.0034
18	S96T002699	.0541	46.65	-.0956	.9817	.0013	.0044
19	S96T002699_D	.0509	42.24	-.0879	.7569	.0012	.0039
20	S96T002708_L	.0157	47.35	-.1036	.7778	-.0004	.0030
21	S96T002708	.0385	44.91	-.0865	.7531	.0009	.0037
22	S96T002708_D	.0483	55.72	-.0787	.7408	.0017	.0049
23	CCV	5.111	4.991	5.239	5.072	5.049	5.261
24	CCB	.0008	-.0161	-.0084	-.0043	.0000	-.0001
25	S96T002716_L	.0429	59.62	-.0683	.7967	-.0006	.0059
26	S96T002716	.0638	56.52	-.0888	.7787	.0010	.0054
27	S96T002716_D	.0608	61.43	-.0975	.7332	.0011	.0055
28	ICSA	.0004	247.1	-.0411	-.0104	.0016	-.0002
29	ICSAB	.9766	245.8	-.0489	-.0031	.4823	.4858
30	CCV	5.082	4.984	5.247	5.062	5.069	5.262
31	CCB	-.0014	-.0150	-.0114	-.0019	.0000	.0000

#	Sample Name	Bi	Ca	Cd	Ce	Co	Cr
1	ICV	5.162	5.124	5.044	5.156	5.076	5.120
2	ICB	.0099	-.0019	-.0004	-.0031	-.0010	-.0001
3	LLS	.1977	.2135	.0092	.2001	.0398	.0214
4	ICSA	.0069	251.0	-.0000	-.0058	-.0007	.0090
5	ICSAB	.0031	249.1	.9365	.0084	.4649	.4798
6	PREPSTDTJA	4.617	4.795	4.611	4.949	4.744	4.665
7	PREPBLKTJA	.0000	.2444	.0001	-.0071	.0009	.0066
8	S96T002683_L	-.1485	.5837	.0029	-.1087	-.0311	.2190
9	S96T002683	.0444	.2672	.0053	-.0134	.0001	.2127
10	S96T002683_D	-.0196	.3313	.0035	-.0088	-.0049	.2134
11	S96T002683_S	.0148	.2313	.0059	-.0228	-.0015	.2534
12	CCV	5.142	5.213	5.141	5.222	5.163	5.204
13	CCB	.0135	.0062	-.0004	-.0058	-.0006	.0006
14	S96T002691_L	.0494	.4056	-.0087	-.0155	-.0168	.1457
15	S96T002691	.0319	.2145	.0025	-.0041	-.0015	.1380
16	S96T002691_D	.0253	.1954	.0033	-.0151	-.0051	.1964
17	S96T002699_L	-.0369	.7532	-.0042	-.0588	-.0133	.1854
18	S96T002699	.0010	.5179	.0052	.0014	-.0029	.1892

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#	Sample Name	Bi	Ca	Cd	Ce	Co	Cr
19	S96T002699_D	.0015	.7269	.0048	-.0195	-.0017	.1658
20	S96T002708_L	-.0410	.4681	.0070	-.1204	-.0144	.1767
21	S96T002708	-.0009	.2757	.0050	-.0173	-.0013	.1786
22	S96T002708_D	-.0417	.3614	.0061	.0014	-.0039	.2338
23	CCV	5.228	5.224	5.142	5.219	5.177	5.218
24	CCB	-.0255	.0063	.0005	-.0120	-.0014	-.0001
25	S96T002716_L	.1618	.4204	.0025	-.0706	-.0229	.2167
26	S96T002716	.0083	.2608	.0066	-.0111	-.0049	.2192
27	S96T002716_D	-.0054	.3254	.0080	-.0188	-.0010	.2358
28	ICSA	-.0070	256.7	.0013	.0012	-.0020	.0085
29	ICSAB	-.0071	255.0	.9508	.0010	.4721	.4894
30	CCV	5.217	5.186	5.124	5.247	5.145	5.189
31	CCB	-.0054	.0092	.0001	-.0066	-.0020	-.0018

#	Sample Name	Cu	Eu	Fe	K	La	Li
1	ICV	5.210	-.0024	5.085	5.313	5.063	5.054
2	ICB	.0004	-.0001	.0002	.1969	-.0005	.0000
3	LLS	.0219	.0006	.1038	Q.6653	.1010	.0209
4	ICSA	-.0097	-.0442	94.16	.1328	-.0068	.0019
5	ICSAB	.4810	-.0408	93.34	.3594	-.0052	1.008
6	PREPSTDTJA	4.680	-.0034	4.698	4.840	4.808	4.812
7	PREPBLKTJA	.0107	-.0020	.1211	.3840	-.0010	-.0019
8	S96T002683_L	.0182	.0054	.1200	301.5	-.0175	.0303
9	S96T002683	.0222	-.0018	.1240	286.0	-.0013	.0245
10	S96T002683_D	.0095	-.0022	.2318	210.3	-.0021	.0230
11	S96T002683_S	.0172	-.0026	.1121	221.5	-.0042	.0274
12	CCV	5.284	-.0024	5.171	5.255	5.127	5.103
13	CCB	.0007	.0000	-.0010	.0972	-.0017	.0004
14	S96T002691_L	.0184	-.0011	.2141	386.1	-.0061	.0776
15	S96T002691	.0146	-.0017	.2085	371.3	-.0012	.0769
16	S96T002691_D	.0595	-.0028	.2140	368.1	-.0027	.1147
17	S96T002699_L	.0182	-.0019	.1779	237.9	-.0091	.0182
18	S96T002699	.0208	-.0010	.1795	223.1	-.0006	.0228
19	S96T002699_D	.0159	-.0010	.1684	222.8	-.0032	.0478
20	S96T002708_L	.0136	.0052	.0855	310.2	-.0254	.0436
21	S96T002708	.0213	-.0009	.0941	297.2	-.0032	.0386
22	S96T002708_D	.0141	-.0011	.1962	330.2	-.0022	.0808
23	CCV	5.280	-.0023	5.184	5.217	5.136	5.112
24	CCB	.0000	.0001	-.0014	.0921	-.0014	.0008
25	S96T002716_L	.0297	-.0056	.1968	253.1	-.0170	.0231
26	S96T002716	.0259	-.0018	.1159	242.8	-.0036	.0284
27	S96T002716_D	.0145	-.0012	.1045	269.5	-.0014	.0357
28	ICSA	-.0113	-.0522	95.83	.3329	-.0058	.0034
29	ICSAB	.4869	-.0471	95.15	.2182	-.0067	1.022
30	CCV	5.299	-.0025	5.148	5.192	5.158	5.130
31	CCB	.0002	.0000	-.0011	.2083	-.0005	-.0001

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#	Sample Name	Mg	Mn	Mo	Na	Nd	Ni
1	ICV	4.912	4.959	5.041	5.030	5.137	5.039
2	ICB	-.0039	.0000	.0038	-.0057	.0014	-.0041
3	LLS	.2067	.0196	.0941	.2185	.2021	.0374
4	ICSA	249.6	-.0065	-.0103	200.6	.0061	.0050
5	ICSAB	248.0	.4428	-.0128	200.3	.0075	.9056
6	PREPSTDTJA	4.461	4.555	4.752	5.854	4.791	4.748
7	PREPBLKTJA	.0425	.0013	-.0014	.6789	.0039	.0068
8	S96T002683_L	.0200	.0093	.0613	896.2	-.0097	.0572
9	S96T002683	.0504	.0080	.1059	849.0	.0051	.0293
10	S96T002683_D	.0278	.0075	.1056	744.8	-.0076	.0295
11	S96T002683_S	.0364	.0080	.1291	799.9	.0021	.0252
12	CCV	4.961	5.031	5.122	5.075	5.200	5.135
13	CCB	-.0005	.0002	.0017	-.0022	-.0008	.0060
14	S96T002691_L	.1115	.0071	.0163	679.7	.0327	.0549
15	S96T002691	.0442	.0088	.0608	647.7	.0015	.0311
16	S96T002691_D	.0227	.0110	.0923	782.8	-.0065	.0209
17	S96T002699_L	.0662	.0051	.0479	828.5	-.0070	.0401
18	S96T002699	.0660	.0070	.0887	785.4	.0049	.0254
19	S96T002699_D	.0639	.0067	.0751	778.0	.0024	.0377
20	S96T002708_L	-.0032	.0102	.0464	644.2	-.0212	.0869
21	S96T002708	.0422	.0087	.0837	616.2	.0000	.0243
22	S96T002708_D	.0710	.0130	.1122	725.6	.0005	.0259
23	CCV	4.968	5.047	5.132	5.087	5.195	5.136
24	CCB	-.0024	.0001	-.0007	-.0009	.0005	.0050
25	S96T002716_L	.0083	.0069	.0892	914.0	-.0017	.0105
26	S96T002716	.0446	.0088	.1112	867.3	.0039	.0375
27	S96T002716_D	.0486	.0093	.1202	894.9	.0013	.0313
28	ICSA	254.2	-.0065	-.0124	201.8	.0070	.0017
29	ICSAB	252.0	.4510	-.0133	203.1	.0061	.9283
30	CCV	4.961	5.024	5.113	5.092	5.238	5.103
31	CCB	.0050	-.0001	-.0007	-.0044	.0003	.0043

#	Sample Name	P	Pb	S	Sb	Se	Si
1	ICV	5.209	5.038	5.027	4.811	4.901	4.797
2	ICB	.0036	-.0001	-.0037	.0022	-.0077	-.0017
3	LLS	.4406	.2000	.2132	.1003	.1866	.1393
4	ICSA	.0267	.0344	-.0010	.0134	-.0540	-.0070
5	ICSAB	.0070	.9933	-.0125	.0067	-.0589	-.0074
6	PREPSTDTJA	4.978	4.479	4.682	4.474	4.467	.4889
7	PREPBLKTJA	.0512	.0008	.0771	.0027	-.0065	.3520
8	S96T002683_L	3.479	.0504	.8645	-.0555	-.1638	2.917
9	S96T002683	3.483	.1299	.8612	-.0086	-.0155	2.751
10	S96T002683_D	3.174	.1027	.8833	-.0025	-.0271	1.684
11	S96T002683_S	2.703	.1508	1.030	-.0002	.0145	3.317
12	CCV	5.202	5.119	5.067	4.892	5.022	4.863
13	CCB	.0000	-.0089	-.0127	.0017	-.0021	-.0003
14	S96T002691_L	3.826	-.0464	.5500	-.0014	-.1099	3.534
15	S96T002691	3.364	.0453	.5641	.0119	-.0097	3.400
16	S96T002691_D	4.248	.0641	.7567	.0016	-.0111	2.759
17	S96T002699_L	2.648	.0585	.9085	-.0442	-.1106	3.295
18	S96T002699	2.539	.1030	.7559	.0057	.0166	3.189

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#	Sample Name	P	Pb	S	Sb	Se	Si
19	S96T002699_D	2.207	.1381	.6791	.0100	-.0152	3.280
20	S96T002708_L	4.337	.1500	.7603	.0461	-.1529	2.713
21	S96T002708	4.191	.1474	.7133	-.0133	-.0061	2.561
22	S96T002708_D	7.574	.2973	.8794	-.0100	.0053	2.881
23	CCV	5.356	5.139	5.093	4.892	4.993	4.872
24	CCB	-.0010	-.0171	-.0059	-.0031	-.0188	-.0013
25	S96T002716_L	3.693	.0523	.9938	-.0197	-.0390	3.377
26	S96T002716	3.477	.1432	.9186	-.0014	.0022	3.269
27	S96T002716_D	4.305	.1181	.9719	-.0010	.0135	2.710
28	ICSA	.0284	.0218	-.0075	-.0026	-.0457	-.0020
29	ICSAB	.0270	1.009	-.0204	.0004	-.0440	-.0036
30	CCV	5.377	5.097	5.128	4.865	5.017	4.837
31	CCB	-.0018	-.0113	-.0020	-.0008	-.0176	-.0042

#	Sample Name	Sm	Sr	Th	Ti	Tl	U
1	ICV	4.943	4.991	.0156	4.905	4.876	9.645
2	ICB	-.0035	.0001	.0016	.0002	-.0140	-.0041
3	LLS	.2082	.0203	-.0046	.0208	.4004	.4973
4	ICSA	-.0054	.0016	-.0011	.0020	-.0223	-.0263
5	ICSAB	-.0045	.0016	-.0013	.0025	-.0115	-.0353
6	PREPSTDTJA	4.696	4.706	.0211	4.676	4.409	9.174
7	PREPBLKTJA	-.0313	.0004	.0071	.0025	.0041	-.1226
8	S96T002683_L	.0230	.0005	-.0870	.0046	-.1860	-.0223
9	S96T002683	-.0289	-.0002	.0123	.0026	-.0576	-.2166
10	S96T002683_D	-.0370	-.0001	-.0007	.0020	-.0649	-.2035
11	S96T002683_S	-.0395	-.0001	.0028	.0025	-.0357	-.2293
12	CCV	5.002	5.050	.0219	4.999	4.971	9.772
13	CCB	.0005	.0001	-.0023	.0005	-.0318	-.0076
14	S96T002691_L	.0006	-.0005	-.0278	.0099	-.1011	-.2856
15	S96T002691	-.0271	.0001	.0034	.0035	-.0354	-.2175
16	S96T002691_D	-.0447	-.0003	.0118	.0016	-.0321	-.2697
17	S96T002699_L	-.0567	-.0011	.0330	.0052	-.1474	-.3493
18	S96T002699	-.0178	.0006	.0125	.0045	-.0493	-.1477
19	S96T002699_D	-.0193	.0006	.0026	.0035	-.0290	-.1672
20	S96T002708_L	.0454	.0010	-.0590	.0023	-.1512	.0182
21	S96T002708	-.0218	.0003	.0019	.0035	-.0256	-.1790
22	S96T002708_D	-.0238	.0006	.0104	.0036	-.0593	-.2067
23	CCV	5.009	5.060	.0205	5.009	4.975	9.792
24	CCB	.0024	.0001	-.0040	.0005	-.0166	-.0081
25	S96T002716_L	-.0916	-.0016	-.0046	.0075	-.0930	-.5216
26	S96T002716	-.0308	.0000	.0129	.0026	-.0210	-.2150
27	S96T002716_D	-.0237	.0005	.0048	.0030	-.0373	-.1668
28	ICSA	.0101	.0017	.0022	.0013	-.0171	-.0023
29	ICSAB	-.0050	.0017	-.0046	.0010	.0006	-.0222
30	CCV	5.025	5.078	.0229	4.992	4.954	9.828
31	CCB	-.0048	.0001	-.0031	.0010	-.0015	-.0239

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#	Sample Name	V	Y	Zn	Zr
1	ICV	5.062	.0062	5.138	4.953
2	ICB	-.0004	-.0001	.0001	-.0012
3	LLS	.1024	.0005	.0216	.0206
4	ICSA	-.0014	.0065	-.0025	-.0046
5	ICSAB	.4657	.0064	.9498	-.0043
6	PREPSTDTJA	4.630	.0041	4.508	4.692
7	PREPBLKTJA	-.0050	-.0015	.0349	-.0036
8	S96T002683_L	.0038	.0000	.1297	.0348
9	S96T002683	-.0057	-.0018	.0786	.0227
10	S96T002683_D	-.0069	-.0018	.0826	.0237
11	S96T002683_S	-.0068	-.0019	.0858	.0299
12	CCV	5.136	.0063	5.214	5.029
13	CCB	.0004	.0001	-.0000	-.0002
14	S96T002691_L	-.0032	-.0007	.0851	.0094
15	S96T002691	-.0027	-.0015	.0707	.0163
16	S96T002691_D	-.0064	-.0021	.1176	.0200
17	S96T002699_L	-.0088	-.0022	.1480	.0122
18	S96T002699	-.0029	-.0009	.1017	.0233
19	S96T002699_D	-.0028	-.0010	.1214	.0213
20	S96T002708_L	.0148	.0016	.1408	.0363
21	S96T002708	-.0024	-.0010	.0717	.0228
22	S96T002708_D	-.0010	-.0010	.1122	.0271
23	CCV	5.146	.0066	5.241	5.040
24	CCB	.0004	.0001	.0002	-.0001
25	S96T002716_L	-.0140	-.0037	.1352	.0081
26	S96T002716	-.0039	-.0018	.0937	.0255
27	S96T002716_D	-.0025	-.0013	.1016	.0289
28	ICSA	.0010	.0072	-.0045	-.0033
29	ICSAB	.4753	.0068	.9665	-.0039
30	CCV	5.134	.0061	5.185	5.033
31	CCB	-.0005	-.0001	-.0007	-.0008

LABCORE Data Entry Template for Worklist# 10841

Analyst: JK Sato **Instrument:** ICP01 JK 8-5-96 **Book#** 58848Q

Method: LA-505-~~151~~/161 Rev/Mod B-1
JK 8-5-96

Worklist Comment: ICP AW-101 (SOLID ACID DIGEST)

S	Type	Sample#	R	A	Test	Matrix	Group#	Project
1	ICV				@ICP-QC	QC		
2	ICB				@ICP-QC	QC		
3	LLS				@ICP-QC	QC		
4	ICSA				@ICP-QC	QC		
5	ICSAB				@ICP-QC	QC		
6	PREPSTDTJA				@ICP-A01	SOLID		
7	PREPBLKTJA				@ICP-A01	SOLID		
8	SERDIL	S96T002418	0	A	@ICP-A01	SOLID		
9	SAMPLE	S96T002418	0	A	@ICP-A01	SOLID	96000462	AW-101 PUSH
		Analytes Requested:			AG-A-01 , AL-A-01 , AS-A-01 , B-A-01 , BA-A-01 , BE-A-01 , BI-A-01 , CA-A-01 , CD-A-01 , CE-A-01 , CO-A-01 , CR-A-01 , CU-A-01 , FE-A-01 , K-A-01 , LA-A-01 , LI-A-01 , MG-A-01 , MN-A-01 , MO-A-01 , NA-A-01 , ND-A-01 , NI-A-01 , P-A-01 , PB-A-01 , S-A-01 , SB-A-01 , SE-A-01 , SI-A-01 , SM-A-01 , SR-A-01 , TI-A-01 , TL-A-01 , U-A-01 , V-A-01 , ZN-A-01 , ZR-A-01			
10	DUP	S96T002418	0	A	@ICP-A01	SOLID		
11	SPK-PREDIG	S96T002418	0	A	@ICP-A01	SOLID		
12	CCV				@ICP-QC	QC		
13	CCB				@ICP-QC	QC		
14	SERDIL	S96T002530	0	A	@ICP-A01	SOLID		
15	SAMPLE	S96T002530	0	A	@ICP-A01	SOLID	96000462	AW-101 PUSH
		Analytes Requested:			AG-A-01 , AL-A-01 , AS-A-01 , B-A-01 , BA-A-01 ,			

Data Entry Comments: This batch needs to be re-prep. All elements failed in Spk-Predig. Prep personnel were notified.
GP 8/8/96

S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

LABCORE Data Entry Template for Worklist# 10841

S	Type	Sample#	R	A	Test	Matrix	Group#	Project
					BE-A-01 , BI-A-01 , CA-A-01 , CD-A-01 , CE-A-01 , CO-A-01 , CR-A-01 , CU-A-01 , FE-A-01 , K-A-01 , LA-A-01 , LI-A-01 , MG-A-01 , MN-A-01 , MO-A-01 , NA-A-01 , ND-A-01 , NI-A-01 , P-A-01 , PB-A-01 , S-A-01 , SB-A-01 , SE-A-01 , SI-A-01 , SM-A-01 , SR-A-01 , TI-A-01 , TL-A-01 , U-A-01 , V-A-01 , ZN-A-01 , ZR-A-01			
16	DUP	S96T002530	0	A	@ICP-A01	SOLID		
17	SERDIL	S96T002535	0	A	@ICP-A01	SOLID		
18	SAMPLE	S96T002535	0	A	@ICP-A01	SOLID	96000462	AW-101 PUSH
		Analytes Requested:			AG-A-01 , AL-A-01 , AS-A-01 , B-A-01 , BA-A-01 , BE-A-01 , BI-A-01 , CA-A-01 , CD-A-01 , CE-A-01 , CO-A-01 , CR-A-01 , CU-A-01 , FE-A-01 , K-A-01 , LA-A-01 , LI-A-01 , MG-A-01 , MN-A-01 , MO-A-01 , NA-A-01 , ND-A-01 , NI-A-01 , P-A-01 , PB-A-01 , S-A-01 , SB-A-01 , SE-A-01 , SI-A-01 , SM-A-01 , SR-A-01 , TI-A-01 , TL-A-01 , U-A-01 , V-A-01 , ZN-A-01 , ZR-A-01			
19	DUP	S96T002535	0	A	@ICP-A01	SOLID		
20	SERDIL	S96T002538	0	A	@ICP-A01	SOLID		
21	SAMPLE	S96T002538	0	A	@ICP-A01	SOLID	96000462	AW-101 PUSH
		Analytes Requested:			AG-A-01 , AL-A-01 , AS-A-01 , B-A-01 , BA-A-01 , BE-A-01 , BI-A-01 , CA-A-01 , CD-A-01 , CE-A-01 , CO-A-01 , CR-A-01 , CU-A-01 , FE-A-01 , K-A-01 , LA-A-01 , LI-A-01 , MG-A-01 , MN-A-01 , MO-A-01 , NA-A-01 , ND-A-01 , NI-A-01 , P-A-01 , PB-A-01 , S-A-01 , SB-A-01 , SE-A-01 , SI-A-01 , SM-A-01 , SR-A-01 , TI-A-01 , TL-A-01 , U-A-01 , V-A-01 , ZN-A-01 , ZR-A-01			
22	DUP	S96T002538	0	A	@ICP-A01	SOLID		
23	CCV				@ICP-QC	QC		
24	CCB				@ICP-QC	QC		
25	SERDIL	S96T002571	0	A	@ICP-A01	SOLID		
26	SAMPLE	S96T002571	0	A	@ICP-A01	SOLID	96000462	AW-101 PUSH
		Analytes Requested:			AG-A-01 , AL-A-01 , AS-A-01 , B-A-01 , BA-A-01 , BE-A-01 , BI-A-01 , CA-A-01 , CD-A-01 , CE-A-01 , CO-A-01 ,			

Data Entry Comments:

S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

LABCORE Data Entry Template for Worklist# 10841

S	Type	Sample#	R	A	Test	Matrix	Group#	Project
					CR-A-01 , CU-A-01 , FE-A-01 , K-A-01 , LA-A-01 , LI-A-01 , MG-A-01 , MN-A-01 , MO-A-01 , NA-A-01 , ND-A-01 , NI-A-01 , P-A-01 , PB-A-01 , S-A-01 , SB-A-01 , SE-A-01 , SI-A-01 , SM-A-01 , SR-A-01 , TI-A-01 , TL-A-01 , U-A-01 , V-A-01 , ZN-A-01 , ZR-A-01			
27	DUP	S96T002571	0	A	@ICP-A01	SOLID		
28	SERDIL	S96T002580	0	A	@ICP-A01	SOLID		
29	SAMPLE	S96T002580	0	A	@ICP-A01	SOLID	96000462	AW-101 PUSH
		Analytes Requested:			AG-A-01 , AL-A-01 , AS-A-01 , B-A-01 , BA-A-01 , BE-A-01 , BI-A-01 , CA-A-01 , CD-A-01 , CE-A-01 , CO-A-01 , CR-A-01 , CU-A-01 , FE-A-01 , K-A-01 , LA-A-01 , LI-A-01 , MG-A-01 , MN-A-01 , MO-A-01 , NA-A-01 , ND-A-01 , NI-A-01 , P-A-01 , PB-A-01 , S-A-01 , SB-A-01 , SE-A-01 , SI-A-01 , SM-A-01 , SR-A-01 , TI-A-01 , TL-A-01 , U-A-01 , V-A-01 , ZN-A-01 , ZR-A-01			
30	DUP	S96T002580	0	A	@ICP-A01	SOLID		
31	ICSA				@ICP-QC	QC		
32	ICSAB				@ICP-QC	QC		
33	CCV				@ICP-QC	QC		
34	CCB				@ICP-QC	QC		

Final page for worklist # 10841

JK Lato 08-05-96

Analyst Signature **Date**

Reviewed by: Sarah R. Pang 8/12/96

Analyst Signature **Date**

Prepsd TTQ, direct
Prepd KTTQ, direct
S96T002418_L, 4-4-2-8, DF 10
S96T002418 4-4 2
S96T002418_D 4-4 2
S96T002418_S 4-4 2
S96T002530_L, 4-4-2-8, DF10
S96T002530 4-4 2
S96T002530_D 4-4 2
S96T002535_L, 4-4-2-8, DF 10
S96T002535 4-4 2
S96T002535_D 4-4 2
S96T002538_L, 4-4-2-8, DF 10
S96T002538 4-4 2
S96T002538_D 4-4 2
S96T002571_L, 4-4-2-8, DF 10
S96T002571 4-4 2
S96T002571_D 4-4 2
S96T002580_L, 4-4-2-8, DF 10
S96T002580 4-4 2
S96T002580_D 4-4 2

Data Entry Comments:

S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

WHC-SD-WM-DP-192, REV. 0

Analysis Report Summary Mon 08-05-96 02:22:18 PM page 1

#	Sample Name	File	Method	Date	Time	OpID	Type	Mode
1	ICV	960805A	ICP2	08/05/96	12:14	DKS	Q	CONC
2	ICB	960805A	ICP2	08/05/96	12:17	DKS	Q	CONC
3	LLS	960805A	ICP2	08/05/96	12:20	DKS	Q	CONC
4	ICSA	960805A	ICP2	08/05/96	12:23	DKS	Q	CONC
5	ICSAB	960805A	ICP2	08/05/96	12:26	DKS	Q	CONC
6	PREPSTDTJA	960805A	ICP2	08/05/96	12:30	DKS	S	CONC
7	PREPBLKTJA	960805A	ICP2	08/05/96	12:34	DKS	S	CONC
8	S969T002418_L	960805A	ICP2	08/05/96	12:37	DKS	S	CONC
9	S96T002418	960805A	ICP2	08/05/96	12:40	DKS	S	CONC
10	S96T002418_D	960805A	ICP2	08/05/96	12:43	DKS	S	CONC
11	S96T002418_S	960805A	ICP2	08/05/96	12:47	DKS	S	CONC
12	CCV	960805A	ICP2	08/05/96	12:51	DKS	Q	CONC
13	CCB	960805A	ICP2	08/05/96	12:55	DKS	Q	CONC
14	S96T002418_S	960805A	ICP2	08/05/96	12:58	DKS	S	CONC
15	S96T002530_L	960805A	ICP2	08/05/96	13:01	DKS	S	CONC
16	S96T002530	960805A	ICP2	08/05/96	13:04	DKS	S	CONC
17	S96T002530_D	960805A	ICP2	08/05/96	13:07	DKS	S	CONC
18	S96T002535_L	960805A	ICP2	08/05/96	13:10	DKS	S	CONC
19	S96T002535	960805A	ICP2	08/05/96	13:14	DKS	S	CONC
20	S96T002535_D	960805A	ICP2	08/05/96	13:17	DKS	S	CONC
21	CCV_1	960805A	ICP2	08/05/96	13:22	DKS	Q	CONC
22	CCB_1	960805A	ICP2	08/05/96	13:25	DKS	Q	CONC
23	S96T002538_L	960805A	ICP2	08/05/96	13:29	DKS	S	CONC
24	S96T002538	960805A	ICP2	08/05/96	13:32	DKS	S	CONC
25	S96T002538_D	960805A	ICP2	08/05/96	13:35	DKS	S	CONC
26	CCV_2	960805A	ICP2	08/05/96	13:39	DKS	Q	CONC
27	CCB_2	960805A	ICP2	08/05/96	13:42	DKS	Q	CONC
28	CCB_2	960805A	ICP2	08/05/96	13:45	DKS	Q	CONC
29	S96T002571_L	960805A	ICP2	08/05/96	13:48	DKS	S	CONC
30	S96T002571	960805A	ICP2	08/05/96	13:51	DKS	S	CONC
31	S96T002571_D	960805A	ICP2	08/05/96	13:54	DKS	S	CONC
32	S96T002580_L	960805A	ICP2	08/05/96	13:57	DKS	S	CONC
33	S96T002580	960805A	ICP2	08/05/96	14:00	DKS	S	CONC
34	S96T002580_D	960805A	ICP2	08/05/96	14:03	DKS	S	CONC
35	ICSA	960805A	ICP2	08/05/96	14:08	DKS	Q	CONC
36	ICSAB	960805A	ICP2	08/05/96	14:11	DKS	Q	CONC
37	CCV_3	960805A	ICP2	08/05/96	14:15	DKS	Q	CONC
38	CCVE_3	960805A	ICP2	08/05/96	14:19	DKS	Q	CONC

JK Lab
08-05-96
GW-101

S96T002418
S96T002530
S96T002535
S96T002538
S96T002571
S96T002580
Worklist # 10841

SIGNATURE ABOVE REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 1894 TO 1900.

Analysis Report Averages WHC-SD-WM-DP-192, REV. 0 page 2

#	Sample Name	Ag	Al	As	B	Ba	Be
1	ICV	4.852	4.898	5.019	4.858	4.834	5.079
2	ICB	.0004	.0068	-.0016	.0023	.0001	.0002
3	LLS	.0219	.1067	.1988	.0981	.0968	.0105
4	ICSA	.0030	242.0	-.0839	-.0026	.0018	.0003
5	ICSAB	.9332	239.0	-.0788	-.0043	.4579	.4699
6	PREPSTDTJA	.9192	4.825	4.669	4.234	4.607	5.061
7	PREPBLKTJA	-.0004	.1583	.0088	.4561	.0007	.0003
8	S969T002418_L	.1085	93.70	-.0368	.9260	.0203	.0107
9	S96T002418	.1020	86.23	-.0797	.8529	.0188	.0083
10	S96T002418_D	.1093	92.64	-.0796	.7540	.0201	.0086
11	S96T002418_S	.0590	30.90	-.0213	.5883	.0015	.0031
12	CCV	4.983	4.998	5.151	4.953	4.979	5.183
13	CCB	.0001	.0042	-.0017	.0018	.0000	.0002
14	S96T002418_S	.0604	30.84	-.0198	.5966	.0013	.0029
15	S96T002530_L	.1351	89.58	-.0976	.8848	.0225	.0097
16	S96T002530	.1256	83.87	-.1381	.8376	.0214	.0083
17	S96T002530_D	.1427	83.93	-.1147	.7334	.0251	.0081
18	S96T002535_L	.0803	83.21	-.1606	.8334	.0151	.0085
19	S96T002535	.0763	78.30	-.1466	.7826	.0138	.0075
20	S96T002535_D	.0816	87.61	-.1410	.7507	.0101	.0088
21	CCV_1	4.952	4.961	5.132	4.935	4.914	5.188
22	CCB_1	.0001	.0036	-.0032	.0014	.0000	.0002
23	S96T002538_L	.0864	51.32	-.0570	.7632	.0046	.0050
24	S96T002538	.0747	48.26	-.1079	.7291	.0048	.0049
25	S96T002538_D	.0694	45.62	-.0860	.8725	.0048	.0045
26	CCV_2	4.991	4.995	5.146	4.975	4.982	5.205
27	CCB_2	.0006	-.0019	-.0056	-.0014	.0001	-.0000
28	CCB_2	.0003	.0043	.0113	.0014	.0000	.0000
29	S96T002571_L	.0598	50.78	.0361	.7910	.0025	.0054
30	S96T002571	.0560	48.26	-.0835	.7578	.0019	.0045
31	S96T002571_D	.0548	44.08	-.0717	.6254	.0021	.0041
32	S96T002580_L	.0551	40.85	-.1083	.8788	.0018	.0037
33	S96T002580	.0505	38.15	-.0657	.7788	.0010	.0034
34	S96T002580_D	.0478	35.06	-.0478	.5097	.0012	.0031
35	ICSA	.0018	249.5	-.1056	-.0053	.0018	.0001
36	ICSAB	.9611	246.5	-.0996	-.0024	.4749	.4844
37	CCV_3	4.957	4.957	5.131	4.958	4.926	5.189
38	CCVB_3	.0000	.0018	.0021	.0023	.0001	-.0001

#	Sample Name	Bi	Ca	Cd	Ce	Co	Cr
1	ICV	4.916	4.849	4.912	5.005	4.928	4.959
2	ICB	.0144	.0009	-.0002	.0091	.0013	.0015
3	LLS	.2165	Q.1861	.0106	.2135	.0431	.0217
4	ICSA	.0207	243.4	.0023	.0110	.0019	.0107
5	ICSAB	.0243	242.4	.9154	.0167	.4560	.4697
6	PREPSTDTJA	4.513	4.663	4.547	4.827	4.674	4.603
7	PREPBLKTJA	.0040	.1990	-.0003	.0116	.0039	.0077
8	S969T002418_L	.0301	1.306	.0514	.0477	.0228	2.183
9	S96T002418	.0689	1.150	.0423	.0201	.0103	1.992
10	S96T002418_D	.0121	1.282	.0469	.0233	.0127	2.224
11	S96T002418_S	.0784	.1238	.0035	.0295	.0044	.1365

Analysis Report Averages Mon 08-05-96 02:22:18 PM page 3

#	Sample Name	Bi	Ca	Cd	Ce	Co	Cr
12	CCV	5.010	5.096	5.053	5.127	5.070	5.120
13	CCB	.0276	.0005	.0003	.0041	.0008	-.0000
14	S96T002418_S	.0469	.1415	.0032	.0118	.0053	.1345
15	S96T002530_L	.3432	1.175	.0413	.0304	.0328	1.931
16	S96T002530	.0896	1.114	.0338	.0165	.0103	1.801
17	S96T002530_D	.0608	1.553	.0411	.0141	.0109	2.074
18	S96T002535_L	.3122	.8134	.0290	.1242	.0289	1.069
19	S96T002535	.0644	.7830	.0252	.0129	.0052	.9952
20	S96T002535_D	.0764	.5525	.0195	.0247	.0059	.8954
21	CCV_1	4.994	5.057	5.042	5.079	5.052	5.090
22	CCB_1	.0119	.0006	-.0002	.0091	.0021	-.0002
23	S96T002538_L	.3576	.3663	.0161	.0151	.0141	.4736
24	S96T002538	.0722	.3764	.0105	.0224	.0000	.4356
25	S96T002538_D	.1106	.3025	.0099	.0217	.0060	.4348
26	CCV_2	5.063	5.095	5.069	5.132	5.081	5.135
27	CCB_2	.0293	-.0008	-.0007	.0027	.0012	.0005
28	CCB_2	-.0010	.0003	.0007	.0069	.0006	.0003
29	S96T002571_L	.2361	.1819	.0005	-.0044	.0104	.3022
30	S96T002571	.0783	.1845	.0061	.0036	.0072	.2811
31	S96T002571_D	.0655	.2128	.0050	.0073	.0025	.2138
32	S96T002580_L	.0460	.2615	.0054	.0612	.0177	.1817
33	S96T002580	.0781	.2130	.0048	.0218	.0035	.1533
34	S96T002580_D	.0504	.1973	.0041	.0067	.0063	.1464
35	ICSA	.0170	254.1	.0003	.0136	.0037	.0087
36	ICSAB	-.0141	251.7	.9427	.0115	.4723	.4859
37	CCV_3	5.009	5.099	5.060	5.076	5.065	5.105
38	CCVB_3	.0123	.0013	.0001	.0073	.0019	.0014

#	Sample Name	Cu	Eu	Fe	K	La	Li
1	ICV	5.100	-.0032	4.956	4.874	4.908	4.953
2	ICB	.0011	-.0007	.0002	-.1122	.0014	-.0004
3	LLS	.0211	.0003	.1025	Q.6820	.1015	.0205
4	ICSA	-.0088	-.0334	92.66	.1781	-.0045	.0026
5	ICSAB	.4657	-.0331	91.56	.1888	-.0034	.9724
6	PREPSTDTJA	4.588	-.0035	4.948	4.562	4.701	4.680
7	PREPBLKTJA	.0207	-.0029	.2485	.0431	.0013	-.0031
8	S969T002418_L	.1716	-.0035	1.648	136.1	.0260	-.0001
9	S96T002418	.1548	-.0037	1.509	125.7	.0198	.0001
10	S96T002418_D	.1972	-.0022	1.544	129.7	.0223	.0020
11	S96T002418_S	.0493	-.0018	.1262	414.3	.0036	.1933
12	CCV	5.193	-.0032	5.108	4.951	5.044	5.022
13	CCB	-.0007	-.0003	-.0002	-.0524	-.0002	.0000
14	S96T002418_S	.0503	-.0044	.1253	415.4	.0021	.1926
15	S96T002530_L	.0602	-.0044	1.501	129.3	.0283	.0450
16	S96T002530	.0465	-.0040	1.404	123.1	.0230	.0441
17	S96T002530_D	.0627	-.0030	1.853	125.5	.0266	.0519
18	S96T002535_L	.0418	-.0055	1.159	130.7	.0266	.0261
19	S96T002535	.0288	-.0040	1.098	123.6	.0133	.0246
20	S96T002535_D	.0256	-.0032	.8297	140.8	.0099	.0274
21	CCV_1	5.158	-.0026	5.093	4.926	4.983	4.984
22	CCB_1	.0004	-.0001	-.0002	.0549	.0014	.0005
23	S96T002538_L	.0308	-.0106	.3653	330.5	.0124	.0644

Analysis Report Averages Mon 08-05-96 02:22:18 PM page 4

#	Sample Name	Cu	Eu	Fe	K	La	Li
24	S96T002538	.0217	-.0034	.3423	318.2	.0064	.0689
25	S96T002538_D	.0288	-.0034	.4075	285.2	.0070	.0673
26	CCV_2	5.195	-.0029	5.123	5.053	5.040	5.015
27	CCB_2	.0004	.0006	-.0001	.1720	.0005	.0008
28	CCB_2	.0005	.0000	.0004	.1062	.0006	.0004
29	S96T002571_L	.0336	-.0068	.7734	357.2	.0106	.1933
30	S96T002571_	.0255	-.0032	.7378	343.3	.0007	.1993
31	S96T002571_D	.0457	-.0041	.5216	396.2	.0008	.2248
32	S96T002580_L	.0246	.0009	.2007	355.1	.0168	.0143
33	S96T002580_	.0148	-.0019	.1874	333.2	.0025	.0093
34	S96T002580_D	.0116	-.0014	.1695	353.5	.0020	.0076
35	ICSA	-.0108	-.0458	95.65	.1272	-.0041	.0031
36	ICSAB	.4814	-.0426	94.58	.1274	-.0033	1.009
37	CCV_3	5.164	-.0023	5.085	4.776	4.995	4.975
38	CCVB_3	.0004	.0006	.0010	.1001	.0007	.0011

#	Sample Name	Mg	Mn	Mo	Na	Nd	Ni
1	ICV	4.873	4.821	4.926	4.926	5.107	4.922
2	ICB	.0126	.0001	.0001	-.0013	.0012	.0027
3	LLS	.2154	.0196	.0999	.2135	.2033	.0401
4	ICSA	249.2	-.0063	-.0039	195.8	.0063	-.0022
5	ICSAB	246.4	.4344	-.0085	193.8	.0068	.8966
6	PREPSTDTJA	4.453	4.496	4.684	5.839	4.795	4.664
7	PREPBLKTJA	.0466	.0022	.0037	.8360	.0022	.0014
8	S969T002418_L	.2576	.8958	.2216	910.4	.0123	.2192
9	S96T002418_	.1843	.8155	.1840	847.9	.0189	.2150
10	S96T002418_D	.1715	.8701	.1992	902.5	.0176	.2387
11	S96T002418_S	.0552	.0078	.0688	815.6	.0002	.0041
12	CCV	4.983	4.973	5.068	5.007	5.244	5.073
13	CCB	.0006	.0002	.0003	.0000	-.0022	.0015
14	S96T002418_S	.0606	.0072	.0691	820.1	.0021	.0208
15	S96T002530_L	.3556	1.258	.1837	909.5	.0037	.2208
16	S96T002530_	.2448	1.170	.1757	860.9	.0156	.1947
17	S96T002530_D	.2918	1.364	.1752	937.6	.0157	.2351
18	S96T002535_L	.3069	.8309	.1579	762.8	.0249	.1186
19	S96T002535_	.1844	.7760	.1569	726.7	.0107	.1269
20	S96T002535_D	.1360	.4431	.1858	799.0	.0086	.1110
21	CCV_1	4.932	4.945	5.052	4.955	5.170	5.056
22	CCB_1	.0037	.0003	.0011	.0026	.0014	-.0011
23	S96T002538_L	.2404	.2199	.1102	925.5	-.0007	.0564
24	S96T002538_	.0839	.2077	.1002	877.7	-.0064	.0578
25	S96T002538_D	.0851	.2052	.0972	800.3	.0057	.0702
26	CCV_2	4.982	4.983	5.087	5.008	5.248	5.065
27	CCB_2	.0082	.0004	-.0006	.0099	.0013	-.0064
28	CCB_2	.0066	.0002	.0010	.0043	-.0019	.0012
29	S96T002571_L	.1843	.0327	.1180	807.4	-.0021	.0869
30	S96T002571_	.0753	.0311	.1000	770.2	.0031	.0607
31	S96T002571_D	.0509	.0263	.0901	756.9	.0036	.0224
32	S96T002580_L	.1102	.0122	.0951	735.8	.0224	-.0022
33	S96T002580_	.0319	.0102	.0859	692.7	-.0083	.0260
34	S96T002580_D	.0628	.0095	.0728	677.0	-.0001	.0149
35	ICSA	257.7	-.0065	-.0088	201.1	.0040	.0021

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#	Sample Name	Mg	Mn	Mo	Na	Nd	Ni
36	ICSAB	253.8	.4476	-.0069	200.2	.0050	.9290
37	CCV_3	4.932	4.955	5.068	4.960	5.187	5.042
38	CCVB_3	.0124	.0004	.0007	.0103	.0006	.0019

#	Sample Name	P	Pb	S	Sb	Se	Si
1	ICV	4.862	4.849	4.915	4.647	4.934	4.728
2	ICB	-.0116	-.0024	.0068	-.0077	.0109	.0007
3	LLS	.3945	.2097	.1844	.1026	.2262	.1360
4	ICSA	.0161	.0261	-.0284	.0008	-.0018	-.0024
5	ICSAB	.0019	.9637	-.0379	.0068	.0073	.0066
6	PREPSTDTJA	4.640	4.410	4.659	4.338	4.465	.3160
7	PREPBLKTJA	.0218	.0121	.1132	-.0016	.0338	1.803
8	S969T002418_L	10.98	.1633	14.59	-.0430	.3133	2.931
9	S96T002418_	10.13	.1942	13.23	-.0253	.0784	2.679
10	S96T002418_D	10.87	.2412	14.99	-.0124	.0915	3.265
11	S96T002418_S	4.394	.0795	.5143	-.0077	.0591	1.760
12	CCV	5.000	5.026	5.010	4.751	5.021	4.865
13	CCB	-.0123	-.0166	-.0056	-.0099	.0295	-.0001
14	S96T002418_S	4.425	.0361	.5141	-.0110	.0440	1.729
15	S96T002530_L	7.185	.2428	5.794	-.1351	.4238	3.914
16	S96T002530_	6.783	.2739	5.512	-.0263	.0588	3.642
17	S96T002530_D	6.491	2.095	7.156	-.0099	.0694	3.112
18	S96T002535_L	2.200	.3104	7.685	-.0104	.2854	2.816
19	S96T002535_	2.126	.3041	7.211	-.0115	.0639	2.663
20	S96T002535_D	2.457	.1886	2.557	-.0096	.0451	2.351
21	CCV_1	4.927	5.001	5.004	4.739	5.044	4.845
22	CCB_1	-.0076	-.0085	-.0093	-.0085	.0264	.0025
23	S96T002538_L	2.833	.1820	1.702	-.0402	.1902	5.650
24	S96T002538_	2.722	.0917	1.548	-.0126	.0660	5.274
25	S96T002538_D	2.375	.1079	1.478	-.0103	.0462	4.451
26	CCV_2	5.041	5.032	5.017	4.766	5.058	5.166
27	CCB_2	.0007	-.0146	.0083	-.0088	.0360	Q.0677
28	CCB_2	-.0166	-.0011	-.0124	-.0063	.0201	.0331
29	S96T002571_L	4.543	.1413	.6372	.0381	.1968	1.844
30	S96T002571_	4.444	.1155	.7229	-.0018	.0749	1.570
31	S96T002571_D	5.403	.0880	.6899	-.0074	.0615	1.805
32	S96T002580_L	2.709	.0638	.5597	-.0569	.2986	3.277
33	S96T002580_	2.423	.0710	.5955	-.0112	.0741	2.906
34	S96T002580_D	2.783	.0830	.5489	-.0127	.0752	1.963
35	ICSA	.0046	.0200	-.0388	-.0057	.0042	.0098
36	ICSAB	.0171	1.000	-.0377	-.0088	-.0011	.0155
37	CCV_3	4.963	5.027	5.018	4.751	5.043	4.858
38	CCVB_3	-.0031	-.0001	-.0135	-.0013	.0379	.0120

#	Sample Name	Sm	Sr	Th	Ti	Tl	U
1	ICV	4.934	4.885	.0010	4.768	4.835	9.866
2	ICB	-.0086	.0002	.0021	.0010	-.0093	-.0378
3	LLS	.2087	.0202	.0022	.0199	.4276	.5105
4	ICSA	-.0027	.0020	-.0087	.0021	-.0043	.1306
5	ICSAB	.0096	.0020	-.0109	.0014	-.0193	.1533

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#	Sample Name	Sm	Sr	Th	Ti	Tl	U
6	PREPSTDTJA	4.723	4.634	-.0069	4.565	4.446	9.428
7	PREPBLKTJA	-.0462	.0002	.0123	.0018	-.0014	-.1614
8	S969T002418_L	-.0347	.0164	.0203	.0108	.0473	2.828
9	S96T002418	-.0489	.0146	.0107	.0074	-.0165	2.603
10	S96T002418_D	-.0235	.0160	.0171	.0079	.0268	2.733
11	S96T002418_S	-.0332	.0003	.0116	.0030	.0352	-.2163
12	CCV	5.066	5.008	-.0063	4.898	4.922	10.12
13	CCB	-.0054	.0001	-.0027	-.0002	.0085	-.0252
14	S96T002418_S	-.0570	-.0001	.0128	.0021	.0184	-.3369
15	S96T002530_L	-.0422	.0183	-.0281	.0093	.1284	5.402
16	S96T002530	-.0366	.0166	.0139	.0086	.0393	5.133
17	S96T002530_D	-.0299	.0192	-.0002	.0101	.0267	6.024
18	S96T002535_L	-.0493	.0107	-.0010	.0129	.1016	3.370
19	S96T002535	-.0462	.0093	.0098	.0061	-.0136	3.327
20	S96T002535_D	-.0366	.0061	.0163	.0050	.0268	1.709
21	CCV_1	5.005	4.952	-.0090	4.846	4.922	10.02
22	CCB_1	-.0010	.0001	.0009	.0007	.0158	.0022
23	S96T002538_L	-.1191	.0026	.0393	.0072	-.1436	.2966
24	S96T002538	-.0416	.0029	.0157	.0011	.0249	.6381
25	S96T002538_D	-.0453	.0028	.0206	.0036	-.0101	.6482
26	CCV_2	5.051	5.008	-.0080	4.895	4.940	10.11
27	CCB_2	.0093	.0003	-.0066	-.0000	.0092	.0398
28	CCB_2	.0031	.0001	-.0026	.0000	-.0031	.0032
29	S96T002571_L	-.1031	.0005	.0170	.0099	.0906	-.3613
30	S96T002571	-.0467	.0004	.0130	.0025	.0088	-.2036
31	S96T002571_D	-.0501	.0002	.0125	.0021	.0412	-.2830
32	S96T002580_L	.0261	.0016	-.0072	.0073	-.0938	.0112
33	S96T002580	-.0242	.0004	.0116	.0021	.0087	-.1954
34	S96T002580_D	-.0205	.0005	.0078	.0030	-.0213	-.1632
35	ICSA	.0107	.0020	-.0133	.0011	-.0044	.1187
36	ICSAB	.0019	.0020	-.0140	.0016	.0056	.1085
37	CCV_3	5.015	4.965	-.0075	4.864	4.936	10.02
38	CCVB_3	.0106	.0003	-.0068	-.0000	.0011	.0374

#	Sample Name	V	Y	Zn	Zr
1	ICV	4.955	.0059	4.992	4.840
2	ICB	-.0007	-.0002	-.0001	-.0008
3	LLS	.1005	.0006	.0205	.0214
4	ICSA	-.0004	.0068	-.0035	-.0016
5	ICSAB	.4604	.0070	.9327	-.0008
6	PREPSTDTJA	4.581	.0045	4.477	4.629
7	PREPBLKTJA	-.0074	-.0019	.0658	-.0021
8	S969T002418_L	-.0003	.0011	.1095	.2425
9	S96T002418	-.0035	-.0006	.0996	.2216
10	S96T002418_D	.0014	.0002	.1137	.2301
11	S96T002418_S	-.0035	-.0008	.0959	.0156
12	CCV	5.095	.0066	5.137	4.979
13	CCB	-.0001	.0000	.0006	-.0005
14	S96T002418_S	-.0073	-.0024	.0819	.0114
15	S96T002530_L	.0063	.0016	.1309	.3952
16	S96T002530	-.0025	-.0001	.1179	.3641
17	S96T002530_D	-.0005	.0006	.1360	.4143

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#	Sample Name	V	Y	Zn	Zr
18	S96T002535_L	.0008	.0009	.0919	.2647
19	S96T002535	-.0058	-.0005	.0790	.2463
20	S96T002535_D	-.0025	-.0007	.1043	.1565
21	CCV_1	5.070	.0066	5.135	4.938
22	CCB_1	.0005	.0002	-.0003	.0006
23	S96T002538_L	-.0175	-.0048	.0888	.1735
24	S96T002538	-.0051	-.0014	.0824	.0758
25	S96T002538_D	-.0070	-.0017	.0857	.0740
26	CCV_2	5.109	.0066	5.158	4.988
27	CCB_2	.0020	.0007	-.0005	.0029
28	CCB_2	.0009	.0002	.0009	.0016
29	S96T002571_L	-.0163	-.0022	.1168	.0239
30	S96T002571	-.0055	-.0015	.1041	.0254
31	S96T002571_D	-.0090	-.0021	.0894	.0220
32	S96T002580_L	.0108	.0039	.1043	.0357
33	S96T002580	-.0028	-.0010	.0966	.0226
34	S96T002580_D	-.0025	-.0007	.0939	.0201
35	ICSA	.0007	.0072	-.0042	-.0001
36	ICSAB	.4747	.0071	.9592	-.0012
37	CCV_3	5.077	.0066	5.139	4.946
38	CCVB_3	.0023	.0005	-.0001	.0029

JK Lad
08-05-96

07/16/96 09:49
A-0004-1

File #: 960806B.TXT

LABCORE Data Entry Template for Worklist# 10842

Analyst: MKSeb **Instrument:** ICP01 MK 8-6-96 **Book#** 58848a

Method: LA-505-~~151~~/161 Rev/Mod B-1
MK 8-6-96

Worklist Comment: ICP AW-101 (SOLID ACID DIGEST)

S	Type	Sample#	R	A	Test	Matrix	Group#	Project
1	ICV				@ICP-QC	QC		
2	ICB				@ICP-QC	QC		
3	LLS				@ICP-QC	QC		
4	ICSA				@ICP-QC	QC		
5	ICSAB				@ICP-QC	QC		
6	PREPSTDTJA				@ICP-A01	SOLID		
7	PREPBLKTJA				@ICP-A01	SOLID		
8	SERDIL	S96T002426	0	A	@ICP-A01	SOLID		
9	SAMPLE	S96T002426	0	A	@ICP-A01	SOLID	96000462	AW-101 PUSH

Analytes Requested: AG-A-01 , AL-A-01 , AS-A-01 , B-A-01 , BA-A-01 , BE-A-01 , BI-A-01 , CA-A-01 , CD-A-01 , CE-A-01 , CO-A-01 , CR-A-01 , CU-A-01 , FE-A-01 , K-A-01 , LA-A-01 , LI-A-01 , MG-A-01 , MN-A-01 , MO-A-01 , NA-A-01 , ND-A-01 , NI-A-01 , P-A-01 , PB-A-01 , S-A-01 , SB-A-01 , SE-A-01 , SI-A-01 , SM-A-01 , SR-A-01 , TI-A-01 , TL-A-01 , U-A-01 , V-A-01 , ZN-A-01 , ZR-A-01

10	DUP	S96T002426	0	A	@ICP-A01	SOLID		
11	CCV				@ICP-QC	QC		
12	CCB				@ICP-QC	QC		
13	SERDIL	S96T002434	0	A	@ICP-A01	SOLID		
14	SAMPLE	S96T002434	0	A	@ICP-A01	SOLID	96000462	AW-101 PUSH

Analytes Requested: AG-A-01 , AL-A-01 , AS-A-01 , B-A-01 , BA-A-01 , BE-A-01 , BI-A-01 , CA-A-01 , CD-A-01 , CE-A-01 , CO-A-01 , CR-A-01 , CU-A-01 , FE-A-01 , K-A-01 , LA-A-01 , LI-A-01 ,

Data Entry Comments: Sample result calculation :

S96T002597 $Cu = 0.0362 \frac{ug}{ml} \times \frac{1}{5.164 \frac{g}{L} \times \frac{1L}{1000 ml}} = 7.01 \; ug/g$

S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

Note: $5.164 \frac{g}{L}$ is sample prep dilution factor which can be found in sample prep worklist.

LABCORE Data Entry Template for Worklist# 10842

S	Type	Sample#	R	A	Test	Matrix	Group#	Project
					MG-A-01 , MN-A-01 , MO-A-01 , NA-A-01 , ND-A-01 , NI-A-01 , P-A-01 , PB-A-01 , S-A-01 , SB-A-01 , SE-A-01 , SI-A-01 , SM-A-01 , SR-A-01 , TI-A-01 , TL-A-01 , U-A-01 , V-A-01 , ZN-A-01 , ZR-A-01			
15	DUP	S96T002434	0	A	@ICP-A01	SOLID		
16	SERDIL	S96T002450	0	A	@ICP-A01	SOLID		
17	SAMPLE	S96T002450	0	A	@ICP-A01	SOLID	96000462	AW-101 PUSH
		Analytes Requested:			AG-A-01 , AL-A-01 , AS-A-01 , B-A-01 , BA-A-01 , BE-A-01 , BI-A-01 , CA-A-01 , CD-A-01 , CE-A-01 , CO-A-01 , CR-A-01 , CU-A-01 , FE-A-01 , K-A-01 , LA-A-01 , LI-A-01 , MG-A-01 , MN-A-01 , MO-A-01 , NA-A-01 , ND-A-01 , NI-A-01 , P-A-01 , PB-A-01 , S-A-01 , SB-A-01 , SE-A-01 , SI-A-01 , SM-A-01 , SR-A-01 , TI-A-01 , TL-A-01 , U-A-01 , V-A-01 , ZN-A-01 , ZR-A-01			
18	DUP	S96T002450	0	A	@ICP-A01	SOLID		
19	SERDIL	S96T002458	0	A	@ICP-A01	SOLID		
20	SAMPLE	S96T002458	0	A	@ICP-A01	SOLID	96000462	AW-101 PUSH
		Analytes Requested:			AG-A-01 , AL-A-01 , AS-A-01 , B-A-01 , BA-A-01 , BE-A-01 , BI-A-01 , CA-A-01 , CD-A-01 , CE-A-01 , CO-A-01 , CR-A-01 , CU-A-01 , FE-A-01 , K-A-01 , LA-A-01 , LI-A-01 , MG-A-01 , MN-A-01 , MO-A-01 , NA-A-01 , ND-A-01 , NI-A-01 , P-A-01 , PB-A-01 , S-A-01 , SB-A-01 , SE-A-01 , SI-A-01 , SM-A-01 , SR-A-01 , TI-A-01 , TL-A-01 , U-A-01 , V-A-01 , ZN-A-01 , ZR-A-01			
21	DUP	S96T002458	0	A	@ICP-A01	SOLID		
22	CCV				@ICP-QC	QC		
23	CCB				@ICP-QC	QC		
24	SERDIL	S96T002466	0	A	@ICP-A01	SOLID		
25	SAMPLE	S96T002466	0	A	@ICP-A01	SOLID	96000462	AW-101 PUSH
		Analytes Requested:			AG-A-01 , AL-A-01 , AS-A-01 , B-A-01 , BA-A-01 , BE-A-01 , BI-A-01 , CA-A-01 , CD-A-01 , CE-A-01 , CO-A-01 , CR-A-01 , CU-A-01 , FE-A-01 , K-A-01 , LA-A-01 , LI-A-01 , MG-A-01 , MN-A-01 , MO-A-01 , NA-A-01 , ND-A-01 , NI-A-01 ,			

Data Entry Comments:

S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

LABCORE Data Entry Template for Worklist# 10842

S	Type	Sample#	R	A	Test	Matrix	Group#	Project
					P-A-01 , PB-A-01 , SM-A-01 , SR-A-01 , ZN-A-01 , ZR-A-01	S-A-01 , SB-A-01 , SE-A-01 , SI-A-01 , TI-A-01 , TL-A-01 , U-A-01 , V-A-01 ,		
26	DUP	S96T002466	0	A	@ICP-A01	SOLID		
27	SERDIL	S96T002597	0	A	@ICP-A01	SOLID		
28	SAMPLE	S96T002597	0	A	@ICP-A01	SOLID	96000462	AW-101 PUSH
		Analytes Requested:			AG-A-01 , AL-A-01 , BE-A-01 , BI-A-01 , CR-A-01 , CU-A-01 , MG-A-01 , MN-A-01 , P-A-01 , PB-A-01 , SM-A-01 , SR-A-01 , ZN-A-01 , ZR-A-01	AS-A-01 , B-A-01 , BA-A-01 , CA-A-01 , CD-A-01 , CE-A-01 , CO-A-01 , FE-A-01 , K-A-01 , LA-A-01 , LI-A-01 , MO-A-01 , NA-A-01 , ND-A-01 , NI-A-01 , S-A-01 , SB-A-01 , SE-A-01 , SI-A-01 , TI-A-01 , TL-A-01 , U-A-01 , V-A-01 ,		
29	DUP	S96T002597	0	A	@ICP-A01	SOLID		
30	SPK-PREDIG	S96T002597	0	A	@ICP-A01	SOLID		
31	ICSA				@ICP-QC	QC		
32	ICSAB				@ICP-QC	QC		
33	CCV				@ICP-QC	QC		
34	CCB				@ICP-QC	QC		

Final page for worklist # 10842

Analyst Signature	Date
[illegible]	08-06-96
Prep#4TTQ, direct	
Prep#4TTQ, direct	
S96T002446_L , 4-4-2-8 , DF 10	
S96T002446 4-4 2	
S96T002446_D 4-4 2	
S96T002434_L , 4-4-2-8 , DF 10	
S96T002434 4-4 2	
S96T002434_D 4-4 2	
S96T002450_L , 4-4-2-8 , DF 10	
S96T002450 4-4 2	
S96T002450_D 4-4 2	
S96T002458_L , 4-4-2-8 , DF 10	
S96T002458 4-4 2	
S96T002458_D 4-4 2	
S96T002466_L , 4-4-2-8 , DF 10	
S96T002466 4-4 2	
S96T002466_D 4-4 2	

Analyst Signature	Date
Reviewed by: Samuel R. Parry	8/7/96
S96T002597_L , 4-4-2-8 , DF 10	
S96T002597 4-4 2	
S96T002597_D 4-4 2	
S96T002597_S 4-4 2	

Data Entry Comments: Spike recovery calculation:

S96T002597 $Cu = \frac{4.766 - 0.0362}{5} \times 100 = 94.6\%$

S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

Note: Spike true value is 5.0 ppm for all elements except for Ag = 1.0 ppm and U = 10.0 ppm.

WHC-SD-WM-DP-192, REV. 0

Analysis Report Summary Tue 08-06-96 01:57:34 PM page 1

#	Sample Name	File	Method	Date	Time	OpID	Type	Mode
1	ICV	960806B	ICP2	08/06/96	12:04	DKS	Q	CONC
2	ICB	960806B	ICP2	08/06/96	12:08	DKS	Q	CONC
3	LLS	960806B	ICP2	08/06/96	12:11	DKS	Q	CONC
4	ICSA	960806B	ICP2	08/06/96	12:14	DKS	Q	CONC
5	ICSAB	960806B	ICP2	08/06/96	12:16	DKS	Q	CONC
6	PREPSTDTJA	960806B	ICP2	08/06/96	12:20	DKS	S	CONC
7	PREPBLKTJA	960806B	ICP2	08/06/96	12:23	DKS	S	CONC
8	S96T002426_L	960806B	ICP2	08/06/96	12:26	DKS	S	CONC
9	S96T002426_	960806B	ICP2	08/06/96	12:29	DKS	S	CONC
10	S96T002426_D	960806B	ICP2	08/06/96	12:32	DKS	S	CONC
11	CCV	960806B	ICP2	08/06/96	12:37	DKS	Q	CONC
12	CCB	960806B	ICP2	08/06/96	12:40	DKS	Q	CONC
13	S96T002434_L	960806B	ICP2	08/06/96	12:46	DKS	S	CONC
14	S96T002434_	960806B	ICP2	08/06/96	12:49	DKS	S	CONC
15	S96T002434_D	960806B	ICP2	08/06/96	12:52	DKS	S	CONC
16	S96T002450_L	960806B	ICP2	08/06/96	12:55	DKS	S	CONC
17	S96T002450_	960806B	ICP2	08/06/96	12:58	DKS	S	CONC
18	S96T002450_D	960806B	ICP2	08/06/96	13:01	DKS	S	CONC
19	S96T002458_L	960806B	ICP2	08/06/96	13:04	DKS	S	CONC
20	S96T002458_	960806B	ICP2	08/06/96	13:07	DKS	S	CONC
21	S96T002458_D	960806B	ICP2	08/06/96	13:10	DKS	S	CONC
22	CCV_1	960806B	ICP2	08/06/96	13:15	DKS	Q	CONC
23	CCB_1	960806B	ICP2	08/06/96	13:19	DKS	Q	CONC
24	S96T002466_L	960806B	ICP2	08/06/96	13:22	DKS	S	CONC
25	S96T002466_	960806B	ICP2	08/06/96	13:25	DKS	S	CONC
26	S96T002466_D	960806B	ICP2	08/06/96	13:28	DKS	S	CONC
27	S96T002597_L	960806B	ICP2	08/06/96	13:31	DKS	S	CONC
28	S96T002597_	960806B	ICP2	08/06/96	13:34	DKS	S	CONC
29	S96T002597_D	960806B	ICP2	08/06/96	13:37	DKS	S	CONC
30	S96T002597_S	960806B	ICP2	08/06/96	13:40	DKS	S	CONC
31	ICSA	960806B	ICP2	08/06/96	13:44	DKS	Q	CONC
32	ICSAB	960806B	ICP2	08/06/96	13:47	DKS	Q	CONC
33	CCV_2	960806B	ICP2	08/06/96	13:51	DKS	Q	CONC
34	CCB_2	960806B	ICP2	08/06/96	13:54	DKS	Q	CONC

DK Lold
08-06-96
GW-101 S96T002426
S96T002434
S96T002450
S96T002458
S96T002466
S96T002597
Worklist # 10842

SIGNATURE ABOVE REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT LAD 11-7-96
COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 1904 TO ~~1910~~ 1909.

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#	Sample Name	Ag	Al	As	B	Ba	Be
1	ICV	4.958	4.900	5.139	5.013	4.968	5.151
2	ICB	.0003	-.0001	-.0046	.0079	.0000	.0000
3	LLS	.0214	.0953	.1861	.1077	.0970	.0104
4	ICSA	.0029	239.9	-.0344	.0065	.0018	.0002
5	ICSAB	.9553	239.1	-.0496	.0064	.4687	.4691
6	PREPSTDTJA	.9321	4.742	4.722	4.290	4.630	5.012
7	PREPBLKTJA	-.0001	.1498	-.0014	.5180	.0006	-.0002
8	S96T002426_L	.0617	42.54	-.0887	.6965	.0024	.0028
9	S96T002426_	.0539	38.81	-.0893	.5664	.0016	.0034
10	S96T002426_D	.0548	50.66	-.0891	.7251	.0023	.0046
11	CCV	5.047	4.871	5.189	4.951	4.940	5.144
12	CCB	-.0001	-.0054	.0160	.0084	.0001	.0002
13	S96T002434_L	.0629	50.49	-.2072	.8448	.0011	.0049
14	S96T002434_	.0616	47.21	-.0811	.7417	.0008	.0044
15	S96T002434_D	.0513	36.93	-.0478	.5960	.0008	.0034
16	S96T002450_L	.0644	39.24	.0225	.6360	.0015	.0033
17	S96T002450_	.0548	36.15	-.0710	.5718	.0008	.0038
18	S96T002450_D	.0456	39.47	-.0610	.6377	.0005	.0038
19	S96T002458_L	.0596	67.33	-.1126	.8774	.0026	.0049
20	S96T002458_	.0525	61.73	-.1017	.7705	.0018	.0053
21	S96T002458_D	.0559	75.32	-.1373	.6712	.0018	.0064
22	CCV_1	5.047	4.876	5.179	4.940	4.922	5.129
23	CCB_1	.0000	-.0039	.0020	.0098	-.0000	.0000
24	S96T002466_L	.0713	56.18	-.1578	.7380	.0010	.0041
25	S96T002466_	.0684	52.03	-.0953	.6192	.0012	.0052
26	S96T002466_D	.0647	48.87	-.1101	.6507	.0010	.0044
27	S96T002597_L	.0583	80.90	-.1451	.7845	.0007	.0053
28	S96T002597_	.0569	75.97	-.0896	.7018	.0014	.0067
29	S96T002597_D	.0587	37.15	-.0152	.7862	.0009	.0032
30	S96T002597_S	.6028	88.51	4.816	5.584	4.716	4.794
31	ICSA	.0040	246.7	-.0557	.0052	.0018	.0003
32	ICSAB	.9763	244.2	-.0500	.0035	.4800	.4832
33	CCV_2	5.048	4.937	5.209	5.021	5.021	5.214
34	CCB_2	.0017	.0043	-.0069	.0107	.0001	.0001

#	Sample Name	Bi	Ca	Cd	Ce	Co	Cr
1	ICV	5.106	5.015	5.049	5.123	5.057	5.097
2	ICB	-.0054	-.0005	.0009	-.0038	.0005	.0009
3	LLS	.1641	.2240	.0115	.2019	.0431	.0229
4	ICSA	-.0079	250.8	.0027	.0026	-.0007	.0099
5	ICSAB	-.0223	250.6	.9360	.0140	.4658	.4834
6	PREPSTDTJA	4.672	4.785	4.623	4.847	4.747	4.692
7	PREPBLKTJA	-.0037	.2198	.0002	.0025	.0001	.0078
8	S96T002426_L	-.0606	.1670	.0136	.0009	-.0021	.2032
9	S96T002426_	-.0447	.1440	.0157	-.0086	-.0029	.1787
10	S96T002426_D	-.0131	.1843	.0067	.0076	.0004	.2307
11	CCV	5.149	5.266	5.171	5.105	5.173	5.227
12	CCB	-.0211	.0009	.0014	-.0040	.0017	.0012
13	S96T002434_L	.2382	.1505	.0076	-.0987	.0072	.2103
14	S96T002434_	-.0275	.1255	.0055	-.0084	.0016	.1918
15	S96T002434_D	-.0391	.8545	.0048	-.0114	.0016	.1590

#	Sample Name	Bi	Ca	Cd	Ce	Co	Cr
16	S96T002450_L	-.0336	.2357	.0090	.0428	.0002	.1711
17	S96T002450	-.0585	.1939	.0041	-.0010	-.0064	.1542
18	S96T002450_D	-.0754	.1629	.0039	-.0215	.0004	.1753
19	S96T002458_L	.1076	.2477	.0155	.0589	.0087	.3298
20	S96T002458	-.0520	.2182	.0092	-.0100	-.0030	.2771
21	S96T002458_D	-.0459	.2339	.0098	.0169	.0038	.3470
22	CCV_1	5.111	5.265	5.158	5.081	5.167	5.225
23	CCB_1	-.0263	.0011	.0005	-.0060	.0004	.0003
24	S96T002466_L	-.0061	.1939	.0153	-.0685	.0177	.2449
25	S96T002466	-.0347	.1690	.0064	-.0117	-.0007	.2182
26	S96T002466_D	-.0604	.3553	.0086	.0007	.0026	.2070
27	S96T002597_L	-.1626	.2521	.0209	-.0258	.0073	.3515
28	S96T002597	-.0928	.2276	.0076	-.0009	.0004	.3161
29	S96T002597_D	-.0331	.1463	.0055	-.0100	.0004	.1698
30	S96T002597_S	4.677	5.852	4.687	4.971	4.743	6.797
31	ICSA	.0240	258.7	.0021	.0114	.0032	.0091
32	ICSAB	-.0156	257.0	.9577	.0121	.4777	.4960
33	CCV_2	5.190	5.207	5.151	5.189	5.164	5.214
34	CCB_2	-.0230	.0010	.0008	.0020	.0013	.0019

#	Sample Name	Cu	Eu	Fe	K	La	Li
1	ICV	5.166	-.0015	5.077	5.014	5.033	5.019
2	ICB	.0006	.0005	-.0002	.2521	.0004	.0006
3	LLS	.0215	.0017	.1027	.5579	.0999	.0215
4	ICSA	-.0097	-.0412	93.73	-.0076	-.0059	.0037
5	ICSAB	.4681	-.0393	93.31	.1829	-.0045	.9797
6	PREPSTDTJA	4.543	-.0014	4.810	4.847	4.718	4.601
7	PREPBLKTJA	.0215	-.0021	.2817	-.0233	.0006	-.0026
8	S96T002426_L	.0551	.0111	.6387	530.4	.0111	.3666
9	S96T002426	.0457	-.0010	.5731	489.9	-.0014	.3435
10	S96T002426_D	.0261	-.0004	.6497	363.7	.0022	.3967
11	CCV	5.084	.0004	5.158	4.905	5.007	4.839
12	CCB	.0008	.0025	-.0002	.0225	-.0007	.0025
13	S96T002434_L	.0129	.0123	.1339	474.3	-.0087	.0322
14	S96T002434	.0155	.0006	.1351	449.0	-.0013	.0184
15	S96T002434_D	.0239	.0014	.1368	415.0	-.0005	.0146
16	S96T002450_L	.0373	.0104	.1330	476.2	.0148	.1779
17	S96T002450	.0284	-.0008	.1205	440.1	-.0018	.1636
18	S96T002450_D	.0430	-.0007	.1560	424.4	-.0038	.1873
19	S96T002458_L	.0259	.0179	.2832	301.4	.0131	.1468
20	S96T002458	.0154	.0012	.2592	279.2	.0012	.1228
21	S96T002458_D	.0486	.0007	.2942	245.0	.0023	.1636
22	CCV_1	5.073	.0001	5.155	4.986	4.994	4.820
23	CCB_1	.0008	.0014	-.0001	.0724	-.0003	.0017
24	S96T002466_L	.0397	.0034	.2238	337.0	.0025	.0669
25	S96T002466	.0305	-.0013	.2040	315.0	-.0006	.0616
26	S96T002466_D	.0270	-.0001	.1757	294.5	-.0000	.0607
27	S96T002597_L	.0439	.0135	.1682	254.6	.0052	.3762
28	S96T002597	.0362	-.0006	.1678	242.7	.0002	.3516
29	S96T002597_D	.0306	-.0007	.1335	401.9	.0001	.3206
30	S96T002597_S	4.766	-.0033	6.056	131.4	4.861	4.903
31	ICSA	-.0095	-.0481	96.57	.1483	-.0048	.0029

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#	Sample Name	Cu	Eu	Fe	K	La	Li
32	ICSAB	.4803	-.0445	95.67	.2110	-.0049	1.002
33	CCV_2	5.195	-.0008	5.170	4.962	5.088	5.009
34	CCB_2	.0017	.0013	.0001	.1723	.0003	.0014

#	Sample Name	Mg	Mn	Mo	Na	Nd	Ni
1	ICV	4.874	4.958	5.016	4.966	5.089	5.019
2	ICB	.0056	.0005	.0005	.0064	.0022	-.0040
3	LLS	.2015	.0202	.1007	.2151	.1972	.0349
4	ICSA	245.2	-.0053	-.0082	195.0	.0045	-.0094
5	ICSAB	244.2	.4451	-.0082	195.1	.0059	.9079
6	PREPSTDTJA	4.389	4.571	4.732	5.768	4.670	4.751
7	PREPBLKTJA	.0478	.0026	.0006	.9208	.0019	-.0027
8	S96T002426_L	.0591	.0235	.0931	827.1	.0100	-.0474
9	S96T002426	.0323	.0154	.0833	762.6	-.0073	.0252
10	S96T002426_D	.0632	.0183	.1072	767.0	.0063	.0003
11	CCV	4.852	5.053	5.121	4.874	5.030	5.135
12	CCB	.0005	.0014	.0025	.0244	.0029	-.0060
13	S96T002434_L	.0172	.0185	.1224	921.6	.0027	.0512
14	S96T002434	.0363	.0117	.1046	866.9	.0031	.0741
15	S96T002434_D	.0340	.0097	.0837	729.3	.0013	.0215
16	S96T002450_L	.0160	.0136	.1192	808.1	-.0005	-.0014
17	S96T002450	-.0306	.0093	.0788	751.8	-.0218	.0063
18	S96T002450_D	.0319	.0100	.0811	684.6	.0032	-.0065
19	S96T002458_L	.0853	.0387	.1667	794.4	.0143	-.0664
20	S96T002458	-.0036	.0285	.1372	736.0	-.0126	.0253
21	S96T002458_D	.0528	.0333	.1581	753.2	.0080	.0413
22	CCV_1	4.862	5.045	5.116	4.862	5.022	5.143
23	CCB_1	.0030	.0007	.0022	.0150	-.0004	-.0040
24	S96T002466_L	.1292	.0146	.1370	1003.	-.0012	.0055
25	S96T002466	.0195	.0111	.1140	937.0	-.0111	-.0098
26	S96T002466_D	.0428	.0108	.1075	892.5	.0032	.0240
27	S96T002597_L	.1158	.0228	.1779	855.9	.0152	-.0080
28	S96T002597	.0319	.0167	.1633	813.2	-.0047	.0215
29	S96T002597_D	.0408	.0102	.0746	815.2	.0012	.0133
30	S96T002597_S	4.550	5.379	4.975	837.9	4.808	4.917
31	ICSA	252.8	-.0057	-.0105	199.7	.0018	-.0151
32	ICSAB	249.6	.4563	-.0105	198.8	.0067	.9344
33	CCV_2	4.905	5.054	5.135	4.981	5.136	5.110
34	CCB_2	.0063	.0008	-.0001	.0133	.0043	-.0061

#	Sample Name	P	Pb	S	Sb	Se	Si
1	ICV	4.931	5.005	4.914	4.772	4.907	4.820
2	ICB	.0060	.0171	-.0074	-.0030	.0220	.0070
3	LLS	.4002	.2265	.1981	.0994	.2190	.1590
4	ICSA	-.0006	.0478	-.0197	.0183	-.0632	.0070
5	ICSAB	.0152	1.031	-.0141	.0064	-.0255	.0092
6	PREPSTDTJA	4.796	4.530	4.645	4.432	4.409	.3568
7	PREPBLKTJA	.0424	.0309	.1241	-.0071	.0113	2.019
8	S96T002426_L	4.361	.3263	.6749	.0064	.2237	2.185
9	S96T002426	3.934	5.052	.6155	-.0070	.0548	1.863

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#	Sample Name	P	Pb	S	Sb	Se	Si
10	S96T002426_D	4.107	.1336	.7943	-.0109	.0558	2.715
11	CCV	5.032	5.191	5.001	4.858	4.969	4.910
12	CCB	.0014	.0214	.0053	.0040	.0340	.0195
13	S96T002434_L	4.433	.3548	.7977	.0120	.1930	.9812
14	S96T002434	4.030	.1529	.7418	-.0190	.0439	.8137
15	S96T002434_D	4.203	.1016	.5814	.0104	.0397	1.933
16	S96T002450_L	5.001	.1749	.5709	-.0126	.1670	2.128
17	S96T002450	4.424	.1016	.6149	.0053	.0345	1.840
18	S96T002450_D	4.809	.1183	.5888	-.0153	.0479	2.474
19	S96T002458_L	3.713	.2773	.9140	-.0057	.1827	2.435
20	S96T002458	3.431	.1619	.9821	-.0002	.0643	2.069
21	S96T002458_D	4.454	.2270	1.155	.0058	.0697	2.127
22	CCV_1	5.021	5.202	4.996	4.856	4.941	4.922
23	CCB_1	-.0044	.0190	-.0119	.0003	.0255	.0124
24	S96T002466_L	5.375	.3635	.9497	-.0053	.2168	2.138
25	S96T002466	4.819	.1298	.8850	.0155	.0653	1.859
26	S96T002466_D	5.558	.1564	.7836	.0043	.0803	1.855
27	S96T002597_L	8.864	.3079	1.112	-.0254	.2440	1.850
28	S96T002597	8.276	.1875	1.124	.0168	.0448	1.600
29	S96T002597_D	6.608	.0975	.5778	-.0041	.0593	2.054
30	S96T002597_S	14.88	4.822	18.52	4.504	4.500	8.717
31	ICSA	.0259	.0477	-.0173	-.0004	-.0381	.0067
32	ICSAB	.0112	1.053	-.0352	-.0084	-.0360	.0079
33	CCV_2	4.957	5.141	4.983	4.862	4.971	4.898
34	CCB_2	.0106	.0152	-.0023	.0044	.0168	.0112

#	Sample Name	Sm	Sr	Th	Ti	Tl	U
1	ICV	4.902	4.939	.0545	4.862	4.807	9.560
2	ICB	.0100	.0001	.0033	.0003	-.0092	.0251
3	LLS	.2169	.0202	-.0021	.0202	.4073	.5625
4	ICSA	.0145	.0017	.0063	.0017	.0576	-.0237
5	ICSAB	.0122	.0018	.0035	.0017	.0158	-.0222
6	PREPSTDTJA	4.591	4.598	.0417	4.554	4.395	8.960
7	PREPBLKTJA	-.0334	.0003	.0089	.0015	-.0072	-.1071
8	S96T002426_L	.1597	.0031	-.0098	.0048	.1811	.4755
9	S96T002426	-.0153	.0002	.0092	.0011	.0084	-.1780
10	S96T002426_D	-.0044	.0007	.0131	.0035	-.0095	-.1120
11	CCV	4.862	4.912	.0503	4.853	4.933	9.493
12	CCB	.0349	.0006	-.0119	.0002	.0133	.1457
13	S96T002434_L	.1433	.0036	-.0007	.0024	.3622	.4289
14	S96T002434	.0018	.0005	.0067	.0020	-.0132	-.0937
15	S96T002434_D	.0129	.0010	.0078	.0006	.0318	-.0537
16	S96T002450_L	.1332	.0025	.0079	.0024	.2282	.4675
17	S96T002450	-.0091	.0003	.0060	-.0023	.0228	-.1787
18	S96T002450_D	-.0110	.0003	-.0023	.0025	.0006	-.1405
19	S96T002458_L	.2754	.0051	-.0044	.0047	.0133	.9349
20	S96T002458	.0120	.0010	.0027	-.0005	.0208	.0162
21	S96T002458_D	.0115	.0009	.0077	.0024	.0068	.0284
22	CCV_1	4.851	4.902	.0465	4.864	4.974	9.467
23	CCB_1	.0208	.0003	-.0073	.0002	.0129	.0815
24	S96T002466_L	.0652	.0015	-.0012	.0048	.0222	.1995
25	S96T002466	-.0189	.0004	.0126	.0006	-.0050	-.1399

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#	Sample Name	Sm	Sr	Th	Ti	Tl	U
26	S96T002466_D	-.0037	.0006	.0082	.0020	-.0019	-.0589
27	S96T002597_L	.1550	.0036	-.0466	.0094	-.0238	.5960
28	S96T002597_	-.0123	.0004	.0137	.0006	.0517	-.0933
29	S96T002597_D	-.0085	.0004	.0077	.0020	-.0132	-.1233
30	S96T002597_S	4.694	4.714	.0683	4.635	4.445	11.70
31	ICSA	.0082	.0018	.0181	.0013	.0303	-.0677
32	ICSAB	.0086	.0018	.0141	.0013	.0378	-.0578
33	CCV_2	4.960	4.994	.0512	4.914	4.993	9.658
34	CCB_2	.0181	.0004	.0013	.0007	.0160	.0683

#	Sample Name	V	Y	Zn	Zr
1	ICV	5.023	.0063	5.101	4.914
2	ICB	.0018	.0003	.0010	.0018
3	LLS	.1053	.0013	.0224	.0235
4	ICSA	.0029	.0075	.0012	-.0007
5	ICSAB	.4667	.0073	.9558	-.0006
6	PREPSTDTJA	4.587	.0051	4.554	4.623
7	PREPBLKTJA	-.0054	-.0016	.0704	-.0002
8	S96T002426_L	.0298	.0069	.1305	.0523
9	S96T002426_	-.0025	-.0012	.1150	.0204
10	S96T002426_D	-.0009	-.0006	.1227	.0277
11	CCV	5.094	.0077	5.256	4.946
12	CCB	.0072	.0014	.0013	.0063
13	S96T002434_L	.0299	.0061	.0907	.0552
14	S96T002434_	.0014	-.0004	.0720	.0289
15	S96T002434_D	.0039	.0003	.0798	.0231
16	S96T002450_L	.0262	.0053	.0872	.0440
17	S96T002450_	-.0009	-.0009	.0738	.0193
18	S96T002450_D	-.0003	-.0006	.0771	.0226
19	S96T002458_L	.0525	.0114	.1128	.0827
20	S96T002458_	.0044	.0003	.0940	.0395
21	S96T002458_D	.0029	.0003	.1149	.0454
22	CCV_1	5.086	.0077	5.255	4.931
23	CCB_1	.0042	.0007	.0008	.0036
24	S96T002466_L	.0158	.0031	.1034	.0486
25	S96T002466_	-.0022	-.0014	.0922	.0279
26	S96T002466_D	.0010	.0000	.0951	.0280
27	S96T002597_L	.0369	.0037	.1269	.0723
28	S96T002597_	-.0012	-.0009	.1107	.0388
29	S96T002597_D	-.0007	-.0009	.0806	.0212
30	S96T002597_S	4.657	.0055	4.643	4.930
31	ICSA	.0023	.0075	-.0002	-.0025
32	ICSAB	.4782	.0073	.9745	-.0019
33	CCV_2	5.116	.0068	5.218	4.991
34	CCB_2	.0035	.0007	.0012	.0029

JK
08-06-96

LABCORE Data Entry Template for Worklist# 10936

Analyst: K Seto **Instrument:** ICP01 8-7-96 **Book#** 588480

Method: LA-505-~~151~~/161 Rev/Mod B-1
8-7-96

Worklist Comment: ICP AW-101 (SOLID ACID DIGEST)

S	Type	Sample#	R	A	Test	Matrix	Group#	Project
1	ICV				@ICP-QC	QC		
2	ICB				@ICP-QC	QC		
3	LLS				@ICP-QC	QC		
4	ICSA				@ICP-QC	QC		
5	ICSAB				@ICP-QC	QC		
6	PREPSTDTJA				@ICP-A01	SOLID		
7	PREPBLKTJA				@ICP-A01	SOLID		
8	SERDIL	S96T002738	0	A	@ICP-A01	SOLID		
9	SAMPLE	S96T002738	0	A	@ICP-A01	SOLID	96000103	AW-101 PUSH
	Analytes Requested:	AG-A-01 , AL-A-01 , AS-A-01 , B-A-01 , BA-A-01 , BE-A-01 , BI-A-01 , CA-A-01 , CD-A-01 , CE-A-01 , CO-A-01 , CR-A-01 , CU-A-01 , FE-A-01 , K-A-01 , LA-A-01 , LI-A-01 , MG-A-01 , MN-A-01 , MO-A-01 , NA-A-01 , ND-A-01 , NI-A-01 , P-A-01 , PB-A-01 , S-A-01 , SB-A-01 , SE-A-01 , SI-A-01 , SM-A-01 , SR-A-01 , TI-A-01 , TL-A-01 , U-A-01 , V-A-01 , ZN-A-01 , ZR-A-01						
10	DUP	S96T002738	0	A	@ICP-A01	SOLID		
11	SPK-PREDIG	S96T002738	0	A	@ICP-A01	SOLID		
12	CCV				@ICP-QC	QC		
13	CCB				@ICP-QC	QC		
14	SERDIL	S96T002743	0	A	@ICP-A01	SOLID		
15	SAMPLE	S96T002743	0	A	@ICP-A01	SOLID	96000103	AW-101 PUSH
	Analytes Requested:	AG-A-01 , AL-A-01 , AS-A-01 , B-A-01 , BA-A-01 ,						

Data Entry Comments: Sample result calculation:

S96T002738 $Cr = 2.494 \frac{ug}{ml} \times \frac{1}{5.138 \frac{g}{L} \times \frac{1L}{1000ml}} = 4.85e+2 \frac{ug}{g}$

S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

Note: 5.138 g/L is sample prep dilution factor which can be found in sample prep worklist.

LABCORE Data Entry Template for Worklist# 10936

S	Type	Sample#	R	A	Test	Matrix	Group#	Project
					BE-A-01 , BI-A-01 , CA-A-01 , CD-A-01 , CE-A-01 , CO-A-01 , CR-A-01 , CU-A-01 , FE-A-01 , K-A-01 , LA-A-01 , LI-A-01 , MG-A-01 , MN-A-01 , MO-A-01 , NA-A-01 , ND-A-01 , NI-A-01 , P-A-01 , PB-A-01 , S-A-01 , SB-A-01 , SE-A-01 , SI-A-01 , SM-A-01 , SR-A-01 , TI-A-01 , TL-A-01 , U-A-01 , V-A-01 , ZN-A-01 , ZR-A-01			
16	DUP	S96T002743	0	A	@ICP-A01	SOLID		
17	SERDIL	S96T002751	0	A	@ICP-A01	SOLID		
18	SAMPLE	S96T002751	0	A	@ICP-A01	SOLID	96000103	AW-101 PUSH
		Analytes Requested:			AG-A-01 , AL-A-01 , AS-A-01 , B-A-01 , BA-A-01 , BE-A-01 , BI-A-01 , CA-A-01 , CD-A-01 , CE-A-01 , CO-A-01 , CR-A-01 , CU-A-01 , FE-A-01 , K-A-01 , LA-A-01 , LI-A-01 , MG-A-01 , MN-A-01 , MO-A-01 , NA-A-01 , ND-A-01 , NI-A-01 , P-A-01 , PB-A-01 , S-A-01 , SB-A-01 , SE-A-01 , SI-A-01 , SM-A-01 , SR-A-01 , TI-A-01 , TL-A-01 , U-A-01 , V-A-01 , ZN-A-01 , ZR-A-01			
19	DUP	S96T002751	0	A	@ICP-A01	SOLID		
20	ICSA				@ICP-QC	QC		
21	ICSAB				@ICP-QC	QC		
22	CCV				@ICP-QC	QC		
23	CCB				@ICP-QC	QC		

Final page for worklist # 10936

JK Lido 08-07-96
Analyst Signature **Date**

Reviewed by: Saul M. Pang 8/12/96
Analyst Signature **Date**

Prep SW 3010, direct
Prep blk 3010, direct
S96T002738_L, 4-4-2-8, DF 10
S96T002738 4-4 2
S96T002738_D 4-4 2
S96T002738_S 4-4 2
S96T002743_L, 4-4-2-8, DF 10
S96T002743 4-4 2
S96T002743_D 4-4 2
~~S96T002743~~ ← DK 8-7-96
S96T002751_L, 4-4-2-8, DF 10
S96T002751 4-4 2
S96T002751_D 4-4 2

Data Entry Comments: Spike recovery calculation:

S96T002738 $Cr = \frac{7.467 - 2.494}{5} \times 100 = 99.5\%$

S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

Note: Spike true value is 5.0 ppm for all elements except for Ag = 1.0 and Cl = 10.0 ppm.

Analysis Report Summary Wed 08-07-96 09:12:11 PM page 1

#	Sample Name	File	Method	Date	Time	OpID	Type	Mode
1	ICV	960807C	ICP2	08/07/96	19:50	DKS	Q	CONC
2	ICB	960807C	ICP2	08/07/96	19:53	DKS	Q	CONC
3	LLS	960807C	ICP2	08/07/96	19:56	DKS	Q	CONC
4	ICSA	960807C	ICP2	08/07/96	19:59	DKS	Q	CONC
5	ICSAB	960807C	ICP2	08/07/96	20:02	DKS	Q	CONC
6	PREPSTDTJA	960807C	ICP2	08/07/96	20:05	DKS	S	CONC
7	PREPBLKTJA	960807C	ICP2	08/07/96	20:08	DKS	S	CONC
8	S96T002738_L	960807C	ICP2	08/07/96	20:11	DKS	S	CONC
9	S96T002738	960807C	ICP2	08/07/96	20:14	DKS	S	CONC
10	S96T002738_D	960807C	ICP2	08/07/96	20:17	DKS	S	CONC
11	S96T002738_S	960807C	ICP2	08/07/96	20:21	DKS	S	CONC
12	CCV	960807C	ICP2	08/07/96	20:25	DKS	Q	CONC
13	CCB	960807C	ICP2	08/07/96	20:29	DKS	Q	CONC
14	S96T002743_L	960807C	ICP2	08/07/96	20:32	DKS	S	CONC
15	S96T002743	960807C	ICP2	08/07/96	20:35	DKS	S	CONC
16	S96T002743_D	960807C	ICP2	08/07/96	20:43	DKS	S	CONC
17	S96T002751_L	960807C	ICP2	08/07/96	20:46	DKS	S	CONC
18	S96T002751	960807C	ICP2	08/07/96	20:50	DKS	S	CONC
19	S96T002751_D	960807C	ICP2	08/07/96	20:53	DKS	S	CONC
20	ICSA	960807C	ICP2	08/07/96	20:57	DKS	Q	CONC
21	ICSAB	960807C	ICP2	08/07/96	21:00	DKS	Q	CONC
22	CCV_1	960807C	ICP2	08/07/96	21:04	DKS	Q	CONC
23	CCB_1	960807C	ICP2	08/07/96	21:08	DKS	Q	CONC

DK [illegible]
08-07-96
QW-101 S96T002738
S96T002743
S96T002751
Worklist # 10936

SIGNATURE ABOVE REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 1912 TO 1916.

Analysis Report Averages Wed 08-07-96 09:12:11 PM page 2

#	Sample Name	Ag	Al	As	B	Ba	Be
1	ICV	4.988	4.985	5.096	4.920	4.944	5.131
2	ICB	-.0004	.0102	.0214	.0047	.0001	.0002
3	LLS	.0196	.1037	.2086	.1007	.0976	.0107
4	ICSA	.0017	244.8	-.0949	-.0021	.0017	.0002
5	ICSAB	.9031	241.6	-.1145	-.0023	.4399	.4430
6	PREPSTDTJA	.7598	4.213	3.961	4.473	4.109	4.704
7	PREPBLKTJA	-.0011	.1039	-.0102	.4657	.0004	-.0001
8	S96T002738_L	.1434	91.85	-.1227	.5902	.0308	.0070
9	S96T002738_	.1266	80.50	-.1263	.5184	.0274	.0076
10	S96T002738_D	.1319	84.12	-.1256	.6677	.0294	.0085
11	S96T002738_S	1.027	98.88	4.410	4.950	4.478	4.880
12	CCV	5.110	5.070	5.212	5.033	4.998	5.218
13	CCB	.0003	-.0051	.0184	.0014	.0001	.0000
14	S96T002743_L	.0494	98.28	-.1371	.6681	.0003	.0079
15	S96T002743_	.0604	89.22	-.1500	.5853	.0013	.0083
16	S96T002743_D	.0565	93.96	-.1514	.7367	.0019	.0092
17	S96T002751_L	.1792	91.53	-.1092	.4921	.0359	.0077
18	S96T002751_	.1682	82.80	-.1225	.4787	.0327	.0077
19	S96T002751_D	.1877	90.96	-.1448	.6426	.0361	.0083
20	ICSA	.0014	249.1	-.0767	-.0043	.0018	.0001
21	ICSAB	.9200	245.9	-.0623	-.0032	.4465	.4519
22	CCV_1	5.034	5.021	5.149	4.970	4.959	5.174
23	CCB_1	.0011	.0063	.0052	.0009	.0001	.0002

#	Sample Name	Bi	Ca	Cd	Ce	Co	Cr
1	ICV	5.033	5.127	5.094	5.091	5.126	5.145
2	ICB	.0068	-.0004	.0010	-.0034	.0004	-.0001
3	LLS	.2092	.2232	Q.0126	.2005	.0425	.0200
4	ICSA	.0017	250.9	.0005	.0072	.0019	.0093
5	ICSAB	-.0029	249.9	.8821	.0129	.4457	.4566
6	PREPSTDTJA	3.793	4.058	3.801	4.305	4.012	3.985
7	PREPBLKTJA	.0396	.1331	-.0009	-.0064	.0021	.0056
8	S96T002738_L	.2456	1.578	.0428	.0631	.0299	2.905
9	S96T002738_	.0523	1.354	.0383	.0243	.0053	2.494
10	S96T002738_D	.0504	1.496	.0426	.0032	.0100	2.638
11	S96T002738_S	4.467	6.201	4.451	4.674	4.545	7.467
12	CCV	5.147	5.310	5.194	5.128	5.250	5.260
13	CCB	.0038	.0015	.0005	-.0026	-.0002	-.0001
14	S96T002743_L	-.0251	.1743	.0039	-.0999	.0106	.3957
15	S96T002743_	.0211	.2570	.0089	.0027	.0013	.3451
16	S96T002743_D	.0411	.3277	.0101	.0096	.0013	.3690
17	S96T002751_L	.2321	2.200	.0637	-.0042	.0195	2.949
18	S96T002751_	.0628	2.013	.0463	.0095	.0089	2.633
19	S96T002751_D	.1221	2.379	.0532	.0095	.0141	2.949
20	ICSA	-.0070	257.1	.0005	.0118	.0022	.0095
21	ICSAB	-.0207	255.0	.8996	.0132	.4522	.4650
22	CCV_1	5.048	5.207	5.114	5.094	5.171	5.177
23	CCB_1	.0284	.0032	.0015	.0093	.0017	-.0002

Analysis Report Averages Wed 08-07-96 09:12:11 PM page 3

#	Sample Name	Cu	Eu	Fe	K	La	Li
1	ICV	5.152	-.0030	5.091	5.080	5.014	4.918
2	ICB	.0009	-.0000	.0003	-.0485	-.0012	.0004
3	LLS	.0208	.0008	.1031	.5973	.0987	.0206
4	ICSA	-.0100	-.0467	93.27	.0516	-.0062	.0027
5	ICSAB	.4428	-.0454	92.31	.2495	-.0053	.9672
6	PREPSTDTJA	4.046	-.0063	4.109	3.935	4.197	4.342
7	PREPBLKTJA	.0048	-.0038	.0626	-.0731	-.0018	-.0040
8	S96T002738_L	.0451	.0010	2.183	129.6	.0296	.0286
9	S96T002738	.0320	-.0059	1.883	115.0	.0266	.0161
10	S96T002738_D	.0408	-.0051	3.396	122.5	.0275	.0197
11	S96T002738_S	4.454	-.0073	7.360	141.6	4.600	4.734
12	CCV	5.200	-.0022	5.190	5.309	5.042	4.973
13	CCB	-.0003	.0009	-.0003	-.1467	-.0003	.0011
14	S96T002743_L	.0135	-.0055	.3538	147.6	-.0197	.0471
15	S96T002743	.0121	-.0041	.3255	135.4	-.0024	.0461
16	S96T002743_D	.0134	-.0040	.2609	132.9	.0003	.0469
17	S96T002751_L	.0634	-.0046	2.882	114.3	.0373	.0284
18	S96T002751	.0407	-.0057	2.586	104.0	.0364	.0258
19	S96T002751_D	.0461	-.0044	2.651	112.8	.0398	.0304
20	ICSA	-.0104	-.0537	94.94	-.1372	-.0053	.0033
21	ICSAB	.4513	-.0505	93.94	.2209	-.0059	.9869
22	CCV_1	5.185	-.0025	5.116	5.077	5.006	4.975
23	CCB_1	.0011	.0009	.0014	.1795	.0007	.0010

#	Sample Name	Mg	Mn	Mo	Na	Nd	Ni
1	ICV	4.937	5.001	5.109	4.938	5.162	5.058
2	ICB	.0013	.0003	-.0030	.0004	.0024	-.0019
3	LLS	.2081	.0200	.0997	.2110	.2012	.0428
4	ICSA	249.9	-.0066	-.0077	195.9	.0067	-.0068
5	ICSAB	247.1	.4204	-.0076	194.3	.0057	.8593
6	PREPSTDTJA	3.813	3.882	4.101	5.385	4.305	3.939
7	PREPBLKTJA	.0207	-.0000	-.0011	.7848	.0028	-.0030
8	S96T002738_L	.2604	1.781	.1847	911.1	.0490	.3107
9	S96T002738	.2769	1.533	.1655	812.7	.0211	.2176
10	S96T002738_D	.3500	1.626	.2229	848.9	.0371	.2348
11	S96T002738_S	4.612	6.222	4.755	961.3	4.655	4.728
12	CCV	5.030	5.124	5.203	5.003	5.197	5.161
13	CCB	.0003	.0004	.0013	.0113	.0033	.0039
14	S96T002743_L	.0640	.0204	.2082	832.7	.0120	.0261
15	S96T002743	.0269	.0189	.1828	764.0	-.0027	.0506
16	S96T002743_D	.0800	.0193	.1940	793.8	.0116	.0361
17	S96T002751_L	.6317	2.303	.1959	942.0	.1019	.3621
18	S96T002751	.4761	2.068	.1718	865.8	.0250	.2674
19	S96T002751_D	.4552	2.339	.1857	957.0	.0320	.2928
20	ICSA	255.6	-.0062	-.0112	198.1	.0038	-.0003
21	ICSAB	251.9	.4280	-.0141	197.4	.0076	.8877
22	CCV_1	4.979	5.041	5.138	4.970	5.170	5.097
23	CCB_1	.0079	.0003	.0002	.0065	.0048	.0050

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#	Sample Name	P	Pb	S	Sb	Se	Si
1	ICV	5.117	5.050	5.099	4.796	5.024	4.771
2	ICB	.0005	-.0013	-.0091	-.0039	.0011	.0023
3	LLS	.4060	.2101	.2039	.0897	.1990	.1495
4	ICSA	.0242	.0209	-.0287	.0105	-.0612	-.0019
5	ICSAB	.0133	.9286	-.0373	-.0037	-.0392	.0054
6	PREPSTDTJA	4.068	3.565	3.835	3.624	3.902	7.742
7	PREPBLKTJA	.0493	-.0056	.0667	-.0122	.0169	1.304
8	S96T002738_L	9.910	.1154	7.387	-.0738	.1013	1.803
9	S96T002738_	8.813	.1933	6.361	-.0008	.0240	1.497
10	S96T002738_D	9.795	.2682	6.715	.0434	.0234	3.266
11	S96T002738_S	16.08	4.531	11.96	4.261	4.403	8.480
12	CCV	5.104	5.183	5.194	4.897	5.100	4.908
13	CCB	.0114	-.0127	-.0080	.0053	.0081	.0085
14	S96T002743_L	3.172	.0681	1.317	-.0575	-.0308	1.847
15	S96T002743_	2.753	.1562	1.308	-.0256	.0136	1.669
16	S96T002743_D	2.880	.1695	1.370	-.0104	.0292	2.632
17	S96T002751_L	4.294	.2675	9.835	-.0308	.0896	2.232
18	S96T002751_	3.953	.2270	8.846	-.0000	.0263	1.990
19	S96T002751_D	6.888	.2390	10.04	.0079	.0322	3.443
20	ICSA	.0026	.0386	-.0428	.0009	-.0361	.0042
21	ICSAB	.0310	.9599	-.0210	-.0008	-.0358	.0013
22	CCV_1	5.205	5.082	5.162	4.836	5.056	4.827
23	CCB_1	-.0067	-.0023	-.0264	.0026	.0171	.0045

#	Sample Name	Sm	Sr	Th	Ti	Tl	U
1	ICV	5.040	4.946	.0158	4.921	4.967	10.08
2	ICB	-.0004	.0001	.0021	.0000	-.0098	.0049
3	LLS	.2112	.0203	-.0033	.0203	.4006	.5466
4	ICSA	-.0036	.0016	.0028	.0014	.0229	.0787
5	ICSAB	.0056	.0016	-.0044	.0014	-.0008	.0935
6	PREPSTDTJA	4.241	4.127	.0099	4.070	3.720	8.510
7	PREPBLKTJA	-.0579	-.0005	.0118	.0010	-.0482	-.1872
8	S96T002738_L	.0578	.0250	.0345	.0135	-.1097	7.608
9	S96T002738_	-.0708	.0206	.0303	.0089	-.0123	6.465
10	S96T002738_D	-.0574	.0237	.0124	.0656	-.0356	6.757
11	S96T002738_S	4.564	4.483	.0351	4.417	4.206	17.09
12	CCV	5.072	4.982	.0083	4.964	5.007	10.14
13	CCB	.0080	.0004	-.0018	.0005	-.0212	.0442
14	S96T002743_L	-.0894	-.0005	-.0053	.0024	-.0317	-.2644
15	S96T002743_	-.0623	-.0001	.0207	.0016	.0110	-.2301
16	S96T002743_D	-.0715	-.0001	.0205	.0070	-.0193	-.2482
17	S96T002751_L	-.0493	.0326	.0852	.0294	-.0752	10.02
18	S96T002751_	-.0545	.0289	.0140	.0217	-.0335	9.290
19	S96T002751_D	-.0365	.0323	.0204	.0163	-.0551	10.34
20	ICSA	.0088	.0016	.0033	.0010	.0032	.0989
21	ICSAB	.0103	.0016	.0044	.0014	-.0196	.0842
22	CCV_1	5.034	4.954	.0127	4.933	5.072	10.07
23	CCB_1	.0084	.0002	.0071	.0010	-.0201	.0437

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#	Sample Name	V	Y	Zn	Zr
1	ICV	5.120	.0062	5.202	5.005
2	ICB	.0002	.0000	.0005	-.0002
3	LLS	.1050	.0009	.0224	.0219
4	ICSA	.0005	.0066	-.0018	-.0035
5	ICSAB	.4463	.0071	.9083	-.0020
6	PREPSTDTJA	4.041	.0015	3.661	4.098
7	PREPBLKTJA	-.0081	-.0025	.0226	-.0056
8	S96T002738_L	.0188	.0046	.1110	.5198
9	S96T002738_	-.0072	-.0007	.0893	.4460
10	S96T002738_D	-.0033	.0003	.0870	.5225
11	S96T002738_S	4.470	.0059	4.507	5.057
12	CCV	5.215	.0071	5.356	5.072
13	CCB	.0027	.0006	.0004	.0015
14	S96T002743_L	-.0129	-.0038	.1265	.0363
15	S96T002743_	-.0096	-.0030	.1123	.0372
16	S96T002743_D	-.0089	-.0030	.0936	.0400
17	S96T002751_L	.0030	.0012	.1126	.6168
18	S96T002751_	-.0047	-.0002	.0988	.5717
19	S96T002751_D	.0001	.0009	.1128	.6527
20	ICSA	.0020	.0072	-.0015	-.0020
21	ICSAB	.4536	.0073	.9274	-.0021
22	CCV_1	5.154	.0061	5.263	5.008
23	CCB_1	.0016	.0004	.0003	.0001

DK Lold
08-07-96

07/22/96 15:54 File #: 960807D.TXT Page: 1
A-0004-1

LABCORE Data Entry Template for Worklist# 11043

Analyst: JK Sato **Instrument:** ICP01-2 JK 8-7-96 **Book#** 58B48a

Method: LA-505-~~151~~/161 Rev/Mod B-1
JK 8-7-96

Worklist Comment: ICP AW-101 (SOLID ACID DIGEST)

S	Type	Sample#	R	A	Test	Matrix	Group#	Project
1	ICV				@ICP-QC	QC		
2	ICB				@ICP-QC	QC		
3	LLS				@ICP-QC	QC		
4	ICSA				@ICP-QC	QC		
5	ICSAB				@ICP-QC	QC		
6	PREPSTDTJA				@ICP-A01	SOLID		
7	PREPBLKTJA				@ICP-A01	SOLID		
8	SERDIL	S96T003240	0	A	@ICP-A01	SOLID		
9	SAMPLE	S96T003240	0	A	@ICP-A01	SOLID	96000462	AW-101 PUSH

Analytes Requested: AG-A-01 , AL-A-01 , AS-A-01 , B-A-01 , BA-A-01 , BE-A-01 , BI-A-01 , CA-A-01 , CD-A-01 , CE-A-01 , CO-A-01 , CR-A-01 , CU-A-01 , FE-A-01 , K-A-01 , LA-A-01 , LI-A-01 , MG-A-01 , MN-A-01 , MO-A-01 , NA-A-01 , ND-A-01 , NI-A-01 , P-A-01 , PB-A-01 , S-A-01 , SB-A-01 , SE-A-01 , SI-A-01 , SM-A-01 , SR-A-01 , TI-A-01 , TL-A-01 , U-A-01 , V-A-01 , ZN-A-01 , ZR-A-01

S	Type	Sample#	R	A	Test	Matrix	Group#	Project
10	DUP	S96T003240	0	A	@ICP-A01	SOLID		
11	SPK-PREDIG	S96T003240	0	A	@ICP-A01	SOLID		
12	ICSA				@ICP-QC	QC		
13	ICSAB				@ICP-QC	QC		
14	CCV				@ICP-QC	QC		
15	CCB				@ICP-QC	QC		

Data Entry Comments: Sample result calculation:

S96T003240 $C_x = 0.1350 \frac{ug}{ml} \times \frac{1}{5.142 \frac{g}{L} \times \frac{1L}{1000ml}} = 2.63e+1 \frac{ug}{g}$

S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

Note: $5.142 \frac{g}{L}$ is sample prep dilution factor which can be found in sample prep worklist.

LABCORE Data Entry Template for Worklist# 11043

S Type	Sample#	R	A	Test	Matrix	Group#	Project

Final page for worklist # 11043

JK 08-07-96
Analyst Signature Date

Reviewed by:
Sam R. Perry 8/12/96
Analyst Signature Date

PrepStdTJG, direct
PrepblkTJG, direct
S96T003240_L, 4-4-2-8, DF 10
S96T003240 4-4 2
S96T003240_D 4-4 2
S96T003240_S 4-4 2

Data Entry Comments: Spike recovery calculation:

S96T003240 $Cr = \frac{5.0000 - 0.1350}{5} \times 100 = 97.3\%$

S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

Note: Spike true value is 5.0 ppm for all elements except for Ag = 1.0 ppm and U = 10.0 ppm.

Analysis Report Summary Wed 08-07-96 10:08:09 PM page 1

#	Sample Name	File	Method	Date	Time	OpID	Type	Mode
1	ICV	960807D	ICP2	08/07/96	21:18	DKS	Q	CONC
2	ICB	960807D	ICP2	08/07/96	21:22	DKS	Q	CONC
3	LLS	960807D	ICP2	08/07/96	21:25	DKS	Q	CONC
4	ICSA	960807D	ICP2	08/07/96	21:28	DKS	Q	CONC
5	ICSAB	960807D	ICP2	08/07/96	21:30	DKS	Q	CONC
6	PREPSTDTJA	960807D	ICP2	08/07/96	21:34	DKS	S	CONC
7	PREPBLKTJA	960807D	ICP2	08/07/96	21:38	DKS	S	CONC
8	S96T003240_L	960807D	ICP2	08/07/96	21:41	DKS	S	CONC
9	S96T003240_	960807D	ICP2	08/07/96	21:44	DKS	S	CONC
10	S96T003240_D	960807D	ICP2	08/07/96	21:46	DKS	S	CONC
11	S96T003240_S	960807D	ICP2	08/07/96	21:49	DKS	S	CONC
12	ICSA	960807D	ICP2	08/07/96	21:53	DKS	Q	CONC
13	ICSAB	960807D	ICP2	08/07/96	21:56	DKS	Q	CONC
14	CCV	960807D	ICP2	08/07/96	22:00	DKS	Q	CONC
15	CCB	960807D	ICP2	08/07/96	22:04	DKS	Q	CONC

JK Sold
08-07-96
GW-101 S96T003240
Worklist # 11043

SIGNATURE ABOVE REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 1917 TO 1920.

Analysis Report Averages Wed 08-07-96 10:08:09 PM page 2

#	Sample Name	Ag	Al	As	B	Ba	Be
1	ICV	4.950	4.927	5.039	4.881	4.862	5.057
2	ICB	-.0022	-.0127	-.0074	.0019	.0001	-.0001
3	LLS	.0206	.1003	.2050	.1007	.0985	.0103
4	ICSA	.0011	244.4	-.0908	.0064	.0018	.0001
5	ICSAB	.9038	243.0	-.1015	-.0041	.4431	.4471
6	PREPSTDTJA	.9056	4.915	4.684	5.500	4.660	4.691
7	PREPBLKTJA	-.0010	.1006	.0046	.4319	.0007	-.0001
8	S96T003240_L	.0429	38.24	.0263	.6634	.0006	.0037
9	S96T003240_	.0474	35.00	-.0607	.5928	.0008	.0030
10	S96T003240_D	.0604	46.90	-.0986	.4770	.0011	.0039
11	S96T003240_S	1.011	51.90	4.869	5.269	4.751	4.759
12	ICSA	.0009	252.0	-.0661	.0024	.0018	.0001
13	ICSAB	.9258	247.6	-.0771	-.0058	.4523	.4541
14	CCV	5.025	4.990	5.141	4.967	4.944	5.144
15	CCB	.0010	.0027	.0056	.0028	.0001	.0001

#	Sample Name	Bi	Ca	Cd	Ce	Co	Cr
1	ICV	4.965	5.136	5.024	4.982	5.074	5.097
2	ICB	.0019	-.0083	-.0007	-.0037	.0013	-.0007
3	LLS	.2030	.2278	.0114	.2041	.0427	.0211
4	ICSA	.0313	251.9	.0009	.0130	.0006	.0089
5	ICSAB	-.0079	251.1	.8859	.0038	.4452	.4568
6	PREPSTDTJA	4.502	5.085	4.597	4.865	4.774	4.704
7	PREPBLKTJA	-.0071	.1758	.0001	-.0006	.0029	.0041
8	S96T003240_L	.3881	.1002	.0128	-.0683	.0037	.1469
9	S96T003240_	.0224	.1467	.0029	-.0209	.0006	.1350
10	S96T003240_D	.0321	.2347	.0029	-.0010	.0018	.1810
11	S96T003240_S	4.715	5.280	4.753	4.986	4.905	5.000
12	ICSA	-.0089	263.7	.0005	.0134	.0000	.0086
13	ICSAB	.0011	257.4	.9044	.0088	.4551	.4665
14	CCV	5.005	5.231	5.111	5.047	5.164	5.173
15	CCB	.0216	-.0044	.0012	.0078	.0010	.0014

#	Sample Name	Cu	Eu	Fe	K	La	Li
1	ICV	5.067	-.0021	5.031	4.945	4.897	4.847
2	ICB	.0007	.0009	-.0017	.0681	-.0020	.0007
3	LLS	.0201	.0013	.1058	.5475	.1000	.0215
4	ICSA	-.0106	-.0493	93.22	.0514	-.0059	.0030
5	ICSAB	.4457	-.0472	92.71	.1126	-.0073	.9823
6	PREPSTDTJA	4.582	-.0033	4.795	4.796	4.726	4.713
7	PREPBLKTJA	.0057	-.0028	.1036	-.0561	-.0013	-.0028
8	S96T003240_L	.0132	.0087	.2106	285.8	-.0127	.0253
9	S96T003240_	.0095	-.0015	.1978	266.5	-.0050	.0130
10	S96T003240_D	.0108	-.0018	.1497	300.1	-.0032	.0191
11	S96T003240_S	4.668	-.0033	4.918	274.6	4.857	4.940
12	ICSA	-.0104	-.0610	96.51	-.0600	-.0064	.0031
13	ICSAB	.4538	-.0523	94.59	.1287	-.0056	.9969
14	CCV	5.152	-.0021	5.112	5.010	4.975	4.933
15	CCB	.0011	.0009	.0009	.2267	.0011	.0011

Analysis Report Averages Wed 08-07-96 10:08:09 PM page 3

#	Sample Name	Mg	Mn	Mo	Na	Nd	Ni
1	ICV	4.896	4.952	5.042	4.867	5.056	5.007
2	ICB	.0001	.0003	-.0008	.0048	.0035	.0058
3	LLS	.2031	.0202	.0969	.2193	.2047	.0465
4	ICSA	250.5	-.0065	-.0058	195.4	.0069	-.0045
5	ICSAB	248.7	.4213	-.0091	195.8	.0036	.8659
6	PREPSTDTJA	4.589	4.591	4.785	6.417	4.792	4.713
7	PREPBLKTJA	.0085	.0000	.0012	.5969	.0013	-.0020
8	S96T003240_L	.0100	.0106	.0862	774.8	.0064	.0430
9	S96T003240_	.0061	.0067	.0707	717.2	-.0049	.0345
10	S96T003240_D	.0414	.0089	.0948	909.2	.0035	.0300
11	S96T003240_S	4.611	4.658	5.038	886.7	4.913	4.830
12	ICSA	258.1	-.0063	-.0099	200.5	.0021	-.0066
13	ICSAB	253.4	.4307	-.0098	199.0	.0040	.8879
14	CCV	4.955	5.032	5.122	4.952	5.135	5.086
15	CCB	.0053	.0003	.0000	.0074	.0059	.0020

#	Sample Name	P	Pb	S	Sb	Se	Si
1	ICV	5.063	5.036	5.092	4.744	4.957	4.734
2	ICB	-.0010	-.0069	-.0128	-.0127	.0123	.0063
3	LLS	.3968	.2002	.1938	.1017	.1944	.1541
4	ICSA	.0227	.0335	-.0278	-.0003	-.0337	-.0010
5	ICSAB	.0336	.9248	-.0477	-.0037	-.0431	-.0025
6	PREPSTDTJA	4.730	4.456	4.743	4.356	4.521	2.595
7	PREPBLKTJA	.0377	.0011	.2779	.0017	.0040	.6333
8	S96T003240_L	1.773	.0649	.8916	-.0039	.1224	.7950
9	S96T003240_	1.565	.0607	.6745	-.0132	.0207	.6623
10	S96T003240_D	2.357	.0792	.8552	-.0015	.0237	.5604
11	S96T003240_S	7.044	4.763	5.622	4.568	4.750	4.117
12	ICSA	-.0042	.0159	-.0324	-.0078	-.0315	.0039
13	ICSAB	-.0008	.9539	-.0342	-.0030	-.0328	.0009
14	CCV	5.188	5.095	5.187	4.836	5.031	4.823
15	CCB	-.0087	-.0110	.0022	-.0044	.0174	.0052

#	Sample Name	Sm	Sr	Th	Ti	Tl	U
1	ICV	4.919	4.842	.0116	4.826	4.929	9.855
2	ICB	.0153	.0002	-.0026	.0005	.0027	.0535
3	LLS	.2188	.0204	-.0055	.0201	.4107	.5748
4	ICSA	.0023	.0016	-.0097	.0009	-.0389	.0891
5	ICSAB	.0017	.0015	-.0057	.0009	-.0095	.0802
6	PREPSTDTJA	4.765	4.644	.0134	4.644	4.484	9.541
7	PREPBLKTJA	-.0426	-.0002	.0066	.0013	.0127	-.1494
8	S96T003240_L	.0897	.0021	.0007	-.0001	-.0833	.4076
9	S96T003240_	-.0266	.0003	.0013	.0001	-.0450	-.1698
10	S96T003240_D	-.0369	.0005	.0090	.0006	-.0261	-.1814
11	S96T003240_S	4.853	4.744	.0066	4.725	4.588	9.650
12	ICSA	.0073	.0016	.0059	.0010	.0241	.0690
13	ICSAB	.0043	.0016	.0013	.0012	.0233	.0715
14	CCV	5.001	4.920	.0142	4.901	4.979	10.02
15	CCB	.0106	.0003	-.0013	.0007	-.0044	.0674

Analysis Report Averages Wed 08-07-96 10:08:09 PM page 4

#	Sample Name	V	Y	Zn	Zr
1	ICV	5.054	.0066	5.184	4.912
2	ICB	.0025	.0005	-.0003	.0012
3	LLS	.1074	.0010	.0224	.0221
4	ICSA	.0010	.0069	-.0026	-.0019
5	ICSAB	.4478	.0069	.9129	-.0023
6	PREPSTDTJA	4.697	.0044	4.509	4.700
7	PREPBLKTJA	-.0076	-.0020	.0151	-.0042
8	S96T003240_L	.0288	.0045	.0838	.0350
9	S96T003240_	-.0047	-.0012	.0782	.0165
10	S96T003240_D	-.0065	-.0015	.0892	.0188
11	S96T003240_S	4.806	.0050	4.811	4.878
12	ICSA	.0032	.0074	-.0016	-.0027
13	ICSAB	.4557	.0071	.9325	-.0026
14	CCV	5.139	.0066	5.261	4.991
15	CCB	.0025	.0006	-.0008	.0011

DK
08-07-96

LABCORE Data Entry Template for Worklist# 11044

Analyst: JK Seth **Instrument:** ICP01 JK 8-12-96 **Book#** 58848

Method: LA-505-~~151~~/161 Rev/Mod B-1
JK 8-12-96

Worklist Comment: ICP AW-101 (SOLID ACID DIGEST)

S	Type	Sample#	R	A	Test	Matrix	Group#	Project
1	ICV				@ICP-QC	QC		
2	ICB				@ICP-QC	QC		
3	LLS				@ICP-QC	QC		
4	ICSA				@ICP-QC	QC		
5	ICSAB				@ICP-QC	QC		
6	PREPSTDTJA				@ICP-A01	SOLID		
7	PREPBLKTJA				@ICP-A01	SOLID		
8	SERDIL	S96T003521	0	A	@ICP-A01	SOLID		
9	SAMPLE	S96T003521	0	A	@ICP-A01	SOLID	96000462	AW-101 PUSH
	Analytes Requested:				AG-A-01 , AL-A-01 , AS-A-01 , B-A-01 , BA-A-01 , BE-A-01 , BI-A-01 , CA-A-01 , CD-A-01 , CE-A-01 , CO-A-01 , CR-A-01 , CU-A-01 , FE-A-01 , K-A-01 , LA-A-01 , LI-A-01 , MG-A-01 , MN-A-01 , MO-A-01 , NA-A-01 , ND-A-01 , NI-A-01 , P-A-01 , PB-A-01 , S-A-01 , SB-A-01 , SE-A-01 , SI-A-01 , SM-A-01 , SR-A-01 , TI-A-01 , TL-A-01 , U-A-01 , V-A-01 , ZN-A-01 , ZR-A-01			
10	DUP	S96T003521	0	A	@ICP-A01	SOLID		
11	SPK-PREDIG	S96T003521	0	A	@ICP-A01	SOLID		
12	CCV				@ICP-QC	QC		
13	CCB				@ICP-QC	QC		
14	SERDIL	S96T003536	0	A	@ICP-A01	SOLID		
15	SAMPLE	S96T003536	0	A	@ICP-A01	SOLID	96000462	AW-101 PUSH
	Analytes Requested:				AG-A-01 , AL-A-01 , AS-A-01 , B-A-01 , BA-A-01 ,			

Data Entry Comments:

S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

LABCORE Data Entry Template for Worklist# 11044

S	Type	Sample#	R	A	Test	Matrix	Group#	Project
					BE-A-01 , BI-A-01 , CA-A-01 , CD-A-01 , CE-A-01 , CO-A-01 , CR-A-01 , CU-A-01 , FE-A-01 , K-A-01 , LA-A-01 , LI-A-01 , MG-A-01 , MN-A-01 , MO-A-01 , NA-A-01 , ND-A-01 , NI-A-01 , P-A-01 , PB-A-01 , S-A-01 , SB-A-01 , SE-A-01 , SI-A-01 , SM-A-01 , SR-A-01 , TI-A-01 , TL-A-01 , U-A-01 , V-A-01 , ZN-A-01 , ZR-A-01			
16	DUP	S96T003536	0	A	@ICP-A01	SOLID		
17	SERDIL	S96T003550	0	A	@ICP-A01	SOLID		
18	SAMPLE	S96T003550	0	A	@ICP-A01	SOLID	96000462	AW-101 PUSH
		Analytes Requested:			AG-A-01 , AL-A-01 , AS-A-01 , B-A-01 , BA-A-01 , BE-A-01 , BI-A-01 , CA-A-01 , CD-A-01 , CE-A-01 , CO-A-01 , CR-A-01 , CU-A-01 , FE-A-01 , K-A-01 , LA-A-01 , LI-A-01 , MG-A-01 , MN-A-01 , MO-A-01 , NA-A-01 , ND-A-01 , NI-A-01 , P-A-01 , PB-A-01 , S-A-01 , SB-A-01 , SE-A-01 , SI-A-01 , SM-A-01 , SR-A-01 , TI-A-01 , TL-A-01 , U-A-01 , V-A-01 , ZN-A-01 , ZR-A-01			
19	DUP	S96T003550	0	A	@ICP-A01	SOLID		
20	CCV				@ICP-QC	QC		
21	CCB				@ICP-QC	QC		
22	SERDIL	S96T003557	0	A	@ICP-A01	SOLID		
23	SAMPLE	S96T003557	0	A	@ICP-A01	SOLID	96000462	AW-101 PUSH
		Analytes Requested:			AG-A-01 , AL-A-01 , AS-A-01 , B-A-01 , BA-A-01 , BE-A-01 , BI-A-01 , CA-A-01 , CD-A-01 , CE-A-01 , CO-A-01 , CR-A-01 , CU-A-01 , FE-A-01 , K-A-01 , LA-A-01 , LI-A-01 , MG-A-01 , MN-A-01 , MO-A-01 , NA-A-01 , ND-A-01 , NI-A-01 , P-A-01 , PB-A-01 , S-A-01 , SB-A-01 , SE-A-01 , SI-A-01 , SM-A-01 , SR-A-01 , TI-A-01 , TL-A-01 , U-A-01 , V-A-01 , ZN-A-01 , ZR-A-01			
24	DUP	S96T003557	0	A	@ICP-A01	SOLID		
25	ICSA				@ICP-QC	QC		
26	ICSAB				@ICP-QC	QC		
27	CCV				@ICP-QC	QC		

Data Entry Comments:

S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

LABCORE Data Entry Template for Worklist# 11044

S	Type	Sample#	R	A	Test	Matrix	Group#	Project
28	CCB				@ICP-QC	QC		

Final page for worklist # 11044

JK 08-12-96
Analyst Signature Date

8/13/96
Analyst Signature Date
Reviewed

Prep std IIIa, direct
Prep blk IIIa, direct

596T003521_L,	4-4-2-8,	DF 10
596T003521	4-4	2
596T003521_D	4-4	2
596T003521_S	4-4	2
596T003536_L,	4-4-2-8,	DF 10
596T003536	4-4	2
596T003536_D	4-4	2
~~596T003536~~ JK 8-12-96		
596T003550_L,	4-4-2-8,	DF 10
596T003550	4-4	2
596T003550_D	4-4	2
596T003557_L,	4-4-2-8,	DF 10
596T003557	4-4	2
596T003557_D	4-4	2

Data Entry Comments:

S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

Analysis Report Summary Mon 08-12-96 09:02:08 PM page 1

#	Sample Name	File	Method	Date	Time	OpID	Type	Mode
1	ICV	960812D	ICP2	08/12/96	19:26	DKS	Q	CONC
2	ICB	960812D	ICP2	08/12/96	19:30	DKS	Q	CONC
3	LLS	960812D	ICP2	08/12/96	19:32	DKS	Q	CONC
4	ICSA	960812D	ICP2	08/12/96	19:35	DKS	Q	CONC
5	ICSAB	960812D	ICP2	08/12/96	19:38	DKS	Q	CONC
6	PREPSTDTJA	960812D	ICP2	08/12/96	19:42	DKS	S	CONC
7	PREPBLKTJA	960812D	ICP2	08/12/96	19:46	DKS	S	CONC
8	S96T003521_L	960812D	ICP2	08/12/96	19:49	DKS	S	CONC
9	S96T003521	960812D	ICP2	08/12/96	19:52	DKS	S	CONC
10	S96T003521_D	960812D	ICP2	08/12/96	19:55	DKS	S	CONC
11	S96T003521_S	960812D	ICP2	08/12/96	19:58	DKS	S	CONC
12	CCV	960812D	ICP2	08/12/96	20:04	DKS	Q	CONC
13	CCB	960812D	ICP2	08/12/96	20:08	DKS	Q	CONC
14	S96T003536_L	960812D	ICP2	08/12/96	20:11	DKS	S	CONC
15	S96T003536	960812D	ICP2	08/12/96	20:14	DKS	S	CONC
16	S96T003536_D	960812D	ICP2	08/12/96	20:17	DKS	S	CONC
17	S96T003550_L	960812D	ICP2	08/12/96	20:20	DKS	S	CONC
18	S96T003550	960812D	ICP2	08/12/96	20:23	DKS	S	CONC
19	S96T003550_D	960812D	ICP2	08/12/96	20:26	DKS	S	CONC
20	CCV_1	960812D	ICP2	08/12/96	20:32	DKS	Q	CONC
21	CCB_1	960812D	ICP2	08/12/96	20:36	DKS	Q	CONC
22	S96T003557_L	960812D	ICP2	08/12/96	20:39	DKS	S	CONC
23	S96T003557	960812D	ICP2	08/12/96	20:42	DKS	S	CONC
24	S96T003557_D	960812D	ICP2	08/12/96	20:45	DKS	S	CONC
25	ICSA	960812D	ICP2	08/12/96	20:49	DKS	Q	CONC
26	ICSAB	960812D	ICP2	08/12/96	20:52	DKS	Q	CONC
27	CCV_2	960812D	ICP2	08/12/96	20:55	DKS	Q	CONC
28	CCB_2	960812D	ICP2	08/12/96	20:59	DKS	Q	CONC

JK [signature]
08-12-96
GW-101 S96T003521
S96T003536
S96T003550
S96T003557
Worklist # 11044

SIGNATURE ABOVE REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 1926 TO 1931.

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#	Sample Name	Ag	Al	As	B	Ba	Be
1	ICV	4.969	4.930	5.103	4.976	5.011	5.162
2	ICB	-.0013	.0078	-.0171	-.0039	-.0001	.0003
3	LLS	.0212	.1120	.2002	.1022	.0980	.0107
4	ICSA	.0014	242.0	-.0901	-.0114	.0017	.0000
5	ICSAB	.9510	243.2	-.0931	-.0043	.4712	.4753
6	PREPSTDTJA	.8434	4.616	4.363	5.143	4.496	4.466
7	PREPBLKTJA	-.0002	.1335	-.0114	.5128	.0010	.0001
8	S96T003521_L	.0675	45.83	-.1811	.5228	.0005	.0073
9	S96T003521	.0599	42.11	-.1146	.5491	.0008	.0038
10	S96T003521_D	.0598	45.79	-.0845	.5084	.0007	.0043
11	S96T003521_S	1.007	53.61	4.830	5.460	4.809	4.815
12	CCV	5.052	5.034	5.225	5.074	5.132	5.243
13	CCB	-.0007	.0132	-.0098	-.0000	-.0001	.0003
14	S96T003536_L	.0646	78.64	-.2247	.5131	.0009	.0085
15	S96T003536	.0649	72.32	-.1292	.4949	.0010	.0068
16	S96T003536_D	.0650	71.71	-.1156	.5222	.0013	.0069
17	S96T003550_L	.1318	94.76	-.3807	.6510	.0353	.0102
18	S96T003550	.1296	87.17	-.1639	.6481	.0328	.0078
19	S96T003550_D	.1117	84.91	-.1423	.5729	.0282	.0078
20	CCV_1	5.062	5.045	5.228	5.103	5.137	5.257
21	CCB_1	-.0003	.0094	-.0196	-.0024	-.0000	.0001
22	S96T003557_L	.1622	91.48	-.2676	.7526	.0360	.0106
23	S96T003557	.1502	85.88	-.1528	.7091	.0354	.0079
24	S96T003557_D	.1424	87.96	-.1781	.5435	.0337	.0081
25	ICSA	.0024	249.9	-.0723	-.0105	.0019	.0001
26	ICSAB	.9602	247.5	-.0633	-.0040	.4823	.4827
27	CCV_2	5.045	5.039	5.245	5.131	5.142	5.291
28	CCB_2	-.0009	.0086	-.0182	-.0029	-.0002	.0004

#	Sample Name	Bi	Ca	Cd	Ce	Co	Cr
1	ICV	5.088	4.982	4.998	5.214	5.060	5.064
2	ICB	-.0225	.0007	.0014	-.0049	.0021	-.0006
3	LLS	.1919	.2122	.0106	.2018	.0428	.0194
4	ICSA	-.0015	244.3	-.0003	.0107	.0020	.0085
5	ICSAB	-.0110	247.1	.9245	.0041	.4627	.4757
6	PREPSTDTJA	4.262	4.679	4.220	4.775	4.415	4.370
7	PREPBLKTJA	.0096	.1090	.0003	.0036	.0012	.0058
8	S96T003521_L	.0841	.1314	.0084	-.0455	.0304	.1801
9	S96T003521	-.0128	.1712	.0036	-.0022	.0020	.1590
10	S96T003521_D	.0332	.1773	.0060	.0085	.0044	.1822
11	S96T003521_S	4.871	5.003	4.687	5.153	4.833	4.941
12	CCV	5.125	5.069	5.073	5.311	5.136	5.145
13	CCB	-.0101	-.0045	.0007	.0007	.0015	.0003
14	S96T003536_L	.1401	.0792	.0086	-.0616	.0197	.3006
15	S96T003536	.0056	.1498	.0057	-.0167	.0005	.2687
16	S96T003536_D	-.0046	.1139	.0059	-.0173	.0032	.2719
17	S96T003550_L	-.2206	1.522	.0548	.0317	-.0005	2.573
18	S96T003550	.0044	1.409	.0420	.0107	.0069	2.373
19	S96T003550_D	.0409	1.317	.0394	.0141	.0131	2.095
20	CCV_1	5.167	5.074	5.072	5.304	5.145	5.149
21	CCB_1	-.0071	-.0028	.0001	-.0070	.0022	-.0000

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#	Sample Name	Bi	Ca	Cd	Ce	Co	Cr
22	S96T003557_L	.0658	1.918	.0525	.0757	.0113	2.654
23	S96T003557	.0730	1.471	.0480	.0138	.0149	2.506
24	S96T003557_D	.0111	1.440	.0472	.0186	.0094	2.398
25	ICSA	-.0318	251.1	.0007	.0200	.0019	.0092
26	ICSAB	-.0089	247.3	.9258	.0121	.4673	.4794
27	CCV_2	5.223	5.077	5.066	5.320	5.139	5.145
28	CCB_2	-.0206	-.0048	-.0006	-.0094	.0014	.0013

#	Sample Name	Cu	Eu	Fe	K	La	Li
1	ICV	5.266	-.0048	5.051	5.173	5.125	5.070
2	ICB	.0007	-.0017	-.0000	.1543	-.0001	-.0018
3	LLS	.0209	-.0007	.1027	.4575	.1017	.0197
4	ICSA	-.0116	-.0405	93.06	.3792	-.0046	.0014
5	ICSAB	.4778	-.0405	93.70	-.0591	-.0056	1.084
6	PREPSTDTJA	4.450	-.0064	4.462	4.646	4.627	4.683
7	PREPBLKTJA	.0051	-.0046	.2220	.2056	.0003	-.0055
8	S96T003521_L	.0169	-.0172	.1475	446.9	.0031	.0129
9	S96T003521	.0091	-.0055	.1385	412.2	-.0008	.0238
10	S96T003521_D	.0194	-.0037	.0971	376.6	.0004	.0287
11	S96T003521_S	4.786	-.0073	4.850	436.1	4.992	5.127
12	CCV	5.374	-.0051	5.130	5.047	5.212	5.200
13	CCB	-.0005	-.0013	.0002	.0402	.0001	-.0015
14	S96T003536_L	.0570	-.0208	.2115	333.1	.0061	-.0191
15	S96T003536	.0398	-.0065	.1883	310.4	-.0012	-.0061
16	S96T003536_D	.0232	-.0048	.7203	294.8	-.0008	-.0036
17	S96T003550_L	.0554	-.0213	2.697	150.7	.0355	.5539
18	S96T003550	.0561	-.0071	2.478	137.4	.0322	.5539
19	S96T003550_D	.0475	-.0064	3.976	153.7	.0266	.4183
20	CCV_1	5.380	-.0053	5.140	5.250	5.202	5.234
21	CCB_1	.0000	-.0019	-.0002	.0308	.0005	-.0020
22	S96T003557_L	.0691	-.0287	2.171	130.7	.0541	.1481
23	S96T003557	.0491	-.0092	2.042	122.7	.0356	.1655
24	S96T003557_D	.0526	-.0077	2.293	128.9	.0341	.1017
25	ICSA	-.0109	-.0444	95.71	.4068	-.0041	.0010
26	ICSAB	.4894	-.0372	94.52	.2599	-.0047	1.120
27	CCV_2	5.400	-.0052	5.130	5.293	5.212	5.253
28	CCB_2	.0005	-.0015	.0006	.0295	-.0005	-.0015

#	Sample Name	Mg	Mn	Mo	Na	Nd	Ni
1	ICV	4.897	4.917	5.028	5.021	5.173	4.927
2	ICB	-.0003	-.0005	-.0019	-.0141	-.0007	-.0012
3	LLS	.1926	.0190	.0941	.1981	.1975	.0406
4	ICSA	249.4	-.0071	-.0147	198.4	.0063	-.0084
5	ICSAB	250.1	.4390	-.0109	200.5	.0040	.9045
6	PREPSTDTJA	4.300	4.253	4.494	6.350	4.609	4.339
7	PREPBLKTJA	.0275	.0005	-.0016	.6807	.0034	.0005
8	S96T003521_L	.0938	.0009	.0473	936.9	.0349	.0350
9	S96T003521	.0131	.0055	.0791	868.0	-.0049	.0156
10	S96T003521_D	.0550	.0068	.0877	854.8	.0110	.0196
11	S96T003521_S	4.576	4.584	4.966	900.1	4.931	4.765

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#	Sample Name	Mg	Mn	Mo	Na	Nd	Ni
12	CCV	4.994	5.021	5.103	5.117	5.258	5.031
13	CCB	-.0066	-.0004	.0006	-.0109	-.0028	-.0109
14	S96T003536_L	.1159	.0046	.1315	1014.	.0458	.0072
15	S96T003536	-.0002	.0084	.1462	946.8	-.0062	.0156
16	S96T003536_D	.0272	.0118	.1479	955.3	.0044	.0371
17	S96T003550_L	.2818	1.699	.1425	962.4	.0245	.2877
18	S96T003550	.3052	1.559	.1641	895.4	.0159	.2743
19	S96T003550_D	.2798	1.338	.1631	880.8	.0285	.2193
20	CCV_1	5.023	5.028	5.111	5.117	5.258	5.049
21	CCB_1	.0016	-.0008	-.0024	-.0191	-.0008	-.0004
22	S96T003557_L	.4397	1.775	.1906	996.6	.0430	.2887
23	S96T003557	.3522	1.674	.1649	944.9	.0298	.2643
24	S96T003557_D	.3146	1.608	.1731	952.4	.0295	.2588
25	ICSA	257.3	-.0077	-.0155	205.1	.0080	-.0050
26	ICSAB	254.5	.4412	-.0093	205.1	.0083	.9019
27	CCV_2	5.009	5.002	5.101	5.148	5.281	5.060
28	CCB_2	.0054	-.0006	-.0017	-.0164	.0013	-.0052

#	Sample Name	P	Pb	S	Sb	Se	Si
1	ICV	5.123	4.937	4.969	4.791	4.852	4.679
2	ICB	-.0123	.0062	-.0086	.0011	-.0346	-.0077
3	LLS	.3828	.2041	.2040	.0954	.1789	.1265
4	ICSA	.0044	.0333	-.0300	-.0056	-.0732	-.0138
5	ICSAB	-.0068	.9656	-.0200	.0020	-.0845	-.0059
6	PREPSTDTJA	4.580	4.022	4.286	4.098	4.136	4.412
7	PREPBLKTJA	.0203	.0097	.3287	-.0037	-.0308	.5110
8	S96T003521_L	2.315	.1072	.9695	.0397	-.3439	.4940
9	S96T003521	2.144	.0648	.6770	.0097	-.0543	.5085
10	S96T003521_D	2.557	.1055	.7852	.0270	-.0188	.5827
11	S96T003521_S	7.832	4.674	5.462	4.516	4.536	3.645
12	CCV	5.087	5.017	5.031	4.884	4.933	4.766
13	CCB	-.0030	.0004	.0034	-.0007	-.0132	-.0059
14	S96T003536_L	2.662	.0883	1.244	.0632	-.2036	.6897
15	S96T003536	2.573	.1192	1.074	-.0001	-.0598	.6949
16	S96T003536_D	2.268	.1486	1.078	-.0083	-.0468	.7664
17	S96T003550_L	4.381	.1863	7.481	-.0276	-.3502	1.360
18	S96T003550	3.888	.1930	6.727	-.0161	-.0395	1.276
19	S96T003550_D	3.326	.2288	5.919	-.0223	-.0379	1.449
20	CCV_1	5.237	5.026	5.061	4.871	4.941	4.771
21	CCB_1	-.0048	-.0017	.0070	-.0063	-.0223	-.0107
22	S96T003557_L	3.100	.1835	8.238	.0025	-.4679	1.547
23	S96T003557	2.996	.2212	7.627	-.0027	-.0536	1.539
24	S96T003557_D	3.229	.2169	7.556	.0027	-.0268	1.540
25	ICSA	-.0022	.0259	-.0182	.0011	-.0725	-.0129
26	ICSAB	.0312	.9825	-.0357	-.0067	-.0840	-.0107
27	CCV_2	5.101	5.001	5.046	4.865	4.928	4.771
28	CCB_2	-.0022	-.0019	-.0044	-.0029	-.0360	-.0089

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#	Sample Name	Sm	Sr	Th	Ti	Tl	U
1	ICV	5.021	5.027	.0066	4.964	4.884	9.767
2	ICB	-.0244	-.0003	.0063	.0000	.0109	-.0765
3	LLS	.1898	.0201	.0067	.0200	.4098	.4595
4	ICSA	-.0062	.0018	.0053	.0015	-.0038	.0925
5	ICSAB	-.0103	.0018	.0079	.0015	-.0032	.0768
6	PREPSTDTJA	4.532	4.520	.0049	4.518	4.146	8.866
7	PREPBLKTJA	-.0714	-.0005	.0173	.0024	-.0278	-.2507
8	S96T003521_L	-.2572	-.0021	.1055	.0182	.0237	-1.038
9	S96T003521_	-.0882	-.0004	.0318	.0022	.0162	-.4212
10	S96T003521_D	-.0608	-.0001	.0242	.0037	.0084	-.3067
11	S96T003521_S	4.846	4.834	.0299	4.785	4.543	9.208
12	CCV	5.106	5.102	.0081	5.037	4.941	9.947
13	CCB	-.0189	-.0002	.0083	.0005	.0108	-.0638
14	S96T003536_L	-.3268	-.0032	.0790	.0080	-.2691	-1.101
15	S96T003536_	-.1038	-.0008	.0255	.0007	-.0077	-.4643
16	S96T003536_D	-.0717	-.0003	.0228	.0017	-.0072	-.3225
17	S96T003550_L	-.2840	.0201	.0997	.0119	.0075	6.357
18	S96T003550_	-.0838	.0214	.0315	.0093	-.0516	6.450
19	S96T003550_D	-.0776	.0190	.0292	.0103	-.0567	5.430
20	CCV_1	5.097	5.105	.0091	5.029	4.942	9.943
21	CCB_1	-.0308	-.0003	.0116	.0003	.0086	-.1043
22	S96T003557_L	-.4344	.0206	.1459	.0193	.0707	6.627
23	S96T003557_	-.1104	.0235	.0410	.0124	-.0196	7.423
24	S96T003557_D	-.0913	.0226	.0326	.0104	-.0244	7.302
25	ICSA	-.0144	.0019	.0041	.0022	.0073	.0818
26	ICSAB	-.0252	.0018	.0083	.0020	-.0031	.0593
27	CCV_2	5.094	5.128	.0169	5.054	4.939	9.955
28	CCB_2	-.0257	-.0002	.0069	.0008	.0005	-.0881

#	Sample Name	V	Y	Zn	Zr
1	ICV	5.053	.0054	5.055	4.997
2	ICB	-.0042	-.0009	.0002	-.0043
3	LLS	.1008	-.0001	.0210	.0184
4	ICSA	-.0018	.0064	-.0045	-.0053
5	ICSAB	.4636	.0062	.9372	-.0057
6	PREPSTDTJA	4.397	.0023	4.050	4.519
7	PREPBLKTJA	-.0121	-.0029	.0310	-.0071
8	S96T003521_L	-.0376	-.0105	.0740	-.0173
9	S96T003521_	-.0147	-.0033	.0748	.0083
10	S96T003521_D	-.0108	-.0022	.0777	.0137
11	S96T003521_S	4.739	.0025	4.664	4.877
12	CCV	5.131	.0052	5.130	5.073
13	CCB	-.0025	-.0006	.0006	-.0038
14	S96T003536_L	-.0562	-.0129	.1181	-.0117
15	S96T003536_	-.0185	-.0045	.1205	.0218
16	S96T003536_D	-.0125	-.0033	.1585	.0254
17	S96T003550_L	-.0405	-.0098	.2079	.4415
18	S96T003550_	-.0136	-.0016	.1970	.4404
19	S96T003550_D	-.0114	-.0014	.1951	.3772
20	CCV_1	5.141	.0052	5.145	5.068
21	CCB_1	-.0049	-.0011	-.0005	-.0050

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#	Sample Name	V	Y	Zn	Zr		
22	S96T003557_L	-.0653	-.0130	.1651	.4668		
23	S96T003557	-.0176	-.0025	.1631	.4937		
24	S96T003557_D	-.0129	-.0020	.1567	.4777		
25	ICSA	-.0035	.0061	-.0036	-.0062		
26	ICSAB	.4673	.0057	.9419	-.0075		
27	CCV_2	5.148	.0051	5.133	5.070		
28	CCB_2	-.0040	-.0011	-.0006	-.0044		

JK Lab
08-12-96

LABCORE Data Entry Template for Worklist# 11045

Analyst: JKSalo **Instrument:** ICP01 JK 8-13-96 **Book#** 58B480

Method: LA-505-~~151~~/161 Rev/Mod B-1

JK 8-13-96

Worklist Comment: ICP AW-101 (SOLID ACID DIGEST)

S	Type	Sample#	R	A	Test	Matrix	Group#	Project
1	ICV				@ICP-QC	QC		
2	ICB				@ICP-QC	QC		
3	LLS				@ICP-QC	QC		
4	ICSA				@ICP-QC	QC		
5	ICSAB				@ICP-QC	QC		
6	PREPSTDTJA				@ICP-A01	SOLID		
7	PREPBLKTJA				@ICP-A01	SOLID		
8	SERDIL	S96T003566	0	A	@ICP-A01	SOLID		
9	SAMPLE	S96T003566	0	A	@ICP-A01	SOLID	96000462	AW-101 PUSH
		Analytes Requested:			AG-A-01 , AL-A-01 , AS-A-01 , B-A-01 , BA-A-01 , BE-A-01 , BI-A-01 , CA-A-01 , CD-A-01 , CE-A-01 , CO-A-01 , CR-A-01 , CU-A-01 , FE-A-01 , K-A-01 , LA-A-01 , LI-A-01 , MG-A-01 , MN-A-01 , MO-A-01 , NA-A-01 , ND-A-01 , NI-A-01 , P-A-01 , PB-A-01 , S-A-01 , SB-A-01 , SE-A-01 , SI-A-01 , SM-A-01 , SR-A-01 , TI-A-01 , TL-A-01 , U-A-01 , V-A-01 , ZN-A-01 , ZR-A-01			
10	DUP	S96T003566	0	A	@ICP-A01	SOLID		
11	SPK-PREDIG	S96T003566	0	A	@ICP-A01	SOLID		
12	CCV				@ICP-QC	QC		
13	CCB				@ICP-QC	QC		
14	SERDIL	S96T003572	0	A	@ICP-A01	SOLID		
15	SAMPLE	S96T003572	0	A	@ICP-A01	SOLID	96000462	AW-101 PUSH
		Analytes Requested:			AG-A-01 , AL-A-01 , AS-A-01 , B-A-01 , BA-A-01 ,			

Data Entry Comments: This batch needs to be re-prep. Spike recovery for all elements in Prep std and predig spk. failed.

SP 8/19/96

S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

LABCORE Data Entry Template for Worklist# 11045

S	Type	Sample#	R	A	Test	Matrix	Group#	Project
					BE-A-01 , BI-A-01 , CA-A-01 , CD-A-01 , CE-A-01 , CO-A-01 , CR-A-01 , CU-A-01 , FE-A-01 , K-A-01 , LA-A-01 , LI-A-01 , MG-A-01 , MN-A-01 , MO-A-01 , NA-A-01 , ND-A-01 , NI-A-01 , P-A-01 , PB-A-01 , S-A-01 , SB-A-01 , SE-A-01 , SI-A-01 , SM-A-01 , SR-A-01 , TI-A-01 , TL-A-01 , U-A-01 , V-A-01 , ZN-A-01 , ZR-A-01			
16	DUP	S96T003572	0	A	@ICP-A01	SOLID		
17	SERDIL	S96T003580	0	A	@ICP-A01	SOLID		
18	SAMPLE	S96T003580	0	A	@ICP-A01	SOLID	96000462	AW-101 PUSH
		Analytes Requested:			AG-A-01 , AL-A-01 , AS-A-01 , B-A-01 , BA-A-01 , BE-A-01 , BI-A-01 , CA-A-01 , CD-A-01 , CE-A-01 , CO-A-01 , CR-A-01 , CU-A-01 , FE-A-01 , K-A-01 , LA-A-01 , LI-A-01 , MG-A-01 , MN-A-01 , MO-A-01 , NA-A-01 , ND-A-01 , NI-A-01 , P-A-01 , PB-A-01 , S-A-01 , SB-A-01 , SE-A-01 , SI-A-01 , SM-A-01 , SR-A-01 , TI-A-01 , TL-A-01 , U-A-01 , V-A-01 , ZN-A-01 , ZR-A-01			
19	DUP	S96T003580	0	A	@ICP-A01	SOLID		
20	SERDIL	S96T003586	0	A	@ICP-A01	SOLID		
21	SAMPLE	S96T003586	0	A	@ICP-A01	SOLID	96000462	AW-101 PUSH
		Analytes Requested:			AG-A-01 , AL-A-01 , AS-A-01 , B-A-01 , BA-A-01 , BE-A-01 , BI-A-01 , CA-A-01 , CD-A-01 , CE-A-01 , CO-A-01 , CR-A-01 , CU-A-01 , FE-A-01 , K-A-01 , LA-A-01 , LI-A-01 , MG-A-01 , MN-A-01 , MO-A-01 , NA-A-01 , ND-A-01 , NI-A-01 , P-A-01 , PB-A-01 , S-A-01 , SB-A-01 , SE-A-01 , SI-A-01 , SM-A-01 , SR-A-01 , TI-A-01 , TL-A-01 , U-A-01 , V-A-01 , ZN-A-01 , ZR-A-01			
22	DUP	S96T003586	0	A	@ICP-A01	SOLID		
23	ICSA				@ICP-QC	QC		
24	ICSAB				@ICP-QC	QC		
25	CCV				@ICP-QC	QC		
26	CCB				@ICP-QC	QC		

Data Entry Comments:

S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

LABCORE Data Entry Template for Worklist# 11045

S Type	Sample#	R	A	Test	Matrix	Group#	Project

Final page for worklist # 11045

08-13-96
Analyst Signature Date

Reviewed by:
Analyst Signature Date 8/19/96

Prepstd TJR, direct
Prepblk TJR, direct
596T003564_L, 4-4-2-8, DF 10
596T003566 4-4 2
596T003566_D 4-4 2
596T003566_S 4-4 2

596T003572_L, 4-4-2-8, DF 10
596T003572 4-4 2
596T003572_D 4-4 2

596T003580_L, 4-4-2-8, DF 10
596T003580 4-4 2
596T003580_D 4-4 2

596T003586_L, 4-4-2-8, DF 10
596T003586 4-4 2
596T003586_D 4-4

Data Entry Comments:

S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

Analysis Report Summary Tue 08-13-96 11:00:28 AM page 1

#	Sample Name	File	Method	Date	Time	OpID	Type	Mode
1	ICV	960813B	ICP2	08/13/96	09:38	DKS	Q	CONC
2	ICB	960813B	ICP2	08/13/96	09:41	DKS	Q	CONC
3	LLS	960813B	ICP2	08/13/96	09:44	DKS	Q	CONC
4	ICSA	960813B	ICP2	08/13/96	09:47	DKS	Q	CONC
5	ICSAB	960813B	ICP2	08/13/96	09:50	DKS	Q	CONC
6	PREPSTDTJA	960813B	ICP2	08/13/96	09:54	DKS	S	CONC
7	PREPBLKTJA	960813B	ICP2	08/13/96	09:57	DKS	S	CONC
8	S96T003566_L	960813B	ICP2	08/13/96	10:00	DKS	S	CONC
9	S96T003566	960813B	ICP2	08/13/96	10:03	DKS	S	CONC
10	S96T003566_D	960813B	ICP2	08/13/96	10:06	DKS	S	CONC
11	S96T003566_S	960813B	ICP2	08/13/96	10:09	DKS	S	CONC
12	CCV	960813B	ICP2	08/13/96	10:13	DKS	Q	CONC
13	CCB	960813B	ICP2	08/13/96	10:17	DKS	Q	CONC
14	S96T003572_L	960813B	ICP2	08/13/96	10:20	DKS	S	CONC
15	S96T003572	960813B	ICP2	08/13/96	10:23	DKS	S	CONC
16	S96T003572_D	960813B	ICP2	08/13/96	10:25	DKS	S	CONC
17	S96T003580_L	960813B	ICP2	08/13/96	10:28	DKS	S	CONC
18	S96T003580	960813B	ICP2	08/13/96	10:31	DKS	S	CONC
19	S96T003580_D	960813B	ICP2	08/13/96	10:34	DKS	S	CONC
20	S96T003586_L	960813B	ICP2	08/13/96	10:37	DKS	S	CONC
21	S96T003586	960813B	ICP2	08/13/96	10:40	DKS	S	CONC
22	S96T003586_D	960813B	ICP2	08/13/96	10:42	DKS	S	CONC
23	ICSA	960813B	ICP2	08/13/96	10:46	DKS	Q	CONC
24	ICSAB	960813B	ICP2	08/13/96	10:50	DKS	Q	CONC
25	CCV_1	960813B	ICP2	08/13/96	10:53	DKS	Q	CONC
26	CCB_1	960813B	ICP2	08/13/96	10:56	DKS	Q	CONC

DK [illegible]

08-13-96 S96T003566

GW-101 S96T003572

S96T003580

S96T003586

Worklist # 11045

SIGNATURE ABOVE REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 1935 TO 1939.

Analysis Report Averages Tue 08-13-96 11:00:28 AM page 2

#	Sample Name	Ag	Al	As	B	Ba	Be
1	ICV	4.905	4.810	5.117	4.937	4.849	5.086
2	ICB	.0014	.0023	.0101	-.0023	.0001	.0000
3	LLS	.0212	.1060	.1943	.0899	.0936	.0103
4	ICSA	.0023	234.4	-.0381	-.0076	.0017	.0002
5	ICSAB	.9244	233.3	-.0102	-.0095	.4472	.4579
6	PREPSTDTJA	1.145	13.91	14.08	5.929	14.04	5.280
7	PREPBLKTJA	.0006	.1125	-.0034	.6525	.0007	-.0002
8	S96T003566_L	.2061	90.38	-.1117	.5453	.0289	.0078
9	S96T003566_	.1864	87.83	-.1311	.5583	.0290	.0082
10	S96T003566_D	.1769	84.25	-.0985	.6247	.0288	.0079
11	S96T003566_S	.4045	94.03	9.668	.8550	9.487	.2552
12	CCV	4.885	4.769	5.104	4.858	4.803	5.035
13	CCB	.0017	.0039	.0034	-.0061	.0000	.0001
14	S96T003572_L	.1600	66.98	-.0122	.4325	.0217	.0066
15	S96T003572_	.1454	65.36	-.0827	.5044	.0225	.0062
16	S96T003572_D	.1637	70.71	-.0496	.7003	.0258	.0064
17	S96T003580_L	.1673	73.90	-.2373	.4848	.0327	.0052
18	S96T003580_	.1630	72.31	-.0363	.5259	.0329	.0068
19	S96T003580_D	.1853	81.34	-.0856	.5337	.0376	.0073
20	S96T003586_L	.2189	90.00	-.0784	.5696	.0367	.0080
21	S96T003586_	.2035	88.16	-.1037	.6163	.0369	.0083
22	S96T003586_D	.2173	98.15	-.1048	.6118	.0388	.0094
23	ICSA	.0024	240.3	-.0327	-.0086	.0017	.0002
24	ICSAB	.9329	237.8	-.0643	-.0084	.4567	.4682
25	CCV_1	4.907	4.850	5.114	4.996	4.862	5.127
26	CCB_1	.0013	-.0001	-.0024	-.0037	.0000	.0000

#	Sample Name	Bi	Ca	Cd	Ce	Co	Cr
1	ICV	5.048	5.046	5.009	5.035	5.039	5.058
2	ICB	.0001	.0039	.0007	.0129	.0004	.0013
3	LLS	.1863	.2159	.0100	.1972	.0428	.0216
4	ICSA	.0173	245.5	-.0002	.0168	.0005	.0085
5	ICSAB	.0073	245.5	.9092	.0180	.4540	.4709
6	PREPSTDTJA	4.593	4.743	4.812	4.758	7.067	5.558
7	PREPBLKTJA	.0217	.1945	-.0006	.0001	.0005	.0008
8	S96T003566_L	-.0714	1.636	.0630	.0477	-.0101	2.535
9	S96T003566_	.0192	1.604	.0465	.0298	.0099	2.440
10	S96T003566_D	.0942	1.689	.0466	.0034	.0085	2.433
11	S96T003566_S	.0802	1.645	.2928	.0064	2.442	3.410
12	CCV	5.055	5.062	4.981	4.966	5.016	5.042
13	CCB	.0129	.0024	.0013	.0072	-.0015	-.0001
14	S96T003572_L	.0585	1.258	.0433	.0765	.0093	1.938
15	S96T003572_	.0072	1.242	.0336	.0322	.0049	1.891
16	S96T003572_D	.0432	1.399	.0404	.0253	.0079	2.158
17	S96T003580_L	-.1493	2.701	.0665	.0263	.0053	2.784
18	S96T003580_	.0949	2.673	.0534	.0129	.0106	2.710
19	S96T003580_D	.0684	1.999	.0624	.0452	.0092	3.046
20	S96T003586_L	.2251	2.358	.0720	.0305	.0239	3.107
21	S96T003586_	.0907	2.319	.0580	.0116	.0100	3.008
22	S96T003586_D	.0884	2.378	.0631	.0280	.0068	3.454
23	ICSA	.0083	245.8	.0004	.0167	.0012	.0083

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#	Sample Name	Bi	Ca	Cd	Ce	Co	Cr
24	ICSAB	-.0104	244.6	.9098	.0129	.4568	.4691
25	CCV_1	5.020	5.002	4.952	5.035	4.995	5.028
26	CCB_1	-.0196	.0004	.0003	.0053	-.0005	.0002

#	Sample Name	Cu	Eu	Fe	K	La	Li
1	ICV	5.086	-.0005	5.013	5.128	4.932	4.864
2	ICB	.0011	.0010	-.0001	-.0233	.0008	.0012
3	LLS	.0216	.0015	.0989	.6059	.0971	.0205
4	ICSA	-.0094	-.0316	91.72	-.0754	-.0048	.0035
5	ICSAB	.4536	-.0312	91.28	.2280	-.0044	1.019
6	PREPSTDTJA	5.683	-.0009	9.348	4.463	4.620	4.518
7	PREPBLKTJA	.0049	.0008	.0365	-.0216	.0004	.0008
8	S96T003566_L	.1284	.0098	2.174	132.1	.0424	.0748
9	S96T003566	.0518	-.0006	2.108	128.3	.0364	.0628
10	S96T003566_D	.0456	-.0003	2.091	133.4	.0334	.0631
11	S96T003566_S	1.232	.0002	6.891	130.1	.0330	.0631
12	CCV	5.022	.0003	4.978	4.954	4.876	4.796
13	CCB	.0004	.0007	.0009	-.1120	.0005	.0010
14	S96T003572_L	.0434	.0055	1.831	98.89	.0302	.0486
15	S96T003572	.0361	-.0001	1.778	97.59	.0296	.0422
16	S96T003572_D	.0389	.0004	2.045	112.9	.0320	.0479
17	S96T003580_L	.0537	.0074	2.452	113.2	.0325	.0603
18	S96T003580	.0465	-.0007	2.388	114.7	.0368	.0515
19	S96T003580_D	.0530	-.0023	2.737	131.8	.0429	.0543
20	S96T003586_L	.0658	-.0068	3.213	137.0	.0497	.0925
21	S96T003586	.0571	-.0035	3.140	134.0	.0417	.0944
22	S96T003586_D	.0564	-.0025	3.028	144.2	.0483	.1013
23	ICSA	-.0094	-.0275	92.97	.1568	-.0046	.0029
24	ICSAB	.4672	-.0260	92.01	.0289	-.0044	1.062
25	CCV_1	5.152	-.0006	4.992	5.106	4.943	5.004
26	CCB_1	.0007	-.0002	.0011	-.0751	.0003	-.0001

#	Sample Name	Mg	Mn	Mo	Na	Nd	Ni
1	ICV	4.809	4.910	4.995	4.858	4.974	4.960
2	ICB	.0132	.0002	-.0016	.0128	.0036	-.0004
3	LLS	.1963	.0189	.0892	.2118	.1916	.0358
4	ICSA	241.1	-.0059	-.0139	189.8	.0044	-.0040
5	ICSAB	240.2	.4302	-.0179	189.0	.0076	.8770
6	PREPSTDTJA	4.342	6.844	4.754	6.337	4.562	6.989
7	PREPBLKTJA	.0340	.0010	-.0042	1.041	.0026	-.0050
8	S96T003566_L	.3520	1.933	.1373	972.2	.0266	.2066
9	S96T003566	.3564	1.863	.1738	947.0	.0294	.2303
10	S96T003566_D	.3299	1.858	.1596	935.9	.0211	.2303
11	S96T003566_S	.3307	4.196	.1627	920.9	.0198	2.649
12	CCV	4.747	4.879	4.974	4.792	4.906	4.968
13	CCB	.0022	.0002	-.0026	.0081	-.0005	.0009
14	S96T003572_L	.3489	1.455	.1038	736.0	.0387	.2148
15	S96T003572	.2623	1.410	.1258	717.9	.0238	.1936
16	S96T003572_D	.2943	1.624	.1380	784.3	.0228	.2255
17	S96T003580_L	.4294	2.468	.0995	830.8	.0321	.2963

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#	Sample Name	Mg	Mn	Mo	Na	Nd	Ni
18	S96T003580	.4128	2.411	.1424	812.7	.0323	.2719
19	S96T003580_D	.4724	2.711	.1625	923.7	.0358	.3133
20	S96T003586_L	.6661	2.656	.1631	1035.	.0535	.3211
21	S96T003586_	.5302	2.592	.1734	1018.	.0373	.3295
22	S96T003586_D	.5638	2.893	.1903	1087.	.0387	.3519
23	ICSA	247.3	-.0064	-.0145	195.8	.0034	-.0130
24	ICSAB	244.6	.4313	-.0150	194.8	.0036	.8962
25	CCV_1	4.838	4.870	4.975	4.923	4.998	4.940
26	CCB_1	-.0047	-.0004	-.0016	-.0013	.0011	-.0091

#	Sample Name	P	Pb	S	Sb	Se	Si
1	ICV	5.172	4.982	4.986	4.766	4.862	4.756
2	ICB	.0070	.0145	.0045	.0113	-.0034	.0062
3	LLS	.3871	.2101	.2095	.1104	.1871	.1350
4	ICSA	.0438	.0338	-.0222	.0110	-.0246	.0020
5	ICSAB	.0261	.9895	-.0300	.0127	-.0193	.0083
6	PREPSTDTJA	4.833	6.812	4.721	6.861	13.45	14.51
7	PREPBLKTJA	.0050	.0039	.0673	.0011	.0033	.7746
8	S96T003566_L	5.585	.3362	9.665	.0624	.0811	2.254
9	S96T003566_	5.456	.2772	9.343	.0100	.0334	2.021
10	S96T003566_D	8.142	.2506	9.635	.0151	.0325	1.942
11	S96T003566_S	6.794	2.700	9.434	2.478	9.347	4.900
12	CCV_	5.024	4.996	4.923	4.743	4.810	4.737
13	CCB	.0034	.0034	.0002	.0100	.0042	.0062
14	S96T003572_L	2.913	.1731	6.717	.0997	-.0610	1.698
15	S96T003572_	2.898	.1906	6.616	.0193	.0435	1.573
16	S96T003572_D	3.076	.2131	7.486	.0417	.0580	1.994
17	S96T003580_L	9.799	.3084	8.969	.0727	.0466	2.572
18	S96T003580_	9.426	.2473	8.687	.0072	.0352	2.356
19	S96T003580_D	12.99	.2553	9.603	-.0005	.0285	2.160
20	S96T003586_L	13.20	.4120	10.88	.0758	.1193	2.589
21	S96T003586_	12.91	.2691	10.65	.0117	.0075	2.434
22	S96T003586_D	9.491	.3394	11.15	.0256	.0259	2.348
23	ICSA	.0065	.0333	-.0240	.0131	-.0367	-.0039
24	ICSAB	.0204	.9618	-.0244	.0083	-.0279	-.0012
25	CCV_1	5.137	4.926	4.990	4.773	4.864	4.753
26	CCB_1	.0177	.0031	.0086	.0071	.0022	-.0037

#	Sample Name	Sm	Sr	Th	Ti	Tl	U
1	ICV	4.803	4.844	.0381	4.801	4.855	9.451
2	ICB	.0110	.0001	.0033	.0007	-.0155	.0387
3	LLS	.2069	.0193	.0004	.0200	.4137	.5345
4	ICSA	.0159	.0016	.0113	.0015	-.0090	.0460
5	ICSAB	.0204	.0017	.0129	.0017	-.0214	.0773
6	PREPSTDTJA	4.495	4.508	.0397	4.595	13.77	8.854
7	PREPBLKTJA	.0072	.0007	-.0009	.0012	.0044	.0206
8	S96T003566_L	.1130	.0259	.0647	.0033	.0643	8.490
9	S96T003566_	.0044	.0247	.0363	.0110	.0111	8.010
10	S96T003566_D	.0152	.0250	.0411	.0096	-.0159	7.983
11	S96T003566_S	.0362	.0248	.0376	.0116	9.785	7.871

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#	Sample Name	Sm	Sr	Th	Ti	Tl	U
12	CCV	4.740	4.793	.0402	4.762	4.778	9.331
13	CCB	.0111	.0001	.0025	.0000	.0228	.0401
14	S96T003572_L	.0850	.0199	.0417	.0114	.0528	6.464
15	S96T003572	.0217	.0188	.0416	.0082	.0196	6.021
16	S96T003572_D	.0265	.0218	.0429	.0096	.0049	6.912
17	S96T003580_L	.1162	.0303	.0579	.0072	.0725	10.12
18	S96T003580	.0173	.0289	.0544	.0122	-.0114	9.566
19	S96T003580_D	-.0007	.0316	.0731	.0130	-.0239	10.74
20	S96T003586_L	-.0402	.0333	.1041	.0210	.2539	11.35
21	S96T003586	-.0211	.0342	.0652	.0142	.0055	11.23
22	S96T003586_D	.0013	.0360	.0769	.0158	-.0029	11.91
23	ICSA	.0015	.0017	.0205	.0010	-.0106	.0264
24	ICSAB	.0061	.0016	.0128	.0015	-.0056	.0302
25	CCV_1	4.813	4.877	.0428	4.817	4.822	9.481
26	CCB_1	-.0035	-.0001	.0059	-.0002	-.0071	-.0142

#	Sample Name	V	Y	Zn	Zr
1	ICV	4.995	.0071	5.106	4.866
2	ICB	.0025	.0006	.0002	.0007
3	LLS	.1025	.0011	.0204	.0210
4	ICSA	.0025	.0073	-.0020	-.0021
5	ICSAB	.4566	.0078	.9335	-.0017
6	PREPSTDTJA	6.886	.0056	6.849	4.663
7	PREPBLKTJA	.0023	.0003	.0196	.0035
8	S96T003566_L	.0290	.0081	.1287	.5322
9	S96T003566	.0064	.0027	.1016	.5176
10	S96T003566_D	.0072	.0026	.1010	.5118
11	S96T003566_S	2.417	.0036	2.535	.5269
12	CCV	4.962	.0074	5.099	4.821
13	CCB	.0026	.0006	.0005	.0004
14	S96T003572_L	.0183	.0059	.0771	.4012
15	S96T003572	.0058	.0026	.0799	.3942
16	S96T003572_D	.0073	.0030	.0903	.4526
17	S96T003580_L	.0296	.0082	.0947	.6486
18	S96T003580	.0089	.0031	.1006	.6336
19	S96T003580_D	.0056	.0026	.0991	.6842
20	S96T003586_L	.0035	.0014	.1558	.7200
21	S96T003586	.0035	.0018	.1498	.7119
22	S96T003586_D	.0051	.0031	.1174	.7615
23	ICSA	-.0001	.0070	-.0020	-.0046
24	ICSAB	.4563	.0070	.9336	-.0037
25	CCV_1	4.995	.0065	5.083	4.856
26	CCB_1	-.0011	-.0001	-.0001	-.0011

DK Lad
08-13-96

LABCORE Completed Worklist Report for Worklist# 11264

Analyst: krq **Instrument:** IC01 **Book#** 149/19

Method: LA-533-105 Rev/Mod D-1

Worklist Comment: AW-101 IC. RCJ

Seq	Type	Sample#	R	A	Test	Matrix	Actual	Found	DL or Yield	Unit
1	CCB			0	@IC-QC	F	QC	1	<1.30e-2		ug/mL
1	CCB			0	@IC-QC	CL	QC	1	<1.70e-2		ug/mL
1	CCB			0	@IC-QC	NO2	QC	1	<1.07e-1		ug/mL
1	CCB			0	@IC-QC	BR	QC	1	<1.26e-1		ug/mL
1	CCB			0	@IC-QC	NO3	QC	1	<1.40e-1		ug/mL
1	CCB			0	@IC-QC	PO4	QC	1	<1.19e-1		ug/mL
1	CCB			0	@IC-QC	SO4	QC	1	<1.36e-1		ug/mL
1	CCB			0	@IC-QC	OXALATE2	QC	1	<1.05e-1		ug/mL
2	CCV			0	@IC-QC	F	QC	5.90e01	5.60e+01	94.915	% Recovery
2	CCV			0	@IC-QC	CL	QC	7.90e01	7.67e+01	97.089	% Recovery
2	CCV			0	@IC-QC	NO2	QC	5.42e02	5.29e+02	97.601	% Recovery
2	CCV			0	@IC-QC	BR	QC	5.89e02	5.61e+02	95.246	% Recovery
2	CCV			0	@IC-QC	NO3	QC	5.94e02	5.62e+02	94.613	% Recovery
2	CCV			0	@IC-QC	PO4	QC	5.45e02	5.26e+02	96.514	% Recovery
2	CCV			0	@IC-QC	SO4	QC	6.31e02	6.01e+02	95.246	% Recovery
2	CCV			0	@IC-QC	OXALATE2	QC	5.25e02	5.17e+02	98.476	% Recovery
3	SAMPLE	S96T003236		0	@IC-01	BR-02	LIQUID	N/A <	2.672e+02	267.200	ug/mL
4	DUP	S96T003236		0	@IC-01	BR-02	LIQUID	<2.67e2	<2.67e2		RPD
5	SPK	S96T003236		0	@IC-01	BR-02	LIQUID	5.89e02	3.20e+02	54.329	% Recovery
6	SAMPLE	S96T003545		0	@IC-01	BR-02	LIQUID	N/A <	2.672e+02	267.200	ug/mL
7	DUP	S96T003545		0	@IC-01	BR-02	LIQUID	<2.67e2	<2.67e2		RPD

Final page for worklist# 11264

Analyst Signature **Date** **Analyst Signature** **Date**

Noel Smith 9/30/96

Reviewer Signature **Date**

Validated

Units shown for QC (BLK/BKG) may not reflect the actual units.

07/29/96 10:31
A-0004-1

LABCORE Data Entry Template for Worklist# 11264

Analyst: [illegible] **Instrument:** IC00 IC01 **Book#** 149Na-C

Method: LA-533-105 **Rev/Mod** D-1

Worklist Comment: AW-101 IC. RCJ

S	Type	Sample#	R	A	Test	Matrix	Group#	Project
1	CCB				@IC-QC	QC		
2	CCV				@IC-QC	QC		
3	SAMPLE	S96T003236	0		@IC-01	LIQUID	96000462	AW-101 PUSH
		Analytes Requested: BR-02						
4	DUP	S96T003236	0		@IC-01	LIQUID		
5	SPK	S96T003236	0		@IC-01	LIQUID		
6	SAMPLE	S96T003545	0		@IC-01	LIQUID	96000462	AW-101 PUSH
		Analytes Requested: BR-02						
7	DUP	S96T003545	0		@IC-01	LIQUID		

Final page for worklist # 11264

Analyst Signature **Date** 8/24/96 **Analyst Signature** **Date**

Shell

Data Entry Comments: 96D72451. D04 → D11

S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

WL 112604

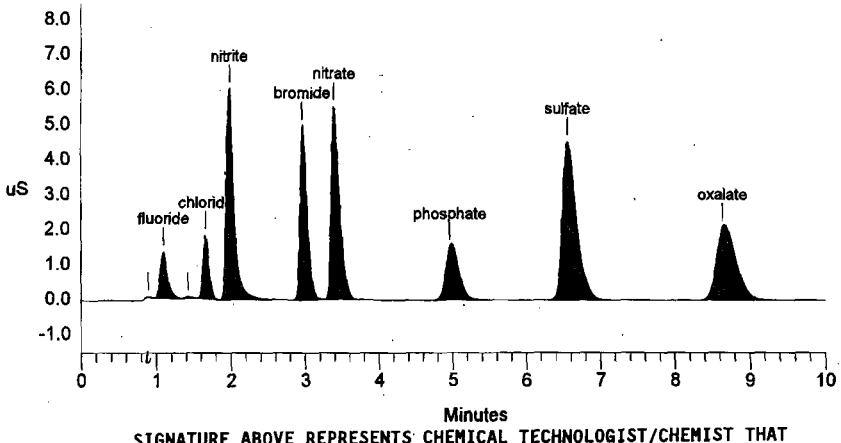
Sample Name: CCV 149N9-C Date: 08/24/1996 07:41:18
Data File : C:\DX\DATA\96082451.D04
Method : C:\DX\METHOD\KIT.MET
ACI Address: 1 System: 1 Inject#: 4 Detector: CDM-1
Analyst : Column: AG4A/AS4A anion column

Calibration	Volume	Dilution	Points	Rate	Start	Stop	Area	Reject
External	1	101	3000	5Hz	0.00	10.00		50

********** Peak Report: All Peaks **********

Pk. Num	Ret Time	Component Name	Concentration ug/ml	Height	Area	Bl. Code	%Delta
1	0.89		0.000	34	154	2	
2	1.10	fluoride	56.021	1327	9199	3	-0.90
3	1.43		0.000	42	292	4	
4	1.66	chloride	76.651	1813	10129	1	-0.60
5	1.98	nitrite	529.098	6010	43594	1	-2.46
6	2.97	bromide	560.877	4970	33448	1	-3.37
7	3.39	nitrate	561.622	5514	43653	1	-3.32
8	4.96	phosphate	525.774	1530	20537	1	-2.17
9	6.56	sulfate	601.027	4545	60846	1	-2.38
10	8.64	oxalate	516.766	2080	39091	1	-3.03
		Totals	3427.837	27865	260943		

File: 96082451.D04 Sample: CCV 149N9-C



SIGNATURE ABOVE REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 1942 TO 1948.

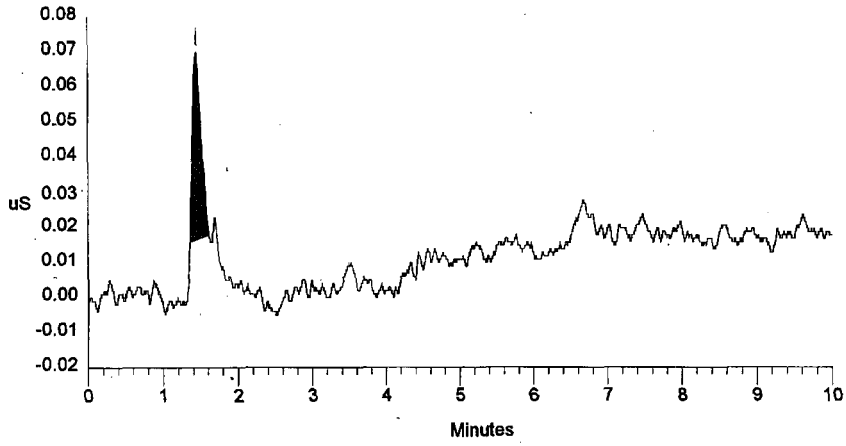
Sample Name: CCB Date: 08/24/1996 07:13:11
Data File : C:\DX\DATA\96082451.D03
Method : C:\DX\METHOD\KIT.MET
ACI Address: 1 System 1 Inject#: 3 Detector: CDM-1
Analyst Column: AG4A/AS4A anion column

Calibration	Volume	Dilution	Points	Rate	Start	Stop	Area	Reject
External	1	1	3000	5Hz	0.00	10.00		50

********** Peak Report: All Peaks **********

Pk. Num	Ret Time	Component Name	Concentration ug/ml	Height	Area	Bl. Code	%Delta
1	1.44		0.000	53	431	1	
		Totals	0.000	53	431		

File: 96082451.D03 Sample: CCB



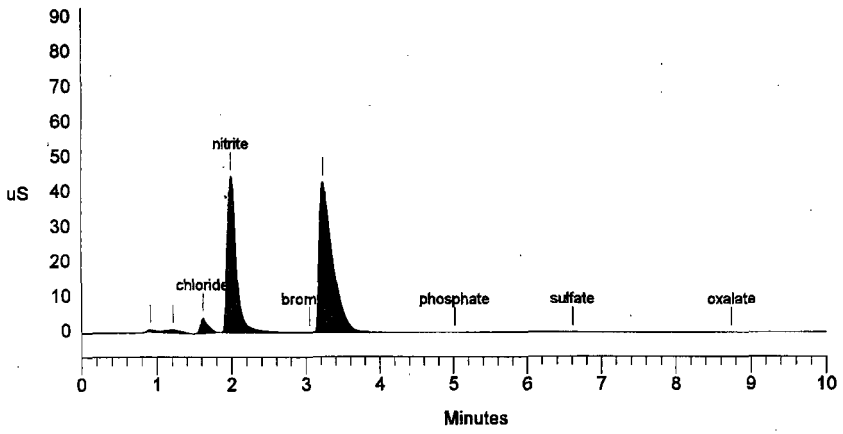
Sample Name: S96T003236 Date: 08/24/1996 16:49:13
Data File : C:\DX\DATA\96082451.D07
Method : C:\DX\METHOD\KIT.MET
ACI Address: 1 System: 1 Inject#: 7 Detector:CDM-1
Analyst: Column: AG4A/AS4A anion column

Calibration	Volume	Dilution	Points	Rate	Start	Stop	Area	Reject
External	1	2121	3000	5Hz	0.00	10.00		50

********** Peak Report: All Peaks **********

Pk. Num	Ret Time	Component Name	Concentration ug/ml	Height	Area	Bl. Code	%Delta
1	0.91		0.000	683	5075	2	
2	1.21		0.000	949	14577	2	
3	1.61	chloride	4785.534	4403	30827	1	-3.39
4	1.99	nitrite	82854.279	44610	371958	1	-1.81
5	3.05	bromide	145.577	31	131	1	-0.76
6	3.23		0.000	43090	544119	1	
7	5.01	phosphate	202.524	31	389	1	-1.12
8	6.61	sulfate	487.936	100	1930	1	-1.59
9	8.75	oxalate	125.450	23	381	1	-1.83
		Totals	88601.301	93919	969389		

File: 96082451.D07 Sample: S96T003236



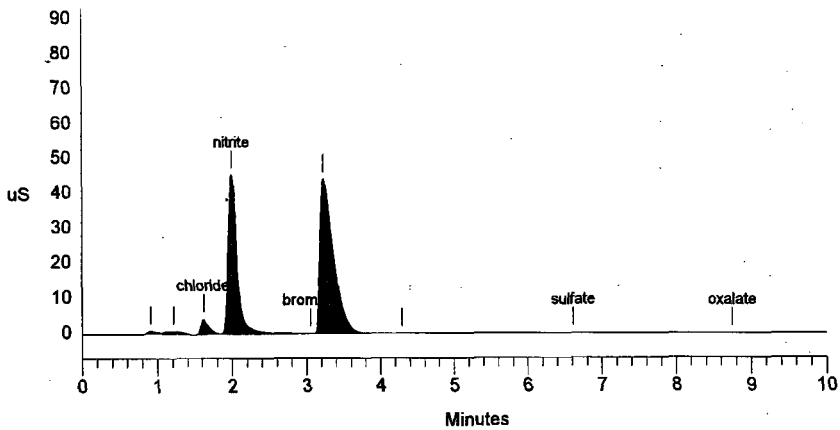
Sample Name: S96T003236 DUP Date: 08/24/1996 17:01:01
Data File : C:\DX\DATA\96082451.D08
Method : C:\DX\METHOD\KIT.MET
ACI Address: 1 System: 1 Inject#: 8 Detector:CDM-1
Analyst Column: AG4A/AS4A anion column

Calibration	Volume	Dilution	Points	Rate	Start	Stop	Area	Reject
External	1	2121	3000	5Hz	0.00	10.00		50

********** Peak Report: All Peaks **********

Pk. Num	Ret Time	Component Name	Concentration ug/ml	Height	Area	Bl. Code	%Delta
1	0.91		0.000	651	4873	2	
2	1.21		0.000	953	14520	2	
3	1.61	chloride	4876.809	4391	31440	1	-3.39
4	2.00	nitrite	84878.270	45327	382591	1	-1.48
5	3.05	bromide	150.558	33	145	1	-0.54
6	3.23		0.000	44170	552516	1	
7	4.29		0.000	26	244	1	
8	6.61	sulfate	466.155	99	1826	1	-1.59
9	8.75	oxalate	140.086	27	434	1	-1.83
		Totals	90511.878	95678	988590		

File: 96082451.D08 Sample: S96T003236 DUP



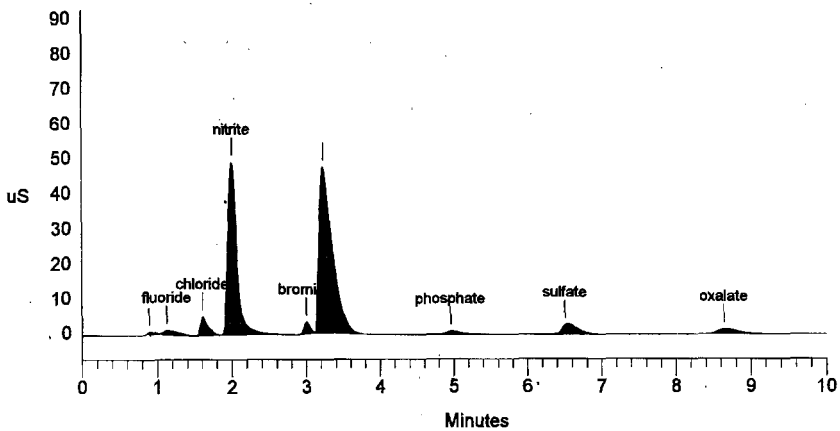
Sample Name: S96T003236 SPIKE Date: 08/24/1996 17:12:17
Data File : C:\DX\DATA\96082451.D09
Method : C:\DX\METHOD\KIT.MET
ACI Address: 1 System: 1 Inject#: 9 Detector:CDM-1
Analyst Column: AG4A/AS4A anion column

Calibration	Volume	Dilution	Points	Rate	Start	Stop	Area	Reject
External	1	2121	3000	5Hz	0.00	10.00		50

********** Peak Report: All Peaks **********

Pk. Num	Ret Time	Component Name	Concentration ug/ml	Height	Area	Bl. Code	%Delta
1	0.89		0.000	522	3855	2	
2	1.13	fluoride	2222.848	1281	18064	2	1.50
3	1.61	chloride	5968.435	5516	38846	1	-3.79
4	2.00	nitrite	92466.739	49308	423371	1	-1.48
5	3.00	bromide	6463.026	3332	18068	1	-2.28
6	3.23		0.000	47409	592521	1	
7	4.96	phosphate	6443.767	921	11906	1	-2.17
8	6.51	sulfate	9132.864	2724	43689	1	-3.17
9	8.64	oxalate	7727.631	1420	27736	1	-3.03
		Totals	130425.309	112432	1178056		

File: 96082451.D09 Sample: S96T003236 SPIKE



WHC-SD-WM-DP-192, REV. 0

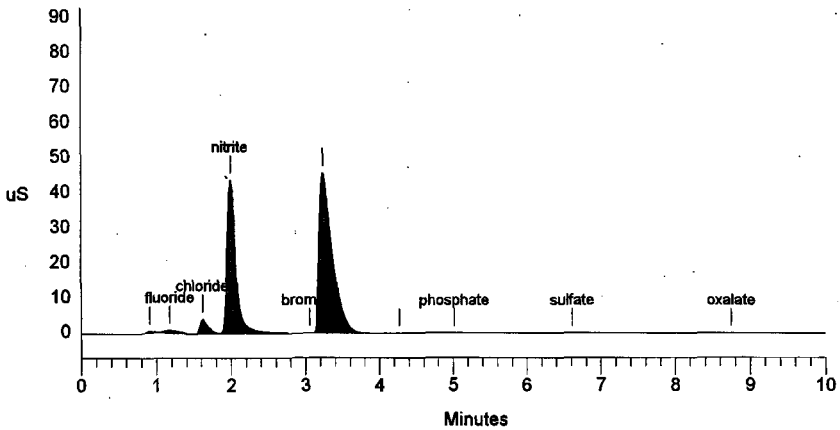
Sample Name: S96T003545 Date: 08/24/1996 17:23:05
Data File : C:\DX\DATA\96082451.D10
Method : C:\DX\METHOD\KIT.MET
ACI Address: 1 System: 1 Inject#: 10 Detector:CDM-1
Analyst Column: AG4A/AS4A anion column

Calibration	Volume	Dilution	Points	Rate	Start	Stop	Area Reject
External	1	2121	3000	5Hz	0.00	10.00	50

********** Peak Report: All Peaks **********

Pk. Num	Ret Time	Component Name	Concentration ug/ml	Height	Area	Bl. Code	%Delta
1	0.91		0.000	560	4043	2	
2	1.17	fluoride	1819.038	934	14612	2	5.71
3	1.61	chloride	4874.396	4394	31423	1	-3.39
4	1.99	nitrite	83137.085	43751	373438	1	-1.81
5	3.05	bromide	258.019	93	447	1	-0.54
6	3.24		0.000	45828	566860	1	
7	4.27		0.000	22	234	1	
8	5.01	phosphate	225.504	28	431	1	-1.12
9	6.61	sulfate	490.033	106	1940	1	-1.59
10	8.75	oxalate	158.247	29	499	1	-1.83
		Totals	90962.322	95745	993928		

File: 96082451.D10 Sample: S96T003545



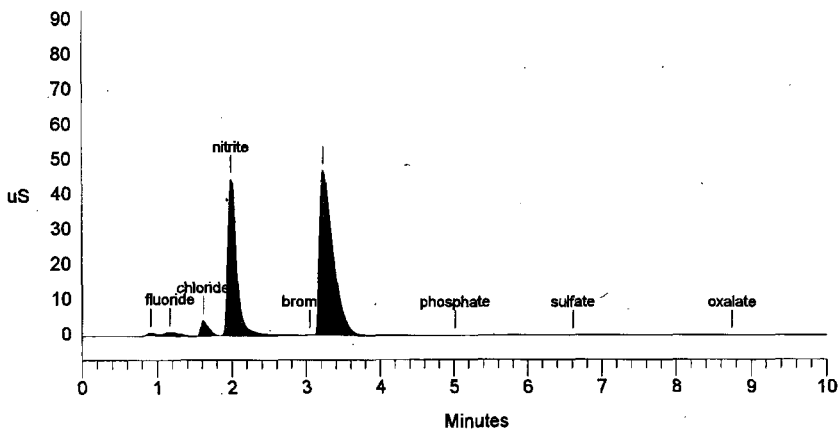
Sample Name: S96T003545 DUP Date: 08/24/1996 17:34:06
Data File : C:\DX\DATA\96082451.D11
Method : C:\DX\METHOD\KIT.MET
ACI Address: 1 System: 1 Inject#: 11 Detector:CDM-1
Analyst : Column: AG4A/AS4A anion column

Calibration	Volume	Dilution	Points	Rate	Start	Stop	Area	Reject
External	1	2121	3000	5Hz	0.00	10.00		50

********** Peak Report: All Peaks **********

Pk. Num	Ret Time	Component Name	Concentration ug/ml	Height	Area	Bl. Code	%Delta
1	0.91		0.000	574	4271	2	
2	1.17	fluoride	1808.474	930	14522	2	5.11
3	1.61	chloride	4904.574	4403	31626	1	-3.39
4	1.99	nitrite	83508.988	44509	375387	1	-1.81
5	3.05	bromide	256.774	94	444	1	-0.76
6	3.23		0.000	47023	583976	1	
7	5.01	phosphate	158.804	26	309	1	-1.12
8	6.61	sulfate	450.013	98	1749	1	-1.59
9	8.75	oxalate	323.066	45	1088	1	-1.83
		Totals	91410.694	97702	1013372		

File: 96082451.D11 Sample: S96T003545 DUP



worklistdata Version 1.0 05/15/96
08/21/96 14:51

LABCORE Completed Worklist Report for Worklist# 11723

Analyst: krq **Instrument:** IC01 **Book#** 14A19B

Method: LA-533-705 Rev/Mod D-1

Worklist Comment: AW-101 IC Reruns for Br. Try a 41 DF.

Seq	Type	Sample#	R	A	Test	Matrix	Actual	Found	DL or Yield	Unit
1	CCB			0	@IC-QC	F	QC	1	<1.30e-2		ug/mL
1	CCB			0	@IC-QC	CL	QC	1	<1.70e-2		ug/mL
1	CCB			0	@IC-QC	NO2	QC	1	<1.07e-1		ug/mL
1	CCB			0	@IC-QC	BR	QC	1	<1.26e-1		ug/mL
1	CCB			0	@IC-QC	NO3	QC	1	<1.40e-1		ug/mL
1	CCB			0	@IC-QC	PO4	QC	1	<1.19e-1		ug/mL
1	CCB			0	@IC-QC	SO4	QC	1	<1.36e-1		ug/mL
1	CCB			0	@IC-QC	OXALATE2	QC	1	<1.05e-1		ug/mL
2	CCV			0	@IC-QC	F	QC	5.90e01	5.96e+01	101.017	% Recovery
2	CCV			0	@IC-QC	CL	QC	7.90e01	7.78e+01	98.481	% Recovery
2	CCV			0	@IC-QC	NO2	QC	5.44e02	5.38e+02	98.897	% Recovery
2	CCV			0	@IC-QC	BR	QC	5.89e02	5.95e+02	101.019	% Recovery
2	CCV			0	@IC-QC	NO3	QC	5.94e02	5.86e+02	98.653	% Recovery
2	CCV			0	@IC-QC	PO4	QC	5.45e02	5.28e+02	96.881	% Recovery
2	CCV			0	@IC-QC	SO4	QC	6.31e02	6.26e+02	99.208	% Recovery
2	CCV			0	@IC-QC	OXALATE2	QC	5.29e02	5.36e+02	101.323	% Recovery
3	BLNK-PREP			0	@IC-01	F-02	SOLID	1	<1.30e-2		ug/g
3	BLNK-PREP			0	@IC-01	CL-02	SOLID	1	<1.70e-2		ug/g
3	BLNK-PREP			0	@IC-01	NO2-02	SOLID	1	<1.07e-1		ug/g
3	BLNK-PREP			0	@IC-01	BR-02	SOLID	1	<1.26e-1		ug/g
3	BLNK-PREP			0	@IC-01	NO3-02	SOLID	1	<1.40e-1		ug/g
3	BLNK-PREP			0	@IC-01	PO4-02	SOLID	1	<1.19e-1		ug/g
3	BLNK-PREP			0	@IC-01	SO4-02	SOLID	1	<1.36e-1		ug/g
3	BLNK-PREP			0	@IC-01	OXALATE2	SOLID	1	<1.05e-1		ug/g
4	SAMPLE	S96T002539	0	W	@IC-01	BR-02	SOLID	N/A <	5.655e+02	565.500	ug/g
5	DUP	S96T002539	0	W	@IC-01	BR-02	SOLID	<5.66e2	<5.62e2		RPD
6	SPK	S96T002539	0	W	@IC-01	BR-02	SOLID	5.89e02	5.30e+02	89.983	% Recovery
7	SAMPLE	S96T002572	0	W	@IC-01	BR-02	SOLID	N/A <	5.881e+02	588.200	ug/g
8	DUP	S96T002572	0	W	@IC-01	BR-02	SOLID	<5.88e2	<6.08e2		RPD

Final page for worklist# 11723

Analyst Signature **Date** **Analyst Signature** **Date**

Lynn M. Fuge 8/21/96
Reviewer Signature **Date**

Units shown for QC (BLK/BKG) may not reflect the actual units.

LABCORE Data Entry Template for Worklist# 11723

Analyst: KBQ **Instrument:** IC00 IC01 **Book#** 149N9-13

Method: LA-533-105 Rev/Mod 01

Worklist Comment: AW-101 IC Reruns for Br. Try a 41 DF.

S	Type	Sample#	R	A	Test	Matrix	Group#	Project
1	CCB				@IC-QC	QC		
2	CCV				@IC-QC	QC		
3	BLNK-PREP				@IC-01	SOLID		
4	SAMPLE	S96T002539	0	W	@IC-01	SOLID	96000462	AW-101 PUSH
		Analytes Requested: BR-02						
5	DUP	S96T002539	0	W	@IC-01	SOLID		
6	SPK	S96T002539	0	W	@IC-01	SOLID		
7	SAMPLE	S96T002572	0	W	@IC-01	SOLID	96000462	AW-101 PUSH
		Analytes Requested: BR-02						
8	DUP	S96T002572	0	W	@IC-01	SOLID		

Final page for worklist # 11723

Analyst Signature Date 8/20/96

Analyst Signature Date

11723ag. csv
In shell 8/20
Uploaded 8/21/96 MLye
Validated 8/21/96

Data Entry Comments: 96081976.D18, ~~D19~~ LAD 10/30/96, D01, D02, D04 -> D06
96080561.D04
96082071.D19

S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

A-0010-IC DATA FILE/WORKLIST RESOLUTION 21-Aug-96

Worklist#: 11723

	Seq	Type	Sample #
=>	1	CCB	
=>	2	CCV	
=>	3	BLNK-PREP	
=>	4	SAMPLE	S96T002539
=>	5	DUP	S96T002539
=>	6	SPK	S96T002539
=>	7	SAMPLE	S96T002572
=>	8	DUP	S96T002572

Data File: 11723AG.CSV

Seq#	Data File	Sample Name	Dilution
3	96080561.d04	BLANK PREP	1.00
4	96081971.d01	S96T002539	21.00
5	96081971.d02	S96T002539 DUP	21.00
7	96081971.d04	S96T002572	21.00
8	96081971.d05	S96T002572 DUP	21.00
6	96081971.d06	S96T002539 SPIKE	21.00
1	96081971.d18	CCB	1.00
2	96082071.d19	CCV 149N9-B	101.00

Save(F4) Abort(Shift-F3) ListFiles(Shift-F1) UploadFile(F8)

Data Reprocessed On 08/21/1996 14:39:27

Sample Name: CCB	Date: 08/20/1996 02:25:14
Data File : D:\DATA\96081971.d18	
Method : C:\DX\METHOD\KIT.MET	
ACI Address: 1 System: 1 Inject#: 18	Detector:CDM-1
Analyst	Column: AG4A/AS4A anion column

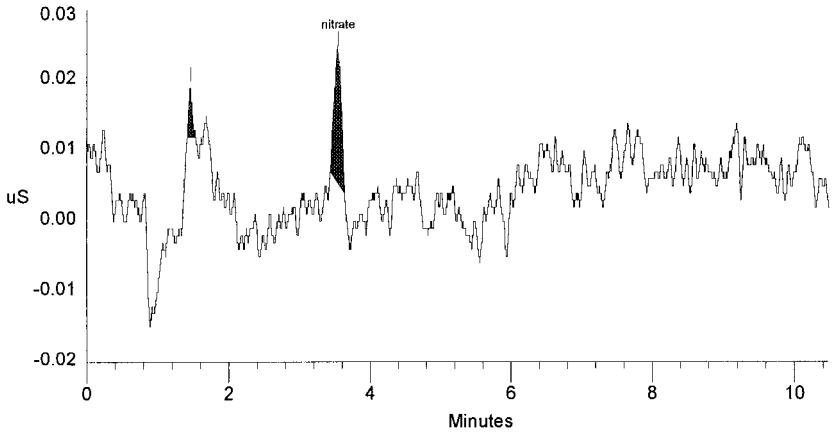
for KRQ 8/21/96

Calibration	Volume	Dilution	Points	Rate	Start	Stop	Area Reject
External	1	1	3150	5Hz	0.00	10.50	50

********** Peak Report: All Peaks **********

Pk. Num	Ret Time	Component Name	Concentration ug/ml	Height	Area	Bl. Code	%Delta
2	3.55	nitrate	0.131	19	133	1	1.04
		Totals	0.131	19	133		

File: 96081971.d18 Sample: CCB



SIGNATURE ABOVE REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 1952 TO 1959.

Data Reprocessed On 08/21/1996 14:39:23

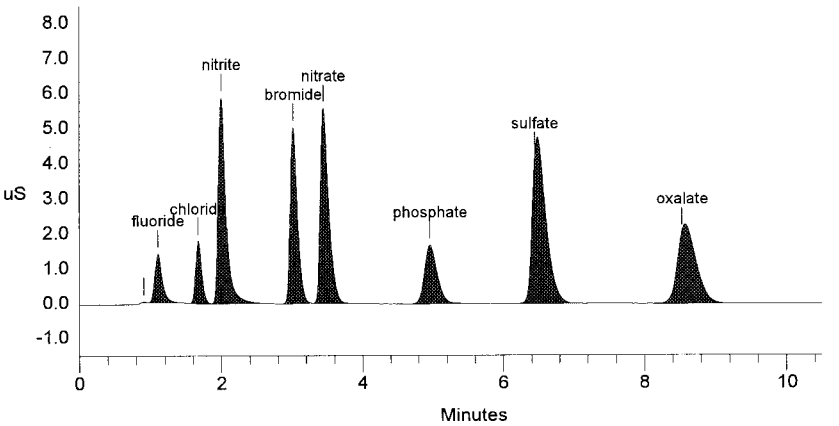
Sample Name: CCV 149N9-B		Date: 08/20/1996 03:01:47
Data File : D:\DATA\96082071.d19		
Method : C:\DX\METHOD\KIT.MET		
ACI Address: 1 System: 1 Inject#: 19		Detector:CDM-1
Analyst :	Column: AG4A/AS4A anion column	

Calibration	Volume	Dilution	Points	Rate	Start	Stop	Area	Reject
External	1	101	3150	5Hz	0.00	10.50		50

********** Peak Report: All Peaks **********

Pk. Num	Ret Time	Component Name	Concentration ug/ml	Height	Area	Bl. Code	%Delta
1	0.91		0.000	22	96	2	
2	1.11	fluoride	59.608	1382	9829	2	-0.30
3	1.67	chloride	77.774	1752	10279	1	0.20
4	2.00	nitrite	538.379	5869	44387	1	-1.48
5	3.02	bromide	594.862	5020	35534	1	-1.63
6	3.45	nitrate	585.814	5552	45603	1	-1.80
7	4.96	phosphate	527.576	1672	20609	1	-2.17
8	6.45	sulfate	625.747	4206	63415	1	-3.97
9	8.53	oxalate	536.470	2057	40600	1	-4.23
		Totals	3546.232	27533	270350		

File: 96082071.d19 Sample: CCV 149N9-B



Data Reprocessed On 08/20/1996 09:00:40

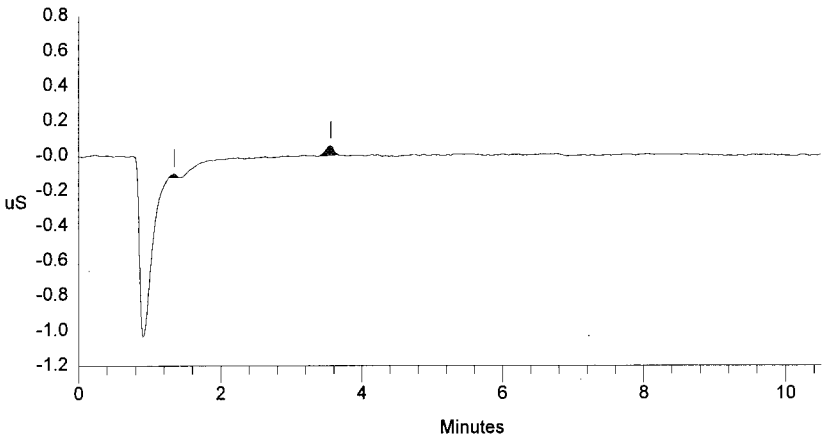
Sample Name: BLANK PREP Date: 08/20/1996 03:32:24
Data File : C:\DX\DATA\96080561.d04
Method : C:\DX\METHOD\AUTOMEL.MET
ACI Address: 1 System: 1 Inject#: 4 Detector:CDM-1
Analyst : Column: AG4A/AS4A anion column

Calibration	Volume	Dilution	Points	Rate	Start	Stop	Area Reject
External	1	1	3150	5Hz	0.00	10.50	50

********** Peak Report: All Peaks **********

Pk. Num	Ret Time	Component Name	Concentration ug/ml	Height	Area	Bl. Code	%Delta
1	1.35		0.000	20	99	1	
2	3.56		0.000	54	422	1	
		Totals	0.000	74	521		

File: 96080561.d04 Sample: BLANK PREP



Data Reprocessed On 08/20/1996 09:00:42

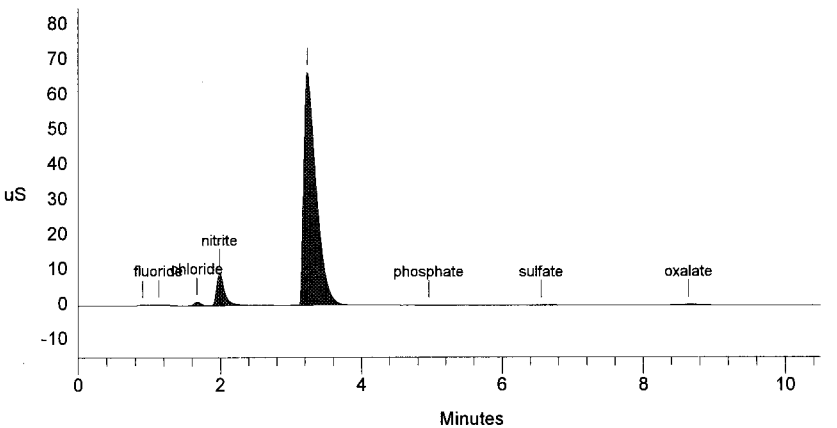
Sample Name: S96T002539 Date: 08/20/1996 04:38:21
Data File : C:\DX\DATA\96081971.d01
Method : C:\DX\METHOD\KIT.MET
ACI Address: 1 System: 1 Inject#: 1 Detector:CDM-1
Analyst : Column: AG4A/AS4A anion column

Calibration	Volume	Dilution	Points	Rate	Start	Stop	Area	Reject
External	1	21	3150	5Hz	0.00	10.50		50

********** Peak Report: All Peaks **********

Pk. Num	Ret Time	Component Name	Concentration ug/ml	Height	Area	Bl. Code	%Delta
1	0.91		0.000	140	934	2	
2	1.13	fluoride	5.551	314	4101	2	2.10
3	1.67	chloride	10.213	1009	6480	1	0.20
4	1.99	nitrite	176.055	9065	70992	1	-1.81
5	3.23		0.000	66665	814297	1	
6	4.96	phosphate	6.002	77	1127	1	-2.17
7	6.56	sulfate	3.784	87	1426	1	-2.38
8	8.64	oxalate	11.982	226	4261	1	-3.03
		Totals	213.587	77583	903619		

File: 96081971.d01 Sample: S96T002539



Data Reprocessed On 08/20/1996 09:00:44

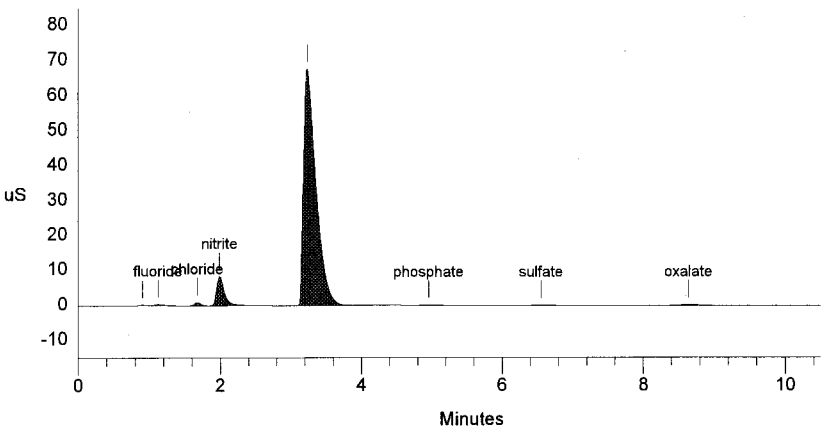
Sample Name: S96T002539 DUP Date: 08/20/1996 04:50:08
Data File : C:\DX\DATA\96081971.d02
Method : C:\DX\METHOD\KIT.MET
ACI Address: 1 System: 1 Inject#: 2 Detector:CDM-1
Analyst : Column: AG4A/AS4A anion column

Calibration	Volume	Dilution	Points	Rate	Start	Stop	Area Reject
External	1	21	3150	5Hz	0.00	10.50	50

********** Peak Report: All Peaks **********

Pk. Num	Ret Time	Component Name	Concentration ug/ml	Height	Area	Bl. Code	%Delta
1	0.91		0.000	123	778	2	
2	1.13	fluoride	5.425	333	3996	2	1.50
3	1.68	chloride	9.515	949	6038	1	0.60
4	1.99	nitrite	159.347	8235	64012	1	-1.81
5	3.23		0.000	67748	827695	1	
6	4.96	phosphate	7.536	107	1411	1	-2.17
7	6.56	sulfate	4.327	106	1687	1	-2.38
8	8.64	oxalate	14.052	270	5010	1	-3.03
		Totals	200.201	77872	910627		

File: 96081971.d02 Sample: S96T002539 DUP



Data Reprocessed On 08/20/1996 09:00:46

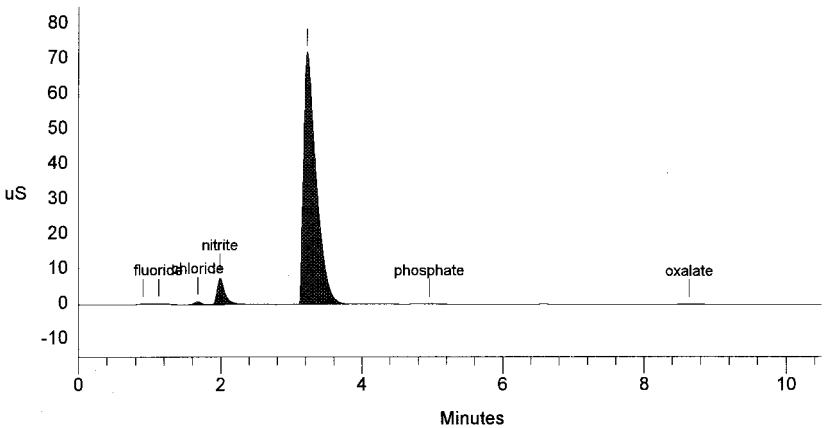
Sample Name: S96T002572 Date: 08/20/1996 05:14:53
Data File : C:\DX\DATA\96081971.d04
Method : C:\DX\METHOD\KIT.MET
ACI Address: 1 System: 1 Inject#: 4 Detector:CDM-1
Analyst : Column: AG4A/AS4A anion column

Calibration	Volume	Dilution	Points	Rate	Start	Stop	Area	Reject
External	1	21	3150	5Hz	0.00	10.50		50

********** Peak Report: All Peaks **********

Pk. Num	Ret Time	Component Name	Concentration ug/ml	Height	Area	Bl. Code	%Delta
1	0.91		0.000	147	1046	2	
2	1.13	fluoride	4.980	273	3627	2	1.50
3	1.68	chloride	8.655	869	5493	1	0.60
4	1.99	nitrite	141.643	7458	56653	1	-1.81
5	3.22		0.000	71861	893030	1	
6	4.96	phosphate	12.230	171	2279	1	-2.17
7	8.64	oxalate	3.340	63	1139	1	-3.03
		Totals	170.847	80842	963267		

File: 96081971.d04 Sample: S96T002572



Data Reprocessed On 08/20/1996 09:00:48

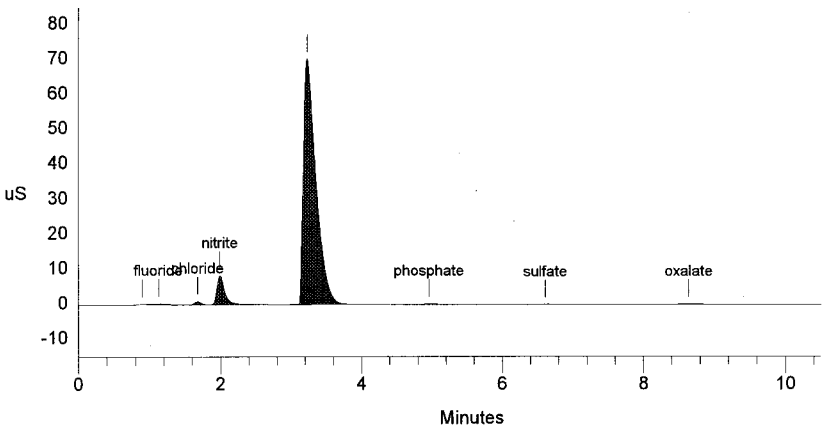
Sample Name: S96T002572 DUP	Date: 08/20/1996 05:26:38
Data File : C:\DX\DATA\96081971.d05	
Method : C:\DX\METHOD\KIT.MET	
ACI Address: 1 System: 1 Inject#: 5	Detector:CDM-1
Analyst : Column: AG4A/AS4A anion column	

Calibration	Volume	Dilution	Points	Rate	Start	Stop	Area Reject
External	1	21	3150	5Hz	0.00	10.50	50

********** Peak Report: All Peaks **********

Pk. Num	Ret Time	Component Name	Concentration ug/ml	Height	Area	Bl. Code	%Delta
1	0.90		0.000	134	930	2	
2	1.13	fluoride	5.329	317	3917	2	1.50
3	1.68	chloride	9.370	954	5946	1	0.60
4	1.99	nitrite	156.284	8255	62736	1	-1.81
5	3.23		0.000	70341	862550	1	
6	4.96	phosphate	15.958	210	2970	1	-2.17
7	6.61	sulfate	1.745	32	444	1	-1.59
8	8.64	oxalate	4.523	82	1566	1	-3.03
		Totals	193.209	80326	941058		

File: 96081971.d05 Sample: S96T002572 DUP



Data Reprocessed On 08/20/1996 09:00:51

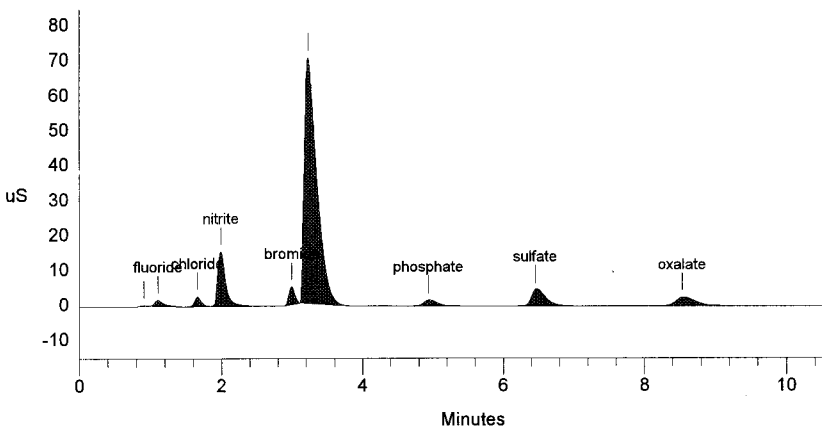
Sample Name: S96T002539 SPIKE Date: 08/20/1996 05:38:12
Data File : C:\DX\DATA\96081971.d06
Method : C:\DX\METHOD\KIT.MET
ACI Address: 1 System: 1 Inject#: 6 Detector:CDM-1
Analyst : Column: AG4A/AS4A anion column

Calibration	Volume	Dilution	Points	Rate	Start	Stop	Area	Reject
External	1	21	3150	5Hz	0.00	10.50		50

********** Peak Report: All Peaks **********

Pk. Num	Ret Time	Component Name	Concentration ug/ml	Height	Area	Bl. Code	%Delta
1	0.91		0.000	154	893	2	
2	1.11	fluoride	17.569	1730	14234	2	-0.30
3	1.66	chloride	26.377	2750	16875	1	-0.60
4	1.99	nitrite	294.886	15610	121636	1	-1.81
5	2.99	bromide	106.016	5228	30327	1	-2.50
6	3.23		0.000	70423	861233	1	
7	4.93	phosphate	120.305	1750	22640	1	-2.70
8	6.45	sulfate	135.795	4681	66263	1	-3.97
9	8.53	oxalate	126.236	2459	46020	1	-4.23
		Totals	827.185	104785	1180121		

File: 96081971.d06 Sample: S96T002539 SPIKE



FILE: 960809C.TXT

08/07/96 13:54
A-0004-1

LABCORE Data Entry Template for Worklist# 11727

Analyst: J.WORRELL **Instrument:** ICP0~~1~~2 JW 8-9-96 **Book#** 58848A

Method: LA-505-~~151~~/161 Rev/Mod B-1 JW 8-9-96

Worklist Comment: ICP AW-101 (DIRECT)

S	Type	Sample#	R	A	Test	Matrix	Group#	Project
1	ICV				@ICP-QC	QC		
2	ICB				@ICP-QC	QC		
3	LLS				@ICP-QC	QC		
4	ICSA				@ICP-QC	QC		
5	ICSAB				@ICP-QC	QC		
6	SERDIL	S96T002558	0	D	@ICP-D01	LIQUID		
7	SAMPLE	S96T002558	0	D	@ICP-D01	LIQUID	96000462	AW-101 PUSH
		Analytes Requested:			AG-D-01 , AL-D-01 , AS-D-01 , B-D-01 , BA-D-01 , BE-D-01 , BI-D-01 , CA-D-01 , CD-D-01 , CE-D-01 , CO-D-01 , CR-D-01 , CU-D-01 , FE-D-01 , K-D-01 , LA-D-01 , LI-D-01 , MG-D-01 , MN-D-01 , MO-D-01 , NA-D-01 , ND-D-01 , NI-D-01 , P-D-01 , PB-D-01 , S-D-01 , SB-D-01 , SE-D-01 , SI-D-01 , SM-D-01 , SR-D-01 , TI-D-01 , TL-D-01 , U-D-01 , V-D-01 , ZN-D-01 , ZR-D-01			
8	DUP	S96T002558	0	D	@ICP-D01	LIQUID		
9	SPK	S96T002558	0	D	@ICP-D01	LIQUID		
10	ICSA				@ICP-QC	QC		
11	ICSAB				@ICP-QC	QC		
12	CCV				@ICP-QC	QC		
13	CCB				@ICP-QC	QC		

Data Entry Comments: Raw data is final result in ug/ml.

Cr = 1.17e+2 ug/ml

S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

1360

08/09/96 12:55 ☎509 372 2929 WESTINGHOUSE →→→ MO-924 200W 001

LABCORE Data Entry Template for Worklist# 11727

S Type	Sample#	R	A	Test	Matrix	Group#	Project

Final page for worklist # 11727

Analyst Signature: [signature] Date: 8-9-96

Reviewed by: Analyst Signature: [signature] Date: 8/14/96

		DF
S96T002558	DIL 5X .025ml-30ml-2ml-8ml	6005
	SAM .025-30	1201
	DUP .025-30	1201
	P SPK .025-6-24	1201

Data Entry Comments: Spike recovery calculation:

$$C_r = \frac{\left(\frac{1338}{1201}\right) - \left(\frac{117.1}{1201}\right)}{1} \times 100 = 101.6\ \%$$

S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

Note: Spike true value is 1.0 ppm for all elements except for U = 2.0 ppm

08/09/96 12:55 ☎509 372 2929 WESTINGHOUSE →→→ MO-924 200W 002

Analysis Report Summary Fri 08-09-96 01:39:26 PM page 1

#	Sample Name	File	Method	Date	Time	OpID	Type	Mode
1	ICV	960809C	ICP2	08/09/96	12:47	JHW	Q	CONC
2	ICB	960809C	ICP2	08/09/96	12:50	JHW	Q	CONC
3	LLS	960809C	ICP2	08/09/96	12:54	JHW	Q	CONC
4	ICSA2	960809C	ICP2	08/09/96	12:57	JHW	Q	CONC
5	ICSAB2	960809C	ICP2	08/09/96	13:00	JHW	Q	CONC
6	S96T002558_L	960809C	ICP2	08/09/96	13:04	JHW	S	CONC
7	S96T002558_	960809C	ICP2	08/09/96	13:08	JHW	S	CONC
8	S96T002558_D	960809C	ICP2	08/09/96	13:11	JHW	S	CONC
9	S96T002558_P	960809C	ICP2	08/09/96	13:16	JHW	S	CONC
10	ICSA2	960809C	ICP2	08/09/96	13:25	JHW	Q	CONC
11	ICSAB2	960809C	ICP2	08/09/96	13:28	JHW	Q	CONC
12	CCV	960809C	ICP2	08/09/96	13:31	JHW	Q	CONC
13	CCB	960809C	ICP2	08/09/96	13:34	JHW	Q	CONC

SIGNATURE BELOW REPRESENTS CHEMICAL TECHNOLOGIST/ CHEMIST THAT COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 1962 TO 1965.

JH Worrell
8-9-96

AW-101 DIRECT S96T002558

SST-5 = 58B48A

08/09/96 12:56 ☎509 372 2929 WESTINGHOUSE →→→ MO-924 200W 003

Analysis Report Averages Fri 08-09-96 01:39:26 PM page 2

#	Sample Name	Ag	Al	As	B	Ba	Be
1	ICV	5.037	4.933	5.213	4.984	4.988	5.212
2	ICB	.0003	.0026	.0009	.0108	.0002	.0003
3	LLS	Q.0251	.1078	.2050	.1072	.0965	.0105
4	ICSA2	.0038	242.7	-.0500	.0020	.0019	.0003
5	ICSAB2	.9147	240.1	-.0660	.0014	.4473	.4561
6	S96T002558_L	18.40	32670.	-136.3	59.31	1.333	3.748
7	S96T002558	18.84	32590.	-60.40	61.54	.0932	3.256
8	S96T002558_D	18.07	30330.	-51.68	52.51	.2956	3.005
9	S96T002558_P	1135.	29550.	1207.	1232.	1172.	1239.
10	ICSA2	.0051	244.8	-.0348	.0075	.0019	.0004
11	ICSAB2	.9235	242.8	-.0432	-.0002	.4547	.4606
12	CCV	5.077	5.006	5.286	5.037	5.082	5.297
13	CCB	.0012	.0074	-.0053	.0066	.0002	.0003

#	Sample Name	Bi	Ca	Cd	Ce	Co	Cr
1	ICV	5.174	5.109	5.085	5.169	5.110	5.152
2	ICB	-.0335	-.0027	.0001	-.0005	.0005	-.0013
3	LLS	.1763	.2087	.0113	.1964	.0391	.0189
4	ICSA2	-.0165	250.8	.0005	.0147	.0023	.0075
5	ICSAB2	-.0070	251.0	.8933	.0101	.4457	.4605
6	S96T002558_L	-47.88	-13.90	2.175	32.56	-7.162	115.9
7	S96T002558	17.17	-13.93	2.834	-11.73	1.127	117.1
8	S96T002558_D	6.840	-13.75	3.865	-6.604	-.1704	108.1
9	S96T002558_P	1216.	1237.	1223.	1231.	1220.	1338.
10	ICSA2	-.0320	254.6	.0016	.0138	.0025	.0080
11	ICSAB2	-.0047	252.8	.8971	.0067	.4484	.4621
12	CCV	5.216	5.189	5.130	5.269	5.151	5.199
13	CCB	-.0291	-.0013	.0001	.0007	.0000	-.0014

#	Sample Name	Cu	Eu	Fe	K	La	Li
1	ICV	5.210	-.0029	5.114	4.815	5.077	5.034
2	ICB	-.0009	-.0004	-.0007	-.1761	-.0005	-.0008
3	LLS	.0209	-.0007	.1000	.4218	.0989	.0192
4	ICSA2	-.0101	-.0459	94.22	.0277	-.0050	.0021
5	ICSAB2	.4514	-.0467	93.49	.0457	-.0053	.9961
6	S96T002558_L	-1.451	2.256	8.803	35610.	2.676	21.90
7	S96T002558	.2302	-.6479	5.362	36650.	-2.365	22.49
8	S96T002558_D	1.043	-.8014	6.087	34160.	-1.175	20.74
9	S96T002558_P	1235.	-.1707	1222.	32960.	1211.	1210.
10	ICSA2	-.0104	-.0503	95.05	.1969	-.0051	.0023
11	ICSAB2	.4578	-.0466	94.34	-.0202	-.0052	1.007
12	CCV	5.317	-.0029	5.165	4.896	5.182	5.143
13	CCB	.0002	-.0004	-.0004	.0025	-.0002	-.0002

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Analysis Report Averages Fri 08-09-96 01:39:26 PM page 3

#	Sample Name	Mg	Mn	Mo	Na	Nd	Ni
1	ICV	4.923	5.008	5.096	5.000	5.131	5.036
2	ICB	-.0102	.0002	.0053	-.0052	-.0030	-.0023
3	LLS	.1989	.0190	.1026	.1981	.1942	.0426
4	ICSA2	250.0	-.0062	-.0081	197.9	.0024	.0028
5	ICSAB2	247.4	.4238	-.0091	196.9	.0013	.8658
6	S96T002558_L	-31.20	4.061	64.59	270200.	-23.74	46.07
7	S96T002558	-8.984	3.011	68.28	272700.	-5.334	14.38
8	S96T002558_D	-3.646	2.287	63.30	252700.	-1.829	15.07
9	S96T002558_P	1157.	1174.	1281.	235800.	1220.	1220.
10	ICSA2	252.3	-.0062	-.0093	199.1	.0012	-.0105
11	ICSAB2	249.7	.4264	-.0103	199.3	.0005	.8787
12	CCV	4.975	5.046	5.142	5.052	5.233	5.118
13	CCB	-.0026	.0003	.0053	-.0035	-.0016	-.0043

#	Sample Name	P	Pb	S	Sb	Se	Si
1	ICV	5.187	5.062	5.049	4.820	4.944	4.743
2	ICB	-.0025	-.0034	-.0056	.0050	.0126	-.0002
3	LLS	.4122	.2061	.2043	.1002	.2078	.1572
4	ICSA2	-.0002	.0361	-.0211	.0036	-.0441	-.0041
5	ICSAB2	-.0044	.9611	-.0224	-.0047	-.0172	-.0036
6	S96T002558_L	209.6	136.0	530.4	49.24	171.8	266.1
7	S96T002558	255.1	77.35	439.0	5.351	27.20	242.7
8	S96T002558_D	217.5	68.37	424.3	2.776	18.84	227.4
9	S96T002558_P	1441.	1286.	1612.	1145.	1227.	1391.
10	ICSA2	-.0059	.0270	-.0235	-.0074	-.0275	-.0016
11	ICSAB2	.0152	.9507	-.0003	.0082	-.0441	.0019
12	CCV	5.108	5.137	5.020	4.873	5.013	4.771
13	CCB	-.0035	.0097	.0038	.0022	.0195	.0007

#	Sample Name	Sm	Sr	Th	Ti	Tl	U
1	ICV	4.951	4.994	.0269	4.913	4.921	9.661
2	ICB	-.0092	.0000	.0024	-.0002	.0001	-.0312
3	LLS	.1867	.0198	-.0001	.0200	.3731	.4474
4	ICSA2	-.0023	.0018	.0028	.0015	.0322	-.0325
5	ICSAB2	.0042	.0018	.0011	.0015	-.0417	-.0171
6	S96T002558_L	15.60	.6269	-4.744	-.0218	113.4	52.13
7	S96T002558	-7.880	-.0589	-.7524	-.5838	26.94	-42.52
8	S96T002558_D	-12.75	-.1217	2.268	.3087	11.65	-45.34
9	S96T002558_P	1181.	1186.	6.231	1173.	1210.	2311.
10	ICSA2	-.0017	.0017	.0007	.0013	.0316	-.0387
11	ICSAB2	-.0060	.0017	.0039	.0013	.0082	-.0557
12	CCV	5.066	5.094	.0344	5.022	4.999	9.867
13	CCB	-.0035	.0001	.0030	-.0002	.0155	-.0237

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Analysis Report Averages Fri 08-09-96 01:39:26 PM page 4

#	Sample Name	V	Y	Zn	Zr
1	ICV	5.086	.0064	5.167	4.971
2	ICB	-.0014	-.0003	.0005	-.0012
3	LLS	.0984	-.0001	.0224	.0189
4	ICSA2	-.0005	.0067	-.0005	-.0035
5	ICSAB2	.4459	.0071	.9096	-.0024
6	S96T002558_L	3.154	.9192	136.7	19.42
7	S96T002558_	-2.452	-.4526	27.12	14.14
8	S96T002558_D	-2.892	-.5456	24.81	12.65
9	S96T002558_P	1214.	1.842	1271.	1202.
10	ICSA2	.0000	.0068	-.0010	-.0030
11	ICSAB2	.4486	.0066	.9085	-.0040
12	CCV	5.151	.0060	5.187	5.055
13	CCB	-.0005	-.0001	.0007	-.0005

08/09/96 12:58 ☎509 372 2929 WESTINGHOUSE →→→ MO-924 200W 006

LABCORE Completed Worklist Report for Worklist# 11785

Analyst: eal **Instrument:** IC02 **Book#** 149N9C

Method: LA-533-105 Rev/Mod D-1

Worklist Comment: AW-101 Reruns for Br

Seq	Type	Sample#	R	A	Test	Matrix	Actual	Found	DL or Yield	Unit
1	CCB			0	@IC-QC	F	QC	1	<1.30e-2		ug/mL
1	CCB			0	@IC-QC	CL	QC	1	<1.70e-2		ug/mL
1	CCB			0	@IC-QC	NO2	QC	1	<1.07e-1		ug/mL
1	CCB			0	@IC-QC	BR	QC	1	<1.26e-1		ug/mL
1	CCB			0	@IC-QC	NO3	QC	1	2.25e-01	0.225	ug/mL
1	CCB			0	@IC-QC	PO4	QC	1	<1.19e-1		ug/mL
1	CCB			0	@IC-QC	SO4	QC	1	<1.36e-1		ug/mL
1	CCB			0	@IC-QC	OXALATE2	QC	1	<1.05e-1		ug/mL
2	CCV			0	@IC-QC	F	QC	5.90e01	5.92e+01	100.339	% Recovery
2	CCV			0	@IC-QC	CL	QC	7.90e01	7.85e+01	99.367	% Recovery
2	CCV			0	@IC-QC	NO2	QC	5.42e02	5.24e+02	96.679	% Recovery
2	CCV			0	@IC-QC	BR	QC	5.89e02	5.82e+02	98.812	% Recovery
2	CCV			0	@IC-QC	NO3	QC	5.94e02	5.74e+02	96.633	% Recovery
2	CCV			0	@IC-QC	PO4	QC	5.45e02	5.25e+02	96.330	% Recovery
2	CCV			0	@IC-QC	SO4	QC	6.31e02	6.21e+02	98.415	% Recovery
2	CCV			0	@IC-QC	OXALATE2	QC	5.25e02	5.26e+02	100.190	% Recovery
3	SAMPLE	S96T002430		0	@IC-01	BR-02	LIQUID	N/A	8.907e+02	649.000	ug/mL
4	DUP	S96T002430		0	@IC-01	BR-02	LIQUID	8.91e+02	8.44e+02	5.418	RPD
5	SPK	S96T002430		0	@IC-01	BR-02	LIQUID	5.89e02	5.68e+02	96.435	% Recovery
6	SAMPLE	S96T002439		0	@IC-01	BR-02	LIQUID	N/A <	6.490e+02	649.000	ug/mL
7	DUP	S96T002439		0	@IC-01	BR-02	LIQUID	<6.49e2	<6.49e2		RPD

Final page for worklist# 11785

Analyst Signature Date

Analyst Signature Date

Reviewer Signature Date 8/28/96

Units shown for QC (BLK/BKG) may not reflect the actual units

LABCORE Data Entry Template for Worklist# 11785

Analyst: EAL **Instrument:** IC00 IC02 **Book#** 149N9-C

Method: LA-533-105 **Rev/Mod** D-1

Worklist Comment: AW-101 Reruns for Br

S	Type	Sample#	R	A	Test	Matrix	Group#	Project
1	CCB				@IC-QC	QC		
2	CCV				@IC-QC	QC		
3	SAMPLE	S96T002430	0		@IC-01	LIQUID	96000462	AW-101 PUSH
		Analytes Requested: BR-02						
4	DUP	S96T002430	0		@IC-01	LIQUID		
5	SPK	S96T002430	0		@IC-01	LIQUID		
6	SAMPLE	S96T002439	0		@IC-01	LIQUID	96000462	AW-101 PUSH
		Analytes Requested: BR-02						
7	DUP	S96T002439	0		@IC-01	LIQUID		

Final page for worklist # 11785

A. Lambel 08.24.96

Analyst Signature **Date** **Analyst Signature** **Date**

11785ag.csv

On shell

Uploaded 8/28/96

Validated 8/28/96 [illegible]

Data Entry Comments:

S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

A-0010-IC DATA FILE/WORKLIST RESOLUTION 28-Aug-96

Worklist#: 11785

	Seq	Type	Sample #
=>	1	CCB	
=>	2	CCV	
=>	3	SAMPLE	S96T002430
=>	4	DUP	S96T002430
=>	5	SPK	S96T002430
=>	6	SAMPLE	S96T002439
=>	7	DUP	S96T002439

Data File: 11785AG.CSV

Seq#	Data File	Sample Name	Dilution
1	96082481.d01	INST. BLANK	1.00
2	96082491.d02	149N9-C STD.	101.00
3	96082491.d03	S96T002430	5151.00
4	96082401.d04	S96T002430 DUP	5151.00
5	96082401.d05	S96T002430 SPIKE	5151.00
6	96082401.d06	S96T002439	5151.00
7	96082401.d07	S96T002439 DUP	5151.00

Save(F4) Abort(Shift-F3) ListFiles(Shift-F1) UploadFile(F8)

Data Reprocessed On 08/26/1996 14:35:52

Sample Name: INST. BLANK Date: 08/24/1996 19:52:34
Data File : C:\DX\DATA\96082481.d01
Method : C:\DX\METHOD\ANIONS.MET
ACI Address: 1 System: 1 Inject#: 1 Detector:CDM-1
Analyst Column:

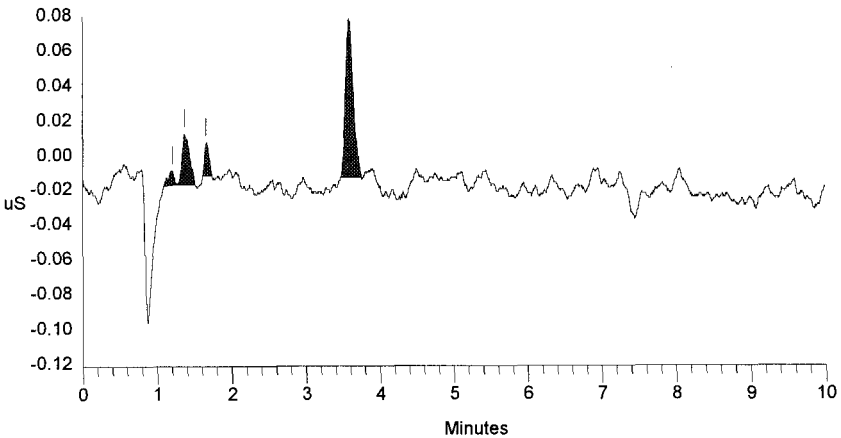
EAL 8/28/96

Calibration	Volume	Dilution	Points	Rate	Start	Stop	Area Reject
External	1	1	3000	5Hz	0.00	10.00	200

********** Peak Report: All Peaks **********

Pk. Num	Ret Time	Component Name	Concentration ug/ml	Height	Area	Bl. Code	%Delta
4	3.58	NITRATE	0.225	90	662	1	2.97
		Totals	0.225	90	662		

File: 96082481.d01 Sample: INST. BLANK



SIGNATURE ABOVE REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 1964 TO 1975.

Data Reprocessed On 08/28/1996 14:55:25

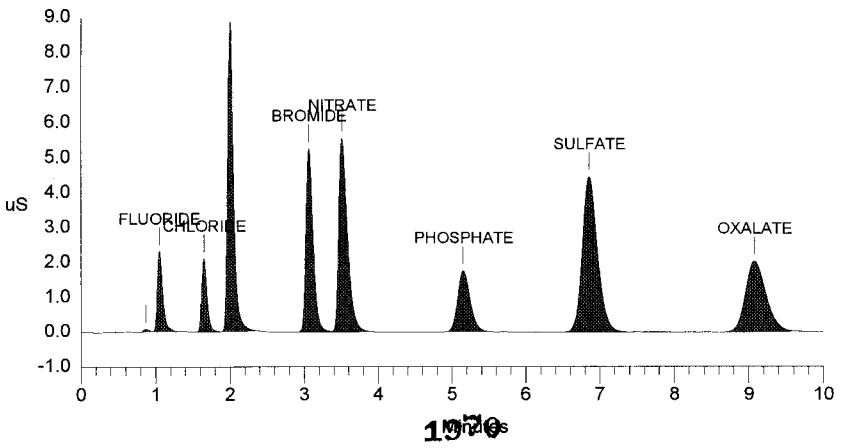
Sample Name: 149N9-C STD.	Date: 08/24/1996 20:04:28
Data File : E:\DATA\96082491.D02	
Method : C:\DX\METHOD\ANIONS.MET	
ACI Address: 1 System: 1 Inject#: 2	Detector:CDM-1
Analyst : Column:	

Calibration	Volume	Dilution	Points	Rate	Start	Stop	Area Reject
External	1	101	3000	5Hz	0.00	10.00	200

********** Peak Report: All Peaks **********

Pk. Num	Ret Time	Component Name	Concentration ug/ml	Height	Area	Bl. Code	%Delta
1	0.87		0.000	66	289	2	
2	1.05	FLUORIDE	59.250	2286	11449	2	0.96
3	1.65	CHLORIDE	78.521	2096	10302	1	0.81
4	2.00	NITRITE	523.895	8858	48982	1	0.00
5	3.06	BROMIDE	581.523	5255	35405	2	0.11
6	3.51	NITRATE	574.120	5559	45308	2	0.86
7	5.15	PHOSPHATE	524.586	1757	20355	1	2.39
8	6.86	SULFATE	620.802	4468	63154	1	2.59
9	9.08	OXALATE	525.818	2041	38590	1	3.42
		Totals	3488.515	32385	273834		

File: 96082491.D02 Sample: 149N9-C STD.



Data Reprocessed On 08/26/1996 14:35:59

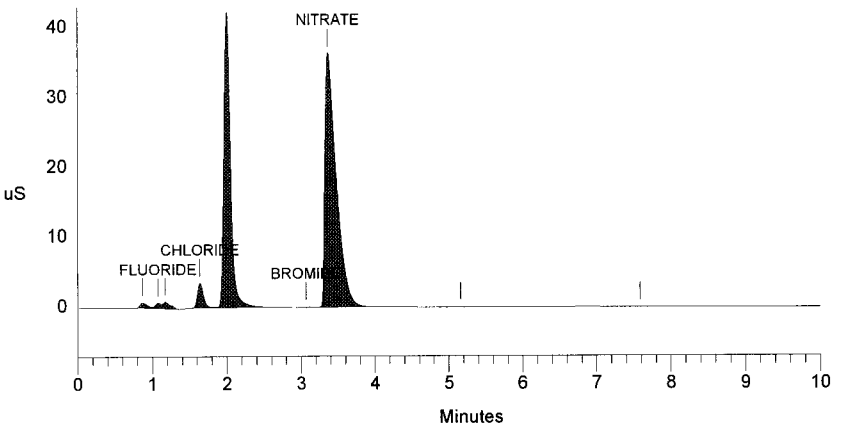
Sample Name: S96T002430 Date: 08/24/1996 21:41:28
Data File : C:\DX\DATA\96082491.d03
Method : C:\DX\METHOD\ANIONS.MET
ACI Address: 1 System: 1 Inject#: 3 Detector:CDM-1
Analyst : Column:

Calibration	Volume	Dilution	Points	Rate	Start	Stop	Area Reject
External	1	5151	3000	5Hz	0.00	10.00	200

********** Peak Report: All Peaks **********

Pk. Num	Ret Time	Component Name	Concentration ug/ml	Height	Area	Bl. Code	%Delta
1	0.87		0.000	718	4558	2	
2	1.08	FLUORIDE	1071.561	769	3893	2	3.53
3	1.17		0.000	936	6750	2	
4	1.64	CHLORIDE	7296.154	3476	19034	2	0.00
5	2.00	NITRITE	134500.004	42143	261258	2	0.00
6	3.07	BROMIDE	890.654	58	322	1	0.00
7	3.36	NITRATE	214621.486	36346	386317	1	-3.35
		Totals	358379.859	84446	682133		

File: 96082491.d03 Sample: S96T002430



Data Reprocessed On 08/26/1996 14:36:03

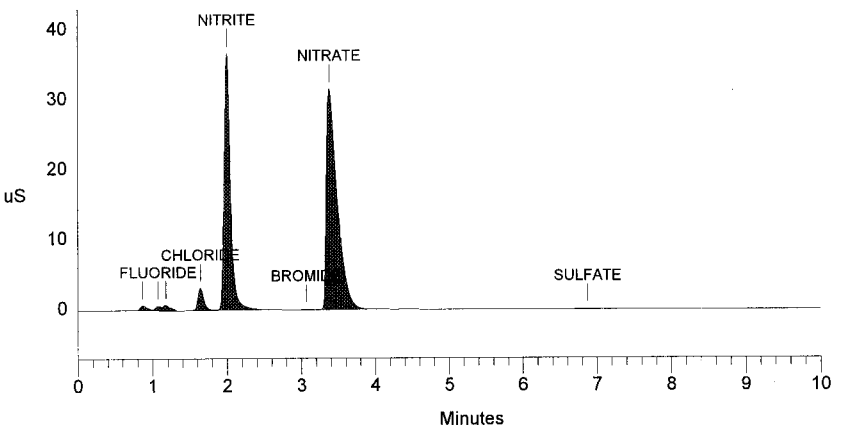
Sample Name: S96T002430 DUP Date: 08/24/1996 22:00:15
Data File : C:\DX\DATA\96082401.d04
Method : C:\DX\METHOD\ANIONS.MET
ACI Address: 1 System: 1 Inject#: 4 Detector:CDM-1
Analyst : Column:

Calibration	Volume	Dilution	Points	Rate	Start	Stop	Area	Reject
External	1	5151	3000	5Hz	0.00	10.00		200

********** Peak Report: All Peaks **********

Pk. Num	Ret Time	Component Name	Concentration ug/ml	Height	Area	Bl. Code	%Delta
1	0.87		0.000	604	3727	2	
2	1.08	FLUORIDE	924.745	657	3328	2	3.53
3	1.18		0.000	792	5591	2	
4	1.64	CHLORIDE	6377.804	3120	16578	2	0.41
5	2.00	NITRITE	113674.566	36661	218825	2	0.00
6	3.07	BROMIDE	843.592	48	266	1	0.00
7	3.38	NITRATE	184740.980	31553	324204	1	-2.78
8	6.88	SULFATE	890.855	70	933	1	2.89
		Totals	307452.542	73504	573453		

File: 96082401.d04 Sample: S96T002430 DUP



Data Reprocessed On 08/26/1996 14:36:07

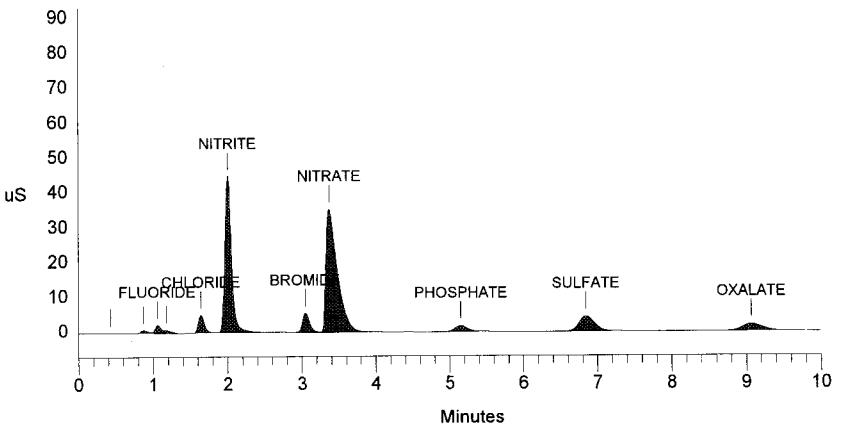
Sample Name: S96T002430 SPIKE Date: 08/24/1996 22:11:59
Data File : C:\DX\DATA\96082401.d05
Method : C:\DX\METHOD\ANIONS.MET
ACI Address: 1 System: 1 Inject#: 5 Detector:CDM-1
Analyst : Column:

Calibration	Volume	Dilution	Points	Rate	Start	Stop	Area	Reject
External	1	5151	3000	5Hz	0.00	10.00		200

********** Peak Report: All Peaks **********

Pk. Num	Ret Time	Component Name	Concentration ug/ml	Height	Area	Bl. Code	%Delta
2	0.87		0.000	689	3995	2	
3	1.06	FLUORIDE	3149.736	2232	11948	2	1.60
4	1.17		0.000	911	5930	2	
5	1.64	CHLORIDE	10604.561	4977	28023	2	0.00
6	2.00	NITRITE	140664.813	44739	273962	2	0.00
7	3.04	BROMIDE	29560.247	5475	35283	2	3.40
8	3.37	NITRATE	208659.550	35328	373632	2	-3.16
9	5.15	PHOSPHATE	26862.831	1727	20442	1	2.39
10	6.84	SULFATE	31473.472	4374	62768	1	2.39
11	9.06	OXALATE	26404.282	1997	37980	1	3.27
		Totals	477379.492	102450	853964		

File: 96082401.d05 Sample: S96T002430 SPIKE



Data Reprocessed On 08/26/1996 14:36:11

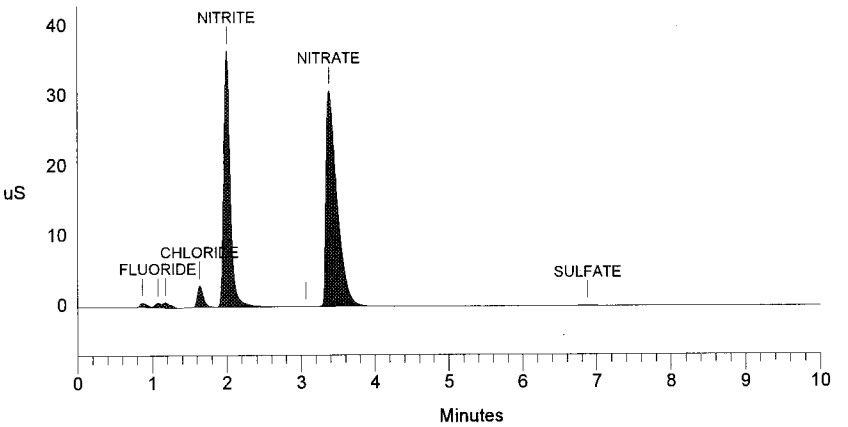
Sample Name: S96T002439	Date: 08/24/1996 22:26:43
Data File : C:\DX\DATA\96082401.d06	
Method : C:\DX\METHOD\ANIONS.MET	
ACI Address: 1 System: 1 Inject#: 6	Detector:CDM-1
Analyst : Column:	

Calibration	Volume	Dilution	Points	Rate	Start	Stop	Area	Reject
External	1	5151	3000	5Hz	0.00	10.00		200

********** Peak Report: All Peaks **********

Pk. Num	Ret Time	Component Name	Concentration ug/ml	Height	Area	Bl. Code	%Delta
1	0.87		0.000	590	3628	2	
2	1.08	FLUORIDE	967.566	657	3493	2	3.53
3	1.18		0.000	792	5395	2	
4	1.64	CHLORIDE	6266.359	2980	16281	2	0.00
5	2.00	NITRITE	115874.989	36555	223274	2	0.00
7	3.38	NITRATE	182281.096	30766	319246	1	-2.78
8	6.88	SULFATE	751.794	52	657	1	2.99
		Totals	306141.802	72392	571974		

File: 96082401.d06 Sample: S96T002439



Data Reprocessed On 08/26/1996 14:36:15

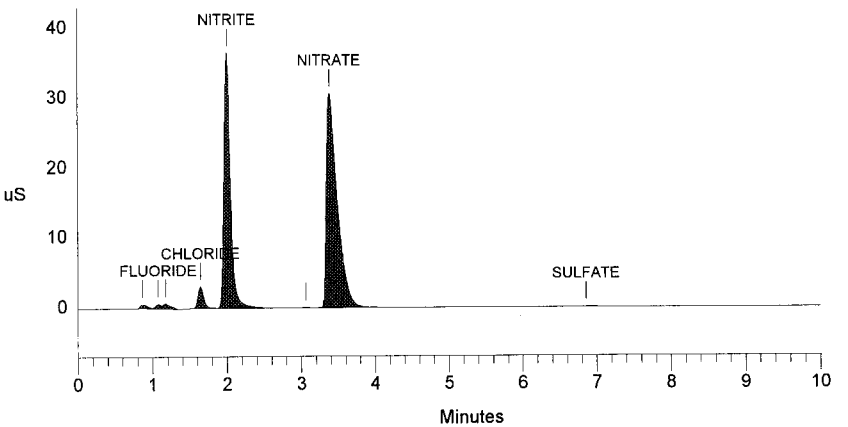
Sample Name: S96T002439 DUP Date: 08/24/1996 22:44:15
Data File : C:\DX\DATA\96082401.d07
Method : C:\DX\METHOD\ANIONS.MET
ACI Address: 1 System: 1 Inject#: 7 Detector:CDM-1
Analyst : Column:

Calibration	Volume	Dilution	Points	Rate	Start	Stop	Area	Reject
External	1	5151	3000	5Hz	0.00	10.00		200

********** Peak Report: All Peaks **********

Pk. Num	Ret Time	Component Name	Concentration ug/ml	Height	Area	Bl. Code	%Delta
1	0.87		0.000	566	3432	2	
2	1.08	FLUORIDE	896.191	643	3219	2	3.53
3	1.18		0.000	771	5431	2	
4	1.64	CHLORIDE	6379.195	3068	16581	2	0.41
5	2.00	NITRITE	114254.516	36545	219996	2	0.00
7	3.38	NITRATE	180331.646	30660	315332	1	-2.78
8	6.86	SULFATE	992.150	74	1134	1	2.59
		Totals	302853.698	72326	565126		

File: 96082401.d07 Sample: S96T002439 DUP



LABCORE Completed Worklist Report for Worklist# 11868

Analyst: krq **Instrument:** IC02 **Book#** 149N98

Method: LA-533-105 Rev/Mod D-1

Worklist Comment: Rerun Br AW-101 use 41 df. jmf

Seq	Type	Sample#	R	A	Test	Matrix	Actual	Found	DL or Yield	Unit
1	CCB			0	@IC-QC	F	QC	1	<1.30e-2		ug/mL
1	CCB			0	@IC-QC	CL	QC	1	<1.70e-2		ug/mL
1	CCB			0	@IC-QC	NO2	QC	1	<1.07e-1		ug/mL
1	CCB			0	@IC-QC	BR	QC	1	<1.26e-1		ug/mL
1	CCB			0	@IC-QC	NO3	QC	1	<1.40e-1		ug/mL
1	CCB			0	@IC-QC	PO4	QC	1	<1.19e-1		ug/mL
1	CCB			0	@IC-QC	SO4	QC	1	<1.36e-1		ug/mL
1	CCB			0	@IC-QC	OXALATE2	QC	1	<1.05e-1		ug/mL
2	CCV			0	@IC-QC	F	QC	5.90e01	5.71e+01	96.780	% Recovery
2	CCV			0	@IC-QC	CL	QC	7.90e01	7.52e+01	95.190	% Recovery
2	CCV			0	@IC-QC	NO2	QC	5.44e02	4.94e+02	90.809	% Recovery
2	CCV			0	@IC-QC	BR	QC	5.89e02	5.34e+02	90.662	% Recovery
2	CCV			0	@IC-QC	NO3	QC	5.94e02	5.42e+02	91.246	% Recovery
2	CCV			0	@IC-QC	PO4	QC	5.45e02	5.74e+02	105.321	% Recovery
2	CCV			0	@IC-QC	SO4	QC	6.31e02	5.72e+02	90.650	% Recovery
2	CCV			0	@IC-QC	OXALATE2	QC	5.29e02	4.98e+02	94.140	% Recovery
3	BLNK-PREP			0	@IC-01	F-02	SOLID	1	<1.30e-2		ug/g
3	BLNK-PREP			0	@IC-01	CL-02	SOLID	1	<1.70e-2		ug/g
3	BLNK-PREP			0	@IC-01	NO2-02	SOLID	1	<1.07e-1		ug/g
3	BLNK-PREP			0	@IC-01	BR-02	SOLID	1	<1.26e-1		ug/g
3	BLNK-PREP			0	@IC-01	NO3-02	SOLID	1	2.44e-01	0.244	ug/g
3	BLNK-PREP			0	@IC-01	PO4-02	SOLID	1	<1.19e-1		ug/g
3	BLNK-PREP			0	@IC-01	SO4-02	SOLID	1	<1.36e-1		ug/g
3	BLNK-PREP			0	@IC-01	OXALATE2	SOLID	1	<1.05e-1		ug/g
4	SAMPLE	S96T003241	0	W	@IC-01	BR-02	SOLID	N/A <	1.004e+03	1004.000	ug/g
5	DUP	S96T003241	0	W	@IC-01	BR-02	SOLID	<1.00e3	<9.81e2		RPD
6	SPK	S96T003241	0	W	@IC-01	BR-02	SOLID	5.89e02	5.39e+02	91.511	% Recovery

Final page for worklist# 11868

Analyst Signature **Date** **Analyst Signature** **Date**

Janice M. Fuge 8/21/96
Reviewer Signature **Date**

Units shown for QC (BLK/BKG) may not reflect the actual units.

LABCORE Data Entry Template for Worklist# 11868

Analyst: [illegible] **Instrument:** IC00 IC02 **Book#** 149N4-B

Method: LA-533-105 Rev/Mod D-1

Worklist Comment: Rerun Br AW-101 use 41 df. jmf

S	Type	Sample#	R	A	Test	Matrix	Group#	Project
1	CCB				@IC-QC	QC		
2	CCV				@IC-QC	QC		
3	BLNK-PREP				@IC-01	SOLID		
4	SAMPLE	S96T003241	0	W	@IC-01	SOLID	96000462	AW-101 PUSH
		Analytes Requested: BR-02						
5	DUP	S96T003241	0	W	@IC-01	SOLID		
6	SPK	S96T003241	0	W	@IC-01	SOLID		

Final page for worklist # 11868

Analyst Signature [illegible] Date 8/20/96

Analyst Signature Date

11868AG.CSV

Ln Shell 8-20-96 HLa
uploaded 8-20-96 HLa

Data Entry Comments:

S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

A-0010-IC DATA FILE/WORKLIST RESOLUTION 20-Aug-96

Worklist#: 11868

		Seq	Type	Sample #
-	=>	1	CCB	
	=>	2	CCV	
	=>	3	BLNK-PREP	
	=>	4	SAMPLE	S96T003241
	=>	5	DUP	S96T003241
	=>	6	SPK	S96T003241
+				

Data File: 11868AG.CSV

	Seq#	Data File	Sample Name	Dilution
-	1	96082081.d23	CCB	1.00
	2	96082081.d24	CCV 149N9-B	101.00
	3	96082081.d25	BLANK PREP	1.00
	4	96082081.d26	S96T003241	41.00
	5	96082081.d27	S96T003241 DUP	41.00
	6	96082081.d28	S96T003241 SPIK	41.00
+				

Save(F4) Abort(Shift-F3) ListFiles(Shift-F1) UploadFile(F8)

Data Reprocessed On 08/20/1996 10:46:06

Sample Name: CCB	Date: 08/20/1996 03:34:47
Data File : C:\DX\DATA\96082081.d23	
Method : C:\DX\METHOD\ANIONS.MET	
ACI Address: 1 System: 1 Inject#: 23	Detector:CDM-1
Analyst : Column:	

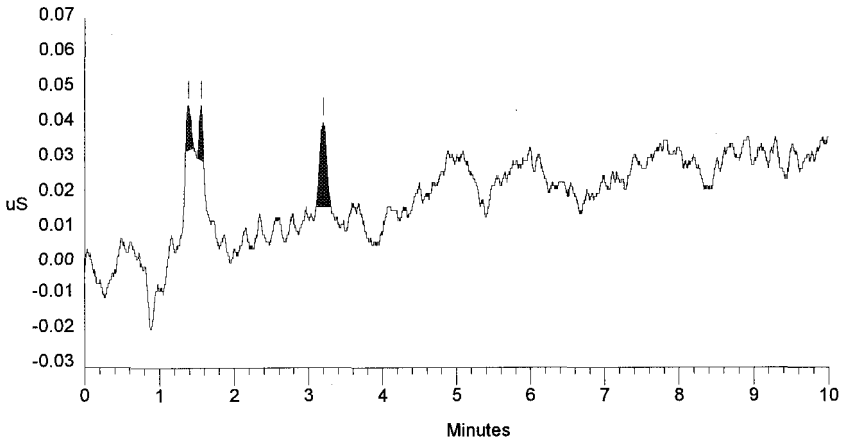
Jane Fey for RRG 8/21/96

Calibration	Volume	Dilution	Points	Rate	Start	Stop	Area	Reject
External	1	1	3000	5Hz	0.00	10.00		200

********** Peak Report: All Peaks **********

Pk. Num	Ret Time	Component Name	Concentration ug/ml	Height	Area	Bl. Code	%Delta
		Totals	0.000	0	0		

File: 96082081.d23 Sample: CCB



SIGNATURE ABOVE REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 1979 TO 1984.

Data Reprocessed On 08/20/1996 10:46:08

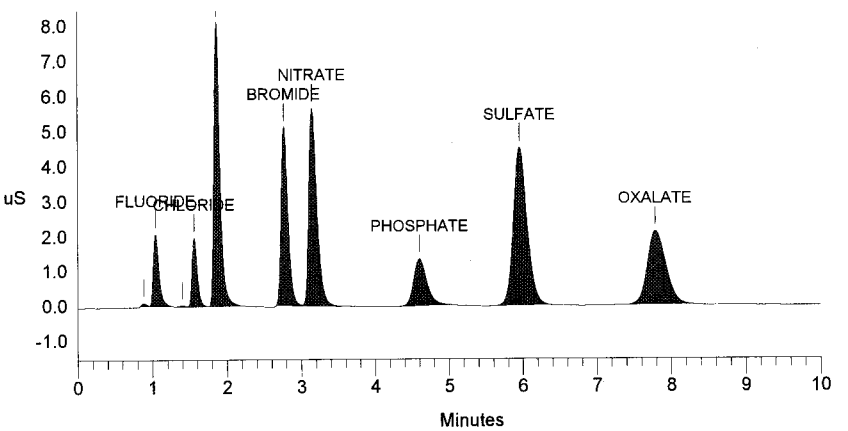
Sample Name: CCV 149N9-B	Date: 08/20/1996 04:30:01
Data File : C:\DX\DATA\96082081.d24	
Method : C:\DX\METHOD\ANIONS.MET	
ACI Address: 1 System: 1 Inject#: 24	Detector:CDM-1
Analyst : Column:	

Calibration	Volume	Dilution	Points	Rate	Start	Stop	Area	Reject
External	1	101	3000	5Hz	0.00	10.00		200

********** Peak Report: All Peaks **********

Pk. Num	Ret Time	Component Name	Concentration ug/ml	Height	Area	Bl. Code	%Delta
1	0.88		0.000	77	327	2	
2	1.04	FLUORIDE	57.135	2059	10735	2	0.32
4	1.56	CHLORIDE	75.224	1974	9515	2	0.00
5	1.86	NITRITE	493.650	8121	45148	1	-1.41
6	2.77	BROMIDE	533.940	5093	32289	2	1.47
7	3.15	NITRATE	542.475	5656	42753	2	-1.56
8	4.60	PHOSPHATE	573.833	1351	16629	1	2.07
9	5.96	SULFATE	572.135	4535	58196	1	2.06
10	7.79	OXALATE	498.053	2130	36707	1	2.73
		Totals	3346.443	30996	252298		

File: 96082081.d24 Sample: CCV 149N9-B



Data Reprocessed On 08/20/1996 10:46:11

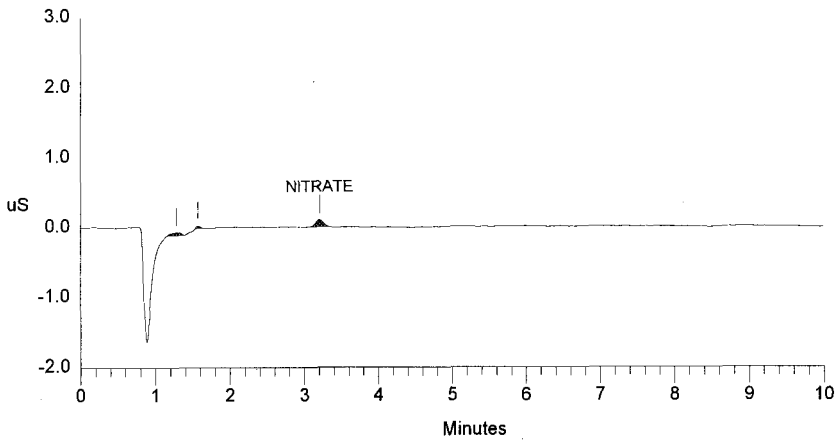
Sample Name: BLANK PREP	Date: 08/20/1996 04:42:01
Data File : C:\DX\DATA\96082081.d25	
Method : C:\DX\METHOD\ANIONS.MET	
ACI Address: 1 System: 1 Inject#: 25	Detector:CDM-1
Analyst : Column:	

Calibration	Volume	Dilution	Points	Rate	Start	Stop	Area	Reject
External	1	1	3000	5Hz	0.00	10.00		200

********** Peak Report: All Peaks **********

Pk. Num	Ret Time	Component Name	Concentration ug/ml	Height	Area	Bl. Code	%Delta
1	1.28		0.000	41	320	1	
3	3.21	NITRATE	0.244	99	721	1	0.31
		Totals	0.244	140	1041		

File: 96082081.d25 Sample: BLANK PREP



Data Reprocessed On 08/20/1996 10:46:13

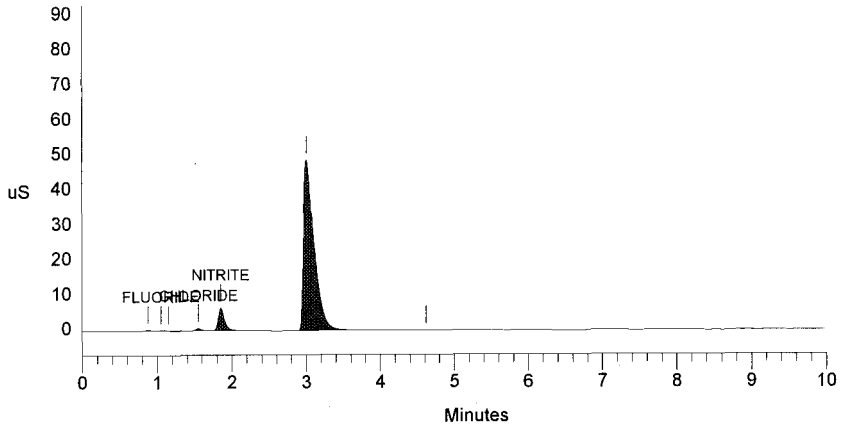
Sample Name: S96T003241	Date: 08/20/1996 04:57:35
Data File : C:\DX\DATA\96082081.d26	
Method : C:\DX\METHOD\ANIONS.MET	
ACI Address: 1 System: 1 Inject#: 26	Detector:CDM-1
Analyst : Column:	

Calibration	Volume	Dilution	Points	Rate	Start	Stop	Area	Reject
External	1	41	3000	5Hz	0.00	10.00		200

********** Peak Report: All Peaks **********

Pk. Num	Ret Time	Component Name	Concentration ug/ml	Height	Area	Bl. Code	%Delta
1	0.88		0.000	208	1144	2	
2	1.06	FLUORIDE	1.485	159	861	2	1.60
3	1.16		0.000	142	1029	2	
4	1.56	CHLORIDE	9.769	605	3077	1	-0.43
5	1.86	NITRITE	165.692	6455	37154	1	-1.76
6	3.01		0.000	48777	476324	1	
		Totals	176.946	56345	519589		

File: 96082081.d26 Sample: S96T003241



Data Reprocessed On 08/20/1996 10:46:16

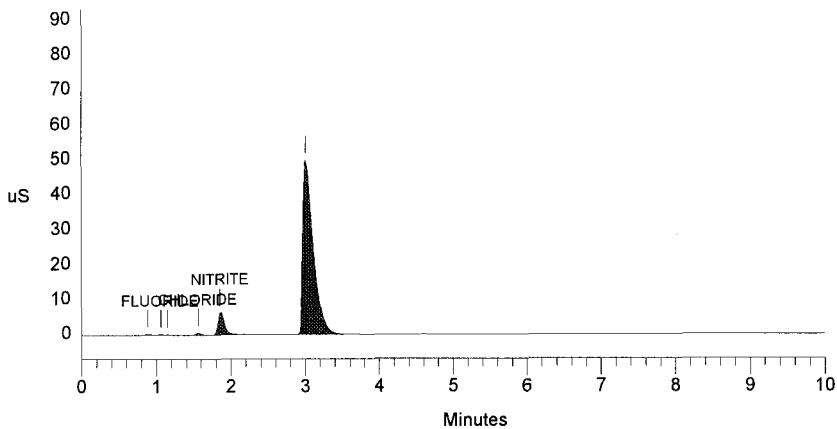
Sample Name: S96T003241 DUP	Date: 08/20/1996 05:11:45
Data File : C:\DX\DATA\96082081.d27	
Method : C:\DX\METHOD\ANIONS.MET	
ACI Address: 1 System: 1 Inject#: 27	Detector:CDM-1
Analyst : Column:	

Calibration	Volume	Dilution	Points	Rate	Start	Stop	Area	Reject
External	1	41	3000	5Hz	0.00	10.00		200

********** Peak Report: All Peaks **********

Pk. Num	Ret Time	Component Name	Concentration ug/ml	Height	Area	Bl. Code	%Delta
1	0.88		0.000	191	1030	2	
2	1.06	FLUORIDE	1.159	138	715	2	1.60
3	1.15		0.000	125	851	2	
4	1.56	CHLORIDE	9.327	588	2941	1	-0.43
5	1.86	NITRITE	167.416	6435	37550	1	-1.76
6	3.01		0.000	49850	487904	1	
		Totals	177.902	57328	530992		

File: 96082081.d27 Sample: S96T003241 DUP



Data Reprocessed On 08/20/1996 10:46:18

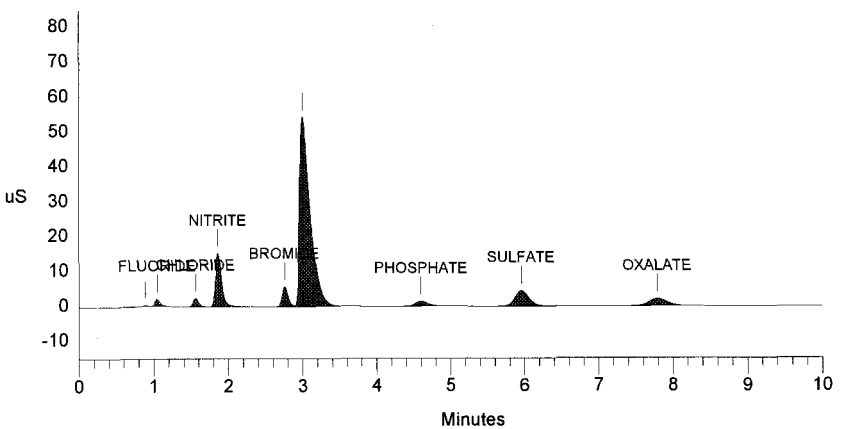
Sample Name: S96T003241 SPIKE Date: 08/20/1996 05:22:39
Data File : C:\DX\DATA\96082081.d28
Method : C:\DX\METHOD\ANIONS.MET
ACI Address: 1 System: 1 Inject#: 28 Detector:CDM-1
Analyst : Column:

Calibration	Volume	Dilution	Points	Rate	Start	Stop	Area	Reject
External	1	41	3000	5Hz	0.00	10.00		200

********** Peak Report: All Peaks **********

Pk. Num	Ret Time	Component Name	Concentration ug/ml	Height	Area	Bl. Code	%Delta
1	0.88		0.000	249	1083	2	
2	1.04	FLUORIDE	22.156	2019	10258	2	0.32
3	1.56	CHLORIDE	39.213	2430	12242	2	-0.43
4	1.86	NITRITE	377.294	15261	86274	2	-1.41
5	2.76	BROMIDE	215.554	5682	32104	2	0.98
6	3.00		0.000	54438	546948	2	
7	4.60	PHOSPHATE	241.780	1388	17308	1	1.92
8	5.96	SULFATE	235.469	4544	59029	1	2.06
9	7.78	OXALATE	204.315	2140	37105	1	2.64
		Totals	1335.780	88151	802349		

File: 96082081.d28 Sample: S96T003241 SPIKE



FILE # 0608266.TXT WHC-SD-WM-DP-192, REV. 0

08/21/96 10:33
A-0004-1

LABCORE Data Entry Template for Worklist# 12177

Analyst: B. Gaeck **Instrument:** ~~ICP01~~ ICP01 **Book#** 608448

Method: LA-505-~~151~~ 161/161 Rev/Mod B-1

Worklist Comment: ICP AW-101 (DIRECT)

S	Type	Sample#	R	A	Test	Matrix	Group#	Project
1	ICV				@ICP-QC	QC		
2	ICB				@ICP-QC	QC		
3	LLS				@ICP-QC	QC		
4	ICSA				@ICP-QC	QC		
5	ICSAB				@ICP-QC	QC		
6	SERDIL	S96T001573	0	D	@ICP-D01	LIQUID		
7	SAMPLE	S96T001573	0	D	@ICP-D01	LIQUID	96000103	AW-101 PUSH
		Analytes Requested:			AG-D-01 , AL-D-01 , AS-D-01 , B-D-01 , BA-D-01 , BE-D-01 , BI-D-01 , CA-D-01 , CD-D-01 , CE-D-01 , CO-D-01 , CR-D-01 , CU-D-01 , FE-D-01 , K-D-01 , LA-D-01 , LI-D-01 , MG-D-01 , MN-D-01 , MO-D-01 , NA-D-01 , ND-D-01 , NI-D-01 , P-D-01 , PB-D-01 , S-D-01 , SB-D-01 , SE-D-01 , SI-D-01 , SM-D-01 , SR-D-01 , TI-D-01 , TL-D-01 , U-D-01 , V-D-01 , ZN-D-01 , ZR-D-01			
8	DUP	S96T001573	0	D	@ICP-D01	LIQUID		
9	SPK	S96T001573	0	D	@ICP-D01	LIQUID		
10	ICSA				@ICP-QC	QC		
11	ICSAB				@ICP-QC	QC		
12	CCV				@ICP-QC	QC		
13	CCB				@ICP-QC	QC		

Data Entry Comments: Raw data is final result in ug/ml.

S96T001573 Ca = 2.38 ug/ml

S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

LABCORE Data Entry Template for Worklist# 12177

S Type	Sample#	R	A	Test	Matrix	Group#	Project

Final page for worklist # 12177

Analyst Signature: [signature] Date: 8-26-96

Reviewed by: Analyst Signature: [signature] Date: 8/27/96

		D.F.
S96T001573_C	Inc-Suc . Inc-Fuc	50
1573	Inc-Suc	10
1573-D	Inc-Fuc	10
1573-A	Inc-Inc-Inc	10

Data Entry Comments: Spike recovery calculation:

S96T001573 Ca = $\left(\frac{13.08}{10}\right) - \left(\frac{2.383}{10}\right) \times 100 = 106.2\ \%$

1

S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

1986

Note: Spike true value is 1.0 ppm for all elements except for U = 2.0 ppm.

Analysis Report Summary Mon 08-26-96 10:13:06 PM page 1

#	Sample Name	File	Method	Date	Time	OpID	Type	Mode
1	ICV	960826G	ICP2	08/26/96	21:34	BJG	Q	CONC
2	ICB	960826G	ICP2	08/26/96	21:37	BJG	Q	CONC
3	LLS	960826G	ICP2	08/26/96	21:40	BJG	Q	CONC
4	ICSA	960826G	ICP2	08/26/96	21:43	BJG	Q	CONC
5	ICSAB	960826G	ICP2	08/26/96	21:45	BJG	Q	CONC
6	S96T001573_L	960826G	ICP2	08/26/96	21:48	BJG	S	CONC
7	S96T001573_	960826G	ICP2	08/26/96	21:51	BJG	S	CONC
8	S96T001573_D	960826G	ICP2	08/26/96	21:54	BJG	S	CONC
9	S96T001573_A	960826G	ICP2	08/26/96	21:56	BJG	S	CONC
10	ICSA	960826G	ICP2	08/26/96	21:59	BJG	Q	CONC
11	ICSAB	960826G	ICP2	08/26/96	22:04	BJG	Q	CONC
12	CCV	960826G	ICP2	08/26/96	22:07	BJG	Q	CONC
13	CCB	960826G	ICP2	08/26/96	22:09	BJG	Q	CONC

8-26-96

AW-101 Hydro. HERA Fluid

Inc-Sol

S96T001573

FILE # 0960826G.TXT

SIGNATURE ABOVE REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 1987 TO 1990.

Analysis Report Averages Mon 08-26-96 10:13:06 PM page 2

#	Sample Name	Ag	Al	As	B	Ba	Be
1	ICV	4.984	4.874	5.155	5.044	4.931	5.115
2	ICB	.0007	-.0100	-.0062	.0034	.0002	.0001
3	LLS	.0209	.0939	.2116	.1058	.0988	.0102
4	ICSA	.0027	238.0	-.0279	-.0096	.0017	.0000
5	ICSAB	.9546	239.4	-.0277	-.0026	.4674	.4692
6	S96T001573_L	.0082	-.3861	-.3899	-.0974	.0890	-.0067
7	S96T001573	-.0007	-.0865	-.1026	.0001	.0906	-.0000
8	S96T001573_D	.0023	-.0639	.0752	-.0243	.0894	.0013
9	S96T001573_A	9.196	9.462	10.21	9.625	9.764	9.860
10	ICSA	.0181	242.1	-.0577	-.0017	.0017	.0002
11	ICSAB	.9593	240.6	-.0105	.0024	.4712	.4708
12	CCV	5.025	4.917	5.193	5.046	5.075	5.145
13	CCB	.0024	-.0053	-.0036	.0025	.0001	.0002

#	Sample Name	Bi	Ca	Cd	Ce	Co	Cr
1	ICV	5.015	5.087	5.039	4.932	5.075	5.059
2	ICB	.0164	.0007	.0009	.0023	.0000	-.0009
3	LLS	.1758	.2149	.0124	.2006	.0444	.0192
4	ICSA	-.0111	249.6	.0007	.0155	.0013	.0096
5	ICSAB	-.0459	250.8	.9306	.0106	.4662	.4747
6	S96T001573_L	-.3043	2.964	.0294	.0231	-.0363	-.0806
7	S96T001573	-.1430	2.383	.0028	.0478	.0115	-.0091
8	S96T001573_D	-.2686	2.290	.0069	.0325	.0092	-.0107
9	S96T001573_A	9.551	13.00	10.03	9.871	9.999	10.05
10	ICSA	-.0018	255.1	.0005	.0081	.0003	.0085
11	ICSAB	-.0023	252.2	.9355	.0129	.4681	.4766
12	CCV	5.165	5.185	5.099	5.061	5.142	5.133
13	CCB	-.0050	.0017	.0005	.0043	-.0004	-.0014

#	Sample Name	Cu	Eu	Fe	K	La	Li
1	ICV	4.813	-.0027	5.029	5.125	4.995	5.047
2	ICB	-.0005	.0004	.0005	.1258	-.0003	.0004
3	LLS	.0200	.0009	.1007	.4551	.1004	.0210
4	ICSA	-.0100	-.0582	92.59	.0433	-.0046	.0033
5	ICSAB	.4687	-.0562	92.76	.0753	-.0059	.9919
6	S96T001573_L	.0338	.0572	.0842	-.2141	-.0322	1441.
7	S96T001573	.0391	.0174	.0038	.2919	.0051	1446.
8	S96T001573_D	.0087	.0235	-.0085	1.723	-.0083	1433.
9	S96T001573_A	9.266	.0101	10.12	13.80	9.934	1477.
10	ICSA	-.0107	-.0613	94.15	-.0706	-.0052	.0080
11	ICSAB	.4715	-.0569	93.20	.1105	-.0043	.9929
12	CCV	4.872	-.0026	5.080	5.294	5.127	5.073
13	CCB	-.0000	.0006	.0002	.1677	-.0007	.0001

Analysis Report Averages Mon 08-26-96 10:13:06 PM page 3

#	Sample Name	Mg	Mn	Mo	Na	Nd	Ni
1	ICV	4.850	4.892	5.045	4.876	5.017	4.999
2	ICB	-.0061	.0002	.0000	-.0018	-.0040	.0008
3	LLS	.1961	.0200	.0966	.2055	.1932	.0490
4	ICSA	243.4	-.0057	-.0063	192.2	.0044	.0033
5	ICSAB	244.6	.4397	-.0070	193.4	.0019	.9104
6	S96T001573_L	.4255	.0024	.0182	5.392	.0112	.4696
7	S96T001573_	.2358	.0079	.0243	5.052	-.0202	.0893
8	S96T001573_D	.1211	.0108	.0228	5.167	-.0487	.0161
9	S96T001573_A	9.557	9.520	10.09	14.84	9.921	10.01
10	ICSA	246.9	-.0058	-.0046	195.7	.0053	-.0040
11	ICSAB	245.3	.4456	-.0113	194.5	.0021	.9215
12	CCV	4.865	4.967	5.106	4.930	5.127	5.077
13	CCB	.0006	.0004	.0019	.0022	-.0020	.0053

#	Sample Name	P	Pb	S	Sb	Se	Si
1	ICV	5.406	4.999	5.096	4.780	4.807	4.794
2	ICB	.0029	-.0197	.0099	.0101	-.0428	.0019
3	LLS	.4139	.2119	.2216	.1058	.1569	.1287
4	ICSA	.0093	.0513	-.0142	-.0055	-.0624	.0008
5	ICSAB	.0123	.9901	-.0165	.0011	-.0440	.0031
6	S96T001573_L	.5589	-.8750	1.463	-.0240	-2.051	3.951
7	S96T001573_	.0290	-.0633	1.393	-.0131	-.1343	3.818
8	S96T001573_D	.0493	-.0340	1.201	.0502	-.2101	3.868
9	S96T001573_A	10.61	9.907	11.27	9.588	9.694	13.51
10	ICSA	.0284	.0408	-.0026	.0123	-.0976	.0033
11	ICSAB	.0049	.9938	-.0284	.0086	-.0962	.0040
12	CCV	5.317	5.092	5.055	4.839	4.856	4.813
13	CCB	.0127	.0012	.0134	.0015	-.0237	.0043

#	Sample Name	Sm	Sr	Th	Ti	Tl	U
1	ICV	4.831	4.886	-.0074	4.871	4.881	9.517
2	ICB	.0031	.0002	-.0017	-.0015	-.0156	.0182
3	LLS	.2099	.0202	-.0035	.0189	.4179	.5319
4	ICSA	.0115	.0016	-.0105	.0005	.0044	.0482
5	ICSAB	.0134	.0017	-.0058	-.0005	-.0126	.0497
6	S96T001573_L	.6019	.0319	-.1613	-.0638	-.0619	2.266
7	S96T001573_	.1771	.0245	-.0475	-.0129	-.3240	.8481
8	S96T001573_D	.2806	.0261	-.0579	-.0155	.0706	1.089
9	S96T001573_A	9.697	9.624	-.0265	9.615	9.216	19.34
10	ICSA	.0109	.0018	-.0029	-.0008	-.0231	.0262
11	ICSAB	.0049	.0018	-.0072	.0005	-.0167	.0198
12	CCV	4.960	4.986	-.0022	4.967	4.908	9.721
13	CCB	.0066	.0003	-.0040	-.0015	.0019	.0359

Analysis Report Averages Mon 08-26-96 10:13:06 PM page 4

#	Sample Name	V	Y	Zn	Zr
1	ICV	5.012	.0062	5.061	4.910
2	ICB	.0005	.0001	-.0013	.0012
3	LLS	.1033	.0007	.0214	.0228
4	ICSA	.0016	.0071	-.0049	.0002
5	ICSAB	.4637	.0071	.9445	-.0006
6	S96T001573_L	.1003	.0226	-.7590	.0996
7	S96T001573_	.0458	.0083	-.7943	.0351
8	S96T001573_D	.0605	.0121	-.8091	.0501
9	S96T001573_A	9.960	.0216	9.441	9.766
10	ICSA	.0018	.0071	-.0044	-.0012
11	ICSAB	.4659	.0072	.9439	-.0009
12	CCV	5.077	.0061	5.076	5.010
13	CCB	.0014	.0002	-.0004	.0021

09/05/96 06:39
A-0004-1

File #: 9609060.TXT

LABCORE Data Entry Template for Worklist# 12663

Analyst: JKSoto **Instrument:** ICP01 JK 9-6-96 **Book#** 60B48B

Method: LA-505-~~151~~/161 Rev/Mod B-1

JK 9-6-96

Worklist Comment: ICP AW-101 (SOLID ACID DIGEST)

S	Type	Sample#	R	A	Test	Matrix	Group#	Project
1	ICV				@ICP-QC	QC		
2	ICB				@ICP-QC	QC		
3	LLS				@ICP-QC	QC		
4	ICSA				@ICP-QC	QC		
5	ICSAB				@ICP-QC	QC		
6	PREPSTDTJA				@ICP-A01	SOLID		
7	PREPBLKTJA				@ICP-A01	SOLID		
8	SERDIL	S96T004496	0	A	@ICP-A01	SOLID		
9	SAMPLE	S96T004496	0	A	@ICP-A01	SOLID	96000462	AW-101 PUSH

Analytes Requested: AG-A-01 , AL-A-01 , AS-A-01 , B-A-01 , BA-A-01 , BE-A-01 , BI-A-01 , CA-A-01 , CD-A-01 , CE-A-01 , CO-A-01 , CR-A-01 , CU-A-01 , FE-A-01 , K-A-01 , LA-A-01 , LI-A-01 , MG-A-01 , MN-A-01 , MO-A-01 , NA-A-01 , ND-A-01 , NI-A-01 , P-A-01 , PB-A-01 , S-A-01 , SB-A-01 , SE-A-01 , SI-A-01 , SM-A-01 , SR-A-01 , TI-A-01 , TL-A-01 , U-A-01 , V-A-01 , ZN-A-01 , ZR-A-01

10	DUP	S96T004496	0	A	@ICP-A01	SOLID		
11	SPK-PREDIG	S96T004496	0	A	@ICP-A01	SOLID		
12	CCV				@ICP-QC	QC		
13	CCB				@ICP-QC	QC		
14	SERDIL	S96T004497	0	A	@ICP-A01	SOLID		
15	SAMPLE	S96T004497	0	A	@ICP-A01	SOLID	96000462	AW-101 PUSH

Analytes Requested: AG-A-01 , AL-A-01 , AS-A-01 , B-A-01 , BA-A-01 ,

Data Entry Comments: Sample result calculation:

S96T004496 $Cd = 0.0499 \frac{ug}{ml} \times \frac{1}{5.690 \frac{g}{L} \times \frac{1L}{1000ml}} = 8.76 \frac{ug}{ml}$

S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

LABCORE Data Entry Template for Worklist# 12663

```
S Type       Sample#     R A  Test      Matrix        Group#   Project
                              BE-A-01 , BI-A-01 , CA-A-01 , CD-A-01 , CE-A-01 , CO-A-01 ,
                              CR-A-01 , CU-A-01 , FE-A-01 , K-A-01  , LA-A-01 , LI-A-01 ,
                              MG-A-01 , MN-A-01 , MO-A-01 , NA-A-01 , ND-A-01 , NI-A-01 ,
                              P-A-01  , PB-A-01 , S-A-01  , SB-A-01 , SE-A-01 , SI-A-01 ,
                              SM-A-01 , SR-A-01 , TI-A-01 , TL-A-01 , U-A-01  , V-A-01  ,
                              ZN-A-01 , ZR-A-01

16 DUP       S96T004497 0 A  @ICP-A01 SOLID

17 SERDIL    S96T004498 0 A  @ICP-A01 SOLID

18 SAMPLE    S96T004498 0 A  @ICP-A01 SOLID         96000462 AW-101 PUSH
        Analytes Requested: AG-A-01 , AL-A-01 , AS-A-01 , B-A-01  , BA-A-01 ,
                              BE-A-01 , BI-A-01 , CA-A-01 , CD-A-01 , CE-A-01 , CO-A-01 ,
                              CR-A-01 , CU-A-01 , FE-A-01 , K-A-01  , LA-A-01 , LI-A-01 ,
                              MG-A-01 , MN-A-01 , MO-A-01 , NA-A-01 , ND-A-01 , NI-A-01 ,
                              P-A-01  , PB-A-01 , S-A-01  , SB-A-01 , SE-A-01 , SI-A-01 ,
                              SM-A-01 , SR-A-01 , TI-A-01 , TL-A-01 , U-A-01  , V-A-01  ,
                              ZN-A-01 , ZR-A-01

19 DUP       S96T004498 0 A  @ICP-A01 SOLID

20 SERDIL    S96T004499 0 A  @ICP-A01 SOLID

21 SAMPLE    S96T004499 0 A  @ICP-A01 SOLID         96000462 AW-101 PUSH
        Analytes Requested: AG-A-01 , AL-A-01 , AS-A-01 , B-A-01  , BA-A-01 ,
                              BE-A-01 , BI-A-01 , CA-A-01 , CD-A-01 , CE-A-01 , CO-A-01 ,
                              CR-A-01 , CU-A-01 , FE-A-01 , K-A-01  , LA-A-01 , LI-A-01 ,
                              MG-A-01 , MN-A-01 , MO-A-01 , NA-A-01 , ND-A-01 , NI-A-01 ,
                              P-A-01  , PB-A-01 , S-A-01  , SB-A-01 , SE-A-01 , SI-A-01 ,
                              SM-A-01 , SR-A-01 , TI-A-01 , TL-A-01 , U-A-01  , V-A-01  ,
                              ZN-A-01 , ZR-A-01

22 DUP       S96T004499 0 A  @ICP-A01 SOLID

23 CCV                       @ICP-QC  QC

24 CCB                       @ICP-QC  QC

25 SERDIL    S96T004500 0 A  @ICP-A01 SOLID

26 SAMPLE    S96T004500 0 A  @ICP-A01 SOLID         96000462 AW-101 PUSH
        Analytes Requested: AG-A-01 , AL-A-01 , AS-A-01 , B-A-01  , BA-A-01 ,
                              BE-A-01 , BI-A-01 , CA-A-01 , CD-A-01 , CE-A-01 , CO-A-01 ,
```

Data Entry Comments:

S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

LABCORE Data Entry Template for Worklist# 12663

S	Type	Sample#	R	A	Test	Matrix	Group#	Project
					CR-A-01 , CU-A-01 , FE-A-01 , K-A-01 , LA-A-01 , LI-A-01 , MG-A-01 , MN-A-01 , MO-A-01 , NA-A-01 , ND-A-01 , NI-A-01 , P-A-01 , PB-A-01 , S-A-01 , SB-A-01 , SE-A-01 , SI-A-01 , SM-A-01 , SR-A-01 , TI-A-01 , TL-A-01 , U-A-01 , V-A-01 , ZN-A-01 , ZR-A-01			
27	DUP	S96T004500	0	A	@ICP-A01	SOLID		
28	ICSA				@ICP-QC	QC		
29	ICSAB				@ICP-QC	QC		
30	CCV				@ICP-QC	QC		
31	CCB				@ICP-QC	QC		

Final page for worklist # 12663

JK 09-06-96
Analyst Signature **Date**

Reviewed by: Saul M. Perry 9/9/96
Analyst Signature **Date**

Prepsfl TJa, direct
Prepblk TJa, direct

S96T004496_L, 4-4-2-8, DF 10
S96T004496 4-4 2
S96T004496_D 4-4 2
S96T004496_S 4-4 2

S96T004497_L, 4-4-2-8, DF 10
S96T004497 4-4 2
S96T004497_D 4-4 2

S96T004498_L, 4-4-2-8, DF 10
S96T004498 4-4 2
S96T004498_D 4-4 2

S96T004499_L, 4-4-2-8, DF 10
S96T004499 4-4 2
S96T004499_D 4-4 2

S96T004500_L, 4-4-2-8, DF 10
S96T004500 4-4 2
S96T004500_D 4-4 2

Data Entry Comments: Spike recovery calculation:

S96T004496 Cd = $\frac{3.152 - 0.0499}{5} \times 100 = 62.0\ \%$

S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

Note: This is a second prep. The prep STD and the pre-dig spike has still low recovery (< 80%) which is better than the first prep.

Analysis Report Summary Fri 09-06-96 12:02:31 PM page 1

#	Sample Name	File	Method	Date	Time	OpID	Type	Mode
1	ICV	960906A	ICP2	09/06/96	09:33	DKS	Q	CONC
2	ICB	960906A	ICP2	09/06/96	09:36	DKS	Q	CONC
3	LLS	960906A	ICP2	09/06/96	09:39	DKS	Q	CONC
4	ICSA	960906A	ICP2	09/06/96	09:42	DKS	Q	CONC
5	ICSAB	960906A	ICP2	09/06/96	09:46	DKS	Q	CONC
6	PREPSTDTJA DK 9-6-96	960906A	ICP2	09/06/96	09:49	DKS	S	CONC
~~7~~	~~PREPSTDTJA~~	~~960906A~~	~~ICP2~~	~~09/06/96~~	~~10:10~~	~~DKS~~	~~S~~	~~CONC~~
8	PREPBLKTJA	960906A	ICP2	09/06/96	10:41	DKS	S	CONC
9	S96T004496_L	960906A	ICP2	09/06/96	10:46	DKS	S	CONC
10	S96T004496	960906A	ICP2	09/06/96	10:49	DKS	S	CONC
11	S96T004496_D	960906A	ICP2	09/06/96	10:52	DKS	S	CONC
12	S96T004496_S	960906A	ICP2	09/06/96	10:54	DKS	S	CONC
13	CCV	960906A	ICP2	09/06/96	10:58	DKS	Q	CONC
14	CCB	960906A	ICP2	09/06/96	11:01	DKS	Q	CONC
15	S96T004497_L	960906A	ICP2	09/06/96	11:04	DKS	S	CONC
16	S96T004497	960906A	ICP2	09/06/96	11:07	DKS	S	CONC
17	S96T004497_D	960906A	ICP2	09/06/96	11:10	DKS	S	CONC
18	S96T004498_L	960906A	ICP2	09/06/96	11:13	DKS	S	CONC
19	S96T004498	960906A	ICP2	09/06/96	11:16	DKS	S	CONC
20	S96T004498_D	960906A	ICP2	09/06/96	11:19	DKS	S	CONC
21	S96T004499_L	960906A	ICP2	09/06/96	11:22	DKS	S	CONC
22	S96T004499	960906A	ICP2	09/06/96	11:24	DKS	S	CONC
23	S96T004499_D	960906A	ICP2	09/06/96	11:27	DKS	S	CONC
24	CCV_1	960906A	ICP2	09/06/96	11:32	DKS	Q	CONC
25	CCB_2	960906A	ICP2	09/06/96	11:35	DKS	Q	CONC
26	S96T004500_L	960906A	ICP2	09/06/96	11:38	DKS	S	CONC
27	S96T004500	960906A	ICP2	09/06/96	11:41	DKS	S	CONC
28	S96T004500_D	960906A	ICP2	09/06/96	11:44	DKS	S	CONC
29	ICSA	960906A	ICP2	09/06/96	11:49	DKS	Q	CONC
30	ICSAB	960906A	ICP2	09/06/96	11:51	DKS	Q	CONC
31	CCV_2	960906A	ICP2	09/06/96	11:55	DKS	Q	CONC
32	CCB_2	960906A	ICP2	09/06/96	11:59	DKS	Q	CONC

DK 9-6-96
09-06-96
QW-101

S96T004496
S96T004497
S96T004498
S96T004499
S96T004500

Worklist # 12663

SIGNATURE ABOVE REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 1994 TO 1998.

Analysis Report Averages Fri 09-06-96 12:08:23 PM page 2

#	Sample Name	Ag	Al	As	B	Ba	Be
1	ICV	5.001	4.911	5.203	5.048	4.951	5.151
2	ICB	-.0001	-.0044	.0057	.0068	.0000	.0002
3	LLS	.0221	.1027	.2127	.0985	.0997	.0104
4	ICSA	.0023	241.6	-.0294	.0002	.0021	.0003
5	ICSAB	.9576	241.0	-.0095	-.0016	.4607	.4744
6	PREPSTDTJA DK 9-4-96	.7881	3.932	4.060	4.925	3.935	4.126
~~7~~	~~PREPSTDTJA~~	~~.6843~~	~~3.476~~	~~3.525~~	~~5.275~~	~~3.385~~	~~3.577~~
8	PREPBLKTJA	-.0015	.0393	.0009	.0853	-.0002	.0002
9	S96T004496_L	.1307	103.4	-.0226	.6362	.0170	.0104
10	S96T004496	.1213	98.94	-.0314	.6362	.0211	.0093
11	S96T004496_D	.1048	86.78	-.0564	.9890	.0179	.0083
12	S96T004496_S	.7416	93.47	3.251	6.045	3.070	3.196
13	CCV	5.045	4.960	5.274	5.129	4.943	5.255
14	CCB	.0000	-.0021	-.0077	.0024	.0000	.0003
15	S96T004497_L	.1535	87.69	-.1401	.6514	.0206	.0115
16	S96T004497	.1420	83.78	-.1095	.5922	.0235	.0079
17	S96T004497_D	.1430	87.10	-.1274	.8578	.0229	.0082
18	S96T004498_L	.0924	99.77	-.1768	.8152	.0055	.0113
19	S96T004498	.0896	95.32	-.1570	.7763	.0096	.0095
20	S96T004498_D	.0910	99.94	-.1278	.9130	.0098	.0095
21	S96T004499_L	.0773	33.97	.0323	.9311	.0012	.0061
22	S96T004499	.0731	31.95	-.0312	.8797	.0043	.0035
23	S96T004499_D	.0736	31.45	-.0252	.7479	.0047	.0033
24	CCV_1	5.075	4.982	5.332	5.185	4.997	5.262
25	CCB_2	-.0004	.0043	.0009	-.0005	.0001	.0001
26	S96T004500_L	.0627	53.10	-.1719	.4703	-.0032	.0083
27	S96T004500	.0578	50.38	-.0513	.4520	.0011	.0054
28	S96T004500_D	.0616	46.40	-.0795	.8757	.0011	.0049
29	ICSA	.0028	248.3	-.0355	-.0068	.0022	.0005
30	ICSAB	.9658	246.6	-.0560	-.0036	.4704	.4889
31	CCV_2	5.097	5.015	5.333	5.155	5.044	5.318
32	CCB_2	.0001	.0074	.0072	.0034	.0000	.0003

#	Sample Name	Bi	Ca	Cd	Ce	Co	Cr
1	ICV	5.137	5.025	5.081	4.963	5.090	5.091
2	ICB	-.0063	-.0022	-.0005	-.0004	-.0011	-.0023
3	LLS	.2042	.2141	.0096	.2097	.0395	.0211
4	ICSA	-.0370	248.3	.0003	.0124	.0000	.0064
5	ICSAB	-.0288	250.4	.9397	.0163	.4667	.4761
6	PREPSTDTJA DK 9-4-93	3.849	4.113	3.873	4.054	4.007	3.941
~~7~~	~~PREPSTDTJA~~	~~3.321~~	~~4.455~~	~~3.373~~	~~3.499~~	~~3.490~~	~~3.415~~
8	PREPBLKTJA	-.0323	.1901	.0005	-.0001	.0008	.0021
9	S96T004496_L	-.1521	3.000	.0503	.0169	.0101	2.403
10	S96T004496	-.0333	2.863	.0499	.0111	.0081	2.306
11	S96T004496_D	-.0388	1.373	.0410	.0129	.0045	2.068
12	S96T004496_S	3.094	5.269	3.152	3.200	3.181	5.251
13	CCV	5.133	5.110	5.115	4.967	5.137	5.147
14	CCB	-.0172	.0018	-.0002	-.0015	-.0006	-.0016
15	S96T004497_L	-.0256	1.286	.0370	.0814	-.0113	2.208
16	S96T004497	.0157	1.268	.0375	.0166	.0036	2.113
17	S96T004497_D	.0046	1.441	.0419	.0166	.0077	2.124

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#	Sample Name	Bi	Ca	Cd	Ce	Co	Cr
18	S96T004498_L	-.1229	.7008	.0297	.0311	-.0008	1.036
19	S96T004498	-.0273	.6910	.0222	.0123	.0012	.9876
20	S96T004498_D	-.0302	.6119	.0208	.0154	.0012	1.019
21	S96T004499_L	-.2294	.3880	.0040	.0933	-.0048	.3396
22	S96T004499	-.0263	.3866	.0085	.0085	-.0043	.3121
23	S96T004499_D	-.0418	.4831	.0097	.0080	-.0004	.3361
24	CCV_1	5.190	5.118	5.158	5.037	5.184	5.175
25	CCB_2	-.0264	-.0014	-.0001	-.0004	-.0009	-.0022
26	S96T004500_L	-.0515	.4363	.0117	.0398	-.0051	.2330
27	S96T004500	.0142	.4485	.0055	.0109	.0006	.2295
28	S96T004500_D	-.0188	.7460	.0074	.0154	-.0001	.2157
29	ICSA	-.0225	251.6	.0010	.0081	-.0007	.0056
30	ICSAB	-.0324	249.8	.9407	.0105	.4673	.4767
31	CCV_2	5.190	5.185	5.175	5.101	5.192	5.209
32	CCB_2	-.0098	.0015	-.0001	.0070	-.0006	-.0010

#	Sample Name	Cu	Eu	Fe	K	La	Li
1	ICV	4.828	-.0018	5.054	4.798	5.041	5.064
2	ICB	-.0009	-.0003	-.0004	-.1657	-.0010	-.0005
3	LLS	.0206	.0004	.1030	.3962	.1034	.0213
4	ICSA	-.0110	-.0384	93.15	.0256	-.0043	.0028
5	ICSAB	.4684	-.0408	93.39	-.0401	-.0042	1.003
6	PREPSTDTJA 9-6-96	3.906	-.0028	4.002	3.735	4.047	4.096
~~7~~	~~PREPSTDTJA~~	~~3.382~~	~~-.0019~~	~~3.441~~	~~3.391~~	~~3.494~~	~~3.529~~
8	PREPBLKTJA	.0100	-.0020	.0602	-.0821	-.0020	-.0021
9	S96T004496_L	.1614	-.0024	1.544	150.5	.0136	.0011
10	S96T004496	.1642	-.0013	1.498	148.6	.0206	.0006
11	S96T004496_D	.1592	-.0017	1.336	124.8	.0184	.0023
12	S96T004496_S	3.207	-.0009	4.396	149.5	3.202	3.250
13	CCV	4.868	-.0017	5.111	4.912	5.046	5.122
14	CCB	-.0007	-.0004	.0011	-.2691	-.0012	.0001
15	S96T004497_L	.0512	-.0117	1.868	142.0	.0199	.0499
16	S96T004497	.0458	-.0035	1.799	135.5	.0232	.0511
17	S96T004497_D	.0513	-.0020	1.542	135.1	.0244	.0516
18	S96T004498_L	.0295	-.0010	.7295	139.1	.0038	.0366
19	S96T004498	.0297	-.0033	.7163	133.9	.0059	.0313
20	S96T004498_D	.0314	-.0032	.6159	140.1	.0067	.0322
21	S96T004499_L	.0218	-.0065	.3201	493.6	.0081	.0722
22	S96T004499	.0145	-.0027	.3203	473.4	.0028	.0717
23	S96T004499_D	.0163	-.0019	.3524	527.7	.0039	.0796
24	CCV_1	5.262	-.0022	5.139	4.953	5.117	5.154
25	CCB_2	-.0009	-.0007	-.0004	-.2978	-.0012	-.0002
26	S96T004500_L	.0205	-.0116	.4442	474.1	-.0055	.2119
27	S96T004500	.0203	-.0020	.4449	453.5	-.0013	.2136
28	S96T004500_D	.0275	-.0019	.3963	429.9	-.0003	.2097
29	ICSA	-.0108	-.0381	95.29	-.0546	-.0054	.0017
30	ICSAB	.4853	-.0349	94.43	-.1541	-.0053	1.043
31	CCV_2	4.935	-.0018	5.169	4.992	5.167	5.177
32	CCB_2	-.0002	-.0006	-.0002	-.1458	-.0001	-.0007

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#	Sample Name	Mg	Mn	Mo	Na	Nd	Ni
1	ICV	4.876	4.948	5.069	4.913	5.051	5.058
2	ICB	-.0099	-.0001	.0036	-.0043	-.0053	-.0055
3	LLS	.1953	.0197	.0986	.2044	.1983	.0428
4	ICSA	245.4	-.0060	-.0083	193.9	-.0020	-.0106
5	ICSAB	245.6	.4420	-.0111	193.0	-.0025	.9205
6	PREPSTDTJA 18 9-9-96	3.726	3.831	4.702	4.667	4.008	4.002
~~7~~	~~PREPSTDTJA~~	~~3.222~~	~~3.319~~	~~4.537~~	~~4.487~~	~~3.459~~	~~3.471~~
8	PREPBLKTJA	.0189	.0000	-.0014	.4391	-.0047	-.0053
9	S96T004496_L	.1216	1.016	.2004	1036.	-.0340	.2654
10	S96T004496	.1751	.9672	.2162	995.9	.0036	.2488
11	S96T004496_D	.1423	.8013	.1851	851.3	.0017	.2144
12	S96T004496_S	3.050	3.852	5.174	889.2	3.126	3.397
13	CCV	4.930	4.984	5.116	4.960	5.051	5.091
14	CCB	-.0076	-.0001	.0071	-.0026	-.0062	.0021
15	S96T004497_L	.2123	1.448	.1883	936.2	-.0332	.2062
16	S96T004497	.2596	1.383	.1751	895.9	.0136	.2233
17	S96T004497_D	.2617	1.364	.1862	900.1	.0126	.2212
18	S96T004498_L	.0315	.5287	.1948	912.5	-.0432	.1021
19	S96T004498	.1204	.5021	.2007	881.6	-.0117	.1150
20	S96T004498_D	.1082	.5128	.2014	905.0	.0024	.1249
21	S96T004499_L	.0623	.2613	.0751	922.9	-.0193	.0403
22	S96T004499	.0364	.2466	.0707	878.5	-.0162	.0611
23	S96T004499_D	.0851	.2601	.0660	851.7	-.0023	.0583
24	CCV_1	4.953	5.000	5.142	4.963	5.119	5.103
25	CCB_2	-.0087	-.0003	-.0007	-.0056	-.0048	-.0056
26	S96T004500_L	-.0162	.0220	.1304	847.5	-.0483	.0141
27	S96T004500	.0333	.0250	.1068	802.6	-.0099	.0305
28	S96T004500_D	.0358	.0239	.0977	844.9	-.0061	.0229
29	ICSA	253.1	-.0068	-.0111	200.2	-.0036	-.0137
30	ICSAB	251.0	.4432	-.0113	199.1	-.0048	.9161
31	CCV_2	4.977	5.039	5.175	4.992	5.165	5.139
32	CCB_2	-.0071	-.0001	.0041	-.0090	-.0044	.0014

#	Sample Name	P	Pb	S	Sb	Se	Si
1	ICV	5.173	5.044	5.000	4.817	4.878	4.788
2	ICB	.0181	-.0065	-.0114	-.0109	-.0175	.0019
3	LLS	.4028	.2007	.1977	.0829	.1919	.1164
4	ICSA	.0213	.0100	-.0486	-.0024	-.0428	-.0036
5	ICSAB	.0182	.9772	-.0368	-.0172	-.0152	-.0029
6	PREPSTDTJA 18 9-9-96	4.926	3.717	4.673	4.587	3.741	6.336
~~7~~	~~PREPSTDTJA~~	~~4.539~~	~~3.260~~	~~4.452~~	~~4.427~~	~~3.216~~	~~7.468~~
8	PREPBLKTJA	.0335	.0085	.0573	-.0075	.0206	.1626
9	S96T004496_L	18.34	.2677	17.81	-.1081	.0698	2.621
10	S96T004496	17.06	.2895	17.08	-.0244	.0188	2.510
11	S96T004496_D	10.81	.2732	14.31	-.0249	.0276	2.855
12	S96T004496_S	17.74	3.316	20.11	4.969	3.083	8.444
13	CCV	5.275	5.085	5.089	4.875	4.956	4.826
14	CCB	.0221	-.0128	.0036	-.0109	.0075	-.0026
15	S96T004497_L	11.61	.1417	6.735	-.1256	-.0729	1.940
16	S96T004497	10.92	.2255	6.405	-.0308	.0279	1.892
17	S96T004497_D	8.934	.2857	6.630	-.0321	.0470	2.123

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#	Sample Name	P	Pb	S	Sb	Se	Si
18	S96T004498_L	3.127	.1996	3.050	-.0380	.1251	2.029
19	S96T004498	2.836	.1944	2.917	-.0189	.0224	1.902
20	S96T004498_D	3.202	.2254	3.071	-.0631	.0480	2.047
21	S96T004499_L	3.343	37.46	1.540	.3406	.0078	8.668
22	S96T004499	3.157	34.69	1.497	.3793	.0393	8.149
23	S96T004499_D	3.540	32.92	1.622	.3715	.0291	6.787
24	CCV_1	5.174	5.084	5.060	4.914	5.016	5.026
25	CCB_2	.0253	-.0121	-.0069	-.0159	.0128	.0357
26	S96T004500_L	4.830	.0285	.7678	-.0475	-.0103	2.036
27	S96T004500	4.795	.0842	.7333	-.0161	.0404	1.706
28	S96T004500_D	4.763	.0962	.7272	-.0183	.0340	1.936
29	ICSA	.0155	.0183	-.0386	.0007	-.0655	-.0001
30	ICSAB	.0235	.9671	-.0374	.0037	-.0406	-.0022
31	CCV_2	5.216	5.149	5.078	4.935	4.982	4.888
32	CCB_2	.0149	-.0067	.0102	-.0065	.0210	.0087

#	Sample Name	Sm	Sr	Th	Ti	Tl	U
1	ICV	4.875	4.913	.0284	4.866	4.957	9.558
2	ICB	-.0012	.0001	-.0013	-.0010	.0100	-.0188
3	LLS	.2071	.0205	.0005	.0189	.4005	.4974
4	ICSA	.0015	.0017	.0000	.0002	-.0050	-.0035
5	ICSAB	.0073	.0016	.0039	.0008	-.0055	-.0195
6	PREPSTDTJA 4-7-96	3.921	3.933	.0282	4.347	3.757	7.698
~~7~~	~~PREPSTDTJA~~	~~3.372~~	~~3.397~~	~~.0270~~	~~4.179~~	~~3.218~~	~~6.632~~
8	PREPBLKTJA	-.0243	-.0001	.0025	.0003	-.0061	-.0938
9	S96T004496_L	-.0306	.0193	.0145	-.0089	.0140	3.059
10	S96T004496	-.0312	.0178	.0214	.0059	.0300	2.970
11	S96T004496_D	-.0195	.0150	.0191	.0037	.0156	2.520
12	S96T004496_S	3.068	3.094	.0424	4.561	2.939	8.708
13	CCV	4.879	4.939	.0289	4.929	4.932	9.593
14	CCB	-.0030	.0001	.0022	-.0002	-.0020	-.0159
15	S96T004497_L	-.1432	.0181	.0765	-.0003	-.1945	5.547
16	S96T004497	-.0297	.0187	.0297	.0069	-.0165	5.770
17	S96T004497_D	-.0058	.0186	.0355	.0080	-.0253	5.669
18	S96T004498_L	.0094	.0075	.0172	-.0059	-.1491	2.145
19	S96T004498	-.0414	.0065	.0177	.0005	-.0490	1.903
20	S96T004498_D	-.0303	.0066	.0147	.0039	-.0295	1.948
21	S96T004499_L	-.0514	.0030	.0695	-.0026	-.1840	.6391
22	S96T004499	-.0291	.0033	.0202	.0001	-.0091	.7778
23	S96T004499_D	-.0138	.0036	.0213	.0011	-.0140	.8563
24	CCV_1	4.944	4.998	.0384	4.984	4.952	9.758
25	CCB_2	-.0064	-.0000	.0018	-.0010	-.0247	-.0390
26	S96T004500_L	-.1559	-.0010	.0180	-.0121	-.1765	-.6817
27	S96T004500	-.0340	.0005	.0046	-.0014	.0068	-.2006
28	S96T004500_D	-.0271	.0006	.0235	.0001	-.0481	-.1866
29	ICSA	-.0107	.0016	.0035	-.0007	-.0288	-.0652
30	ICSAB	-.0103	.0016	.0068	-.0007	.0212	-.0609
31	CCV_2	4.994	5.044	.0404	5.023	4.993	9.808
32	CCB_2	-.0043	.0000	.0065	-.0005	-.0092	-.0244

FILE No.: 960905A.TXT

09/05/96 06:48
A-0004-1

LABCORE Data Entry Template for Worklist# 12664

Analyst: J. WORRELL **Instrument:** ICP~~012~~ JW 9-5-96 **Book#** 60848B

Method: LA-505-~~151~~/161 Rev/Mod B-1 JW 9-5-96

Worklist Comment: ICP AW-101 (SOLID ACID DIGEST)

S	Type	Sample#	R	A	Test	Matrix	Group#	Project
1	ICV				@ICP-QC	QC		
2	ICB				@ICP-QC	QC		
3	LLS				@ICP-QC	QC		
4	ICSA				@ICP-QC	QC		
5	ICSAB				@ICP-QC	QC		
6	PREPSTDTJA				@ICP-A01	SOLID		
7	PREPBLKTJA				@ICP-A01	SOLID		
8	SERDIL	S96T004501	0	A	@ICP-A01	SOLID		
9	SAMPLE	S96T004501	0	A	@ICP-A01	SOLID	96000462	AW-101 PUSH

Analytes Requested: AG-A-01 , AL-A-01 , AS-A-01 , B-A-01 , BA-A-01 , BE-A-01 , BI-A-01 , CA-A-01 , CD-A-01 , CE-A-01 , CO-A-01 , CR-A-01 , CU-A-01 , FE-A-01 , K-A-01 , LA-A-01 , LI-A-01 , MG-A-01 , MN-A-01 , MO-A-01 , NA-A-01 , ND-A-01 , NI-A-01 , P-A-01 , PB-A-01 , S-A-01 , SB-A-01 , SE-A-01 , SI-A-01 , SM-A-01 , SR-A-01 , TI-A-01 , TL-A-01 , U-A-01 , V-A-01 , ZN-A-01 , ZR-A-01

10	DUP	S96T004501	0	A	@ICP-A01	SOLID		
11	SPK-PREDIG	S96T004501	0	A	@ICP-A01	SOLID		
12	CCV				@ICP-QC	QC		
13	CCB				@ICP-QC	QC		
14	SERDIL	S96T004502	0	A	@ICP-A01	SOLID		
15	SAMPLE	S96T004502	0	A	@ICP-A01	SOLID	96000462	AW-101 PUSH

Analytes Requested: AG-A-01 , AL-A-01 , AS-A-01 , B-A-01 , BA-A-01 ,

Data Entry Comments: Sample result calculation:

S96T004501 $Cr = 0.1557 \frac{ug}{ml} \times \frac{1}{4.912 \frac{g}{L} \times \frac{1L}{1000ml}} = 3.17e+1 \frac{ug}{g}$

S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

Note: 4.912 g/L is single prep dilution factor which can be found in single prep worklist.

1999

LABCORE Data Entry Template for Worklist# 12664

```
S Type       Sample#     R A  Test      Matrix        Group#    Project
                              BE-A-01 , BI-A-01 , CA-A-01 , CD-A-01 , CE-A-01 , CO-A-01 ,
                              CR-A-01 , CU-A-01 , FE-A-01 , K-A-01  , LA-A-01 , LI-A-01 ,
                              MG-A-01 , MN-A-01 , MO-A-01 , NA-A-01 , ND-A-01 , NI-A-01 ,
                              P-A-01  , PB-A-01 , S-A-01  , SB-A-01 , SE-A-01 , SI-A-01 ,
                              SM-A-01 , SR-A-01 , TI-A-01 , TL-A-01 , U-A-01  , V-A-01  ,
                              ZN-A-01 , ZR-A-01

16 DUP       S96T004502 0 A  @ICP-A01 SOLID

17 SERDIL    S96T004503 0 A  @ICP-A01 SOLID

18 SAMPLE    S96T004503 0 A  @ICP-A01 SOLID         96000462 AW-101 PUSH
           Analytes Requested: AG-A-01 , AL-A-01 , AS-A-01 , B-A-01  , BA-A-01 ,
                              BE-A-01 , BI-A-01 , CA-A-01 , CD-A-01 , CE-A-01 , CO-A-01 ,
                              CR-A-01 , CU-A-01 , FE-A-01 , K-A-01  , LA-A-01 , LI-A-01 ,
                              MG-A-01 , MN-A-01 , MO-A-01 , NA-A-01 , ND-A-01 , NI-A-01 ,
                              P-A-01  , PB-A-01 , S-A-01  , SB-A-01 , SE-A-01 , SI-A-01 ,
                              SM-A-01 , SR-A-01 , TI-A-01 , TL-A-01 , U-A-01  , V-A-01  ,
                              ZN-A-01 , ZR-A-01

19 DUP       S96T004503 0 A  @ICP-A01 SOLID

20 SERDIL    S96T004504 0 A  @ICP-A01 SOLID

21 SAMPLE    S96T004504 0 A  @ICP-A01 SOLID         96000462 AW-101 PUSH
           Analytes Requested: AG-A-01 , AL-A-01 , AS-A-01 , B-A-01  , BA-A-01 ,
                              BE-A-01 , BI-A-01 , CA-A-01 , CD-A-01 , CE-A-01 , CO-A-01 ,
                              CR-A-01 , CU-A-01 , FE-A-01 , K-A-01  , LA-A-01 , LI-A-01 ,
                              MG-A-01 , MN-A-01 , MO-A-01 , NA-A-01 , ND-A-01 , NI-A-01 ,
                              P-A-01  , PB-A-01 , S-A-01  , SB-A-01 , SE-A-01 , SI-A-01 ,
                              SM-A-01 , SR-A-01 , TI-A-01 , TL-A-01 , U-A-01  , V-A-01  ,
                              ZN-A-01 , ZR-A-01

22 DUP       S96T004504 0 A  @ICP-A01 SOLID

23 CCV                       @ICP-QC  QC

24 CCB                       @ICP-QC  QC

25 SERDIL    S96T004505 0 A  @ICP-A01 SOLID

26 SAMPLE    S96T004505 0 A  @ICP-A01 SOLID         96000462 AW-101 PUSH
           Analytes Requested: AG-A-01 , AL-A-01 , AS-A-01 , B-A-01  , BA-A-01 ,
                              BE-A-01 , BI-A-01 , CA-A-01 , CD-A-01 , CE-A-01 , CO-A-01 ,
```

Data Entry Comments:

S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code

2000

LABCORE Data Entry Template for Worklist# 12664

S	Type	Sample#	R	A	Test	Matrix	Group#	Project
					CR-A-01 , CU-A-01 , FE-A-01 , K-A-01 , LA-A-01 , LI-A-01 , MG-A-01 , MN-A-01 , MO-A-01 , NA-A-01 , ND-A-01 , NI-A-01 , P-A-01 , PB-A-01 , S-A-01 , SB-A-01 , SE-A-01 , SI-A-01 , SM-A-01 , SR-A-01 , TI-A-01 , TL-A-01 , U-A-01 , V-A-01 , ZN-A-01 , ZR-A-01			
27	DUP	S96T004505	0	A	@ICP-A01	SOLID		
28	ICSA				@ICP-QC	QC		
29	ICSAB				@ICP-QC	QC		
30	CCV				@ICP-QC	QC		
31	CCB				@ICP-QC	QC		

Final page for worklist # 12664

Analyst Signature	Date		DR
[signature]	9-5-96		
PREPSTDTJA		DIRECT	1
PREPBLKTJA		DIRECT	1
S96T004501	DIL 5X	5-5-2-8	10
	SAM	5-5	2
	DUP	5-5	2
	DIGSPK	5-5	2
S96T004502	DIL 5X	5-5-2-8	10
	SAM	5-5	2
	DUP	5-5	2
S96T004503	DIL 5X	5-5-2-8	10
	SAM	5-5	2
	DUP	5-5	2
S96T004504	DIL 5X	5-5-2-8	10
	SAM	5-5	2
	DUP	5-5	2

Reviewed by: [signature] 9/9/96

Analyst Signature		Date	DR
S96T004505	DIL 5X	5-5-2-8	10
	SAM	5-5	2
	DUP	5-5	2

Data Entry Comments: Spike recovery calculation:

S96T004501 $Cr = \frac{4.786 - 0.1557}{5} \times 100 = 92.6\%$

S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

Note: true spike is 5.0 ppm for all elements except for Ag = 1.0 ppm and Cu = 10.0 ppm.

Analysis Report *Summary* *Thu 09-05-96 08:31:29 PM* *page 1*

#	Sample Name	File	Method	Date	Time	OpID	Type	Mode
1	ICV	960905A	ICP2	09/05/96	16:47	JHW	Q	CONC
2	ICB	960905A	ICP2	09/05/96	16:50	JHW	Q	CONC
3	LLS	960905A	ICP2	09/05/96	16:53	JHW	Q	CONC
4	ICSA	960905A	ICP2	09/05/96	16:57	JHW	Q	CONC
5	ICSAB	960905A	ICP2	09/05/96	17:00	JHW	Q	CONC
6	PREPSTDTJA	960905A	ICP2	09/05/96	17:15	JHW	S	CONC
7	PREPBLKTJA	960905A	ICP2	09/05/96	17:21	JHW	S	CONC
8	S96T004501_L	960905A	ICP2	09/05/96	17:36	JHW	S	CONC
9	S96T004501	960905A	ICP2	09/05/96	17:39	JHW	S	CONC
10	S96T004501_D	960905A	ICP2	09/05/96	17:43	JHW	S	CONC
11	S96T004501_S	960905A	ICP2	09/05/96	17:46	JHW	S	CONC
12	CCV	960905A	ICP2	09/05/96	19:13	JHW	Q	CONC
13	CCB	960905A	ICP2	09/05/96	19:16	JHW	Q	CONC
14	S96T004502_L	960905A	ICP2	09/05/96	19:19	JHW	S	CONC
15	S96T004502	960905A	ICP2	09/05/96	19:22	JHW	S	CONC
16	S96T004502	960905A	ICP2	09/05/96	19:28	JHW	S	CONC
17	S96T004503_L	960905A	ICP2	09/05/96	19:32	JHW	S	CONC
18	S96T004503	960905A	ICP2	09/05/96	19:37	JHW	S	CONC
19	S96T004503_D	960905A	ICP2	09/05/96	19:41	JHW	S	CONC
20	S96T004504_L	960905A	ICP2	09/05/96	19:45	JHW	S	CONC
21	S96T004504	960905A	ICP2	09/05/96	19:48	JHW	S	CONC
22	S96T004504_D	960905A	ICP2	09/05/96	19:51	JHW	S	CONC
23	CCV	960905A	ICP2	09/05/96	19:55	JHW	Q	CONC
24	CCB	960905A	ICP2	09/05/96	19:58	JHW	Q	CONC
25	S96T004505_L	960905A	ICP2	09/05/96	20:02	JHW	S	CONC
26	S96T004505	960905A	ICP2	09/05/96	20:06	JHW	S	CONC
27	S96T004505_D	960905A	ICP2	09/05/96	20:09	JHW	S	CONC
28	ICSA	960905A	ICP2	09/05/96	20:13	JHW	Q	CONC
29	ICSAB	960905A	ICP2	09/05/96	20:17	JHW	Q	CONC
30	CCV	960905A	ICP2	09/05/96	20:20	JHW	Q	CONC
31	CCB	960905A	ICP2	09/05/96	20:24	JHW	Q	CONC

John Worrell
9-5-96

FILE No. 960905A.TXT

SST5- 60B48B

AW-101 ACID DIG

S96T004501, 02, 03, 04, 05

SIGNATURE ABOVE REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 2002 TO 2007.

09/05/96 19:44 ☎509 372 2929 WESTINGHOUSE →→→ MO-924 200W ☑004

Analysis Report Averages Thu 09-05-96 08:31:29 PM page 2

#	Sample Name	Ag	Al	As	B	Ba	Be
1	ICV	4.963	4.884	5.134	4.980	5.006	5.127
2	ICB	.0007	.0081	-.0003	.0014	.0003	.0004
3	LLS	.0205	.1036	.1936	.1042	.1002	.0104
4	ICSA	.0023	240.5	-.0636	-.0016	.0025	.0005
5	ICSAB	.9531	240.6	-.0455	-.0063	.4739	.4738
6	PREPSTDTJA	.0896	4.798	4.940	4.862	4.868	4.899
7	PREPBLKTJA	.0004	.0501	-.0041	.0207	-.0000	.0004
8	S96T004501_L	.0617	40.21	-.0303	.1637	-.0028	.0075
9	S96T004501_	.0599	39.42	-.0476	.1600	.0002	.0042
10	S96T004501_D	.0616	31.98	-.0525	.3152	.0003	.0033
11	S96T004501_S	.5435	41.20	4.885	4.756	4.681	4.729
12	CCV	4.942	4.847	5.137	4.931	4.959	5.092
13	CCB	.0003	.0076	-.0004	.0005	.0002	.0003
14	S96T004502_L	.0663	47.28	-.0048	.2602	-.0023	.0071
15	S96T004502_	.0666	45.72	-.0696	.2362	.0006	.0047
16	S96T004502	.0631	56.20	-.0728	.2642	.0008	.0053
17	S96T004503_L	.0595	77.31	-.1801	.5061	-.0023	.0075
18	S96T004503_	.0604	75.02	-.1560	.5467	.0009	.0075
19	S96T004503_D	.0637	46.42	-.0912	.2121	.0007	.0050
20	S96T004504_L	.0608	42.57	.0208	.1157	-.0045	.0062
21	S96T004504_	.0663	41.67	-.0633	.1340	.0001	.0043
22	S96T004504_D	.0680	40.16	-.0790	.2507	-.0000	.0039
23	CCV	5.013	4.945	5.248	5.039	5.066	5.212
24	CCB	.0010	.0122	-.0025	-.0000	.0004	.0003
25	S96T004505_L	.0525	88.05	-.0673	.2940	-.0031	.0093
26	S96T004505_	.0597	84.94	-.1368	.2758	.0007	.0078
27	S96T004505_D	.0648	43.28	-.0724	.1793	-.0003	.0042
28	ICSA	.0018	239.9	-.0378	.0004	.0023	.0003
29	ICSAB	.9588	241.0	-.0412	-.0031	.4725	.4743
30	CCV	4.985	4.883	5.217	4.974	4.989	5.135
31	CCB	.0004	.0091	.0044	.0024	.0001	.0003

#	Sample Name	Bi	Ca	Cd	Ce	Co	Cr
1	ICV	5.065	4.986	5.027	4.964	5.034	5.053
2	ICB	.0052	.0049	.0008	.0091	.0033	.0011
3	LLS	.2030	.2150	.0109	.2067	.0420	.0220
4	ICSA	-.0213	246.4	.0019	.0126	.0029	.0082
5	ICSAB	-.0131	248.5	.9319	.0146	.4633	.4752
6	PREPSTDTJA	4.790	5.848	4.721	4.941	4.850	4.754
7	PREPBLKTJA	.0009	.4590	.0007	.0040	.0039	.0040
8	S96T004501_L	-.0909	.9083	.0014	.0218	.0400	.1623
9	S96T004501_	-.0039	.4748	.0051	.0241	.0073	.1557
10	S96T004501_D	-.0369	.2295	.0049	.0104	.0080	.1263
11	S96T004501_S	4.745	5.437	4.650	4.769	4.730	4.786
12	CCV	5.048	4.990	4.986	4.933	4.993	5.015
13	CCB	-.0133	.0012	.0006	.0030	.0039	.0006
14	S96T004502_L	-.1223	.6979	.0058	-.0005	.0157	.1861
15	S96T004502_	-.0173	.5783	.0059	.0127	.0063	.1793
16	S96T004502	-.0482	.2647	.0078	.0158	.0007	.2195
17	S96T004503_L	-.2684	.5300	.0098	.0223	.0267	.3147
18	S96T004503_	-.0195	.4852	.0104	-.0063	.0104	.3062

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Analysis Report Averages Thu 09-05-96 08:31:29 PM page 3

#	Sample Name	Bi	Ca	Cd	Ce	Co	Cr
19	S96T004503_D	-.0055	1.123	.0070	.0151	.0090	.1969
20	S96T004504_L	-.0337	.6399	.0157	-.0231	.0231	.1745
21	S96T004504	.0064	.6330	.0058	-.0030	.0080	.1638
22	S96T004504_D	.0001	1.196	.0064	.0113	.0058	.1597
23	CCV	5.085	5.049	5.080	5.032	5.067	5.100
24	CCB	-.0164	-.0002	-.0002	.0011	.0034	-.0001
25	S96T004505_L	-.2027	1.047	.0119	-.0076	.0317	.3322
26	S96T004505	.0044	.7241	.0076	.0174	.0061	.3305
27	S96T004505_D	-.0263	.5415	.0040	-.0001	.0051	.1701
28	ICSA	-.0432	247.4	.0012	.0138	.0041	.0092
29	ICSAB	-.0246	252.0	.9344	.0168	.4658	.4775
30	CCV	5.083	5.100	5.029	4.948	5.041	5.068
31	CCB	.0046	-.0009	.0014	.0041	.0045	.0005

#	Sample Name	Cu	Eu	Fe	K	La	Li
1	ICV	4.814	-.0029	5.017	4.831	5.055	5.040
2	ICB	.0005	-.0002	.0017	-.0377	.0005	.0001
3	LLS	.0203	.0005	.1037	Q.2666	.1024	.0213
4	ICSA	-.0100	-.0419	92.87	-.0100	-.0034	.0020
5	ICSAB	.4748	-.0420	93.08	-.0368	-.0047	1.011
6	PREPSTDTJA	4.781	-.0036	4.825	4.839	4.932	4.994
7	PREPBLKTJA	.0023	-.0017	.0943	-.1709	-.0003	-.0013
8	S96T004501_L	.0252	-.0113	.0881	402.4	.0022	-.0012
9	S96T004501	.0114	-.0004	.1008	399.6	.0013	.0096
10	S96T004501_D	.0046	-.0015	.0487	428.5	-.0000	.0083
11	S96T004501_S	4.630	-.0038	4.786	459.4	4.791	4.919
12	CCV	4.784	-.0034	5.009	4.607	5.008	5.019
13	CCB	.0009	-.0003	.0006	-.0087	.0003	-.0001
14	S96T004502_L	.0207	-.0086	.1091	350.1	.0037	.0147
15	S96T004502	.0113	-.0010	.1174	346.2	.0005	.0260
16	S96T004502	.0177	-.0005	.1480	381.3	.0008	.0264
17	S96T004503_L	.0364	-.0049	.2193	352.0	-.0031	.1714
18	S96T004503	.0340	-.0014	.2078	348.2	-.0015	.1773
19	S96T004503_D	.0095	-.0001	.2153	399.5	.0022	.1156
20	S96T004504_L	.0524	-.0038	.1694	279.8	-.0099	.0233
21	S96T004504	.0459	.0003	.0816	279.4	.0007	.0225
22	S96T004504_D	.0059	-.0011	.2027	276.1	.0012	.0223
23	CCV	4.890	-.0039	5.099	4.795	5.120	5.149
24	CCB	.0009	-.0007	.0003	-.2050	.0003	-.0002
25	S96T004505_L	.0250	-.0016	.1791	218.2	-.0031	.0686
26	S96T004505	.0194	.0002	.1807	211.9	.0016	.0681
27	S96T004505_D	.0073	-.0009	.0735	327.0	-.0009	.0382
28	ICSA	-.0093	-.0464	93.22	.0215	-.0035	.0028
29	ICSAB	.4730	-.0517	93.89	.1923	-.0036	1.012
30	CCV	4.813	-.0028	5.043	4.867	5.022	5.076
31	CCB	.0012	-.0007	.0010	-.1672	.0005	-.0001

09/05/96 19:46 ☎509 372 2929 WESTINGHOUSE →→→ MO-924 200W 006

Analysis Report Averages Thu 09-05-96 08:31:29 PM page 4

#	Sample Name	Mg	Mn	Mo	Na	Nd	Ni
1	ICV	4.832	4.897	5.028	4.877	5.068	4.989
2	ICB	.0085	.0003	.0099	-.0021	.0011	-.0057
3	LLS	.2024	.0200	.0996	.2086	.1982	.0401
4	ICSA	244.7	-.0060	-.0055	194.5	.0004	-.0081
5	ICSAB	244.7	.4394	-.0038	194.6	.0034	.9068
6	PREPSTDTJA	4.631	4.646	4.710	5.583	4.881	4.866
7	PREPBLKTJA	.0275	.0005	.0037	.3211	-.0030	.0011
8	S96T004501_L	.0601	.0062	.1006	852.1	-.0189	.0026
9	S96T004501	.0212	.0091	.0862	830.9	-.0052	.0135
10	S96T004501_D	.0264	.0073	.0714	856.2	-.0066	.0077
11	S96T004501_S	4.424	4.477	4.735	831.1	4.704	4.720
12	CCV	4.799	4.854	4.988	4.876	5.047	4.974
13	CCB	.0083	.0001	.0080	-.0017	.0017	.0028
14	S96T004502_L	.0728	.0041	.1246	954.5	.0036	.0197
15	S96T004502	.0337	.0070	.1033	918.8	-.0027	.0251
16	S96T004502	.0298	.0077	.1197	888.5	-.0034	.0332
17	S96T004503_L	.1206	.0142	.2000	878.3	-.0088	.0361
18	S96T004503	.0446	.0165	.1669	854.4	-.0091	.0353
19	S96T004503_D	.0718	.0119	.1067	877.5	.0010	.0148
20	S96T004504_L	.0656	.0090	.1009	935.4	-.0288	.0499
21	S96T004504	.0440	.0067	.0900	913.7	.0020	.0230
22	S96T004504_D	.0335	.0063	.0909	922.7	-.0008	.0114
23	CCV	4.893	4.939	5.084	4.966	5.149	5.069
24	CCB	.0013	.0004	.0109	-.0060	-.0007	-.0013
25	S96T004505_L	.0115	.0148	.2155	856.2	-.0057	.0069
26	S96T004505	.0466	.0146	.1820	825.0	.0009	.0255
27	S96T004505_D	.0232	.0070	.0964	912.9	-.0054	.0191
28	ICSA	244.7	-.0060	-.0068	194.6	.0020	-.0065
29	ICSAB	245.7	.4408	-.0083	195.0	.0006	.9197
30	CCV	4.837	4.905	5.048	4.930	5.060	5.026
31	CCB	.0104	.0000	.0116	-.0073	.0004	-.0009

#	Sample Name	P	Pb	S	Sb	Se	Si
1	ICV	4.907	5.014	4.898	4.785	4.852	4.769
2	ICB	-.0267	-.0022	-.0096	.0112	.0041	-.0005
3	LLS	.4013	.2229	.2022	.1044	.2133	.1214
4	ICSA	.0168	.0370	-.0333	.0138	-.0378	-.0064
5	ICSAB	.0020	.9860	-.0358	-.0127	-.0232	-.0083
6	PREPSTDTJA	4.985	4.602	4.837	4.723	4.577	2.993
7	PREPBLKTJA	.0059	.0137	.0812	.0010	.0242	.0755
8	S96T004501_L	2.767	.1916	.5497	-.0940	.2017	.6229
9	S96T004501	2.881	.1047	.5760	.0005	.0272	.6671
10	S96T004501_D	2.946	.0818	.5232	-.0057	.0514	.6316
11	S96T004501_S	7.159	4.674	5.389	4.695	4.517	3.529
12	CCV	4.863	4.983	4.877	4.742	4.853	4.750
13	CCB	-.0413	.0099	-.0051	.0026	.0252	-.0030
14	S96T004502_L	2.230	.2062	.7616	.0328	.1768	1.144
15	S96T004502	2.186	.1884	.7559	.0062	.0457	1.155
16	S96T004502	2.570	.2081	.8559	.0105	.0662	1.089
17	S96T004503_L	5.999	.2738	1.158	-.0275	.2542	1.125
18	S96T004503	5.976	.1789	1.151	-.0053	.0506	1.166

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#	Sample Name	P	Pb	S	Sb	Se	Si
19	S96T004503_D	3.185	.1445	.7365	.0048	.0698	.8187
20	S96T004504_L	2.226	.1610	.7083	.0422	.3471	.5742
21	S96T004504_	2.413	.1193	.6542	-.0030	.0425	.5989
22	S96T004504_D	2.637	.1006	.6181	.0181	.0506	.7214
23	CCV	5.010	5.042	4.974	4.840	4.928	4.822
24	CCB	-.0188	.0061	-.0059	.0011	.0226	-.0015
25	S96T004505_L	5.690	.2173	1.325	-.0011	.2499	1.048
26	S96T004505_	5.848	.1537	1.310	-.0120	.0552	1.027
27	S96T004505_D	3.578	.0843	.6857	-.0002	.0708	.6716
28	ICSA	-.0131	.0415	-.0406	-.0057	-.0116	-.0071
29	ICSAB	-.0086	1.005	-.0269	.0060	-.0095	-.0069
30	CCV	5.076	5.020	4.982	4.806	4.898	4.805
31	CCB	-.0225	.0270	.0010	.0058	.0385	-.0022

#	Sample Name	Sm	Sr	Th	Ti	Tl	U
1	ICV	4.879	4.938	.0208	4.880	4.815	9.530
2	ICB	.0008	.0001	.0016	.0005	.0160	-.0045
3	LLS	.2043	.0205	-.0022	.0194	.4278	.5103
4	ICSA	-.0024	.0017	.0009	.0012	-.0111	.0108
5	ICSAB	-.0062	.0016	-.0024	.0012	.0066	-.0135
6	PREPSTDTJA	4.773	4.803	.0197	4.378	4.567	9.376
7	PREPBLKTJA	-.0235	.0000	.0050	.0000	-.0107	-.0900
8	S96T004501_L	-.1234	-.0016	.0418	.0003	-.1124	-.6251
9	S96T004501_	-.0134	.0003	.0124	.0021	.0134	-.1577
10	S96T004501_D	-.0246	.0000	.0139	.0006	-.0064	-.1986
11	S96T004501_S	4.606	4.639	.0303	4.231	4.441	8.872
12	CCV	4.825	4.912	.0142	4.826	4.784	9.484
13	CCB	-.0018	.0001	.0011	.0010	.0140	-.0124
14	S96T004502_L	-.0701	-.0005	.0033	.0027	.1327	-.5400
15	S96T004502_	-.0161	.0004	.0061	.0021	.0238	-.1421
16	S96T004502	-.0054	.0004	.0116	.0001	.0053	-.1172
17	S96T004503_L	-.0488	.0005	.0072	.0051	-.0887	-.3026
18	S96T004503_	-.0248	.0008	.0072	.0016	-.0093	-.1846
19	S96T004503_D	-.0074	.0009	.0106	.0026	.0516	-.1378
20	S96T004504_L	-.0437	.0011	-.0181	.0025	-.0526	-.2844
21	S96T004504_	-.0036	.0009	-.0002	.0015	-.0034	-.0908
22	S96T004504_D	-.0242	.0006	.0151	.0011	.0083	-.1708
23	CCV	4.939	5.015	.0136	4.924	4.849	9.677
24	CCB	-.0084	.0002	.0008	.0010	-.0096	-.0260
25	S96T004505_L	-.0002	.0010	-.0369	-.0050	.1401	-.1234
26	S96T004505_	.0004	.0010	-.0038	.0005	-.0094	-.0820
27	S96T004505_D	-.0061	.0006	.0043	.0006	-.0539	-.1467
28	ICSA	-.0035	.0017	-.0050	.0017	-.0154	-.0071
29	ICSAB	.0025	.0016	.0019	.0013	.0088	-.0057
30	CCV	4.845	4.931	.0074	4.830	4.825	9.490
31	CCB	-.0080	.0000	.0018	.0010	.0068	-.0320

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Analysis Report *Averages* *Thu 09-05-96 08:31:29 PM* *page 6*

#	Sample Name	V	Y	Zn	Zr
1	ICV	5.008	.0057	5.024	4.924
2	ICB	-.0002	.0000	.0000	-.0001
3	LLS	.1010	.0006	.0217	.0210
4	ICSA	-.0017	.0065	-.0017	-.0032
5	ICSAB	.4629	.0065	.9398	-.0034
6	PREPSTDTJA	4.738	.0041	4.622	4.840
7	PREPBLKTJA	-.0053	-.0011	.0400	-.0035
8	S96T004501_L	-.0292	-.0068	.3016	.0048
9	S96T004501	-.0037	-.0006	.1338	.0179
10	S96T004501_D	-.0047	-.0012	.1130	.0128
11	S96T004501_S	4.602	.0041	4.767	3.804
12	CCV	4.976	.0056	5.008	4.883
13	CCB	-.0013	-.0001	.0003	-.0011
14	S96T004502_L	-.0274	-.0045	.2535	.0075
15	S96T004502	-.0041	-.0007	.3244	.0205
16	S96T004502	-.0023	-.0003	.1183	.0272
17	S96T004503_L	-.0167	-.0014	.4742	.0287
18	S96T004503	-.0056	-.0012	.1437	.0348
19	S96T004503_D	-.0034	-.0003	.1356	.0223
20	S96T004504_L	-.0128	-.0022	.4008	.0196
21	S96T004504	-.0011	.0000	.1286	.0209
22	S96T004504_D	-.0063	-.0012	.1446	.0162
23	CCV	5.071	.0055	5.076	4.979
24	CCB	-.0013	-.0003	.0015	-.0007
25	S96T004505_L	-.0094	.0001	.3379	.0495
26	S96T004505	-.0024	-.0003	.1788	.0426
27	S96T004505_D	-.0037	-.0007	.0894	.0199
28	ICSA	-.0022	.0064	-.0020	-.0027
29	ICSAB	.4667	.0070	.9511	-.0017
30	CCV	5.018	.0060	5.068	4.908
31	CCB	-.0022	-.0003	.0023	-.0015

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FILE No: 960905B.TXT

09/05/96 07:02
A-0004-1

LABCORE Data Entry Template for Worklist# 12665

Analyst: J. WORRELL **Instrument:** ICP~~012~~ 9-5-96 **Book#** 60B486

Method: LA-505-~~151~~/161 Rev/Mod ~~6-1~~ B-1 9-5-96 9-5-96

Worklist Comment: ICP AW-101 (SOLID ACID DIGEST)

S	Type	Sample#	R	A	Test	Matrix	Group#	Project
1	ICV				@ICP-QC	QC		
2	ICB				@ICP-QC	QC		
3	LLS				@ICP-QC	QC		
4	ICSA				@ICP-QC	QC		
5	ICSAB				@ICP-QC	QC		
6	PREPSTDTJA				@ICP-A01	SOLID		
7	PREPBLKTJA				@ICP-A01	SOLID		
8	SERDIL	S96T004506	0	A	@ICP-A01	SOLID		
9	SAMPLE	S96T004506	0	A	@ICP-A01	SOLID	96000462	AW-101 PUSH
		Analytes Requested:			AG-A-01 , AL-A-01 , AS-A-01 , B-A-01 , BA-A-01 , BE-A-01 , BI-A-01 , CA-A-01 , CD-A-01 , CE-A-01 , CO-A-01 , CR-A-01 , CU-A-01 , FE-A-01 , K-A-01 , LA-A-01 , LI-A-01 , MG-A-01 , MN-A-01 , MO-A-01 , NA-A-01 , ND-A-01 , NI-A-01 , P-A-01 , PB-A-01 , S-A-01 , SB-A-01 , SE-A-01 , SI-A-01 , SM-A-01 , SR-A-01 , TI-A-01 , TL-A-01 , U-A-01 , V-A-01 , ZN-A-01 , ZR-A-01			
10	DUP	S96T004506	0	A	@ICP-A01	SOLID		
11	SPK-PREDIG	S96T004506	0	A	@ICP-A01	SOLID		
12	CCV				@ICP-QC	QC		
13	CCB				@ICP-QC	QC		
14	SERDIL	S96T004507	0	A	@ICP-A01	SOLID		
15	SAMPLE	S96T004507	0	A	@ICP-A01	SOLID	96000462	AW-101 PUSH
		Analytes Requested:			AG-A-01 , AL-A-01 , AS-A-01 , B-A-01 , BA-A-01 ,			

Data Entry Comments: Sample result calculation:

S96T004506 $Cr = 0.2167 \frac{ug}{ml} \times \frac{1}{5.056 \frac{g}{L} \times \frac{1L}{1000ml}} = 4.29e+1 \frac{ug}{g}$

S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

Note: $5.056 \frac{g}{L}$ is sample prep dilution factor which can be found in 2008 sample prep worklist.

LABCORE Data Entry Template for Worklist# 12665

S	Type	Sample#	R	A	Test	Matrix	Group#	Project
					BE-A-01 , BI-A-01 , CA-A-01 , CD-A-01 , CE-A-01 , CO-A-01 , CR-A-01 , CU-A-01 , FE-A-01 , K-A-01 , LA-A-01 , LI-A-01 , MG-A-01 , MN-A-01 , MO-A-01 , NA-A-01 , ND-A-01 , NI-A-01 , P-A-01 , PB-A-01 , S-A-01 , SB-A-01 , SE-A-01 , SI-A-01 , SM-A-01 , SR-A-01 , TI-A-01 , TL-A-01 , U-A-01 , V-A-01 , ZN-A-01 , ZR-A-01			
16	DUP	S96T004507	0	A	@ICP-A01	SOLID		
17	SERDIL	S96T004508	0	A	@ICP-A01	SOLID		
18	SAMPLE	S96T004508	0	A	@ICP-A01	SOLID	96000462	AW-101 PUSH
		Analytes Requested:			AG-A-01 , AL-A-01 , AS-A-01 , B-A-01 , BA-A-01 , BE-A-01 , BI-A-01 , CA-A-01 , CD-A-01 , CE-A-01 , CO-A-01 , CR-A-01 , CU-A-01 , FE-A-01 , K-A-01 , LA-A-01 , LI-A-01 , MG-A-01 , MN-A-01 , MO-A-01 , NA-A-01 , ND-A-01 , NI-A-01 , P-A-01 , PB-A-01 , S-A-01 , SB-A-01 , SE-A-01 , SI-A-01 , SM-A-01 , SR-A-01 , TI-A-01 , TL-A-01 , U-A-01 , V-A-01 , ZN-A-01 , ZR-A-01			
19	DUP	S96T004508	0	A	@ICP-A01	SOLID		
20	SERDIL	S96T004509	0	A	@ICP-A01	SOLID		
21	SAMPLE	S96T004509	0	A	@ICP-A01	SOLID	96000462	AW-101 PUSH
		Analytes Requested:			AG-A-01 , AL-A-01 , AS-A-01 , B-A-01 , BA-A-01 , BE-A-01 , BI-A-01 , CA-A-01 , CD-A-01 , CE-A-01 , CO-A-01 , CR-A-01 , CU-A-01 , FE-A-01 , K-A-01 , LA-A-01 , LI-A-01 , MG-A-01 , MN-A-01 , MO-A-01 , NA-A-01 , ND-A-01 , NI-A-01 , P-A-01 , PB-A-01 , S-A-01 , SB-A-01 , SE-A-01 , SI-A-01 , SM-A-01 , SR-A-01 , TI-A-01 , TL-A-01 , U-A-01 , V-A-01 , ZN-A-01 , ZR-A-01			
22	DUP	S96T004509	0	A	@ICP-A01	SOLID		
23	CCV				@ICP-QC	QC		
24	CCB				@ICP-QC	QC		
25	SERDIL	S96T004510	0	A	@ICP-A01	SOLID		
26	SAMPLE	S96T004510	0	A	@ICP-A01	SOLID	96000462	AW-101 PUSH
		Analytes Requested:			AG-A-01 , AL-A-01 , AS-A-01 , B-A-01 , BA-A-01 , BE-A-01 , BI-A-01 , CA-A-01 , CD-A-01 , CE-A-01 , CO-A-01 ,			

Data Entry Comments:

S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

LABCORE Data Entry Template for Worklist# 12665

S	Type	Sample#	R	A	Test	Matrix	Group#	Project
					CR-A-01 , CU-A-01 , FE-A-01 , K-A-01 , LA-A-01 , LI-A-01 , MG-A-01 , MN-A-01 , MO-A-01 , NA-A-01 , ND-A-01 , NI-A-01 , P-A-01 , PB-A-01 , S-A-01 , SB-A-01 , SE-A-01 , SI-A-01 , SM-A-01 , SR-A-01 , TI-A-01 , TL-A-01 , U-A-01 , V-A-01 , ZN-A-01 , ZR-A-01			
27	DUP	S96T004510	0	A	@ICP-A01	SOLID		
28	ICSA				@ICP-QC	QC		
29	ICSAB				@ICP-QC	QC		
30	CCV				@ICP-QC	QC		
31	CCB				@ICP-QC	QC		

Final page for worklist # 12665

Reviewed by:

Analyst Signature	Date	DF
PRESTD - DIRECT		1
PRESPIK - DIRECT		1
S96T004506 DIL 5X	5-5-2-8	10
SAM	5-5	2
DUP	5-5	2
DIGSPK	5-5	2
S96T004507 DIL 5X	5-5-2-8	10
SAM	5-5	2
DUP	5-5	2
S96T004508 DIL 5X	5-5-2-8	10
SAM	5-5	2
DUP	5-5	2
S96T004509 DIL 5X	5-5-2-8	10
SAM	5-5	2
DUP	5-5	2
S96T004510 DIL 5X	5-5-2-8	10
SAM	5-5	2
DUP	5-5	2

Analyst Signature: 9-5-96 Date

Analyst Signature: 9/9/96 Date

Data Entry Comments: Spike recovery calculation:

S96T004506 $Cr = \frac{4.841 - 0.2167}{5} \times 100 = 92.5\%$

S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

Note: Spike true value is 5.0 ppm for all elements except for Ag = 1.0 ppm and U = 10.0 ppm.

WHC-SD-WM-DP-192 REV 0

Analysis Report Summary Fri 09-06-96 07:54:58 AM page 1

#	Sample Name	File	Method	Date	Time	OpID	Type	Mode
1	ICV	960905B	ICP2	09/05/96	20:36	JHW	Q	CONC
2	ICB	960905B	ICP2	09/05/96	20:39	JHW	Q	CONC
3	LLS	960905B	ICP2	09/05/96	20:43	JHW	Q	CONC
4	ICSA	960905B	ICP2	09/05/96	20:46	JHW	Q	CONC
5	ICSAB	960905B	ICP2	09/05/96	20:49	JHW	Q	CONC
6	PREPSTDTJA	960905B	ICP2	09/05/96	20:53	JHW	S	CONC
7	PREPBLKTJA	960905B	ICP2	09/05/96	20:56	JHW	S	CONC
8	S96T004506_L	960905B	ICP2	09/05/96	21:00	JHW	S	CONC
9	S96T004506_	960905B	ICP2	09/05/96	21:03	JHW	S	CONC
10	S96T004506_D	960905B	ICP2	09/05/96	21:06	JHW	S	CONC
11	S96T004506_S	960905B	ICP2	09/05/96	21:09	JHW	S	CONC
12	CCV	960905B	ICP2	09/05/96	21:33	JHW	Q	CONC
13	CCB	960905B	ICP2	09/05/96	21:36	JHW	Q	CONC
14	S96T004507_L	960905B	ICP2	09/05/96	21:39	JHW	S	CONC
15	S96T004507_	960905B	ICP2	09/05/96	21:43	JHW	S	CONC
16	S96T004507_D	960905B	ICP2	09/05/96	21:46	JHW	S	CONC
17	S96T004508_L	960905B	ICP2	09/05/96	21:49	JHW	S	CONC
18	S96T004508_	960905B	ICP2	09/05/96	21:53	JHW	S	CONC
19	S96T004508_D	960905B	ICP2	09/05/96	21:56	JHW	S	CONC
20	S96T004509_L	960905B	ICP2	09/05/96	22:00	JHW	S	CONC
21	S96T004509_	960905B	ICP2	09/05/96	22:03	JHW	S	CONC
22	S96T004509_D	960905B	ICP2	09/05/96	22:06	JHW	S	CONC
23	CCV	960905B	ICP2	09/05/96	22:10	JHW	Q	CONC
24	CCB	960905B	ICP2	09/05/96	22:13	JHW	Q	CONC
25	S96T004510_L	960905B	ICP2	09/05/96	22:16	JHW	S	CONC
26	S96T004510_	960905B	ICP2	09/05/96	22:20	JHW	S	CONC
27	S96T004510_D	960905B	ICP2	09/05/96	22:23	JHW	S	CONC
28	ICSA	960905B	ICP2	09/05/96	22:26	JHW	Q	CONC
29	ICSAB	960905B	ICP2	09/05/96	22:29	JHW	Q	CONC
30	CCV	960905B	ICP2	09/05/96	22:32	JHW	Q	CONC
31	CCB	960905B	ICP2	09/05/96	22:36	JHW	Q	CONC

SIGNATURE BELOW REPRESENTS CHEMICAL TECHNOLOGIST/ CHEMIST THAT COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 2011 TO 2016.

J.H. Wall

9-5-96

S96T004506, 07, 08, 09 & 10

ACID DIG. AW-101

FILE No. 960905B.TXT

SST-5 = 60848B

Analysis Report Averages Fri 09-06-96 07:54:56 AM page 2

#	Sample Name	Ag	Al	As	B	Ba	Be
1	ICV	4.999	4.906	5.200	4.985	5.071	5.142
2	ICB	-.0006	.0061	-.0047	.0024	.0001	.0002
3	LLS	.0212	.1111	.2142	.0998	.1000	.0102
4	ICSA	.0023	241.4	-.0230	.0002	.0024	.0002
5	ICSAB	.9584	241.5	-.0198	-.0060	.4768	.4745
6	PREPSTDTJA	.1519	4.767	4.937	4.948	4.859	4.861
7	PREPBLKTJA	.0001	.0476	.0003	.1051	.0006	.0003
8	S96T004506_L	.0664	56.35	-.0657	.2457	-.0019	.0062
9	S96T004506	.0649	55.17	-.0794	.2381	.0004	.0049
10	S96T004506_D	.0643	42.15	-.0662	.3471	.0013	.0039
11	S96T004506_S	.5769	38.74	4.990	4.997	4.841	4.807
12	CCV	4.993	4.923	5.222	5.001	5.076	5.171
13	CCB	-.0004	.0086	-.0085	.0053	.0004	.0002
14	S96T004507_L	.2036	90.44	-.1327	1.063	.0344	.0083
15	S96T004507	.2012	87.93	-.1097	.9880	.0365	.0075
16	S96T004507_D	.1855	80.21	.0311	.2328	.0308	.0074
17	S96T004508_L	.2284	86.21	-.0310	.2872	.0356	.0087
18	S96T004508	.2230	83.16	-.1145	.3017	.0381	.0076
19	S96T004508_D	.2456	83.52	-.1007	.5277	.0682	.0075
20	S96T004509_L	.2300	81.68	-.0305	.3754	.0527	.0080
21	S96T004509	.2330	80.71	-.0393	.3601	.0573	.0075
22	S96T004509_D	.2017	78.80	-.0348	.5270	.0447	.0071
23	CCV	5.037	4.949	5.233	5.026	5.111	5.176
24	CCB	.0008	.0069	-.0050	.0053	.0002	.0002
25	S96T004510_L	.2238	77.94	-.1042	.3894	.0440	.0058
26	S96T004510	.2180	77.70	-.0695	.3866	.0473	.0069
27	S96T004510_D	.2019	79.56	-.0986	.4119	.0375	.0069
28	ICSA	.0019	244.4	-.0594	.0027	.0025	.0000
29	ICSAB	.9676	243.5	-.0306	-.0031	.4829	.4776
30	CCV	5.043	4.927	5.241	4.988	5.151	5.167
31	CCB	.0000	.0095	.0041	.0043	.0002	.0001

#	Sample Name	Bi	Ca	Cd	Ce	Co	Cr
1	ICV	5.131	5.100	5.039	5.009	5.046	5.074
2	ICB	.0009	-.0019	-.0004	.0018	.0038	.0008
3	LLS	.1766	.2174	.0108	.2090	.0431	.0215
4	ICSA	.0092	251.3	.0006	.0159	.0040	.0086
5	ICSAB	-.0230	252.2	.9304	.0285	.4662	.4758
6	PREPSTDTJA	4.736	5.372	4.658	4.893	4.798	4.721
7	PREPBLKTJA	-.0158	.5775	.0008	.0102	.0018	.0026
8	S96T004506_L	-.1670	.5755	.0011	.0182	.0193	.2164
9	S96T004506	.0281	.4334	.0067	.0075	.0041	.2167
10	S96T004506_D	.0155	.7295	.0049	.0120	.0063	.1679
11	S96T004506_S	4.764	5.830	4.698	4.903	4.788	4.841
12	CCV	5.107	5.106	5.040	5.006	5.037	5.072
13	CCB	-.0181	-.0019	.0021	.0079	.0022	-.0007
14	S96T004507_L	-.0680	2.668	.0707	.0596	.0296	2.981
15	S96T004507	.0498	2.517	.0592	.0439	.0147	2.902
16	S96T004507_D	.0219	2.410	.0501	.0227	.0126	2.616
17	S96T004508_L	.1590	2.998	.0671	.0673	.0418	3.208
18	S96T004508	.0123	2.571	.0565	.0133	.0129	3.082

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#	Sample Name	Bi	Ca	Cd	Ce	Co	Cr
19	S96T004508_D	.0814	2.718	.0654	.0300	.0138	3.438
20	S96T004509_L	.0263	3.335	.0946	.0176	.0316	4.333
21	S96T004509_	.0426	3.103	.0875	.0421	.0157	4.260
22	S96T004509_D	.0371	2.710	.0680	.0257	.0143	3.522
23	CCV	5.104	5.140	5.066	5.041	5.069	5.106
24	CCB	.0217	-.0016	.0001	.0060	.0013	.0002
25	S96T004510_L	-.1467	3.611	.0841	.0735	.0265	3.784
26	S96T004510_	.0626	3.035	.0736	.0198	.0172	3.763
27	S96T004510_D	.0567	2.562	.0612	.0247	.0146	3.086
28	ICSA	-.0271	256.8	.0010	.0072	.0017	.0076
29	ICSAB	-.0203	256.7	.9433	.0155	.4715	.4816
30	CCV	5.199	5.184	5.097	5.068	5.092	5.128
31	CCB	-.0117	-.0014	.0012	.0091	.0044	.0011

#	Sample Name	Cu	Eu	Fe	K	La	Li
1	ICV	4.848	-.0036	5.072	4.795	5.088	5.104
2	ICB	.0009	-.0008	.0009	-.0453	-.0002	-.0007
3	LLS	.0217	-.0002	.1034	.4188	.1021	.0210
4	ICSA	-.0095	-.0516	93.96	-.0968	-.0041	.0023
5	ICSAB	.4750	-.0516	93.96	-.0194	-.0038	1.021
6	PREPSTDTJA	4.732	-.0041	4.796	4.603	4.902	4.990
7	PREPBLKTJA	.0030	-.0008	.0947	-.0865	.0010	-.0010
8	S96T004506_L	.0274	-.0074	.1038	275.4	.0061	.0257
9	S96T004506_	.0177	-.0009	.0945	275.0	.0010	.0333
10	S96T004506_D	.0100	-.0003	.1943	405.6	.0019	.0279
11	S96T004506_S	4.727	-.0048	4.990	441.3	4.930	5.065
12	CCV	4.871	-.0041	5.096	4.746	5.093	5.136
13	CCB	.0002	-.0006	.0017	-.1157	.0005	-.0001
14	S96T004507_L	.0621	-.0112	2.685	117.6	.0399	.0656
15	S96T004507_	.0558	-.0032	2.596	117.4	.0449	.0705
16	S96T004507_D	.0448	-.0036	2.174	118.9	.0393	.0622
17	S96T004508_L	.0594	-.0132	2.820	110.1	.0473	.0497
18	S96T004508_	.0498	-.0043	2.605	108.9	.0449	.0580
19	S96T004508_D	.0637	-.0046	3.060	110.9	.0515	.0604
20	S96T004509_L	.1027	-.0181	4.088	113.8	.0576	.0555
21	S96T004509_	.0961	-.0073	3.908	116.7	.0627	.0660
22	S96T004509_D	.0577	-.0044	3.194	109.5	.0494	.0588
23	CCV	4.886	-.0040	5.133	4.872	5.128	5.150
24	CCB	.0003	-.0010	.0008	-.1886	.0002	-.0006
25	S96T004510_L	.0769	-.0149	3.590	112.5	.0591	.1009
26	S96T004510_	.0725	-.0055	3.526	114.2	.0563	.1097
27	S96T004510_D	.0480	-.0040	2.917	111.8	.0453	.0919
28	ICSA	-.0102	-.0600	95.61	-.0260	-.0045	.0034
29	ICSAB	.4792	-.0572	95.29	-.2077	-.0042	1.022
30	CCV	4.887	-.0034	5.128	4.706	5.176	5.113
31	CCB	.0007	-.0001	.0011	.0265	.0003	.0007

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#	Sample Name	Mg	Mn	Mo	Na	Nd	Ni
1	ICV	4.850	4.916	5.056	4.954	5.134	5.026
2	ICB	.0021	-.0001	.0099	-.0107	-.0006	-.0026
3	LLS	.2096	.0196	.0999	.2030	.1999	.0448
4	ICSA	245.6	-.0061	-.0040	196.8	.0026	-.0062
5	ICSAB	245.9	.4408	-.0086	196.7	-.0003	.9204
6	PREPSTDTJA	4.557	4.615	4.688	5.679	4.873	4.806
7	PREPBLKTJA	.0432	.0012	.0072	.4202	-.0011	.0012
8	S96T004506_L	.0363	.0071	.1366	936.1	-.0177	.0127
9	S96T004506	.0423	.0091	.1197	914.0	.0033	.0309
10	S96T004506_D	.0569	.0091	.0958	912.6	-.0025	.0323
11	S96T004506_S	4.460	4.558	4.798	841.5	4.877	4.832
12	CCV	4.864	4.912	5.070	4.984	5.144	5.022
13	CCB	.0032	.0004	.0120	-.0086	-.0015	.0034
14	S96T004507_L	.4435	2.377	.2315	1000.	.0090	.3036
15	S96T004507	.4130	2.313	.1811	970.3	.0249	.3141
16	S96T004507_D	.3605	2.010	.1703	939.7	.0239	.2800
17	S96T004508_L	.6008	2.475	.2163	984.5	.0270	.3209
18	S96T004508	.4606	2.384	.1760	951.5	.0333	.3225
19	S96T004508_D	.5166	2.686	.1757	986.9	.0320	.3713
20	S96T004509_L	.6957	3.929	.2126	1015.	.0065	.5237
21	S96T004509	.6517	3.896	.1717	1002.	.0445	.4723
22	S96T004509_D	.5367	3.160	.1696	924.7	.0369	.3968
23	CCV	4.909	4.957	5.087	4.994	5.184	5.066
24	CCB	-.0022	-.0002	.0082	-.0064	-.0035	.0007
25	S96T004510_L	.7166	3.283	.1876	987.9	.0277	.3987
26	S96T004510	.6876	3.288	.1650	983.8	.0474	.4203
27	S96T004510_D	.5365	2.683	.1699	929.1	.0340	.3435
28	ICSA	249.1	-.0061	-.0036	197.6	.0010	-.0054
29	ICSAB	247.8	.4468	-.0069	197.3	-.0011	.9371
30	CCV	4.864	4.965	5.114	4.985	5.210	5.063
31	CCB	.0022	.0006	.0113	-.0013	-.0014	-.0019

#	Sample Name	P	Pb	S	Sb	Se	Si
1	ICV	5.045	5.040	4.936	4.785	4.918	4.803
2	ICB	-.0247	.0076	-.0119	-.0084	.0299	-.0043
3	LLS	.3895	.2202	.2000	.0961	.2299	.1162
4	ICSA	-.0104	.0342	-.0472	-.0111	-.0058	-.0089
5	ICSAB	.0038	.9959	-.0279	.0134	-.0183	-.0088
6	PREPSTDTJA	4.936	4.524	4.702	4.649	4.541	3.866
7	PREPBLKTJA	-.0089	.0068	.0715	.0058	.0274	.0895
8	S96T004506_L	3.514	.2021	.8081	.0531	.3179	.7633
9	S96T004506	3.819	.1306	.8680	.0005	.0628	.8160
10	S96T004506_D	4.192	.1062	.7076	.0034	.0683	.8389
11	S96T004506_S	8.867	4.688	5.430	4.794	4.649	4.741
12	CCV	4.964	5.019	4.927	4.810	4.955	4.799
13	CCB	-.0175	.0055	-.0091	.0038	.0298	-.0001
14	S96T004507_L	6.881	.3136	11.32	-.0062	.3217	1.842
15	S96T004507	6.923	.2930	11.22	.0062	.0724	1.839
16	S96T004507_D	16.73	.2433	10.27	.0151	.0753	1.369
17	S96T004508_L	4.420	.3597	11.06	.0364	.2982	1.788
18	S96T004508	4.571	.2666	10.70	.0014	.0529	1.772

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#	Sample Name	P	Pb	S	Sb	Se	Si
19	S96T004508_D	5.414	.3064	12.10	-.0056	.0678	1.544
20	S96T004509_L	14.12	.4105	13.93	-.0170	.2669	1.236
21	S96T004509_	14.04	.3597	13.72	-.0034	.0728	1.285
22	S96T004509_D	13.26	.2956	11.16	.0141	.0907	1.209
23	CCV	5.153	5.065	5.035	4.831	4.957	4.843
24	CCB	-.0279	.0048	.0021	-.0025	.0318	-.0023
25	S96T004510_L	10.76	.3058	13.94	.0280	.4139	.9638
26	S96T004510_	10.87	.3595	14.00	.0041	.0775	.9966
27	S96T004510_D	9.755	.2764	10.68	.0129	.0611	1.369
28	ICSA	-.0075	.0444	-.0371	.0005	-.0074	-.0074
29	ICSAB	.0110	1.012	-.0285	.0046	-.0017	-.0089
30	CCV	5.084	5.112	4.959	4.872	4.953	4.842
31	CCB	-.0104	.0054	-.0071	.0038	.0508	.0021

#	Sample Name	Sm	Sr	Th	Ti	Tl	U
1	ICV	4.892	4.988	.0057	4.878	4.906	9.631
2	ICB	-.0124	.0000	-.0016	.0005	-.0169	-.0437
3	LLS	.1981	.0204	-.0027	.0194	.4050	.4761
4	ICSA	-.0105	.0016	-.0034	.0010	-.0153	-.0355
5	ICSAB	-.0052	.0017	.0034	.0015	.0098	-.0272
6	PREPSTDTJA	4.737	4.788	.0115	4.316	4.500	9.340
7	PREPBLKTJA	-.0157	.0006	.0041	.0013	.0046	-.0607
8	S96T004506_L	-.0968	.0000	.0274	.0002	.2491	-.5489
9	S96T004506_	-.0134	.0006	.0061	.0035	.0006	-.1401
10	S96T004506_D	-.0099	.0009	-.0023	.0025	-.0174	-.1498
11	S96T004506_S	4.737	4.781	.0090	4.337	4.618	9.075
12	CCV	4.907	5.000	.0111	4.870	4.886	9.630
13	CCB	-.0067	.0002	.0018	.0000	-.0100	-.0264
14	S96T004507_L	-.0613	.0307	.0001	.0099	.0084	9.586
16	S96T004507_D	-.0235	.0268	.0206	.0125	.0387	8.542
17	S96T004508_L	-.1390	.0322	.0341	.0221	.0200	10.03
18	S96T004508_	-.0238	.0326	.0174	.0161	-.0036	10.19
19	S96T004508_D	-.0230	.0369	.0289	.0170	-.0086	11.46
20	S96T004509_L	-.1829	.0459	.0315	.0193	-.1448	15.28
21	S96T004509_	-.0323	.0463	.0314	.0207	.0206	15.78
22	S96T004509_D	-.0075	.0379	.0232	.0168	.0053	12.75
23	CCV	4.938	5.034	.0084	4.904	4.947	9.690
24	CCB	-.0115	-.0000	.0015	.0005	.0004	-.0508
25	S96T004510_L	-.1464	.0413	.0638	.0204	.1961	13.55
26	S96T004510_	-.0194	.0435	.0324	.0201	-.0033	14.18
27	S96T004510_D	-.0144	.0350	.0220	.0155	.0184	11.44
28	ICSA	-.0019	.0016	-.0036	.0015	-.0364	-.0336
29	ICSAB	-.0041	.0016	-.0017	.0018	-.0107	-.0551
30	CCV	4.969	5.061	.0086	4.920	4.933	9.725
31	CCB	.0004	.0003	-.0008	.0005	-.0021	-.0033

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#	Sample Name	V	Y	Zn	Zr
1	ICV	5.037	.0057	5.048	4.951
2	ICB	-.0027	-.0007	.0016	-.0016
3	LLS	.0997	.0000	.0220	.0200
4	ICSA	-.0030	.0065	-.0013	-.0033
5	ICSAB	.4637	.0066	.9473	-.0032
6	PREPSTDTJA	4.717	.0041	4.548	4.803
7	PREPBLKTJA	-.0035	-.0007	.0620	-.0017
8	S96T004506_L	-.0256	-.0060	.5206	.0165
9	S96T004506	-.0045	-.0006	.1633	.0269
10	S96T004506_D	-.0040	-.0006	.1844	.0220
11	S96T004506_S	4.702	.0034	4.827	4.868
12	CCV	5.045	.0056	5.055	4.951
13	CCB	-.0015	-.0002	.0023	-.0012
14	S96T004507_L	-.0183	-.0025	.5549	.6540
15	S96T004507	.0005	.0016	.2303	.6437
16	S96T004507_D	.0025	.0006	.1525	.5508
17	S96T004508_L	-.0286	-.0043	.3767	.6582
18	S96T004508	-.0039	.0013	.1562	.6542
19	S96T004508_D	-.0026	.0017	.2058	.7439
20	S96T004509_L	-.0289	-.0041	.7852	1.023
21	S96T004509	-.0012	.0027	.1955	1.037
22	S96T004509_D	.0031	.0026	.1464	.2359
23	CCV	5.078	.0058	5.089	4.987
24	CCB	-.0027	-.0005	.0015	-.0015
25	S96T004510_L	-.0239	-.0034	.3461	.8821
26	S96T004510	-.0005	.0021	.1712	.9095
27	S96T004510_D	.0001	.0019	.1773	.7380
28	ICSA	-.0023	.0068	-.0026	-.0027
29	ICSAB	.4693	.0067	.9577	-.0029
30	CCV	5.092	.0057	5.094	5.024
31	CCB	-.0002	.0000	.0027	.0011

09/05/96 07:08
A-0004-1

File #: 960906B.TXT

LABCORE Data Entry Template for Worklist# 12669

Analyst: JK Soto **Instrument:** ICP01 JK 9-6-96 **Book#** 60848B

Method: LA-505-~~151~~/161 Rev/Mod B-1
JK 9-6-96

Worklist Comment: ICP AW-101 (SOLID ACID DIGEST)

S	Type	Sample#	R	A	Test	Matrix	Group#	Project
1	ICV				@ICP-QC	QC		
2	ICB				@ICP-QC	QC		
3	LLS				@ICP-QC	QC		
4	ICSA				@ICP-QC	QC		
5	ICSAB				@ICP-QC	QC		
6	PREPSTDTJA				@ICP-A01	SOLID		
7	PREPBLKTJA				@ICP-A01	SOLID		
8	SERDIL	S96T004492	0	A	@ICP-A01	SOLID		
9	SAMPLE	S96T004492	0	A	@ICP-A01	SOLID	96000103	AW-101 PUSH

Analytes Requested: AG-A-01 , AL-A-01 , AS-A-01 , B-A-01 , BA-A-01 , BE-A-01 , BI-A-01 , CA-A-01 , CD-A-01 , CE-A-01 , CO-A-01 , CR-A-01 , CU-A-01 , FE-A-01 , K-A-01 , LA-A-01 , LI-A-01 , MG-A-01 , MN-A-01 , MO-A-01 , NA-A-01 , ND-A-01 , NI-A-01 , P-A-01 , PB-A-01 , S-A-01 , SB-A-01 , SE-A-01 , SI-A-01 , SM-A-01 , SR-A-01 , TI-A-01 , TL-A-01 , U-A-01 , V-A-01 , ZN-A-01 , ZR-A-01

10	DUP	S96T004492	0	A	@ICP-A01	SOLID		
11	SPK-PREDIG	S96T004492	0	A	@ICP-A01	SOLID		
12	CCV				@ICP-QC	QC		
13	CCB				@ICP-QC	QC		
14	SERDIL	S96T004493	0	A	@ICP-A01	SOLID		
15	SAMPLE	S96T004493	0	A	@ICP-A01	SOLID	96000103	AW-101 PUSH

Analytes Requested: AG-A-01 , AL-A-01 , AS-A-01 , B-A-01 , BA-A-01 ,

Data Entry Comments: Sample result calculation:

S96T004492 $Cr = 0.2174 \frac{ug}{ml} \times \frac{1}{4.944 \frac{g}{L} \times \frac{1L}{1000ml}} = 4.40 \text{ e+1} \frac{ug}{g}$

S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

LABCORE Data Entry Template for Worklist# 12669

S	Type	Sample#	R	A	Test	Matrix	Group#	Project
					BE-A-01 , BI-A-01 , CA-A-01 , CD-A-01 , CE-A-01 , CO-A-01 , CR-A-01 , CU-A-01 , FE-A-01 , K-A-01 , LA-A-01 , LI-A-01 , MG-A-01 , MN-A-01 , MO-A-01 , NA-A-01 , ND-A-01 , NI-A-01 , P-A-01 , PB-A-01 , S-A-01 , SB-A-01 , SE-A-01 , SI-A-01 , SM-A-01 , SR-A-01 , TI-A-01 , TL-A-01 , U-A-01 , V-A-01 , ZN-A-01 , ZR-A-01			
16	DUP	S96T004493	0	A	@ICP-A01	SOLID		
17	SERDIL	S96T004494	0	A	@ICP-A01	SOLID		
18	SAMPLE	S96T004494	0	A	@ICP-A01	SOLID	96000103	AW-101 PUSH
		Analytes Requested:			AG-A-01 , AL-A-01 , AS-A-01 , B-A-01 , BA-A-01 , BE-A-01 , BI-A-01 , CA-A-01 , CD-A-01 , CE-A-01 , CO-A-01 , CR-A-01 , CU-A-01 , FE-A-01 , K-A-01 , LA-A-01 , LI-A-01 , MG-A-01 , MN-A-01 , MO-A-01 , NA-A-01 , ND-A-01 , NI-A-01 , P-A-01 , PB-A-01 , S-A-01 , SB-A-01 , SE-A-01 , SI-A-01 , SM-A-01 , SR-A-01 , TI-A-01 , TL-A-01 , U-A-01 , V-A-01 , ZN-A-01 , ZR-A-01			
19	DUP	S96T004494	0	A	@ICP-A01	SOLID		
20	CCV				@ICP-QC	QC		
21	CCB				@ICP-QC	QC		
22	SERDIL	S96T004495	0	A	@ICP-A01	SOLID		
23	SAMPLE	S96T004495	0	A	@ICP-A01	SOLID	96000103	AW-101 PUSH
		Analytes Requested:			AG-A-01 , AL-A-01 , AS-A-01 , B-A-01 , BA-A-01 , BE-A-01 , BI-A-01 , CA-A-01 , CD-A-01 , CE-A-01 , CO-A-01 , CR-A-01 , CU-A-01 , FE-A-01 , K-A-01 , LA-A-01 , LI-A-01 , MG-A-01 , MN-A-01 , MO-A-01 , NA-A-01 , ND-A-01 , NI-A-01 , P-A-01 , PB-A-01 , S-A-01 , SB-A-01 , SE-A-01 , SI-A-01 , SM-A-01 , SR-A-01 , TI-A-01 , TL-A-01 , U-A-01 , V-A-01 , ZN-A-01 , ZR-A-01			
24	DUP	S96T004495	0	A	@ICP-A01	SOLID		
25	ICSA				@ICP-QC	QC		
26	ICSAB				@ICP-QC	QC		
27	CCV				@ICP-QC	QC		

Data Entry Comments:

S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code

LABCORE Data Entry Template for Worklist# 12669

S Type	Sample#	R A	Test	Matrix	Group#	Project
28 CCB			@ICP-QC	QC		

Final page for worklist # 12669

JK 09-06-96
Analyst Signature Date

Reviewed by: Saul A. Pavey 9/9/96
Analyst Signature Date

Prepstd TJG, direct
Prepblk TJG, direct
596T004492_L, 4-4-2-8, DF 10
596T004492 4-4 2
596T004492_D 4-4 2
596T004492_S 4-4 2

596T004493_L, 4-4-2-8, DF 10
596T004493 4-4 2
596T004493_D 4-4 2

596T004494_L, 4-4-2-8, DF 10
596T004494 4-4 2
596T004494_D 4-4 2
596T004495_L, 4-4-2-8, DF 10
596T004495 4-4 2
596T004495_D 4-4 2

Data Entry Comments: Spike recovery calculation.

596T004492 $Cr = \frac{4.084 - 0.2174}{5} \times 100 = 77.3\%$

2019

S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

Note: This is the second prep. The pre-std and pre-dig spike has still low recovery (below 80%) but better than the first prep. See W.L. # 10272

Analysis Report Summary Fri 09-06-96 03:55:15 PM page 1

#	Sample Name	File	Method	Date	Time	OpID	Type	Mode
1	ICV	960906B	ICP2	09/06/96	13:30	DKS	Q	CONC
2	ICB	960906B	ICP2	09/06/96	13:34	DKS	Q	CONC
3	LLS	960906B	ICP2	09/06/96	13:36	DKS	Q	CONC
4	ICSA	960906B	ICP2	09/06/96	13:39	DKS	Q	CONC
5	ICSAB	960906B	ICP2	09/06/96	13:42	DKS	Q	CONC
6	PREPSTDTJA	960906B	ICP2	09/06/96	13:46	DKS	S	CONC
7	PREPBLKTJA	960906B	ICP2	09/06/96	13:49	DKS	S	CONC
8	S96T004492_L	960906B	ICP2	09/06/96	13:52	DKS	S	CONC
9	S96T004492	960906B	ICP2	09/06/96	13:55	DKS	S	CONC
10	S96T004492_D	960906B	ICP2	09/06/96	13:58	DKS	S	CONC
11	S96T004492_S	960906B	ICP2	09/06/96	14:01	DKS	S	CONC
12	CCV	960906B	ICP2	09/06/96	14:04	DKS	Q	CONC
13	CCB	960906B	ICP2	09/06/96	14:07	DKS	Q	CONC
14	S96T004493_L	960906B	ICP2	09/06/96	14:10	DKS	S	CONC
15	S96T004493	960906B	ICP2	09/06/96	14:13	DKS	S	CONC
16	S96T004493_D	960906B	ICP2	09/06/96	14:16	DKS	S	CONC
17	S96T004494_L	960906B	ICP2	09/06/96	14:19	DKS	S	CONC
18	S96T004494	960906B	ICP2	09/06/96	14:22	DKS	S	CONC
19	S96T004494_D	960906B	ICP2	09/06/96	14:25	DKS	S	CONC
20	CCV_1	960906B	ICP2	09/06/96	14:31	DKS	Q	CONC
21	CCB_1	960906B	ICP2	09/06/96	14:34	DKS	Q	CONC
22	S96T004495_L	960906B	ICP2	09/06/96	14:38	DKS	S	CONC
23	S96T004495	960906B	ICP2	09/06/96	14:41	DKS	S	CONC
24	S96T004495_D	960906B	ICP2	09/06/96	14:44	DKS	S	CONC
25	ICSA	960906B	ICP2	09/06/96	14:53	DKS	Q	CONC
26	ICSAB	960906B	ICP2	09/06/96	14:56	DKS	Q	CONC
27	CCV_2	960906B	ICP2	09/06/96	15:01	DKS	Q	CONC
28	CCB_2	960906B	ICP2	09/06/96	15:05	DKS	Q	CONC

DK Sold
09-06-96
GW-101

S96T004492
S96T004493
S96T004494
S96T004495

Worklist # 12669

SIGNATURE ABOVE REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 2020 TO 2025.

Analysis Report Averages Fri 09-06-96 03:55:15 PM page 2

#	Sample Name	Ag	Al	As	B	Ba	Be
1	ICV	4.995	4.958	5.283	5.069	4.952	5.239
2	ICB	-.0002	-.0009	.0007	-.0000	-.0004	.0004
3	LLS	.0224	.1018	.2045	.1009	.0982	.0108
4	ICSA	.0025	242.9	-.0385	-.0120	.0022	.0004
5	ICSAB	.9614	244.7	-.0348	-.0033	.4654	.4831
6	PREPSTDTJA	.6818	3.526	3.550	5.327	3.404	3.644
7	PREPBLKTJA	-.0003	.1342	-.0116	.6797	.0001	.0005
8	S96T004492_L	.0634	50.46	-.0780	.8776	-.0043	.0092
9	S96T004492	.0568	48.50	-.0834	.9028	.0007	.0057
10	S96T004492_D	.0601	77.49	-.1132	1.902	.0015	.0076
11	S96T004492_S	.8152	95.60	3.895	5.161	3.699	3.882
12	CCV	5.025	4.992	5.324	5.148	4.941	5.296
13	CCB	-.0000	.0021	.0000	-.0015	-.0004	.0005
14	S96T004493_L	.0519	81.14	-.0499	.4848	-.0053	.0110
15	S96T004493	.0561	77.33	-.1328	.4645	.0000	.0081
16	S96T004493_D	.0566	80.75	-.1284	.5585	.0001	.0086
17	S96T004494_L	.0616	49.91	-.0644	1.188	-.0036	.0083
18	S96T004494	.0632	47.64	-.0570	1.167	.0010	.0054
19	S96T004494_D	.0606	50.64	-.0888	.6312	.0003	.0054
20	CCV_1	5.032	4.969	5.307	5.116	4.943	5.265
21	CCB_1	-.0003	.0024	.0096	.0005	-.0004	.0004
22	S96T004495_L	.0647	46.85	-.1774	.6690	-.0032	.0066
23	S96T004495	.0621	43.89	-.0758	.6128	.0002	.0052
24	S96T004495_D	.0670	79.22	-.1220	.5314	.0004	.0083
25	ICSA	.0029	243.4	-.0050	-.0013	.0021	.0005
26	ICSAB	.9567	243.5	-.0181	-.0060	.4595	.4837
27	CCV_2	4.995	4.971	5.290	5.117	4.935	5.289
28	CCB_2	.0007	.0011	.0073	.0000	-.0003	.0007

#	Sample Name	Bi	Ca	Cd	Ce	Co	Cr
1	ICV	5.115	4.996	5.048	5.012	5.059	5.070
2	ICB	-.0148	-.0044	.0011	.0003	-.0004	-.0008
3	LLS	.1836	.2177	.0121	.2071	.0386	.0207
4	ICSA	-.0271	246.5	.0017	.0152	-.0005	.0047
5	ICSAB	-.0077	249.8	.9361	.0128	.4685	.4777
6	PREPSTDTJA	3.374	4.379	3.336	3.540	3.466	3.391
7	PREPBLKTJA	-.0033	.2640	-.0002	.0057	-.0014	.0038
8	S96T004492_L	-.3200	.5749	.0030	.0216	-.0243	.2126
9	S96T004492	-.0880	.5733	.0049	.0058	-.0015	.2174
10	S96T004492_D	-.0734	.3976	.0063	.0020	-.0027	.3098
11	S96T004492_S	3.714	4.681	3.726	3.842	3.787	4.084
12	CCV	5.086	5.056	5.087	4.987	5.099	5.111
13	CCB	-.0224	-.0039	.0001	.0007	-.0010	-.0009
14	S96T004493_L	-.2165	.3098	-.0017	-.0308	-.0050	.2911
15	S96T004493	-.0255	.2806	.0089	.0130	-.0040	.2910
16	S96T004493_D	-.0231	.2431	.0089	-.0018	-.0020	.3159
17	S96T004494_L	.1032	.2715	-.0011	.0659	-.0196	.1805
18	S96T004494	-.0674	.2925	.0014	.0064	-.0066	.1848
19	S96T004494_D	-.0572	.2167	.0049	.0004	.0009	.2004
20	CCV_1	5.140	5.088	5.093	4.995	5.108	5.121
21	CCB_1	-.0308	-.0024	.0002	.0010	-.0020	-.0015

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#	Sample Name	Bi	Ca	Cd	Ce	Co	Cr
22	S96T004495_L	-.2839	.2837	.0023	-.0049	-.0099	.1841
23	S96T004495	-.0341	.2960	.0064	.0011	-.0006	.1770
24	S96T004495_D	.0302	.5714	.0058	.0065	-.0032	.2991
25	ICSA	-.0378	245.9	.0008	.0144	.0001	.0065
26	ICSAB	-.0524	247.7	.9255	.0186	.4637	.4728
27	CCV_2	5.122	5.025	5.048	4.976	5.072	5.074
28	CCB_2	-.0318	-.0027	.0011	.0013	-.0021	-.0015

#	Sample Name	Cu	Eu	Fe	K	La	Li
1	ICV	4.901	-.0030	5.067	4.899	5.095	5.167
2	ICB	-.0004	-.0012	-.0026	-.1408	-.0016	-.0012
3	LLS	.0199	-.0003	.1013	Q.3301	.1026	.0214
4	ICSA	-.0108	-.0361	92.96	-.1629	-.0057	.0023
5	ICSAB	.4793	-.0377	93.95	-.0991	-.0049	1.028
6	PREPSTDTJA	3.450	-.0028	3.439	3.185	3.540	3.649
7	PREPBLKTJA	.0156	-.0028	.0605	-.2399	-.0008	-.0027
8	S96T004492_L	.0046	-.0047	.1987	373.0	-.0123	.0074
9	S96T004492	.0130	-.0010	.2166	366.7	-.0015	.0078
10	S96T004492_D	.0143	-.0020	.2312	263.9	-.0020	.0130
11	S96T004492_S	3.747	-.0042	3.903	205.6	3.866	4.050
12	CCV	4.921	-.0027	5.104	4.854	5.072	5.201
13	CCB	-.0009	-.0008	-.0013	-.2056	-.0008	-.0009
14	S96T004493_L	.0114	-.0097	.0699	184.2	-.0113	.0037
15	S96T004493	.0094	-.0031	.0812	178.9	-.0016	.0064
16	S96T004493_D	.0166	-.0034	.0861	186.2	-.0033	.0069
17	S96T004494_L	.0160	-.0115	.0707	338.7	-.0024	.0000
18	S96T004494	.0135	-.0026	.0829	330.3	-.0020	.0088
19	S96T004494_D	.0135	-.0025	.0701	331.4	-.0035	.0083
20	CCV_1	4.887	-.0024	5.106	4.793	5.073	5.147
21	CCB_1	-.0002	-.0011	-.0021	-.0773	-.0008	-.0009
22	S96T004495_L	.0138	-.0107	.0767	360.3	-.0070	-.0012
23	S96T004495	.0104	-.0030	.0948	340.8	-.0027	.0074
24	S96T004495_D	.0162	-.0014	.0698	266.9	-.0014	.0154
25	ICSA	-.0103	-.0351	93.17	-.0333	-.0044	.0018
26	ICSAB	.4772	-.0361	93.33	-.0264	-.0053	1.026
27	CCV_2	4.912	-.0025	5.068	4.797	5.065	5.213
28	CCB_2	-.0009	-.0014	-.0015	-.2143	-.0009	-.0016

#	Sample Name	Mg	Mn	Mo	Na	Nd	Ni
1	ICV	4.935	4.912	5.053	4.968	5.097	5.007
2	ICB	-.0077	-.0005	.0007	-.0128	-.0049	-.0054
3	LLS	.2001	.0193	.0969	.2026	.1963	.0436
4	ICSA	247.2	-.0066	-.0082	195.5	-.0018	-.0127
5	ICSAB	249.4	.4418	-.0080	197.0	-.0023	.9125
6	PREPSTDTJA	3.263	3.303	4.521	4.532	3.492	3.452
7	PREPBLKTJA	.0150	-.0001	.0028	1.120	-.0061	-.0016
8	S96T004492_L	-.0600	.0179	.1052	854.8	-.0670	.0070
9	S96T004492	.0444	.0210	.1113	819.6	-.0108	.0286
10	S96T004492_D	.0562	.0185	.1649	843.4	-.0119	.0365
11	S96T004492_S	3.555	3.603	4.679	903.6	3.789	3.801

Analysis Report Averages

WHC-SD-WM-DP-192, REV. 0

#	Sample Name	Mg	Mn	Mo	Na	Nd	Ni
12	CCV	4.973	4.956	5.084	4.972	5.072	5.042
13	CCB	-.0060	-.0002	.0037	-.0103	-.0041	-.0011
14	S96T004493_L	-.0162	.0048	.1661	811.6	-.0488	.0071
15	S96T004493	-.0177	.0090	.1690	775.9	-.0273	.0215
16	S96T004493_D	.0310	.0110	.1723	793.9	-.0082	.0215
17	S96T004494_L	-.0109	.0050	.0863	928.3	-.0559	.0127
18	S96T004494	.0162	.0107	.0997	890.4	-.0167	.0084
19	S96T004494_D	.0245	.0112	.1078	892.3	-.0101	.0146
20	CCV_1	4.964	4.959	5.103	4.950	5.061	5.069
21	CCB_1	-.0065	-.0005	.0025	-.0098	-.0039	-.0039
22	S96T004495_L	.0286	.0057	.1134	953.5	-.0360	.0084
23	S96T004495	.0205	.0101	.0977	898.7	-.0190	.0211
24	S96T004495_D	.0311	.0103	.1687	943.4	-.0143	.0100
25	ICSA	249.1	-.0067	-.0085	195.6	-.0033	-.0030
26	ICSAB	249.0	.4380	-.0079	195.5	-.0048	.9097
27	CCV_2	4.962	4.917	5.064	4.969	5.055	5.013
28	CCB_2	-.0096	-.0006	.0018	-.0137	-.0084	-.0024

#	Sample Name	P	Pb	S	Sb	Se	Si
1	ICV	5.150	5.008	5.000	4.830	4.948	4.755
2	ICB	.0092	-.0081	-.0087	-.0098	.0208	-.0064
3	LLS	.4105	.1982	.2080	.1046	.2028	Q.1070
4	ICSA	.0290	.0025	-.0261	-.0160	-.0333	-.0131
5	ICSAB	.0178	.9844	-.0446	-.0134	-.0312	-.0147
6	PREPSTDTJA	4.760	3.182	4.484	4.427	3.276	7.469
7	PREPBLKTJA	.0278	-.0035	.0629	-.0093	.0159	1.341
8	S96T004492_L	6.099	-.1882	.8474	-.0528	.0204	3.242
9	S96T004492	5.813	.1028	.8549	-.0266	.0483	3.168
10	S96T004492_D	4.835	.1159	1.162	-.0141	.0464	2.108
11	S96T004492_S	9.334	4.119	5.934	4.498	3.657	6.242
12	CCV	5.233	5.037	5.075	4.883	5.001	4.810
13	CCB	.0089	-.0112	-.0056	-.0048	.0117	-.0061
14	S96T004493_L	1.905	.0477	1.135	-.1303	.2140	1.535
15	S96T004493	1.761	.1429	1.132	-.0347	.0443	1.480
16	S96T004493_D	1.886	.2127	1.187	-.0126	.0368	1.860
17	S96T004494_L	3.328	-.0457	.7571	-.1173	.1102	2.136
18	S96T004494	3.149	.0656	.7437	-.0229	.0645	2.076
19	S96T004494_D	3.386	.0972	.7871	-.0136	.0592	2.327
20	CCV_1	5.150	5.078	5.018	4.875	4.988	4.803
21	CCB_1	.0218	-.0261	-.0079	-.0045	.0320	-.0085
22	S96T004495_L	5.177	-.0009	.7288	-.1116	.2256	1.852
23	S96T004495	4.818	.0785	.7479	-.0263	.0766	1.759
24	S96T004495_D	3.161	.1720	1.150	-.0083	.0461	1.433
25	ICSA	.0320	.0015	-.0466	-.0122	-.0286	-.0170
26	ICSAB	.0195	.9563	-.0542	-.0020	-.0259	-.0139
27	CCV_2	5.230	4.991	5.072	4.862	4.975	4.779
28	CCB_2	.0087	-.0205	-.0094	-.0066	.0171	-.0128

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#	Sample Name	Sm	Sr	Th	Tl	Tl	U
1	ICV	4.933	4.975	.0404	4.957	4.827	9.678
2	ICB	-.0160	-.0001	.0021	-.0012	-.0035	-.0616
3	LLS	.1998	.0204	.0011	.0192	.4269	.4688
4	ICSA	-.0053	.0016	.0013	-.0002	.0104	-.0592
5	ICSAB	-.0033	.0016	-.0007	.0000	-.0021	-.0646
6	PREPSTDTJA	3.435	3.437	.0307	4.231	3.189	6.735
7	PREPBLKTJA	-.0416	-.0001	.0118	-.0004	-.0044	-.1527
8	S96T004492_L	-.0474	.0010	.0075	-.0121	-.0639	-.3135
9	S96T004492	-.0149	.0010	.0026	.0001	-.0515	-.1407
10	S96T004492_D	-.0288	.0009	.0032	-.0009	-.0156	-.1492
11	S96T004492_S	3.736	3.735	.0368	4.143	3.515	7.189
12	CCV	4.911	4.954	.0428	4.963	4.893	9.654
13	CCB	-.0095	-.0000	.0005	-.0012	.0072	-.0403
14	S96T004493_L	-.1252	-.0010	.0121	-.0121	-.0194	-.5165
15	S96T004493	-.0444	.0000	.0143	-.0028	-.0264	-.2003
16	S96T004493_D	-.0435	.0001	.0072	-.0004	-.0200	-.2058
17	S96T004494_L	-.1387	-.0015	.0358	-.0095	.2638	-.6355
18	S96T004494	-.0372	.0002	.0102	-.0014	-.0191	-.2153
19	S96T004494_D	-.0346	.0000	.0060	-.0004	-.0383	-.2132
20	CCV_1	4.920	4.953	.0455	4.961	4.911	9.659
21	CCB_1	-.0125	-.0000	.0017	-.0010	.0217	-.0491
22	S96T004495_L	-.1511	-.0010	.0427	-.0070	-.2869	-.6998
23	S96T004495	-.0388	.0002	.0067	-.0063	-.0336	-.2394
24	S96T004495_D	-.0254	.0005	.0065	.0001	-.0312	-.1580
25	ICSA	-.0094	.0016	-.0007	-.0005	-.0094	-.0654
26	ICSAB	-.0084	.0016	-.0001	.0003	.0127	-.0627
27	CCV_2	4.928	4.951	.0413	4.959	4.829	9.660
28	CCB_2	-.0194	-.0001	.0053	-.0012	.0093	-.0713

#	Sample Name	V	Y	Zn	Zr
1	ICV	5.051	.0054	5.052	4.961
2	ICB	-.0032	-.0008	-.0001	-.0022
3	LLS	.0994	.0000	.0208	.0198
4	ICSA	-.0013	.0066	-.0002	-.0036
5	ICSAB	.4670	.0066	.9526	-.0029
6	PREPSTDTJA	3.392	.0023	3.237	4.552
7	PREPBLKTJA	-.0068	-.0019	.0134	-.0024
8	S96T004492_L	-.0164	-.0030	.0618	.0211
9	S96T004492	-.0026	-.0010	.0787	.0289
10	S96T004492_D	-.0052	-.0015	.0948	.0381
11	S96T004492_S	3.718	.0020	3.744	4.553
12	CCV	5.083	.0057	5.110	4.959
13	CCB	-.0024	-.0005	-.0003	-.0010
14	S96T004493_L	-.0272	-.0068	.0741	.0210
15	S96T004493	-.0085	-.0024	.0777	.0310
16	S96T004493_D	-.0092	-.0026	.0831	.0358
17	S96T004494_L	-.0344	-.0068	.0535	.0053
18	S96T004494	-.0076	-.0018	.0640	.0207
19	S96T004494_D	-.0076	-.0018	.0573	.0246
20	CCV_1	5.085	.0060	5.111	4.962
21	CCB_1	-.0023	-.0007	-.0016	-.0018

Analysis Report *Averages* *Fri 09-06-96 03:55:15 PM* *page 6*

#	Sample Name	V	Y	Zn	Zr
22	S96T004495_L	-.0325	-.0083	.0668	-.0023
23	S96T004495	-.0079	-.0019	.0736	.0189
24	S96T004495_D	-.0056	-.0013	.0888	.0379
25	ICSA	-.0018	.0064	-.0009	-.0038
26	ICSAB	.4641	.0065	.9496	-.0033
27	CCV_2	5.060	.0055	5.066	4.942
28	CCB_2	-.0036	-.0009	-.0015	-.0028

JK
09-06-96

File # 09609258.TXT WHC-SD-WM-DP-192, REV. 0

09/24/96 07:22
A-0004-1

LABCORE Data Entry Template for Worklist# 13282

Analyst: B. GOEDECKE **Instrument:** ~~ICP01~~ ICP02 **Book#** 61848

Method: LA-505-~~151~~ 161 Rev/Mod B-1

Worklist Comment: ICP AW-~~101~~ 105 (DIRECT)

S	Type	Sample#	R	A	Test	Matrix	Group#	Project
1	ICV				@ICP-QC	QC		
2	ICB				@ICP-QC	QC		
3	LLS				@ICP-QC	QC		
4	ICSA				@ICP-QC	QC		
5	ICSAB				@ICP-QC	QC		
6	SERDIL	S96T005004	0	D	@ICP-D01	LIQUID		
7	SAMPLE	S96T005004	0	D	@ICP-D01	LIQUID	96001213	AW-105 GRAB
		Analytes Requested:			AG-D-01 , AL-D-01 , AS-D-01 , B-D-01 , BA-D-01 , BE-D-01 , BI-D-01 , CA-D-01 , CD-D-01 , CE-D-01 , CO-D-01 , CR-D-01 , CU-D-01 , FE-D-01 , K-D-01 , LA-D-01 , LI-D-01 , MG-D-01 , MN-D-01 , MO-D-01 , NA-D-01 , ND-D-01 , NI-D-01 , P-D-01 , PB-D-01 , S-D-01 , SB-D-01 , SE-D-01 , SI-D-01 , SM-D-01 , SR-D-01 , TI-D-01 , TL-D-01 , U-D-01 , V-D-01 , ZN-D-01 , ZR-D-01		
8	DUP	S96T005004	0	D	@ICP-D01	LIQUID		
9	SPK	S96T005004	0	D	@ICP-D01	LIQUID		
10	CCV				@ICP-QC	QC		
11	CCB				@ICP-QC	QC		
12	SERDIL	S96T005005	0	D	@ICP-D01	LIQUID		
13	SAMPLE	S96T005005	0	D	@ICP-D01	LIQUID	96001213	AW-105 GRAB
		Analytes Requested:			AG-D-01 , AL-D-01 , AS-D-01 , B-D-01 , BA-D-01 , BE-D-01 , BI-D-01 , CA-D-01 , CD-D-01 , CE-D-01 , CO-D-01 , CR-D-01 , CU-D-01 , FE-D-01 , K-D-01 , LA-D-01 , LI-D-01 , MG-D-01 , MN-D-01 , MO-D-01 , NA-D-01 , ND-D-01 , NI-D-01 , P-D-01 , PB-D-01 , S-D-01 , SB-D-01 , SE-D-01 , SI-D-01 ,		

Data Entry Comments:

S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

LABCORE Data Entry Template for Worklist# 13282

S	Type	Sample#	R	A	Test	Matrix	Group#	Project
					SM-D-01 , SR-D-01 , TI-D-01 , TL-D-01 , U-D-01 , V-D-01 , ZN-D-01 , ZR-D-01			
14	DUP	S96T005005	0	D	@ICP-D01	LIQUID		
15	SPK	S96T005005	0	D	@ICP-D01	LIQUID		
16	SERDIL	S96T005006	0	D	@ICP-D01	LIQUID		
17	SAMPLE	S96T005006	0	D	@ICP-D01	LIQUID	96001213 AW-105	GRAB
		Analytes Requested:			AG-D-01 , AL-D-01 , AS-D-01 , B-D-01 , BA-D-01 , BE-D-01 , BI-D-01 , CA-D-01 , CD-D-01 , CE-D-01 , CO-D-01 , CR-D-01 , CU-D-01 , FE-D-01 , K-D-01 , LA-D-01 , LI-D-01 , MG-D-01 , MN-D-01 , MO-D-01 , NA-D-01 , ND-D-01 , NI-D-01 , P-D-01 , PB-D-01 , S-D-01 , SB-D-01 , SE-D-01 , SI-D-01 , SM-D-01 , SR-D-01 , TI-D-01 , TL-D-01 , U-D-01 , V-D-01 , ZN-D-01 , ZR-D-01			
18	DUP	S96T005006	0	D	@ICP-D01	LIQUID		
19	SPK	S96T005006	0	D	@ICP-D01	LIQUID		
20	ICSA				@ICP-QC	QC		
21	ICSAB				@ICP-QC	QC		
22	CCV				@ICP-QC	QC		
23	CCB				@ICP-QC	QC		

Final page for worklist # 13282

Reviewed by: Saul R. Perry 9/26/96

Analyst Signature	Date	Analyst Signature	Date
9/25-96			
S96T005004_L , 25-10-28 , DF 205		S96T005006_L , 25-10-28 , DF 205	
S96T005004 , 25-10	41	S96T005006 , 25-10	41
S96T005004_D , 25-10	41	S96T005006_D , 25-10	41
S96T005004_Q , 25-10	41	S96T005006_Q , 25-10	41
S96T005005_L , 25-10-28 , DF 205			
S96T005005 , 25-10	41		
S96T005005_D , 25-10	41		
S96T005005_Q , 25-10	41		

All post spikes: .25 ml sample + 2.05 ml SSTS + 7.95 ml HNO_3

Data Entry Comments: Spike recovery calculation:

S96T005004 $Al = \left(\frac{55.94}{41}\right) - \left(\frac{15.60}{41}\right) \times 10 = 98.4\%$

S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

Note: Spike true value is 1.0 ppm for all elements except for U = 2.0 ppm.

Analysis Report Summary Wed 09-25-96 06:06:34 PM page 1

#	Sample Name	File	Method	Date	Time	OpID	Type	Mode
1	ICV	960925B	ICP2	09/25/96	16:38	BJG	Q	CONC
2	ICB	960925B	ICP2	09/25/96	16:41	BJG	Q	CONC
3	LLS	960925B	ICP2	09/25/96	16:48	BJG	Q	CONC
4	ICSA	960925B	ICP2	09/25/96	16:52	BJG	Q	CONC
5	ICSAB	960925B	ICP2	09/25/96	16:55	BJG	Q	CONC
6	S96T005004_L	960925B	ICP2	09/25/96	16:58	BJG	S	CONC
7	S96T005004	960925B	ICP2	09/25/96	17:01	BJG	S	CONC
8	S96T005004_D	960925B	ICP2	09/25/96	17:05	BJG	S	CONC
9	S96T005004_A	960925B	ICP2	09/25/96	17:08	BJG	S	CONC
10	CCV	960925B	ICP2	09/25/96	17:12	BJG	Q	CONC
11	CCB	960925B	ICP2	09/25/96	17:15	BJG	Q	CONC
12	S96T005005_L	960925B	ICP2	09/25/96	17:18	BJG	S	CONC
13	S96T005005	960925B	ICP2	09/25/96	17:21	BJG	S	CONC
14	S96T005005_D	960925B	ICP2	09/25/96	17:24	BJG	S	CONC
15	S96T005005_A	960925B	ICP2	09/25/96	17:27	BJG	S	CONC
16	S96T005006_L	960925B	ICP2	09/25/96	17:40	BJG	S	CONC
17	S96T005006	960925B	ICP2	09/25/96	17:42	BJG	S	CONC
18	S96T005006_D	960925B	ICP2	09/25/96	17:45	BJG	S	CONC
19	S96T005006_A	960925B	ICP2	09/25/96	17:49	BJG	S	CONC
20	ICSA	960925B	ICP2	09/25/96	17:51	BJG	Q	CONC
21	ICSAB	960925B	ICP2	09/25/96	17:54	BJG	Q	CONC
22	CCV	960925B	ICP2	09/25/96	17:58	BJG	Q	CONC
23	CCB	960925B	ICP2	09/25/96	18:01	BJG	Q	CONC

SIGNATURE BELOW REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 2028 TO 2032

9-25-96

AW-105

S96T005004, 5005, 5006

.250-1-10-L

FILE # 09609258.TXT

Analysis Report Averages Wed 09-25-96 06:06:34 PM page 2

#	Sample Name	Ag	Al	As	B	Ba	Be
1	ICV	4.961	4.902	5.117	4.960	4.953	5.079
2	ICB	.0016	.0007	.0071	.0063	.0004	.0003
3	LLS	.0212	.1002	.2061	.1019	.0968	.0100
4	ICSA	.0023	243.6	-.0434	-.0014	.0011	.0004
5	ICSAB	.9610	240.7	-.0250	.0028	.4684	.4741
6	S96T005004_L	1.011	15.74	3.289	3.898	.0087	-.0279
7	S96T005004	.9940	15.60	-.0624	3.179	.0072	-.0026
8	S96T005004_D	1.022	16.10	.4369	3.239	.0087	-.0008
9	S96T005004_A	35.41	55.94	42.90	42.96	39.68	41.11
10	CCV	4.957	4.913	5.151	4.945	4.946	5.112
11	CCB	.0063	.0021	.0064	.0078	.0015	.0016
12	S96T005005_L	1.416	15.65	.9462	6.596	.0199	-.0101
13	S96T005005	1.068	16.50	.3141	5.436	.0090	-.0009
14	S96T005005_D	1.116	16.89	.2067	5.456	.0068	.0045
15	S96T005005_A	35.44	56.66	43.10	45.14	40.21	41.09
16	S96T005006_L	1.327	17.69	-1.984	3.299	.0073	.0262
17	S96T005006	1.137	17.43	.6465	2.979	.0087	.0082
18	S96T005006_D	1.058	17.01	-.1497	2.859	.0070	.0064
19	S96T005006_A	35.25	57.26	42.63	42.66	39.97	41.24
20	ICSA	.0076	242.4	-.0517	.0024	.0009	.0002
21	ICSAB	.9584	239.4	-.0302	.0089	.4622	.4716
22	CCV	4.969	4.878	5.128	4.937	4.898	5.089
23	CCB	.0004	-.0035	.0099	.0078	.0001	.0002

#	Sample Name	Bi	Ca	Cd	Ce	Co	Cr
1	ICV	5.086	5.004	4.977	4.998	4.993	5.010
2	ICB	-.0272	.0106	.0015	.0129	.0005	.0004
3	LLS	.1949	.2085	.0098	.1973	.0398	.0194
4	ICSA	.0213	246.2	.0006	.0082	.0000	.0072
5	ICSAB	-.0065	245.3	.9305	.0008	.4616	.4780
6	S96T005004_L	-4.830	4.631	.1941	-.0756	-.1227	.3423
7	S96T005004	.0394	3.526	.0232	-.0538	-.0524	.6402
8	S96T005004_D	.5631	3.538	.0531	-.0390	-.0127	.5729
9	S96T005004_A	41.19	44.42	40.51	40.72	40.45	41.27
10	CCV	5.069	5.000	4.983	4.981	5.003	5.012
11	CCB	-.0210	.0063	.0031	-.0012	.0012	.0008
12	S96T005005_L	-.3566	7.132	.2089	-.0632	-.3960	.5347
13	S96T005005	-.2553	6.177	.0330	-.0534	-.0274	.6154
14	S96T005005_D	-.1167	6.232	.0192	-.0217	.0025	.6306
15	S96T005005_A	41.47	47.79	41.01	41.04	40.91	41.77
16	S96T005006_L	-4.759	4.621	.1470	.0827	-.3242	.5452
17	S96T005006	-.3129	3.760	.0737	.0405	-.0178	.6510
18	S96T005006_D	-.3360	3.625	.0443	-.3259	-.0125	.6522
19	S96T005006_A	41.07	44.86	41.09	40.77	40.67	41.68
20	ICSA	.0112	246.1	.0005	.0079	.0000	.0092
21	ICSAB	-.0357	245.1	.9286	.0102	.4662	.4750
22	CCV	5.038	5.052	5.001	4.939	5.009	5.037
23	CCB	-.0039	.0065	.0011	-.0004	.0006	-.0004

Analysis Report *Averages* *Wed 09-25-96 06:06:34 PM* *page 3*

#	Sample Name	Cu	Eu	Fe	K	La	Li
1	ICV	5.157	-.0039	4.999	4.798	5.079	5.087
2	ICB	.0002	.0004	.0014	.1398	.0023	.0004
3	LLS	.0196	-.0005	.1015	.4904	.1010	.0200
4	ICSA	-.0114	-.0453	93.21	-.0428	-.0052	.0017
5	ICSAB	.4731	-.0447	92.27	.0320	-.0051	1.041
6	S96T005004_L	-.0622	-.0236	.2004	1207.	.0791	-.1060
7	S96T005004	.0926	-.0084	.0191	1231.	.0238	-.0219
8	S96T005004_D	.0733	-.0283	.0511	1258.	-.0291	-.0324
9	S96T005004_A	42.04	-.0587	40.49	1288.	41.23	42.12
10	CCV	5.175	-.0038	4.993	4.825	5.059	5.115
11	CCB	.0007	-.0004	.0011	-.0264	.0020	.0008
12	S96T005005_L	.0320	.0136	.0065	1241.	.1324	-.0274
13	S96T005005	.1108	-.0111	.0088	1266.	.0163	.0044
14	S96T005005_D	.1107	-.0316	.0194	1292.	.0179	-.0009
15	S96T005005_A	42.02	-.0498	40.85	1330.	41.61	41.69
16	S96T005006_L	-.1075	-.0725	.0399	1325.	.0541	-.1060
17	S96T005006	.1116	-.0350	.0154	1317.	.0199	-.0429
18	S96T005006_D	.0825	-.0291	.0050	1324.	-.0260	-.0272
19	S96T005006_A	42.07	-.0534	40.67	1355.	41.45	41.85
20	ICSA	-.0102	-.0461	92.93	.1918	-.0049	.0022
21	ICSAB	.4678	-.0458	91.84	.0663	-.0046	1.029
22	CCV	5.121	-.0025	4.989	4.770	5.008	5.038
23	CCB	-.0007	.0001	.0003	-.0633	-.0001	-.0005

#	Sample Name	Mg	Mn	Mo	Na	Nd	Ni
1	ICV	4.671	4.863	5.011	4.906	5.097	4.931
2	ICB	.0268	.0005	.0020	.0062	.0016	.0068
3	LLS	.2002	.0189	.0987	.2000	.1944	.0472
4	ICSA	246.2	-.0063	-.0066	197.6	.0048	-.0060
5	ICSAB	243.4	.4415	-.0055	195.3	.0031	.9250
6	S96T005004_L	3.735	-.0272	.4626	12730.	-.5746	.8943
7	S96T005004	.4741	-.0094	.4339	12570.	-.0414	.3324
8	S96T005004_D	.2919	-.0080	.4478	12740.	-.0750	.4042
9	S96T005004_A	38.31	38.71	41.47	12790.	41.27	40.25
10	CCV	4.701	4.867	5.011	4.918	5.067	4.948
11	CCB	.0178	.0015	.0012	.0022	.0002	.0097
12	S96T005005_L	2.803	.0182	.3951	12760.	-.0878	2.174
13	S96T005005	.5280	-.0044	.4553	12730.	-.0586	.3746
14	S96T005005_D	.3367	-.0098	.4275	12940.	-.0393	.1668
15	S96T005005_A	38.41	39.17	41.62	12850.	41.39	40.34
16	S96T005006_L	3.747	-.0267	.0441	13190.	-.5044	2.058
17	S96T005006	.4094	-.0120	.3640	13050.	-.0869	.3567
18	S96T005006_D	.0279	-.0123	.4203	12990.	-.1066	.3562
19	S96T005006_A	37.91	39.02	41.91	12980.	41.33	40.49
20	ICSA	245.6	-.0061	-.0070	194.8	.0062	.0079
21	ICSAB	242.6	.4402	-.0089	192.7	.0034	.9251
22	CCV	4.680	4.879	5.025	4.860	5.021	4.940
23	CCB	.0115	.0002	.0007	.0053	.0011	.0056

Analysis Report Averages Wed 09-25-96 06:06:34 PM page 4

#	Sample Name	P	Pb	S	Sb	Se	Si
1	ICV	5.107	4.990	4.933	4.755	4.779	5.014
2	ICB	.0032	.0038	.0112	-.0026	.0097	.0051
3	LLS	.3992	.1835	.1870	.0976	.1632	Q.2162
4	ICSA	.0173	.0247	-.0118	.0131	-.0632	.0118
5	ICSAB	.0158	.9782	-.0330	.0104	-.0721	-.0007
6	S96T005004_L	14.28	-.6139	47.50	-.1125	-2.109	48.68
7	S96T005004_	14.37	.2340	45.98	.0755	-.1556	45.60
8	S96T005004_D	13.76	-.0662	46.45	.1238	.1383	46.32
9	S96T005004_A	57.25	40.02	86.82	39.27	41.07	88.43
10	CCV	5.141	4.972	4.950	4.774	4.793	5.035
11	CCB	.0062	.0077	-.0051	.0103	-.0007	.0037
12	S96T005005_L	17.54	.8777	45.94	1.034	-2.050	53.64
13	S96T005005_	13.39	.4865	45.85	.0285	-.2704	51.26
14	S96T005005_D	13.37	.5113	46.03	.1472	.2091	51.54
15	S96T005005_A	56.58	41.27	88.13	39.26	40.42	94.06
16	S96T005006_L	13.18	1.851	46.93	.4890	-1.722	49.75
17	S96T005006_	12.92	.1489	46.70	.3985	-.0827	47.74
18	S96T005006_D	13.71	.0330	46.49	-.2119	-.2225	47.43
19	S96T005006_A	57.48	41.41	87.33	39.93	40.16	90.18
20	ICSA	.0420	.0161	-.0411	-.0003	-.0619	.0145
21	ICSAB	.0405	.9988	-.0262	.0064	-.0565	.0049
22	CCV	5.292	4.982	5.019	4.770	4.781	5.057
23	CCB	.0108	-.0087	-.0078	.0003	.0011	.0062

#	Sample Name	Sm	Sr	Th	Ti	Tl	U
1	ICV	4.909	4.943	.0158	4.909	4.814	9.622
2	ICB	.0085	.0003	.0060	.0003	-.0109	.0203
3	LLS	.1926	.0197	.0018	.0193	.3845	.4593
4	ICSA	-.0070	.0018	-.0051	.0007	-.0207	.0086
5	ICSAB	.0019	.0020	.0006	.0005	-.0070	.0218
6	S96T005004_L	-.3260	.0645	1.259	-.1570	2.947	14.79
7	S96T005004_	-.0673	.0689	.0190	-.0181	.3002	15.23
8	S96T005004_D	-.3110	.0667	.1226	-.0077	-.7015	15.11
9	S96T005004_A	39.16	39.96	.2363	40.08	38.59	93.06
10	CCV	4.900	4.920	.0246	4.925	4.784	9.596
11	CCB	-.0059	.0013	-.0002	.0012	-.0084	-.0157
12	S96T005005_L	1.062	.1079	.0523	-.0087	.4793	20.36
13	S96T005005_	-.1460	.1061	.0646	.0020	.5950	16.15
14	S96T005005_D	-.3536	.1083	-.0124	-.0192	-.5378	16.30
15	S96T005005_A	39.79	40.25	.2220	40.45	38.60	94.98
16	S96T005006_L	-1.264	.0536	.2125	-.1106	-.5795	13.74
17	S96T005006_	-.3295	.0558	.1720	-.0176	-.4217	14.73
18	S96T005006_D	-.2161	.0579	.0484	-.0287	.0055	15.68
19	S96T005006_A	39.70	40.12	.1238	40.30	39.20	94.53
20	ICSA	.0002	.0019	-.0099	.0007	.0342	.0455
21	ICSAB	.0092	.0020	-.0038	.0012	-.0110	.0409
22	CCV	4.865	4.876	.0140	4.897	4.767	9.513
23	CCB	.0009	.0001	-.0009	.0000	.0060	.0093

Analysis Report *Averages* *Wed 09-25-96 06:06:34 PM* *page 5*

#	Sample Name	V	Y	Zn	Zr
1	ICV	4.976	.0059	5.029	4.941
2	ICB	.0013	.0005	.0030	-.0005
3	LLS	.0987	.0004	.0236	.0196
4	ICSA	-.0014	.0064	.0077	-.0041
5	ICSAB	.4649	.0069	.9558	-.0031
6	S96T005004_L	-.1075	.0098	2.167	-.2589
7	S96T005004	.0182	-.0033	1.291	-.0339
8	S96T005004_D	-.0126	-.0128	1.281	-.0710
9	S96T005004_A	40.42	.0344	42.45	39.99
10	CCV	4.977	.0058	5.039	4.932
11	CCB	.0000	-.0001	.0045	.0008
12	S96T005005_L	.1166	.0396	2.318	-.0284
13	S96T005005	.0164	.0028	1.574	-.0384
14	S96T005005_D	-.0145	-.0069	1.582	-.0475
15	S96T005005_A	40.83	.0432	43.01	40.38
16	S96T005006_L	-.2181	-.0380	2.152	-.1790
17	S96T005006	-.0120	-.0127	1.336	-.0891
18	S96T005006_D	.0020	-.0131	1.320	-.0512
19	S96T005006_A	40.74	.0402	42.76	40.25
20	ICSA	.0007	.0070	.0076	-.0020
21	ICSAB	.4641	.0073	.9557	-.0010
22	CCV	4.979	.0064	5.073	4.911
23	CCB	.0004	.0001	.0028	.0000

LABCORE Data Entry Template for Worklist# 13283

Analyst: JK 5/10 **Instrument:** ICP01-2 JK 9-25-96 **Book#** 61848B

Method: LA-505-~~151~~/161 Rev/Mod B-1
JK 9-24-96 5

Worklist Comment: ICP AW-10~~1~~5 (DIRECT) JK 9-24-96

S	Type	Sample#	R	A	Test	Matrix	Group#	Project
1	ICV				@ICP-QC	QC		
2	ICB				@ICP-QC	QC		
3	LLS				@ICP-QC	QC		
4	ICSA				@ICP-QC	QC		
5	ICSAB				@ICP-QC	QC		
6	SERDIL	S96T005010	0	D	@ICP-D01	LIQUID		
7	SAMPLE	S96T005010	0	D	@ICP-D01	LIQUID	96001215	AW-105 GRAB
		Analytes Requested:			AG-D-01 , AL-D-01 , AS-D-01 , B-D-01 , BA-D-01 , BE-D-01 , BI-D-01 , CA-D-01 , CD-D-01 , CE-D-01 , CO-D-01 , CR-D-01 , CU-D-01 , FE-D-01 , K-D-01 , LA-D-01 , LI-D-01 , MG-D-01 , MN-D-01 , MO-D-01 , NA-D-01 , ND-D-01 , NI-D-01 , P-D-01 , PB-D-01 , S-D-01 , SB-D-01 , SE-D-01 , SI-D-01 , SM-D-01 , SR-D-01 , TI-D-01 , TL-D-01 , U-D-01 , V-D-01 , ZN-D-01 , ZR-D-01			
8	DUP	S96T005010	0	D	@ICP-D01	LIQUID		
9	SPK	S96T005010	0	D	@ICP-D01	LIQUID		
10	CCV				@ICP-QC	QC		
11	CCB				@ICP-QC	QC		
12	SERDIL	S96T005011	0	D	@ICP-D01	LIQUID		
13	SAMPLE	S96T005011	0	D	@ICP-D01	LIQUID	96001215	AW-105 GRAB
		Analytes Requested:			AG-D-01 , AL-D-01 , AS-D-01 , B-D-01 , BA-D-01 , BE-D-01 , BI-D-01 , CA-D-01 , CD-D-01 , CE-D-01 , CO-D-01 , CR-D-01 , CU-D-01 , FE-D-01 , K-D-01 , LA-D-01 , LI-D-01 , MG-D-01 , MN-D-01 , MO-D-01 , NA-D-01 , ND-D-01 , NI-D-01 , P-D-01 , PB-D-01 , S-D-01 , SB-D-01 , SE-D-01 , SI-D-01 ,			

Data Entry Comments:

S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

LABCORE Data Entry Template for Worklist# 13283

S	Type	Sample#	R	A	Test	Matrix	Group#	Project
					SM-D-01 , SR-D-01 , TI-D-01 , TL-D-01 , U-D-01 , V-D-01 , ZN-D-01 , ZR-D-01			
14	DUP	S96T005011	0	D	@ICP-D01	LIQUID		
15	SPK	S96T005011	0	D	@ICP-D01	LIQUID		
16	SERDIL	S96T005012	0	D	@ICP-D01	LIQUID		
17	SAMPLE	S96T005012	0	D	@ICP-D01	LIQUID	96001215 AW-105	GRAB
		Analytes Requested:			AG-D-01 , AL-D-01 , AS-D-01 , B-D-01 , BA-D-01 , BE-D-01 , BI-D-01 , CA-D-01 , CD-D-01 , CE-D-01 , CO-D-01 , CR-D-01 , CU-D-01 , FE-D-01 , K-D-01 , LA-D-01 , LI-D-01 , MG-D-01 , MN-D-01 , MO-D-01 , NA-D-01 , ND-D-01 , NI-D-01 , P-D-01 , PB-D-01 , S-D-01 , SB-D-01 , SE-D-01 , SI-D-01 , SM-D-01 , SR-D-01 , TI-D-01 , TL-D-01 , U-D-01 , V-D-01 , ZN-D-01 , ZR-D-01			
18	DUP	S96T005012	0	D	@ICP-D01	LIQUID		
19	SPK	S96T005012	0	D	@ICP-D01	LIQUID		
20	ICSA				@ICP-QC	QC		
21	ICSAB				@ICP-QC	QC		
22	CCV				@ICP-QC	QC		
23	CCB				@ICP-QC	QC		

Final page for worklist # 13283

Analyst Signature	Date		Analyst Signature	Date	
[signature]	09-25-96		Reviewed by: [signature]	9/26/96	
S96T005010_L , 25-10-2-8 , JF 205			S96T005012_L , 25-10-2-8 , JF 205		
S96T005010 , 25-10	41		S96T005012 , 25-10	41	
S96T005010_D , 25-10	41		S96T005012_D , 25-10	41	
S96T005010_Q , 25-10	41		S96T005012_Q , 25-10	41	
S96T005011_L , 25-10-2-8 , JF 205					
S96T005011 , 25-10	41				
S96T005011_D , 25-10	41				
S96T005011_Q , 25-10	41				

All post spikes: , 25 ml sample + 2.05 ml SSTS + 7.85 ml HNO_3

Data Entry Comments: Spike recovery calculation:

S96T005010 $Al = \left(\frac{56.39}{41}\right) - \left(\frac{16.01}{41}\right) \times 100 = 98.5\%$

S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

Note: Spike true ~~value~~ value is 1.0 ppm for all elements except for U = 2.0 ppm.

Analysis Report Summary Wed 09-25-96 11:02:23 AM page 1

#	Sample Name	File	Method	Date	Time	OpID	Type	Mode
1	ICV	960925A	ICP2	09/25/96	09:37	DKS	Q	CONC
2	ICB	960925A	ICP2	09/25/96	09:40	DKS	Q	CONC
3	LLS	960925A	ICP2	09/25/96	09:44	DKS	Q	CONC
4	ICSA	960925A	ICP2	09/25/96	09:51	DKS	Q	CONC
5	ICSAB	960925A	ICP2	09/25/96	09:54	DKS	Q	CONC
6	S96T005010_L	960925A	ICP2	09/25/96	09:58	DKS	S	CONC
7	S96T005010	960925A	ICP2	09/25/96	10:01	DKS	S	CONC
8	S96T005010_D	960925A	ICP2	09/25/96	10:06	DKS	S	CONC
9	S96T005010_S	960925A	ICP2	09/25/96	10:09	DKS	S	CONC
10	CCV 9-25-96	960925A	ICP2	09/25/96	10:12	DKS	Q	CONC
~~11~~	~~CCB~~	~~960925A~~	~~ICP2~~	~~09/25/96~~	~~10:15~~	~~DKS~~	~~Q~~	~~CONC~~
12	CCB	960925A	ICP2	09/25/96	10:19	DKS	Q	CONC
13	S96T005011_L	960925A	ICP2	09/25/96	10:22	DKS	S	CONC
14	S96T005011	960925A	ICP2	09/25/96	10:25	DKS	S	CONC
15	S96T005011_D	960925A	ICP2	09/25/96	10:30	DKS	S	CONC
16	S96T005011_A	960925A	ICP2	09/25/96	10:33	DKS	S	CONC
17	S96T005012_L	960925A	ICP2	09/25/96	10:36	DKS	S	CONC
18	S96T005012	960925A	ICP2	09/25/96	10:40	DKS	S	CONC
19	S96T005012_D	960925A	ICP2	09/25/96	10:43	DKS	S	CONC
20	S96T005012_A	960925A	ICP2	09/25/96	10:47	DKS	S	CONC
21	ICSA	960925A	ICP2	09/25/96	10:50	DKS	Q	CONC
22	ICSAB	960925A	ICP2	09/25/96	10:53	DKS	Q	CONC
23	CCV_1	960925A	ICP2	09/25/96	10:56	DKS	Q	CONC
24	CCB_1	960925A	ICP2	09/25/96	10:59	DKS	Q	CONC

JK
09-25-96
QW-105

S96T005010
S96T005011
S96T005012

Worklist# 15283

SIGNATURE ABOVE REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 2035 TO 2039.

Analysis Report Averages Wed 09-25-96 11:02:23 AM page 2

#	Sample Name	Ag	Al	As	B	Ba	Be
1	ICV	4.964	4.897	5.159	5.074	5.035	5.113
2	ICB	.0021	.0086	.0112	.0052	.0000	.0001
3	LLS	.0214	.1022	.2182	.1080	.1002	.0104
4	ICSA	.0043	241.6	-.0098	-.0007	.0019	.0002
5	ICSAB	.9725	243.3	-.0313	.0052	.4811	.4799
6	S96T005010_L	1.152	16.22	3.619	4.619	-.0143	.0341
7	S96T005010_	1.039	16.01	.1720	2.851	.0007	.0010
8	S96T005010_D	1.072	16.17	.7989	2.870	-.0009	.0130
9	S96T005010_S	34.02	56.39	44.11	43.99	40.93	41.63
10	CCV 9-25-96	5.008	4.921	5.252	5.113	5.008	5.167
~~11~~	~~CCB~~	~~0.0122~~	~~.0088~~	~~.0101~~	~~.0047~~	~~.0001~~	~~.0004~~
12	CCB	.0020	.0106	.0057	.0037	.0000	.0001
13	S96T005011_L	1.404	17.32	2.509	3.754	-.0027	.0167
14	S96T005011_	1.156	16.86	.8710	2.678	.0027	.0026
15	S96T005011_D	1.151	16.86	.7460	2.659	.0046	.0095
16	S96T005011_A	34.41	57.15	43.86	43.14	40.65	41.49
17	S96T005012_L	7.405	90.37	3.433	3.753	.0036	.0948
18	S96T005012_	1.551	88.27	.7608	2.677	.0030	.0270
19	S96T005012_D	1.501	89.12	.6722	2.831	.0014	.0288
20	S96T005012_A	34.55	129.5	44.58	43.47	40.84	41.52
21	ICSA	.0360	245.5	-.0138	.0060	.0018	.0003
22	ICSAB	.9708	243.3	-.0194	-.0004	.4794	.4837
23	CCV_1	5.055	4.960	5.221	5.091	5.103	5.205
24	CCB_1	.0032	-.0044	.0202	.0061	.0001	.0002

#	Sample Name	Bi	Ca	Cd	Ce	Co	Cr
1	ICV	5.087	5.013	5.015	5.003	5.100	5.054
2	ICB	-.0121	.0014	.0005	.0025	.0034	-.0000
3	LLS	.1868	.2387	.0104	.1895	.0438	.0211
4	ICSA	-.0051	248.1	.0014	.0103	.0002	.0087
5	ICSAB	-.0118	252.3	.9480	.0063	.4811	.4854
6	S96T005010_L	-3.543	3.007	.1891	-2.066	.0691	.5651
7	S96T005010_	.1105	3.288	.0546	-.2722	-.0080	.6103
8	S96T005010_D	.8470	3.068	-.0224	-.2273	.0797	.6478
9	S96T005010_S	43.69	46.01	41.81	41.46	42.34	42.66
10	CCV 9-25-96	5.124	5.115	5.058	4.981	5.154	5.099
~~11~~	~~CCB~~	~~.0126~~	~~-.0024~~	~~.0007~~	~~-.0109~~	~~.0001~~	~~.0003~~
12	CCB	.0109	.0000	.0001	-.0026	.0014	.0003
13	S96T005011_L	-3.676	3.543	.0713	-.9543	.0726	.7354
14	S96T005011_	-.4997	4.170	.0759	-.2552	.0800	.6531
15	S96T005011_D	.3619	4.194	.0430	-.2393	.0705	.6429
16	S96T005011_A	41.31	46.32	41.64	40.81	42.09	42.39
17	S96T005012_L	1.476	-.4862	.2298	-2.212	.1664	4.142
18	S96T005012_	1.019	.3592	.0735	-.0961	.1230	3.991
19	S96T005012_D	1.249	.0678	.0560	-.0517	.0747	4.049
20	S96T005012_A	41.00	42.28	41.62	41.27	42.09	45.77
21	ICSA	-.0099	253.9	.0005	.0053	.0030	.0091
22	ICSAB	.0215	252.2	.9453	.0059	.4766	.4839
23	CCV_1	5.218	5.216	5.118	5.078	5.201	5.167
24	CCB_1	-.0146	-.0006	-.0002	-.0004	.0011	.0009

Analysis Report *Averages* *Wed 09-25-96 11:02:23 AM* *page 3*

#	Sample Name	Cu	Eu	Fe	K	La	Li
1	ICV	5.254	-.0015	5.026	4.865	5.091	5.049
2	ICB	.0004	-.0007	-.0001	-.0264	.0013	-.0002
3	LLS	.0214	-.0007	.1030	Q.3723	.1016	.0201
4	ICSA	-.0093	-.0279	92.92	.1598	-.0039	.0023
5	ICSAB	.4887	-.0309	93.75	.1209	-.0042	1.048
6	S96T005010_L	.1269	-.2909	-.1358	1253.	-.1510	-.3359
7	S96T005010	.0959	-.0607	-.0026	1274.	-.0152	-.0295
8	S96T005010_D	.1039	-.0564	-.0159	1270.	.0016	-.0247
9	S96T005010_S	43.14	-.0459	41.57	1315.	41.98	41.75
10	CCV JW 9-25-96	5.276	-.0014	5.070	5.035	5.060	5.092
~~11~~	~~CCB~~	~~-.0006~~	~~-.0015~~	~~-.0005~~	~~-.1298~~	~~-.0004~~	~~-.0014~~
12	CCB	.0007	-.0015	.0003	.0144	.0004	-.0012
13	S96T005011_L	.2121	-.2344	-.0823	1288.	.0125	-.0484
14	S96T005011	.1299	-.0534	-.0087	1312.	-.0226	-.0152
15	S96T005011_D	.1118	-.0374	-.0256	1310.	.0121	-.0200
16	S96T005011_A	43.00	-.0576	41.30	1347.	41.63	41.74
17	S96T005012_L	.4850	-.3074	-.0171	3301.	.0036	-.1678
18	S96T005012	.3283	-.0347	.0958	3332.	.0294	-.0054
19	S96T005012_D	.3365	-.0365	.0960	3363.	.0219	-.0054
20	S96T005012_A	43.34	-.0555	41.51	3412.	41.92	42.66
21	ICSA	-.0093	-.0334	94.69	-.0666	-.0046	.0012
22	ICSAB	.4913	-.0305	93.81	.0645	-.0050	1.054
23	CCV_1	5.319	-.0011	5.131	4.941	5.162	5.090
24	CCB_1	.0002	-.0004	.0003	.0204	.0001	.0002

#	Sample Name	Mg	Mn	Mo	Na	Nd	Ni
1	ICV	4.814	4.889	5.107	4.894	5.107	4.998
2	ICB	.0071	-.0001	.0001	-.0016	.0000	.0029
3	LLS	.1976	.0192	.1021	.1975	.1978	.0461
4	ICSA	244.5	-.0064	-.0084	195.1	.0024	-.0028
5	ICSAB	245.7	.4482	-.0108	197.6	.0001	.9355
6	S96T005010_L	-.2376	-.0918	.9096	13000.	-.2537	.7103
7	S96T005010	-.0636	-.0239	.4182	12750.	-.1345	.1474
8	S96T005010_D	.0345	-.0191	.4185	12840.	-.0407	.1198
9	S96T005010_S	39.67	39.72	43.12	12790.	41.99	41.44
10	CCV JW 9-25-96	4.868	4.931	5.152	4.905	5.069	5.053
~~11~~	~~CCB~~	~~-.0062~~	~~-.0003~~	~~.0008~~	~~-.0102~~	~~-.0046~~	~~.0013~~
12	CCB	.0005	-.0004	.0021	-.0126	-.0035	.0035
13	S96T005011_L	.9114	-.0751	.4752	13000.	.1661	-.1159
14	S96T005011	.1006	-.0132	.4865	12950.	-.0780	.1277
15	S96T005011_D	.1758	-.0147	.3454	12950.	.0252	.0914
16	S96T005011_A	39.20	39.42	42.87	12950.	41.66	41.61
17	S96T005012_L	1.093	-.0925	1.513	19030.	-.1568	.7968
18	S96T005012	.2009	-.0131	.8265	18700.	-.0000	.3205
19	S96T005012_D	.3384	-.0082	.8872	18840.	.0509	.1390
20	S96T005012_A	39.06	39.54	43.39	18960.	41.92	41.29
21	ICSA	248.3	-.0066	-.0086	198.6	.0030	-.0031
22	ICSAB	246.3	.4469	-.0118	197.7	.0010	.9269
23	CCV_1	4.883	4.996	5.210	4.933	5.156	5.101
24	CCB_1	.0053	-.0001	.0005	-.0028	.0008	-.0011

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#	Sample Name	P	Pb	S	Sb	Se	Si
1	ICV	4.946	5.002	4.910	4.843	4.804	4.984
2	ICB	.0028	.0040	-.0035	-.0048	-.0003	.0018
3	LLS	.4097	.2087	.1986	.0954	.1808	.1186
4	ICSA	.0076	.0198	-.0099	-.0044	-.0763	.0021
5	ICSAB	.0347	.9996	-.0419	-.0056	-.0685	-.0031
6	S96T005010_L	14.16	.5123	44.49	-1.924	-1.663	39.25
7	S96T005010	13.30	-.5538	46.52	.1168	.1898	39.60
8	S96T005010_D	13.05	.0120	45.91	-.1725	.3772	40.09
9	S96T005010_S	55.10	41.91	87.78	40.38	42.22	82.84
10	CCV MK 9-25-96	5.003	5.036	5.017	4.910	4.862	5.039
~~11~~	~~CCB~~	~~-.0076~~	~~.0068~~	~~-.0016~~	~~-.0023~~	~~.0170~~	~~-.0003~~
12	CCB	.0132	.0042	-.0029	-.0080	.0091	-.0032
13	S96T005011_L	14.91	-.5833	45.71	-.8182	.5064	40.10
14	S96T005011	11.62	-.0324	47.16	-.1255	1.221	39.11
15	S96T005011_D	12.26	.2699	47.43	-.1706	.8231	38.98
16	S96T005011_A	53.74	42.12	87.51	40.84	42.35	81.31
17	S96T005012_L	54.34	.0174	93.64	.1859	-.2468	46.14
18	S96T005012	53.89	-.0046	94.03	.0499	1.055	47.21
19	S96T005012_D	54.86	.6569	94.95	-.2298	.7870	48.30
20	S96T005012_A	97.96	41.85	137.6	40.83	42.46	90.63
21	ICSA	.0024	.0224	-.0170	.0044	-.0548	.0073
22	ICSAB	.0344	.9919	-.0399	.0017	-.0600	-.0032
23	CCV_1	5.053	5.105	5.025	4.962	4.890	5.076
24	CCB_1	-.0030	.0039	-.0060	-.0068	.0058	.0032

#	Sample Name	Sm	Sr	Th	Ti	Tl	U
1	ICV	4.915	4.962	.0582	4.968	4.838	9.731
2	ICB	-.0046	.0000	.0047	.0003	-.0080	-.0236
3	LLS	.1901	.0203	.0000	.0202	.4281	.4669
4	ICSA	-.0084	.0016	.0083	.0010	-.0057	-.0640
5	ICSAB	-.0097	.0019	.0070	.0008	-.0170	-.0928
6	S96T005010_L	-4.018	.0301	1.097	-.0511	-5.119	1.487
7	S96T005010	-.6571	.0655	.0340	-.0270	-.3203	13.20
8	S96T005010_D	-.5919	.0675	.2543	-.0168	-.1508	13.98
9	S96T005010_S	39.97	40.82	.5798	41.00	39.64	95.47
10	CCV MK 9-25-96	4.887	4.947	.0565	4.964	4.880	9.701
~~11~~	~~CCB~~	~~-.0156~~	~~-.0001~~	~~.0054~~	~~-.0002~~	~~.0130~~	~~-.0607~~
12	CCB	-.0148	-.0001	.0058	-.0004	-.0098	-.0685
13	S96T005011_L	-1.820	.0599	1.652	-.0004	-.0738	7.732
14	S96T005011	-.4417	.0795	.1082	.0016	.9998	15.36
15	S96T005011_D	-.2722	.0814	.2233	.0118	.5325	15.78
16	S96T005011_A	39.55	40.53	.7380	40.87	39.14	94.65
17	S96T005012_L	-3.239	-.0302	.9196	-.0006	2.343	-1.286
18	S96T005012	-.2608	-.0010	.1328	.0043	.7673	10.93
19	S96T005012_D	-.1770	-.0010	.3450	.0147	-.6013	11.36
20	S96T005012_A	39.73	40.68	.7558	40.90	39.64	91.31
21	ICSA	-.0201	.0016	.0144	.0015	-.0097	-.1235
22	ICSAB	-.0155	.0018	.0092	.0008	-.0001	-.1250
23	CCV_1	4.982	5.032	.0615	5.040	4.923	9.862
24	CCB_1	-.0046	.0001	.0006	.0002	-.0042	-.0106

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#	Sample Name	V	Y	Zn	Zr
1	ICV	5.063	.0060	5.087	5.021
2	ICB	-.0012	-.0005	.0005	-.0013
3	ILS	.1016	.0000	.0221	.0192
4	ICSA	-.0016	.0065	.0698	-.0050
5	ICSAB	.4765	.0067	1.044	-.0041
6	S96T005010_L	-.8571	-.2095	2.704	-.5713
7	S96T005010	-.0909	-.0410	2.606	-.0874
8	S96T005010_D	-.0855	-.0317	2.675	-.1189
9	S96T005010_S	41.99	.0398	45.38	41.29
10	CCV 脈ナシ	5.094	.0060	5.147	5.014
~~11~~	~~CCB~~	~~-.0035~~	~~-.0008~~	~~.0006~~	~~-.0020~~
12	CCB	-.0033	-.0008	.0002	-.0020
13	S96T005011_L	-.4625	-.1158	2.719	-.4110
14	S96T005011	-.0433	-.0258	2.819	-.0817
15	S96T005011_D	-.0294	-.0228	2.796	-.0769
16	S96T005011_A	41.67	.0273	45.15	40.97
17	S96T005012_L	-.6307	-.1762	4.810	-.5562
18	S96T005012	.0307	-.0175	4.772	-.0511
19	S96T005012_D	.0294	-.0177	4.825	-.0815
20	S96T005012_A	41.86	.0287	47.30	41.19
21	ICSA	-.0028	.0060	.0726	-.0063
22	ICSAB	.4752	.0064	1.037	-.0056
23	CCV 1	5.168	.0064	5.184	5.098
24	CCB_1	-.0003	-.0002	-.0008	-.0004

JK [illegible]
09-25-96

LABCORE Completed Worklist Report for Worklist# 10600

Analyst: jls2 **Instrument:** CARB2 **Book#** 22N12C TIC 24N12B TOC

Method: LA-342-100 Rev/Mod D-0

Worklist Comment: AW-101 TICTOC. RCJ

Seq	Type	Sample#	R	A	Test	Matrix	Actual	Found	DL or Yield	Unit
1	BLNK			0	@TICTOC1 TIC-02	SOLID	1	3.00E+0	3.000	ug/g
1	BLNK			0	@TICTOC1 TOC-02	SOLID	1	6.70E+0	6.700	ug/g
2	STD			0	@TICTOC1 TIC-02	SOLID	6.02E+02	6.08E+2	100.997	% Recovery
2	STD			0	@TICTOC1 TOC-02	SOLID	3.00E+03	2.76E+3	92.000	% Recovery
3	SAMPLE	S96T002741		0	@TICTOC1 TIC-02	SOLID	N/A	1.53E+03	5.000	ug/g
3	SAMPLE	S96T002741		0	@TICTOC1 TOC-02	SOLID	N/A	2.32E+03	40.000	ug/g
4	DUP	S96T002741		0	@TICTOC1 TIC-02	SOLID	1.53E+3	1.68E+3	9.346	RPD
4	DUP	S96T002741		0	@TICTOC1 TOC-02	SOLID	2.32E+3	2.50E+3	7.469	RPD
5	SPK	S96T002741		0	@TICTOC1 TIC-02	SOLID	1.00E+02	1.10E+02	110.000	% Recovery
5	SPK	S96T002741		0	@TICTOC1 TOC-02	SOLID	1.00E+02	9.98E+01	99.800	% Recovery
6	SAMPLE	S96T002732		0	@TICTOC1 TIC-02	SOLID	N/A	6.95E+03	5.000	ug/g
6	SAMPLE	S96T002732		0	@TICTOC1 TOC-02	SOLID	N/A	4.90E+03	40.000	ug/g
7	DUP	S96T002732		0	@TICTOC1 TIC-02	SOLID	6.95E+3	6.83E+3	1.742	RPD
7	DUP	S96T002732		0	@TICTOC1 TOC-02	SOLID	4.90E+3	4.88E+3	0.409	RPD
8	SAMPLE	S96T002749		0	@TICTOC1 TIC-02	SOLID	N/A	1.06E+04	5.000	ug/g
8	SAMPLE	S96T002749		0	@TICTOC1 TOC-02	SOLID	N/A	4.87E+03	40.000	ug/g
9	DUP	S96T002749		0	@TICTOC1 TIC-02	SOLID	1.06E+4	1.04E+4	1.905	RPD
9	DUP	S96T002749		0	@TICTOC1 TOC-02	SOLID	4.87E+3	4.20E+3	14.774	RPD

Final page for worklist# 10600

Data entry by RTS 07/17/96
Analyst Signature **Date**

See attached
Analyst Signature **Date**

John McCluskey 07/25/96
Reviewer Signature **Date**

* on 11/19/96 John McCluskey made changes to the QC (% Spike Recovery). See the new completed worklist.
JMM 11/19/96

Units shown for QC (BLK/BKG) may not reflect the actual units.

worklistdata Version 1.0 05/15/96
11/19/96 13:24

LABCORE Completed Worklist Report for Worklist# 10600

Analyst: jls2 **Instrument:** CARB2 **Book#** TIC 22N12C TOC 24N12B

Method: LA-342-100 Rev/Mod D JMM E-0

Worklist Comment: AW-101 TICTOC. RCJ

Seq	Type	Sample#	R	A	Test	Matrix	Actual	Found	DL or Yield	Unit
1	BLNK		0	@TICTOC1	TIC-02	SOLID	1	3.00E+0	3.000	ug/g
1	BLNK		0	@TICTOC1	TOC-02	SOLID	1	6.70E+0	6.700	ug/g
2	STD		0	@TICTOC1	TIC-02	SOLID	6.02E+02	6.08E+2	100.997	% Recovery
2	STD		0	@TICTOC1	TOC-02	SOLID	3.00E+03	2.76E+3	92.000	% Recovery
3	SAMPLE	S96T002741	0	@TICTOC1	TIC-02	SOLID	N/A	1.53E+03	5.000	ug/g
3	SAMPLE	S96T002741	0	@TICTOC1	TOC-02	SOLID	N/A	2.32E+03	40.000	ug/g
4	DUP	S96T002741	0	@TICTOC1	TIC-02	SOLID	1.53E+3	1.68E+3	9.346	RPD
4	DUP	S96T002741	0	@TICTOC1	TOC-02	SOLID	2.32E+3	2.50E+3	7.469	RPD
5	SPK	S96T002741	0	@TICTOC1	TIC-02	SOLID	1.00E+02	1.26E+02	126.000	% Recovery
5	SPK	S96T002741	0	@TICTOC1	TOC-02	SOLID	1.00E+02	9.93E+01	99.300	% Recovery
6	SAMPLE	S96T002732	0	@TICTOC1	TIC-02	SOLID	N/A	6.95E+03	5.000	ug/g
6	SAMPLE	S96T002732	0	@TICTOC1	TOC-02	SOLID	N/A	4.90E+03	40.000	ug/g
7	DUP	S96T002732	0	@TICTOC1	TIC-02	SOLID	6.95E+3	6.83E+3	1.742	RPD
7	DUP	S96T002732	0	@TICTOC1	TOC-02	SOLID	4.90E+3	4.88E+3	0.409	RPD
8	SAMPLE	S96T002749	0	@TICTOC1	TIC-02	SOLID	N/A	1.06E+04	5.000	ug/g
8	SAMPLE	S96T002749	0	@TICTOC1	TOC-02	SOLID	N/A	4.87E+03	40.000	ug/g
9	DUP	S96T002749	0	@TICTOC1	TIC-02	SOLID	1.06E+4	1.04E+4	1.905	RPD
9	DUP	S96T002749	0	@TICTOC1	TOC-02	SOLID	4.87E+3	4.20E+3	14.774	RPD

Final page for worklist# 10600

see attached
Analyst Signature **Date**

see attached
Analyst Signature **Date**

John McCluskey 11/19/96
Reviewer Signature **Date**

★ original worklist # 10600 run by procedure rev D-0 but the spike calculation by procedure rev E-0

JMM
11/19/96

Units shown for QC (BLK/BKG) may not reflect the actual units.

LABCORE Data Entry Template for Worklist# 10600

Analyst: JS2 **Instrument:** CARB2 #1 **Book#** 22N12C TIC 24N12B TOC

Method: LA-342-100 Rev/Mod D-0

Worklist Comment: AW-101 TICTOC. RCJ

S	Type	Sample#	R	A	Test	Matrix	Group#	Project
1	BLNK				@TICTOC1	SOLID		
2	STD				@TICTOC1	SOLID		
3	SAMPLE	S96T002741	0		@TICTOC1	SOLID	96000103	AW-101 PUSH
		Analytes Requested: TIC-02 , TOC-02						
4	DUP	S96T002741	0		@TICTOC1	SOLID		
5	SPK	S96T002741	0		@TICTOC1	SOLID		
6	SAMPLE	S96T002732	0		@TICTOC1	SOLID	96000103	AW-101 PUSH
		Analytes Requested: TIC-02 , TOC-02						
7	DUP	S96T002732	0		@TICTOC1	SOLID		
8	SAMPLE	S96T002749	0		@TICTOC1	SOLID	96000103	AW-101 PUSH
		Analytes Requested: TIC-02 , TOC-02						
9	DUP	S96T002749	0		@TICTOC1	SOLID		

Final page for worklist # 10600

Jackie Steele 7/17/96

Analyst Signature **Date**

Analyst Signature **Date**

Data Entry Comments:

S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

PROJECT NO. LA-342-100 (C-0)

WORKLIST #	ANALYST SIGNATURE	ANALYSIS DATE	ANALYSIS TIME	INSTRUMENT CODE
10600	Jackie Steele	7/7/96		

Sample 1

☐ SAMPLE STANDARD ☒ DUPLICATE BASELINE ☐ SPIKE BLANK ☐ TRIPLICATE

SAMPLE # =

TIC STD # =
TOC STD # =

Amount of SAMPLE Used

SPIKE/STANDARD Added (mL)

	TIC	TOC
Final Coulometer Reading in µg Carbon (Optional)	7.10	32.00

Comments:

Sample 2

☐ SAMPLE STANDARD ☒ DUPLICATE BASELINE ☐ SPIKE BLANK ☐ TRIPLICATE

SAMPLE # = 2741

TIC STD # =
TOC STD # =

Amount of SAMPLE Used .2536g

SPIKE/STANDARD Added (mL)

	TIC	TOC
Final Coulometer Reading in µg Carbon (Optional)	433.80	645.60

Comments:

Sample 3

☒ SAMPLE STANDARD ☐ DUPLICATE BASELINE ☐ SPIKE BLANK ☐ TRIPLICATE

SAMPLE # =

TIC STD # = 22N12C
TOC STD # = 24N12B

Amount of SAMPLE Used

SPIKE/STANDARD Added (mL)

	TIC	TOC
	1.0	.200
Final Coulometer Reading in µg Carbon (Optional)	104.80	584.50

Comments:

Sample 4

☐ SAMPLE STANDARD ☐ DUPLICATE BASELINE ☒ SPIKE BLANK ☐ TRIPLICATE

SAMPLE # = 2741

TIC STD # = 22N12C
TOC STD # = 24N12B

Amount of SAMPLE Used .3050g

SPIKE/STANDARD Added (mL)

	TIC	TOC
	.500	.100
Final Coulometer Reading in µg Carbon (Optional)	854.60	1041.40

Comments:

Sample 5

☐ SAMPLE STANDARD ☐ DUPLICATE BASELINE ☒ SPIKE BLANK ☐ TRIPLICATE

SAMPLE # =

TIC STD # =
TOC STD # =

Amount of SAMPLE Used

SPIKE/STANDARD Added (mL)

	TIC	TOC
Final Coulometer Reading in µg Carbon (Optional)	10.10	25.20

Comments:

Sample 6

☒ SAMPLE STANDARD ☐ DUPLICATE BASELINE ☐ SPIKE BLANK ☐ TRIPLICATE

SAMPLE # = S96T002732

TIC STD # =
TOC STD # =

Amount of SAMPLE Used .1526g

SPIKE/STANDARD Added (mL)

	TIC	TOC
Final Coulometer Reading in µg Carbon (Optional)	1092.60	797.40

Comments:

Sample 7

☒ SAMPLE STANDARD ☐ DUPLICATE BASELINE ☐ SPIKE BLANK ☐ TRIPLICATE

SAMPLE # = S96T002741

TIC STD # =
TOC STD # =

Amount of SAMPLE Used .2712g

SPIKE/STANDARD Added (mL)

	TIC	TOC
Final Coulometer Reading in µg Carbon (Optional)	423.30	660.90

Comments:

Sample 8

☐ SAMPLE STANDARD ☒ DUPLICATE BASELINE ☐ SPIKE BLANK ☐ TRIPLICATE

SAMPLE # = 2732

TIC STD # =
TOC STD # =

Amount of SAMPLE Used .1170g

SPIKE/STANDARD Added (mL)

	TIC	TOC
Final Coulometer Reading in µg Carbon (Optional)	806.30	603.20

Comments:

TOC/TIC: LA-342-100 (C-0)

WORKLIST #	ANALYST SIGNATURE	ANALYSIS DATE	ANALYSIS TIME	INSTRUMENT CODE
10600	Jackie Steele	7/17/96		

[X] SAMPLE [ ] STANDARD [ ] DUPLICATE [ ] BASELINE [ ] SPIKE [ ] BLANK [ ] TRIPLICATE

SAMPLE # = S96T002749 TIC STD # = TOC STD # =

Amount of SAMPLE Used .1829g

	TIC	TOC
SPIKE/STANDARD Added (mL)		
Final Coulometer Reading in µg Carbon (Optional)	1939.70	922.20

Comments:

[ ] SAMPLE [ ] STANDARD [ ] DUPLICATE [ ] BASELINE [ ] SPIKE [ ] BLANK [ ] TRIPLICATE

SAMPLE # = TIC STD # = TOC STD # =

Amount of SAMPLE Used

	TIC	TOC
SPIKE/STANDARD Added (mL)		
Final Coulometer Reading in µg Carbon (Optional)		

Comments:

[ ] SAMPLE [ ] STANDARD [X] DUPLICATE [ ] BASELINE [ ] SPIKE [ ] BLANK [ ] TRIPLICATE

SAMPLE # = 2749 TIC STD # = TOC STD # =

Amount of SAMPLE Used .2311g

	TIC	TOC
SPIKE/STANDARD Added (mL)		
Final Coulometer Reading in µg Carbon (Optional)	2406.20	1001.50

Comments:

[ ] SAMPLE [ ] STANDARD [ ] DUPLICATE [ ] BASELINE [ ] SPIKE [ ] BLANK [ ] TRIPLICATE

SAMPLE # = TIC STD # = TOC STD # =

Amount of SAMPLE Used

	TIC	TOC
SPIKE/STANDARD Added (mL)		
Final Coulometer Reading in µg Carbon (Optional)		

Comments:

[ ] SAMPLE [ ] STANDARD [ ] DUPLICATE [ ] BASELINE [ ] SPIKE [ ] BLANK [ ] TRIPLICATE

SAMPLE # = TIC STD # = TOC STD # =

Amount of SAMPLE Used

	TIC	TOC
SPIKE/STANDARD Added (mL)		
Final Coulometer Reading in µg Carbon (Optional)		

Comments:

[ ] SAMPLE [ ] STANDARD [ ] DUPLICATE [ ] BASELINE [ ] SPIKE [ ] BLANK [ ] TRIPLICATE

SAMPLE # = TIC STD # = TOC STD # =

Amount of SAMPLE Used

	TIC	TOC
SPIKE/STANDARD Added (mL)		
Final Coulometer Reading in µg Carbon (Optional)		

Comments:

[ ] SAMPLE [ ] STANDARD [ ] DUPLICATE [ ] BASELINE [ ] SPIKE [ ] BLANK [ ] TRIPLICATE

SAMPLE # = TIC STD # = TOC STD # =

Amount of SAMPLE Used

	TIC	TOC
SPIKE/STANDARD Added (mL)		
Final Coulometer Reading in µg Carbon (Optional)		

Comments:

2043

WHC-SD-WM-DP-192, REV. 0

TIC- TOTAL INORGANIC CARBON ANALYSIS REPORT
TICTOC REV 2.0
<<< BLANK ANALYSIS >>>

Sample: 1-BASELINE Date: 07/17/96 Time: 10:28:35

Sample Size = 1 uL
Dil Factor = 1
Blank ID # = 1-BASELINE
Blank Value = N/A

Analyst : JL STEELE
Min Readings = 22
Max Readings = 22
% Difference = 10

== Reading	==== Analysis Time	==== Coulometer	==== % Difference ==
1	0.51	0.40	0.00
2	1.01	1.00	60.00
3	1.51	1.50	33.33
4	2.00	2.00	25.00
5	2.50	2.40	16.67
6	3.01	2.70	11.11
7	3.51	3.00	10.00
8	4.01	3.30	9.09
9	4.50	3.50	5.71
10	5.00	3.80	7.89
11	5.50	4.10	7.32
12	6.00	4.30	4.65
13	6.50	4.60	6.52
14	7.00	4.90	6.12
15	7.50	5.20	5.77
16	8.00	5.40	3.70
17	8.50	5.70	5.26
18	9.00	6.00	5.00
19	9.50	6.20	3.23
20	10.00	6.60	6.06
21	10.50	6.80	2.94
22	11.00	7.10	4.23

BLANK VALUE = 7.1 micrograms carbon
BLANK FACTOR = 7.1 / 11.00244 = +6.5E-01 ug/min Carbon

Sample Run By: Jerie Steele
JL STEELE 00000

TOC- TOTAL ORGANIC CARBON ANALYSIS REPORT
TICTOC REV 2.0
<<< BLANK ANALYSIS >>>

Sample: 1-BASELINE Date: 07/17/96 Time: 10:41:43

Sample Size = 1 uL
Dil Factor = 1
Blank ID # = 1-BASELINE
Blank Value = N/A

Analyst : JL STEELE
Min Readings = 22
Max Readings = 22
% Difference = 10

== Reading	==== Analysis Time	==== Coulometer	==== % Difference ==
1	0.51	0.60	0.00
2	1.01	5.40	88.89
3	1.51	16.30	66.87
4	2.00	21.90	25.57
5	2.50	24.10	9.13
6	3.00	25.20	4.37
7	3.50	26.00	3.08
8	4.00	26.60	2.26
9	4.50	27.10	1.85
10	5.00	27.70	2.17
11	5.50	28.10	1.42
12	6.00	28.60	1.75
13	6.50	28.90	1.04
14	7.00	29.30	1.37
15	7.50	29.70	1.35
16	8.00	30.00	1.00
17	8.50	30.40	1.32
18	9.00	30.70	0.98
19	9.50	31.10	1.29
20	10.00	31.40	0.96
21	10.50	31.70	0.95
22	11.00	32.00	0.94

BLANK VALUE = 32 micrograms carbon
BLANK FACTOR = 32 / 10.99786 = +2.91E+00 ug/min Carbon

<<<< WARNING - BLANK VALUE EXCEEDS 1.5 ug/min Carbon!!!!!>>>>

Sample Run By: Jackie Steele
JLSTEELE 00000

WHC-SD-WM-DP-192, REV. 0

TIC- TOTAL INORGANIC CARBON ANALYSIS REPORT
TICTOC REV 2.0

Sample: 1-STD 22N12C Date: 07/17/96 Time: 10:55:23

Sample Size = 1 uL 1ml
Dil Factor = 1
Blank ID # =
Blank Value = .65 ug/minute C

Analyst : JL STEELE
Min Readings = 22
Max Readings = 22
% Difference = 10

== Reading	==== Analysis Time	==== Coulometer	==== % Difference ==
1	0.51	0.50	0.00
2	1.01	47.50	98.95
3	1.50	219.80	78.39
4	2.00	395.30	44.40
5	2.50	509.20	22.37
6	3.00	571.40	10.89
7	3.50	596.60	4.22
8	4.00	605.90	1.53
9	4.50	609.00	0.51
10	5.00	610.20	0.20
11	5.50	610.90	0.11
12	6.00	611.40	0.08
13	6.50	611.80	0.07
14	7.00	612.20	0.07
15	7.50	612.50	0.05
16	8.00	612.90	0.07
17	8.50	613.20	0.05
18	9.00	613.60	0.07
19	9.50	613.90	0.05
20	10.00	614.20	0.05
21	10.50	614.50	0.05
22	11.00	614.80	0.05

USER INPUT BLANK VALUE
BLANK VALUE = 7.148611 micrograms carbon
BLANK FACTOR = 7.148611 / 10.99786 = +6.5E-01 ug/min Carbon

SAMPLE RESULTS:
(614.8 - 7.149762)(1)/(1) = +6.077E+02 g/L Carbon
(614.8 - 7.149762)(1)/(1)(12) = +5.064E+01 Molar Carbon

Sample Run By: Jerrie Steele
JLOSTEELE 00000

TOC- TOTAL ORGANIC CARBON ANALYSIS REPORT
TICTOC REV 2.0

Sample: 1-STD 24N12B Date: 07/17/96 Time: 11:07:36

Sample Size = 1 uL .200ml
Dil Factor = 1
Blank ID # =
Blank Value = 2.91 ug/minute C

Analyst : JL STEELE
Min Readings = 22
Max Readings = 22
% Difference = 10

== Reading	==== Analysis Time	==== Coulometer	==== % Difference ==
1	0.51	2.90	0.00
2	1.01	105.00	97.24
3	1.51	377.10	72.16
4	2.01	523.10	27.91
5	2.51	561.20	6.79
6	3.00	571.10	1.73
7	3.50	574.10	0.52
8	4.00	575.70	0.28
9	4.50	577.20	0.26
10	5.00	578.40	0.21
11	5.50	579.30	0.16
12	6.00	580.10	0.14
13	6.50	580.60	0.09
14	7.00	581.20	0.10
15	7.50	581.60	0.07
16	8.00	582.10	0.09
17	8.50	582.60	0.09
18	9.00	582.90	0.05
19	9.50	583.30	0.07
20	10.00	583.70	0.07
21	10.50	584.10	0.07
22	11.00	584.50	0.07

USER INPUT BLANK VALUE
BLANK VALUE = 32.00378 micrograms carbon
BLANK FACTOR = 32.00378 / 10.99786 = +2.9E+00 ug/min Carbon

SAMPLE RESULTS:
(584.5 - 32.00663)(1)/(1) = +5.525E+02 g/L Carbon
(584.5 - 32.00663)(1)/(1)(12) = +4.604E+01 Molar Carbon
<<<< WARNING - BLANK VALUE EXCEEDS 1.5 ug/min Carbon!!!!!>>>>

Sample Run By: Jackie Steele
JL STEELE 00000

TIC- TOTAL INORGANIC CARBON ANALYSIS REPORT
TICTOC REV 2.0

Sample: 1-BLANK Date: 07/17/96 Time: 11:20:12

Sample Size = 1 uL
Dil Factor = 1
Blank ID # =
Blank Value = .65 ug/minute C

Analyst : JL STEELE
Min Readings = 22
Max Readings = 22
% Difference = 10

== Reading	==== Analysis Time	==== Coulometer	==== % Difference ==
1	0.51	0.50	0.00
2	1.01	2.30	78.26
3	1.51	3.40	32.35
4	2.01	4.00	15.00
5	2.51	4.40	9.09
6	3.01	4.80	8.33
7	3.51	5.20	7.69
8	4.01	5.50	5.45
9	4.50	5.90	6.78
10	5.00	6.20	4.84
11	5.50	6.50	4.62
12	6.00	6.90	5.80
13	6.50	7.20	4.17
14	7.00	7.50	4.00
15	7.50	7.80	3.85
16	8.00	8.10	3.70
17	8.50	8.50	4.71
18	9.00	8.80	3.41
19	9.50	9.10	3.30
20	10.00	9.40	3.19
21	10.50	9.80	4.08
22	11.00	10.10	2.97

USER INPUT BLANK VALUE
BLANK VALUE = 7.148611 micrograms carbon
BLANK FACTOR = 7.148611 / 10.99786 = +6.5E-01 ug/min Carbon

SAMPLE RESULTS:
(10.1 - 7.151111)(1)/(1) = +2.95E+00 g/L Carbon
(10.1 - 7.151111)(1)/(1)(12) = +2.46E-01 Molar Carbon

Sample Run By: Jacque Steele
JL STEELE 00000

TOC- TOTAL ORGANIC CARBON ANALYSIS REPORT
TICTOC REV 2.0

Sample: 1-BLANK Date: 07/17/96 Time: 11:33:08

Sample Size = 1 uL
Dil Factor = 1
Blank ID # =
Blank Value = 2.91 ug/minute C

Analyst : JL STEELE
Min Readings = 22
Max Readings = 22
% Difference = 10

== Reading	==== Analysis Time	==== Coulometer	==== % Difference ==
1	0.51	0.50	0.00
2	1.01	3.00	83.33
3	1.51	11.20	73.21
4	2.01	15.70	28.66
5	2.51	17.30	9.25
6	3.01	18.30	5.46
7	3.51	19.00	3.68
8	4.00	19.70	3.55
9	4.50	20.30	2.96
10	5.00	20.80	2.40
11	5.50	21.30	2.35
12	6.00	21.80	2.29
13	6.50	22.10	1.36
14	7.00	22.60	2.21
15	7.50	23.00	1.74
16	8.00	23.20	0.86
17	8.50	23.50	1.28
18	9.00	23.90	1.67
19	9.50	24.40	2.05
20	10.00	24.60	0.81
21	10.50	24.90	1.20
22	11.00	25.30	1.58

USER INPUT BLANK VALUE
BLANK VALUE = 32.00378 micrograms carbon
BLANK FACTOR = 32.00378 / 10.99786 = +2.9E+00 ug/min Carbon

SAMPLE RESULTS:
(25.3 - 32.01196)(1)/(1) = < 5.00 E-3 g/L Carbon
(25.3 - 32.01196)(1)/(1)(12) = < 4.17 E-4 Molar Carbon
<<<< WARNING - BLANK VALUE EXCEEDS 1.5 ug/min Carbon!!!!!>>>>

Sample Run By: Jacque Steele
JL STEELE 00000

TIC- TOTAL INORGANIC CARBON ANALYSIS REPORT
TICTOC REV 2.0

Sample: 1-S96T002741 Date: 07/17/96 Time: 11:45:04

Sample Size = 1 uL .2712g
Dil Factor = 1
Blank ID # =
Blank Value = .65 ug/minute C

Analyst : JL STEELE
Min Readings = 22
Max Readings = 22
% Difference = 10

== Reading	==== Analysis Time	==== Coulometer	==== % Difference ==
1	0.51	0.20	0.00
2	1.01	13.70	98.54
3	1.51	86.90	84.23
4	2.00	182.10	52.28
5	2.50	249.00	26.87
6	3.00	295.00	15.59
7	3.50	328.10	10.09
8	4.00	351.40	6.63
9	4.50	368.00	4.51
10	5.00	380.60	3.31
11	5.50	389.40	2.26
12	6.00	396.40	1.77
13	6.50	401.70	1.32
14	7.00	405.80	1.01
15	7.50	409.30	0.86
16	8.00	412.20	0.70
17	8.50	414.70	0.60
18	9.00	416.80	0.50
19	9.50	419.10	0.55
20	10.00	420.30	0.29
21	10.50	422.10	0.43
22	11.00	423.30	0.28

USER INPUT BLANK VALUE
BLANK VALUE = 7.148611 micrograms carbon
BLANK FACTOR = 7.148611 / 10.99786 = +6.5E-01 ug/min Carbon

SAMPLE RESULTS:
(423.3 - 7.150436)(1)/(1) = +4.161E+02 g/L Carbon
(423.3 - 7.150436)(1)/(1)(12) = +3.468E+01 Molar Carbon

Sample Run By: Jackie Steele
JL STEELE 00000

2050

TOC- TOTAL ORGANIC CARBON ANALYSIS REPORT
TICTOC REV 2.0

Sample: 1-S96T002741 Date: 07/17/96 Time: 11:57:59

Sample Size = 1 uL .27129
Dil Factor = 1
Blank ID # =
Blank Value = 2.91 ug/minute C

Analyst : JL STEELE
Min Readings = 22
Max Readings = 22
% Difference = 10

== Reading	==== Analysis Time	==== Coulometer	==== % Difference ==
1	0.51	4.70	0.00
2	1.01	112.70	95.83
3	1.51	399.30	71.78
4	2.00	548.10	27.15
5	2.51	592.30	7.46
6	3.01	610.40	2.97
7	3.50	619.10	1.41
8	4.00	625.80	1.07
9	4.50	630.90	0.81
10	5.00	634.80	0.61
11	5.50	638.00	0.50
12	6.00	640.70	0.42
13	6.50	643.50	0.44
14	7.00	646.10	0.40
15	7.50	648.00	0.29
16	8.00	650.00	0.31
17	8.50	652.00	0.31
18	9.00	653.80	0.28
19	9.50	655.50	0.26
20	10.00	657.60	0.32
21	10.50	659.10	0.23
22	11.00	660.90	0.27

USER INPUT BLANK VALUE
BLANK VALUE = 32.00378 micrograms carbon
BLANK FACTOR = 32.00378 / 10.99786 = +2.9E+00 ug/min Carbon

SAMPLE RESULTS:
(660.9 - 32.00911)(1)/(1) = +6.289E+02 g/L Carbon
(660.9 - 32.00911)(1)/(1)(12) = +5.241E+01 Molar Carbon
<<<< WARNING - BLANK VALUE EXCEEDS 1.5 ug/min Carbon!!!!!>>>>

Sample Run By: Jackie Steele
JL STEELE 00000

TIC- TOTAL INORGANIC CARBON ANALYSIS REPORT
TICTOC REV 2.0

Sample: 1-2741 DUP Date: 07/17/96 Time: 12:09:56

Sample Size = 1 uL .253g
Dil Factor = 1
Blank ID # =
Blank Value = .65 ug/minute C

Analyst : JL STEELE
Min Readings = 22
Max Readings = 22
% Difference = 10

== Reading	==== Analysis Time	==== Coulometer	==== % Difference ==
1	0.51	1.20	0.00
2	1.01	17.80	93.26
3	1.51	92.70	80.80
4	2.00	181.80	49.01
5	2.50	248.40	26.81
6	3.00	293.50	15.37
7	3.50	325.10	9.72
8	4.00	348.20	6.63
9	4.50	365.60	4.76
10	5.00	379.90	3.76
11	5.50	390.40	2.69
12	6.00	398.70	2.08
13	6.50	405.30	1.63
14	7.00	410.80	1.34
15	7.50	415.10	1.04
16	8.00	418.90	0.91
17	8.50	422.00	0.73
18	9.00	425.10	0.73
19	9.50	427.50	0.56
20	10.00	429.60	0.49
21	10.50	432.00	0.56
22	11.00	433.80	0.41

USER INPUT BLANK VALUE
BLANK VALUE = 7.148611 micrograms carbon
BLANK FACTOR = 7.148611 / 10.99786 = +6.5E-01 ug/min Carbon

SAMPLE RESULTS:
(433.8 - 7.151071)(1)/(1) = +4.266E+02 g/L Carbon
(433.8 - 7.151071)(1)/(1)(12) = +3.555E+01 Molar Carbon

Sample Run By: Jackie Steele
JL STEELE 00000

TOC- TOTAL ORGANIC CARBON ANALYSIS REPORT
TICTOC REV 2.0

Sample: 1-2741 DUP Date: 07/17/96 Time: 12:22:18

Sample Size = 1 uL ,2532g
Dil Factor = 1
Blank ID # =
Blank Value = 2.91 ug/minute C

Analyst : JL STEELE
Min Readings = 22
Max Readings = 22
% Difference = 10

== Reading	==== Analysis Time	==== Coulometer	==== % Difference ==
1	0.51	5.30	0.00
2	1.01	94.70	94.40
3	1.51	329.30	71.24
4	2.01	520.80	36.77
5	2.51	578.70	10.01
6	3.01	601.60	3.81
7	3.51	608.30	1.10
8	4.01	610.90	0.43
9	4.50	612.90	0.33
10	5.00	614.30	0.23
11	5.50	621.50	1.16
12	6.00	630.70	1.46
13	6.50	639.40	1.36
14	7.00	644.60	0.81
15	7.50	648.00	0.52
16	8.00	651.00	0.46
17	8.50	653.90	0.44
18	9.00	656.40	0.38
19	9.50	658.80	0.36
20	10.00	661.30	0.38
21	10.50	663.40	0.32
22	11.00	665.60	0.33

USER INPUT BLANK VALUE
BLANK VALUE = 32.00378 micrograms carbon
BLANK FACTOR = 32.00378 / 10.99786 = +2.9E+00 ug/min Carbon

SAMPLE RESULTS:
(665.6 - 32.01711)(1)/(1) = +6.336E+02 g/L Carbon
(665.6 - 32.01711)(1)/(1)(12) = +5.280E+01 Molar Carbon
<<<< WARNING - BLANK VALUE EXCEEDS 1.5 ug/min Carbon!!!!!>>>>

Sample Run By: Jacque Steele
JL STEELE 00000

TIC- TOTAL INORGANIC CARBON ANALYSIS REPORT
TICTOC REV 2.0

Sample: 1-2741 SPIKE Date: 07/17/96 Time: 12:34:47

Sample Size = 1 uL , 3050gt , 500ml 22N12C
Dil Factor = 1
Blank ID # =
Blank Value = .65 ug/minute C

Analyst : JL STEELE
Min Readings = 22
Max Readings = 22
% Difference = 10

== Reading	==== Analysis Time	==== Coulometer	==== % Difference ==
1	0.51	1.80	0.00
2	1.01	52.80	96.59
3	1.51	264.10	80.01
4	2.01	465.40	43.25
5	2.51	591.40	21.31
6	3.01	664.00	10.93
7	3.51	709.40	6.40
8	4.01	740.80	4.24
9	4.50	763.50	2.97
10	5.00	783.50	2.55
11	5.50	797.90	1.80
12	6.00	809.10	1.38
13	6.50	818.20	1.11
14	7.00	825.10	0.84
15	7.50	831.20	0.73
16	8.00	836.60	0.65
17	8.50	841.00	0.52
18	9.00	844.50	0.41
19	9.50	848.30	0.45
20	10.00	851.20	0.34
21	10.50	853.80	0.30
22	11.00	856.60	0.33

USER INPUT BLANK VALUE
BLANK VALUE = 7.148611 micrograms carbon
BLANK FACTOR = 7.148611 / 10.99786 = +6.5E-01 ug/min Carbon

SAMPLE RESULTS:
(856.6 - 7.150436)(1)/(1) = +8.494E+02 g/L Carbon
(856.6 - 7.150436)(1)/(1)(12) = +7.079E+01 Molar Carbon

Sample Run By: Jacque Steele
JL STEELE 00000

TOC- TOTAL ORGANIC CARBON ANALYSIS REPORT
TICTOC REV 2.0

Sample: 1-2741 SPIKE Date: 07/17/96 Time: 12:47:01

Sample Size = 1 uL ,3050g +
Dil Factor = 1 ,100ml 24N12B
Blank ID # =
Blank Value = 2.91 ug/minute C

Analyst : JL STEELE
Min Readings = 22
Max Readings = 22
% Difference = 10

== Reading	==== Analysis Time	==== Coulometer	==== % Difference ==
1	0.51	9.60	0.00
2	1.01	193.80	95.05
3	1.50	625.40	69.01
4	2.00	879.40	28.88
5	2.50	946.10	7.05
6	3.00	971.80	2.64
7	3.51	984.50	1.29
8	4.01	992.40	0.80
9	4.50	999.30	0.69
10	5.00	1004.50	0.52
11	5.50	1008.80	0.43
12	6.00	1013.00	0.41
13	6.50	1016.20	0.31
14	7.00	1019.60	0.33
15	7.50	1022.50	0.28
16	8.00	1025.80	0.32
17	8.50	1028.50	0.26
18	9.00	1031.10	0.25
19	9.50	1033.60	0.24
20	10.00	1036.50	0.28
21	10.50	1038.90	0.23
22	11.00	1041.40	0.24

USER INPUT BLANK VALUE
BLANK VALUE = 32.00378 micrograms carbon
BLANK FACTOR = 32.00378 / 10.99786 = +2.9E+00 ug/min Carbon

SAMPLE RESULTS:
(1041.4 - 32.01196)(1)/(1) = +1.0094E+03 g/L Carbon
(1041.4 - 32.01196)(1)/(1)(12) = +8.4116E+01 Molar Carbon
<<<< WARNING - BLANK VALUE EXCEEDS 1.5 ug/min Carbon!!!!!>>>>

Sample Run By: Jacque Steele
JL STEELE 00000

TIC- TOTAL INORGANIC CARBON ANALYSIS REPORT
TICTOC REV 2.0

Sample: 1-S96T002732 Date: 07/17/96 Time: 12:59:00

Sample Size = 1 uL .1561g
Dil Factor = 1
Blank ID # =
Blank Value = .65 ug/minute C

Analyst : JL STEELE
Min Readings = 22
Max Readings = 22
% Difference = 10

== Reading	==== Analysis Time	==== Coulometer	==== % Difference ==
1	0.51	3.90	0.00
2	1.01	114.50	96.59
3	1.51	416.50	72.51
4	2.01	647.60	35.69
5	2.50	796.10	18.65
6	3.00	894.50	11.00
7	3.50	953.10	6.15
8	4.00	988.70	3.60
9	4.50	1011.00	2.21
10	5.00	1026.30	1.49
11	5.50	1038.00	1.13
12	6.00	1047.40	0.90
13	6.50	1055.50	0.77
14	7.00	1061.70	0.58
15	7.50	1067.40	0.53
16	8.00	1072.20	0.45
17	8.50	1076.90	0.44
18	9.00	1080.50	0.33
19	9.50	1083.90	0.31
20	10.00	1087.10	0.29
21	10.50	1090.00	0.27
22	11.00	1092.60	0.24

USER INPUT BLANK VALUE
BLANK VALUE = 7.148611 micrograms carbon
BLANK FACTOR = 7.148611 / 10.99786 = +6.5E-01 ug/min Carbon

SAMPLE RESULTS:
(1092.6 - 7.148611)(1)/(1) = +1.0855E+03 g/L Carbon
(1092.6 - 7.148611)(1)/(1)(12) = +9.0454E+01 Molar Carbon

Sample Run By: Jackie Steele
JL STEELE 00000

TOC- TOTAL ORGANIC CARBON ANALYSIS REPORT
TICTOC REV 2.0

Sample: 1-S96T002732 Date: 07/17/96 Time: 13:11:07

Sample Size = 1 uL .1561g
Dil Factor = 1
Blank ID # =
Blank Value = 2.91 ug/minute C

Analyst : JL STEELE
Min Readings = 22
Max Readings = 22
% Difference = 10

== Reading	==== Analysis Time	==== Coulometer	==== % Difference ==
1	0.51	23.80	0.00
2	1.01	291.70	91.84
3	1.51	568.80	48.72
4	2.00	685.20	16.99
5	2.50	725.30	5.53
6	3.00	742.70	2.34
7	3.50	752.20	1.26
8	4.00	758.30	0.80
9	4.50	763.30	0.66
10	5.00	767.50	0.55
11	5.50	770.60	0.40
12	6.00	773.90	0.43
13	6.50	776.40	0.32
14	7.00	779.50	0.40
15	7.50	781.80	0.29
16	8.00	784.10	0.29
17	8.50	786.40	0.29
18	9.00	788.90	0.32
19	9.50	791.00	0.27
20	10.00	793.10	0.26
21	10.50	795.20	0.26
22	11.00	797.40	0.28

USER INPUT BLANK VALUE
BLANK VALUE = 32.00378 micrograms carbon
BLANK FACTOR = 32.00378 / 10.99786 = +2.9E+00 ug/min Carbon

SAMPLE RESULTS:
(797.4 - 32.00947)(1)/(1) = +7.654E+02 g/L Carbon
(797.4 - 32.00947)(1)/(1)(12) = +6.378E+01 Molar Carbon
<<<< WARNING - BLANK VALUE EXCEEDS 1.5 ug/min Carbon!!!!!>>>>

Sample Run By: Jerie Steele
JL STEELE 00000

2057

TIC- TOTAL INORGANIC CARBON ANALYSIS REPORT
TICTOC REV 2.0

Sample: 1-2732 Date: 07/17/96 Time: 13:23:32

Sample Size = 1 uL .1170g
Dil Factor = 1
Blank ID # =
Blank Value = .65 ug/minute C

Analyst : JL STEELE
Min Readings = 22
Max Readings = 22
% Difference = 10

== Reading	==== Analysis Time	==== Coulometer	==== % Difference ==
1	0.51	2.70	0.00
2	1.01	53.90	94.99
3	1.51	299.10	81.98
4	2.00	471.50	36.56
5	2.51	575.80	18.11
6	3.00	641.80	10.28
7	3.50	694.00	7.52
8	4.00	723.50	4.08
9	4.50	740.40	2.28
10	5.00	752.30	1.58
11	5.50	761.10	1.16
12	6.00	768.40	0.95
13	6.50	774.20	0.75
14	7.00	779.60	0.69
15	7.50	784.50	0.62
16	8.00	788.10	0.46
17	8.50	792.20	0.52
18	9.00	795.20	0.38
19	9.50	798.20	0.38
20	10.00	800.90	0.34
21	10.50	803.50	0.32
22	11.00	806.30	0.35

USER INPUT BLANK VALUE
BLANK VALUE = 7.148611 micrograms carbon
BLANK FACTOR = 7.148611 / 10.99786 = +6.5E-01 ug/min Carbon

SAMPLE RESULTS:
(806.3 - 7.150952)(1)/(1) = +7.991E+02 g/L Carbon
(806.3 - 7.150952)(1)/(1)(12) = +6.660E+01 Molar Carbon

Sample Run By: Jacque Steele
JL STEELE 00000

TOC- TOTAL ORGANIC CARBON ANALYSIS REPORT
TICTOC REV 2.0

Sample: 1-2732 DUP Date: 07/17/96 Time: 13:35:43

Sample Size = 1 uL .11709
Dil Factor = 1
Blank ID # =
Blank Value = 2.91 ug/minute C

Analyst : JL STEELE
Min Readings = 22
Max Readings = 22
% Difference = 10

== Reading	==== Analysis Time	==== Coulometer	==== % Difference ==
1	0.51	45.10	0.00
2	1.01	218.50	79.36
3	1.51	419.30	47.89
4	2.00	512.70	18.22
5	2.50	546.20	6.13
6	3.00	559.50	2.38
7	3.50	567.00	1.32
8	4.00	571.00	0.70
9	4.50	575.00	0.70
10	5.00	578.00	0.52
11	5.50	581.00	0.52
12	6.00	583.50	0.43
13	6.50	585.60	0.36
14	7.00	588.10	0.43
15	7.50	589.90	0.31
16	8.00	592.10	0.37
17	8.50	594.10	0.34
18	9.00	596.00	0.32
19	9.50	598.20	0.37
20	10.00	600.10	0.32
21	10.50	601.60	0.25
22	11.00	603.20	0.27

USER INPUT BLANK VALUE
BLANK VALUE = 32.00378 micrograms carbon
BLANK FACTOR = 32.00378 / 10.99786 = +2.9E+00 ug/min Carbon

SAMPLE RESULTS:
(603.2 - 32.00663)(1)/(1) = +5.712E+02 g/L Carbon
(603.2 - 32.00663)(1)/(1)(12) = +4.760E+01 Molar Carbon
<<<< WARNING - BLANK VALUE EXCEEDS 1.5 ug/min Carbon!!!!!>>>>

Sample Run By: Jacque Steele
JL STEELE 00000

TIC- TOTAL INORGANIC CARBON ANALYSIS REPORT
TICTOC REV 2.0

Sample: 1-S96T002749 Date: 07/17/96 Time: 13:47:36

Sample Size = 1 uL .1829g
Dil Factor = 1
Blank ID # =
Blank Value = .65 ug/minute C

Analyst : JL STEELE
Min Readings = 22
Max Readings = 22
% Difference = 10

== Reading	==== Analysis Time	==== Coulometer	==== % Difference ==
1	0.51	1.60	0.00
2	1.01	236.70	99.32
3	1.51	838.60	71.77
4	2.01	1209.20	30.65
5	2.51	1436.50	15.82
6	3.01	1597.00	10.05
7	3.51	1713.10	6.78
8	4.00	1789.10	4.25
9	4.50	1831.90	2.34
10	5.00	1857.00	1.35
11	5.50	1873.10	0.86
12	6.00	1885.40	0.65
13	6.50	1895.00	0.51
14	7.00	1902.80	0.41
15	7.50	1909.70	0.36
16	8.00	1915.70	0.31
17	8.50	1920.80	0.27
18	9.00	1925.70	0.25
19	9.50	1929.40	0.19
20	10.00	1933.20	0.20
21	10.50	1936.30	0.16
22	11.00	1939.70	0.18

USER INPUT BLANK VALUE
BLANK VALUE = 7.148611 micrograms carbon
BLANK FACTOR = 7.148611 / 10.99786 = +6.5E-01 ug/min Carbon

SAMPLE RESULTS:
(1939.7 - 7.150436)(1)/(1) = +1.9325E+03 g/L Carbon
(1939.7 - 7.150436)(1)/(1)(12) = +1.6105E+02 Molar Carbon

Sample Run By: Jaime Steele
JLOSTEELE 00000

TOC- TOTAL ORGANIC CARBON ANALYSIS REPORT
TICTOC REV 2.0

Sample: 1-S96T002749 Date: 07/17/96 Time: 13:59:46

Sample Size = 1 uL .1829
Dil Factor = 1
Blank ID # =
Blank Value = 2.91 ug/minute C

Analyst : JL STEELE
Min Readings = 22
Max Readings = 22
% Difference = 10

== Reading	==== Analysis Time	==== Coulometer	==== % Difference ==
1	0.51	14.80	0.00
2	1.01	288.30	94.87
3	1.51	602.10	52.12
4	2.01	774.00	22.21
5	2.51	834.40	7.24
6	3.01	862.50	3.26
7	3.51	876.20	1.56
8	4.01	884.10	0.89
9	4.50	889.30	0.58
10	5.00	893.60	0.48
11	5.50	896.90	0.37
12	6.00	900.10	0.36
13	6.50	903.20	0.34
14	7.00	906.00	0.31
15	7.50	908.50	0.28
16	8.00	910.60	0.23
17	8.50	912.70	0.23
18	9.00	914.90	0.24
19	9.50	917.10	0.24
20	10.00	919.10	0.22
21	10.50	920.90	0.20
22	11.00	922.20	0.14

USER INPUT BLANK VALUE
BLANK VALUE = 32.00378 micrograms carbon
BLANK FACTOR = 32.00378 / 10.99786 = +2.9E+00 ug/min Carbon

SAMPLE RESULTS:
(922.2 - 32.01426)(1)/(1) = +8.902E+02 g/L Carbon
(922.2 - 32.01426)(1)/(1)(12) = +7.418E+01 Molar Carbon
<<<< WARNING - BLANK VALUE EXCEEDS 1.5 ug/min Carbon!!!!!>>>>

Sample Run By: Jayne Steele
JL STEELE 00000

TIC- TOTAL INORGANIC CARBON ANALYSIS REPORT
TICTOC REV 2.0

Sample: 1-2749 DUP Date: 07/17/96 Time: 14:11:42

Sample Size = 1 uL .2311g
Dil Factor = 1
Blank ID # =
Blank Value = .65 ug/minute C

Analyst : JL STEELE
Min Readings = 22
Max Readings = 22
% Difference = 10

== Reading	==== Analysis Time	==== Coulometer	==== % Difference ==
1	0.51	12.40	0.00
2	1.01	407.80	96.96
3	1.51	1019.70	60.01
4	2.01	1519.60	32.90
5	2.51	1820.80	16.54
6	3.01	2020.00	9.86
7	3.51	2143.80	5.77
8	4.01	2222.70	3.55
9	4.50	2274.80	2.29
10	5.00	2305.20	1.32
11	5.50	2325.50	0.87
12	6.00	2340.70	0.65
13	6.50	2352.80	0.51
14	7.00	2362.30	0.40
15	7.50	2370.90	0.36
16	8.00	2377.90	0.29
17	8.50	2383.60	0.24
18	9.00	2389.10	0.23
19	9.50	2394.10	0.21
20	10.00	2398.50	0.18
21	10.50	2402.30	0.16
22	11.00	2406.20	0.16

USER INPUT BLANK VALUE
BLANK VALUE = 7.148611 micrograms carbon
BLANK FACTOR = 7.148611 / 10.99786 = +6.5E-01 ug/min Carbon

SAMPLE RESULTS:
(2406.2 - 7.151111)(1)/(1) = +2.3990E+03 g/L Carbon
(2406.2 - 7.151111)(1)/(1)(12) = +1.9992E+02 Molar Carbon

Sample Run By: JL STEELE 00000

TOC- TOTAL ORGANIC CARBON ANALYSIS REPORT
TICTOC REV 2.0

Sample: 1-2749 DUP Date: 07/17/96 Time: 14:23:49

Sample Size = 1 uL .2311g
Dil Factor = 1
Blank ID # =
Blank Value = 2.91 ug/minute C

Analyst : JL STEELE
Min Readings = 22
Max Readings = 22
% Difference = 10

== Reading	==== Analysis Time	==== Coulometer	==== % Difference ==
1	0.51	30.60	0.00
2	1.01	303.30	89.91
3	1.51	601.10	49.54
4	2.01	813.60	26.12
5	2.51	887.90	8.37
6	3.01	922.10	3.71
7	3.51	939.40	1.84
8	4.01	949.60	1.07
9	4.50	957.20	0.79
10	5.00	963.00	0.60
11	5.50	968.00	0.52
12	6.00	972.20	0.43
13	6.50	976.20	0.41
14	7.00	979.70	0.36
15	7.50	982.90	0.33
16	8.00	986.00	0.31
17	8.50	988.90	0.29
18	9.00	992.00	0.31
19	9.50	994.50	0.25
20	10.00	997.30	0.28
21	10.50	999.50	0.22
22	11.00	1001.50	0.20

USER INPUT BLANK VALUE
BLANK VALUE = 32.00378 micrograms carbon
BLANK FACTOR = 32.00378 / 10.99786 = +2.9E+00 ug/min Carbon

SAMPLE RESULTS:
(1001.5 - 32.0148)(1)/(1) = +9.6949E+02 g/L Carbon
(1001.5 - 32.0148)(1)/(1)(12) = +8.0790E+01 Molar Carbon
<<<< WARNING - BLANK VALUE EXCEEDS 1.5 ug/min Carbon!!!!!>>>>

Sample Run By: Jackie Steele
JL STEELE 00000

WORKBOOK PAGE: BLANK1

TIC/TOC : LA-342-100 (D-0) SOLIDS

			TIC	TOC
Type	Sample Size in g	(SS)	0.0000	0.0000
BLNK	Dilution Factor	(DF)	1	1
Work List	µg of Carbon in Sample	(C1)	10.1	25.3
10600	µg of Carbon from Baseline	(C2)	7.1	32

Test Code
@TICTOC1

Matrix
SOLID

Batch Number
96006865

Report
0

µg of Carbon = |C1-C2|

Sample Prep
N/A

Sample #
BLNK

Instrument Code
CARB2#1

Prepared By
RTS

Chemist
RWS

Analyst
JLS2

Date Completed
07/17/96

Analysis Date
07/19/96

Analysis Time

Sample Point
AW101

	TIC	TOC
Method Detection Limit in ug/g	5	40
µg of Carbon	3.00E+00	6.70E+00

Data Entered By:	RTS	Date:	07/17/96
Signature of Chemist:	John M. Clusky	Date:	07/25/96

BLANK.WB1 REV 1.0 342100ML

WORKBOOK PAGE: STD2

TIC/TOC : LA-342-100 (D-0) LIQUIDS

			TIC	TOC
	Sample Size in mL	(SS)	1.0000	0.2000
STD	Dilution Factor	(DF)	1	1
	Final Coulometer Reading in µg	(C1)	614.8	584.5
10600	µg of Carbon from Baseline	(C2)	7.1	32
	Standard Book Number		22N12C	24N12B
@TICTOC1	Standard Value (µg/ml)		602	3001

Matrix: LIQUID

Batch Number: 96006865

Result: 0

Sample Prep: N/A

Sample Type: STD

Instrument Code: CARB2#1

Prepared By: RTS

Analyzed By: RWS

Reviewed By: JLS2

Analyzed Date: 07/17/96

Reviewed Date: 07/19/96

QC Actual in µg/mL = Standard Value (µg/mL)

QC Found in µg/mL = (C1 - C2) * DF / SS

QC Found in µg/mL for TIC = 5 if C1 < C2

QC Found in µg/mL for TOC = 40 if C1 < C2

% Recovery = QC Found / QC Actual * 100

		TIC	TOC
Analyst Initials	Method Detection Limit in µg/mL	5	40
	QC Actual in µg/mL	6.02E+02	3.00E+03
Sample Number	QC Found in µg/mL	6.08E+02	2.76E+03
AW101	Percent Standard Recovery	100.9	92.1

Data Entered By:	RTS	Date:	07/17/96
Signature of Chemist:	John M. Clinkenbeard	Date:	07/25/96

STANDARD.WB1 REV 1.0 342100ML

WORKBOOK PAGE: SAM3

TIC/TOC : LA-342-100 (D-0) SOLIDS

			TIC	TOC
Type	Sample Size in g	(SS)	0.2712	0.2712
SAMPLE	Dilution Factor	(DF)	1	1
Workbook	µg of Carbon in Sample	(C1)	423.3	660.9
10600	µg of Carbon from Baseline	(C2)	7.1	32
Test Code				
@TICTOC1				

Matrix
SOLID

Batch Number
96006865

Run
0

Sample Prep
N/A

Sample
S96T002741

Instrument Code
CARB2#1

Prepared By
RTS

Analyzed By
RWS

Data Validated By
JLS2

Date Completed
07/17/96

Analyzed Date
07/19/96

Sample Id
AW101

µg of Carbon/g = (C1-C2) * DF / SS
µg of Carbon/g for TIC = 5 if C1 < C2
µg of Carbon/g for TOC = 40 if C1 < C2

	TIC	TOC
Method Detection Limit in ug/g	5	40
µg of Carbon/g	1.53E+03	2.32E+03

Data Entered By:	RTS	Date:	07/17/96
Signature of Chemist:	John McCluskey	Date:	07/25/96

SAMPLE.WB1 REV 1.0 342100ML

2066

I:\342100\OUT\10600.WB1 07/25/96 10:04:55

WORKBOOK PAGE: DUP4

TIC/TOC : LA-342-100 (D-0) SOLIDS

			TIC	TOC
Type	Sample Size in g	(SS)	0.2536	0.2536
DUP	Dilution Factor	(DF)	1	1
Work List	µg of Carbon in Sample	(C1)	433.8	665.6
10600	µg of Carbon from Baseline	(C2)	7.1	32
Test Code	Known µg of C from Original Sample		1.53E+3	2.32E+3
@TICTOC1				

Matrix
SOLID

Batch Number
96006865

Reason
0

Sample Prep
N/A

Sample #
S96T002741

Instrument Code
CARB2#1

Prepared By
RTS

Chemist
RWS

Analyst
JLS2

Date Prepared
07/17/96

Analysis Date
07/19/96

Analysis Time

Sample Point
AW101

µg of Carbon/g = (C1-C2) * DF / SS
µg of Carbon/g for TIC = 5 if C1 < C2
µg of Carbon/g for TOC = 40 if C1 < C2

	TIC	TOC
Method Detection Limit in ug/g	5	40
µg of Carbon/g	1.68E+03	2.50E+03

Data Entered By:	RTS	Date:	07/17/96
Signature of Chemist:	John McCluskey	Date:	07/25/96

SAMPLE.WB1 REV 1.0 342100ML

2067

I:\342100\OUT\10600.WB1 07/25/96 10:35:02

TIC/TOC : LA-342-100 (E-0) SOLIDS

			TIC	TOC
	Sample Vial Data			
SPIKE	Sample Size in g	(SS)	0.2712	0.2712
	Final Coulometer Reading in µg	(C1)	423.3	660.9
10600	**Spiked Vial Data**			
	Sample Size in g	(SPK SS)	0.3050	0.3050
@TICTOC1	Amount of Spike Std. in mL	(SPK VOL)	0.500	0.100
	Final Coulometer Reading in µg	(C2)	856.6	1041.4
SOLID	Spike Book Number		22N12C	24N12B
	Spike Standard Value in µg/ml	(SPK CONC)	602	3001

96006865

0

N/A

Percent Spike Recovery = (C2 - C1 * (SPK SS) / SS) / ((SPK CONC) * (SPK VOL)) * 100

S96T002741

QC Actual in µg/mL = Spike Value (µg/mL)

CARB2#1

QC Found in µg/mL = (Percent Spike Recovery)*(QC Actual) / 100

RTS

JLS2

07/17/96

07/19/96

		TIC	TOC
	QC Actual in µg/mL	6.02E+02	3.00E+03
	QC Found in µg/mL	7.61E+02	2.98E+03
AW-101	Percent Spike Recovery	126.4	99.3

Data Entered By:	RTS	Date:	07/19/96
Signature of Chemist:	John McCluskey	Date:	11/19/96

SPIKE.WB1 REV 1.1 342100ML

WORKBOOK PAGE: SAM6

TIC/TOC : LA-342-100 (D-0) SOLIDS

			TIC	TOC
Type	Sample Size in g	(SS)	0.1561	0.1561
SAMPLE	Dilution Factor	(DF)	1	1
Workbook	µg of Carbon in Sample	(C1)	1092.6	797.4
10600	µg of Carbon from Baseline	(C2)	7.1	32
Worksheet				
@TICTOC1				

Matrix
SOLID

Batch Number
96006865

Weight Percent
0

Sample Prep
N/A

Sample #
S96T002732

Instrument Code
CARB2#1

Prepared By
RTS

Chemist
RWS

Analyzed By
JLS2

Date Sampled
07/17/96

Analysis Date
07/19/96

Analysis Time
AW101

µg of Carbon/g = (C1-C2) * DF / SS
µg of Carbon/g for TIC = 5 if C1 < C2
µg of Carbon/g for TOC = 40 if C1 < C2

	TIC	TOC
Method Detection Limit in ug/g	5	40
µg of Carbon/g	6.95E+03	4.90E+03

Data Entered By:	RTS	Date:	07/17/96
Signature of Chemist:	John McCluskey	Date:	07/25/96

SAMPLE.WB1 REV 1.0 342100ML

2069

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WORKBOOK PAGE: DUP7

TIC/TOC : LA-342-100 (D-0) SOLIDS

			TIC	TOC
Vial	Sample Size in g	(SS)	0.1170	0.1170
DUP	Dilution Factor	(DF)	1	1
Wet Weight	µg of Carbon in Sample	(C1)	806.3	603.2
10600	µg of Carbon from Baseline	(C2)	7.1	32
Test Code	Known µg of C from Original Sample		6.95E+3	4.90E+3
@TICTOC1				

Matrix: SOLID

Batch Number: 96006865

Recovery: 0

Sample Prep: N/A

Sample #: S96T002732

Instrument Code: CARB2#1

Prepared By: RTS

Checked By: RWS

Analyst #: JLS2

Date Sampled: 07/17/96

Analysis Date: 07/19/96

Analysis Time:

Sample Point: AW101

µg of Carbon/g = (C1-C2) * DF / SS
µg of Carbon/g for TIC = 5 if C1 < C2
µg of Carbon/g for TOC = 40 if C1 < C2

	TIC	TOC
Method Detection Limit in ug/g	5	40
µg of Carbon/g	6.83E+03	4.88E+03

Data Entered By:	RTS	Date:	07/17/96
Signature of Chemist:	John McCluskey	Date:	07/25/96

SAMPLE.WB1 REV 1.0 342100ML

2070

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WORKBOOK PAGE: SAM8

TIC/TOC : LA-342-100 (D-0) SOLIDS

			TIC	TOC
Sample Type	Sample Size in g	(SS)	0.1829	0.1829
SAMPLE	Dilution Factor	(DF)	1	1
Instrument	µg of Carbon in Sample	(C1)	1939.7	922.2
10600	µg of Carbon from Baseline	(C2)	7.1	32
Test Code				
@TICTOC1				

Matrix
SOLID

Batch Number
96006865

Run
0

Sample Prep
N/A

Sample ID
S96T002749

Instrument Used
CARB2#1

Prepared By
RTS

Chemist
RWS

Analyst
JLS2

Date Completed
07/17/96

Analysis Date
07/19/96

Analysis Time
AW101

µg of Carbon/g = (C1-C2) * DF / SS
µg of Carbon/g for TIC = 5 if C1 < C2
µg of Carbon/g for TOC = 40 if C1 < C2

	TIC	TOC
Method Detection Limit in ug/g	5	40
µg of Carbon/g	1.06E+04	4.87E+03

Data Entered By:	RTS	Date:	07/17/96
Signature of Chemist:	John McClure	Date:	07/25/96

SAMPLE.WB1 REV 1.0 342100ML

2071

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WORKBOOK PAGE: DUP9

TIC/TOC : LA-342-100 (D-0) SOLIDS

			TIC	TOC
Sample Size in g		(SS)	0.2311	0.2311
Dilution Factor		(DF)	1	1
µg of Carbon in Sample		(C1)	2406.2	1001.5
µg of Carbon from Baseline		(C2)	7.1	32
Known µg of C from Original Sample			1.06E+4	4.87E+3

Node	DUP
Worked Up	10600
Lab Book	@TICTOC1
Matrix	SOLID
Batch Number	96006865
Rerun	0
Sample Prep	N/A
Sample	S96T002749
Instrument Code	CARB2#1
Approved By	RTS
Chemist	RWS
Analyst	JLS2
Date Analyzed	07/17/96
Analyzed Date	07/19/96
Analyze Time	
Sample Point	AW101

µg of Carbon/g = (C1-C2) * DF / SS
µg of Carbon/g for TIC = 5 if C1 < C2
µg of Carbon/g for TOC = 40 if C1 < C2

	TIC	TOC
Method Detection Limit in ug/g	5	40
µg of Carbon/g	1.04E+04	4.20E+03

Data Entered By:	RTS	Date:	07/17/96
Signature of Chemist:	John McCloskey	Date:	07/25/96

SAMPLE.WB1 REV 1.0 342100ML

2072

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LABCORE Completed Worklist Report for Worklist# 11328

Analyst: dgg **Instrument:** CARB2 **Book#** TIC 22N12C TOC 24N12B

Method: LA-342-100 Rev/Mod D-0

Worklist Comment: AW-101 TICTOC. RCJ

Seq	Type	Sample#	R	A	Test	Matrix	Actual	Found	DL or Yield	Unit
1	BLNK			0	@TICTOC1 TIC-02	LIQUID	1	4.60E+0	4.600	ug/mL
1	BLNK			0	@TICTOC1 TOC-02	LIQUID	1	1.12E+1	11.200	ug/mL
2	STD			0	@TICTOC1 TIC-02	LIQUID	6.02E+02	5.91E+2	98.173	% Recovery
2	STD			0	@TICTOC1 TOC-02	LIQUID	3.00E+03	2.77E+3	92.333	% Recovery
3	SAMPLE	S96T002767		0	@TICTOC1 TIC-02	LIQUID	N/A	1.73E+03	5.000	ug/mL
3	SAMPLE	S96T002767		0	@TICTOC1 TOC-02	LIQUID	N/A	3.58E+03	40.000	ug/mL
4	DUP	S96T002767		0	@TICTOC1 TIC-02	LIQUID	1.73E+3	1.83E+3	5.618	RPD
4	DUP	S96T002767		0	@TICTOC1 TOC-02	LIQUID	3.58E+3	3.30E+3	8.140	RPD
5	SPK	S96T002767		0	@TICTOC1 TIC-02	LIQUID	1.00E+02	1.12E+02	112.000	% Recovery
5	SPK	S96T002767		0	@TICTOC1 TOC-02	LIQUID	1.00E+02	9.23E+01	92.300	% Recovery

Final page for worklist# 11328

See attached
Analyst Signature **Date**

See attached
Analyst Signature **Date**

Verified in Labcore

John McCluskey 08/07/96
Reviewer Signature **Date**

Units shown for QC (BLK/BKG) may not reflect the actual units.

LABCORE Data Entry Template for Worklist# 11328

Analyst: N.B.B. **Instrument:** CARB2 _____ **Book#** TIC 22N12-C
TOC 24N12-B

Method: LA-342-100 Rev/Mod D-0

Worklist Comment: AW-101 TICTOC. RCJ

S	Type	Sample#	R	A	Test	Matrix	Group#	Project
1	BLNK				@TICTOC1	LIQUID		
2	STD				@TICTOC1	LIQUID		
3	SAMPLE	S96T002767	0		@TICTOC1	LIQUID	96000103	AW-101 PUSH
		Analytes Requested:			TIC-02 , TOC-02			
4	DUP	S96T002767	0		@TICTOC1	LIQUID		
5	SPK	S96T002767	0		@TICTOC1	LIQUID		

Final page for worklist # 11328

N. B. Griffin 8-4-96
Analyst Signature **Date**

Linda Mack 8-6-96
Analyst Signature **Date**

Data Entry Comments:

S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

LABCORE Completed Worklist Report for Worklist# 11328

Analyst: dgg **Instrument:** CARB2 **Book#** TIC 22N12C
TOC 24N12B

Method: LA-342-100 Rev/Mod E-0

Worklist Comment: AW-101 TICTOC. RCJ

Seq	Type	Sample#	R	A	Test	Matrix	Actual	Found	DL or Yield	Unit
1	BLNK			0	@TICTOC1 TIC-02	LIQUID	1	4.60E+0	4.600	ug/mL
1	BLNK			0	@TICTOC1 TOC-02	LIQUID	1	1.12E+1	11.200	ug/mL
2	STD			0	@TICTOC1 TIC-02	LIQUID	6.02E+02	5.91E+2	98.173	% Recovery
2	STD			0	@TICTOC1 TOC-02	LIQUID	3.00E+03	2.77E+3	92.333	% Recovery
3	SAMPLE	S96T002767		0	@TICTOC1 TIC-02	LIQUID	N/A	1.73E+03	5.000	ug/mL
3	SAMPLE	S96T002767		0	@TICTOC1 TOC-02	LIQUID	N/A	3.58E+03	40.000	ug/mL
4	DUP	S96T002767		0	@TICTOC1 TIC-02	LIQUID	1.73E+3	1.83E+3	5.618	RPD
4	DUP	S96T002767		0	@TICTOC1 TOC-02	LIQUID	3.58E+3	3.30E+3	8.140	RPD
5	SPK	S96T002767		0	@TICTOC1 TIC-02	LIQUID	1.00E+02	1.18E+02	118.000	% Recovery
5	SPK	S96T002767		0	@TICTOC1 TOC-02	LIQUID	1.00E+02	8.26E+01	82.600	% Recovery

Final page for worklist# 11328

See attached
Analyst Signature **Date**

See attached
Analyst Signature **Date**

John McCluskey 11/19/96
Reviewer Signature **Date**

★ note: transition between rev D-0 and E-0, spike calculation by LA-342-100 rev E-0

JMM 11/19/96

Units shown for QC (BLK/BKG) may not reflect the actual units.

WORKLIST #	ANALYST SIGNATURE	ANALYSIS DATE	ANALYSIS TIME	INSTRUMENT CODE
11328	D.B. Buffum	8-3-96		

Block 1

☐ SAMPLE ☐ STANDARD ☒ DUPLICATE BASELINE ☐ SPIKE BLANK ☐ TRIPLICATE

SAMPLE # =

TIC STD # =
TOC STD # =

Amount of SAMPLE Used _____

	TIC	TOC
SPIKE/STANDARD Added (mL)		
Final Coulometer Reading in µg Carbon (Optional)		

Comments:

Block 2

☐ SAMPLE ☐ STANDARD ☒ DUPLICATE BASELINE ☐ SPIKE BLANK ☐ TRIPLICATE

SAMPLE # = S96T002767 Dup

TIC STD # =
TOC STD # =

Amount of SAMPLE Used .100 mL

	TIC	TOC
SPIKE/STANDARD Added (mL)		
Final Coulometer Reading in µg Carbon (Optional)		

Comments:

Block 3

☒ SAMPLE ☐ STANDARD ☐ DUPLICATE BASELINE ☐ SPIKE BLANK ☐ TRIPLICATE

SAMPLE # =

TIC STD # = 22N12-C
TOC STD # = 24N12-B

Amount of SAMPLE Used _____

	TIC	TOC
~~Std Added~~ SPIKE/STANDARD Added (mL)	1.0 mL	.200 mL
Final Coulometer Reading in µg Carbon (Optional)		

Comments:

Block 4

☐ SAMPLE ☐ STANDARD ☐ DUPLICATE BASELINE ☒ SPIKE BLANK ☐ TRIPLICATE

SAMPLE # = S96T002767 +

TIC STD # = 22N12-C
TOC STD # = 24N12-B

Amount of SAMPLE Used .100 mL

	TIC	TOC
SPIKE/STANDARD Added (mL)	.500 mL	.100 mL
Final Coulometer Reading in µg Carbon (Optional)		

Comments:

Block 5

☐ SAMPLE ☐ STANDARD ☐ DUPLICATE BASELINE ☒ SPIKE BLANK ☐ TRIPLICATE

SAMPLE # =

TIC STD # =
TOC STD # =

Amount of SAMPLE Used _____

	TIC	TOC
SPIKE/STANDARD Added (mL)		
Final Coulometer Reading in µg Carbon (Optional)		

Comments:

Block 6

☐ SAMPLE ☐ STANDARD ☐ DUPLICATE BASELINE ☐ SPIKE BLANK ☐ TRIPLICATE

SAMPLE # =

TIC STD # =
TOC STD # =

Amount of SAMPLE Used _____

	TIC	TOC
SPIKE/STANDARD Added (mL)		
Final Coulometer Reading in µg Carbon (Optional)		

Comments:

Block 7

☒ SAMPLE ☐ STANDARD ☐ DUPLICATE BASELINE ☐ SPIKE BLANK ☐ TRIPLICATE

SAMPLE # = S96T002767

TIC STD # =
TOC STD # =

Amount of SAMPLE Used .100 mL

	TIC	TOC
SPIKE/STANDARD Added (mL)		
Final Coulometer Reading in µg Carbon (Optional)		

Comments:

Block 8

☐ SAMPLE ☐ STANDARD ☐ DUPLICATE BASELINE ☐ SPIKE BLANK ☐ TRIPLICATE

SAMPLE # =

TIC STD # =
TOC STD # =

Amount of SAMPLE Used _____

	TIC	TOC
SPIKE/STANDARD Added (mL)		
Final Coulometer Reading in µg Carbon (Optional)		

Comments:

WORKBOOK PAGE: BLANK1

TIC/TOC : LA-342-100 (D-0) LIQUIDS

			TIC	TOC
Sample Size in mL	(SS)		0.0000	0.0000
Dilution Factor	(DF)		1	1
µg of Carbon in Sample	(C1)		7.2	26.8
µg of Carbon from Baseline	(C2)		2.6	15.6

Type	BLNK
Work List	11328
Test Code	@TICTOC1
Matrix	LIQUID
Batch Number	96007658
Rerun	0
Sample Prep	N/A
Sample #	
Instrument Code	CARB2
Prepared By	LCM
Chemist	RWS
Analyst	DGG
Date Complete	08/06/96
Analysis Date	08/04/96
Analysis Time	09:48 PM
Sample Point	AW-101

µg of Carbon = |C1-C2|

	TIC	TOC
Method Detection Limit in µg/mL	5	40
µg of Carbon	4.60E+00	1.12E+01

SIGNATURE BELOW REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES _____ TO _____.

Data Entered By:	LCM	Date:	08/06/96
Signature of Chemist:	John McCluskey	Date:	08/07/96

BLANK.WB1 REV 1.0 342100ML

WORKBOOK PAGE: STD2

TIC/TOC : LA-342-100 (D-0) LIQUIDS

			TIC	TOC
Type	Sample Size in mL	(SS)	1.0000	0.2000
STD	Dilution Factor	(DF)	1	1
Work List	Final Coulometer Reading in µg	(C1)	593.5	569.9
11328	µg of Carbon from Baseline	(C2)	2.6	15.6
Test Code	Standard Book Number		22N12C	24N12B
@TICTOC1	Standard Value (µg/ml)		602	3001

Matrix: LIQUID

Batch Number: 96007658

Rerun: 0

Sample Prep: N/A

Sample #:

Instrument Code: CARB2

Prepared By: LCM

Chemist: RWS

Analyst: DGG

Data complete: 08/06/96

Analysis Date: 08/04/96

Analysis Time: 09:48 PM

Sample Point: AW-101

QC Actual in µg/mL = Standard Value (µg/mL)

QC Found in µg/mL = (C1 - C2) * DF / SS

QC Found in µg/mL for TIC = 5 if C1 < C2

QC Found in µg/mL for TOC = 40 if C1 < C2

% Recovery = QC Found / QC Actual * 100

	TIC	TOC
Method Detection Limit in µg/mL	5	40
QC Actual in µg/mL	6.02E+02	3.00E+03
QC Found in µg/mL	5.91E+02	2.77E+03
Percent Standard Recovery	98.2	92.4

Data Entered By:	LCM	Date:	08/06/96
Signature of Chemist:	John McCrudden	Date:	08/07/96

STANDARD.WB1 REV 1.0 342100ML

2077

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WORKBOOK PAGE: SAM3

TIC/TOC : LA-342-100 (D-0) LIQUIDS

			TIC	TOC
Type: SAMPLE	Sample Size in mL	(SS)	0.1000	0.1000
	Dilution Factor	(DF)	1	1
Work List: 11328	µg of Carbon in Sample	(C1)	175.7	373.5
	µg of Carbon from Baseline	(C2)	2.6	15.6
Test Code: @TICTOC1				
Matrix: LIQUID				
Batch Number: 96007658				
Reqn: 0	µg of Carbon/mL = (C1-C2) * DF / SS			
	µg of Carbon/mL for TIC = 5 if C1 < C2			
Sample Prep: N/A	µg of Carbon/mL for TOC = 40 if C1 < C2			
Sample #: S96T002767				
Instrument Code: CARB2				
Prepared By: LCM				
Chemist: RWS				
Analyst: DGG				
Date Complete: 08/06/96				
Analysis Date: 08/04/96			TIC	TOC
Analysis Time: 09:48 PM	Method Detection Limit in µg/mL		5	40
Sample Point: AW-101	µg of Carbon/mL		1.73E+03	3.58E+03

Data Entered By:	LCM	Date:	08/06/96
Signature of Chemist:	John McCluskey	Date:	08/07/96

SAMPLE.WB1 REV 1.0 342100ML

2078

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WORKBOOK PAGE: DUP4

TIC/TOC : LA-342-100 (D-0) LIQUIDS

			TIC	TOC
Type	Sample Size in mL	(SS)	0.1000	0.1000
DUP	Dilution Factor	(DF)	1	1
Work List	µg of Carbon in Sample	(C1)	185.4	345.6
11328	µg of Carbon from Baseline	(C2)	2.6	15.6
Test Code	Known µg of C from Original Sample		1.73E+3	3.58E+3
@TICTOC1				

Matrix	LIQUID
Batch Number	96007658
Rerun	0
Sample Prep	N/A
Sample #	S96T002767
Instrument Code	CARB2
Prepared By	LCM
Chemist	RWS
Analyst	DGG
Date Complete	08/06/96
Analysis Date	08/04/96
Analysis Time	09:48 PM
Sample Point	AW-101

µg of Carbon/mL = (C1-C2) * DF / SS
µg of Carbon/mL for TIC = 5 if C1 < C2
µg of Carbon/mL for TOC = 40 if C1 < C2

	TIC	TOC
Method Detection Limit in µg/mL	5	40
µg of Carbon/mL	1.83E+03	3.30E+03

Data Entered By:	LCM	Date:	08/06/96
Signature of Chemist:	Glen McCluskey	Date:	08/07/96

SAMPLE.WB1 REV 1.0 342100ML

I:\342100\OUT\TT11328.WB1 08/06/96 2079 08/07/96 07

TIC/TOC : LA-342-100 (E-0) LIQUIDS

	Sample Vial Data		TIC	TOC
SPIKE	Sample Volume in mL	(SS)	0.1000	0.1000
	Final Coulometer Reading in µg	(C1)	175.7	373.5
11328	Spiked Vial Data			
	Sample Volume in mL	(SPK SS)	0.1000	0.1000
@TICTOC1	Amount of Spike Std. in mL	(SPK VOL)	0.500	0.100
	Final Coulometer Reading in µg	(C2)	531.6	621.4
LIQUID	Spike Book Number		22N12C	24N12B
	Spike Standard Value in µg/ml	(SPK CONC)	602	3001

96007658

0

N/A

Percent Spike Recovery = (C2 - C1 * (SPK SS) / SS) / ((SPK CONC) * (SPK VOL)) * 100

S96T002767

QC Actual in µg/mL = Spike Value (µg/mL)

CARB2

QC Found in µg/mL = (Percent Spike Recovery)*(QC Actual) / 100

LCM

RWS

DGG

08/06/96

08/04/96

		TIC	TOC
09:48 AM	QC Actual in µg/mL	6.02E+02	3.00E+03
	QC Found in µg/mL	7.12E+02	2.48E+03
AW-101	Percent Spike Recovery	118.2	82.6

Data Entered By:	LCM	Date:	08/06/96
Signature of Chemist:	John McCluskey	Date:	11/19/96

SPIKE.WB1 REV 1.1 342100ML

#1

TIC- TOTAL INORGANIC CARBON ANALYSIS REPORT
TICTOC REV 2.0
<<< BLANK ANALYSIS >>>

Sample: BASELINE BLK Date: 08/03/96 Time: 21:48:09

Sample Size = 1 uL
Dil Factor = 1
Blank ID # = BASELINE BLK
Blank Value = N/A

Analyst : DG GIFFIN
Min Readings = 22
Max Readings = 22
% Difference = 10

== Reading	==== Analysis Time	==== Coulometer	==== % Difference ==
1	0.51	0.10	0.00
2	1.01	0.20	50.00
3	1.51	0.40	50.00
4	2.00	0.50	20.00
5	2.50	0.60	16.67
6	3.00	0.70	14.29
7	3.50	0.90	22.22
8	4.00	0.90	0.00
9	4.50	1.10	18.18
10	5.00	1.20	8.33
11	5.50	1.30	7.69
12	6.00	1.50	13.33
13	6.50	1.60	6.25
14	7.00	1.80	11.11
15	7.50	1.80	0.00
16	8.00	1.90	5.26
17	8.50	2.00	5.00
18	9.00	2.20	9.09
19	9.50	2.20	0.00
20	10.00	2.40	8.33
21	10.50	2.50	4.00
22	11.00	2.60	3.85

BLANK VALUE = 2.6 micrograms carbon
BLANK FACTOR = 2.6 / 10.99988 = +2.4E-01 ug/min Carbon

SIGNATURE BELOW REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 2081 TO 2092.

Sample Run By: Robert W Schwab for DG Griffin 11/5/96
DG GIFFIN 00000

#1

TOC- TOTAL ORGANIC CARBON ANALYSIS REPORT
TICTOC REV 2.0
<<< BLANK ANALYSIS >>>

Sample: BASELINEBLK Date: 08/03/96 Time: 22:18:24

Sample Size = 1 uL
Dil Factor = 1
Blank ID # = BASELINEBLK
Blank Value = N/A

Analyst : DG GIFFIN
Min Readings = 22
Max Readings = 22
% Difference = 10

== Reading	==== Analysis Time	==== Coulometer	==== % Difference ==
1	0.51	0.30	0.00
2	1.01	0.60	50.00
3	1.50	1.10	45.45
4	2.00	1.80	38.89
5	2.50	2.90	37.93
6	3.00	4.50	35.56
7	3.50	5.60	19.64
8	4.00	6.80	17.65
9	4.50	7.70	11.69
10	5.00	8.70	11.49
11	5.50	9.40	7.45
12	6.00	10.20	7.84
13	6.50	10.70	4.67
14	7.00	11.40	6.14
15	7.50	12.00	5.00
16	8.00	12.80	6.25
17	8.50	13.10	2.29
18	9.00	13.60	3.68
19	9.50	14.30	4.90
20	10.00	14.70	2.72
21	10.50	15.10	2.65
22	11.00	15.60	3.21

BLANK VALUE = 15.6 micrograms carbon
BLANK FACTOR = 15.6 / 10.9978 = +1.42E+00 ug/min Carbon

Sample Run By: _____
DG GIFFIN 00000

#1

TIC- TOTAL INORGANIC CARBON ANALYSIS REPORT
TICTOC REV 2.0

Sample: BLANK Date: 08/03/96 Time: 23:49:38

Sample Size = 1 uL
Dil Factor = 1
Blank ID # =
Blank Value = .24 ug/minute C

Analyst : DG GIFFIN
Min Readings = 22
Max Readings = 22
% Difference = 10

== Reading	==== Analysis Time	==== Coulometer	==== % Difference ==
1	0.51	0.50	0.00
2	1.01	0.90	44.44
3	1.50	1.40	35.71
4	2.00	1.60	12.50
5	2.50	2.00	20.00
6	3.00	2.40	16.67
7	3.50	2.80	14.29
8	4.00	3.10	9.68
9	4.50	3.40	8.82
10	5.00	3.70	8.11
11	5.50	4.10	9.76
12	6.00	4.50	8.89
13	6.50	4.70	4.26
14	7.00	5.10	7.84
15	7.50	5.40	5.56
16	8.00	5.70	5.26
17	8.50	5.90	3.39
18	9.00	6.20	4.84
19	9.50	6.50	4.62
20	10.00	6.70	2.99
21	10.50	7.00	4.29
22	11.00	7.20	2.78

USER INPUT BLANK VALUE
BLANK VALUE = 2.639472 micrograms carbon
BLANK FACTOR = 2.639472 / 10.9978 = +2.4E-01 ug/min Carbon

SAMPLE RESULTS:
(7.2 - 2.639766)(1)/(1) = +4.6E+00 g/L Carbon
(7.2 - 2.639766)(1)/(1)(12) = +3.8E-01 Molar Carbon

Sample Run By: _____
DG GIFFIN 00000

#1

TOC- TOTAL ORGANIC CARBON ANALYSIS REPORT
TICTOC REV 2.0

Sample: BLANK Date: 08/04/96 Time: 00:11:49

Sample Size = 1 uL
Dil Factor = 1
Blank ID # =
Blank Value = 1.42 ug/minute C

Analyst : DG GIFFIN
Min Readings = 22
Max Readings = 22
% Difference = 10

== Reading	==== Analysis Time	==== Coulometer	==== % Difference ==
1	0.51	0.70	0.00
2	1.01	1.60	56.25
3	1.51	2.70	40.74
4	2.00	5.30	49.06
5	2.50	9.40	43.62
6	3.00	12.60	25.40
7	3.50	14.70	14.29
8	4.00	16.60	11.45
9	4.50	17.60	5.68
10	5.00	18.60	5.38
11	5.50	19.60	5.10
12	6.00	20.60	4.85
13	6.50	21.70	5.07
14	7.00	22.50	3.56
15	7.50	23.10	2.60
16	8.00	23.70	2.53
17	8.50	24.40	2.87
18	9.00	24.90	2.01
19	9.50	25.40	1.97
20	10.00	25.90	1.93
21	10.50	26.20	1.15
22	11.00	26.80	2.24

USER INPUT BLANK VALUE
BLANK VALUE = 15.61688 *micrograms carbon*
BLANK FACTOR = 15.61688 / 10.9978 = +1.4E+00 ug/min Carbon

SAMPLE RESULTS:
(26.8 - 15.62236)(1)/(1) = +1.12E+01 g/L Carbon
(26.8 - 15.62236)(1)/(1)(12) = +9.31E-01 Molar Carbon

Sample Run By: _____
DG GIFFIN 00000

#1

TIC- TOTAL INORGANIC CARBON ANALYSIS REPORT
TICTOC REV 2.0

Sample: STD. 22N12-C Date: 08/03/96 Time: 23:07:24

Sample Size = 1000 uL
Dil Factor = 1
Blank ID # =
Blank Value = .24 ug/minute C

Analyst : DG GIFFIN
Min Readings = 22
Max Readings = 22
% Difference = 10

== Reading	==== Analysis Time	==== Coulometer	==== % Difference ==
1	0.51	2.30	0.00
2	1.01	8.80	73.86
3	1.51	101.80	91.36
4	2.01	261.00	61.00
5	2.50	395.50	34.01
6	3.00	476.90	17.07
7	3.50	519.50	8.20
8	4.01	540.00	3.80
9	4.50	550.80	1.96
10	5.00	557.40	1.18
11	5.50	562.70	0.94
12	6.00	567.30	0.81
13	6.50	571.10	0.67
14	7.00	574.50	0.59
15	7.50	577.50	0.52
16	8.00	580.60	0.53
17	8.50	582.80	0.38
18	9.00	585.40	0.44
19	9.50	587.50	0.36
20	10.00	589.80	0.39
21	10.50	591.60	0.30
22	11.00	593.50	0.32

USER INPUT BLANK VALUE
BLANK VALUE = 2.639472 micrograms carbon
BLANK FACTOR = 2.639472 / 10.9978 = +2.4E-01 ug/min Carbon

SAMPLE RESULTS:
(593.5 - 2.640381)(1)/(1000) = +5.909E-01 g/L Carbon
(593.5 - 2.640381)(1)/(1000)(12) = +4.924E-02 Molar Carbon

Sample Run By: _____
DG GIFFIN 00000

#1

TOC- TOTAL ORGANIC CARBON ANALYSIS REPORT
TICTOC REV 2.0

Sample: STD. 24N12-B Date: 08/03/96 Time: 23:21:06

Sample Size = 200 uL
Dil Factor = 1
Blank ID # =
Blank Value = 1.42 ug/minute C

Analyst : DG GIFFIN
Min Readings = 22
Max Readings = 22
% Difference = 10

== Reading	==== Analysis Time	==== Coulometer	==== % Difference ==
1	0.51	20.50	0.00
2	1.01	101.20	79.74
3	1.50	294.70	65.66
4	2.00	439.30	32.92
5	2.50	495.00	11.25
6	3.00	516.90	4.24
7	3.50	527.30	1.97
8	4.00	533.40	1.14
9	4.50	538.20	0.89
10	5.00	542.50	0.79
11	5.50	545.90	0.62
12	6.00	549.20	0.60
13	6.50	552.10	0.53
14	7.00	554.70	0.47
15	7.50	557.30	0.47
16	8.00	559.30	0.36
17	8.50	561.20	0.34
18	9.00	563.40	0.39
19	9.50	565.00	0.28
20	10.00	566.90	0.34
21	10.50	568.50	0.28
22	11.00	569.90	0.25

USER INPUT BLANK VALUE
BLANK VALUE = 15.61688 micrograms carbon
BLANK FACTOR = 15.61688 / 10.9978 = +1.4E+00 ug/min Carbon

SAMPLE RESULTS:
(569.9 - 15.61827)(1)/(200) = +2.771E+00 g/L Carbon
(569.9 - 15.61827)(1)/(200)(12) = +2.310E-01 Molar Carbon

Sample Run By: _____
DG GIFFIN 00000

#1

TIC- TOTAL INORGANIC CARBON ANALYSIS REPORT
TICTOC REV 2.0

Sample: S96T002767 Date: 08/04/96 Time: 01:46:21

Sample Size = 100 uL
Dil Factor = 1
Blank ID # =
Blank Value = .24 ug/minute C

Analyst : DG GIFFIN
Min Readings = 22
Max Readings = 22
% Difference = 10

== Reading	==== Analysis Time	==== Coulometer	==== % Difference ==
1	0.51	0.40	0.00
2	1.01	16.50	97.58
3	1.50	48.60	66.05
4	2.00	90.40	46.24
5	2.50	119.40	24.29
6	3.01	135.60	11.95
7	3.51	144.30	6.03
8	4.00	150.50	4.12
9	4.50	155.10	2.97
10	5.00	158.40	2.08
11	5.50	160.90	1.55
12	6.00	162.80	1.17
13	6.50	165.00	1.33
14	7.00	166.40	0.84
15	7.50	168.00	0.95
16	8.00	169.30	0.77
17	8.50	170.80	0.88
18	9.00	171.70	0.52
19	9.50	172.90	0.69
20	10.00	173.70	0.46
21	10.50	174.90	0.69
22	11.00	175.70	0.46

USER INPUT BLANK VALUE
BLANK VALUE = 2.639472 *micrograms carbon*
BLANK FACTOR = 2.639472 / 10.9978 = +2.4E-01 ug/min Carbon

SAMPLE RESULTS:
(175.7 - 2.640359)(1)/(100) = +1.731E+00 g/L Carbon
(175.7 - 2.640359)(1)/(100)(12) = +1.442E-01 Molar Carbon

Sample Run By: _____
DG GIFFIN 00000

#1

TOC- TOTAL ORGANIC CARBON ANALYSIS REPORT
TICTOC REV 2.0

Sample: S96T002767 Date: 08/04/96 Time: 02:00:20

Sample Size = 100 uL
Dil Factor = 1
Blank ID # =
Blank Value = 1.42 ug/minute C

Analyst : DG GIFFIN
Min Readings = 22
Max Readings = 22
% Difference = 10

== Reading	==== Analysis Time	==== Coulometer	==== % Difference ==
1	0.51	1.10	0.00
2	1.01	5.60	80.36
3	1.51	53.30	89.49
4	2.00	184.60	71.13
5	2.50	289.50	36.23
6	3.00	331.60	12.70
7	3.50	346.00	4.16
8	4.00	353.20	2.04
9	4.50	357.20	1.12
10	5.00	360.10	0.81
11	5.50	362.50	0.66
12	6.00	364.10	0.44
13	6.50	365.60	0.41
14	7.00	366.90	0.35
15	7.50	367.90	0.27
16	8.00	369.00	0.30
17	8.50	370.00	0.27
18	9.00	370.70	0.19
19	9.50	371.50	0.22
20	10.00	372.20	0.19
21	10.50	373.10	0.24
22	11.00	373.50	0.11

USER INPUT BLANK VALUE
BLANK VALUE = 15.61688 micrograms carbon
BLANK FACTOR = 15.61688 / 10.9978 = +1.4E+00 ug/min Carbon

SAMPLE RESULTS:
(373.5 - 15.61976)(1)/(100) = +3.579E+00 g/L Carbon
(373.5 - 15.61976)(1)/(100)(12) = +2.982E-01 Molar Carbon

Sample Run By: _____
DG GIFFIN 00000

#1

TIC- TOTAL INORGANIC CARBON ANALYSIS REPORT
TICTOC REV 2.0

Sample: S96T002767DUP Date: 08/04/96 Time: 02:15:24

Sample Size = 100 uL
Dil Factor = 1
Blank ID # =
Blank Value = .24 ug/minute C

Analyst : DG GIFFIN
Min Readings = 22
Max Readings = 22
% Difference = 10

== Reading	==== Analysis Time	==== Coulometer	==== % Difference ==
1	0.51	14.00	0.00
2	1.01	33.80	58.58
3	1.50	54.10	37.52
4	2.00	78.30	30.91
5	2.50	107.50	27.16
6	3.00	127.20	15.49
7	3.50	139.10	8.56
8	4.00	147.30	5.57
9	4.50	153.20	3.85
10	5.00	158.70	3.47
11	5.50	162.70	2.46
12	6.00	166.30	2.16
13	6.50	169.40	1.83
14	7.00	171.90	1.45
15	7.50	174.30	1.38
16	8.00	176.30	1.13
17	8.50	178.10	1.01
18	9.00	179.80	0.95
19	9.50	181.80	1.10
20	10.00	182.80	0.55
21	10.50	184.00	0.65
22	11.00	185.40	0.76

USER INPUT BLANK VALUE
BLANK VALUE = 2.639472 micrograms carbon
BLANK FACTOR = 2.639472 / 10.9978 = +2.4E-01 ug/min Carbon

SAMPLE RESULTS:
(185.4 - 2.640159)(1)/(100) = +1.828E+00 g/L Carbon
(185.4 - 2.640159)(1)/(100)(12) = +1.523E-01 Molar Carbon

Sample Run By: _____
DG GIFFIN 00000

#1

TOC- TOTAL ORGANIC CARBON ANALYSIS REPORT
TICTOC REV 2.0

Sample: S96T002767DUP Date: 08/04/96 Time: 02:28:51

Sample Size = 100 uL
Dil Factor = 1
Blank ID # =
Blank Value = 1.42 ug/minute C

Analyst : DG GIFFIN
Min Readings = 22
Max Readings = 22
% Difference = 10

== Reading	==== Analysis Time	==== Coulometer	==== % Difference ==
1	0.51	1.70	0.00
2	1.01	4.90	65.31
3	1.51	40.30	87.84
4	2.01	122.30	67.05
5	2.51	225.50	45.76
6	3.01	285.50	21.02
7	3.51	311.00	8.20
8	4.01	321.00	3.12
9	4.50	326.70	1.74
10	5.00	330.30	1.09
11	5.50	333.20	0.87
12	6.00	335.40	0.66
13	6.50	337.20	0.53
14	7.00	338.90	0.50
15	7.50	339.90	0.29
16	8.00	341.00	0.32
17	8.50	342.10	0.32
18	9.00	343.00	0.26
19	9.50	343.80	0.23
20	10.00	344.50	0.20
21	10.50	345.10	0.17
22	11.00	345.60	0.14

USER INPUT BLANK VALUE
BLANK VALUE = 15.61688 micrograms carbon
BLANK FACTOR = 15.61688 / 10.9978 = +1.4E+00 ug/min Carbon

SAMPLE RESULTS:
(345.6 - 15.61976)(1)/(100) = +3.300E+00 g/L Carbon
(345.6 - 15.61976)(1)/(100)(12) = +2.750E-01 Molar Carbon

Sample Run By: _____
DG GIFFIN 00000

#1

TIC- TOTAL INORGANIC CARBON ANALYSIS REPORT
TICTOC REV 2.0

Sample: S96T002767SPK Date: 08/04/96 Time: 02:55:20

Sample Size = 100 uL
Dil Factor = 1
Blank ID # =
Blank Value = .24 ug/minute C

Analyst : DG GIFFIN
Min Readings = 22
Max Readings = 22
% Difference = 10

== Reading	==== Analysis Time	==== Coulometer	==== % Difference ==
1	0.51	2.40	0.00
2	1.01	35.60	93.26
3	1.51	163.60	78.24
4	2.01	298.10	45.12
5	2.51	382.80	22.13
6	3.01	430.10	11.00
7	3.51	456.00	5.68
8	4.01	471.30	3.25
9	4.50	482.30	2.28
10	5.00	490.80	1.73
11	5.50	497.20	1.29
12	6.00	503.20	1.19
13	6.50	508.20	0.98
14	7.00	512.10	0.76
15	7.50	515.70	0.70
16	8.00	518.70	0.58
17	8.50	521.50	0.54
18	9.00	523.70	0.42
19	9.50	526.30	0.49
20	10.00	528.00	0.32
21	10.50	529.90	0.36
22	11.00	531.60	0.32

USER INPUT BLANK VALUE
BLANK VALUE = 2.639472 micrograms carbon
BLANK FACTOR = 2.639472 / 10.9978 = +2.4E-01 ug/min Carbon

SAMPLE RESULTS:
(531.6 - 2.640399)(1)/(100) = +5.290E+00 g/L Carbon
(531.6 - 2.640399)(1)/(100)(12) = +4.408E-01 Molar Carbon

Sample Run By: _____
DG GIFFIN 00000

#1

TOC- TOTAL ORGANIC CARBON ANALYSIS REPORT
TICTOC REV 2.0

Sample: S96T002767SPK Date: 08/04/96 Time: 03:12:42

Sample Size = 100 uL
Dil Factor = 1
Blank ID # =
Blank Value = 1.42 ug/minute C

Analyst : DG GIFFIN
Min Readings = 22
Max Readings = 22
% Difference = 10

== Reading	==== Analysis Time	==== Coulometer	==== % Difference ==
1	0.51	1.80	0.00
2	1.01	2.90	37.93
3	1.50	18.90	84.66
4	2.00	87.90	78.50
5	2.50	292.10	69.91
6	3.00	482.60	39.47
7	3.50	558.80	13.64
8	4.00	589.10	5.14
9	4.50	600.00	1.82
10	5.00	605.40	0.89
11	5.50	608.50	0.51
12	6.00	610.90	0.39
13	6.50	612.70	0.29
14	7.00	614.40	0.28
15	7.50	615.60	0.19
16	8.00	616.60	0.16
17	8.50	617.80	0.19
18	9.00	618.50	0.11
19	9.50	619.30	0.13
20	10.00	620.10	0.13
21	10.50	620.80	0.11
22	11.00	621.40	0.10

USER INPUT BLANK VALUE
BLANK VALUE = 15.61688 micrograms carbon
BLANK FACTOR = 15.61688 / 10.9978 = +1.4E+00 ug/min Carbon

SAMPLE RESULTS:
(621.4 - 15.61814)(1)/(100) = +6.058E+00 g/L Carbon
(621.4 - 15.61814)(1)/(100)(12) = +5.048E-01 Molar Carbon

Sample Run By: _____
DG GIFFIN 00000

LABCORE Completed Worklist Report for Worklist# 12400

Analyst: dgg **Instrument:** CARB2 **Book#** TIC 22 N12E
TOC 24 N12C

Method: LA-342-100 Rev/Mod ~~E-0~~ E-0

Worklist Comment: @TICTOC1 PERSULFATE FOR AW-101 RTS!

Seq	Type	Sample#	R	A	Test	Matrix	Actual	Found	DL or Yield	Unit
1	BLNK		0		@TICTOC1 TIC-02	SOLID	1	1.80E+0	1.800	ug/g
1	BLNK		0		@TICTOC1 TOC-02	SOLID	1	2.80E+0	2.800	ug/g
2	STD		0		@TICTOC1 TIC-02	SOLID	6.01E+02	6.12E+2	101.830	% Recovery
2	STD		0		@TICTOC1 TOC-02	SOLID	3.00E+03	2.67E+3	89.000	% Recovery
3	SAMPLE	S96T002432	0		@TICTOC1 TIC-02	SOLID	N/A	1.08E+03	5.000	ug/g
3	SAMPLE	S96T002432	0		@TICTOC1 TOC-02	SOLID	N/A	1.26E+03	40.000	ug/g
4	DUP	S96T002432	0		@TICTOC1 TIC-02	SOLID	1.08E+3	1.32E+3	20.000	RPD
4	DUP	S96T002432	0		@TICTOC1 TOC-02	SOLID	1.26E+3	1.62E+3	25.000	RPD
5	TRIPL	S96T002432	0		@TICTOC1 TIC-02	SOLID	1.08E+3	1.35E+3	22.222	RPD
5	TRIPL	S96T002432	0		@TICTOC1 TOC-02	SOLID	1.26E+3	1.51E+3	18.051	RPD
6	SPK	S96T002432	0		@TICTOC1 TIC-02	SOLID	1.00E+02	1.52E+02	152.000	% Recovery
6	SPK	S96T002432	0		@TICTOC1 TOC-02	SOLID	1.00E+02	1.09E+02	109.000	% Recovery
7	SAMPLE	S96T003585	0		@TICTOC1 TIC-02	SOLID	N/A	8.83E+03	5.000	ug/g
7	SAMPLE	S96T003585	0		@TICTOC1 TOC-02	SOLID	N/A	5.13E+03	40.000	ug/g
8	DUP	S96T003585	0		@TICTOC1 TIC-02	SOLID	8.83E+3	8.30E+3	6.188	RPD
8	DUP	S96T003585	0		@TICTOC1 TOC-02	SOLID	5.13E+3	5.17E+3	0.777	RPD

Final page for worklist# 12400

See attached
Analyst Signature Date

9-9-96
Analyst Signature Date

Robert W Schroeder 9/9/96
Reviewer Signature Date

Sample appears to be slightly nonhomogenous for S96T002432. The duplicate and triplicate agree quite well and the spike would have recovered better using one of the dup or triplicate results. No reanalysis is requested. RW Schroeder 9/9/96

Units shown for QC (BLK/BKG) may not reflect the actual units.

LABCORE Data Entry Template for Worklist# 12400

Analyst: dgg **Instrument:** CARB2 **Book#** TIC 22N12E
TOC 24N12C

Method: LA-342-100 Rev/Mod D-0

Worklist Comment: @TICTOC1 PERSULFATE FOR AW-101 RTS!

S	Type	Sample#	R	A	Test	Matrix	Group#	Project
1	BLNK				@TICTOC1	SOLID		
2	STD				@TICTOC1	SOLID		
3	SAMPLE	S96T002432	0		@TICTOC1	SOLID	96000462	AW-101 PUSH
		Analytes Requested: TIC-02 , TOC-02						
4	DUP	S96T002432	0		@TICTOC1	SOLID		
5	TRIPL	S96T002432	0		@TICTOC1	SOLID		
6	SPK	S96T002432	0		@TICTOC1	SOLID		
7	SAMPLE	S96T003585	0		@TICTOC1	SOLID	96000462	AW-101 PUSH
		Analytes Requested: TIC-02 , TOC-02						
8	DUP	S96T003585	0		@TICTOC1	SOLID		

Final page for worklist # 12400

SEE ATTACHED 9-9-96
Analyst Signature **Date**

Analyst Signature **Date**

Data Entry Comments:

S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

LABCORE Data Entry Template for Worklist# 12400

Analyst: WSB **Instrument:** CARB2 _____ **Book #** TIC 22 N12-E
TOC 24 N12-C

Method: LA-342-100 Rev/Mod D-O

Worklist Comment: @TICTOC1 PERSULFATE FOR AW-101 RTS!

GROUP	PROJECT	S	TYPE	SAMPLE#	R	A	-------TEST------	MATRIX	ACTUAL	FOUND	DL	UNIT
		1	BLNK				@TICTOC1 TIC-02	SOLID			N/A	ug/g
		1	BLNK				@TICTOC1 TOC-02	SOLID			N/A	ug/g
		2	STD				@TICTOC1 TIC-02	SOLID			N/A	ug/g
		2	STD				@TICTOC1 TOC-02	SOLID			N/A	ug/g
96000462	AW-101 PUSH	3	SAMPLE	S96T002432	0		@TICTOC1 TIC-02	SOLID	N/A			ug/g
96000462	AW-101 PUSH	3	SAMPLE	S96T002432	0		@TICTOC1 TOC-02	SOLID	N/A			ug/g
96000462	AW-101 PUSH	4	DUP	S96T002432	0		@TICTOC1 TIC-02	SOLID			N/A	ug/g
96000462	AW-101 PUSH	4	DUP	S96T002432	0		@TICTOC1 TOC-02	SOLID			N/A	ug/g
96000462	AW-101 PUSH	5	SPK	S96T002432	0		@TICTOC1 TIC-02	SOLID			N/A	ug/g
96000462	AW-101 PUSH	5	SPK	S96T002432	0		@TICTOC1 TOC-02	SOLID			N/A	ug/g
96000462	AW-101 PUSH	6	SAMPLE	S96T003585	0		@TICTOC1 TIC-02	SOLID	N/A			ug/g
96000462	AW-101 PUSH	6	SAMPLE	S96T003585	0		@TICTOC1 TOC-02	SOLID	N/A			ug/g
96000462	AW-101 PUSH	7	DUP	S96T003585	0		@TICTOC1 TIC-02	SOLID			N/A	ug/g
96000462	AW-101 PUSH	7	DUP	S96T003585	0		@TICTOC1 TOC-02	SOLID			N/A	ug/g

Final page for worklist # 12400

W S Griffin 9-8-96
Analyst Signature **Date**

_____
Analyst Signature **Date**

Data Entry Comments:

Units shown for QC (SPK & STD) may not reflect the actual units. DL = Detection Limit, S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

TIC/TOC: LA-342-100 (E-0)

WORKLIST #	ANALYST INITIALS	ANALYSIS DATE	ANALYSIS TIME	INSTRUMENT CODE
12400	DJS	9-8-96		

Block 1
- [ ] BASELINE BLANK
- [ ] SAMPLE DUPLICATE
- [ ] SPIKE TRIPLICATE

SAMPLE # = STD # =

SAMPLE WEIGHT (g) —
SPIKE/STANDARD VOLUME (mL) TIC: — TOC: —

FINAL COULOMETER READING (u TIC: 6.10 TOC: 35.10

Block 2
- [ ] BASELINE BLANK
- [ ] SAMPLE DUPLICATE
- [x] SPIKE TRIPLICATE

SAMPLE # = 596700 2432 Dup STD # =

SAMPLE WEIGHT (g) 0.3174 g.
SPIKE/STANDARD VOLUME (mL) TIC: — TOC: —

FINAL COULOMETER READING (u TIC: 426.40 TOC: 549.50

Block 3
- [ ] BASELINE BLANK
- [ ] SAMPLE DUPLICATE
- [ ] SPIKE TRIPLICATE

SAMPLE # = LMCS STD # = TIC 22N12-E TOC 2KN12-C

SAMPLE WEIGHT (g) —
SPIKE/STANDARD VOLUME (mL) TIC: 1.0 ml TOC: 0.200 ml

FINAL COULOMETER READING (u TIC: 617.70 TOC: 569.50

Block 4
- [ ] BASELINE BLANK
- [ ] SAMPLE DUPLICATE
- [x] SPIKE TRIPLICATE

SAMPLE # = 596700 2432 SPK STD # =

SAMPLE WEIGHT (g) 0.3030
SPIKE/STANDARD VOLUME (mL) TIC: .500 ml TOC: .100 ml

FINAL COULOMETER READING (u TIC: 788.50 TOC: 744.70

2096

Block 5
- [ ] BASELINE BLANK
- [x] SAMPLE DUPLICATE
- [ ] SPIKE TRIPLICATE

SAMPLE # = STD # =

SAMPLE WEIGHT (g) — —
SPIKE/STANDARD VOLUME (mL) TIC: — TOC: —

FINAL COULOMETER READING (u TIC: 7.90 TOC: 32.30

Block 6
- [ ] BASELINE BLANK
- [ ] SAMPLE DUPLICATE
- [x] SPIKE TRIPLICATE

SAMPLE # = 596700 2432 TRIP STD # =

SAMPLE WEIGHT (g) 0.3097 ~~0.3025~~
SPIKE/STANDARD VOLUME (mL) TIC: — TOC: —

FINAL COULOMETER READING (u TIC: 423.80 TOC: 504.00

Block 7
- [ ] BASELINE BLANK
- [x] SAMPLE DUPLICATE
- [ ] SPIKE TRIPLICATE

SAMPLE # = 596700 2432 STD # =

SAMPLE WEIGHT (g) 0.3004 g
SPIKE/STANDARD VOLUME (mL) TIC: — TOC: —

FINAL COULOMETER READING (u TIC: 329.10 TOC: 413.90

Block 8
- [ ] BASELINE BLANK
- [x] SAMPLE DUPLICATE
- [ ] SPIKE TRIPLICATE

SAMPLE # = 596700 3585 STD # =

SAMPLE WEIGHT (g) 0.0871 g
SPIKE/STANDARD VOLUME (mL) TIC: — TOC: —

FINAL COULOMETER READING (u TIC: 775.60 TOC: 482.00

TIC/TOC: LA-342-100 (E-0)

WORKLIST #	ANALYST INITIALS	ANALYSIS DATE	ANALYSIS TIME	INSTRUMENT CODE
12400	DBB	9-8-96		

☐ BASELINE BLANK ☒ SAMPLE DUPLICATE ☐ SPIKE TRIPLICATE

SAMPLE # = S96T003585 D up STD # =

SAMPLE WEIGHT (g) 0.0907
SPIKE/STANDARD VOLUME (mL) TIC: — TOC: —

FINAL COULOMETER READING (u TIC: 758.70 TOC: 503.90

☐ BASELINE BLANK ☐ SAMPLE DUPLICATE ☐ SPIKE TRIPLICATE

SAMPLE # = STD # =

SAMPLE WEIGHT (g)
SPIKE/STANDARD VOLUME (mL) TIC: TOC:

FINAL COULOMETER READING (u TIC: TOC:

☐ BASELINE BLANK ☐ SAMPLE DUPLICATE ☐ SPIKE TRIPLICATE

SAMPLE # = STD # =

SAMPLE WEIGHT (g)
SPIKE/STANDARD VOLUME (mL) TIC: TOC:

FINAL COULOMETER READING (u TIC: TOC:

☐ BASELINE BLANK ☐ SAMPLE DUPLICATE ☐ SPIKE TRIPLICATE

SAMPLE # = STD # =

SAMPLE WEIGHT (g)
SPIKE/STANDARD VOLUME (mL) TIC: TOC:

FINAL COULOMETER READING (u TIC: TOC:

☐ BASELINE BLANK ☐ SAMPLE DUPLICATE ☐ SPIKE TRIPLICATE

SAMPLE # = STD # =

SAMPLE WEIGHT (g)
SPIKE/STANDARD VOLUME (mL) TIC: TOC:

FINAL COULOMETER READING (u TIC: TOC:

☐ BASELINE BLANK ☐ SAMPLE DUPLICATE ☐ SPIKE TRIPLICATE

SAMPLE # = STD # =

SAMPLE WEIGHT (g)
SPIKE/STANDARD VOLUME (mL) TIC: TOC:

FINAL COULOMETER READING (u TIC: TOC:

2097

WORKBOOK PAGE: BLANK1

TIC/TOC : LA-342-100 (E-0) SOLIDS

			TIC	TOC
Type	Sample Size in g	(SS)	0.0000	0.0000
BLNK	Dilution Factor	(DF)	1	1
Work Order	µg of Carbon in Sample	(C1)	7.9	32.3
12400	µg of Carbon from Baseline	(C2)	6.1	35.1

Test Code
@TICTOC1

Matrix
SOLID

Batch Number
96008818

Blank Number
0

Sample Date
N/A

Sample
BLANK

Instrument Code
CARB2

Reagent
RCJ

Chemist
RWS

Analyst
DGG

Date Extracted
09/09/96

Analyzed Date
09/08/96

Analysis Time
09:33 AM

Sample
AW-101

µg of Carbon = |C1-C2|

	TIC	TOC
Method Detection Limit in ug/g	5	40
µg of Carbon	1.80E+00	2.80E+00

Data Entered By:	RCJ	Date:	09/09/96
Signature of Chemist:	RW Schroeder	Date:	9/9/96

BLANK.WB1 REV 1.0 342100ML

WORKBOOK PAGE: STD2

TIC/TOC : LA-342-100 (E-0) LIQUIDS

			TIC	TOC
Type	Sample Size in mL	(SS)	1.0000	0.2000
STD	Dilution Factor	(DF)	1	1
Workbook	Final Coulometer Reading in µg	(C1)	617.7	569.5
12400	µg of Carbon from Baseline	(C2)	6.1	35.1
Test Code	Standard Book Number		22N12E	24N12C
@TICTOC1	Standard Value (µg/ml)		601	3001

Matrix
LIQUID

Batch Number
96008818

Rerun
0

Sample Prep
N/A

Sample
STANDARD

Instrument Code
CARB2

Prepared by
RCJ

Chemist
RWS

Analyst
DGG

Date Completed
09/09/96

Analyzed Date
09/08/96

Analyzed Time
09:33 AM

Sample Point
AW-101

QC Actual in µg/mL = Standard Value (µg/mL)

QC Found in µg/mL = (C1 - C2) * DF / SS

QC Found in µg/mL for TIC = 5 if C1 < C2

QC Found in µg/mL for TOC = 40 if C1 < C2

% Recovery = QC Found / QC Actual * 100

	TIC	TOC
Method Detection Limit in µg/mL	5	40
QC Actual in µg/mL	6.01E+02	3.00E+03
QC Found in µg/mL	6.12E+02	2.67E+03
Percent Standard Recovery	101.8	89.0

Data Entered By:	RCJ	Date:	09/09/96
Signature of Chemist:	RW Schroeder	Date:	9/9/96

STANDARD.WB1 REV 1.0 342100ML

2098

I:\342100\OUT\TT12400.WB1 09/09/96 10:32:27

WORKBOOK PAGE: SAM3

TIC/TOC : LA-342-100 (E-0) SOLIDS

			TIC	TOC
Type: SAMPLE	Sample Size in g	(SS)	0.3004	0.3004
	Dilution Factor	(DF)	1	1
Workbook: 12400	µg of Carbon in Sample	(C1)	329.1	413.9
	µg of Carbon from Baseline	(C2)	6.1	35.1
Method: @TICTOC1				

Matrix: SOLID

Batch Number: 96008818

Rerun: 0

Sample Prep: N/A

Sample: S96T002432

Instrument Code: CARB2

Prep Tech: RCJ

Chemist: RWS

Analyst: DGG

Date Completed: 09/09/96

Analysis Date: 09/08/96

Analysis Time: 09:33 AM

Sample Point: AW-101

µg of Carbon/g = (C1-C2) * DF / SS
µg of Carbon/g for TIC = 5 if C1 < C2
µg of Carbon/g for TOC = 40 if C1 < C2

	TIC	TOC
Method Detection Limit in ug/g	5	40
µg of Carbon/g	1.08E+03	1.26E+03

Data Entered By:	RCJ	Date:	09/09/96
Signature of Chemist:	RW Schroeder	Date:	9/9/96

SAMPLE.WB1 REV 1.0 342100ML

2100

I:\342100\OUT\TT12400.WB1 09/09/96 10:32:32

WORKBOOK PAGE: DUP4

TIC/TOC : LA-342-100 (E-0) SOLIDS

			TIC	TOC
Type	Sample Size in g	(SS)	0.3174	0.3174
DUP	Dilution Factor	(DF)	1	1
Work Unit	µg of Carbon in Sample	(C1)	426.4	549.5
12400	µg of Carbon from Baseline	(C2)	6.1	35.1
Test Count	Known µg of C from Original Sample		1.08E+3	1.26E+3
@TICTOC1				

Matrix: SOLID

Batch Number: 96008818

Rerun: 0

Sample Phase: N/A

Sample #: S96T002432

Instrument Code: CARB2

Prepared By: RCJ

Chemist: RWS

Analyst: DGG

Date Completed: 09/09/96

Analysis Date: 09/08/96

Analysis Time: 09:33 AM

Sample Point: AW-101

µg of Carbon/g = (C1-C2) * DF / SS
µg of Carbon/g for TIC = 5 if C1 < C2
µg of Carbon/g for TOC = 40 if C1 < C2

	TIC	TOC
Method Detection Limit in ug/g	5	40
µg of Carbon/g	1.32E+03	1.62E+03

Data Entered By:	RCJ	Date:	09/09/96
Signature of Chemist:	Rw Schroeder	Date:	9/9/96

SAMPLE.WB1 REV 1.0 342100ML

2101

I:\342100\OUT\TT12400.WB1 09/09/96 10:32:38

WORKBOOK PAGE: TRIPL5

TIC/TOC : LA-342-100 (E-0) SOLIDS

			TIC	TOC
Type: TRIPL	Sample Size in g	(SS)	0.3097	0.3097
	Dilution Factor	(DF)	1	1
Work List: 12400	µg of Carbon in Sample	(C1)	423.8	504
	µg of Carbon from Baseline	(C2)	6.1	35.1
Test Code: @TICTOC1	Known µg of C from Original Sample		1.08E+3	1.26E+3
	Duplicate Result		1.32E+3	1.62E+3

Matrix: SOLID

Batch Number: 96008818

Rerun: 0

Sample Prep: N/A

Sample#: S96T002432

Instrument Id#: CARB2

Prep Analyst: RCJ

Chemist: RWS

Analyst: DGG

Date Complete: 09/09/96

Analysis Date: 09/08/96

Analysis Time: 09:33 AM

Sample Point: AW-101

µg of Carbon/g = (C1-C2) * DF / SS
µg of Carbon/g for TIC = 5 if C1 < C2
µg of Carbon/g for TOC = 40 if C1 < C2

	TIC	TOC
Method Detection Limit in ug/g	5	40
µg of Carbon/g	1.35E+03	1.51E+03

Data Entered By:	RCJ	Date:	09/09/96
Signature of Chemist:	RW Schroeder	Date:	9/9/96

SAMPLE.WB1 REV 1.0 342100ML

2102

WORKBOOK PAGE: SPIKE6

TIC/TOC : LA-342-100 (E-0) SOLIDS

Type	Sample Vial Data		TIC	TOC
SPK	Sample Size in g	(SS)	0.3004	0.3004
Work List	Final Coulometer Reading in µg	(C1)	329.1	413.9
12400	Spiked Vial Data			
Test Code	Sample Size in g	(SPK SS)	0.3030	0.3030
@TICTOC1	Amount of Spike Std. in mL	(SPK VOL)	0.500	0.100
Matrix	Final Coulometer Reading in µg	(C2)	788.5	744.7
SOLID	Spike Book Number		22N12E	24N12C
Batch Number	Spike Standard Value in µg/ml	(SPK CONC)	601	3001
96008818				
Rerun				
0				
Sample Prep				
N/A				
Sample #	Percent Spike Recovery = (C2 - C1 * (SPK SS) / SS) / ((SPK CONC) * (SPK VOL)) * 100			
S96T002432				
Instrument Code	QC Actual in µg/mL = Spike Value (µg/mL)			
CARB2	QC Found in µg/mL = (Percent Spike Recovery)*(QC Actual) / 100			
Prepared By				
RCJ				
Chemist				
RWS				
Analyst				
DGG				
Date Complete				
09/09/96				
Analysis Date				
09/08/96				
Analysis Time			TIC	TOC
09:33 AM	QC Actual in µg/mL		6.01E+02	3.00E+03
Sample Point	QC Found in µg/mL		9.13E+02	3.27E+03
AW-101	Percent Spike Recovery		151.9	109.0

Data Entered By:	RCJ	Date:	09/09/96
Signature of Chemist:	RW Schroeder	Date:	9/9/96

SPIKE.WB1 REV 1.1 342100ML

WORKBOOK PAGE: SAM7

TIC/TOC : LA-342-100 (E-0) SOLIDS

			TIC	TOC
Type	Sample Size in g	(SS)	0.0871	0.0871
SAMPLE	Dilution Factor	(DF)	1	1
Work List	µg of Carbon in Sample	(C1)	775.6	482
12400	µg of Carbon from Baseline	(C2)	6.1	35.1
Test Code				
@TICTOC1				

Matrix: SOLID

Batch Number: 96008818

Rerun: 0

Sample Prep: N/A

Sample #: S96T003585

Instrument Code: CARB2

Prepared By: RCJ

Chemist: RWS

Analyst: DGG

Date Complete: 09/09/96

Analytical Prep: 09/08/96

Analysis Time: 09:33 AM

Sample Point: AW-101

µg of Carbon/g = (C1-C2) * DF / SS
µg of Carbon/g for TIC = 5 if C1 < C2
µg of Carbon/g for TOC = 40 if C1 < C2

	TIC	TOC
Method Detection Limit in ug/g	5	40
µg of Carbon/g	8.83E+03	5.13E+03

Data Entered By:	RCJ	Date:	09/09/96
Signature of Chemist:	RW Schroeder	Date:	9/9/96

SAMPLE.WB1 REV 1.0 342100ML

WORKBOOK PAGE: DUP8

TIC/TOC : LA-342-100 (E-0) SOLIDS

			TIC	TOC
Type	Sample Size in g	(SS)	0.0907	0.0907
DUP	Dilution Factor	(DF)	1	1
Work List	µg of Carbon in Sample	(C1)	758.7	503.9
12400	µg of Carbon from Baseline	(C2)	6.1	35.1
Test Code	Known µg of C from Original Sample		8.83E+3	5.13E+3
@TICTOC1				

Matrix	SOLID
Batch Number	96008818
Rerun	0
Sample Prep	N/A
Sample #	S96T003585
Instrument Code	CARB2
Prepared By	RCJ
Chemist	RWS
Analyst	DGG
Date Complete	09/09/96
Analysis Date	09/08/96
Analysis Time	09:33 AM
Sample Point	AW-101

µg of Carbon/g = (C1-C2) * DF / SS
µg of Carbon/g for TIC = 5 if C1 < C2
µg of Carbon/g for TOC = 40 if C1 < C2

	TIC	TOC
Method Detection Limit in ug/g	5	40
µg of Carbon/g	8.30E+03	5.17E+03

Data Entered By:	RCJ	Date:	09/09/96
Signature of Chemist:	RW Schroeder	Date:	9/9/96

SAMPLE.WB1 REV 1.0 342100ML

#1

TIC- TOTAL INORGANIC CARBON ANALYSIS REPORT
TICTOC REV 2.0
<<< BLANK ANALYSIS >>>

Sample: BASELINE Date: 09/08/96 Time: 09:33:51

Sample Size = 1 uL
Dil Factor = 1
Blank ID # = BASELINE
Blank Value = N/A

Analyst : DG GRIFFIN
Min Readings = 22
Max Readings = 22
% Difference = 10

== Reading	==== Analysis Time	==== Coulometer	==== % Difference ==
1	0.51	0.20	0.00
2	1.01	0.50	60.00
3	1.51	0.90	44.44
4	2.01	1.40	35.71
5	2.51	1.80	22.22
6	3.01	2.00	10.00
7	3.51	2.30	13.04
8	4.00	2.50	8.00
9	4.50	2.90	13.79
10	5.00	3.10	6.45
11	5.50	3.30	6.06
12	6.00	3.60	8.33
13	6.50	3.80	5.26
14	7.00	4.10	7.32
15	7.50	4.30	4.65
16	8.00	4.60	6.52
17	8.50	4.90	6.12
18	9.00	5.10	3.92
19	9.50	5.30	3.77
20	10.00	5.50	3.64
21	10.50	5.90	6.78
22	11.00	6.10	3.28

BLANK VALUE = 6.1 micrograms carbon
BLANK FACTOR = 6.1 / 11.00067 = +5.5E-01 ug/min Carbon

SIGNATURE BELOW REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 2106 TO 2123.

Sample Run By: Robert W. Schwab 11/5/96 for DG Griffin
DG GRIFFIN 00000

#1

TOC- TOTAL ORGANIC CARBON ANALYSIS REPORT
TICTOC REV 2.0
<<< BLANK ANALYSIS >>>

Sample: BASELINE Date: 09/08/96 Time: 09:47:56

Sample Size = 1 uL
Dil Factor = 1
Blank ID # = BASELINE
Blank Value = N/A

Analyst : DG GRIFFIN
Min Readings = 22
Max Readings = 22
% Difference = 10

== Reading ====	Analysis Time ====	Coulometer ====	% Difference ==
1	0.51	0.70	0.00
2	1.01	4.60	84.78
3	1.50	14.90	69.13
4	2.00	22.00	32.27
5	2.50	24.80	11.29
6	3.00	26.70	7.12
7	3.50	28.00	4.64
8	4.00	28.80	2.78
9	4.50	29.80	3.36
10	5.00	30.50	2.30
11	5.50	31.10	1.93
12	6.00	31.70	1.89
13	6.50	32.00	0.94
14	7.00	32.40	1.23
15	7.50	32.80	1.22
16	8.00	33.20	1.20
17	8.50	33.50	0.90
18	9.00	33.90	1.18
19	9.50	34.10	0.59
20	10.00	34.50	1.16
21	10.50	34.80	0.86
22	11.00	35.10	0.85

BLANK VALUE = 35.1 micrograms carbon
BLANK FACTOR = 35.1 / 11.00146 = +3.19E+00 ug/min Carbon

<<<< WARNING - BLANK VALUE EXCEEDS 1.5 ug/min Carbon!!!!!>>>>

Sample Run By: _____
DG GRIFFIN 00000

#1

TIC- TOTAL INORGANIC CARBON ANALYSIS REPORT
TICTOC REV 2.0

Sample: STD 22N12-E Date: 09/08/96 Time: 10:09:53

Sample Size = 1000 uL
Dil Factor = 1
Blank ID # =
Blank Value = .55 ug/minute C

Analyst : DG GRIFFIN
Min Readings = 22
Max Readings = 22
% Difference = 10

== Reading	==== Analysis Time	==== Coulometer	==== % Difference ==
1	0.51	0.80	0.00
2	1.01	21.30	96.24
3	1.50	201.50	89.43
4	2.00	411.10	50.99
5	2.50	533.70	22.97
6	3.00	586.00	8.92
7	3.50	604.50	3.06
8	4.00	610.30	0.95
9	4.50	612.10	0.29
10	5.00	612.90	0.13
11	5.50	613.60	0.11
12	6.00	614.00	0.07
13	6.50	614.50	0.08
14	7.00	614.90	0.07
15	7.50	615.30	0.07
16	8.00	615.70	0.06
17	8.50	616.00	0.05
18	9.00	616.50	0.08
19	9.50	616.70	0.03
20	10.00	617.00	0.05
21	10.50	617.30	0.05
22	11.00	617.70	0.06

USER INPUT BLANK VALUE
BLANK VALUE = 6.050806 micrograms carbon
BLANK FACTOR = 6.050806 / 11.00146 = +5.5E-01 ug/min Carbon

SAMPLE RESULTS:
(617.7 - 6.049362)(1)/(1000) = +6.117E-01 g/L Carbon
(617.7 - 6.049362)(1)/(1000)(12) = +5.097E-02 Molar Carbon

Sample Run By: _____
DG GRIFFIN 00000

#1

TOC- TOTAL ORGANIC CARBON ANALYSIS REPORT
TICTOC REV 2.0

Sample: STD 24N12-C Date: 09/08/96 Time: 10:23:09

Sample Size = 200 uL
Dil Factor = 1
Blank ID # =
Blank Value = 3.19 ug/minute C

Analyst : DG GRIFFIN
Min Readings = 22
Max Readings = 22
% Difference = 10

== Reading	==== Analysis Time	==== Coulometer	==== % Difference ==
1	0.51	0.40	0.00
2	1.01	15.80	97.47
3	1.51	175.50	91.00
4	2.00	406.00	56.77
5	2.50	516.00	21.32
6	3.00	548.60	5.94
7	3.50	557.10	1.53
8	4.00	559.90	0.50
9	4.50	561.80	0.34
10	5.00	563.00	0.21
11	5.50	564.10	0.19
12	6.00	564.80	0.12
13	6.50	565.50	0.12
14	7.00	566.10	0.11
15	7.50	566.60	0.09
16	8.00	567.20	0.11
17	8.50	567.60	0.07
18	9.00	568.00	0.07
19	9.50	568.50	0.09
20	10.00	568.90	0.07
21	10.50	569.20	0.05
22	11.00	569.50	0.05

USER INPUT BLANK VALUE
BLANK VALUE = 35.09467 micrograms carbon
BLANK FACTOR = 35.09467 / 11.00146 = +3.2E+00 ug/min Carbon

SAMPLE RESULTS:
(569.5 - 35.08961)(1)/(200) = +2.672E+00 g/L Carbon
(569.5 - 35.08961)(1)/(200)(12) = +2.227E-01 Molar Carbon
<<<< WARNING - BLANK VALUE EXCEEDS 1.5 ug/min Carbon!!!!!>>>>

Sample Run By: _____
DG GRIFFIN 00000

#1

TIC- TOTAL INORGANIC CARBON ANALYSIS REPORT
TICTOC REV 2.0

Sample: BLANK Date: 09/08/96 Time: 10:37:53

Sample Size = 1 uL
Dil Factor = 1
Blank ID # =
Blank Value = .55 ug/minute C

Analyst : DG GRIFFIN
Min Readings = 22
Max Readings = 22
% Difference = 10

== Reading	==== Analysis Time	==== Coulometer	==== % Difference ==
1	0.51	0.30	0.00
2	1.01	0.80	62.50
3	1.50	1.10	27.27
4	2.00	1.70	35.29
5	2.50	2.20	22.73
6	3.00	2.60	15.38
7	3.50	2.90	10.34
8	4.00	3.20	9.37
9	4.50	3.50	8.57
10	5.00	3.80	7.89
11	5.50	4.30	11.63
12	6.00	4.70	8.51
13	6.50	4.90	4.08
14	7.00	5.20	5.77
15	7.50	5.60	7.14
16	8.00	5.90	5.08
17	8.50	6.20	4.84
18	9.00	6.50	4.62
19	9.50	6.90	5.80
20	10.00	7.10	2.82
21	10.50	7.40	4.05
22	11.00	7.90	6.33

USER INPUT BLANK VALUE
BLANK VALUE = 6.050806 micrograms carbon
BLANK FACTOR = 6.050806 / 11.00146 = +5.5E-01 ug/min Carbon

SAMPLE RESULTS:
(7.9 - 6.050336)(1)/(1) = +1.8E+00 g/L Carbon
(7.9 - 6.050336)(1)/(1)(12) = +1.5E-01 Molar Carbon

Sample Run By: _____
DG GRIFFIN 00000

#1

TOC- TOTAL ORGANIC CARBON ANALYSIS REPORT
TICTOC REV 2.0

Sample: BLANK Date: 09/08/96 Time: 10:51:31

Sample Size = 1 uL
Dil Factor = 1
Blank ID # =
Blank Value = 3.19 ug/minute C

Analyst : DG GRIFFIN
Min Readings = 22
Max Readings = 22
% Difference = 10

== Reading	==== Analysis Time	==== Coulometer	==== % Difference ==
1	0.51	0.40	0.00
2	1.01	2.70	85.19
3	1.50	10.60	74.53
4	2.00	17.30	38.73
5	2.50	21.10	18.01
6	3.00	23.20	9.05
7	3.50	24.60	5.69
8	4.00	25.60	3.91
9	4.50	26.40	3.03
10	5.00	27.20	2.94
11	5.50	27.70	1.81
12	6.00	28.40	2.46
13	6.50	28.80	1.39
14	7.00	29.30	1.71
15	7.50	29.90	2.01
16	8.00	30.10	0.66
17	8.50	30.50	1.31
18	9.00	30.90	1.29
19	9.50	31.20	0.96
20	10.00	31.60	1.27
21	10.50	32.00	1.25
22	11.00	32.30	0.93

USER INPUT BLANK VALUE
BLANK VALUE = 35.09467 micrograms carbon
BLANK FACTOR = 35.09467 / 11.00146 = +3.2E+00 ug/min Carbon

SAMPLE RESULTS:
(32.3 - 35.09234)(1)/(1) = < 5.00 E-3 g/L Carbon
(32.3 - 35.09234)(1)/(1)(12) = < 4.17 E-4 Molar Carbon
<<<< WARNING - BLANK VALUE EXCEEDS 1.5 ug/min Carbon!!!!!>>>>

Sample Run By: _____
DG GRIFFIN 00000

#1

TIC- TOTAL INORGANIC CARBON ANALYSIS REPORT
TICTOC REV 2.0

Sample: S96T002432 Date: 09/08/96 Time: 11:24:30

Sample Size = 1 uL
Dil Factor = 1
Blank ID # =
Blank Value = .55 ug/minute C

Analyst : DG GRIFFIN
Min Readings = 22
Max Readings = 22
% Difference = 10

== Reading	==== Analysis Time	==== Coulometer	==== % Difference ==
1	0.51	0.90	0.00
2	1.01	4.30	79.07
3	1.51	56.00	92.32
4	2.00	146.90	61.88
5	2.50	220.80	33.47
6	3.00	264.00	16.36
7	3.50	284.50	7.21
8	4.00	294.50	3.40
9	4.50	300.80	2.09
10	5.00	304.90	1.34
11	5.50	308.30	1.10
12	6.00	311.30	0.96
13	6.50	314.80	1.11
14	7.00	317.70	0.91
15	7.50	319.60	0.59
16	8.00	321.30	0.53
17	8.50	322.80	0.46
18	9.00	324.30	0.46
19	9.50	325.60	0.40
20	10.00	326.80	0.37
21	10.50	327.90	0.34
22	11.00	329.10	0.36

USER INPUT BLANK VALUE
BLANK VALUE = 6.050806 micrograms carbon
BLANK FACTOR = 6.050806 / 11.00146 = +5.5E-01 ug/min Carbon

SAMPLE RESULTS:
(329.1 - 6.0499)(1)/(1) = +3.231E+02 g/L Carbon
(329.1 - 6.0499)(1)/(1)(12) = +2.692E+01 Molar Carbon

Sample Run By: _____
DG GRIFFIN 00000

#1

TOC- TOTAL ORGANIC CARBON ANALYSIS REPORT
TICTOC REV 2.0

Sample: S96T002432 Date: 09/08/96 Time: 11:38:41

Sample Size = 1 uL
Dil Factor = 1
Blank ID # =
Blank Value = 3.19 ug/minute C

Analyst : DG GRIFFIN
Min Readings = 22
Max Readings = 22
% Difference = 10

== Reading	==== Analysis Time	==== Coulometer	==== % Difference ==
1	0.51	1.40	0.00
2	1.01	12.90	89.15
3	1.51	88.70	85.46
4	2.00	216.10	58.95
5	2.50	320.10	32.49
6	3.00	362.90	11.79
7	3.50	380.40	4.60
8	4.00	389.20	2.26
9	4.50	395.20	1.52
10	5.00	399.00	0.95
11	5.50	402.20	0.80
12	6.00	404.20	0.49
13	6.50	405.90	0.42
14	7.00	407.50	0.39
15	7.50	408.50	0.24
16	8.00	409.50	0.24
17	8.50	410.40	0.22
18	9.00	411.30	0.22
19	9.50	411.90	0.15
20	10.00	412.60	0.17
21	10.50	413.20	0.15
22	11.00	413.90	0.17

USER INPUT BLANK VALUE
BLANK VALUE = 35.09467 micrograms carbon
BLANK FACTOR = 35.09467 / 11.00146 = +3.2E+00 ug/min Carbon

SAMPLE RESULTS:
(413.9 - 35.09195)(1)/(1) = +3.788E+02 g/L Carbon
(413.9 - 35.09195)(1)/(1)(12) = +3.157E+01 Molar Carbon
<<<< WARNING - BLANK VALUE EXCEEDS 1.5 ug/min Carbon!!!!!>>>>

Sample Run By: _____
DG GRIFFIN 00000

#1

TIC- TOTAL INORGANIC CARBON ANALYSIS REPORT
TICTOC REV 2.0

Sample: S96T002432DUP Date: 09/08/96 Time: 13:55:44

Sample Size = 1 uL
Dil Factor = 1
Blank ID # =
Blank Value = .55 ug/minute C

Analyst : DG GRIFFIN
Min Readings = 22
Max Readings = 22
% Difference = 10

== Reading	==== Analysis Time	==== Coulometer	==== % Difference ==
1	0.51	1.30	0.00
2	1.01	15.00	91.33
3	1.51	103.80	85.55
4	2.01	208.70	50.26
5	2.51	278.40	25.04
6	3.00	316.30	11.98
7	3.50	339.70	6.89
8	4.00	355.90	4.55
9	4.50	368.00	3.29
10	5.00	377.50	2.52
11	5.50	384.90	1.92
12	6.00	391.60	1.71
13	6.50	397.10	1.39
14	7.00	401.50	1.10
15	7.50	406.00	1.11
16	8.00	409.50	0.85
17	8.50	413.00	0.85
18	9.00	416.20	0.77
19	9.50	418.80	0.62
20	10.00	421.30	0.59
21	10.50	424.10	0.66
22	11.00	426.40	0.54

USER INPUT BLANK VALUE
BLANK VALUE = 6.050806 micrograms carbon
BLANK FACTOR = 6.050806 / 11.00146 = +5.5E-01 ug/min Carbon

SAMPLE RESULTS:
(426.4 - 6.0499)(1)/(1) = +4.204E+02 g/L Carbon
(426.4 - 6.0499)(1)/(1)(12) = +3.503E+01 Molar Carbon

Sample Run By: _____
DG GRIFFIN 00000

#1

TOC- TOTAL ORGANIC CARBON ANALYSIS REPORT
TICTOC REV 2.0

Sample: S96T002432DUP Date: 09/08/96 Time: 14:11:16

Sample Size = 1 uL
Dil Factor = 1
Blank ID # =
Blank Value = 3.19 ug/minute C

Analyst : DG GRIFFIN
Min Readings = 22
Max Readings = 22
% Difference = 10

== Reading	==== Analysis Time	==== Coulometer	==== % Difference ==
1	0.51	3.50	0.00
2	1.01	48.70	92.81
3	1.51	169.00	71.18
4	2.01	351.10	51.87
5	2.51	457.80	23.31
6	3.01	496.80	7.85
7	3.51	512.80	3.12
8	4.00	521.20	1.61
9	4.50	526.90	1.08
10	5.00	531.00	0.77
11	5.50	534.40	0.64
12	6.00	536.50	0.39
13	6.50	538.40	0.35
14	7.00	540.30	0.35
15	7.50	541.70	0.26
16	8.00	543.00	0.24
17	8.50	544.30	0.24
18	9.00	545.50	0.22
19	9.50	546.40	0.16
20	10.00	547.40	0.18
21	10.50	548.70	0.24
22	11.00	549.50	0.15

USER INPUT BLANK VALUE
BLANK VALUE = 35.09467 micrograms carbon
BLANK FACTOR = 35.09467 / 11.00146 = +3.2E+00 ug/min Carbon

SAMPLE RESULTS:
(549.5 - 35.09798)(1)/(1) = +5.144E+02 g/L Carbon
(549.5 - 35.09798)(1)/(1)(12) = +4.287E+01 Molar Carbon
<<<< WARNING - BLANK VALUE EXCEEDS 1.5 ug/min Carbon!!!!!>>>>

Sample Run By: _____
DG GRIFFIN 00000

#1

TIC- TOTAL INORGANIC CARBON ANALYSIS REPORT
TICTOC REV 2.0

Sample: S96T002432SPK Date: 09/08/96 Time: 14:44:38

Sample Size = 1 uL
Dil Factor = 1
Blank ID # =
Blank Value = .55 ug/minute C

Analyst : DG GRIFFIN
Min Readings = 22
Max Readings = 22
% Difference = 10

== Reading	==== Analysis Time	==== Coulometer	==== % Difference ==
1	0.51	4.80	0.00
2	1.01	44.20	89.14
3	1.51	250.00	82.32
4	2.01	454.60	45.01
5	2.51	578.00	21.35
6	3.01	642.00	9.97
7	3.51	674.80	4.86
8	4.01	695.20	2.93
9	4.50	710.20	2.11
10	5.00	722.30	1.68
11	5.50	732.30	1.37
12	6.00	741.10	1.19
13	6.50	748.30	0.96
14	7.00	754.70	0.85
15	7.50	760.50	0.76
16	8.00	765.60	0.67
17	8.50	770.10	0.58
18	9.00	774.70	0.59
19	9.50	778.70	0.51
20	10.00	782.20	0.45
21	10.50	785.50	0.42
22	11.00	788.50	0.38

USER INPUT BLANK VALUE
BLANK VALUE = 6.050806 micrograms carbon
BLANK FACTOR = 6.050806 / 11.00146 = +5.5E-01 ug/min Carbon

SAMPLE RESULTS:
(788.5 - 6.050336)(1)/(1) = +7.824E+02 g/L Carbon
(788.5 - 6.050336)(1)/(1)(12) = +6.520E+01 Molar Carbon

Sample Run By: _____
DG GRIFFIN 00000

#1

TOC- TOTAL ORGANIC CARBON ANALYSIS REPORT
TICTOC REV 2.0

Sample: S96T002432SPK Date: 09/08/96 Time: 14:58:42

Sample Size = 1 uL
Dil Factor = 1
Blank ID # =
Blank Value = 3.19 ug/minute C

Analyst : DG GRIFFIN
Min Readings = 22
Max Readings = 22
% Difference = 10

== Reading	==== Analysis Time	==== Coulometer	==== % Difference ==
1	0.51	3.60	0.00
2	1.01	19.80	81.82
3	1.51	113.00	82.48
4	2.01	303.10	62.72
5	2.51	533.60	43.20
6	3.01	642.80	16.99
7	3.51	685.30	6.20
8	4.00	702.50	2.45
9	4.50	712.10	1.35
10	5.00	717.60	0.77
11	5.50	722.00	0.61
12	6.00	725.60	0.50
13	6.50	728.40	0.38
14	7.00	731.00	0.36
15	7.50	733.30	0.31
16	8.00	735.40	0.29
17	8.50	737.20	0.24
18	9.00	739.00	0.24
19	9.50	740.50	0.20
20	10.00	742.00	0.20
21	10.50	743.40	0.19
22	11.00	744.70	0.17

USER INPUT BLANK VALUE
BLANK VALUE = 35.09467 micrograms carbon
BLANK FACTOR = 35.09467 / 11.00146 = +3.2E+00 ug/min Carbon

SAMPLE RESULTS:
(744.7 - 35.09487)(1)/(1) = +7.096E+02 g/L Carbon
(744.7 - 35.09487)(1)/(1)(12) = +5.913E+01 Molar Carbon
<<<< WARNING - BLANK VALUE EXCEEDS 1.5 ug/min Carbon!!!!!>>>>

Sample Run By: _____
DG GRIFFIN 00000

#1

TIC- TOTAL INORGANIC CARBON ANALYSIS REPORT
TICTOC REV 2.0

Sample: S96T002432TRI Date: 09/08/96 Time: 16:54:18

Sample Size = 1 uL
Dil Factor = 1
Blank ID # =
Blank Value = .55 ug/minute C

Analyst : DG GRIFFIN
Min Readings = 22
Max Readings = 22
% Difference = 10

== Reading	==== Analysis Time	==== Coulometer	==== % Difference ==
1	0.51	2.20	0.00
2	1.01	3.70	40.54
3	1.51	10.80	65.74
4	2.01	50.30	78.53
5	2.51	124.60	59.63
6	3.01	188.70	33.97
7	3.51	236.50	20.21
8	4.01	275.00	14.00
9	4.50	304.30	9.63
10	5.00	325.50	6.51
11	5.50	341.90	4.80
12	6.00	355.20	3.74
13	6.50	365.80	2.90
14	7.00	374.90	2.43
15	7.50	383.40	2.22
16	8.00	390.50	1.82
17	8.50	397.40	1.74
18	9.00	403.80	1.58
19	9.50	409.60	1.42
20	10.00	414.30	1.13
21	10.50	419.40	1.22
22	11.00	423.80	1.04

USER INPUT BLANK VALUE
BLANK VALUE = 6.050806 micrograms carbon
BLANK FACTOR = 6.050806 / 11.00146 = +5.5E-01 ug/min Carbon

SAMPLE RESULTS:
(423.8 - 6.050907)(1)/(1) = +4.177E+02 g/L Carbon
(423.8 - 6.050907)(1)/(1)(12) = +3.481E+01 Molar Carbon

Sample Run By: _____
DG GRIFFIN 00000

#1

TOC- TOTAL ORGANIC CARBON ANALYSIS REPORT
TICTOC REV 2.0

Sample: S96T002432TRI Date: 09/08/96 Time: 17:07:20

Sample Size = 1 uL
Dil Factor = 1
Blank ID # =
Blank Value = 3.19 ug/minute C

Analyst : DG GRIFFIN
Min Readings = 22
Max Readings = 22
% Difference = 10

== Reading	==== Analysis Time	==== Coulometer	==== % Difference ==
1	0.51	5.60	0.00
2	1.01	8.50	34.12
3	1.51	11.70	27.35
4	2.00	23.20	49.57
5	2.50	81.30	71.46
6	3.00	186.90	56.50
7	3.50	286.30	34.72
8	4.00	351.00	18.43
9	4.50	393.30	10.76
10	5.00	422.40	6.89
11	5.50	442.80	4.61
12	6.00	456.10	2.92
13	6.50	467.10	2.35
14	7.00	474.70	1.60
15	7.50	480.90	1.29
16	8.00	486.10	1.07
17	8.50	491.10	1.02
18	9.00	493.90	0.57
19	9.50	497.20	0.66
20	10.00	499.60	0.48
21	10.50	501.90	0.46
22	11.00	504.00	0.42

USER INPUT BLANK VALUE
BLANK VALUE = 35.09467 micrograms carbon
BLANK FACTOR = 35.09467 / 11.00146 = +3.2E+00 ug/min Carbon

SAMPLE RESULTS:
(504 - 35.0863)(1)/(1) = +4.689E+02 g/L Carbon
(504 - 35.0863)(1)/(1)(12) = +3.908E+01 Molar Carbon
<<<< WARNING - BLANK VALUE EXCEEDS 1.5 ug/min Carbon!!!!!>>>>

Sample Run By: _____
DG GRIFFIN 00000

#1

TIC- TOTAL INORGANIC CARBON ANALYSIS REPORT
TICTOC REV 2.0

Sample: S96T003585 Date: 09/08/96 Time: 15:15:42

Sample Size = 1 uL
Dil Factor = 1
Blank ID # =
Blank Value = .55 ug/minute C

Analyst : DG GRIFFIN
Min Readings = 22
Max Readings = 22
% Difference = 10

== Reading	==== Analysis Time	==== Coulometer	==== % Difference ==
1	0.51	1.10	0.00
2	1.01	2.30	52.17
3	1.51	3.40	32.35
4	2.00	7.30	53.42
5	2.50	61.20	88.07
6	3.00	191.20	67.99
7	3.50	331.60	42.34
8	4.01	450.50	26.39
9	4.50	546.90	17.63
10	5.00	623.30	12.26
11	5.50	676.00	7.80
12	6.00	708.90	4.64
13	6.50	728.20	2.65
14	7.00	739.90	1.58
15	7.50	747.80	1.06
16	8.00	753.50	0.76
17	8.50	758.50	0.66
18	9.00	762.40	0.51
19	9.50	766.20	0.50
20	10.00	769.60	0.44
21	10.50	772.70	0.40
22	11.00	775.60	0.37

USER INPUT BLANK VALUE
BLANK VALUE = 6.050806 micrograms carbon
BLANK FACTOR = 6.050806 / 11.00146 = +5.5E-01 ug/min Carbon

SAMPLE RESULTS:
(775.6 - 6.050336)(1)/(1) = +7.695E+02 g/L Carbon
(775.6 - 6.050336)(1)/(1)(12) = +6.413E+01 Molar Carbon

Sample Run By: _____
DG GRIFFIN 00000

#1

TOC- TOTAL ORGANIC CARBON ANALYSIS REPORT
TICTOC REV 2.0

Sample: S96T003585 Date: 09/08/96 Time: 15:28:42

Sample Size = 1 uL
Dil Factor = 1
Blank ID # =
Blank Value = 3.19 ug/minute C

Analyst : DG GRIFFIN
Min Readings = 22
Max Readings = 22
% Difference = 10

== Reading	==== Analysis Time	==== Coulometer	==== % Difference ==
1	0.51	3.90	0.00
2	1.01	6.30	38.10
3	1.50	8.30	24.10
4	2.00	13.10	36.64
5	2.50	37.80	65.34
6	3.00	100.00	62.20
7	3.50	181.60	44.93
8	4.00	247.20	26.54
9	4.50	297.00	16.77
10	5.00	336.00	11.61
11	5.50	365.00	7.95
12	6.00	388.00	5.93
13	6.50	406.70	4.60
14	7.00	422.40	3.72
15	7.50	435.60	3.03
16	8.00	446.50	2.44
17	8.50	455.60	2.00
18	9.00	462.90	1.58
19	9.50	468.90	1.28
20	10.00	473.90	1.06
21	10.50	478.20	0.90
22	11.00	482.00	0.79

USER INPUT BLANK VALUE
BLANK VALUE = 35.09467 micrograms carbon
BLANK FACTOR = 35.09467 / 11.00146 = +3.2E+00 ug/min Carbon

SAMPLE RESULTS:
(482 - 35.08883)(1)/(1) = +4.469E+02 g/L Carbon
(482 - 35.08883)(1)/(1)(12) = +3.724E+01 Molar Carbon
<<<< WARNING - BLANK VALUE EXCEEDS 1.5 ug/min Carbon!!!!!>>>>

Sample Run By: _____
DG GRIFFIN 00000

2121

TIC- TOTAL INORGANIC CARBON ANALYSIS REPORT
TICTOC REV 2.0

Sample: S96T003585DUP Date: 09/08/96 Time: 15:42:29

Sample Size = 1 uL
Dil Factor = 1
Blank ID # =
Blank Value = .55 ug/minute C

Analyst : DG GRIFFIN
Min Readings = 22
Max Readings = 22
% Difference = 10

== Reading	==== Analysis Time	==== Coulometer	==== % Difference ==
1	0.51	3.20	0.00
2	1.01	4.80	33.33
3	1.50	6.60	27.27
4	2.00	10.00	34.00
5	2.50	16.30	38.65
6	3.00	35.50	54.08
7	3.50	90.50	60.77
8	4.00	175.10	48.32
9	4.50	266.30	34.25
10	5.00	355.40	25.07
11	5.50	439.00	19.04
12	6.00	513.10	14.44
13	6.50	576.20	10.95
14	7.00	627.40	8.16
15	7.50	666.40	5.85
16	8.00	695.50	4.18
17	8.50	715.30	2.77
18	9.00	729.80	1.99
19	9.50	740.00	1.38
20	10.00	747.70	1.03
21	10.50	753.80	0.81
22	11.00	758.70	0.65

USER INPUT BLANK VALUE
BLANK VALUE = 6.050806 micrograms carbon
BLANK FACTOR = 6.050806 / 11.00146 = +5.5E-01 ug/min Carbon

SAMPLE RESULTS:
(758.7 - 6.049362)(1)/(1) = +7.527E+02 g/L Carbon
(758.7 - 6.049362)(1)/(1)(12) = +6.272E+01 Molar Carbon

Sample Run By: _____
DG GRIFFIN 00000

#1

TOC- TOTAL ORGANIC CARBON ANALYSIS REPORT
TICTOC REV 2.0

Sample: S96T003585DUP Date: 09/08/96 Time: 15:55:43

Sample Size = 1 uL
Dil Factor = 1
Blank ID # =
Blank Value = 3.19 ug/minute C

Analyst : DG GRIFFIN
Min Readings = 22
Max Readings = 22
% Difference = 10

== Reading	==== Analysis Time	==== Coulometer	==== % Difference ==
1	0.51	4.00	0.00
2	1.01	7.50	46.67
3	1.51	9.20	18.48
4	2.01	11.20	17.86
5	2.50	14.30	21.68
6	3.01	35.20	59.38
7	3.51	101.40	65.29
8	4.00	174.70	41.96
9	4.50	219.10	20.26
10	5.00	260.10	15.76
11	5.50	298.40	12.84
12	6.00	331.60	10.01
13	6.50	360.10	7.91
14	7.00	385.60	6.61
15	7.50	407.20	5.30
16	8.00	426.70	4.57
17	8.50	443.20	3.72
18	9.00	459.00	3.44
19	9.50	472.50	2.86
20	10.00	484.50	2.48
21	10.50	494.90	2.10
22	11.00	503.90	1.79

USER INPUT BLANK VALUE
BLANK VALUE = 35.09467 micrograms carbon
BLANK FACTOR = 35.09467 / 11.00146 = +3.2E+00 ug/min Carbon

SAMPLE RESULTS:
(503.9 - 35.09156)(1)/(1) = +4.688E+02 g/L Carbon
(503.9 - 35.09156)(1)/(1)(12) = +3.907E+01 Molar Carbon
<<<< WARNING - BLANK VALUE EXCEEDS 1.5 ug/min Carbon!!!!!>>>>

Sample Run By: _____
DG GRIFFIN 00000

LABCORE Data Entry Template for Worklist# 6392

Analyst: JLS2 **Instrument:** CARB2 **Book #** 17N12-F TIC
16N12-D TOC

Method: LA-342-100 Rev/Mod C-D

Worklist Comment: AW-101 TOC. RCJ

GROUP	PROJECT	S TYPE	SAMPLE#	R A	-------TEST------	MATRIX	ACTUAL	FOUND	DL	UNIT
		1 BLNK			TOC-02	LIQUID	1	3.10	N/A	ug/mL
		2 STD			TOC-02	LIQUID	3.00 E3	2.85 E3	N/A	ug/mL
96000103	AW-101 PUSH	3 SAMPLE	S96T000806	0 D	TOC-02	LIQUID	N/A	3.04 E3	40.0	ug/mL
96000103	AW-101 PUSH	4 DUP	S96T000806	0 D	TOC-02	LIQUID	3.04 E3	3.43 E3	N/A	ug/mL
96000103	AW-101 PUSH	5 SPK	S96T000806	0 D	TOC-02	LIQUID	100	95	N/A	ug/mL
96000103	AW-101 PUSH	6 SAMPLE	S96T000821	0	TOC-02	LIQUID	N/A	3.14 E3	40.0	ug/mL
96000103	AW-101 PUSH	7 DUP	S96T000821	0	TOC-02	LIQUID	3.14 E3	3.27 E3	N/A	ug/mL
96000103	AW-101 PUSH	8 SAMPLE	S96T000830	0	TOC-02	LIQUID	N/A	~~3.01~~ E3 3.48 E3 JS 3/20/96	40.0	ug/mL
96000103	AW-101 PUSH	9 DUP	S96T000830	0	TOC-02	LIQUID	3.48 E3	3.46 E3	N/A	ug/mL
96000103	AW-101 PUSH	10 SAMPLE	S96T000845	0	TOC-02	LIQUID	N/A	3.41 E3	40.0	ug/mL
96000103	AW-101 PUSH	11 DUP	S96T000845	0	TOC-02	LIQUID	3.41 E3	3.31 E3	N/A	ug/mL

Final page for worklist # 6392

Jacque Steele 3/20/96
Analyst Signature **Date**

3/21/96
Analyst Signature **Date**

Reviewed RW Schroeder 3/27/96

Data Entry Comments:

Units shown for QC (SPK & STD) may not reflect the actual units. DL = Detection Limit, S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

TIC- TOTAL INORGANIC CARBON ANALYSIS REPORT
TICTOC REV 2.0
<<< BLANK ANALYSIS >>>

Sample: BASE Date: 03/20/96 Time: 08:36:01

Sample Size = 1 uL
Dil Factor = 1
Blank ID # = BASE
Blank Value = N/A

Analyst : JL STEELE
Min Readings = 22
Max Readings = 22
% Difference = 10

== Reading	==== Analysis Time	==== Coulometer	==== % Difference ==
1	0.51	0.30	0.00
2	1.01	0.60	50.00
3	1.51	1.30	53.85
4	2.00	1.60	18.75
5	2.50	1.90	15.79
6	3.00	2.40	20.83
7	3.50	2.70	11.11
8	4.00	3.00	10.00
9	4.50	3.20	6.25
10	5.00	3.50	8.57
11	5.50	3.80	7.89
12	6.00	4.10	7.32
13	6.50	4.40	6.82
14	7.00	4.80	8.33
15	7.50	5.00	4.00
16	8.00	5.30	5.66
17	8.50	5.50	3.64
18	9.00	5.90	6.78
19	9.50	6.10	3.28
20	10.00	6.50	6.15
21	10.50	6.80	4.41
22	11.00	7.10	4.23

BLANK VALUE = 7.1 micrograms carbon
BLANK FACTOR = 7.1 / 11.0015 = +6.5E-01 ug/min Carbon

SIGNATURE BELOW REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 2125 TO 2148.

11/5/96

Sample Run By: Robert W Schwedy for JL Steele
JM STEELE 00000

TOC- TOTAL ORGANIC CARBON ANALYSIS REPORT
TICTOC REV 2.0
<<< BLANK ANALYSIS >>>

Sample: BASE Date: 03/20/96 Time: 08:58:05

Sample Size = 1 uL
Dil Factor = 1
Blank ID # = BASE
Blank Value = N/A

Analyst : JL STEELE
Min Readings = 22
Max Readings = 22
% Difference = 10

== Reading	==== Analysis Time	==== Coulometer	==== % Difference ==
1	0.51	0.30	0.00
2	1.00	2.50	88.00
3	1.50	5.10	50.98
4	2.00	7.00	27.14
5	2.50	10.50	33.33
6	3.00	14.80	29.05
7	3.50	17.10	13.45
8	4.00	18.50	7.57
9	4.50	19.20	3.65
10	5.00	19.80	3.03
11	5.50	20.30	2.46
12	6.00	20.60	1.46
13	6.50	21.10	2.37
14	7.00	21.50	1.86
15	7.50	21.80	1.38
16	8.00	22.10	1.36
17	8.50	22.70	2.64
18	9.00	22.70	0.00
19	9.50	23.10	1.73
20	10.00	23.40	1.28
21	10.50	23.80	1.68
22	11.00	24.10	1.24

BLANK VALUE = 24.1 micrograms carbon
BLANK FACTOR = 24.1 / 11.00171 = +2.19E+00 ug/min Carbon

<<<< WARNING - BLANK VALUE EXCEEDS 1.5 ug/min Carbon!!!!!>>>>

Sample Run By: _____
JL STEELE 00000

TIC- TOTAL INORGANIC CARBON ANALYSIS REPORT
TICTOC REV 2.0

Sample: STD 17N12-F Date: 03/20/96 Time: 09:14:35

Sample Size = 1 uL 1mL
Dil Factor = 1
Blank ID # =
Blank Value = .65 ug/minute C

Analyst : JL STEELE
Min Readings = 22
Max Readings = 22
% Difference = 10

== Reading	==== Analysis Time	==== Coulometer	==== % Difference ==
1	0.51	0.00	0.00
2	1.01	8.90	100.00
3	1.51	111.50	92.02
4	2.00	275.90	59.59
5	2.50	416.50	33.76
6	3.00	499.00	16.53
7	3.50	541.90	7.92
8	4.00	559.30	3.11
9	4.50	566.30	1.24
10	5.00	568.90	0.46
11	5.50	570.30	0.25
12	6.00	570.80	0.09
13	6.50	571.40	0.11
14	7.00	572.00	0.10
15	7.50	572.30	0.05
16	8.00	572.70	0.07
17	8.50	573.10	0.07
18	9.00	573.50	0.07
19	9.50	573.90	0.07
20	10.00	574.30	0.07
21	10.50	574.60	0.05
22	11.00	575.00	0.07

USER INPUT BLANK VALUE
BLANK VALUE = 7.151111 micrograms carbon
BLANK FACTOR = 7.151111 / 11.00171 = +6.5E-01 ug/min Carbon

SAMPLE RESULTS:
(575 - 7.149246)(1)/(1) = +5.679E+02 g/L Carbon
(575 - 7.149246)(1)/(1)(12) = +4.732E+01 Molar Carbon

Sample Run By: _____
JL STEELE 00000

567.9 / 600. = 94.65%

2127

TOC- TOTAL ORGANIC CARBON ANALYSIS REPORT
TICTOC REV 2.0

Sample: STD 16N12-D Date: 03/20/96 Time: 09:27:06

Sample Size = 1 uL .200mL
Dil Factor = 1
Blank ID # =
Blank Value = 2.19 ug/minute C

Analyst : JL STEELE
Min Readings = 22
Max Readings = 22
% Difference = 10

== Reading	==== Analysis Time	==== Coulometer	==== % Difference ==
1	0.51	0.30	0.00
2	1.01	15.90	98.11
3	1.50	55.60	71.40
4	2.00	76.60	27.42
5	2.50	93.30	17.90
6	3.00	130.90	28.72
7	3.50	260.30	49.71
8	4.00	437.50	40.50
9	4.50	534.20	18.10
10	5.00	570.30	6.33
11	5.50	583.70	2.30
12	6.00	588.00	0.73
13	6.50	589.90	0.32
14	7.00	590.90	0.17
15	7.50	591.50	0.10
16	8.00	592.20	0.12
17	8.50	592.80	0.10
18	9.00	593.10	0.05
19	9.50	593.70	0.10
20	10.00	594.10	0.07
21	10.50	594.40	0.05
22	11.00	594.90	0.08

USER INPUT BLANK VALUE
BLANK VALUE = 24.09374 micrograms carbon
BLANK FACTOR = 24.09374 / 11.00171 = +2.2E+00 ug/min Carbon

SAMPLE RESULTS:
(594.9 - 24.08572)(1)/(1) = +5.708E+02 g/L Carbon
(594.9 - 24.08572)(1)/(1)(12) = +4.757E+01 Molar Carbon
<<<< WARNING - BLANK VALUE EXCEEDS 1.5 ug/min Carbon!!!!!>>>>

Sample Run By: JL STEELE 00000

2128

$\frac{570.8}{.200} = \frac{2.854E3}{3.00E3} = 95.13\%$

TIC- TOTAL INORGANIC CARBON ANALYSIS REPORT
TICTOC REV 2.0

Sample: BLANK Date: 03/20/96 Time: 09:39:25

Sample Size = 1 uL
Dil Factor = 1
Blank ID # =
Blank Value = .65 ug/minute C

Analyst : JL STEELE
Min Readings = 22
Max Readings = 22
% Difference = 10

== Reading	==== Analysis Time	==== Coulometer	==== % Difference ==
1	0.51	0.20	0.00
2	1.01	2.20	90.91
3	1.51	4.00	45.00
4	2.00	4.80	16.67
5	2.50	5.50	12.73
6	3.00	5.80	5.17
7	3.50	6.20	6.45
8	4.00	6.70	7.46
9	4.50	6.90	2.90
10	5.00	7.30	5.48
11	5.50	7.80	6.41
12	6.00	8.00	2.50
13	6.50	8.30	3.61
14	7.00	8.70	4.60
15	7.50	9.00	3.33
16	8.00	9.20	2.17
17	8.50	9.60	4.17
18	9.00	9.90	3.03
19	9.50	10.20	2.94
20	10.00	10.50	2.86
21	10.50	10.90	3.67
22	11.00	11.10	1.80

USER INPUT BLANK VALUE
BLANK VALUE = 7.151111 micrograms carbon
BLANK FACTOR = 7.151111 / 11.00171 = +6.5E-01 ug/min Carbon

SAMPLE RESULTS:
(11.1 - 7.151111)(1)/(1) = +3.95E+00 g/L Carbon
(11.1 - 7.151111)(1)/(1)(12) = +3.29E-01 Molar Carbon

Sample Run By: _____
JL STEELE 00000

|11.10 - 7.10| = 4

TOC- TOTAL ORGANIC CARBON ANALYSIS REPORT
TICTOC REV 2.0

Sample: BLANK Date: 03/20/96 Time: 09:51:43

Sample Size = 1 uL
Dil Factor = 1
Blank ID # =
Blank Value = 2.19 ug/minute C

Analyst : JL STEELE
Min Readings = 22
Max Readings = 22
% Difference = 10

== Reading	==== Analysis Time	==== Coulometer	==== % Difference ==
1	0.51	0.10	0.00
2	1.00	2.50	96.00
3	1.50	5.10	50.98
4	2.00	6.70	23.88
5	2.50	8.20	18.29
6	3.00	11.50	28.70
7	3.50	15.90	27.67
8	4.00	19.40	18.04
9	4.50	21.00	7.62
10	5.00	22.20	5.41
11	5.50	22.70	2.20
12	6.00	23.30	2.58
13	6.50	23.80	2.10
14	7.00	24.30	2.06
15	7.50	24.60	1.22
16	8.00	25.20	2.38
17	8.50	25.40	0.79
18	9.00	25.70	1.17
19	9.50	26.10	1.53
20	10.00	26.50	1.51
21	10.50	26.90	1.49
22	11.00	27.20	1.10

USER INPUT BLANK VALUE
BLANK VALUE = 24.09374 micrograms carbon
BLANK FACTOR = 24.09374 / 11.00171 = +2.2E+00 ug/min Carbon

SAMPLE RESULTS:
(27.2 - 24.08572)(1)/(1) = +3.11E+00 g/L Carbon
(27.2 - 24.08572)(1)/(1)(12) = +2.60E-01 Molar Carbon
<<<< WARNING - BLANK VALUE EXCEEDS 1.5 ug/min Carbon!!!!!>>>>

Sample Run By: _____
JL STEELE 00000

127.20 - 24.10 / = 3.10

TIC- TOTAL INORGANIC CARBON ANALYSIS REPORT
TICTOC REV 2.0

Sample: S97T000806 Date: 03/20/96 Time: 10:56:45

Sample Size = 1 uL .250ml
Dil Factor = 1
Blank ID # =
Blank Value = .65 ug/minute C

Analyst : JL STEELE
Min Readings = 22
Max Readings = 22
% Difference = 10

== Reading	==== Analysis Time	==== Coulometer	==== % Difference ==
1	0.51	1.70	0.00
2	1.01	6.10	72.13
3	1.51	24.30	74.90
4	2.00	65.30	62.79
5	2.50	111.50	41.43
6	3.00	185.40	39.86
7	3.50	260.20	28.75
8	4.00	297.20	12.45
9	4.50	313.70	5.26
10	5.00	322.70	2.79
11	5.50	327.80	1.56
12	6.00	332.10	1.29
13	6.50	335.30	0.95
14	7.00	338.50	0.95
15	7.50	341.00	0.73
16	8.00	343.60	0.76
17	8.50	345.40	0.52
18	9.00	347.60	0.63
19	9.50	349.50	0.54
20	10.00	351.10	0.46
21	10.50	352.80	0.48
22	11.00	354.50	0.48

USER INPUT BLANK VALUE
BLANK VALUE = 7.151111 micrograms carbon
BLANK FACTOR = 7.151111 / 11.00171 = +6.5E-01 ug/min Carbon

SAMPLE RESULTS:
(354.5 - 7.149881)(1)/(1) = +3.474E+02 g/L Carbon
(354.5 - 7.149881)(1)/(1)(12) = +2.895E+01 Molar Carbon

Sample Run By: JL STEELE 00000

$\frac{347.4}{.250ml} = 1.3896^{E3} = 1.39^{E3}$

TOC- TOTAL ORGANIC CARBON ANALYSIS REPORT
TICTOC REV 2.0

Sample: S96T000806 Date: 03/20/96 Time: 11:09:19

Sample Size = 1 uL .250ml
Dil Factor = 1
Blank ID # =
Blank Value = 2.19 ug/minute C

Analyst : JL STEELE
Min Readings = 22
Max Readings = 22
% Difference = 10

== Reading	==== Analysis Time	==== Coulometer	==== % Difference ==
1	0.51	1.90	0.00
2	1.01	8.80	78.41
3	1.51	25.00	64.80
4	2.01	33.30	24.92
5	2.51	43.30	23.09
6	3.01	72.20	40.03
7	3.51	218.40	66.94
8	4.01	481.90	54.68
9	4.50	646.90	25.51
10	5.00	713.00	9.27
11	5.50	743.30	4.08
12	6.00	757.60	1.89
13	6.50	765.00	0.97
14	7.00	769.20	0.55
15	7.50	772.10	0.38
16	8.00	774.30	0.28
17	8.50	776.30	0.26
18	9.00	778.10	0.23
19	9.50	779.70	0.21
20	10.00	781.10	0.18
21	10.50	782.70	0.20
22	11.00	784.20	0.19

USER INPUT BLANK VALUE
BLANK VALUE = 24.09374 micrograms carbon
BLANK FACTOR = 24.09374 / 11.00171 = +2.2E+00 ug/min Carbon

SAMPLE RESULTS:
(784.2 - 24.08973)(1)/(1) = +7.601E+02 g/L Carbon
(784.2 - 24.08973)(1)/(1)(12) = +6.334E+01 Molar Carbon
<<<< WARNING - BLANK VALUE EXCEEDS 1.5 ug/min Carbon!!!!!>>>>

Sample Run By: JL STEELE 00000

$\frac{760.1}{.250ml} = 3.040^{E3}$

2132

TIC- TOTAL INORGANIC CARBON ANALYSIS REPORT
TICTOC REV 2.0

Sample: 806 DUP Date: 03/20/96 Time: 11:22:35

Sample Size = 1 uL , 250ml
Dil Factor = 1
Blank ID # =
Blank Value = .65 ug/minute C

Analyst : JL STEELE
Min Readings = 22
Max Readings = 22
% Difference = 10

== Reading	==== Analysis Time	==== Coulometer	==== % Difference ==
1	0.51	1.60	0.00
2	1.01	6.80	76.47
3	1.50	31.70	78.55
4	2.00	82.60	61.62
5	2.50	145.50	43.23
6	3.00	232.30	37.37
7	3.50	302.20	23.13
8	4.00	336.70	10.25
9	4.50	353.20	4.67
10	5.00	362.40	2.54
11	5.50	369.00	1.79
12	6.00	374.00	1.34
13	6.50	378.50	1.19
14	7.00	382.60	1.07
15	7.50	386.30	0.96
16	8.00	389.30	0.77
17	8.50	392.20	0.74
18	9.00	394.90	0.68
19	9.50	397.80	0.73
20	10.00	400.30	0.62
21	10.50	402.80	0.62
22	11.00	405.00	0.54

USER INPUT BLANK VALUE
BLANK VALUE = 7.151111 micrograms carbon
BLANK FACTOR = 7.151111 / 11.00171 = +6.5E-01 ug/min Carbon

SAMPLE RESULTS:
(405 - 7.148691)(1)/(1) = +3.979E+02 g/L Carbon
(405 - 7.148691)(1)/(1)(12) = +3.315E+01 Molar Carbon

Sample Run By: _____
JL STEELE 00000

$\frac{397.9}{.250ml} = 1.592^{E3}$

2133

TOC- TOTAL ORGANIC CARBON ANALYSIS REPORT
TICTOC REV 2.0

Sample: 806 DUP Date: 03/20/96 Time: 11:34:46

Sample Size = 1 uL .250ml
Dil Factor = 1
Blank ID # =
Blank Value = 2.19 ug/minute C

Analyst : JL STEELE
Min Readings = 22
Max Readings = 22
% Difference = 10

== Reading	Analysis Time	Coulometer	% Difference ==
1	0.51	3.00	0.00
2	1.01	9.90	69.70
3	1.51	31.70	68.77
4	2.00	44.70	29.08
5	2.50	59.50	24.87
6	3.00	96.20	38.15
7	3.50	251.80	61.80
8	4.00	528.70	52.37
9	4.50	715.40	26.10
10	5.00	794.90	10.00
11	5.50	830.00	4.23
12	6.00	846.40	1.94
13	6.50	856.20	1.14
14	7.00	861.70	0.64
15	7.50	866.10	0.51
16	8.00	869.10	0.35
17	8.50	871.40	0.26
18	9.00	873.60	0.25
19	9.50	875.70	0.24
20	10.00	877.70	0.23
21	10.50	879.20	0.17
22	11.00	881.30	0.24

USER INPUT BLANK VALUE
BLANK VALUE = 24.09374 micrograms carbon
BLANK FACTOR = 24.09374 / 11.00171 = +2.2E+00 ug/min Carbon

SAMPLE RESULTS:
(881.3 - 24.08973)(1)/(1) = +8.572E+02 g/L Carbon
(881.3 - 24.08973)(1)/(1)(12) = +7.143E+01 Molar Carbon
<<<< WARNING - BLANK VALUE EXCEEDS 1.5 ug/min Carbon!!!!!>>>>

Sample Run By: JL STEELE 00000

$\frac{857.2}{.250ml} = 3.429^{83}$

2134

TIC- TOTAL INORGANIC CARBON ANALYSIS REPORT
TICTOC REV 2.0

Sample: 806 SPIKE Date: 03/20/96 Time: 11:48:47

Sample Size = 1 uL .250ml
Dil Factor = 1 +.500ml 17N12-F
Blank ID # =
Blank Value = .65 ug/minute C

Analyst : JL STEELE
Min Readings = 22
Max Readings = 22
% Difference = 10

== Reading	==== Analysis Time	==== Coulometer	==== % Difference ==
1	0.51	1.50	0.00
2	1.01	15.50	90.32
3	1.51	157.50	90.16
4	2.00	355.30	55.67
5	2.50	479.00	25.82
6	3.00	541.30	11.51
7	3.50	577.00	6.19
8	4.00	596.40	3.25
9	4.50	608.00	1.91
10	5.00	617.00	1.46
11	5.50	624.20	1.15
12	6.00	630.70	1.03
13	6.50	636.20	0.86
14	7.00	641.40	0.81
15	7.50	645.60	0.65
16	8.00	649.70	0.63
17	8.50	653.20	0.54
18	9.00	656.30	0.47
19	9.50	659.90	0.55
20	10.00	662.30	0.36
21	10.50	665.00	0.41
22	11.00	667.70	0.40

USER INPUT BLANK VALUE
BLANK VALUE = 7.151111 micrograms carbon
BLANK FACTOR = 7.151111 / 11.00171 = +6.5E-01 ug/min Carbon

SAMPLE RESULTS:
(667.7 - 7.14873)(1)/(1) = +6.606E+02 g/L Carbon
(667.7 - 7.14873)(1)/(1)(12) = +5.505E+01 Molar Carbon

Sample Run By: JL STEELE 00000

$$\frac{667.70}{\left(\frac{354.50}{.250}\right)(.250)+300} = \frac{667.70}{654.50} = 102.02\%$$

TOC- TOTAL ORGANIC CARBON ANALYSIS REPORT
TICTOC REV 2.0

Sample: 806 SPIKE Date: 03/20/96 Time: 13:06:38

Sample Size = 1 uL .250ml
Dil Factor = 1 + .100ml 12N12-D
Blank ID # =
Blank Value = 2.19 ug/minute C

Analyst : JL STEELE
Min Readings = 22
Max Readings = 22
% Difference = 10

== Reading	==== Analysis Time	==== Coulometer	==== % Difference ==
1	0.51	3.40	0.00
2	1.01	7.50	54.67
3	1.50	24.70	69.64
4	2.00	37.00	33.24
5	2.50	50.00	26.00
6	3.00	76.50	34.64
7	3.50	190.20	59.78
8	4.00	475.10	59.97
9	4.50	761.00	37.57
10	5.00	907.00	16.10
11	5.50	964.70	5.98
12	6.00	992.30	2.78
13	6.50	1006.00	1.36
14	7.00	1012.80	0.67
15	7.50	1017.90	0.50
16	8.00	1021.30	0.33
17	8.50	1023.90	0.25
18	9.00	1026.80	0.28
19	9.50	1028.70	0.18
20	10.00	1030.80	0.20
21	10.50	1032.70	0.18
22	11.00	1034.20	0.15

USER INPUT BLANK VALUE
BLANK VALUE = 24.09374 micrograms carbon
BLANK FACTOR = 24.09374 / 11.00171 = +2.2E+00 ug/min Carbon

SAMPLE RESULTS:
(1034.2 - 24.08933)(1)/(1) = +1.0101E+03 g/L Carbon
(1034.2 - 24.08933)(1)/(1)(12) = +8.4176E+01 Molar Carbon
<<<< WARNING - BLANK VALUE EXCEEDS 1.5 ug/min Carbon!!!!!>>>>

Sample Run By: JL STEELE 00000

$\frac{1034.20}{\left(\frac{784.20}{.250}\right)(.250)+300}$ $\frac{1034.20}{1084.20} = 95.39$

2136

TIC- TOTAL INORGANIC CARBON ANALYSIS REPORT
TICTOC REV 2.0

Sample: S96T000821 Date: 03/20/96 Time: 13:21:31

Sample Size = 1 uL .250ml
Dil Factor = 1
Blank ID # =
Blank Value = .65 ug/minute C

Analyst : JL STEELE
Min Readings = 22
Max Readings = 22
% Difference = 10

== Reading	==== Analysis Time	==== Coulometer	==== % Difference ==
1	0.51	1.00	0.00
2	1.01	4.20	76.19
3	1.51	25.10	83.27
4	2.00	74.80	66.44
5	2.50	157.80	52.60
6	3.00	252.40	37.48
7	3.50	307.20	17.84
8	4.00	336.20	8.63
9	4.50	352.80	4.71
10	5.00	364.30	3.16
11	5.50	373.10	2.36
12	6.00	380.80	2.02
13	6.50	387.20	1.65
14	7.00	393.30	1.55
15	7.50	398.10	1.21
16	8.00	403.40	1.31
17	8.50	407.70	1.05
18	9.00	411.10	0.83
19	9.50	415.10	0.96
20	10.00	418.10	0.72
21	10.50	421.30	0.76
22	11.00	424.40	0.73

USER INPUT BLANK VALUE
BLANK VALUE = 7.151111 micrograms carbon
BLANK FACTOR = 7.151111 / 11.00171 = +6.5E-01 ug/min Carbon

SAMPLE RESULTS:
(424.4 - 7.150436)(1)/(1) = +4.172E+02 g/L Carbon
(424.4 - 7.150436)(1)/(1)(12) = +3.477E+01 Molar Carbon

Sample Run By: _____
JL STEELE 00000

$\frac{417.2}{.250ml} = 1.669E3$

TOC- TOTAL ORGANIC CARBON ANALYSIS REPORT
TICTOC REV 2.0

Sample: S96T000821 Date: 03/20/96 Time: 13:33:46

Sample Size = 1 uL .250ml
Dil Factor = 1
Blank ID. # =
Blank Value = 2.19 ug/minute C

Analyst : JL STEELE
Min Readings = 22
Max Readings = 22
% Difference = 10

== Reading	==== Analysis Time	==== Coulometer	==== % Difference ==
1	0.51	3.60	0.00
2	1.01	10.30	65.05
3	1.51	25.90	60.23
4	2.00	39.60	34.60
5	2.50	60.90	34.98
6	3.00	130.80	53.44
7	3.50	335.80	61.05
8	4.00	571.10	41.20
9	4.50	698.50	18.24
10	5.00	749.90	6.85
11	5.50	773.80	3.09
12	6.00	785.20	1.45
13	6.50	791.00	0.73
14	7.00	794.20	0.40
15	7.50	797.20	0.38
16	8.00	799.50	0.29
17	8.50	801.00	0.19
18	9.00	802.90	0.24
19	9.50	804.40	0.19
20	10.00	806.10	0.21
21	10.50	807.60	0.19
22	11.00	809.00	0.17

USER INPUT BLANK VALUE
BLANK VALUE = 24.09374 micrograms carbon
BLANK FACTOR = 24.09374 / 11.00171 = +2.2E+00 ug/min Carbon

SAMPLE RESULTS:
(809 - 24.08759)(1)/(1) = +7.849E+02 g/L Carbon
(809 - 24.08759)(1)/(1)(12) = +6.541E+01 Molar Carbon
<<<< WARNING - BLANK VALUE EXCEEDS 1.5 ug/min Carbon!!!!!>>>>

Sample Run By: _____
JL STEELE 00000

2138

$\frac{784.9}{.250ml} = 3.13983$

TIC- TOTAL INORGANIC CARBON ANALYSIS REPORT
TICTOC REV 2.0

Sample: 821 DUP Date: 03/20/96 Time: 13:46:53

Sample Size = 1 uL .250ml
Dil Factor = 1
Blank ID # =
Blank Value = .65 ug/minute C

Analyst : JL STEELE
Min Readings = 22
Max Readings = 22
% Difference = 10

== Reading	==== Analysis Time	==== Coulometer	==== % Difference ==
1	0.51	1.50	0.00
2	1.01	5.90	74.58
3	1.51	39.70	85.14
4	2.00	115.80	65.72
5	2.50	219.10	47.15
6	3.00	303.80	27.88
7	3.50	346.90	12.42
8	4.00	370.80	6.45
9	4.50	387.10	4.21
10	5.00	398.50	2.86
11	5.50	407.60	2.23
12	6.00	415.30	1.85
13	6.50	422.40	1.68
14	7.00	427.70	1.24
15	7.50	433.30	1.29
16	8.00	438.00	1.07
17	8.50	442.40	0.99
18	9.00	445.90	0.78
19	9.50	449.80	0.87
20	10.00	452.80	0.66
21	10.50	456.00	0.70
22	11.00	458.80	0.61

USER INPUT BLANK VALUE
BLANK VALUE = 7.151111 micrograms carbon
BLANK FACTOR = 7.151111 / 11.00171 = +6.5E-01 ug/min Carbon

SAMPLE RESULTS:
(458.8 - 7.14873)(1)/(1) = +4.517E+02 g/L Carbon
(458.8 - 7.14873)(1)/(1)(12) = +3.764E+01 Molar Carbon

Sample Run By: JL STEELE 00000

$\frac{451.7}{.250ml} = 1.807^{E3} = 1.81^{E3}$

TOC- TOTAL ORGANIC CARBON ANALYSIS REPORT
TICTOC REV 2.0

Sample: 821 DUP Date: 03/20/96 Time: 13:58:59

Sample Size = 1 uL .250ml
Dil Factor = 1
Blank ID # =
Blank Value = 2.19 ug/minute C

Analyst : JL STEELE
Min Readings = 22
Max Readings = 22
% Difference = 10

== Reading	==== Analysis Time	==== Coulometer	==== % Difference ==
1	0.51	4.50	0.00
2	1.01	10.20	55.88
3	1.51	24.20	57.85
4	2.00	33.60	27.98
5	2.50	44.20	23.98
6	3.00	64.90	31.90
7	3.50	145.60	55.43
8	4.00	372.70	60.93
9	4.50	606.40	38.54
10	5.00	733.20	17.29
11	5.50	784.20	6.50
12	6.00	807.50	2.89
13	6.50	818.80	1.38
14	7.00	824.10	0.64
15	7.50	827.60	0.42
16	8.00	830.70	0.37
17	8.50	832.70	0.24
18	9.00	834.60	0.23
19	9.50	836.80	0.26
20	10.00	838.40	0.19
21	10.50	840.00	0.19
22	11.00	841.50	0.18

USER INPUT BLANK VALUE
BLANK VALUE = 24.09374 micrograms carbon
BLANK FACTOR = 24.09374 / 11.00171 = +2.2E+00 ug/min Carbon

SAMPLE RESULTS:
(841.5 - 24.08746)(1)/(1) = +8.174E+02 g/L Carbon
(841.5 - 24.08746)(1)/(1)(12) = +6.812E+01 Molar Carbon
<<<< WARNING - BLANK VALUE EXCEEDS 1.5 ug/min Carbon!!!!!>>>>

Sample Run By: JL STEELE 00000

$\frac{817.4}{.250ml} = 3.269E3$

TIC- TOTAL INORGANIC CARBON ANALYSIS REPORT
TICTOC REV 2.0

Sample: S96T000830 Date: 03/20/96 Time: 14:12:06

Sample Size = 1 uL .250ml
Dil Factor = 1
Blank ID # =
Blank Value = .65 ug/minute C

Analyst : JL STEELE
Min Readings = 22
Max Readings = 22
% Difference = 10

== Reading	==== Analysis Time	==== Coulometer	==== % Difference ==
1	0.51	1.80	0.00
2	1.01	5.50	67.27
3	1.51	31.40	82.48
4	2.00	86.30	63.62
5	2.50	180.20	52.11
6	3.00	295.30	38.98
7	3.50	357.50	17.40
8	4.00	390.20	8.38
9	4.50	410.70	4.99
10	5.00	425.60	3.50
11	5.50	437.10	2.63
12	6.00	448.20	2.48
13	6.50	457.60	2.05
14	7.00	467.80	2.18
15	7.50	475.80	1.68
16	8.00	482.90	1.47
17	8.50	488.10	1.07
18	9.00	493.10	1.01
19	9.50	497.50	0.88
20	10.00	502.00	0.90
21	10.50	505.50	0.69
22	11.00	509.30	0.75

USER INPUT BLANK VALUE
BLANK VALUE = 7.151111 micrograms carbon
BLANK FACTOR = 7.151111 / 11.00171 = +6.5E-01 ug/min Carbon

SAMPLE RESULTS:
(509.3 - 7.150396)(1)/(1) = +5.021E+02 g/L Carbon
(509.3 - 7.150396)(1)/(1)(12) = +4.185E+01 Molar Carbon

Sample Run By: _____
JL STEELE 00000

$\frac{502.1}{.250ml} = 2.008^{E3}$

TOC- TOTAL ORGANIC CARBON ANALYSIS REPORT
TICTOC REV 2.0

Sample: S96T000830 Date: 03/20/96 Time: 14:24:58

Sample Size = 1 uL
Dil Factor = 1
Blank ID # =
Blank Value = 2.19 ug/minute C

Analyst : JL STEELE
Min Readings = 22
Max Readings = 22
% Difference = 10

== Reading	==== Analysis Time	==== Coulometer	==== % Difference ==
1	0.51	4.70	0.00
2	1.01	13.10	64.12
3	1.50	29.80	56.04
4	2.00	39.90	25.31
5	2.50	48.60	17.90
6	3.00	68.40	28.95
7	3.50	168.40	59.38
8	4.00	440.50	61.77
9	4.50	688.60	36.03
10	5.00	798.80	13.80
11	5.50	841.90	5.12
12	6.00	861.80	2.31
13	6.50	871.40	1.10
14	7.00	876.00	0.53
15	7.50	879.00	0.34
16	8.00	881.60	0.29
17	8.50	883.60	0.23
18	9.00	885.70	0.24
19	9.50	887.80	0.24
20	10.00	889.50	0.19
21	10.50	891.50	0.22
22	11.00	893.10	0.18

USER INPUT BLANK VALUE
BLANK VALUE = 24.09374 micrograms carbon
BLANK FACTOR = 24.09374 / 11.00171 = +2.2E+00 ug/min Carbon

SAMPLE RESULTS:
(893.1 - 24.0916)(1)/(1) = +8.690E+02 g/L Carbon
(893.1 - 24.0916)(1)/(1)(12) = +7.242E+01 Molar Carbon
<<<< WARNING - BLANK VALUE EXCEEDS 1.5 ug/min Carbon!!!!!>>>>

Sample Run By: _____
JL STEELE 00000

$\frac{869.0}{.250ml} = 3.476E3$

2142

TIC- TOTAL INORGANIC CARBON ANALYSIS REPORT
TICTOC REV 2.0

Sample: 830 DUP Date: 03/20/96 Time: 14:37:50

Sample Size = 1 uL
Dil Factor = 1
Blank ID # =
Blank Value = .65 ug/minute C

Analyst : JL STEELE
Min Readings = 22
Max Readings = 22
% Difference = 10

== Reading	==== Analysis Time	==== Coulometer	==== % Difference ==
1	0.51	2.00	0.00
2	1.01	6.90	71.01
3	1.50	41.10	83.21
4	2.00	111.70	63.21
5	2.50	210.70	46.99
6	3.00	310.30	32.10
7	3.50	362.60	14.42
8	4.00	393.60	7.88
9	4.50	413.70	4.86
10	5.00	429.00	3.57
11	5.50	441.90	2.92
12	6.00	451.60	2.15
13	6.50	462.20	2.29
14	7.00	471.70	2.01
15	7.50	479.40	1.61
16	8.00	486.00	1.36
17	8.50	492.30	1.28
18	9.00	498.30	1.20
19	9.50	503.20	0.97
20	10.00	508.30	1.00
21	10.50	512.50	0.82
22	11.00	517.20	0.91

USER INPUT BLANK VALUE
BLANK VALUE = 7.151111 micrograms carbon
BLANK FACTOR = 7.151111 / 11.00171 = +6.5E-01 ug/min Carbon

SAMPLE RESULTS:
(517.2 - 7.149881)(1)/(1) = +5.101E+02 g/L Carbon
(517.2 - 7.149881)(1)/(1)(12) = +4.250E+01 Molar Carbon

Sample Run By: _____
JL STEELE 00000

$\frac{510.1}{.250ml} = 2.040E3$

TOC- TOTAL ORGANIC CARBON ANALYSIS REPORT
TICTOC REV 2.0

Sample: 830 DUP Date: 03/20/96 Time: 14:50:00

Sample Size = 1 uL
Dil Factor = 1
Blank ID # =
Blank Value = 2.19 ug/minute C

Analyst : JL STEELE
Min Readings = 22
Max Readings = 22
% Difference = 10

== Reading	==== Analysis Time	==== Coulometer	==== % Difference ==
1	0.51	5.90	0.00
2	1.01	12.70	53.54
3	1.51	28.90	56.06
4	2.00	43.20	33.10
5	2.50	57.80	25.26
6	3.00	90.30	35.99
7	3.50	224.40	59.76
8	4.00	489.90	54.19
9	4.50	701.40	30.15
10	5.00	798.50	12.16
11	5.50	838.10	4.72
12	6.00	856.80	2.18
13	6.50	865.90	1.05
14	7.00	870.80	0.56
15	7.50	874.20	0.39
16	8.00	876.80	0.30
17	8.50	879.30	0.28
18	9.00	881.60	0.26
19	9.50	883.30	0.19
20	10.00	885.10	0.20
21	10.50	887.20	0.24
22	11.00	889.10	0.21

USER INPUT BLANK VALUE
BLANK VALUE = 24.09374 micrograms carbon
BLANK FACTOR = 24.09374 / 11.00171 = +2.2E+00 ug/min Carbon

SAMPLE RESULTS:
(889.1 - 24.09321)(1)/(1) = +8.650E+02 g/L Carbon
(889.1 - 24.09321)(1)/(1)(12) = +7.208E+01 Molar Carbon
<<<< WARNING - BLANK VALUE EXCEEDS 1.5 ug/min Carbon!!!!!>>>>

Sample Run By: _____
JL STEELE 00000

$\frac{865.0}{.250ml} = 3.460^{E3}$

2144

TIC- TOTAL INORGANIC CARBON ANALYSIS REPORT
TICTOC REV 2.0

Sample: S96T000845 Date: 03/20/96 Time: 15:03:36

Sample Size = 1 uL
Dil Factor = 1
Blank ID # =
Blank Value = .65 ug/minute C

Analyst : JL STEELE
Min Readings = 22
Max Readings = 22
% Difference = 10

== Reading	==== Analysis Time	==== Coulometer	==== % Difference ==
1	0.51	1.70	0.00
2	1.01	7.00	75.71
3	1.51	49.90	85.97
4	2.00	146.60	65.96
5	2.50	249.70	41.29
6	3.00	330.20	24.38
7	3.50	373.80	11.66
8	4.00	399.70	6.48
9	4.50	417.70	4.31
10	5.00	432.20	3.35
11	5.50	444.40	2.75
12	6.00	453.70	2.05
13	6.50	461.60	1.71
14	7.00	468.20	1.41
15	7.50	474.00	1.22
16	8.00	479.90	1.23
17	8.50	484.20	0.89
18	9.00	489.10	1.00
19	9.50	492.80	0.75
20	10.00	496.60	0.77
21	10.50	500.80	0.84
22	11.00	504.10	0.65

USER INPUT BLANK VALUE
BLANK VALUE = 7.151111 micrograms carbon
BLANK FACTOR = 7.151111 / 11.00171 = +6.5E-01 ug/min Carbon

SAMPLE RESULTS:
(504.1 - 7.150476)(1)/(1) = +4.969E+02 g/L Carbon
(504.1 - 7.150476)(1)/(1)(12) = +4.141E+01 Molar Carbon

Sample Run By: _____
JL STEELE 00000

$\frac{496.9}{.250ml} = 1.98863$

TOC- TOTAL ORGANIC CARBON ANALYSIS REPORT
TICTOC REV 2.0

Sample: S96T000845 Date: 03/20/96 Time: 15:16:17

Sample Size = 1 uL
Dil Factor = 1
Blank ID # =
Blank Value = 2.19 ug/minute C

Analyst : JL STEELE
Min Readings = 22
Max Readings = 22
% Difference = 10

== Reading	==== Analysis Time	==== Coulometer	==== % Difference ==
1	0.51	5.90	0.00
2	1.01	15.00	60.67
3	1.51	33.30	54.95
4	2.01	50.40	33.93
5	2.51	74.00	31.89
6	3.01	163.00	54.60
7	3.51	425.30	61.67
8	4.00	679.80	37.44
9	4.50	786.70	13.59
10	5.00	825.70	4.72
11	5.50	844.20	2.19
12	6.00	852.90	1.02
13	6.50	856.90	0.47
14	7.00	860.40	0.41
15	7.50	862.30	0.22
16	8.00	864.60	0.27
17	8.50	866.70	0.24
18	9.00	868.70	0.23
19	9.50	870.80	0.24
20	10.00	872.60	0.21
21	10.50	874.00	0.16
22	11.00	875.90	0.22

USER INPUT BLANK VALUE
BLANK VALUE = 24.09374 micrograms carbon
BLANK FACTOR = 24.09374 / 11.00171 = +2.2E+00 ug/min Carbon

SAMPLE RESULTS:
(875.9 - 24.09147)(1)/(1) = +8.518E+02 g/L Carbon
(875.9 - 24.09147)(1)/(1)(12) = +7.098E+01 Molar Carbon
<<<< WARNING - BLANK VALUE EXCEEDS 1.5 ug/min Carbon!!!!!>>>>

Sample Run By: _____
JL STEELE 00000

$\frac{851.8}{.250 ml} = 3.407^{E3}$

2146

TIC- TOTAL INORGANIC CARBON ANALYSIS REPORT
TICTOC REV 2.0

Sample: 845 DUP Date: 03/20/96 Time: 15:29:23

Sample Size = 1 uL
Dil Factor = 1
Blank ID # =
Blank Value = .65 ug/minute C

Analyst : JL STEELE
Min Readings = 22
Max Readings = 22
% Difference = 10

== Reading	==== Analysis Time	==== Coulometer	==== % Difference ==
1	0.51	2.00	0.00
2	1.01	6.40	68.75
3	1.51	29.40	78.23
4	2.00	88.40	66.74
5	2.50	197.50	55.24
6	3.00	301.90	34.58
7	3.50	354.10	14.74
8	4.00	384.00	7.79
9	4.50	404.70	5.11
10	5.00	420.40	3.73
11	5.50	433.60	3.04
12	6.00	444.90	2.54
13	6.50	454.00	2.00
14	7.00	461.80	1.69
15	7.50	468.40	1.41
16	8.00	474.60	1.31
17	8.50	479.00	0.92
18	9.00	484.20	1.07
19	9.50	488.10	0.80
20	10.00	492.60	0.91
21	10.50	496.10	0.71
22	11.00	499.30	0.64

USER INPUT BLANK VALUE
BLANK VALUE = 7.151111 micrograms carbon
BLANK FACTOR = 7.151111 / 11.00171 = +6.5E-01 ug/min Carbon

SAMPLE RESULTS:
(499.3 - 7.14992)(1)/(1) = +4.922E+02 g/L Carbon
(499.3 - 7.14992)(1)/(1)(12) = +4.101E+01 Molar Carbon

Sample Run By: _____
JL STEELE 00000

$\frac{492.2}{.25ml} = 1.96983$

TOC- TOTAL ORGANIC CARBON ANALYSIS REPORT
TICTOC REV 2.0

Sample: 845 DUP Date: 03/20/96 Time: 15:41:45

Sample Size = 1 uL
Dil Factor = 1
Blank ID # =
Blank Value = 2.19 ug/minute C

Analyst : JL STEELE
Min Readings = 22
Max Readings = 22
% Difference = 10

== Reading	==== Analysis Time	==== Coulometer	==== % Difference ==
1	0.51	5.40	0.00
2	1.01	12.60	57.14
3	1.50	33.70	62.61
4	2.00	55.60	39.39
5	2.50	99.00	43.84
6	3.00	283.50	65.08
7	3.50	566.50	49.96
8	4.00	723.80	21.73
9	4.50	781.80	7.42
10	5.00	808.50	3.30
11	5.50	821.50	1.58
12	6.00	828.50	0.84
13	6.50	832.40	0.47
14	7.00	835.30	0.35
15	7.50	837.90	0.31
16	8.00	840.00	0.25
17	8.50	842.00	0.24
18	9.00	844.20	0.26
19	9.50	846.10	0.22
20	10.00	848.00	0.22
21	10.50	849.70	0.20
22	11.00	851.70	0.23

USER INPUT BLANK VALUE
BLANK VALUE = 24.09374 micrograms carbon
BLANK FACTOR = 24.09374 / 11.00171 = +2.2E+00 ug/min Carbon

SAMPLE RESULTS:
(851.7 - 24.08733)(1)/(1) = +8.276E+02 g/L Carbon
(851.7 - 24.08733)(1)/(1)(12) = +6.897E+01 Molar Carbon
<<<< WARNING - BLANK VALUE EXCEEDS 1.5 ug/min Carbon!!!!!>>>>

Sample Run By: _____
JL STEELE 00000

$\frac{827.6}{.250} = 3.31^{E3}$

2148

WHC-SD-WM-DP-192, REV. 0

RADIOCHEMICAL ANALYSIS

2148.1

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worklistrad Version 1.0 05/09/96
08/13/96 11:05

LABCORE Completed RadChem Report for Worklist#: 11633

Analyst: dgg **Instrument:** LSC01 **Book#** _____

Method: _____ Rev/Mod _____

Worklist Comment: Use .1-10-1 mL. Rerun #1. SLF

Seq	Type	Sample#	R	A	Test	Matrix	Actual	Found	DL or Yield	Unit
1	STD		0	@H3-01	H3-01	LIQUID	6.10E-04	4.97E-4	81.475	% Recovery
1	STD		0	@H3-01	H3-01E	LIQUID	1	1.30E+00	1.300	% Ct. Erro
2	BLNK		0	@H3-01	H3-01	LIQUID	1	<4.03E-4		uCi/mL
2	BLNK		0	@H3-01	H3-01E	LIQUID	1	5.84E+00	5.840	uCi/mL
3	SAMPLE	S96T002767	0	@H3-01	H3-01	LIQUID	N/A	4.68E-03	403.0e-006	uCi/mL
3	SAMPLE	S96T002767	0	@H3-01	H3-01E	LIQUID	N/A	3.39E+00	100.0e-006	% Ct. Error
4	DUP	S96T002767	0	@H3-01	H3-01	LIQUID	4.68E-3	6.18E-3	27.624	RPD
4	DUP	S96T002767	0	@H3-01	H3-01E	LIQUID	1	3.11E+00	3.110	% Ct. Erro

Final page for worklist# 11633

Analyst Signature **Date** **Analyst Signature** **Date**

Reviewer Signature 14 Aug 96 **Date**

Rejected high RPD SR

Units shown for QC (BLK/BKG) may not reflect the actual units.

08/08/96 16:21
A-0004-1

LABCORE Data Entry Template for Worklist# 11633

Analyst: JBB **Instrument:** LSC00 5801 **Book#** 55 B56

Method: LA-218-114 Rev/Mod A 4

Worklist Comment: Use .1-10-1 mL. Rerun #1. SLF

S	Type	Sample#	R	A	Test	Matrix	Group#	Project
1	STD				@H3-01	LIQUID		
2	BLNK				@H3-01	LIQUID		
3	SAMPLE	S96T002767	0		@H3-01	LIQUID	96000103	AW-101 PUSH
		Analytes Requested:			H3-01	, H3-01E		
4	DUP	S96T002767	0		@H3-01	LIQUID		

Final page for worklist # 11633

J B Griffin 8-10-96
Analyst Signature **Date**

[illegible] 8-12-96
Analyst Signature **Date**

[illegible] 7/13/96

for Sample, + Dup: .100 to 10 dilution, added 2 ml to distillation tube, + 1ml S.S after distillation.

Data Entry Comments:

S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

```
USER: 1 ID:H-3. TRITIUM PRESET TIME: 50.00              SAT 10 AUG 1996 17:38
SAMPLE REPEAT: 1 CYCLE REPEAT: 1 SCR:N   RS232:N
H#: 1 AQC:Y QCF:N RCM:Y 2 PHASE MONITOR:N
RCM-TIME:  0.10 INT:999.95
CHANNEL 1-LL:  0 UL: 400 2SIGMA: 0.10 BKG SUB:   0.00 BKG 2SIG:  0.00 LSR:   0

SINGLE LABEL DPM  SET UP ON   3 NOV 1994  13:57

UNKNOWN ID:H-3. LS 5801            UNKNOWN REPLICATES: 1
UNKNOWN NORM FACTOR  ISO1:Q 1.00000
UNKNOWN UNITS          ISO1:DPM
UNKNOWN HALF LIFE CORRECTION:N
INDIVIDUAL UNKNOWN NORM FACTORS:N    BACKGROUND QUENCH CURVES:Y
STANDARD ID:#001135. LS5801        QUENCH LIMITS   LOW:0.000    HIGH:304.0
HALF LIFE(DAYS)  ISO1:  4503.410
STANDARD DPM     ISO1:  531082.0


SAM  POS  CH     CPM    2SIG%  TIME   EL TIME AVG H#       RCM%            ERR

B1  **- 1  1      28.34  5.31  50.00    51.70  97.0         1.37


BACKGROUND QUENCH CURVES: CONSTANT


CHANNEL 1
QUENCH CURVE COEFFICIENTS
A:  28.34000      B:0.00000000      C:0.00000000      D:0.00000000000

                BACKGROUND QUENCH CURVE CORRELATION TABLE

                              MEASURED      CALCULATED      PERCENT
  BKG          H#             CPM.           CPM.          DIFF.       FLAG
  ---          ---           ---------      ----------     --------     ----
   1          97.0            28.34          28.34          0.00


BACKGROUND QUENCH LIMITS   LOW:0.000    HIGH:1000.
     TOTAL QUENCH LIMITS   LOW:0.000    HIGH:304.0


SAM  POS  CH     CPM    2SIG%  TIME   EL TIME AVG H#       RCM%            ERR

  1 **- 3  1     472.28  1.30  50.00   103.73  96.0         0.90
     ISO1 %EFF CH1:40.22                              ISO1 DPM  :1103.724

  2 **- 4  1      23.48  5.84  50.00   155.55  96.0         4.79
     ISO1 %EFF CH1:40.22                              ISO1 DPM  :0.000000

  3 **- 5  1      69.74  3.39  50.00   207.37  96.0         1.19
     ISO1 %EFF CH1:40.22                              ISO1 DPM  :102.9298

  4 **- 6  1      82.96  3.11  50.00   259.21  96.0         0.79
     ISO1 %EFF CH1:40.22                              ISO1 DPM  :135.7984
```

WORKBOOK PAGE: STD1

H3 : LA-218-114 (A-4), LA-218-115(A-0) TRITIUM LIQUIDS

			STANDARD
STD	Disintegrations per minute from Counter	(dpm)	1103.724
	Sample Volume in mL	(SS)	1
11633	Dilution Factor	(DF)	1
	Digest Dilution Factor	(DDF)	1
@H3-01	Background Count Rate in Counts per Minute	(BKG cpm)	28.34
	Background Count Time in Minutes	(BKG Time)	50
LIQUID	Instrument Fractional Efficiency	(EFF)	0.4022
	% Counting Error		1.3
96007990	Detection Limit	(Ld)	8.86
	Critical Level	(Lc)	1.75
0	Tritium Concentration in µCi/L		4.97E-01
	Standard Book No.		55B56
N/A	Standard Value in µCi/mL		6.0962E-04

WL11633

WB27818

SLH2

SLF

DGG

08/12/96

08/10/96

12:00 PM

AW-101 PUSH

Critical Level (Lc) = 2.33 * the Square Root of (BKG cpm / BKG Time)

Detection Limit (Ld) = ((2.72 / BKG Time) + (2 * Lc)) / EFF

H3 µCi/L = (dpm * (1000mL/L) * DF * DDF) / (SS * (2220000dpm/µCi))

H3 µCi/mL = µCi/L/1000mL/L

Detection Limit (µCi/mL) = (Ld)(DF)(DDF) / [(SS) (2220000 dpm/µCi)]

Tritium Concentration in µCi/L	4.97E-01

Tritium Concentration in µCi/mL	4.97E-04
Detection Limit in µCi/mL	3.99E-06
% Counting Error	1.3

Analyst:	DGG	Date:	08/12/96
Signature of Chemist:	SLF	Date:	

STANDARD.WB1 REV 2.0 21811NML

LABCORE Completed RadChem Report for Worklist#: 11985

Analyst: sac **Instrument:** LSC02 **Book#** _____

Method: _____ Rev/Mod _____

Worklist Comment: RR#2 Use .1mL-10mL-1mL. sac

Seq	Type	Sample#	R	A	Test	Matrix	Actual	Found	DL or Yield	Unit
1	STD		0	@H3-01	H3-01	LIQUID	6.09E-04	6.06E-4	99.507	% Recovery
1	STD		0	@H3-01	H3-01E	LIQUID	1	1.15E+00	1.150	% Ct. Erro
2	BLNK		0	@H3-01	H3-01	LIQUID	1	<2.85E-4		uCi/mL
2	BLNK		0	@H3-01	H3-01E	LIQUID	1	7.04E+00	7.040	uCi/mL
3	SAMPLE	S96T002767	0	@H3-01	H3-01	LIQUID	N/A	4.81E-03	285.0e-006	uCi/mL
3	SAMPLE	S96T002767	0	@H3-01	H3-01E	LIQUID	N/A	3.53E+00	100.0e-006	% Ct. Error
4	DUP	S96T002767	0	@H3-01	H3-01	LIQUID	4.81E-3	4.82E-3	0.208	RPD
4	DUP	S96T002767	0	@H3-01	H3-01E	LIQUID	1	3.53E+00	3.530	% Ct. Erro

Final page for worklist# 11985

Analyst Signature **Date** **Analyst Signature** **Date**

Reviewer Signature 8/20/96 **Date**

Units shown for QC (BLK/BKG) may not reflect the actual units.

LABCORE Data Entry Template for Worklist# 11985

Analyst: SAC **Instrument:** LSC00 6000 **Book#** 55856

Method: LA-218-114 Rev/Mod A-4

Worklist Comment: RR#2 Use .1mL-10mL-1mL. sac

S	Type	Sample#	R	A	Test	Matrix	Group#	Project
1	STD				@H3-01	LIQUID		
2	BLNK				@H3-01	LIQUID		
3	SAMPLE	S96T002767	0		@H3-01	LIQUID	96000103	AW-101 PUSH
		Analytes Requested:			H3-01	, H3-01E		
4	DUP	S96T002767	0		@H3-01	LIQUID		

Final page for worklist # 11985

Analyst Signature 16 Aug 96 Date

Analyst Signature 8-19-96 Date

Sue Horgan 8-19-96

Data Entry Comments: regarding Sample vial empty, used dilution from last run. sre

S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

WORKBOOK PAGE: STD1

H3 : LA-218-114 (A-4), LA-218-115(A-0) TRITIUM LIQUIDS

			STANDARD
Vial	Disintegrations per minute from Counter	(dpm)	1344.74
STD	Sample Volume in mL	(SS)	1
Work List	Dilution Factor	(DF)	1
11985	Digest Dilution Factor	(DDF)	1
Test Code	Background Count Rate in Counts per Minute	(BKG cpm)	17.4
@H3-01	Background Count Time in Minutes	(BKG Time)	50
Matrix	Instrument Fractional Efficiency	(EFF)	0.4401
LIQUID	% Counting Error		1.15
Batch Number	Detection Limit	(Ld)	6.37
96008355	Critical Level	(Lc)	1.37
Factor	Tritium Concentration in µCi/L		6.06E-01
0	Standard Book No.		55B56
Sample Prep	Standard Value in µCi/mL		6.0906E-04
N/A			

Sample #	Critical Level (Lc) = 2.33 * the Square Root of (BKG cpm / BKG Time)
WL11985	Detection Limit (Ld) = ((2.72 / BKG Time) + (2 * Lc)) / EFF
Instrument Code	H3 µCi/L = (dpm * (1000mL/L) * DF * DDF) / (SS * (2220000dpm/µCi))
WC16085	H3 µCi/mL = µCi/L/1000mL/L
Prepared by	Detection Limit (µCi/mL) = (Ld)(DF)(DDF) / [(SS) (2220000 dpm/µCi)]
SLH2	
Chemist	
SLF	
Analyst	
SAC	
Date Complete	
08/19/96	
Analysis Date	
08/16/96	
Analysis Time	
03:20 PM	
Sample Point	
AW-101 PUSH	

Tritium Concentration in µCi/L	6.06E-01		
Tritium Concentration in µCi/mL	6.06E-04		
Detection Limit in µCi/mL	2.87E-06		
% Counting Error	1.15		

Analyst:	SAC	Date:	08/19/96
Signature of Chemist:	SLF	Date:	8/20/96

STANDARD.WB1 REV 2.0 21811NML

2158

I:\21811N\OUT\11985.WB1 08/19/96 08:56:14

WORKBOOK PAGE: BLANK2

H3 : LA-218-114 (A-4), LA-218-115(A-0) TRITIUM LIQUIDS/ SOLIDS

			BLANK
Type	Disintegrations per minute from Counter	(dpm)	-1.36
BLNK	Sample Volume in mL	(SS)	1
Work List	Dilution Factor	(DF)	101
11985	Digest Dilution Factor	(DDF)	1
Test Code	Background Count Rate in Counts per Minute	(BKG cpm)	17.4
@H3-01	Background Count Time in Minutes	(BKG Time)	50
Matrix	Instrument Fractional Efficiency	(EFF)	0.4471
LIQUID	% Counting Error		7.04
Batch Number	Detection Limit	(Ld)	6.27
96008355	Critical Level	(Lc)	1.37
Rerun	Tritium Concentration in µCi/L	<	2.85E-01
0			

Sample Prep	Critical Level (Lc) = 2.33 * the Square Root of (BKG cpm / BKG Time)
N/A	Detection Limit (Ld) = ((2.72 / BKG Time) + (2 * Lc)) / EFF
Sample #	H3 µCi/L = (dpm * (1000mL/L) * DF * DDF) / (SS * (2220000dpm/µCi))
WL11985	H3 µCi/mL = µCi/L/1000mL/L
Instrument Code	Detection Limit (µCi/mL) = (Ld)(DF)(DDF) / [(SS)(2220000 dpm/µCi)]
WC16085	
Prepared By	NOTE: Reported result is a LESS THAN value calculated
SLH2	from the statistical Detection Limit (Ld).
Chemist	
SLF	
Analyst	
SAC	
Date Complete	
08/19/96	
Analysis Date	
08/16/96	
Analysis Time	
03:20 PM	
Sample Point	
AW-101 PUSH	

Tritium Concentration in µCi/L	<	2.85E-01	
Tritium Concentration in µCi/mL	<	2.85E-04	
Detection Limit in µCi/mL		2.85E-04	
% Counting Error		7.04	

Analyst:	SAC	Date:	08/19/96
Signature of Chemist:	SLF	Date:	8/20/96

BLANK.WB1 REV 2.0 21811NML

WORKBOOK PAGE: SAM3

H3 : LA-218-114 (A-4), LA-218-115(A-0) TRITIUM LIQUIDS/ SOLIDS

			SAMPLE
Type	Disintegrations per minute from Counter	(dpm)	105.81
SAMPLE	Sample Volume in mL	(SS)	1
Work List	Dilution Factor	(DF)	101
11985	Digest Dilution Factor	(DDF)	1
Sample Code	Background Count Rate in Counts per Minute	(BKG cpm)	17.4
@H3-01	Background Count Time in Minutes	(BKG Time)	50
Matrix	Instrument Fractional Efficiency	(EFF)	0.4471
LIQUID	% Counting Error		3.53
Batch Number	Detection Limit	(Ld)	6.27
96008355	Critical Level	(Lc)	1.37
Rerun	Tritium Concentration in µCi/L		4.81E+00
0			
Sample Prep	Critical Level (Lc) = 2.33 * the Square Root of (BKG cpm / BKG Time)		
N/A	Detection Limit (Ld) = ((2.72 / BKG Time) + (2 * Lc)) / EFF		
Sample #	H3 µCi/L = (dpm * (1000mL/L) * DF * DDF) / (SS * (2220000dpm/µCi))		
S96T002767	H3 µCi/mL = µCi/L/1000mL/L		
Instrument Code	Detection Limit (µCi/mL) = (Ld)(DF)(DDF) / [(SS)(2220000 dpm/µCi)]		
WC16085			
Prepared By			
SLH2			
Chemist			
SLF			
Reviewer	Tritium Concentration in µCi/L		4.81E+00
SAC			
Rev. Complete	Tritium Concentration in µCi/mL		4.81E-03
08/19/96	Detection Limit in µCi/mL		2.85E-04
Analysis Date	% Counting Error		3.53
08/16/96			
Analysis Time			
03:20 PM			
Sample Point			
AW-101 PUSH			

Analyst:		SAC	Date:	08/19/96
Signature of Chemist:		SLF	Date:	8/20/96

SAMPLE.WB1 REV 2.0 21811NML

2160

WORKBOOK PAGE: DUP4

H3 : LA-218-114 (A-4), LA-218-115(A-0) TRITIUM LIQUIDS/ SOLIDS

			DUPLICATE
Type	Disintegrations per minute from Counter	(dpm)	105.92
DUP	Sample Volume in mL	(SS)	1
Work List	Dilution Factor	(DF)	101
11985	Digest Dilution Factor	(DDF)	1
Test Code	Background Count Rate in Counts per Minute	(BKG cpm)	17.4
@H3-01	Background Count Time in Minutes	(BKG Time)	50
Matrix	Instrument Fractional Efficiency	(EFF)	0.4487
LIQUID	% Counting Error		3.53
Batch Number	Detection Limit	(Ld)	6.25
96008355	Critical Level	(Lc)	1.37
Rerun	Tritium Concentration in µCi/L		4.82E+00
0			
Sample Prep	Critical Level (Lc) = 2.33 * the Square Root of (BKG cpm / BKG Time)		
N/A	Detection Limit (Ld) = ((2.72 / BKG Time) + (2 * Lc)) / EFF		
Sample #	H3 µCi/L = (dpm * (1000mL/L) * DF * DDF) / (SS * (2220000dpm/µCi))		
S96T002767	H3 µCi/mL = µCi/L/1000mL/L		
Instrument Code	Detection Limit (µCi/mL) = (Ld)(DF)(DDF) / [(SS)(2220000 dpm/µCi)]		
WC16085			
Prepared By			
SLH2			
Chemist			
SLF			
Analyst	Tritium Concentration in µCi/L		4.82E+00
SAC			
Date Complete	Tritium Concentration in µCi/mL		4.82E-03
08/19/96	Detection Limit in µCi/mL		2.84E-04
Analysis Date	% Counting Error		3.53
08/16/96			
Analysis Time			
03:20 PM			
Sample Point			
AW-101 PUSH			

Analyst:		SAC	Date:	08/19/96
Signature of Chemist:		SLF	Date:	8/20/96

SAMPLE.WB1 REV 2.0 21811NML

2161

LABCORE Data Entry Template for Worklist# 7054

Analyst: AKL **Instrument:** AB00 14 **Book#** 47856

Method: LA-508-101 Rev/Mod D-2

Worklist Comment: Determine sample size using ludlum.For spike use: 0.1ml. new

S	Type	Sample#	R	A	Test	Matrix	Group#	Project
1	STD				@ALPHA01	SOLID		
2	BLNK-PREP				@ALPHA01	SOLID		
3	BLNK/BKG				@ALPHA01	SOLID		
4	SAMPLE	S96T000795	0	F	@ALPHA01	SOLID	96000103	AW-101 PUSH
	Analytes Requested:	ALPHA01 , ALPHA01E						
5	DUP	S96T000795	0	F	@ALPHA01	SOLID		
6	SPK	S96T000795	0	F	@ALPHA01	SOLID		
7	SAMPLE	S96T000810	0	F	@ALPHA01	SOLID	96000103	AW-101 PUSH
	Analytes Requested:	ALPHA01 , ALPHA01E						
8	DUP	S96T000810	0	F	@ALPHA01	SOLID		

Final page for worklist # 7054

G Lewis 4/3/96
Analyst Signature **Date**

4/8/96
Analyst Signature **Date**
Sharon L Miller 4-8-96

Data Entry Comments: The Elevated RPD for 8/10 is due to low sample alpha activity. No rerun requested. 4/9/96

S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

LABCORE Completed Worklist Report for Worklist# 7054

Analyst: akl **Instrument:** AB14 **Book#** _____

Method: _____ Rev/Mod _____

Worklist Comment: Determine sample size using ludlum.For spike use: 0.1ml. new

Seq	Type	Sample#	R	A	Test		Matrix	Actual	Found	DL or Yield	Unit
1	STD		0		@ALPHA01	ALPHA01	SOLID	1.28E-04	1.42E-4	110.940	% Recovery
1	STD		0		@ALPHA01	ALPHA01E	SOLID	1.00	4.25E+00	4.250	% Ct. Error
2	BLNK-PREP		0		@ALPHA01	ALPHA01	SOLID	1	<1.76E-2		uCi/g
2	BLNK-PREP		0		@ALPHA01	ALPHA01E	SOLID	1.00	5.00E+02	500.000	% Ct. Error
3	BLNK/BKG		0		@ALPHA01	ALPHA01	SOLID	1.00E+00	8.89E-01	0.890	uCi/g
4	SAMPLE	S96T000795	0	F	@ALPHA01	ALPHA01	SOLID	N/A	7.59E-02	2.790e-002	uCi/g
4	SAMPLE	S96T000795	0	F	@ALPHA01	ALPHA01E	SOLID	N/A	3.46E+01	0.000	% Ct. Error
5	DUP	S96T000795	0	F	@ALPHA01	ALPHA01	SOLID	7.59E-2	7.96E-2	4.760	RPD
5	DUP	S96T000795	0	F	@ALPHA01	ALPHA01E	SOLID	1.00	3.41E+01	34.100	% Ct. Error
6	SPK	S96T000795	0	F	@ALPHA01	ALPHA01	SOLID	3.59E-02	3.29E-02	91.640	% Recovery
7	SAMPLE	S96T000810	0	F	@ALPHA01	ALPHA01	SOLID	N/A	6.53E-02	2.730e-002	uCi/g
7	SAMPLE	S96T000810	0	F	@ALPHA01	ALPHA01E	SOLID	N/A	3.86E+01	0.000	% Ct. Error
8	DUP	S96T000810	0	F	@ALPHA01	ALPHA01	SOLID	6.53E-2	4.57E-2	35.320	RPD
8	DUP	S96T000810	0	F	@ALPHA01	ALPHA01E	SOLID	1.00	4.87E+01	48.700	% Ct. Error

Final page for worklist# 7054

Analyst Signature **Date** **Analyst Signature** **Date**

4/9/96

Reviewer Signature **Date**

Units shown for QC (BLK/BKG) may not reflect the actual units.

worklistdata Version 0.0 05/16/95
04/08/96 11:44

LABCORE Completed Worklist Report for Worklist# 7054

Analyst: akl **Instrument:** AB14 **Book#** _____

Method: _____ Rev/Mod _____

Worklist Comment: Determine sample size using ludlum.For spike use: 0.1ml. new

Seq	Type	Sample#	R	A	Test		Matrix	Actual	Found	DL or Yield	Unit
1	STD		0		@ALPHA01	ALPHA01	SOLID	1.28E-04	1.42E-4	110.940	% Recovery
1	STD		0		@ALPHA01	ALPHA01E	SOLID	1.00	4.25E+00	4.250	% Ct. Error
2	BLNK-PREP		0		@ALPHA01	ALPHA01	SOLID	1	<1.76E-2		uCi/g
2	BLNK-PREP		0		@ALPHA01	ALPHA01E	SOLID	1.00	5.00E+02	500.000	% Ct. Error
3	BLNK/BKG		0		@ALPHA01	ALPHA01	SOLID	0.00E+00	8.89E-01	0.000	uCi/g
4	SAMPLE	S96T000795	0	F	@ALPHA01	ALPHA01	SOLID	N/A	7.59E-02	2.790e-002	uCi/g
4	SAMPLE	S96T000795	0	F	@ALPHA01	ALPHA01E	SOLID	N/A	3.46E+01	0.000	% Ct. Error
5	DUP	S96T000795	0	F	@ALPHA01	ALPHA01	SOLID	7.59E-2	7.96E-2	4.760	RPD
5	DUP	S96T000795	0	F	@ALPHA01	ALPHA01E	SOLID	1.00	3.41E+01	34.100	% Ct. Error
6	SPK	S96T000795	0	F	@ALPHA01	ALPHA01	SOLID	3.59E-02	3.29E-02	91.640	% Recovery
7	SAMPLE	S96T000810	0	F	@ALPHA01	ALPHA01	SOLID	N/A	6.53E-02	2.730e-002	uCi/g
7	SAMPLE	S96T000810	0	F	@ALPHA01	ALPHA01E	SOLID	N/A	3.86E+01	0.000	% Ct. Error
8	DUP	S96T000810	0	F	@ALPHA01	ALPHA01	SOLID	6.53E-2	4.57E-2	35.320	RPD
8	DUP	S96T000810	0	F	@ALPHA01	ALPHA01E	SOLID	1.00	4.87E+01	48.700	% Ct. Error

Final page for worklist# 7054

Analyst Signature **Date** **Analyst Signature** **Date**

Reviewer Signature **Date**

Corrected QC actual + yield for BLNK/BKG.
4/9/96

Units shown for QC (BLK/BKG) may not reflect the actual units.

WORKBOOK PAGE: STD1

AT : LA-508-101 (D-2) STANDARD

			STANDARD	REPLICATE
DETECTOR NUMBER			14	14
DISH SIZE (1 , 2 , or 5)		(MS)	2	2
GROSS COUNTS		(GC)	2169	2158
COUNT TIME in MINUTES		(CT)	30	30
BACKGROUND in cpm		(BKG)	0.3	0.3
SAMPLE SIZE in mL		(SS)	1.000	1.000
DILUTION FACTOR		(DF)	1	1
STANDARD BOOK NUMBER		(Std BN)	47B56	47B56
EFFICIENCY FACTOR		(EFF)	0.2274	0.2274
Lc, Rmax, or Rs,(SAMPLE RATE) as APPROPRIATE			72.000	71.633
Standard Value in µCi/mL			1.28E-04	
Concentration in µCi/L	=		1.43E-01	
Replicate Concentration in µCi/L	=		1.42E-01	
AVERAGE CONCENTRATION in µCi/L	=		1.4226E-01	

Type	STD
Work List	7054
AT or LB ?	AT
Test Code	@ALPHA01
Matrix	LIQUID
Batch Number	96002764
Rerun	0
Sample Prep	N/A
Sample #	WL7054
Instrument Code	WB27807
Prepared By	CJO
Chemist	SLF
Analyst	AKL
Date Complete	04/08/96
Analysis Date	04/03/96
Analysis Time	03:00 PM
Sample Point	AW-101 PUSH

Rs (Sample Count Rate) = (TC / CT) - BKG

ALPHA TOTAL µCi/L = Rs * 1000mL/L * DF / (EFF * SS * 2220000dpm/µCi)

ALPHA TOTAL µCi/mL = ALPHA TOTAL µCi/L / 1000mL/L

Relative Counting Error = [|(The Square Root of TC + BKG * CT) / (TC - BKG * CT)|] * 1.96 * 100

Detection Levels and Less Than Values are determined from Procedure LA-508-002.

			DETECTION LEVEL
ALPHA TOTAL CONCENTRATION in µCi/mL	=	1.42E-04	
RELATIVE COUNTING ERROR	=	4.2%	1.10E-06 µCi/mL

Analyst:

Signature of Chemist: CJO Date: 08-Apr-96

STANDARD.WB1 Rev. 1.0 508101ML SLF Date: 4/9/96

2165

WORKBOOK PAGE: BLANK2

AT : LA-508-101 (D-2) SOLIDS

			BLNK-PREP	REPLICATE
Type	DETECTOR NUMBER		14	14
BLNK-PREP	DISH SIZE (1 , 2 , or 5)	(MS)	2	2
Work List	GROSS COUNTS	(GC)	12	4
7054	COUNT TIME in MINUTES	(CT)	30	30
AT or TB ?	BACKGROUND in cpm	(BKG)	0.3	0.3
AT	SAMPLE SIZE in mL	(SS)	1.000	1.000
Test Code	DILUTION FACTOR	(DF)	51	51
@ALPHA01	DIGEST GRAMS of SOLIDS / L	(Dg/L)	2.0188	2.0188
Matrix	EFFICIENCY FACTOR	(EFF)	0.2274	0.2274
SOLID	Lc, Rmax, or Rs,(SAMPLE RATE) as APPROPRIATE		0.352	0.233

Batch Number			
96002764	Blank Concentration in µCi/g	<	1.76E-02
Rerun	Replicate Concentration in µCi/g	<	1.17E-02
0	Maximum Concentration in µCi/g	<	1.7617E-02

Sample Prep: N/A

Sample #:

Instrument Code: WB27807

Prepared By: CJO

Chemist: SLF

Analyst: AKL

Date Complete: 04/08/96

Analysis Date: 04/03/96

Analysis Time: 03:00 PM

Sample Point: AW-101 PUSH

Rs (Sample Count Rate) = (TC / CT) - BKG

ALPHA TOTAL µCi/g = Rs * 1000mL/L * DF / (EFF * SS * Dg/L * 2220000dpm/µCi)

Relative Counting Error = [|(The Square Root of TC + BKG * CT) / (TC - BKG * CT)|] * 1.96 * 100

Detection Levels and Less Than Values are determined from Procedure LA-508-002.

ALPHA TOTAL in µCi/g (Maximum)	=	< 1.76E-02		DETECTION LEVEL
LESS THAN Value was Determined from Rmax.				2.79E-02 µCi/g
RELATIVE COUNTING ERROR		500.0%		

Analyst:		AKL	Date: 08-Apr-96
Signature of Chemist:		SLF	Date: ~~4/8/96~~ SLF 4/9/96

BLANK.WB1 Rev. 1.0 508101MJ

2166

WORKBOOK PAGE: SAM4

AT : LA-508-101 (D-2) SOLIDS

			SAMPLE	REPLICATE
Type	DETECTOR NUMBER		14	14
SAMPLE	DISH SIZE (1 , 2 , or 5)	(MS)	2	2
Worklist	GROSS COUNTS	(GC)	55	54
7054	COUNT TIME in MINUTES	(CT)	30	30
AT or TB ?	BACKGROUND in cpm	(BKG)	0.3	0.3
AT	SAMPLE SIZE in mL	(SS)	1.000	1.000
Test Code	DILUTION FACTOR	(DF)	51	51
@ALPHA01	DIGEST GRAMS of SOLIDS / L	(Dg/L)	2.0188	2.0188
Matrix	EFFICIENCY FACTOR	(EFF)	0.2274	0.2274
SOLID	Lc, Rmax, or Rs,(SAMPLE RATE) as APPROPRIATE		1.533	1.500

Blank Concentration in µCi/g	7.67E-02
Replicate Concentration in µCi/g	7.51E-02
Average Concentration in µCi/g	7.5897E-02

Batch Number	96002764
Rerun	0
Sample Prep	FUSION01
Sample #	S96T000795
Instrument Code	WB2T807
Prepared By	CJO
Chemist	SLF
Analyst	AKL
Date Complete	04/08/96
Analysis Date	04/03/96
Analysis Time	03:00 PM
Sample Point	AW-101 PUSH

Rs (Sample Count Rate) = (TC / CT) - BKG

ALPHA TOTAL µCi/g = Rs * 1000mL/L * DF / (EFF * SS * Dg/L * 2220000dpm/µCi)

Relative Counting Error = [|(The Square Root of TC + BKG * CT) / (TC - BKG * CT)|] * 1.96 * 100

Detection Levels and Less Than Values are determined from Procedure LA-508-002.

			DETECTION LEVEL
ALPHA TOTAL in µCi/g (Average)	=	7.59E-02	2.79E-02 µCi/g
RELATIVE COUNTING ERROR		34.6%	

Analyst:	AKL		Date: 08-Apr-96
Signature of Chemist:	SLF		Date: 4/9/96

SAMPLE.WB1 Rev. 1.0 508101ML

2167

WORKBOOK PAGE: DUP5

AT : LA-508-101 (D-2) SOLIDS

			DUP	REPLICATE
DETECTOR NUMBER			14	14
DISH SIZE (1 , 2 , or 5)		(MS)	2	2
GROSS COUNTS		(GC)	55	58
COUNT TIME in MINUTES		(CT)	30	30
BACKGROUND in cpm		(BKG)	0.3	0.3
SAMPLE SIZE in mL		(SS)	1.000	1.000
DILUTION FACTOR		(DF)	51	51
DIGEST GRAMS of SOLIDS / L		(Dg/L)	2.0104	2.0104
EFFICIENCY FACTOR		(EFF)	0.2274	0.2274
Lc, Rmax, or Rs,(SAMPLE RATE) as APPROPRIATE			1.533	1.633

Blank Concentration in µCi/g	7.71E-02
Replicate Concentration in µCi/g	8.21E-02
Average Concentration in µCi/g	7.9564E-02

Rs (Sample Count Rate) = (TC / CT) - BKG

ALPHA TOTAL µCi/g = Rs * 1000mL/L * DF / (EFF * SS * Dg/L * 2220000dpm/µCi)

Relative Counting Error = [|(The Square Root of TC + BKG * CT) / (TC - BKG * CT)|] * 1.96 * 100

Detection Levels and Less Than Values are determined from Procedure LA-508-002.

Type	DUP
Work List	7054
AT or TB ?	AT
Test Code	@ALPHA01
Matrix	SOLID
Batch Number	96002764
Rerun	0
Sample Prep	FUSION01
Sample #	S96T000795
Instrument Code	WB27807
Prepared By	CJO
Chemist	SLF
Analyst	AKL
Data Complete	04/08/96
Analysis Date	04/03/96
Analysis Time	03:00 PM
Sample Point	AW-101 PUSH

			DETECTION LEVEL
ALPHA TOTAL in µCi/g (Average)	=	7.96E-02	
RELATIVE COUNTING ERROR		34.1%	2.80E-02 µCi/g

Analyst:	AKL		Date: 08-Apr-96
Signature of Chemist:		SLF	Date: 4/9/96

SAMPLE.WB1 Rev. 1.0 508101ML

2169

WORKBOOK PAGE: SPIKE6

AT : LA-508-101 (D-2) SPIKED SAMPLE

			SPIKE	REPLICATE
Type	DETECTOR NUMBER		14	14
SPK	DISH SIZE 1 , 2 , or 5	(MS)	2	2
Work List	TOTAL COUNTS	(TC)	50848	49012
7054	COUNT TIME in MINUTES	(CT)	30	30
AT or TB ?	BACKGROUND in cpm	(BKG)	0.3	0.3
AT	SAMPLE VOLUME in mL (Spiked Vial)	(SS)	1.000	1.000
Test Code	SAMPLE DILUTION FACTOR (Spiked Vial)	(DF)	51	51
@ALPHA01	DIGEST GRAMS of SOLIDS / L	(Dg/L)	2.0188	2.0188
Matrix	SPIKE VOLUME in mL	(SVol)	0.100	0.100
SOLID	SPIKE DILUTION FACTOR	(SDF)	1	1
Batch Number	SPIKE BOOK NUMBER	(Spk BN)	123B43	123B43
96002764	SPIKE VALUE in µCi/mL	(SVal)	3.5898E-02	3.5898E-02
Rerun	INSTRUMENT EFFICIENCY FACTOR	(EFF)	0.2274	0.2274
0	SAMPLE + SPIKE µCi/g	(S+S)	8.48E+01	8.17E+01
Sample Prep	AVERAGE or MAXIMUM µCi/g in SAMPLE		7.5897E-02	
FUSION01				
Sample #				
S96T000795				
Instrument Code				
WB27807				
Prepared By				
CJO				
Chemist				
SLF				
Analyst				
AKL				
Date Complete				
04/08/96				
Analysis Date				
04/03/96				
Analysis Time				
03:00 PM				
Sample Point				
AW-101 PUSH				

Rs (Sample Count Rate) = (TC / CT) - BKG

SAMPLE + SPIKE µCi/g = Rs * 1000mL/L * DF / (EFF * SS * Dg/L *2220000dpm/µCi)

QC ACTUAL = SVal

QC FOUND = (((S+S µCi/g - SAMPLE µCi/g) * ((SDF/(SVol*1000))/(DF/SS/Dg/L))))

PERCENT SPIKE RECOVERY = (QC FOUND / QC ACTUAL) *100

QC ACTUAL	=	3.59E-02
QC FOUND	=	3.29E-02
AVG. PERCENT SPIKE RECOVERY	=	91.7%

Analyst:		CJO	Date: 08-Apr-96
Signature of Chemist:		SLF	Date: 4/9/96

SPIKE.WB1 Rev. 1.0 508101ML

2169

WORKBOOK PAGE: SAM7

AT : LA-508-101 (D-2) SOLIDS

			SAMPLE	REPLICATE
Type	DETECTOR NUMBER		14	14
SAMPLE	DISH SIZE (1 , 2 , or 5)	(MS)	2	2
Work List	GROSS COUNTS	(GC)	47	51
7054	COUNT TIME in MINUTES	(CT)	30	30
AT or TB ?	BACKGROUND in cpm	(BKG)	0.3	0.3
AT	SAMPLE SIZE in mL	(SS)	1.000	1.000
Test Code	DILUTION FACTOR	(DF)	34.33	34.33
@ALPHA01	DIGEST GRAMS of SOLIDS / L	(Dg/L)	1.388	1.388
Matrix	EFFICIENCY FACTOR	(EFF)	0.2274	0.2274
SOLID	Lc, Rmax, or Rs,(SAMPLE RATE) as APPROPRIATE		1.267	1.400

Blank Concentration in µCi/g	6.21E-02
Replicate Concentration in µCi/g	6.86E-02
Average Concentration in µCi/g	6.5325E-02

Batch Number: 96002764
Rerun: 0
Sample Prep: FUSION01
Sample #: S96T000810
Instrument Code: WB27807
Prepared By: CJO
Chemist: SLF
Analyst: AKL
Date Complete: 04/08/96
Analysis Date: 04/03/96
Analysis Time: 03:00 PM
Sample Point: AW-101 PUSH

Rs (Sample Count Rate) = (TC / CT) - BKG

ALPHA TOTAL µCi/g = Rs * 1000mL/L * DF / (EFF * SS * Dg/L * 2220000dpm/µCi)

Relative Counting Error = [|(The Square Root of TC + BKG * CT) / (TC - BKG * CT)|] * 1.96 * 100

Detection Levels and Less Than Values are determined from Procedure LA-508-002.

			DETECTION LEVEL
ALPHA TOTAL in µCi/g (Average)	=	6.53E-02	
RELATIVE COUNTING ERROR		38.6%	2.73E-02 µCi/g

Analyst:	AKL		Date: 08-Apr-96
Signature of Chemist:	SLF		Date: 4/9/96

SAMPLE.WB1 Rev. 1.0 508101ML

2170

WORKBOOK PAGE: DUP8

AT : LA-508-101 (D-2) SOLIDS

			DUP	REPLICATE
Type	DETECTOR NUMBER		14	14
DUP	DISH SIZE (1 , 2 , or 5)	(MS)	2	2
Work List	GROSS COUNTS	(GC)	36	42
7054	COUNT TIME in MINUTES	(CT)	30	30
AT or TB ?	BACKGROUND in cpm	(BKG)	0.3	0.3
AT	SAMPLE SIZE in mL	(SS)	1.000	1.000
Test Code	DILUTION FACTOR	(DF)	34.33	34.33
@ALPHA01	DIGEST GRAMS of SOLIDS / L	(Dg/L)	1.4888	1.4888
Matrix	EFFICIENCY FACTOR	(EFF)	0.2274	0.2274
SOLID	Lc, Rmax, or Rs,(SAMPLE RATE) as APPROPRIATE		0.900	1.100

Blank Concentration in µCi/g	4.11E-02
Replicate Concentration in µCi/g	5.02E-02
Average Concentration in µCi/g	4.5677E-02

Batch Number: 96002764
Rerun: 0
Sample Prep: FUSION01
Sample #: S96T000810
Instrument Code: WB27807
Prepared By: CJO
Chemist: SLF
Analyst: AKL
Date Complete: 04/08/96
Analysis Date: 04/03/96
Analysis Time: 03:00 PM
Sample Point: AW-101 PUSH

Rs (Sample Count Rate) = (TC / CT) - BKG

ALPHA TOTAL µCi/g = Rs * 1000mL/L * DF / (EFF * SS * Dg/L * 2220000dpm/µCi)

Relative Counting Error = [|(The Square Root of TC + BKG * CT) / (TC - BKG * CT)|] * 1.96 * 100

Detection Levels and Less Than Values are determined from Procedure LA-508-002.

			DETECTION LEVEL
ALPHA TOTAL in µCi/g (Average)	=	4.57E-02	
RELATIVE COUNTING ERROR		48.7%	2.55E-02 µCi/g

Analyst:	AKL		Date: 08-Apr-96
Signature of Chemist:	SLF		Date: 4/9/96

SAMPLE.WB1 Rev. 1.0 508101ML

2171

Shelf 3

LABCORE Data Entry Template for Worklist# 7055

Analyst: AKL **Instrument:** AB00 14 **Book#** 47656

Method: LA-508-101 Rev/Mod D-2

Worklist Comment: Determine sample size using ludlum.For spike use: 0.1ml. new

S	Type	Sample#	R	A	Test	Matrix	Group#	Project
1	STD				@ALPHA01	SOLID		
2	BLNK-PREP				@ALPHA01	SOLID		
3	BLNK/BKG				@ALPHA01	SOLID		
4	SAMPLE	S96T000850	0	F	@ALPHA01	SOLID	96000103	AW-101 PUSH
	Analytes Requested: ALPHA01 , ALPHA01E							
5	DUP	S96T000850	0	F	@ALPHA01	SOLID		
6	SPK	S96T000850	0	F	@ALPHA01	SOLID		
7	SAMPLE	S96T000852	0	F	@ALPHA01	SOLID	96000103	AW-101 PUSH
	Analytes Requested: ALPHA01 , ALPHA01E							
8	DUP	S96T000852	0	F	@ALPHA01	SOLID		
9	SAMPLE	S96T000853	0	F	@ALPHA01	SOLID	96000103	AW-101 PUSH
	Analytes Requested: ALPHA01 , ALPHA01E							
10	DUP	S96T000853	0	F	@ALPHA01	SOLID		

Final page for worklist # 7055

O Lewis 4/3/96
Analyst Signature **Date**

M Brown 4/5/96
Analyst Signature **Date**

C.J. Opinen 4/5/96

Sue Hogan 4/5/96

Data Entry Comments:

S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

LABCORE Completed Worklist Report for Worklist# 7055

Analyst: akl **Instrument:** AB14 **Book#** _____

Method: _____ Rev/Mod _____

Worklist Comment: Determine sample size using ludlum.For spike use: 0.1ml. new

Seq	Type	Sample#	R	A	Test		Matrix	Actual		Found	DL or Yield	Unit
1	STD		0		@ALPHA01	ALPHA01	SOLID	1.28E-04		1.36E-4	106.250	% Recovery
1	STD		0		@ALPHA01	ALPHA01E	SOLID	1.00		4.39E+00	4.390	% Ct. Error
2	BLNK-PREP		0		@ALPHA01	ALPHA01	SOLID	1		<8.31E-3		uCi/g
2	BLNK-PREP		0		@ALPHA01	ALPHA01E	SOLID	1.00		5.00E+02	500.000	% Ct. Error
3	BLNK/BKG		0		@ALPHA01	ALPHA01	SOLID	1.00E+00		5.00E-01	0.500	uCi/g
4	SAMPLE	S96T000850	0	F	@ALPHA01	ALPHA01	SOLID	N/A	<	9.73E-03	1.990e-002	uCi/g
4	SAMPLE	S96T000850	0	F	@ALPHA01	ALPHA01E	SOLID	N/A		5.00E+02	0.000	% Ct. Error
5	DUP	S96T000850	0	F	@ALPHA01	ALPHA01	SOLID	<9.73E-3		<1.44E-2		RPD
5	DUP	S96T000850	0	F	@ALPHA01	ALPHA01E	SOLID	1.00		5.00E+02	500.000	% Ct. Error
6	SPK	S96T000850	0	F	@ALPHA01	ALPHA01	SOLID	3.59E-02		3.06E-02	85.240	% Recovery
7	SAMPLE	S96T000852	0	F	@ALPHA01	ALPHA01	SOLID	N/A	<	1.93E-02	2.120e-002	uCi/g
7	SAMPLE	S96T000852	0	F	@ALPHA01	ALPHA01E	SOLID	N/A		1.40E+02	0.000	% Ct. Error
8	DUP	S96T000852	0	F	@ALPHA01	ALPHA01	SOLID	<1.93E-2		<1.49E-2		RPD
8	DUP	S96T000852	0	F	@ALPHA01	ALPHA01E	SOLID	1.00		5.00E+02	500.000	% Ct. Error
9	SAMPLE	S96T000853	0	F	@ALPHA01	ALPHA01	SOLID	N/A	<	1.45E-02	2.300e-002	uCi/g
9	SAMPLE	S96T000853	0	F	@ALPHA01	ALPHA01E	SOLID	N/A		5.00E+02	0.000	% Ct. Error
10	DUP	S96T000853	0	F	@ALPHA01	ALPHA01	SOLID	<1.45E-2		<9.43E-3		RPD
10	DUP	S96T000853	0	F	@ALPHA01	ALPHA01E	SOLID	1.00		5.00E+02	500.000	% Ct. Error

Final page for worklist# 7055

Analyst Signature Date

Analyst Signature Date

4/8/96

Reviewer Signature Date

Units shown for QC (BLK/BKG) may not reflect the actual units.

LABCORE Completed Worklist Report for Worklist# 7055

Analyst: akl **Instrument:** AB14 **Book#** _____

Method: _____ Rev/Mod _____

Worklist Comment: Determine sample size using ludlum.For spike use: 0.1ml. new

Seq	Type	Sample#	R	A	Test		Matrix	Actual	Found	DL or Yield	Unit
1	STD		0		@ALPHA01	ALPHA01	SOLID	1.28E-04	1.36E-4	106.250	% Recovery
1	STD		0		@ALPHA01	ALPHA01E	SOLID	1.00	4.39E+00	4.390	% Ct. Error
2	BLNK-PREP		0		@ALPHA01	ALPHA01	SOLID	1	<8.31E-3		uCi/g
2	BLNK-PREP		0		@ALPHA01	ALPHA01E	SOLID	1.00	5.00E+02	500.000	% Ct. Error
3	BLNK/BKG		0		@ALPHA01	ALPHA01	SOLID	0.00E+00	5.00E-01	0.000	uCi/g
4	SAMPLE	S96T000850	0	F	@ALPHA01	ALPHA01	SOLID	N/A <	9.73E-03	1.990e-002	uCi/g
4	SAMPLE	S96T000850	0	F	@ALPHA01	ALPHA01E	SOLID	N/A	5.00E+02	0.000	% Ct. Error
5	DUP	S96T000850	0	F	@ALPHA01	ALPHA01	SOLID	<9.73E-3	<1.44E-2		RPD
5	DUP	S96T000850	0	F	@ALPHA01	ALPHA01E	SOLID	1.00	5.00E+02	500.000	% Ct. Error
6	SPK	S96T000850	0	F	@ALPHA01	ALPHA01	SOLID	3.59E-02	3.06E-02	85.240	% Recovery
7	SAMPLE	S96T000852	0	F	@ALPHA01	ALPHA01	SOLID	N/A <	1.93E-02	2.120e-002	uCi/g
7	SAMPLE	S96T000852	0	F	@ALPHA01	ALPHA01E	SOLID	N/A	1.40E+02	0.000	% Ct. Error
8	DUP	S96T000852	0	F	@ALPHA01	ALPHA01	SOLID	<1.93E-2	<1.49E-2		RPD
8	DUP	S96T000852	0	F	@ALPHA01	ALPHA01E	SOLID	1.00	5.00E+02	500.000	% Ct. Error
9	SAMPLE	S96T000853	0	F	@ALPHA01	ALPHA01	SOLID	N/A <	1.45E-02	2.300e-002	uCi/g
9	SAMPLE	S96T000853	0	F	@ALPHA01	ALPHA01E	SOLID	N/A	5.00E+02	0.000	% Ct. Error
10	DUP	S96T000853	0	F	@ALPHA01	ALPHA01	SOLID	<1.45E-2	<9.43E-3		RPD
10	DUP	S96T000853	0	F	@ALPHA01	ALPHA01E	SOLID	1.00	5.00E+02	500.000	% Ct. Error

Final page for worklist# 7055

Analyst Signature **Date** **Analyst Signature** **Date**

Reviewer Signature **Date**

Corrected QC actual + yield for BLNK/BKG.

4/5/96

Units shown for QC (BLK/BKG) may not reflect the actual units.

WORKBOOK PAGE: STD1

AT : LA-508-101 (D-2) STANDARD

			STANDARD	REPLICATE
Type	DETECTOR NUMBER		14	14
STD	DISH SIZE (1 , 2 , or 5)	(MS)	2	2
Work List	GROSS COUNTS	(GC)	2022	2124
7055	COUNT TIME in MINUTES	(CT)	30	30
AT or TB ?	BACKGROUND in cpm	(BKG)	0.3	0.3
AT	SAMPLE SIZE in mL	(SS)	1.000	1.000
Test Code	DILUTION FACTOR	(DF)	1	1
@ALPHA01	STANDARD BOOK NUMBER	(Std BN)	47B56	47B56
Matrix	EFFICIENCY FACTOR	(EFF)	0.2274	0.2274
LIQUID	Lc, Rmax, or Rs,(SAMPLE RATE) as APPROPRIATE		67.100	70.500
Batch Number	Standard Value in µCi/mL		1.28E-04	
96002766	Concentration in µCi/L	=	1.33E-01	
Rerun	Replicate Concentration in µCi/L	=	1.40E-01	
0	AVERAGE CONCENTRATION in µCi/L	=	1.3628E-01	

Sample Prep: N/A

Sample #: WL7055

Instrument Code: WB27807

Prepared By: MCB

Chemist: SLF

Analyst: AKL

Date Complete: 04/05/96

Analysis Date: 04/03/96

Analysis Time: 03:30 PM

Sample Point: AW-101 PUSH

Rs (Sample Count Rate) = (TC / CT) - BKG

ALPHA TOTAL µCi/L = Rs * 1000mL/L * DF / (EFF * SS * 2220000dpm/µCi)

ALPHA TOTAL µCi/mL = ALPHA TOTAL µCi/L / 1000mL/L

Relative Counting Error = [|(The Square Root of TC + BKG * CT) / (TC - BKG * CT)|] * 1.96 * 100

Detection Levels and Less Than Values are determined from Procedure LA-508-002.

ALPHA TOTAL CONCENTRATION in µCi/mL	=	1.36E-04	DETECTION LEVEL
RELATIVE COUNTING ERROR	=	4.4%	1.10E-06 µCi/mL

Analyst:	MCB		Date: 05-Apr-96
Signature of Chemist:		SLF	Date: 4/5/96

STANDARD.WB1 Rev. 1.0 508101ML

2175

WORKBOOK PAGE: BLANK2

AT : LA-508-101 (D-2) SOLIDS

			BLNK-PREP	REPLICATE
Type	DETECTOR NUMBER		14	14
BLNK-PREP	DISH SIZE (1 , 2 , or 5)	(MS)	2	2
Work List	GROSS COUNTS	(GC)	3	6
7055	COUNT TIME in MINUTES	(CT)	30	30
AT or TB ?	BACKGROUND in cpm	(BKG)	0.3	0.3
AT	SAMPLE SIZE in mL	(SS)	1.000	1.000
Test Code	DILUTION FACTOR	(DF)	34.33	34.33
@ALPHA01	DIGEST GRAMS of SOLIDS / L	(Dg/L)	1.9092	1.9092
Matrix	EFFICIENCY FACTOR	(EFF)	0.2274	0.2274
SOLID	Lc, Rmax, or Rs,(SAMPLE RATE) as APPROPRIATE		0.233	0.233

Batch Number		
96002766	Blank Concentration in µCi/g	< 8.31E-03
Rerun	Replicate Concentration in µCi/g	< 8.31E-03
0	Maximum Concentration in µCi/g	< 8.3115E-03

Sample Prep: N/A

Sample #: WL7055

Instrument Code: WB27807

Prepared By: MCB

Chemist: SLF

Analyst: AKL

Date Complete: 04/05/96

Analysis Date: 04/03/96

Analysis Time: 03:30 PM

Sample Point: AW-101 PUSH

Rs (Sample Count Rate) = (TC / CT) - BKG

ALPHA TOTAL µCi/g = Rs * 1000mL/L * DF / (EFF * SS * Dg/L * 2220000dpm/µCi)

Relative Counting Error = [|(The Square Root of TC + BKG * CT) / (TC - BKG * CT)|] * 1.96 * 100

Detection Levels and Less Than Values are determined from Procedure LA-508-002.

ALPHA TOTAL in µCi/g (Maximum)	=	< 8.31E-03	DETECTION LEVEL	
LESS Than Value was Determined from Lc.			1.99E-02 µCi/g	
RELATIVE COUNTING ERROR		500.0%		

Analyst:	AKL		Date: 05-Apr-96
Signature of Chemist:		SLF	Date: 4/5/96

BLANK.WB1 Rev. 1.0 508101ML

2176

WORKBOOK PAGE: SAM4

AT : LA-508-101 (D-2) SOLIDS

			SAMPLE	REPLICATE
Type	DETECTOR NUMBER		14	14
SAMPLE	DISH SIZE (1 , 2 , or 5)	(MS)	2	2
Work List	GROSS COUNTS	(GC)	6	10
7055	COUNT TIME in MINUTES	(CT)	30	30
AT or TB ?	BACKGROUND in cpm	(BKG)	0.3	0.3
AT	SAMPLE SIZE in mL	(SS)	1.000	1.000
Test Code	DILUTION FACTOR	(DF)	34.33	34.33
@ALPHA01	DIGEST GRAMS of SOLIDS / L	(Dg/L)	1.9092	1.9092
Matrix	EFFICIENCY FACTOR	(EFF)	0.2274	0.2274
SOLID	Lc, Rmax, or Rs,(SAMPLE RATE) as APPROPRIATE		0.233	0.273

Batch Number		
96002766	Blank Concentration in µCi/g	< 8.31E-03
Rerun	Replicate Concentration in µCi/g	< 9.73E-03
0	Maximum Concentration in µCi/g	< 9.7265E-03

Sample Prep: FUSION01

Sample #: S96T000850

Instrument Code: WB27807

Prepared By: MCB

Chemist: SLF

Analyst: AKL

Date Complete: 04/05/96

Analysis Date: 04/03/96

Analysis Time: 03:30 PM

Sample Point: AW-101 PUSH

Rs (Sample Count Rate) = (TC / CT) - BKG

ALPHA TOTAL µCi/g = Rs * 1000mL/L * DF / (EFF * SS * Dg/L * 2220000dpm/µCi)

Relative Counting Error = [|(The Square Root of TC + BKG * CT) / (TC - BKG * CT)|] * 1.96 * 100

Detection Levels and Less Than Values are determined from Procedure LA-508-002.

			DETECTION LEVEL
ALPHA TOTAL in µCi/g (Maximum)	=	< 9.73E-03	
LESS Than Value was Determined from Lc.			
RELATIVE COUNTING ERROR		500.0%	1.99E-02 µCi/g

Analyst:	AKL		Date: 05-Apr-96
Signature of Chemist:		SLF	Date: 4/5/96

SAMPLE.WB1 Rev. 1.0 508101ML

2177

WORKBOOK PAGE: DUP5

AT : LA-508-101 (D-2) SOLIDS

			DUP	REPLICATE
Type	DETECTOR NUMBER		14	14
DUP	DISH SIZE (1 , 2 , or 5)	(MS)	2	2
Work List	GROSS COUNTS	(GC)	12	9
7055	COUNT TIME in MINUTES	(CT)	30	30
AT or TB ?	BACKGROUND in cpm	(BKG)	0.3	0.3
AT	SAMPLE SIZE in mL	(SS)	1.000	1.000
Test Code	DILUTION FACTOR	(DF)	34.33	34.33
@ALPHA01	DIGEST GRAMS of SOLIDS / L	(Dg/L)	1.66	1.66
Matrix	EFFICIENCY FACTOR	(EFF)	0.2274	0.2274
SOLID	Lc, Rmax, or Rs,(SAMPLE RATE) as APPROPRIATE		0.352	0.233

Batch Number		
96002766	Blank Concentration in µCi/g	< 1.44E-02
Rerun	Replicate Concentration in µCi/g	< 9.56E-03
0	Maximum Concentration in µCi/g	< 1.4422E-02

Sample Prep: FUSION01

Sample #: S96T000850

Instrument Code: WB27807

Prepared By: MCB

Chemist: SLF

Analyst: AKL

Date Complete: 04/05/96

Analysis Date: 04/03/96

Analysis Time: 03:30 PM

Sample Point: AW-101 PUSH

Rs (Sample Count Rate) = (TC / CT) - BKG

ALPHA TOTAL µCi/g = Rs * 1000mL/L * DF / (EFF * SS * Dg/L * 2220000dpm/µCi)

Relative Counting Error = [|(The Square Root of TC + BKG * CT) / (TC - BKG * CT)|] * 1.96 * 100

Detection Levels and Less Than Values are determined from Procedure LA-508-002.

ALPHA TOTAL in µCi/g (Maximum)	=	< 1.44E-02	DETECTION LEVEL
LESS THAN Value was Determined from Rmax.			2.28E-02 µCi/g
RELATIVE COUNTING ERROR		500.0%	

Analyst:	AKL		Date: 05-Apr-96
Signature of Chemist:		SLF	Date: 4/5/96

SAMPLE.WB1 Rev. 1.0 508101ML

2178

WORKBOOK PAGE: SPIKE6

AT : LA-508-101 (D-2) SPIKED SAMPLE

			SPIKE	REPLICATE
Type	DETECTOR NUMBER		14	14
SPK	DISH SIZE 1 , 2 , or 5	(MS)	2	2
Work List	TOTAL COUNTS	(TC)	45998	46715
7055	COUNT TIME in MINUTES	(CT)	30	30
AT or TB ?	BACKGROUND in cpm	(BKG)	0.3	0.3
AT	SAMPLE VOLUME in mL (Spiked Vial)	(SS)	1.000	1.000
Test Code	SAMPLE DILUTION FACTOR (Spiked Vial)	(DF)	34.33	34.33
@ALPHA01	DIGEST GRAMS of SOLIDS / L	(Dg/L)	1.9092	1.9092
Matrix	SPIKE VOLUME in mL	(SVol)	0.100	0.100
SOLID	SPIKE DILUTION FACTOR	(SDF)	1	1
Batch Number	SPIKE BOOK NUMBER	(Spk BN)	123B43	123B43
96002766	SPIKE VALUE in µCi/mL	(SVal)	3.5898E-02	3.5898E-02
Rerun	INSTRUMENT EFFICIENCY FACTOR	(EFF)	0.2274	0.2274
0	SAMPLE + SPIKE µCi/g	(S+S)	5.46E+01	5.55E+01
Sample Prep	AVERAGE or MAXIMUM µCi/g in SAMPLE	<	9.7265E-03	
FUSION01				
Sample #				
S96T000850	Rs (Sample Count Rate) = (TC / CT) - BKG			
Instrument Code	SAMPLE + SPIKE µCi/g = Rs * 1000mL/L * DF / (EFF * SS * Dg/L *2220000dpm/µCi)			
WB27807	QC ACTUAL = SVal			
Prepared By	QC FOUND = (((S+S µCi/g - SAMPLE µCi/g) * ((SDF/(SVol*1000))/(DF/SS/Dg/L))))			
MCB	PERCENT SPIKE RECOVERY = (QC FOUND / QC ACTUAL) *100			
Chemist				
SLF				
Analyst				
AKL				
Date Complete	NOTE: Original Sample result was a LESS THAN value. Zero (0) was subtracted from the spiked value for QC found calculation.			
04/05/96				
Analysis Date				
04/03/96	QC ACTUAL	=	3.59E-02	
Analysis Time	QC FOUND	=	3.06E-02	
03:30 PM	AVG. PERCENT SPIKE RECOVERY	=	85.3%	
Sample Point				
AW-101 PUSH				

Analyst:		MCB	Date: 05-Apr-96
Signature of Chemist:		SLF	Date: 4/5/96

SPIKE.WB1 Rev. 1.0 508101ML

WORKBOOK PAGE: SAM7

AT : LA-508-101 (D-2) SOLIDS

			SAMPLE	REPLICATE
DETECTOR NUMBER			14	14
DISH SIZE (1 , 2 , or 5)		(MS)	2	2
GROSS COUNTS		(GC)	16	17
COUNT TIME in MINUTES		(CT)	30	30
BACKGROUND in cpm		(BKG)	0.3	0.3
SAMPLE SIZE in mL		(SS)	1.000	1.000
DILUTION FACTOR		(DF)	34.33	34.33
DIGEST GRAMS of SOLIDS / L		(Dg/L)	1.7912	1.7912
EFFICIENCY FACTOR		(EFF)	0.2274	0.2274
Lc, Rmax, or Rs.(SAMPLE RATE) as APPROPRIATE			0.508	0.267
Blank Concentration in µCi/g	<		1.93E-02	
Replicate Concentration in µCi/g			1.01E-02	
Maximum Concentration in µCi/g	<		1.9299E-02	

Type	SAMPLE
Work List	7055
AT or TB ?	AT
Test Code	@ALPHA01
Matrix	SOLID
Batch Number	96002766
Rerun	0
Sample Prep	FUSION01
Sample #	S96T000852
Instrument Code	WB27807
Prepared By	MCB
Chemist	SLF
Analyst	AKL
Date Complete	04/05/96
Analysis Date	04/03/96
Analysis Time	03:30 PM
Sample Point	AW-101 PUSH

Rs (Sample Count Rate) = (TC / CT) - BKG

ALPHA TOTAL µCi/g = Rs * 1000mL/L * DF / (EFF * SS * Dg/L * 2220000dpm/µCi)

Relative Counting Error = [|(The Square Root of TC + BKG * CT) / (TC - BKG * CT)|] * 1.96 * 100

Detection Levels and Less Than Values are determined from Procedure LA-508-002.

ALPHA TOTAL in µCi/g (Maximum)	=	< 1.93E-02	DETECTION LEVEL
LESS THAN Value was Determined from Rmax.			2.12E-02 µCi/g
RELATIVE COUNTING ERROR		140.0%	

Analyst: AKL Date: 05-Apr-96

Signature of Chemist: SLF Date: 4/5/96

SAMPLE.WB1 Rev. 1.0 508101ML

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WORKBOOK PAGE: DUP8

AT : LA-508-101 (D-2) SOLIDS

			DUP	REPLICATE
Type	DETECTOR NUMBER		14	14
DUP	DISH SIZE (1 , 2 , or 5)	(MS)	2	2
Work List	GROSS COUNTS	(GC)	12	11
7055	COUNT TIME in MINUTES	(CT)	30	30
AT or TB ?	BACKGROUND in cpm	(BKG)	0.3	0.3
AT	SAMPLE SIZE in mL	(SS)	1.000	1.000
Test Code	DILUTION FACTOR	(DF)	34.33	34.33
@ALPHA01	DIGEST GRAMS of SOLIDS / L	(Dg/L)	1.6112	1.6112
Matrix	EFFICIENCY FACTOR	(EFF)	0.2274	0.2274
SOLID	Lc, Rmax, or Rs,(SAMPLE RATE) as APPROPRIATE		0.352	0.313

Blank Concentration in µCi/g	<	1.49E-02
Replicate Concentration in µCi/g	<	1.32E-02
Maximum Concentration in µCi/g	<	1.4859E-02

Batch Number: 96002766
Rerun: 0
Sample Prep: FUSION01
Sample #: S96T000852
Instrument Code: WB27807
Prepared By: MCB
Chemist: SLF
Analyst: AKL
Date Complete: 04/05/96
Analysis Date: 04/03/96
Analysis Time: 03:30 PM
Sample Point: AW-101 PUSH

Rs (Sample Count Rate) = (TC / CT) - BKG
ALPHA TOTAL µCi/g = Rs * 1000mL/L * DF / (EFF * SS * Dg/L * 2220000dpm/µCi)

Relative Counting Error = [|(The Square Root of TC + BKG * CT) / (TC - BKG * CT)|] * 1.96 * 100
Detection Levels and Less Than Values are determined from Procedure LA-508-002.

				DETECTION LEVEL
ALPHA TOTAL in µCi/g	(Maximum)	=	< 1.49E-02	
LESS THAN Value was Determined from Rmax.				2.35E-02 µCi/g
RELATIVE COUNTING ERROR			500.0%	

Analyst:	AKL	Date: 05-Apr-96	
Signature of Chemist:	SLF	Date: 4/5/96	

SAMPLE.WB1 Rev. 1.0 508101ML

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WORKBOOK PAGE: SAM9

AT : LA-508-101 (D-2) SOLIDS

				SAMPLE	REPLICATE
Type	DETECTOR NUMBER			14	14
SAMPLE	DISH SIZE (1 , 2 , or 5)	(MS)		2	2
Work List	GROSS COUNTS	(GC)		12	10
7055	COUNT TIME in MINUTES	(CT)		30	30
AT or TB ?	BACKGROUND in cpm	(BKG)		0.3	0.3
AT	SAMPLE SIZE in mL	(SS)		1.000	1.000
Test Code	DILUTION FACTOR	(DF)		34.33	34.33
@ALPHA01	DIGEST GRAMS of SOLIDS / L	(Dg/L)		1.6512	1.6512
Matrix	EFFICIENCY FACTOR	(EFF)		0.2274	0.2274
SOLID	Lc, Rmax, or Rs,(SAMPLE RATE) as APPROPRIATE			0.352	0.273
Batch Number					
96002766	Blank Concentration in µCi/g		<	1.45E-02	
Rerun	Replicate Concentration in µCi/g		<	1.12E-02	
0	Maximum Concentration in µCi/g		<	1.4499E-02	

Sample Prep: FUSION01

Sample #: S96T000853

Instrument Code: WB27807

Prepared By: MCB

Chemist: SLF

Analyst: AKL

Date Complete: 04/05/96

Analysis Date: 04/03/96

Analysis Time: 03:30 PM

Sample Point: AW-101 PUSH

Rs (Sample Count Rate) = (TC / CT) - BKG

ALPHA TOTAL µCi/g = Rs * 1000mL/L * DF / (EFF * SS * Dg/L * 2220000dpm/µCi)

Relative Counting Error = [|(The Square Root of TC + BKG * CT) / (TC - BKG * CT)|] * 1.96 * 100

Detection Levels and Less Than Values are determined from Procedure LA-508-002.

				DETECTION LEVEL
ALPHA TOTAL in µCi/g (Maximum)	=	< 1.45E-02		
LESS THAN Value was Determined from Rmax.				2.30E-02 µCi/g
RELATIVE COUNTING ERROR			500.0%	

Analyst:		AKL	Date: 05-Apr-96
Signature of Chemist:		SLF	Date: 4/5/96

SAMPLE.WB1 Rev. 1.0 508101ML

2182

WORKBOOK PAGE: DUP1

AT : LA-508-101 (D-2) SOLIDS

			DUP	REPLICATE
Type	DETECTOR NUMBER		14	14
DUP	DISH SIZE (1 , 2 , or 5)	(MS)	2	2
Work List	GROSS COUNTS	(GC)	9	8
7055	COUNT TIME in MINUTES	(CT)	30	30
AT or TB ?	BACKGROUND in cpm	(BKG)	0.3	0.3
AT	SAMPLE SIZE in mL	(SS)	1.000	1.000
Test Code	DILUTION FACTOR	(DF)	34.33	34.33
@ALPHA01	DIGEST GRAMS of SOLIDS / L	(Dg/L)	1.6824	1.6824
Matrix	EFFICIENCY FACTOR	(EFF)	0.2274	0.2274
SOLID	Lc, Rmax, or Rs,(SAMPLE RATE) as APPROPRIATE		0.233	0.233

Batch Number			
96002766	Blank Concentration in µCi/g	<	9.43E-03
Rerun	Replicate Concentration in µCi/g	<	9.43E-03
0	Maximum Concentration in µCi/g	<	9.4319E-03

Sample Prep: FUSION01

Sample #: S96T000853

Instrument Code: WB27807

Prepared By: MCB

Chemist: SLF

Analyst: AKL

Date Complete: 04/05/96

Analysis Date: 04/03/96

Analysis Time: 03:30 PM

Sample Point: AW-101 PUSH

Rs (Sample Count Rate) = (TC / CT) - BKG

ALPHA TOTAL µCi/g = Rs * 1000mL/L * DF / (EFF * SS * Dg/L * 2220000dpm/µCi)

Relative Counting Error = [|(The Square Root of TC + BKG * CT) / (TC - BKG * CT)|] * 1.96 * 100

Detection Levels and Less Than Values are determined from Procedure LA-508-002.

				DETECTION LEVEL
ALPHA TOTAL in µCi/g (Maximum)	=	< 9.43E-03		
LESS THAN Value was Determined from Rmax.				2.25E-02 µCi/g
RELATIVE COUNTING ERROR			500.0%	

Analyst:		AKL	Date: 05-Apr-96
Signature of Chemist:		SLF	Date: 4/5/96

SAMPLE.WB1 Rev. 1.0 508101ML

2133

LABCORE Data Entry Template for Worklist# 9131

Analyst: DCD **Instrument:** AB00 15 **Book#** 47856

Method: LA-508-101 Rev/Mod D-2

Worklist Comment: Determine sample size using ludlum.For spike use: 0.1ml. new

S	Type	Sample#	R	A	Test	Matrix	Group#	Project
1	STD				@ALPHA01	LIQUID		
2	BLNK				@ALPHA01	LIQUID		
3	BLNK/BKG				@ALPHA01	LIQUID		
4	SAMPLE	S96T001705	0		@ALPHA01	LIQUID	96000103	AW-101 PUSH
		Analytes Requested: ALPHA01 , ALPHA01E						
5	DUP	S96T001705	0		@ALPHA01	LIQUID		
6	SPK	S96T001705	0		@ALPHA01	LIQUID		
7	SAMPLE	S96T001759	0		@ALPHA01	LIQUID	96000103	AW-101 PUSH
		Analytes Requested: ALPHA01 , ALPHA01E						
8	DUP	S96T001759	0		@ALPHA01	LIQUID		

Final page for worklist # 9131

David C Dunham 5-28-96
Analyst Signature **Date**

C.J. Opinen 5/28/96
Analyst Signature **Date**

M C B... 5/28/96

Data Entry Comments: No Replicates run with batch - Batch will be rerun. 5/29/96

S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

worklistrad Version 0.0 04/18/96
05/28/96 15:13

LABCORE Completed RadChem Report for Worklist#: 9131

Analyst: dcd **Instrument:** AB15 **Book#** _____

Method: _____ Rev/Mod _____

Worklist Comment: Determine sample size using ludlum.For spike use: 0.1ml. new

Seq	Type	Sample#	R	A	Test	Matrix	Actual	Found	DL or Yield	Unit
1	STD		0	@ALPHA01	ALPHA01	LIQUID	1.28E-04	1.25E-4	97.656	% Recovery
1	STD		0	@ALPHA01	ALPHA01E	LIQUID	1.00	4.42E+00	4.420	% Ct. Erro
2	BLNK		0	@ALPHA01	ALPHA01	LIQUID	1	3.72E-7	37.200e-008	uCi/mL
2	BLNK		0	@ALPHA01	ALPHA01E	LIQUID	1.00	1.33E+02	133.000	uCi/mL
3	BLNK/BKG		0	@ALPHA01	ALPHA01	LIQUID	1.00E+00	1.08E+00	1.080	BLNK/BKG
4	SAMPLE	S96T001705	0	@ALPHA01	ALPHA01	LIQUID	N/A <	3.32E-07	837.0e-009	uCi/mL
4	SAMPLE	S96T001705	0	@ALPHA01	ALPHA01E	LIQUID	N/A	5.00E+02	0.0e+000	% Ct. Error
5	DUP	S96T001705	0	@ALPHA01	ALPHA01	LIQUID	<3.32E-7	<3.32E-7		RPD
5	DUP	S96T001705	0	@ALPHA01	ALPHA01E	LIQUID	1.00	5.00E+02	500.000	% Ct. Erro
6	SPK	S96T001705	0	@ALPHA01	ALPHA01	LIQUID	3.59E-02	3.67E-02	102.228	% Recovery
7	SAMPLE	S96T001759	0	@ALPHA01	ALPHA01	LIQUID	N/A <	3.36E-04	845.0e-006	uCi/mL
7	SAMPLE	S96T001759	0	@ALPHA01	ALPHA01E	LIQUID	N/A	5.00E+02	0.0e+000	% Ct. Error
8	DUP	S96T001759	0	@ALPHA01	ALPHA01	LIQUID	<3.36E-4	<3.36E-4		RPD
8	DUP	S96T001759	0	@ALPHA01	ALPHA01E	LIQUID	1.00	5.00E+02	500.000	% Ct. Erro

Final page for worklist# 9131

Analyst Signature **Date** **Analyst Signature** **Date**

5/29/96

Reviewer Signature **Date**

Units shown for QC (BLK/BKG) may not reflect the actual units.

WORKBOOK PAGE: STD1

AT : LA-508-101 (D-2) **LA-508-113 (A-2) STANDARD**

			STANDARD	REPLICATE
	DETECTOR NUMBER		15	N/A
STD	DISH SIZE (1 , 2 , or 5)	(MS)	2	N/A
	GROSS COUNTS	(GC)	1985	N/A
9131	COUNT TIME in MINUTES	(CT)	30	N/A
	BACKGROUND in cpm	(BKG)	0.17	N/A
AT	SAMPLE SIZE in mL	(SS)	1.000	N/A
	DILUTION FACTOR	(DF)	1	N/A
@ALPHA01	STANDARD BOOK NUMBER	(Std BN)	47B56	N/A
	EFFICIENCY FACTOR	(EFF)	0.2380	N/A
LIQUID	Lc, Rmax, or Rs,(SAMPLE RATE) as APPROPRIATE		65.997	N/A
	Standard Value in µCi/mL		1.28E-04	
96005186				
0	CONCENTRATION in µCi/L	=	1.2491E-01	

Sample Prep
N/A

Sample
WL9131

Instrument Code
WB26872

Prepared By
CJO

Chemist
SLF

Analyst
DCD

Date Completed
05/28/96

Analysis Date
05/28/96

Analysis Time
01:30 AM

Sample Path
AW-101 PUSH

Rs (Sample Count Rate) = (TC / CT) - BKG
ALPHA TOTAL µCi/L = Rs * 1000mL/L * DF / (EFF * SS * 2220000dpm/µCi)
ALPHA TOTAL µCi/mL = ALPHA TOTAL µCi/L / 1000mL/L
Relative Counting Error = [|(The Square Root of TC + BKG * CT) / (TC - BKG * CT)|] * 1.96 * 100
Detection Levels and Less Than Values are determined from Procedure LA-508-002.

ALPHA TOTAL CONCENTRATION in µCi/mL	=	1.25E-04		DETECTION LEVEL
				8.37E-07 µCi/mL
RELATIVE COUNTING ERROR	=	4.4%		

Analyst:		CJO	Date: 28-May-96
Signature of Chemist:		SLF	Date: 5/29/96

STANDARD.WB1 Rev. 1.0 508101ML

2186

WORKBOOK PAGE: BLANK2

AT : LA-508-101 (D-2) LIQUIDS

			BLNK	REPLICATE
Type	DETECTOR NUMBER		15	N/A
BLNK	DISH SIZE (1 , 2 , or 5)	(MS)	2	N/A
Matrix	GROSS COUNTS	(GC)	11	N/A
9131	COUNT TIME in MINUTES	(CT)	30	N/A
Analyte	BACKGROUND in cpm	(BKG)	0.17	N/A
AT	SAMPLE SIZE in mL	(SS)	1.000	N/A
Method	DILUTION FACTOR	(DF)	1	N/A
@ALPHA01	DIGEST DILUTION FACTOR	(DDF)	1	N/A
Unit	EFFICIENCY FACTOR	(EFF)	0.2380	N/A
LIQUID	Lc, Rmax, or Rs,(SAMPLE RATE) as APPROPRIATE		0.197	N/A
Batch Number				
96005186				
Replicate				
0	Sample Concentration in µCi/L		3.7222E-04	
Sample Prep				
N/A				

Sample: WL9131

Instrument Code: WB26872

Analyst: CJO

Chemist: SLF

Analyst: DCD

Date Complete: 05/28/96

Analysis Date: 05/28/96

Analysis Time: 01:30 AM

Sample Point: AW-101 PUSH

Rs (Sample Count Rate) = (TC / CT) - BKG
ALPHA TOTAL µCi/L = Rs * 1000mL/L * DF * DDF / (EFF * SS * 2220000dpm/µCi)
ALPHA TOTAL µCi/mL = ALPHA TOTAL µCi/L / 1000mL/L
Relative Counting Error = [|(The Square Root of TC + BKG * CT) / (TC - BKG * CT)|] * 1.96 * 100
Detection Levels and Less Than Values are determined from Procedure LA-508-002.

SLF	ALPHA TOTAL in µCi/mL	=	3.72E-07	DETECTION LEVEL
				8.37E-07 µCi/mL
05/28/96	RELATIVE COUNTING ERROR		133.3%	

Analyst:	DCD		Date: 28-May-96
Signature of Chemist:		SLF	Date: 5/29/96

BLANK.WB1 Rev. 1.0 508101ML

WORKBOOK PAGE: SAM4

AT : LA-508-101 (D-2) LIQUIDS

			SAMPLE	REPLICATE
Type	DETECTOR NUMBER		15	N/A
SAMPLE	DISH SIZE (1 , 2 , or 5)	(MS)	2	N/A
Work List	GROSS COUNTS	(GC)	4	N/A
9131	COUNT TIME in MINUTES	(CT)	30	N/A
Analysis Type	BACKGROUND in cpm	(BKG)	0.17	N/A
AT	SAMPLE SIZE in mL	(SS)	1.000	N/A
Test Code	DILUTION FACTOR	(DF)	1	N/A
@ALPHA01	DIGEST DILUTION FACTOR	(DDF)	1	N/A
Matrix	EFFICIENCY FACTOR	(EFF)	0.2380	N/A
LIQUID	Lc, Rmax, or Rs,(SAMPLE RATE) as APPROPRIATE		0.176	N/A

Batch Number	
96005186	
Rerun	
0	Sample Concentration in µCi/L < 3.3245E-04
Sample Prep	
N/A	
Sample #	
S96T001705	
Instrument Code	
WB26872	
Prepared By	
CJO	
Chemist	
SLF	
Analyst	
DCD	
Data Complete	
05/28/96	
Analysis Date	
05/28/96	
Analysis Time	
01:30 AM	
Sample Point	
AW-101 PUSH	

Rs (Sample Count Rate) = (TC / CT) - BKG
ALPHA TOTAL µCi/L = Rs * 1000mL/L * DF * DDF / (EFF * SS * 2220000dpm/µCi)
ALPHA TOTAL µCi/mL = ALPHA TOTAL µCi/L / 1000mL/L
Relative Counting Error = [|(The Square Root of TC + BKG * CT) / (TC - BKG * CT)|] * 1.96 * 100
Detection Levels and Less Than Values are determined from Procedure LA-508-002.

ALPHA TOTAL in µCi/mL	=	< 3.32E-07	DETECTION LEVEL
LESS Than Value was Determined from Lc.			8.37E-07 µCi/mL
RELATIVE COUNTING ERROR	500.0%		

Analyst:	DCD		Date: 28-May-96
Signature of Chemist:		SLF	Date: 5/29/96

SAMPLE.WB1 Rev. 1. 508101ML

WORKBOOK PAGE: DUP5

AT : LA-508-101 (D-2) LIQUIDS

			DUP	REPLICATE
Type	DETECTOR NUMBER		15	N/A
DUP	DISH SIZE (1 , 2 , or 5)	(MS)	2	N/A
Workcell	GROSS COUNTS	(GC)	3	N/A
9131	COUNT TIME in MINUTES	(CT)	30	N/A
Analysis Type	BACKGROUND in cpm	(BKG)	0.17	N/A
AT	SAMPLE SIZE in mL	(SS)	1.000	N/A
Test Code	DILUTION FACTOR	(DF)	1	N/A
@ALPHA01	DIGEST DILUTION FACTOR	(DDF)	1	N/A
Matrix	EFFICIENCY FACTOR	(EFF)	0.2380	N/A
LIQUID	Lc, Rmax, or Rs,(SAMPLE RATE) as APPROPRIATE		0.176	N/A
Batch Number				
96005186				
Rerun				
0	Sample Concentration in µCi/L	<	3.3245E-04	

Sample Prep
N/A
Sample #
S96T001705
Instrument Code
WB26872
Prepared By
CJO
Chemist
SLF
Analyst
DCD
Date Complete
05/28/96
Analysis Date
05/28/96
Analysis Time
01:30 AM
Sample Point
AW-101 PUSH

Rs (Sample Count Rate) = (TC / CT) - BKG
ALPHA TOTAL µCi/L = Rs * 1000mL/L * DF * DDF / (EFF * SS * 2220000dpm/µCi)
ALPHA TOTAL µCi/mL = ALPHA TOTAL µCi/L / 1000mL/L
Relative Counting Error = [|(The Square Root of TC + BKG * CT) / (TC - BKG * CT)|] * 1.96 * 100
Detection Levels and Less Than Values are determined from Procedure LA-508-002.

ALPHA TOTAL in µCi/mL	=	< 3.32E-07		DETECTION LEVEL
LESS Than Value was Determined from Lc.				8.37E-07 µCi/mL
RELATIVE COUNTING ERROR		500.0%		

Analyst:		DCD	Date: 28-May-96
Signature of Chemist:		SLF	Date: 5/29/96

SAMPLE.WB1 Rev. 1. 508101ML

WORKBOOK PAGE: SPK6

AT : LA-508-101 (D-2) LA-508-113 (A-2) SPIKED SAMPLE

				SPIKE	REPLICATE
Type	DETECTOR NUMBER			15	N/A
SPK	DISH SIZE 1 , 2 , or 5		(MS)	2	N/A
Work List	TOTAL COUNTS		(TC)	58207	N/A
9131	COUNT TIME in MINUTES		(CT)	30	N/A
Analyte	BACKGROUND in cpm		(BKG)	0.17	N/A
AT	SAMPLE VOLUME in mL	(Spiked Vial)	(SS)	1.000	N/A
Test Code	SAMPLE DILUTION FACTOR	(Spiked Vial)	(DF)	1	N/A
@ALPHA01	*DIGEST DILUTION FACTOR*		*(DDF)*	1	N/A
Matrix	SPIKE VOLUME in mL		(SVol)	0.100	N/A
LIQUID	SPIKE DILUTION FACTOR		(SDF)	1	N/A
Batch Number	SPIKE BOOK NUMBER		(Spk BN)	123B43	N/A
96005186	SPIKE VALUE in µCi/mL		(SVal)	3.5889E-02	N/A
Rerun	INSTRUMENT EFFICIENCY FACTOR		(EFF)	0.238	N/A
0	SAMPLE + SPIKE µCi/mL		(S+S)	3.67E-03	N/A
Sample Prep	µCi/mL in SAMPLE		<	3.3245E-07	
N/A					
Sample #					
S96T001705					
Instrument Code					
WB26872					
Prepared By					
CJO					
Chemist					
SLF					
Analyst					
DCD					
Date Completed					
05/28/96					
Analysis Date					
05/28/96					
Analysis Time					
01:30 AM					
Sample Point					
AW-101 PUSH					

Rs (Sample Count Rate) = (TC / CT) - BKG

SAMPLE + SPIKE µCi/mL = Rs * DF * DDF / (EFF * SS * 2220000dpm/µCi)

QC ACTUAL = SVal

QC FOUND = (((S+S µCi/mL - SAMPLE µCi/mL) * ((SDF/SVol)/(DF*DDF/SS))))

PERCENT SPIKE RECOVERY = (QC FOUND / QC ACTUAL) *100

NOTE: Original Sample result was a LESS THAN value. Zero (0) was subtracted from the spiked value for QC found calculation.

QC ACTUAL	=	3.59E-02
QC FOUND	=	3.67E-02
PERCENT SPIKE RECOVERY	=	102.3%

Analyst:		CJO	Date: 28-May-96
Signature of Chemist:		SLF	Date: 5/29/96

SPIKE.WB1 Rev. 1.0 508101ML

WORKBOOK PAGE: SAM7

AT : LA-508-101 (D-2) LIQUIDS

			SAMPLE	REPLICATE
Type	DETECTOR NUMBER		15	N/A
SAMPLE	DISH SIZE (1 , 2 , or 5)	(MS)	2	N/A
Work Key	GROSS COUNTS	(GC)	3	N/A
9131	COUNT TIME in MINUTES	(CT)	30	N/A
Lab Code	BACKGROUND in cpm	(BKG)	0.17	N/A
AT	SAMPLE SIZE in mL	(SS)	0.100	N/A
Test Code	DILUTION FACTOR	(DF)	101	N/A
@ALPHA01	DIGEST DILUTION FACTOR	(DDF)	1	N/A
Matrix	EFFICIENCY FACTOR	(EFF)	0.2380	N/A
LIQUID	Lc, Rmax, or Rs,(SAMPLE RATE) as APPROPRIATE		0.176	N/A
Batch Number				
96005186				
Rerun				
0	Sample Concentration in µCi/L	<	3.3578E-01	

Sample Prep	
N/A	Rs (Sample Count Rate) = (TC / CT) - BKG
Sample #	ALPHA TOTAL µCi/L = Rs * 1000mL/L * DF * DDF / (EFF * SS * 2220000dpm/µCi)
S96T001759	ALPHA TOTAL µCi/mL = ALPHA TOTAL µCi/L / 1000mL/L
Instrument Code	Relative Counting Error = [|(The Square Root of TC + BKG * CT) / (TC - BKG * CT)|] * 1.96 * 100
WB26872	Detection Levels and Less Than Values are determined from Procedure LA-508-002.
Prepared By	
CJO	
Chemist	
SLF	ALPHA TOTAL in µCi/mL = < 3.36E-04
Analyst	
DCD	LESS Than Value was Determined from Lc.
Date Complete	
05/28/96	RELATIVE COUNTING ERROR 500.0%
Analysis Date	
05/28/96	
Analysis Time	
01:30 AM	
Sample Point	
AW-101 PUSH	

DETECTION LEVEL
8.45E-04 µCi/mL

Analyst:		DCD	Date: 28-May-96
Signature of Chemist:		SLF	Date: 5/29/96

SAMPLE.WB1 Rev. 1. 508101ML

WORKBOOK PAGE: DUP8

AT : LA-508-101 (D-2) LIQUIDS

			DUP	REPLICATE
Type	DETECTOR NUMBER		15	N/A
DUP	DISH SIZE (1 , 2 , or 5)	(MS)	2	N/A
Work List	GROSS COUNTS	(GC)	2	N/A
9131	COUNT TIME in MINUTES	(CT)	30	N/A
Analyst Id	BACKGROUND in cpm	(BKG)	0.17	N/A
AT	SAMPLE SIZE in mL	(SS)	0.100	N/A
Test Code	DILUTION FACTOR	(DF)	101	N/A
@ALPHA01	DIGEST DILUTION FACTOR	(DDF)	1	N/A
Matrix	EFFICIENCY FACTOR	(EFF)	0.2380	N/A
LIQUID	Lc, Rmax, or Rs,(SAMPLE RATE) as APPROPRIATE		0.176	N/A

Batch Number	
96005186	
Form	
0	Sample Concentration in µCi/L < 3.3578E-01
Sample Prep	
N/A	Rs (Sample Count Rate) = (TC / CT) - BKG
Sample #	ALPHA TOTAL µCi/L = Rs * 1000mL/L * DF * DDF / (EFF * SS * 2220000dpm/µCi)
S96T001759	ALPHA TOTAL µCi/mL = ALPHA TOTAL µCi/L / 1000mL/L
Instrument Code	Relative Counting Error = [|(The Square Root of TC + BKG * CT) / (TC - BKG * CT)|] * 1.96 * 100
WB26872	Detection Levels and Less Than Values are determined from Procedure LA-508-002.
Prepared By	
CJO	
Chemist	
SLF	ALPHA TOTAL in µCi/mL = < 3.36E-04
Analyst	
DCD	LESS Than Value was Determined from Lc.
Date Complete	
05/28/96	RELATIVE COUNTING ERROR 500.0%
Analysis Date	
05/28/96	
Analysis Time	
01:30 AM	
Sample Point	
AW-101 PUSH	

DETECTION LEVEL
8.45E-04 µCi/mL

Analyst:		DCD	Date: 28-May-96
Signature of Chemist:		SLF	Date: 5/29/96

SAMPLE.WB1 Rev. 1. 508101ML

LABCORE Data Entry Template for Worklist# 9292

Analyst: AKL **Instrument:** AB00 #16 **Book#** 47856

Method: LA-508-101 Rev/Mod D-2

Worklist Comment: Sample 1705 use 1 mL, sample 1759 use .1-10-.1 mL. RR #1.SLF

S	Type	Sample#	R	A	Test	Matrix	Group#	Project
1	STD				@ALPHA01	LIQUID		
2	BLNK				@ALPHA01	LIQUID		
3	BLNK/BKG				@ALPHA01	LIQUID		
4	SAMPLE	S96T001705	0		@ALPHA01	LIQUID	96000103	AW-101 PUSH
		Analytes Requested:			ALPHA01 , ALPHA01E			
5	DUP	S96T001705	0		@ALPHA01	LIQUID		
6	SPK	S96T001705	0		@ALPHA01	LIQUID		
7	SAMPLE	S96T001759	0		@ALPHA01	LIQUID	96000103	AW-101 PUSH
		Analytes Requested:			ALPHA01 , ALPHA01E			
8	DUP	S96T001759	0		@ALPHA01	LIQUID		
9	SPK	S96T001759	0		@ALPHA01	LIQUID		

Final page for worklist# 9292

Aleta Lewis 5/30/96
Analyst Signature **Date**

Sylvia Z Cochran 5-31-96
Steve J Hale 5-31-96
Analyst Signature **Date**

Data Entry Comments:

S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

worklistrad Version 0.0 04/18/96
05/31/96 14:09

LABCORE Completed RadChem Report for Worklist#: 9292

Analyst: akl **Instrument:** AB16 **Book#** _____

Method: _____Rev/Mod _____

Worklist Comment: Sample 1705 use 1 mL, sample 1759 use .1-10-.1 mL. RR #1.SLF

Seq	Type	Sample#	R	A	Test	Matrix	Actual	Found	DL or Yield	Unit
1	STD		0	@ALPHA01	ALPHA01	LIQUID	1.28E-04	1.48E-4	115.625	% Recovery
1	STD		0	@ALPHA01	ALPHA01E	LIQUID	1.00	4.38E+00	4.380	% Ct. Erro
2	BLNK		0	@ALPHA01	ALPHA01	LIQUID	1	<8.64E-7		uCi/mL
2	BLNK		0	@ALPHA01	ALPHA01E	LIQUID	1.00	5.00E+02	500.000	uCi/mL
3	BLNK/BKG		0	@ALPHA01	ALPHA01	LIQUID	1.00E+00	1.74E+00	1.740	BLNK/BKG
4	SAMPLE	S96T001705	0	@ALPHA01	ALPHA01	LIQUID	N/A <	4.37E-07	107.0e-008	uCi/mL
4	SAMPLE	S96T001705	0	@ALPHA01	ALPHA01E	LIQUID	N/A	5.00E+02	0.0e+000	% Ct. Error
5	DUP	S96T001705	0	@ALPHA01	ALPHA01	LIQUID	<4.37E-7	<4.37E-7		RPD
5	DUP	S96T001705	0	@ALPHA01	ALPHA01E	LIQUID	1.00	5.00E+02	500.000	% Ct. Erro
6	SPK	S96T001705	0	@ALPHA01	ALPHA01	LIQUID	3.59E-02	4.18E-02	116.435	% Recovery
7	SAMPLE	S96T001759	0	@ALPHA01	ALPHA01	LIQUID	N/A <	4.42E-04	108.0e-005	uCi/mL
7	SAMPLE	S96T001759	0	@ALPHA01	ALPHA01E	LIQUID	N/A	5.00E+02	0.0e+000	% Ct. Error
8	DUP	S96T001759	0	@ALPHA01	ALPHA01	LIQUID	<4.42E-4	<7.99E-4		RPD
8	DUP	S96T001759	0	@ALPHA01	ALPHA01E	LIQUID	1.00	5.00E+02	500.000	% Ct. Erro
9	SPK	S96T001759	0	@ALPHA01	ALPHA01	LIQUID	3.59E-02	3.98E-02	110.864	% Recovery

Final page for worklist# 9292

Analyst Signature **Date** **Analyst Signature** **Date**

6/3/96

Reviewer Signature **Date**

Units shown for QC (BLK/BKG) may not reflect the actual units.

WORKBOOK PAGE: STD1

AT : LA-508-101 (D-2) **LA-508-113 (A-2) STANDARD**

			STANDARD	REPLICATE
Type	DETECTOR NUMBER		16	16
STD	DISH SIZE (1 , 2 , or 5)	(MS)	2	2
Work List	GROSS COUNTS	(GC)	2155	2020
9292	COUNT TIME in MINUTES	(CT)	30	30
AT or TB ?	BACKGROUND in cpm	(BKG)	0.23	0.23
AT	SAMPLE SIZE in mL	(SS)	1.000	1.000
Test Code	DILUTION FACTOR	(DF)	1	1
@ALPHA01	STANDARD BOOK NUMBER	(Std BN)	47B56	47B56
Matrix	EFFICIENCY FACTOR	(EFF)	0.2104	0.2104
LIQUID	Lc, Rmax, or Rs,(SAMPLE RATE) as APPROPRIATE		71.603	67.103
Batch Number	Standard Value in µCi/mL		1.28E-04	
96005439	Concentration in µCi/L.	=	1.53E-01	
Rerun	Replicate Concentration in µCi/L	=	1.44E-01	
0	AVERAGE CONCENTRATION In µCi/L	=	1.4848E-01	

Sample Prep: N/A

Sample #: WL9292

Instrument Code: WB27806

Prepared By: SZC

Chemist: SLF

Analyst: AKL

Date Complete: 05/31/96

Analysis Date: 05/30/96

Analysis Time: 12:00 PM

Sample Point: AW-101 PUSH

Rs (Sample Count Rate) = (TC / CT) - BKG

ALPHA TOTAL µCi/L = Rs * 1000mL/L * DF / (EFF * SS * 2220000dpm/µCi)

ALPHA TOTAL µCi/mL = ALPHA TOTAL µCi/L / 1000mL/L

Relative Counting Error = [|(The Square Root of TC + BKG * CT) / (TC - BKG * CT)|] * 1.96 * 100

Detection Levels and Less Than Values are determined from Procedure LA-508-002.

			DETECTION LEVEL
ALPHA TOTAL CONCENTRATION in µCi/mL	=	1.48E-04	
RELATIVE COUNTING ERROR	=	4.4%	1.07E-06 µCi/mL

Analyst:	SZC		Date: 31-May-96
Signature of Chemist:	SLF		Date: 6/3/96

STANDARD.WB1 Rev. 1.0 508101ML

2195

WORKBOOK PAGE: BLANK2

AT : LA-508-101 (D-2) LIQUIDS

			BLNK	REPLICATE
Type	DETECTOR NUMBER		16	16
BLNK	DISH SIZE (1 , 2 , or 5)	(MS)	2	2
Work List	GROSS COUNTS	(GC)	19	5
9292	COUNT TIME in MINUTES	(CT)	30	30
AT or TB ?	BACKGROUND in cpm	(BKG)	0.23	0.23
AT	SAMPLE SIZE in mL	(SS)	1.000	1.000
Test Code	DILUTION FACTOR	(DF)	1	1
@ALPHA01	DIGEST DILUTION FACTOR	(DDF)	1	1
Matrix	EFFICIENCY FACTOR	(EFF)	0.2104	0.2104
LIQUID	Lc, Rmax, or Rs,(SAMPLE RATE) as APPROPRIATE		0.403	0.204

Batch Number			
96005439	Blank Concentration in µCi/L		8.64E-04
Rerun	Replicate Concentration in µCi/L	<	4.37E-04
0	Maximum Concentration in µCi/L	<	8.6351E-04

Sample Prep	
N/A	Rs (Sample Count Rate) = (TC / CT) - BKG
Sample #	ALPHA TOTAL µCi/L = Rs * 1000mL/L * DF * DDF / (EFF * SS * 2220000dpm/µCi)
WL9292	ALPHA TOTAL µCi/mL = ALPHA TOTAL µCi/L / 1000mL/L
Instrument Code	Relative Counting Error = [|(The Square Root of TC + BKG * CT) / (TC - BKG * CT)|] * 1.96 * 100
WB27806	Detection Levels and Less Than Values are determined from Procedure LA-508-002.
Prepared By	
SZC	
Chemist	
SLF	
Analyst	
AKL	
Date Complete	
05/31/96	
Analysis Date	
05/30/96	
Analysis Time	
12:00 PM	
Sample Point	
AW-101 PUSH	

ALPHA TOTAL in µCi/mL (Maximum)	=	< 8.64E-07	DETECTION LEVEL
LESS THAN Value was Determined from Rs.			1.07E-06 µCi/mL
RELATIVE COUNTING ERROR		500.0%	

Analyst:	AKL		Date: 31-May-96
Signature of Chemist:		SLF	Date: 6/3/96

BLANK.WB1 Rev. 1.0 508101ML

WORKBOOK PAGE: SAM4

AT : LA-508-101 (D-2) LIQUIDS

			SAMPLE	REPLICATE
Type	DETECTOR NUMBER		16	16
SAMPLE	DISH SIZE (1 , 2 , or 5)	(MS)	2	2
Work List	GROSS COUNTS	(GC)	6	5
9292	COUNT TIME in MINUTES	(CT)	30	30
AT or TB ?	BACKGROUND in cpm	(BKG)	0.23	0.23
AT	SAMPLE SIZE in mL	(SS)	1.000	1.000
Test Code	DILUTION FACTOR	(DF)	1	1
@ALPHA01	DIGEST DILUTION FACTOR	(DDF)	1	1
Matrix	EFFICIENCY FACTOR	(EFF)	0.2104	0.2104
LIQUID	Lc, Rmax, or Rs,(SAMPLE RATE) as APPROPRIATE		0.204	0.204
Batch Number				
96005439	Blank Concentration in µCi/L	<	4.37E-04	
Rerun	Replicate Concentration in µCi/L	<	4.37E-04	
0	Maximum Concentration in µCi/L	<	4.3742E-04	
Sample Prep				
N/A				
Sample #				
S96T001705				
Instrument Code				
WB27806				
Prepared By				
SZC				
Chemist				
SLF				
Analyst				
AKL				
Date Complete				
05/31/96				
Analysis Date				
05/30/96				
Analysis Time				
12:00 PM				
Sample Point				
AW-101 PUSH				

Rs (Sample Count Rate) = (TC / CT) - BKG
ALPHA TOTAL µCi/L = Rs * 1000mL/L * DF * DDF / (EFF * SS * 2220000dpm/µCi)
ALPHA TOTAL µCi/mL = ALPHA TOTAL µCi/L / 1000mL/L
Relative Counting Error = [|(The Square Root of TC + BKG * CT) / (TC - BKG * CT)|] * 1.96 * 100
Detection Levels and Less Than Values are determined from Procedure LA-508-002.

ALPHA TOTAL in µCi/mL	(Maximum)	=	< 4.37E-07	DETECTION LEVEL
LESS Than Value was Determined from Lc.				1.07E-06 µCi/mL
RELATIVE COUNTING ERROR			500.0%	

Analyst:	AKL		Date: 31-May-96
Signature of Chemist:		SLF	Date: 6/3/96

SAMPLE.WB1 Rev. 1.0 508101ML

WORKBOOK PAGE: DUP5

AT : LA-508-101 (D-2) LIQUIDS

			DUP	REPLICATE
Type	DETECTOR NUMBER		16	16
DUP	DISH SIZE (1 , 2 , or 5)	(MS)	2	2
Work List	GROSS COUNTS	(GC)	3	6
9292	COUNT TIME in MINUTES	(CT)	30	30
AT or TB ?	BACKGROUND in cpm	(BKG)	0.23	0.23
AT	SAMPLE SIZE in mL	(SS)	1.000	1.000
Test Code	DILUTION FACTOR	(DF)	1	1
@ALPHA01	DIGEST DILUTION FACTOR	(DDF)	1	1
Matrix	EFFICIENCY FACTOR	(EFF)	0.2104	0.2104
LIQUID	Lc, Rmax, or Rs,(SAMPLE RATE) as APPROPRIATE		0.204	0.204
Batch Number				
96005439	Blank Concentration in µCi/L	<	4.37E-04	
Rerun	Replicate Concentration in µCi/L	<	4.37E-04	
0	Maximum Concentration in µCi/L	<	4.3742E-04	

Sample Prep	
N/A	Rs (Sample Count Rate) = (TC / CT) - BKG
Sample #	ALPHA TOTAL µCi/L = Rs * 1000mL/L * DF * DDF / (EFF * SS * 2220000dpm/µCi)
S96T001705	ALPHA TOTAL µCi/mL = ALPHA TOTAL µCi/L / 1000mL/L
Instrument Code	Relative Counting Error = [|(The Square Root of TC + BKG * CT) / (TC - BKG * CT)|] * 1.96 * 100
WB27806	Detection Levels and Less Than Values are determined from Procedure LA-508-002.
Prepared By	
SZC	
Chemist	
SLF	
Analyst	
AKL	
Date Complete	
05/31/96	
Analysis Date	
05/30/96	
Analysis Time	
12:00 PM	
Sample Point	
AW-101 PUSH	

				DETECTION LEVEL
ALPHA TOTAL in µCi/mL	(Maximum)	=	< 4.37E-07	
LESS Than Value was Determined from Lc.				1.07E-06 µCi/mL
RELATIVE COUNTING ERROR			500.0%	

Analyst:		AKL	Date: 31-May-96
Signature of Chemist:		SLF	Date: 6/3/96

SAMPLE.WB1 Rev. 1.0 508101ML

2198

AT : LA-508-101 (D-2) LA-508-113 (A-2) SPIKED SAMPLE

			SPIKE	REPLICATE
Type	DETECTOR NUMBER		16	16
SPK	DISH SIZE 1 , 2 , or 5	(MS)	2	2
Work List	TOTAL COUNTS	(TC)	58360	58921
9292	COUNT TIME in MINUTES	(CT)	30	30
AT or TB ?	BACKGROUND in cpm	(BKG)	0.23	0.23
AT	SAMPLE VOLUME in mL (Spiked Vial)	(SS)	1.000	1.000
Test Code	SAMPLE DILUTION FACTOR (Spiked Vial)	(DF)	1	1
@ALPHA01	DIGEST DILUTION FACTOR	(DDF)	1	1
Matrix	SPIKE VOLUME in mL	(SVol)	0.100	0.100
LIQUID	SPIKE DILUTION FACTOR	(SDF)	1	1
Batch Number	SPIKE BOOK NUMBER	(Spk BN)	123B43	123B43
96005439	SPIKE VALUE in µCi/mL	(SVal)	3.5889E-02	3.5889E-02
Rerun	INSTRUMENT EFFICIENCY FACTOR	(EFF)	0.2104	0.2104
0	SAMPLE + SPIKE µCi/mL	(S+S)	4.16E-03	4.20E-03
Sample Prep	AVERAGE or MAXIMUM µCi/mL in SAMPLE	<	4.3742E-07	
N/A				
Sample #				
S96T001705				
Instrument Code				
WB27806				
Prepared By				
SZC				
Chemist				
SLF				
Analyst				
AKL				
Date Complete				
05/31/96				
Analysis Date				
05/30/96				
Analysis Time				
12:00 PM				
Sample Point				
AW-101 PUSH				

Rs (Sample Count Rate) = (TC / CT) - BKG

SAMPLE + SPIKE µCi/mL = Rs * DF * DDF / (EFF * SS * 2220000dpm/µCi)

QC ACTUAL = SVal

QC FOUND = (((S+S µCi/mL - SAMPLE µCi/mL) * ((SDF/SVol)/(DF*DDF/SS))))

PERCENT SPIKE RECOVERY = (QC FOUND / QC ACTUAL) *100

NOTE: **Original Sample result was a LESS THAN value. Zero (0) was subtracted from the spiked value for QC found calculation.**

QC ACTUAL	=	3.59E-02
QC FOUND	=	4.18E-02
AVG. PERCENT SPIKE RECOVERY	=	116.6%

Analyst:		SZC	Date: 31-May-96
Signature of Chemist:		SLF	Date: 6/3/96

SPIKE.WB1 Rev. 1.0 508101ML

WORKBOOK PAGE: SAM7

AT : LA-508-101 (D-2) LIQUIDS

			SAMPLE	REPLICATE
Type	DETECTOR NUMBER		16	16
SAMPLE	DISH SIZE (1 , 2 , or 5)	(MS)	2	2
Work List	GROSS COUNTS	(GC)	1	6
9292	COUNT TIME in MINUTES	(CT)	30	30
AT or TB ?	BACKGROUND in cpm	(BKG)	0.23	0.23
AT	SAMPLE SIZE in mL	(SS)	0.100	0.100
Test Code	DILUTION FACTOR	(DF)	101	101
@ALPHA01	DIGEST DILUTION FACTOR	(DDF)	1	1
Matrix	EFFICIENCY FACTOR	(EFF)	0.2104	0.2104
LIQUID	Lc, Rmax, or Rs,(SAMPLE RATE) as APPROPRIATE		0.204	0.204

Batch Number			
96005439	Blank Concentration in µCi/L	<	4.42E-01
Rerun	Replicate Concentration in µCi/L	<	4.42E-01
0	Maximum Concentration in µCi/L	<	4.4180E-01

Sample Prep: N/A

Sample #: S96T001759

Instrument Code: WB27806

Prepared By: SZC

Chemist: SLF

Analyst: AKL

Date Complete: 05/31/96

Analysis Date: 05/30/96

Analysis Time: 12:00 PM

Sample Point: AW-101 PUSH

Rs (Sample Count Rate) = (TC / CT) - BKG

ALPHA TOTAL µCi/L = Rs * 1000mL/L * DF * DDF / (EFF * SS * 2220000dpm/µCi)

ALPHA TOTAL µCi/mL = ALPHA TOTAL µCi/L / 1000mL/L

Relative Counting Error = [|(The Square Root of TC + BKG * CT) / (TC - BKG * CT)|] * 1.96 * 100

Detection Levels and Less Than Values are determined from Procedure LA-508-002.

ALPHA TOTAL in µCi/mL (Maximum)	=	< 4.42E-04	DETECTION LEVEL
LESS Than Value was Determined from Lc.			1.08E-03 µCi/mL
RELATIVE COUNTING ERROR		500.0%	

Analyst:	AKL		Date: 31-May-96
Signature of Chemist:		SLF	Date: 6/3/96

SAMPLE.WB1 Rev. 1.0 508101ML

2200

WORKBOOK PAGE: DUP8

AT : LA-508-101 (D-2) LIQUIDS

			DUP	REPLICATE
Type	DETECTOR NUMBER		16	16
DUP	DISH SIZE (1 , 2 , or 5)	(MS)	2	2
Work List	GROSS COUNTS	(GC)	1	11
9292	COUNT TIME in MINUTES	(CT)	30	30
AT or TB ?	BACKGROUND in cpm	(BKG)	0.23	0.23
AT	SAMPLE SIZE in mL	(SS)	0.100	0.100
Test Code	DILUTION FACTOR	(DF)	101	101
@ALPHA01	DIGEST DILUTION FACTOR	(DDF)	1	1
Matrix	EFFICIENCY FACTOR	(EFF)	0.2104	0.2104
LIQUID	Lc, Rmax, or Rs,(SAMPLE RATE) as APPROPRIATE		0.204	0.369

Blank Concentration in µCi/L	<	4.42E-01
Replicate Concentration in µCi/L	<	7.99E-01
Maximum Concentration in µCi/L	<	7.9869E-01

Batch Number: 96005439
Rerun: 0
Sample Prep: N/A
Sample #: S96T001759
Instrument Code: WB27806
Prepared By: SZC
Chemist: SLF
Analyst: AKL
Date Complete: 05/31/96
Analysis Date: 05/30/96
Analysis Time: 12:00 PM
Sample Point: AW-101 PUSH

Rs (Sample Count Rate) = (TC / CT) - BKG
ALPHA TOTAL µCi/L = Rs * 1000mL/L * DF * DDF / (EFF * SS * 2220000dpm/µCi)
ALPHA TOTAL µCi/mL = ALPHA TOTAL µCi/L / 1000mL/L
Relative Counting Error = [|(The Square Root of TC + BKG * CT) / (TC - BKG * CT)|] * 1.96 * 100
Detection Levels and Less Than Values are determined from Procedure LA-508-002.

				DETECTION LEVEL
ALPHA TOTAL in µCi/mL (Maximum)	=	< 7.99E-04		1.08E-03 µCi/mL
LESS Than Value was Determined from Lc.				
RELATIVE COUNTING ERROR			500.0%	

Analyst:		AKL	Date: 31-May-96
Signature of Chemist:		SLF	Date: 6/3/96

SAMPLE.WB1 Rev. 1.0 508101ML

2201

WORKBOOK PAGE: SPK9

AT : LA-508-101 (D-2) LA-508-113 (A-2) SPIKED SAMPLE

			SPIKE	REPLICATE
Type	DETECTOR NUMBER		16	16
SPK	DISH SIZE 1 , 2 , or 5	(MS)	2	2
Work List	TOTAL COUNTS	(TC)	57371	54109
9292	COUNT TIME in MINUTES	(CT)	30	30
AT or TB ?	BACKGROUND in cpm	(BKG)	0.23	0.23
AT	SAMPLE VOLUME in mL (Spiked Vial)	(SS)	0.100	0.100
Test Code	SAMPLE DILUTION FACTOR (Spiked Vial)	(DF)	101	101
@ALPHA01	DIGEST DILUTION FACTOR	(DDF)	1	1
Matrix	SPIKE VOLUME in mL	(SVol)	0.100	0.100
LIQUID	SPIKE DILUTION FACTOR	(SDF)	1	1
Batch Number	SPIKE BOOK NUMBER	(Spk BN)	123B43	123B43
96005439	SPIKE VALUE in µCi/mL	(SVal)	3.5889E-02	3.5889E-02
Rerun	INSTRUMENT EFFICIENCY FACTOR	(EFF)	0.2104	0.2104
0	SAMPLE + SPIKE µCi/mL	(S+S)	4.13E+00	3.90E+00
Sample Prep	AVERAGE or MAXIMUM µCi/mL in SAMPLE	<	4.4180E-04	
N/A				
Sample #				
S96T001759				
Instrument Code				
WB27806				
Prepared By				
SZC				
Chemist				
SLF				
Analyst				
AKL				
Date Complete				
05/31/96				
Analysis Date				
05/30/96				
Analysis Time				
12:00 PM				
Sample Point				
AW-101 PUSH				

Rs (Sample Count Rate) = (TC / CT) - BKG

SAMPLE + SPIKE µCi/mL = Rs * DF * DDF / (EFF * SS * 2220000dpm/µCi)

QC ACTUAL = SVal

QC FOUND = (((S+S µCi/mL - SAMPLE µCi/mL) * ((SDF/SVol)/(DF*DDF/SS))))

PERCENT SPIKE RECOVERY = (QC FOUND / QC ACTUAL) *100

NOTE: **Original Sample result was a LESS THAN value. Zero (0) was subtracted from the spiked value for QC found calculation.**

QC ACTUAL	=	3.59E-02
QC FOUND	=	3.98E-02
AVG. PERCENT SPIKE RECOVERY	=	110.8%

Analyst:		SZC	Date: 31-May-96
Signature of Chemist:		SLF	Date: 6/3/96

SPIKE.WB1 Rev. 1.0 508101ML

2202

LABCORE Data Entry Template for Worklist# 10282

Analyst: S.C.L **Instrument:** AB00 16 **Book#** 47B56

Method: LA-508-101 Rev/Mod D-2

Worklist Comment: Determine sample size using ludlum.For spike use: 0.1ml. new

S	Type	Sample#	R	A	Test	Matrix	Group#	Project
1	STD				@ALPHA01	SOLID		
2	BLNK-PREP				@ALPHA01	SOLID		
3	BLNK/BKG				@ALPHA01	SOLID		
4	SAMPLE	S96T001961	0	F	@ALPHA01	SOLID	96000103	AW-101 PUSH
	Analytes Requested:				ALPHA01 , ALPHA01E			
5	DUP	S96T001961	0	F	@ALPHA01	SOLID		
6	SPK	S96T001961	0	F	@ALPHA01	SOLID		
7	SAMPLE	S96T001965	0	F	@ALPHA01	SOLID	96000103	AW-101 PUSH
	Analytes Requested:				ALPHA01 , ALPHA01E			
8	DUP	S96T001965	0	F	@ALPHA01	SOLID		
9	SAMPLE	S96T001969	0	F	@ALPHA01	SOLID	96000103	AW-101 PUSH
	Analytes Requested:				ALPHA01 , ALPHA01E			
10	DUP	S96T001969	0	F	@ALPHA01	SOLID		

Final page for worklist # 10282

Sue C Lai 6-27-96
Analyst Signature **Date**

C.J. Oranen 7/2/96
Analyst Signature **Date**

Data Entry Comments:

S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

LABCORE Completed RadChem Report for Worklist#: 10282

Analyst: scl **Instrument:** AB16 **Book#** _____

Method: _____ Rev/Mod _____

Worklist Comment: Determine sample size using ludlum.For spike use: 0.1ml. new

Seq	Type	Sample#	R	A	Test	Matrix	Actual		Found	DL or Yield	Unit
1	STD		0		@ALPHA01 ALPHA01	SOLID	1.28E-04		1.45E-4	113.281	% Recovery
1	STD		0		@ALPHA01 ALPHA01E	SOLID	1.00		4.38E+00	4.380	% Ct. Erro
2	BLNK-PREP		0		@ALPHA01 ALPHA01	SOLID	1		<7.37E-3		uCi/g
2	BLNK-PREP		0		@ALPHA01 ALPHA01E	SOLID	1.00		5.00E+02	500.000	uCi/g
3	BLNK/BKG		0		@ALPHA01 ALPHA01	SOLID	1.00E+00		1.01E+00	1.010	BLNK/BKG
4	SAMPLE	S96T001961	0	F	@ALPHA01 ALPHA01	SOLID	N/A	<	5.20E-03	127.0e-004	uCi/g
4	SAMPLE	S96T001961	0	F	@ALPHA01 ALPHA01E	SOLID	N/A		5.00E+02	0.0e+000	% Ct. Error
5	DUP	S96T001961	0	F	@ALPHA01 ALPHA01	SOLID	<5.20E-3		<5.16E-3		RPD
5	DUP	S96T001961	0	F	@ALPHA01 ALPHA01E	SOLID	1.00		5.00E+02	500.000	% Ct. Erro
6	SPK	S96T001961	0	F	@ALPHA01 ALPHA01	SOLID	3.59E-02		3.10E-02	86.351	% Recovery
7	SAMPLE	S96T001965	0	F	@ALPHA01 ALPHA01	SOLID	N/A	<	6.99E-03	121.0e-004	uCi/g
7	SAMPLE	S96T001965	0	F	@ALPHA01 ALPHA01E	SOLID	N/A		5.00E+02	0.0e+000	% Ct. Error
8	DUP	S96T001965	0	F	@ALPHA01 ALPHA01	SOLID	<6.99E-3		<4.76E-3		RPD
8	DUP	S96T001965	0	F	@ALPHA01 ALPHA01E	SOLID	1.00		5.00E+02	500.000	% Ct. Erro
9	SAMPLE	S96T001969	0	F	@ALPHA01 ALPHA01	SOLID	N/A	<	5.70E-03	114.0e-004	uCi/g
9	SAMPLE	S96T001969	0	F	@ALPHA01 ALPHA01E	SOLID	N/A		5.00E+02	0.0e+000	% Ct. Error
10	DUP	S96T001969	0	F	@ALPHA01 ALPHA01	SOLID	<5.70E-3		<7.27E-3		RPD
10	DUP	S96T001969	0	F	@ALPHA01 ALPHA01E	SOLID	1.00		5.00E+02	500.000	% Ct. Erro

Final page for worklist# 10282

Analyst Signature **Date** **Analyst Signature** **Date**

7/2/96

Reviewer Signature **Date**

Units shown for QC (BLK/BKG) may not reflect the actual units.

WORKBOOK PAGE: STD1

AT : LA-508-101 (D-2)

	LA-508-113 (A-2) STANDARD		STANDARD	REPLICATE
	DETECTOR NUMBER		16	16
STD	DISH SIZE (1 , 2 , or 5)	(MS)	2	2
	GROSS COUNTS	(GC)	2070	2020
10282	COUNT TIME in MINUTES	(CT)	30	30
	BACKGROUND in cpm	(BKG)	0.23	0.23
AT	SAMPLE SIZE in mL	(SS)	1.000	1.000
	DILUTION FACTOR	(DF)	1	1
@ALPHA01	STANDARD BOOK NUMBER	(Std BN)	47B56	47B56
	EFFICIENCY FACTOR	(EFF)	0.2104	0.2104
LIQUID	Lc, Rmax, or Rs,(SAMPLE RATE) as APPROPRIATE		68.770	67.103
	Standard Value in µCi/mL		1.28E-04	
96006521	Concentration in µCi/L	=	1.47E-01	
	Replicate Concentration in µCi/L	=	1.44E-01	
0	AVERAGE CONCENTRATION in µCi/L	=	1.4545E-01	

N/A

Rs (Sample Count Rate) = (TC / CT) - BKG

ALPHA TOTAL µCi/L = Rs * 1000mL/L * DF / (EFF * SS * 2220000dpm/µCi)

wl10282

ALPHA TOTAL µCi/mL = ALPHA TOTAL µCi/L / 1000mL/L

Relative Counting Error = [|(The Square Root of TC + BKG * CT) / (TC - BKG * CT)|] * 1.96 * 100

WB27806

Detection Levels and Less Than Values are determined from Procedure LA-508-002.

CJO

SLF	ALPHA TOTAL CONCENTRATION in µCi/mL	=	1.45E-04	DETECTION LEVEL
SCL				1.07E-06 µCi/mL
07/02/96	RELATIVE COUNTING ERROR	=	4.4%	

06/27/96

12:00 PM

AW-101

Analyst:		CJO	Date: 02-Jul-96
Signature of Chemist:		SLF	Date: 7/2/96

STANDARD.WB1 Rev. 1.0 508101ML

WORKBOOK PAGE: BLANK2

AT : LA-508-101 (D-2) SOLIDS

			BLNK-PREP	REPLICATE
	DETECTOR NUMBER		16	16
BLNK-PREP	DISH SIZE (1 , 2 , or 5)	(MS)	2	2
	GROSS COUNTS	(GC)	5	9
10282	COUNT TIME in MINUTES	(CT)	30	30
	BACKGROUND in cpm	(BKG)	0.23	0.23
AT	SAMPLE SIZE in mL	(SS)	0.500	0.500
	DILUTION FACTOR	(DF)	11	11
@ALPHA01	DIGEST GRAMS of SOLIDS / L	(Dg/L)	1.85	1.85
	EFFICIENCY FACTOR	(EFF)	0.2104	0.2104
SOLID	Lc, Rmax, or Rs,(SAMPLE RATE) as APPROPRIATE		0.204	0.289

96006521	Blank Concentration in µCi/g	<	5.20E-03
	Replicate Concentration in µCi/g	<	7.37E-03
0	Maximum Concentration in µCi/g	<	7.3658E-03

N/A

WL10282

WB27806

CJO

Rs (Sample Count Rate) = (TC / CT) - BKG

ALPHA TOTAL µCi/g = Rs * 1000mL/L * DF / (EFF * SS * Dg/L * 2220000dpm/µCi)

Relative Counting Error = [|(The Square Root of TC + BKG * CT) / (TC - BKG * CT)|] * 1.96 * 100

Detection Levels and Less Than Values are determined from Procedure LA-508-002.

SLF	ALPHA TOTAL in µCi/g (Maximum)	=	< 7.37E-03	DETECTION LEVEL
SCL	LESS Than Value was Determined from Lc.			1.27E-02 µCi/g
07/02/96	RELATIVE COUNTING ERROR		500.0%	

07/02/96

06/27/96

12:00 PM

AW-101

Analyst:		SCL	Date: 02-Jul-96
Signature of Chemist:		SLF	Date: 7/2/96

BLANK.WB1 Rev. 1.0 508101ML

2206

WORKBOOK PAGE: SAM4

AT : LA-508-101 (D-2) SOLIDS

			SAMPLE	REPLICATE
Type	DETECTOR NUMBER		16	16
SAMPLE	DISH SIZE (1 , 2 , or 5)	(MS)	2	2
Work Order	GROSS COUNTS	(GC)	5	1
10282	COUNT TIME in MINUTES	(CT)	30	30
Sample Date	BACKGROUND in cpm	(BKG)	0.23	0.23
AT	SAMPLE SIZE in mL	(SS)	0.500	0.500
Analyst Code	DILUTION FACTOR	(DF)	11	11
@ALPHA01	DIGEST GRAMS of SOLIDS / L	(Dg/L)	1.85	1.85
Matrix	EFFICIENCY FACTOR	(EFF)	0.2104	0.2104
SOLID	Lc, Rmax, or Rs,(SAMPLE RATE) as APPROPRIATE		0.204	0.204

Batch Number			
96006521	Blank Concentration in µCi/g	<	5.20E-03
Rerun	Replicate Concentration in µCi/g	<	5.20E-03
0	Maximum Concentration in µCi/g	<	5.2018E-03

Sample Prep
FUSION01

Sample #
S96T001961

Instrument Code
WB27806

Prepared By
CJO

Chemist
SLF

Analyst
SCL

Date Complete
07/02/96

Analyst Date
06/27/96

Analyst Time
12:00 PM

Sample Point
AW-101

Rs (Sample Count Rate) = (TC / CT) - BKG
ALPHA TOTAL µCi/g = Rs * 1000mL/L * DF / (EFF * SS * Dg/L * 2220000dpm/µCi)

Relative Counting Error = [|(The Square Root of TC + BKG * CT) / (TC - BKG * CT)|] * 1.96 * 100
Detection Levels and Less Than Values are determined from Procedure LA-508-002.

ALPHA TOTAL in µCi/g (Maximum)	=	< 5.20E-03	DETECTION LEVEL
LESS Than Value was Determined from Lc.			1.27E-02 µCi/g
RELATIVE COUNTING ERROR		500.0%	

Analyst:	SCL		Date: 02-Jul-96
Signature of Chemist:		SLF	Date: 7/2/96

SAMPLE.WB1 Rev. 1. 508101ML

WORKBOOK PAGE: DUP5

AT : LA-508-101 (D-2) SOLIDS

			DUP	REPLICATE
Type	DETECTOR NUMBER		16	16
DUP	DISH SIZE (1 , 2 , or 5)	(MS)	2	2
Worksheet	GROSS COUNTS	(GC)	1	1
10282	COUNT TIME in MINUTES	(CT)	30	30
Analytical Method	BACKGROUND in cpm	(BKG)	0.23	0.23
AT	SAMPLE SIZE in mL	(SS)	0.500	0.500
Part Code	DILUTION FACTOR	(DF)	11	11
@ALPHA01	DIGEST GRAMS of SOLIDS / L	(Dg/L)	1.8664	1.8664
Matrix	EFFICIENCY FACTOR	(EFF)	0.2104	0.2104
SOLID	Lc, Rmax, or Rs,(SAMPLE RATE) as APPROPRIATE		0.204	0.204

Batch Number			
96006521	Blank Concentration in µCi/g	<	5.16E-03
Batch	Replicate Concentration in µCi/g	<	5.16E-03
0	Maximum Concentration in µCi/g	<	5.1561E-03

Sample Preparer
FUSION01

Sample
S96T001961

Instrument Code
WB27806

Prepared By
CJO

Chemist
SLF

Analyst
SCL

Date Complete
07/02/96

Prep Date
06/27/96

Analysis Time
12:00 PM

Sample Point
AW-101

Rs (Sample Count Rate) = (TC / CT) - BKG
ALPHA TOTAL µCi/g = Rs * 1000mL/L * DF / (EFF * SS * Dg/L * 2220000dpm/µCi)

Relative Counting Error = [|(The Square Root of TC + BKG * CT) / (TC - BKG * CT)|] * 1.96 * 100
Detection Levels and Less Than Values are determined from Procedure LA-508-002.

ALPHA TOTAL in µCi/g	(Maximum)	=	< 5.16E-03	DETECTION LEVEL
LESS Than Value was Determined from Lc.				1.26E-02 µCi/g
RELATIVE COUNTING ERROR			500.0%	

Analyst:		SCL	Date: 02-Jul-96
Signature of Chemist:		SLF	Date: 7/2/96

SAMPLE.WB1 Rev. 1. 508101ML

2208

WORKBOOK PAGE: SPK6

AT : LA-508-101 (D-2) LA-508-113 (A-2) SPIKED SAMPLE

			SPIKE	REPLICATE
Type	DETECTOR NUMBER		16	16
SPK	DISH SIZE 1 , 2 , or 5	(MS)	2	2
Weight	TOTAL COUNTS	(TC)	43805	43202
10282	COUNT TIME in MINUTES	(CT)	30	30
Vol. Filter	BACKGROUND in cpm	(BKG)	0.23	0.23
AT	SAMPLE VOLUME in mL (Spiked Vial)	(SS)	0.500	0.500
Sample Code	SAMPLE DILUTION FACTOR (Spiked Vial)	(DF)	11	11
@ALPHA01	DIGEST GRAMS of SOLIDS / L	(Dg/L)	1.85	1.85
Matrix	SPIKE VOLUME in mL	(SVol)	0.100	0.100
SOLID	SPIKE DILUTION FACTOR	(SDF)	1	1
Batch Number	SPIKE BOOK NUMBER	(Spk BN)	123B43	123B43
96006521	SPIKE VALUE in µCi/mL	(SVal)	3.5884E-02	3.5884E-02
Rerun	INSTRUMENT EFFICIENCY FACTOR	(EFF)	0.2104	0.2104
0	SAMPLE + SPIKE µCi/g	(S+S)	3.72E+01	3.67E+01
Sample Prep	AVERAGE or MAXIMUM µCi/g in SAMPLE	<	5.2018E-03	
FUSION01				

Sample #	
S96T001961	Rs (Sample Count Rate) = (TC / CT) - BKG
Instrument Code	SAMPLE + SPIKE µCi/g = Rs * 1000mL/L * DF / (EFF * SS * Dg/L *2220000dpm/µCi)
WB27806	QC ACTUAL = SVal
Performed By	QC FOUND = (((S+S µCi/g - SAMPLE µCi/g) * ((SDF/(SVol*1000))/(DF/SS/Dg/L))))
CJO	PERCENT SPIKE RECOVERY = (QC FOUND / QC ACTUAL) *100
Reviewed By	
SLF	
Analyst	
SCL	
Date Completed	NOTE: Original Sample result was a LESS THAN value. Zero (0) was subtracted from the spiked value for QC found calculation.
07/02/96	
Sample Date	
06/27/96	QC ACTUAL = 3.59E-02
Sample Time	QC FOUND = 3.10E-02
12:00 PM	AVG. PERCENT SPIKE RECOVERY = 86.5%
Sample Point	
AW-101	

Analyst:	CJO		Date: 02-Jul-96
Signature of Chemist:	SLF		Date: 7/2/96

SPIKE.WB1 Rev. 1.0 50810 ML

2209

WORKBOOK PAGE: SAM7

AT : LA-508-101 (D-2) SOLIDS

			SAMPLE	REPLICATE
Type	DETECTOR NUMBER		16	16
SAMPLE	DISH SIZE (1 , 2 , or 5)	(MS)	2	2
Matrix	GROSS COUNTS	(GC)	9	5
10282	COUNT TIME in MINUTES	(CT)	30	30
Client	BACKGROUND in cpm	(BKG)	0.23	0.23
AT	SAMPLE SIZE in mL	(SS)	0.500	0.500
Client Code	DILUTION FACTOR	(DF)	11	11
@ALPHA01	DIGEST GRAMS of SOLIDS / L	(Dg/L)	1.9508	1.9508
Matrix	EFFICIENCY FACTOR	(EFF)	0.2104	0.2104
SOLID	Lc, Rmax, or Rs,(SAMPLE RATE) as APPROPRIATE		0.289	0.204

Batch Number			
96006521	Blank Concentration in µCi/g	<	6.99E-03
Return	Replicate Concentration in µCi/g	<	4.93E-03
0	Maximum Concentration in µCi/g	<	6.9852E-03

Sample Prep
FUSION01

Sample #
S96T001965

Instrument Code
WB27806

Prepared By
CJO

Chemist
SLF

Analyst
SCL

Date Complete
07/02/96

Analysis Date
06/27/96

Analysis Time
12:00 PM

Sample Point
AW-101

Rs (Sample Count Rate) = (TC / CT) - BKG

ALPHA TOTAL µCi/g = Rs * 1000mL/L * DF / (EFF * SS * Dg/L * 2220000dpm/µCi)

Relative Counting Error = [|(The Square Root of TC + BKG * CT) / (TC - BKG * CT)|] * 1.96 * 100

Detection Levels and Less Than Values are determined from Procedure LA-508-002.

ALPHA TOTAL in µCi/g (Maximum)	=	< 6.99E-03		DETECTION LEVEL
LESS THAN Value was Determined from Rmax.				1.21E-02 µCi/g
RELATIVE COUNTING ERROR		500.0%		

Analyst:		SCL	Date: 02-Jul-96
Signature of Chemist:		SLF	Date: 7/2/96

SAMPLE.WB1 Rev. 1. 508101ML

2210

WORKBOOK PAGE: DUP8

AT : LA-508-101 (D-2) SOLIDS

			DUP	REPLICATE
Type	DETECTOR NUMBER		16	16
DUP	DISH SIZE (1 , 2 , or 5)	(MS)	2	2
Workbook	GROSS COUNTS	(GC)	6	4
10282	COUNT TIME in MINUTES	(CT)	30	30
Sample	BACKGROUND in cpm	(BKG)	0.23	0.23
AT	SAMPLE SIZE in mL	(SS)	0.500	0.500
Test Code	DILUTION FACTOR	(DF)	11	11
@ALPHA01	DIGEST GRAMS of SOLIDS / L	(Dg/L)	2.0216	2.0216
Matrix	EFFICIENCY FACTOR	(EFF)	0.2104	0.2104
SOLID	Lc, Rmax, or Rs,(SAMPLE RATE) as APPROPRIATE		0.204	0.204

Batch Number			
96006521	Blank Concentration in µCi/g	<	4.76E-03
Replicate	Replicate Concentration in µCi/g	<	4.76E-03
0	Maximum Concentration in µCi/g	<	4.7603E-03

Sample Prep Code
FUSION01

Rs (Sample Count Rate) = (TC / CT) - BKG
ALPHA TOTAL µCi/g = Rs * 1000mL/L * DF / (EFF * SS * Dg/L * 2220000dpm/µCi)

Sample
S96T001965

Relative Counting Error = [|(The Square Root of TC + BKG * CT) / (TC - BKG * CT)|] * 1.96 * 100
Detection Levels and Less Than Values are determined from Procedure LA-508-002.

Instrument Code
WB27806

Prepared By
CJO

Chemist
SLF

ALPHA TOTAL in µCi/g (Maximum)	=	< 4.76E-03	DETECTION LEVEL
LESS Than Value was Determined from Lc.			1.16E-02 µCi/g
RELATIVE COUNTING ERROR		500.0%	

Analyst
SCL

Date Complete
07/02/96

Analysis Date
06/27/96

Analysis Time
12:00 PM

Sample Point
AW-101

Analyst:	SCL	Date: 02-Jul-96	
Signature of Chemist:	SLF	Date: 7/2/96	

SAMPLE.WB1 Rev. 1. 508101ML

2211

WORKBOOK PAGE: SAM9

AT : LA-508-101 (D-2) SOLIDS

			SAMPLE	REPLICATE
Type	DETECTOR NUMBER		16	16
SAMPLE	DISH SIZE (1 , 2 , or 5)	(MS)	2	2
Type	GROSS COUNTS	(GC)	8	5
10282	COUNT TIME in MINUTES	(CT)	30	30
Matrix	BACKGROUND in cpm	(BKG)	0.23	0.23
AT	SAMPLE SIZE in mL	(SS)	0.500	0.500
Method	DILUTION FACTOR	(DF)	11	11
@ALPHA01	DIGEST GRAMS of SOLIDS / L	(Dg/L)	2.0588	2.0588
Matrix	EFFICIENCY FACTOR	(EFF)	0.2104	0.2104
SOLID	Lc, Rmax, or Rs,(SAMPLE RATE) as APPROPRIATE		0.249	0.204

Batch Number			
96006521	Blank Concentration in µCi/g	<	5.70E-03
Batch	Replicate Concentration in µCi/g	<	4.67E-03
0	Maximum Concentration in µCi/g	<	5.6958E-03

Instrument Prog
FUSION01
Sample ID
S96T001969
Preparation Date
WB27806
Prepared By
CJO
Chemist
SLF
Analyst
SCL
Date Complete
07/02/96
Analysis Date
06/27/96
Analysis Time
12:00 PM
Sample Point
AW-101

Rs (Sample Count Rate) = (TC / CT) - BKG
ALPHA TOTAL µCi/g = Rs * 1000mL/L * DF / (EFF * SS * Dg/L * 2220000dpm/µCi)

Relative Counting Error = [|(The Square Root of TC + BKG * CT) / (TC - BKG * CT)|] * 1.96 * 100
Detection Levels and Less Than Values are determined from Procedure LA-508-002.

				DETECTION LEVEL
ALPHA TOTAL in µCi/g (Maximum)	=	< 5.70E-03		
LESS THAN Value was Determined from Rmax.				1.14E-02 µCi/g
RELATIVE COUNTING ERROR			500.0%	

Analyst:		SCL	Date: 02-Jul-96
Signature of Chemist:		SLF	Date: 7/2/96

SAMPLE.WB1 Rev. 1. 508101ML

2212

WORKBOOK PAGE: DUP10

AT : LA-508-101 (D-2) SOLIDS

			DUP	REPLICATE
Type	DETECTOR NUMBER		16	16
DUP	DISH SIZE (1 , 2 , or 5)	(MS)	2	2
Worksheet	GROSS COUNTS	(GC)	10	6
10282	COUNT TIME in MINUTES	(CT)	30	30
Analyte	BACKGROUND in cpm	(BKG)	0.23	0.23
AT	SAMPLE SIZE in mL	(SS)	0.500	0.500
Method	DILUTION FACTOR	(DF)	11	11
@ALPHA01	DIGEST GRAMS of SOLIDS / L	(Dg/L)	2.134	2.134
Matrix	EFFICIENCY FACTOR	(EFF)	0.2104	0.2104
SOLID	Lc, Rmax, or Rs,(SAMPLE RATE) as APPROPRIATE		0.329	0.204

Batch Number			
96006521	Blank Concentration in µCi/g	<	7.27E-03
Replicate	Replicate Concentration in µCi/g	<	4.51E-03
0	Maximum Concentration in µCi/g	<	7.2711E-03

Sample Group
FUSION01
Sample
S96T001969
Instrument Code
WB27806
Prepared By
CJO
Chemist
SLF
Analyst
SCL
Date Complete
07/02/96
Analysis Date
06/27/96
Analysis Time
12:00 PM
Sample Point
AW-101

Rs (Sample Count Rate) = (TC / CT) - BKG
ALPHA TOTAL µCi/g = Rs * 1000mL/L * DF / (EFF * SS * Dg/L * 2220000dpm/µCi)

Relative Counting Error = [|(The Square Root of TC + BKG * CT) / (TC - BKG * CT)|] * 1.96 * 100
Detection Levels and Less Than Values are determined from Procedure LA-508-002.

ALPHA TOTAL in µCi/g (Maximum)	=	< 7.27E-03		DETECTION LEVEL
LESS THAN Value was Determined from Rmax.				1.10E-02 µCi/g
RELATIVE COUNTING ERROR		500.0%		

Analyst:	SCL	Date: 02-Jul-96	
Signature of Chemist:	SLF	Date: 7/2/96	

SAMPLE.WB1 Rev. 1. 508101ML

LABCORE Data Entry Template for Worklist# 10283

Analyst: SLH **Instrument:** AB00 16 **Book#** 47B56

Method: LA-508-101 Rev/Mod D-2

Worklist Comment: Determine sample size using ludlum.For spike use: 0.1ml.new

S	Type	Sample#	R	A	Test	Matrix	Group#	Project
1	STD				@ALPHA01	SOLID		
2	BLNK-PREP				@ALPHA01	SOLID		
3	BLNK/BKG				@ALPHA01	SOLID		
4	SAMPLE	S96T001977	0	F	@ALPHA01	SOLID	96000103	AW-101 PUSH
	Analytes Requested: ALPHA01 , ALPHA01E							
5	DUP	S96T001977	0	F	@ALPHA01	SOLID		
6	SPK	S96T001977	0	F	@ALPHA01	SOLID		
7	SAMPLE	S96T001984	0	F	@ALPHA01	SOLID	96000103	AW-101 PUSH
	Analytes Requested: ALPHA01 , ALPHA01E							
8	DUP	S96T001984	0	F	@ALPHA01	SOLID		
9	SAMPLE	S96T001991	0	F	@ALPHA01	SOLID	96000103	AW-101 PUSH
	Analytes Requested: ALPHA01 , ALPHA01E							
10	DUP	S96T001991	0	F	@ALPHA01	SOLID		

Final page for worklist # 10283

Sandra L Hood Boatright 6-27-96
Analyst Signature **Date**

Sharon L Walker 7-2-96
Analyst Signature **Date**

Data Entry Comments: SPK + SPK Rep show high RPD. Batch will be rerun. [illegible] 7/2/96

S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

worklistrad Version 0.0 04/18/96
07/02/96 10:59

LABCORE Completed RadChem Report for Worklist#: 10283

Analyst: slh **Instrument:** AB16 **Book#** _____

Method: _____ Rev/Mod _____

Worklist Comment: Determine sample size using ludlum.For spike use: 0.1ml.new

Seq	Type	Sample#	R	A	Test		Matrix	Actual	Found	DL or Yield	Unit
1	STD		0		@ALPHA01	ALPHA01	SOLID	1.28E-04	1.35E-4	105.469	% Recovery
1	STD		0		@ALPHA01	ALPHA01E	SOLID	1.00	4.51E+00	4.510	% Ct. Erro
2	BLNK-PREP		0		@ALPHA01	ALPHA01	SOLID	1	<1.78E-2		uCi/g
2	BLNK-PREP		0		@ALPHA01	ALPHA01E	SOLID	1.00	1.84E+02	184.000	uCi/g
3	BLNK/BKG		0		@ALPHA01	ALPHA01	SOLID	1.00E+00	5.00E+00	5.000	BLNK/BKG
4	SAMPLE	S96T001977	0	F	@ALPHA01	ALPHA01	SOLID	N/A	1.13E-01	237.0e-004	uCi/g
4	SAMPLE	S96T001977	0	F	@ALPHA01	ALPHA01E	SOLID	N/A	3.56E+01	0.0e+000	% Ct. Error
5	DUP	S96T001977	0	F	@ALPHA01	ALPHA01	SOLID	1.13E-1	1.38E-1	19.920	RPD
5	DUP	S96T001977	0	F	@ALPHA01	ALPHA01E	SOLID	1.00	3.21E+01	32.100	% Ct. Erro
6	SPK	S96T001977	0	F	@ALPHA01	ALPHA01	SOLID	3.59E-02	2.64E-02	73.538	% Recovery
7	SAMPLE	S96T001984	0	F	@ALPHA01	ALPHA01	SOLID	N/A	2.07E-01	239.0e-004	uCi/g
7	SAMPLE	S96T001984	0	F	@ALPHA01	ALPHA01E	SOLID	N/A	2.59E+01	0.0e+000	% Ct. Error
8	DUP	S96T001984	0	F	@ALPHA01	ALPHA01	SOLID	2.07E-1	1.98E-1	4.444	RPD
8	DUP	S96T001984	0	F	@ALPHA01	ALPHA01E	SOLID	1.00	2.73E+01	27.300	% Ct. Erro
9	SAMPLE	S96T001991	0	F	@ALPHA01	ALPHA01	SOLID	N/A	1.75E-01	236.0e-004	uCi/g
9	SAMPLE	S96T001991	0	F	@ALPHA01	ALPHA01E	SOLID	N/A	2.85E+01	0.0e+000	% Ct. Error
10	DUP	S96T001991	0	F	@ALPHA01	ALPHA01	SOLID	1.75E-1	1.17E-1	39.726	RPD
10	DUP	S96T001991	0	F	@ALPHA01	ALPHA01E	SOLID	1.00	3.44E+01	34.400	% Ct. Erro

Final page for worklist# 10283

Analyst Signature **Date** **Analyst Signature** **Date**

7/2/96

Reviewer Signature **Date**

Units shown for QC (BLK/BKG) may not reflect the actual units.

WORKBOOK PAGE: STD1

AT : LA-508-101 (D-2) **LA-508-113 (A-2) STANDARD**

			STANDARD	REPLICATE
	DETECTOR NUMBER		16	16
STD	DISH SIZE (1 , 2 , or 5)	(MS)	2	2
	GROSS COUNTS	(GC)	1891	1888
10283	COUNT TIME in MINUTES	(CT)	30	30
	BACKGROUND in cpm	(BKG)	0.03	0.03
AT	SAMPLE SIZE in mL	(SS)	1.000	1.000
	DILUTION FACTOR	(DF)	1	1
@ALPHA01	STANDARD BOOK NUMBER	(Std BN)	47B56	47B56
	EFFICIENCY FACTOR	(EFF)	0.2104	0.2104
LIQUID	Lc, Rmax, or Rs,(SAMPLE RATE) as APPROPRIATE		63.003	62.903
	Standard Value in µCi/mL		1.28E-04	
96006523	Concentration in µCi/L	=	1.35E-01	
	Replicate Concentration in µCi/L	=	1.35E-01	
0	AVERAGE CONCENTRATION in µCi/L	=	1.3478E-01	

N/A

Rs (Sample Count Rate) = (TC / CT) - BKG

ALPHA TOTAL µCi/L = Rs * 1000mL/L * DF / (EFF * SS * 2220000dpm/µCi)

WL10283

ALPHA TOTAL µCi/mL = ALPHA TOTAL µCi/L / 1000mL/L

Relative Counting Error = [|(The Square Root of TC + BKG * CT) / (TC - BKG * CT)|] * 1.96 * 100

WB27806

Detection Levels and Less Than Values are determined from Procedure LA-508-002.

SLH2

SLF

			DETECTION LEVEL
ALPHA TOTAL CONCENTRATION in µCi/mL	=	1.35E-04	
RELATIVE COUNTING ERROR	=	4.5%	5.10E-07 µCi/mL

SLH

07/02/96

06/29/96

05:30 AM

AW-101 PUSH

Analyst:		SLH2	Date: 02-Jul-96
Signature of Chemist:		SLF	Date: 7/2/96

STANDARD.WB1 Rev. 1.0 508101ML

WORKBOOK PAGE: BLANK2

AT : LA-508-101 (D-2) SOLIDS

			BLNK-PREP	REPLICATE
	DETECTOR NUMBER		16	16
BLNK-PREP	DISH SIZE (1 , 2 , or 5)	(MS)	2	2
	GROSS COUNTS	(GC)	6	3
10283	COUNT TIME in MINUTES	(CT)	30	30
	BACKGROUND in cpm	(BKG)	0.03	0.03
AT	SAMPLE SIZE in mL	(SS)	1.000	1.000
	DILUTION FACTOR	(DF)	101	101
@ALPHA01	DIGEST GRAMS of SOLIDS / L	(Dg/L)	2.1724	2.1724
	EFFICIENCY FACTOR	(EFF)	0.2104	0.2104
SOLID	Lc, Rmax, or Rs,(SAMPLE RATE) as APPROPRIATE		0.170	0.179

96006523	Blank Concentration in µCi/g		1.69E-02
	Replicate Concentration in µCi/g	<	1.78E-02
0	Maximum Concentration in µCi/g	<	1.7779E-02

N/A

Rs (Sample Count Rate) = (TC / CT) - BKG

ALPHA TOTAL µCi/g = Rs * 1000mL/L * DF / (EFF * SS * Dg/L * 2220000dpm/µCi)

WL10283

Relative Counting Error = [|(The Square Root of TC + BKG * CT) / (TC - BKG * CT)|] * 1.96 * 100

WB27806

Detection Levels and Less Than Values are determined from Procedure LA-508-002.

SLH2

SLF

ALPHA TOTAL in µCi/g (Maximum)	=	< 1.78E-02	DETECTION LEVEL
LESS THAN Value was Determined from Rs.			2.37E-02 µCi/g
RELATIVE COUNTING ERROR		184.3%	

SLH

07/02/96

06/29/96

05:30 AM

AW-101 PUSH

Analyst:	SLH		Date: 02-Jul-96
Signature of Chemist:		SLF	Date: 7/2/96

BLANK.WB1 Rev. 1.0 508101ML

WORKBOOK PAGE: SAM4

AT : LA-508-101 (D-2) SOLIDS

			SAMPLE	REPLICATE
Type	DETECTOR NUMBER		16	16
SAMPLE	DISH SIZE (1 , 2 , or 5)	(MS)	2	2
Worksheet	GROSS COUNTS	(GC)	37	33
10283	COUNT TIME in MINUTES	(CT)	30	30
Analyte	BACKGROUND in cpm	(BKG)	0.03	0.03
AT	SAMPLE SIZE in mL	(SS)	1.000	1.000
Protocol	DILUTION FACTOR	(DF)	101	101
@ALPHA01	DIGEST GRAMS of SOLIDS / L	(Dg/L)	2.1724	2.1724
Matrix	EFFICIENCY FACTOR	(EFF)	0.2104	0.2104
SOLID	Lc, Rmax, or Rs,(SAMPLE RATE) as APPROPRIATE		1.203	1.070

Batch Number		
96006523	Blank Concentration in µCi/g	1.20E-01
Replicate	Replicate Concentration in µCi/g	1.07E-01
0	Average Concentration in µCi/g	1.1314E-01

Sample Prep
FUSION01

Rs (Sample Count Rate) = (TC / CT) - BKG

Standard
S96T001977

ALPHA TOTAL µCi/g = Rs * 1000mL/L * DF / (EFF * SS * Dg/L * 2220000dpm/µCi)

Internal Control Code
WB27806

Relative Counting Error = [|(The Square Root of TC + BKG * CT) / (TC - BKG * CT)|] * 1.96 * 100

Detection Levels and Less Than Values are determined from Procedure LA-508-002.

Entered By
SLH2

Chemist
SLF

ALPHA TOTAL in µCi/g (Average)	=	1.13E-01	DETECTION LEVEL
RELATIVE COUNTING ERROR		35.6%	2.37E-02 µCi/g

Analyst
SLH

Data Complete
07/02/96

Analysis Date
06/29/96

Analysis Time
05:30 AM

Sample Point
AW-101 PUSH

Analyst:	SLH		Date: 02-Jul-96
Signature of Chemist:		SLF	Date: 7/2/96

SAMPLE.WB1 Rev. 1.0 508101ML

WORKBOOK PAGE: DUP5

AT : LA-508-101 (D-2) SOLIDS

			DUP	REPLICATE
Type	DETECTOR NUMBER		16	16
DUP	DISH SIZE (1 , 2 , or 5)	(MS)	2	2
Project	GROSS COUNTS	(GC)	40	48
10283	COUNT TIME in MINUTES	(CT)	30	30
Analyte	BACKGROUND in cpm	(BKG)	0.03	0.03
AT	SAMPLE SIZE in mL	(SS)	1.000	1.000
Method	DILUTION FACTOR	(DF)	101	101
@ALPHA01	DIGEST GRAMS of SOLIDS / L	(Dg/L)	2.2544	2.2544
Matrix	EFFICIENCY FACTOR	(EFF)	0.2104	0.2104
SOLID	Lc, Rmax, or Rs,(SAMPLE RATE) as APPROPRIATE		1.303	1.570

Batch Number		
96006523	Blank Concentration in µCi/g	1.25E-01
Replicate	Replicate Concentration in µCi/g	1.51E-01
0	Average Concentration in µCi/g	1.3780E-01

Sample Prep
FUSION01

Sample #
S96T001977

Instrument Code
WB27806

Prepared By
SLH2

Chemist
SLF

Analyst
SLH

Date Completed
07/02/96

Analysis Date
06/29/96

Analysis Time
05:30 AM

Sample Point
AW-101 PUSH

Rs (Sample Count Rate) = (TC / CT) - BKG

ALPHA TOTAL µCi/g = Rs * 1000mL/L * DF / (EFF * SS * Dg/L * 2220000dpm/µCi)

Relative Counting Error = [|(The Square Root of TC + BKG * CT) / (TC - BKG * CT)|] * 1.96 * 100

Detection Levels and Less Than Values are determined from Procedure LA-508-002.

ALPHA TOTAL in µCi/g (Average)	=	1.38E-01	DETECTION LEVEL
RELATIVE COUNTING ERROR		32.1%	2.29E-02 µCi/g

Analyst:	SLH		Date: 02-Jul-96
Signature of Chemist:		SLF	Date: 7/2/96

SAMPLE.WB1 Rev. 1.0 508101ML

WORKBOOK PAGE: SPK6

AT : LA-508-101 (D-2) LA-508-113 (A-2) SPIKED SAMPLE

			SPIKE	REPLICATE
Type	DETECTOR NUMBER		16	16
SPK	DISH SIZE 1 , 2 , or 5	(MS)	2	2
Total Cnt	TOTAL COUNTS	(TC)	39481	34472
10283	COUNT TIME in MINUTES	(CT)	30	30
Alpha Bkg	BACKGROUND in cpm	(BKG)	0.03	0.03
AT	SAMPLE VOLUME in mL (Spiked Vial)	(SS)	1.000	1.000
Dilution	SAMPLE DILUTION FACTOR (Spiked Vial)	(DF)	101	101
@ALPHA01	DIGEST GRAMS of SOLIDS / L	(Dg/L)	2.1724	2.1724
Matrix	SPIKE VOLUME in mL	(SVol)	0.100	0.100
SOLID	SPIKE DILUTION FACTOR	(SDF)	1	1
Spk Number	SPIKE BOOK NUMBER	(Spk BN)	123B43	123B43
96006523	SPIKE VALUE in µCi/mL	(SVal)	3.5884E-02	3.5884E-02
Rerun	INSTRUMENT EFFICIENCY FACTOR	(EFF)	0.2104	0.2104
0	SAMPLE + SPIKE µCi/g	(S+S)	1.31E+02	1.14E+02
Sample Prep	AVERAGE or MAXIMUM µCi/g in SAMPLE		1.1314E-01	
FUSION01				
Sample #				
S96T001977				
Instrument Code				
WB27806				
Prepared By				
SLH2				
Submit				
SLF				
Review				
SLH				
Date Submitted				
07/02/96				
Analysis Date				
06/29/96	QC ACTUAL	=	3.59E-02	
Analysis Time	QC FOUND	=	2.64E-02	
05:30 AM	AVG. PERCENT SPIKE RECOVERY	=	73.5%	
Sample Point				
AW-101 PUSH				

Rs (Sample Count Rate) = (TC / CT) - BKG

SAMPLE + SPIKE µCi/g = Rs * 1000mL/L * DF / (EFF * SS * Dg/L *2220000dpm/µCi)

QC ACTUAL = SVal

QC FOUND = (((S+S µCi/g - SAMPLE µCi/g) * ((SDF/(SVol*1000))/(DF/SS/Dg/L))))

PERCENT SPIKE RECOVERY = (QC FOUND / QC ACTUAL) *100

Analyst:	SLH2		Date: 02-Jul-96
Signature of Chemist:		SLF	Date: 7/2/96

SPIKE.WB1 Rev. 1.0 508101ML

WORKBOOK PAGE: SAM7

AT : LA-508-101 (D-2) SOLIDS

			SAMPLE	REPLICATE
Type	DETECTOR NUMBER		16	16
SAMPLE	DISH SIZE (1 , 2 , or 5)	(MS)	2	2
Work ID	GROSS COUNTS	(GC)	60	66
10283	COUNT TIME in MINUTES	(CT)	30	30
AT or IS	BACKGROUND in cpm	(BKG)	0.03	0.03
AT	SAMPLE SIZE in mL	(SS)	1.000	1.000
Lab Code	DILUTION FACTOR	(DF)	101	101
@ALPHA01	DIGEST GRAMS of SOLIDS / L	(Dg/L)	2.1572	2.1572
Matrix	EFFICIENCY FACTOR	(EFF)	0.2104	0.2104
SOLID	Lc, Rmax, or Rs,(SAMPLE RATE) as APPROPRIATE		1.970	2.170

Batch Number	
96006523	Blank Concentration in µCi/g 1.97E-01
Replicate	Replicate Concentration in µCi/g 2.18E-01
0	Average Concentration in µCi/g 2.0749E-01

Sample Prep.
FUSION01

Rs (Sample Count Rate) = (TC / CT) - BKG

Sample ID
S96T001984

ALPHA TOTAL µCi/g = Rs * 1000mL/L * DF / (EFF * SS * Dg/L * 2220000dpm/µCi)

Instrument Code
WB27806

Relative Counting Error = [|(The Square Root of TC + BKG * CT) / (TC - BKG * CT)|] * 1.96 * 100

Detection Levels and Less Than Values are determined from Procedure LA-508-002.

Prepared By
SLH2

Chemist
SLF

ALPHA TOTAL in µCi/g (Average)	=	2.07E-01	DETECTION LEVEL
RELATIVE COUNTING ERROR		25.9%	2.39E-02 µCi/g

Analyst
SLH

Date Complete
07/02/96

Date Rec'd
06/29/96

Analysis Time
05:30 AM

Batch Form
AW-101 PUSH

Analyst:	SLH		Date: 02-Jul-96
Signature of Chemist:		SLF	Date: 7/2/96

SAMPLE.WB1 Rev. 1.0 508101ML

WORKBOOK PAGE: DUP8

AT : LA-508-101 (D-2) SOLIDS

			DUP	REPLICATE
Type	DETECTOR NUMBER		16	16
DUP	DISH SIZE (1 , 2 , or 5)	(MS)	2	2
Matrix	GROSS COUNTS	(GC)	71	54
10283	COUNT TIME in MINUTES	(CT)	30	30
Analysis	BACKGROUND in cpm	(BKG)	0.03	0.03
AT	SAMPLE SIZE in mL	(SS)	1.000	1.000
Prep Code	DILUTION FACTOR	(DF)	101	101
@ALPHA01	DIGEST GRAMS of SOLIDS / L	(Dg/L)	2.2388	2.2388
Matrix	EFFICIENCY FACTOR	(EFF)	0.2104	0.2104
SOLID	Lc, Rmax, or Rs,(SAMPLE RATE) as APPROPRIATE		2.337	1.770

Batch Number		
96006523	Blank Concentration in µCi/g	2.26E-01
Sample	Replicate Concentration in µCi/g	1.71E-01
0	Average Concentration in µCi/g	1.9832E-01

Sample Prep
FUSION01

Rs (Sample Count Rate) = (TC / CT) - BKG

Sample
S96T001984

ALPHA TOTAL µCi/g = Rs * 1000mL/L * DF / (EFF * SS * Dg/L * 2220000dpm/µCi)

Instrument Code
WB27806

Relative Counting Error = [|(The Square Root of TC + BKG * CT) / (TC - BKG * CT)|] * 1.96 * 100

Detection Levels and Less Than Values are determined from Procedure LA-508-002.

Chemist ID
SLH2

Chemist
SLF

ALPHA TOTAL in µCi/g (Average)	=	1.98E-01	DETECTION LEVEL
			2.30E-02 µCi/g
RELATIVE COUNTING ERROR		27.3%	

Analyst
SLH

Date Completed
07/02/96

Analysis Date
06/29/96

Analysis Time
05:30 AM

Instrument Run
AW-101 PUSH

Analyst:	SLH		Date: 02-Jul-96
Signature of Chemist:		SLF	Date: 7/2/96

SAMPLE.WB1 Rev. 1.0 508101ML

WORKBOOK PAGE: SAM9

AT : LA-508-101 (D-2) SOLIDS

			SAMPLE	REPLICATE
Type	DETECTOR NUMBER		16	16
SAMPLE	DISH SIZE (1 , 2 , or 5)	(MS)	2	2
Work Unit	GROSS COUNTS	(GC)	58	50
10283	COUNT TIME in MINUTES	(CT)	30	30
Alpha/Beta	BACKGROUND in cpm	(BKG)	0.03	0.03
AT	SAMPLE SIZE in mL	(SS)	1.000	1.000
Test Code	DILUTION FACTOR	(DF)	101	101
@ALPHA01	DIGEST GRAMS of SOLIDS / L	(Dg/L)	2.1832	2.1832
Matrix	EFFICIENCY FACTOR	(EFF)	0.2104	0.2104
SOLID	Lc, Rmax, or Rs,(SAMPLE RATE) as APPROPRIATE		1.903	1.637

Blank Number		
96006523	Blank Concentration in µCi/g	1.89E-01
Replicate	Replicate Concentration in µCi/g	1.62E-01
0	Average Concentration in µCi/g	1.7531E-01

Sample Prep
FUSION01

Sample #
S96T001991

Instrument Code
WB27806

Prepared By
SLH2

Chemist
SLF

Analyst
SLH

Date Completed
07/02/96

Analysis Date
06/29/96

Analysis Time
05:30 AM

Sample Point
AW-101 PUSH

Rs (Sample Count Rate) = (TC / CT) - BKG

ALPHA TOTAL µCi/g = Rs * 1000mL/L * DF / (EFF * SS * Dg/L * 2220000dpm/µCi)

Relative Counting Error = [|(The Square Root of TC + BKG * CT) / (TC - BKG * CT)|] * 1.96 * 100

Detection Levels and Less Than Values are determined from Procedure LA-508-002.

ALPHA TOTAL in µCi/g (Average)	=	1.75E-01	DETECTION LEVEL
RELATIVE COUNTING ERROR		28.5%	2.36E-02 µCi/g

Analyst:	SLH		Date: 02-Jul-96
Signature of Chemist:		SLF	Date: 7/2/96

SAMPLE.WB1 Rev. 1.0 508101ML

WORKBOOK PAGE: DUP10

AT : LA-508-101 (D-2) SOLIDS

			DUP	REPLICATE
Type	DETECTOR NUMBER		16	16
DUP	DISH SIZE (1 , 2 , or 5)	(MS)	2	2
Worksheet	GROSS COUNTS	(GC)	35	43
10283	COUNT TIME in MINUTES	(CT)	30	30
Analysis Code	BACKGROUND in cpm	(BKG)	0.03	0.03
AT	SAMPLE SIZE in mL	(SS)	1.000	1.000
Test Code	DILUTION FACTOR	(DF)	101	101
@ALPHA01	DIGEST GRAMS of SOLIDS / L	(Dg/L)	2.3564	2.3564
Matrix	EFFICIENCY FACTOR	(EFF)	0.2104	0.2104
SOLID	Lc, Rmax, or Rs,(SAMPLE RATE) as APPROPRIATE		1.137	1.403

Detection Number		
96006523	Blank Concentration in µCi/g	1.04E-01
Result	Replicate Concentration in µCi/g	1.29E-01
0	Average Concentration in µCi/g	1.1654E-01

Sample Prep
FUSION01

Rs (Sample Count Rate) = (TC / CT) - BKG

Sample #
S96T001991

ALPHA TOTAL µCi/g = Rs * 1000mL/L * DF / (EFF * SS * Dg/L * 2220000dpm/µCi)

Instrument Code
WB27806

Relative Counting Error = [|(The Square Root of TC + BKG * CT) / (TC - BKG * CT)|] * 1.96 * 100

Detection Levels and Less Than Values are determined from Procedure LA-508-002.

Prepared By
SLH2

Chemist
SLF

ALPHA TOTAL in µCi/g (Average)	=	1.17E-01	DETECTION LEVEL
RELATIVE COUNTING ERROR		34.4%	2.19E-02 µCi/g

Analyst
SLH

Date Complete
07/02/96

Analysis Date
06/29/96

Analysis Time
05:30 AM

Sample From
AW-101 PUSH

Analyst:	SLH		Date: 02-Jul-96
Signature of Chemist:		SLF	Date: 7/2/96

SAMPLE.WB1 Rev. 1.0 508101ML

LABCORE Data Entry Template for Worklist# 10285

Analyst: S.C.L **Instrument:** AB00 16 **Book#** 47856

Method: LA-508-101 Rev/Mod A-5

Worklist Comment: Determine sample size using ludlum.For spike use: 0.1ml.new

S	Type	Sample#	R	A	Test	Matrix	Group#	Project
1	STD				@ALPHA01	SOLID		
2	BLNK-PREP				@ALPHA01	SOLID		
3	BLNK/BKG				@ALPHA01	SOLID		
4	SAMPLE	S96T002152	0	F	@ALPHA01	SOLID	96000103	AW-101 PUSH
		Analytes Requested:			ALPHA01 , ALPHA01E			
5	DUP	S96T002152	0	F	@ALPHA01	SOLID		
6	SPK	S96T002152	0	F	@ALPHA01	SOLID		

Final page for worklist # 10285

Sue C Lai 6-26-96
Analyst Signature **Date**

Sharon L Hulda 6-27-96
Analyst Signature **Date**

M Brown 6/27/96

Data Entry Comments:

S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

worklistrad Version 0.0 04/18/96
06/27/96 11:36

LABCORE Completed RadChem Report for Worklist#: 10285

Analyst: scl **Instrument:** AB16 **Book#** _____

Method: _____ Rev/Mod _____

Worklist Comment: Determine sample size using ludlum.For spike use: 0.1ml.new

Seq	Type	Sample#	R	A	Test		Matrix	Actual	Found	DL or Yield	Unit
1	STD		0		@ALPHA01	ALPHA01	SOLID	1.28E-04	1.47E-4	114.844	% Recovery
1	STD		0		@ALPHA01	ALPHA01E	SOLID	1.00	4.34E+00	4.340	% Ct. Erro
2	BLNK-PREP		0		@ALPHA01	ALPHA01	SOLID	1	<9.93E-3		uCi/g
2	BLNK-PREP		0		@ALPHA01	ALPHA01E	SOLID	1.00	5.00E+02	500.000	uCi/g
3	BLNK/BKG		0		@ALPHA01	ALPHA01	SOLID	1.00E+00	7.25E-01	0.725	BLNK/BKG
4	SAMPLE	S96T002152	0	F	@ALPHA01	ALPHA01	SOLID	N/A <	9.93E-03	243.0e-004	uCi/g
4	SAMPLE	S96T002152	0	F	@ALPHA01	ALPHA01E	SOLID	N/A	5.00E+02	0.0e+000	% Ct. Error
5	DUP	S96T002152	0	F	@ALPHA01	ALPHA01	SOLID	<9.93E-3	<9.70E-3		RPD
5	DUP	S96T002152	0	F	@ALPHA01	ALPHA01E	SOLID	1.00	5.00E+02	500.000	% Ct. Erro
6	SPK	S96T002152	0	F	@ALPHA01	ALPHA01	SOLID	3.59E-02	3.21E-02	89.415	% Recovery

Final page for worklist# 10285

Analyst Signature **Date** **Analyst Signature** **Date**

6/27/96

Reviewer Signature **Date**

Units shown for QC (BLK/BKG) may not reflect the actual units.

WORKBOOK PAGE: STD1

AT : LA-508-101 (D-2)

	LA-508-113 (A-2) STANDARD		STANDARD	REPLICATE
	DETECTOR NUMBER		16	16
STD	DISH SIZE (1 , 2 , or 5)	(MS)	2	2
	GROSS COUNTS	(GC)	2060	2074
10285	COUNT TIME in MINUTES	(CT)	30	30
	BACKGROUND in cpm	(BKG)	0.23	0.23
AT	SAMPLE SIZE in mL	(SS)	1.000	1.000
	DILUTION FACTOR	(DF)	1	1
@ALPHA01	STANDARD BOOK NUMBER	(Std BN)	47B56	47B56
	EFFICIENCY FACTOR	(EFF)	0.2104	0.2104
LIQUID	Lc, Rmax, or Rs,(SAMPLE RATE) as APPROPRIATE		68.437	68.903
	Standard Value in µCi/mL		1.28E-04	
96006525	Concentration in µCi/L	=	1.47E-01	
	Replicate Concentration in µCi/L	=	1.48E-01	
0	AVERAGE CONCENTRATION in µCi/L	=	1.4702E-01	

N/A

Rs (Sample Count Rate) = (TC / CT) - BKG

ALPHA TOTAL µCi/L = Rs * 1000mL/L * DF / (EFF * SS * 2220000dpm/µCi)

WL10285

ALPHA TOTAL µCi/mL = ALPHA TOTAL µCi/L / 1000mL/L

Relative Counting Error = [|(The Square Root of TC + BKG * CT) / (TC - BKG * CT)|] * 1.96 * 100

WB27806

Detection Levels and Less Than Values are determined from Procedure LA-508-002.

SLH2

SLF

ALPHA TOTAL CONCENTRATION in µCi/mL	=	1.47E-04	DETECTION LEVEL
			1.07E-06 µCi/mL
RELATIVE COUNTING ERROR	=	4.3%	

SCL

06/27/96

06/26/96

03:30 PM

AW-101 PUSH

Analyst:	SLH2	Date: 27-Jun-96	
Signature of Chemist:	SLF	Date: 6/27/96	

STANDARD.WB1 Rev. 1.0 508101ML

WORKBOOK PAGE: BLANK2

AT : LA-508-101 (D-2) SOLIDS

			BLNK-PREP	REPLICATE
	DETECTOR NUMBER		16	16
BLNK-PREP	DISH SIZE (1 , 2 , or 5)	(MS)	2	2
	GROSS COUNTS	(GC)	5	5
10285	COUNT TIME in MINUTES	(CT)	30	30
	BACKGROUND in cpm	(BKG)	0.23	0.23
AT	SAMPLE SIZE in mL	(SS)	0.250	0.250
	DILUTION FACTOR	(DF)	11	11
@ALPHA01	DIGEST GRAMS of SOLIDS / L	(Dg/L)	1.9388	1.9388
	EFFICIENCY FACTOR	(EFF)	0.2104	0.2104
SOLID	Lc, Rmax, or Rs,(SAMPLE RATE) as APPROPRIATE		0.204	0.204

96006525	Blank Concentration in µCi/g	<	9.93E-03
	Replicate Concentration in µCi/g	<	9.93E-03
0	Maximum Concentration in µCi/g	<	9.9271E-03

N/A

Rs (Sample Count Rate) = (TC / CT) - BKG

ALPHA TOTAL µCi/g = Rs * 1000mL/L * DF / (EFF * SS * Dg/L * 2220000dpm/µCi)

WL10285

Relative Counting Error = [|(The Square Root of TC + BKG * CT) / (TC - BKG * CT)|] * 1.96 * 100

WB27806

Detection Levels and Less Than Values are determined from Procedure LA-508-002.

SLH2

SLF	ALPHA TOTAL in µCi/g (Maximum)	=	< 9.93E-03	DETECTION LEVEL
SCL	LESS Than Value was Determined from Lc.			2.43E-02 µCi/g
06/27/96	RELATIVE COUNTING ERROR		500.0%	

06/26/96

03:30 PM

AW-101 PUSH

Analyst:	SCL		Date: 27-Jun-96
Signature of Chemist:	SLF		Date: 6/27/96

BLANK.WB1 Rev. 1.0 508101ML

WORKBOOK PAGE: SAM4

AT : LA-508-101 (D-2) SOLIDS

			SAMPLE	REPLICATE
	DETECTOR NUMBER		16	16
SAMPLE	DISH SIZE (1 , 2 , or 5)	(MS)	2	2
	GROSS COUNTS	(GC)	5	2
10285	COUNT TIME in MINUTES	(CT)	30	30
	BACKGROUND in cpm	(BKG)	0.23	0.23
AT	SAMPLE SIZE in mL	(SS)	0.250	0.250
	DILUTION FACTOR	(DF)	11	11
@ALPHA01	DIGEST GRAMS of SOLIDS / L	(Dg/L)	1.9388	1.9388
	EFFICIENCY FACTOR	(EFF)	0.2104	0.2104
SOLID	Lc, Rmax, or Rs,(SAMPLE RATE) as APPROPRIATE		0.204	0.204

96006525	Blank Concentration in µCi/g	<	9.93E-03
	Replicate Concentration in µCi/g	<	9.93E-03
0	Maximum Concentration in µCi/g	<	9.9271E-03

FUSION01

Rs (Sample Count Rate) = (TC / CT) - BKG

ALPHA TOTAL µCi/g = Rs * 1000mL/L * DF / (EFF * SS * Dg/L * 2220000dpm/µCi)

S96T002152

Relative Counting Error = [|(The Square Root of TC + BKG * CT) / (TC - BKG * CT)|] * 1.96 * 100

WB27806

Detection Levels and Less Than Values are determined from Procedure LA-508-002.

SLH2

SLF

ALPHA TOTAL in µCi/g (Maximum)	=	< 9.93E-03	DETECTION LEVEL
LESS Than Value was Determined from Lc.			2.43E-02 µCi/g
RELATIVE COUNTING ERROR		500.0%	

SCL

06/27/96

06/26/96

03:30 PM

AW-101 PUSH

Analyst:	SCL	Date: 27-Jun-96	
Signature of Chemist:	SLF	Date: 6/27/96	

SAMPLE.WB1 Rev. 1.0 508101ML

WORKBOOK PAGE: DUP5

AT : LA-508-101 (D-2) SOLIDS

			DUP	REPLICATE
	DETECTOR NUMBER		16	16
DUP	DISH SIZE (1 , 2 , or 5)	(MS)	2	2
	GROSS COUNTS	(GC)	5	1
10285	COUNT TIME in MINUTES	(CT)	30	30
	BACKGROUND in cpm	(BKG)	0.23	0.23
AT	SAMPLE SIZE in mL	(SS)	0.250	0.250
	DILUTION FACTOR	(DF)	11	11
@ALPHA01	DIGEST GRAMS of SOLIDS / L	(Dg/L)	1.9836	1.9836
	EFFICIENCY FACTOR	(EFF)	0.2104	0.2104
SOLID	Lc, Rmax, or Rs,(SAMPLE RATE) as APPROPRIATE		0.204	0.204

96006525	Blank Concentration in µCi/g	<	9.70E-03
	Replicate Concentration in µCi/g	<	9.70E-03
0	Maximum Concentration in µCi/g	<	9.7029E-03

FUSION01

Rs (Sample Count Rate) = (TC / CT) - BKG

S96T002152

ALPHA TOTAL µCi/g = Rs * 1000mL/L * DF / (EFF * SS * Dg/L * 2220000dpm/µCi)

WB27806

Relative Counting Error = [|(The Square Root of TC + BKG * CT) / (TC - BKG * CT)|] * 1.96 * 100

Detection Levels and Less Than Values are determined from Procedure LA-508-002.

SLH2

SLF	ALPHA TOTAL in µCi/g (Maximum)	=	< 9.70E-03	DETECTION LEVEL
SCL	LESS Than Value was Determined from Lc.			2.37E-02 µCi/g
06/27/96	RELATIVE COUNTING ERROR		500.0%	

06/26/96

03:30 PM

AW-101 PUSH

Analyst:	SCL		Date: 27-Jun-96
Signature of Chemist:		SLF	Date: 6/27/96

SAMPLE.WB1 Rev. 1.0 508101ML

WORKBOOK PAGE: SPK6

AT : LA-508-101 (D-2) LA-508-113 (A-2) SPIKED SAMPLE

			SPIKE	REPLICATE
	DETECTOR NUMBER		16	16
SPK	DISH SIZE 1 , 2 , or 5	(MS)	2	2
	TOTAL COUNTS	(TC)	45494	44360
10285	COUNT TIME in MINUTES	(CT)	30	30
	BACKGROUND in cpm	(BKG)	0.23	0.23
AT	SAMPLE VOLUME in mL (Spiked Vial)	(SS)	0.250	0.250
	SAMPLE DILUTION FACTOR (Spiked Vial)	(DF)	11	11
@ALPHA01	DIGEST GRAMS of SOLIDS / L	(Dg/L)	1.9388	1.9388
	SPIKE VOLUME in mL	(SVol)	0.100	0.100
SOLID	SPIKE DILUTION FACTOR	(SDF)	1	1
	SPIKE BOOK NUMBER	(Spk BN)	123B43	123B43
96006525	SPIKE VALUE in µCi/mL	(SVal)	3.5884E-02	3.5884E-02
	INSTRUMENT EFFICIENCY FACTOR	(EFF)	0.2104	0.2104
0	SAMPLE + SPIKE µCi/g	(S+S)	7.37E+01	7.18E+01
	AVERAGE or MAXIMUM µCi/g in SAMPLE	<	9.9271E-03	

FUSION01

S96T002152

WB27806

SLH2

SLF

SCL

06/27/96

06/26/96

03:30 PM

AW-101 PUSH

Rs (Sample Count Rate) = (TC / CT) - BKG

SAMPLE + SPIKE µCi/g = Rs * 1000mL/L * DF / (EFF * SS * Dg/L *2220000dpm/µCi)

QC ACTUAL = SVal

QC FOUND = (((S+S µCi/g - SAMPLE µCi/g) * ((SDF/(SVol*1000))/(DF/SS/Dg/L))))

PERCENT SPIKE RECOVERY = (QC FOUND / QC ACTUAL) *100

NOTE: Original Sample result was a LESS THAN value. Zero (0) was subtracted from the spiked value for QC found calculation.

QC ACTUAL	=	3.59E-02
QC FOUND	=	3.21E-02
AVG. PERCENT SPIKE RECOVERY	=	89.3%

Analyst:		SLH2	Date: 27-Jun-96
Signature of Chemist:		SLF	Date: 6/27/96

SPIKE.WB1 Rev. 1.0 508101ML

worklistrad Version 0.0 04/18/96
07/09/96 13:24

LABCORE Completed RadChem Report for Worklist#: 10342

Analyst: slh **Instrument:** AB18 **Book#** _____

Method: _____ Rev/Mod _____

Worklist Comment: Determine sample size using ludlum.For spike use: 0.1ml.new

Seq	Type	Sample#	R	A	Test	Matrix	Actual	Found	DL or Yield	Unit
1	STD		0	@ALPHA01	ALPHA01	LIQUID	1.28E-04	1.32E-4	103.125	% Recovery
1	STD		0	@ALPHA01	ALPHA01E	LIQUID	1.00	4.62E+00	4.620	% Ct. Erro
2	BLNK		0	@ALPHA01	ALPHA01	LIQUID	1	<1.65E-2		uCi/mL
2	BLNK		0	@ALPHA01	ALPHA01E	LIQUID	1.00	5.00E+02	500.000	uCi/mL
3	BLNK/BKG		0	@ALPHA01	ALPHA01	LIQUID	1.00E+00	1.08E+00	1.080	BLNK/BKG
4	SAMPLE	S96T001950	0	@ALPHA01	ALPHA01	LIQUID	N/A <	1.12E-02	194.0e-004	uCi/mL
4	SAMPLE	S96T001950	0	@ALPHA01	ALPHA01E	LIQUID	N/A	5.00E+02	0.0e+000	% Ct. Error
5	DUP	S96T001950	0	@ALPHA01	ALPHA01	LIQUID	<1.12E-2	<1.48E-2		RPD
5	DUP	S96T001950	0	@ALPHA01	ALPHA01E	LIQUID	1.00	1.89E+02	189.000	% Ct. Erro
6	SPK	S96T001950	0	@ALPHA01	ALPHA01	LIQUID	3.59E-02	3.32E-02	92.479	% Recovery
7	SAMPLE	S96T002028	0	@ALPHA01	ALPHA01	LIQUID	N/A <	1.65E-02	194.0e-004	uCi/mL
7	SAMPLE	S96T002028	0	@ALPHA01	ALPHA01E	LIQUID	N/A	1.89E+02	0.0e+000	% Ct. Error
8	DUP	S96T002028	0	@ALPHA01	ALPHA01	LIQUID	<1.65E-2	<1.16E-2		RPD
8	DUP	S96T002028	0	@ALPHA01	ALPHA01E	LIQUID	1.00	5.00E+02	500.000	% Ct. Erro
9	SAMPLE	S96T001960	0	@ALPHA01	ALPHA01	LIQUID	N/A <	1.30E-02	194.0e-004	uCi/mL
9	SAMPLE	S96T001960	0	@ALPHA01	ALPHA01E	LIQUID	N/A	5.00E+02	0.0e+000	% Ct. Error
10	DUP	S96T001960	0	@ALPHA01	ALPHA01	LIQUID	<1.30E-2	<1.59E-2		RPD
10	DUP	S96T001960	0	@ALPHA01	ALPHA01E	LIQUID	1.00	2.45E+02	245.000	% Ct. Erro
11	SAMPLE	S96T001964	0	@ALPHA01	ALPHA01	LIQUID	N/A <	1.12E-02	194.0e-004	uCi/mL
11	SAMPLE	S96T001964	0	@ALPHA01	ALPHA01E	LIQUID	N/A	5.00E+02	0.0e+000	% Ct. Error
12	DUP	S96T001964	0	@ALPHA01	ALPHA01	LIQUID	<1.12E-2	<7.71E-3		RPD
12	DUP	S96T001964	0	@ALPHA01	ALPHA01E	LIQUID	1.00	5.00E+02	500.000	% Ct. Erro
13	SAMPLE	S96T001968	0	@ALPHA01	ALPHA01	LIQUID	N/A <	1.65E-02	194.0e-004	uCi/mL
13	SAMPLE	S96T001968	0	@ALPHA01	ALPHA01E	LIQUID	N/A	5.00E+02	0.0e+000	% Ct. Error
14	DUP	S96T001968	0	@ALPHA01	ALPHA01	LIQUID	<1.65E-2	<1.48E-2		RPD
14	DUP	S96T001968	0	@ALPHA01	ALPHA01E	LIQUID	1.00	5.00E+02	500.000	% Ct. Erro

Final page for worklist# 10342

Analyst Signature **Date** **Analyst Signature** **Date**

7/9/96

Reviewer Signature **Date**

Units shown for QC (BLK/BKG) may not reflect the actual units.

LABCORE Data Entry Template for Worklist# 10342

Analyst: SLH **Instrument:** AB00 18 **Book#** 47B56

Method: LA-508-101 Rev/Mod D-2

Worklist Comment: Determine sample size using ludlum.For spike use: 0.1ml.new

S	Type	Sample#	R	A	Test	Matrix	Group#	Project
1	STD				@ALPHA01	LIQUID		
2	BLNK				@ALPHA01	LIQUID		
3	BLNK/BKG				@ALPHA01	LIQUID		
4	SAMPLE	S96T001950	0		@ALPHA01	LIQUID	96000103	AW-101 PUSH
	Analytes Requested: ALPHA01 , ALPHA01E							
5	DUP	S96T001950	0		@ALPHA01	LIQUID		
6	SPK	S96T001950	0		@ALPHA01	LIQUID		
7	SAMPLE	S96T002028	0		@ALPHA01	LIQUID	96000103	AW-101 PUSH
	Analytes Requested: ALPHA01 , ALPHA01E							
8	DUP	S96T002028	0		@ALPHA01	LIQUID		
9	SAMPLE	S96T001960	0		@ALPHA01	LIQUID	96000103	AW-101 PUSH
	Analytes Requested: ALPHA01 , ALPHA01E							
10	DUP	S96T001960	0		@ALPHA01	LIQUID		
11	SAMPLE	S96T001964	0		@ALPHA01	LIQUID	96000103	AW-101 PUSH
	Analytes Requested: ALPHA01 , ALPHA01E							
12	DUP	S96T001964	0		@ALPHA01	LIQUID		
13	SAMPLE	S96T001968	0		@ALPHA01	LIQUID	96000103	AW-101 PUSH
	Analytes Requested: ALPHA01 , ALPHA01E							
14	DUP	S96T001968	0		@ALPHA01	LIQUID		

Data Entry Comments:

S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

LABCORE Data Entry Template for Worklist# 10342

S Type	Sample#	R	A	Test	Matrix	Group#	Project

Final page for worklist # 10342

Sandra Hood Boatright
Analyst Signature Date 6-29-96

Sue E. Hogan 7-9-96
Analyst Signature Date
Sharon L Hold 7-9-96

Data Entry Comments:

S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

AT : LA-508-101 (D-2) LA-508-113 (A-2) STANDARD

			STANDARD	REPLICATE
	DETECTOR NUMBER		18	18
STD	DISH SIZE (1 , 2 , or 5)	(MS)	2	2
	GROSS COUNTS	(GC)	1887	1813
10342	COUNT TIME in MINUTES	(CT)	30	30
	BACKGROUND in cpm	(BKG)	0.17	0.17
AT	SAMPLE SIZE in mL	(SS)	1.000	1.000
	DILUTION FACTOR	(DF)	1	1
@ALPHA01	STANDARD BOOK NUMBER	(Std BN)	47B56	47B56
	EFFICIENCY FACTOR	(EFF)	0.2095	0.2095
LIQUID	Lc, Rmax, or Rs,(SAMPLE RATE) as APPROPRIATE		62.730	60.263
	Standard Value in µCi/mL		1.28E-04	
96006590	Concentration in µCi/L	=	1.35E-01	
	Replicate Concentration in µCi/L	=	1.30E-01	
0	AVERAGE CONCENTRATION in µCi/L	=	1.3223E-01	

N/A

Rs (Sample Count Rate) = (TC / CT) - BKG

ALPHA TOTAL µCi/L = Rs * 1000mL/L * DF / (EFF * SS * 2220000dpm/µCi)

WL10342

ALPHA TOTAL µCi/mL = ALPHA TOTAL µCi/L / 1000mL/L

Relative Counting Error = [|(The Square Root of TC + BKG * CT) / (TC - BKG * CT)|] * 1.96 * 100

WB27808

Detection Levels and Less Than Values are determined from Procedure LA-508-002.

SEH

SLF

ALPHA TOTAL CONCENTRATION in µCi/mL	=	1.32E-04	DETECTION LEVEL
RELATIVE COUNTING ERROR	=	4.6%	9.50E-07 µCi/mL

SLH

07/09/96

06/29/96

03:00 AM

AW-101 PUSH

Analyst:		SEH	Date: 09-Jul-96
Signature of Chemist:		SLF	Date: 7/9/96

STANDARD.WB1 Rev. 1.0 508101ML

AT : LA-508-101 (D-2) LIQUIDS

			BLNK	REPLICATE
	DETECTOR NUMBER		18	18
BLNK	DISH SIZE (1 , 2 , or 5)	(MS)	2	2
	GROSS COUNTS	(GC)	1	10
10342	COUNT TIME in MINUTES	(CT)	30	30
	BACKGROUND in cpm	(BKG)	0.17	0.17
AT	SAMPLE SIZE in mL	(SS)	0.500	0.500
	DILUTION FACTOR	(DF)	10201	10201
@ALPHA01	DIGEST DILUTION FACTOR	(DDF)	1	1
	EFFICIENCY FACTOR	(EFF)	0.2095	0.2095
LIQUID	Lc, Rmax, or Rs,(SAMPLE RATE) as APPROPRIATE		0.176	0.377

96006590	Blank Concentration in µCi/L	<	7.71E+00
	Replicate Concentration in µCi/L	<	1.65E+01
0	Maximum Concentration in µCi/L	<	1.6540E+01

N/A

WL10342

WB27809

SEH

SLF

SLH

07/09/96

06/26/96

03:00 AM

AW-101 PUSH

Rs (Sample Count Rate) = (TC / CT) - BKG

ALPHA TOTAL µCi/L = Rs * 1000mL/L * DF * DDF / (EFF * SS * 2220000dpm/µCi)

ALPHA TOTAL µCi/mL = ALPHA TOTAL µCi/L / 1000mL/L

Relative Counting Error = [|(The Square Root of TC + BKG * CT) / (TC - BKG * CT)|] * 1.96 * 100

Detection Levels and Less Than Values are determined from Procedure LA-508-002.

ALPHA TOTAL in µCi/mL (Maximum)	=	< 1.65E-02	DETECTION LEVEL
LESS Than Value was Determined from Lc.			1.94E-02 µCi/mL
RELATIVE COUNTING ERROR		500.0%	

Analyst:	SLH		Date: 09-Jul-96
Signature of Chemist:		SLF	Date: 7/9/96

BLANK.WB1 Rev. 1.0 508101ML

AT : LA-508-101 (D-2) LIQUIDS

			SAMPLE	REPLICATE
Type	DETECTOR NUMBER		18	18
SAMPLE	DISH SIZE (1 , 2 , or 5)	(MS)	2	2
Gross Cts	GROSS COUNTS	(GC)	4	7
10342	COUNT TIME in MINUTES	(CT)	30	30
Background	BACKGROUND in cpm	(BKG)	0.17	0.17
AT	SAMPLE SIZE in mL	(SS)	0.500	0.500
Dil Factor	DILUTION FACTOR	(DF)	10201	10201
@ALPHA01	DIGEST DILUTION FACTOR	(DDF)	1	1
Eff	EFFICIENCY FACTOR	(EFF)	0.2095	0.2095
LIQUID	Lc, Rmax, or Rs,(SAMPLE RATE) as APPROPRIATE		0.176	0.255

Batch Number			
96006590	Blank Concentration in µCi/L	<	7.71E+00
Replicate	Replicate Concentration in µCi/L	<	1.12E+01
0	Maximum Concentration in µCi/L	<	1.1171E+01

Sample Point
N/A

Rs (Sample Count Rate) = (TC / CT) - BKG

Sample
S96T001950

ALPHA TOTAL µCi/L = Rs * 1000mL/L * DF * DDF / (EFF * SS * 2220000dpm/µCi)

ALPHA TOTAL µCi/mL = ALPHA TOTAL µCi/L / 1000mL/L

Instrument Code
WB27809

Relative Counting Error = [|(The Square Root of TC + BKG * CT) / (TC - BKG * CT)|] * 1.96 * 100

Detection Levels and Less Than Values are determined from Procedure LA-508-002.

Prepared By
SEH

Chemist
SLF

ALPHA TOTAL in µCi/mL (Maximum) = < 1.12E-02

Analyst
SLH

LESS Than Value was Determined from Lc.

Date Complete
07/09/96

RELATIVE COUNTING ERROR 500.0%

DETECTION LEVEL
1.94E-02 µCi/mL

Analysis Date
06/29/96

Analysis Time
03:00 AM

Sample Point
AW-101 PUSH

{/ system;exit}yes~

Analyst:	SLH	Date: 09-Jul-96	
Signature of Chemist:	SLF	Date: 7/9/96	

SAMPLE.WB1 Rev. 1.0 508101ML

AT : LA-508-101 (D-2) LIQUIDS

			DUP	REPLICATE
Type	DETECTOR NUMBER		18	18
DUP	DISH SIZE (1 , 2 , or 5)	(MS)	2	2
Work Unit	GROSS COUNTS	(GC)	9	9
10342	COUNT TIME in MINUTES	(CT)	30	30
Matrix	BACKGROUND in cpm	(BKG)	0.17	0.17
AT	SAMPLE SIZE in mL	(SS)	0.500	0.500
Test Code	DILUTION FACTOR	(DF)	10201	10201
@ALPHA01	DIGEST DILUTION FACTOR	(DDF)	1	1
Units	EFFICIENCY FACTOR	(EFF)	0.2095	0.2095
LIQUID	Lc, Rmax, or Rs,(SAMPLE RATE) as APPROPRIATE		0.337	0.337

Batch Number			
96006590	Blank Concentration in µCi/L	<	1.48E+01
Replicate	Replicate Concentration in µCi/L	<	1.48E+01
0	Maximum Concentration in µCi/L	<	1.4762E+01

Sample Prep
N/A

Sample #
S96T001950

Instrument Code
WB27809

Prepared By
SEH

Chemist
SLF

Analyst
SLH

Date Complete
07/09/96

Analysis Date
06/29/96

Analysis Time
03:00 AM

Sample Point
AW-101 PUSH

Rs (Sample Count Rate) = (TC / CT) - BKG
ALPHA TOTAL µCi/L = Rs * 1000mL/L * DF * DDF / (EFF * SS * 2220000dpm/µCi)
ALPHA TOTAL µCi/mL = ALPHA TOTAL µCi/L / 1000mL/L
Relative Counting Error = [|(The Square Root of TC + BKG * CT) / (TC - BKG * CT)|] * 1.96 * 100
Detection Levels and Less Than Values are determined from Procedure LA-508-002.

ALPHA TOTAL in µCi/mL (Maximum)	=	< 1.48E-02	DETECTION LEVEL
LESS THAN Value was Determined from Rmax.			1.94E-02 µCi/mL
RELATIVE COUNTING ERROR		188.7%	

(/ system;exit)yes~

Analyst:	SLH		Date: 09-Jul-96
Signature of Chemist:		SLF	Date: 7/9/96

SAMPLE.WB1 Rev. 1.0 508101ML

AT : LA-508-101 (D-2) LA-508-113 (A-2) SPIKED SAMPLE

			SPIKE	REPLICATE
Type	DETECTOR NUMBER		18	18
SPK	DISH SIZE 1 , 2 , or 5	(MS)	2	2
Work Order	TOTAL COUNTS	(TC)	48383	44383
10342	COUNT TIME in MINUTES	(CT)	30	30
Matrix	BACKGROUND in cpm	(BKG)	0.17	0.17
AT	SAMPLE VOLUME in mL (Spiked Vial)	(SS)	0.500	0.500
Test Code	SAMPLE DILUTION FACTOR (Spiked Vial)	(DF)	10201	10201
@ALPHA01	DIGEST DILUTION FACTOR	(DDF)	1	1
Matrix	SPIKE VOLUME in mL	(SVol)	0.100	0.100
LIQUID	SPIKE DILUTION FACTOR	(SDF)	1	1
Spike Number	SPIKE BOOK NUMBER	(Spk BN)	123B43	123B43
96006590	SPIKE VALUE in µCi/mL	(SVal)	3.5884E-02	3.5884E-02
Aliquot	INSTRUMENT EFFICIENCY FACTOR	(EFF)	0.2095	0.2095
0	SAMPLE + SPIKE µCi/mL	(S+S)	7.07E+01	6.49E+01
Sample Prep	AVERAGE or MAXIMUM µCi/mL in SAMPLE	<	1.1171E-02	
N/A				
Sample #				
S96T001950	Rs (Sample Count Rate) = (TC / CT) - BKG			
Instrument Code	SAMPLE + SPIKE µCi/mL = Rs * DF * DDF / (EFF * SS * 2220000dpm/µCi)			
WB27809	QC ACTUAL = SVal			
Instrument By	QC FOUND = (((S+S µCi/mL - SAMPLE µCi/mL) * ((SDF/SVol)/(DF*DDF/SS))))			
SEH	PERCENT SPIKE RECOVERY = (QC FOUND / QC ACTUAL) *100			
Chemist				
SLF				
Analyst				
SLH				
Date Completed	NOTE: Original Sample result was a LESS THAN value. Zero (0) was subtracted from the spiked value for QC found calculation.			
07/09/96				
Analysis Date				
06/29/96	QC ACTUAL	=	3.59E-02	
Analysis Time	QC FOUND	=	3.32E-02	
03:00 AM	AVG. PERCENT SPIKE RECOVERY	=	92.6%	
Sample Point				
AW-101 PUSH				

Analyst:	SEH		Date: 09-Jul-96
Signature of Chemist:		SLF	Date: 7/9/96

SPIKE.WB1 Rev. 1.0 508101ML

AT : LA-508-101 (D-2) LIQUIDS

			SAMPLE	REPLICATE
Type	DETECTOR NUMBER		18	18
SAMPLE	DISH SIZE (1 , 2 , or 5)	(MS)	2	2
Work Set	GROSS COUNTS	(GC)	9	10
10342	COUNT TIME in MINUTES	(CT)	30	30
Aliquot	BACKGROUND in cpm	(BKG)	0.17	0.17
AT	SAMPLE SIZE in mL	(SS)	0.500	0.500
Test Code	DILUTION FACTOR	(DF)	10201	10201
@ALPHA01	DIGEST DILUTION FACTOR	(DDF)	1	1
Matrix	EFFICIENCY FACTOR	(EFF)	0.2095	0.2095
LIQUID	Lc, Rmax, or Rs,(SAMPLE RATE) as APPROPRIATE		0.337	0.377

Batch Number			
96006590	Blank Concentration in µCi/L	<	1.48E+01
Replicate	Replicate Concentration in µCi/L	<	1.65E+01
0	Maximum Concentration in µCi/L	<	1.6540E+01

Sample Prep
N/A

Rs (Sample Count Rate) = (TC / CT) - BKG

Sample 1
S96T002028

ALPHA TOTAL µCi/L = Rs * 1000mL/L * DF * DDF / (EFF * SS * 2220000dpm/µCi)

ALPHA TOTAL µCi/mL = ALPHA TOTAL µCi/L / 1000mL/L

Instrument Code
WB27809

Relative Counting Error = [|(The Square Root of TC + BKG * CT) / (TC - BKG * CT)|] * 1.96 * 100

Detection Levels and Less Than Values are determined from Procedure LA-508-002.

Prepared By
SEH

Chemist
SLF

ALPHA TOTAL in µCi/mL (Maximum) =	< 1.65E-02	DETECTION LEVEL
LESS THAN Value was Determined from Rmax.		1.94E-02 µCi/mL
RELATIVE COUNTING ERROR	188.7%	

Analyst
SLH

Date Complete
07/09/96

Analysis Date
06/29/96

Analysis Time
03:00 AM

Sample Point
AW-101 PUSH

(/ system;exit)yes~

Analyst:	SLH	Date: 09-Jul-96	
Signature of Chemist:	SLF	Date: 7/9/96	

SAMPLE.WB1 Rev. 1.0 508101ML

AT : LA-508-101 (D-2) LIQUIDS

			DUP	REPLICATE
Type	DETECTOR NUMBER		18	18
DUP	DISH SIZE (1 , 2 , or 5)	(MS)	2	2
Count	GROSS COUNTS	(GC)	13	6
10342	COUNT TIME in MINUTES	(CT)	30	30
Matrix	BACKGROUND in cpm	(BKG)	0.17	0.17
AT	SAMPLE SIZE in mL	(SS)	0.500	0.500
Dilution	DILUTION FACTOR	(DF)	10201	10201
@ALPHA01	DIGEST DILUTION FACTOR	(DDF)	1	1
Matrix	EFFICIENCY FACTOR	(EFF)	0.2095	0.2095
LIQUID	Lc, Rmax, or Rs,(SAMPLE RATE) as APPROPRIATE		0.263	0.213

Blank Conc.			
96006590	Blank Concentration in µCi/L		1.16E+01
Repl Conc.	Replicate Concentration in µCi/L	<	9.35E+00
0	Maximum Concentration in µCi/L	<	1.1552E+01

Sample Prep.
N/A

Rs (Sample Count Rate) = (TC / CT) - BKG

Sample
S96T002028

ALPHA TOTAL µCi/L = Rs * 1000mL/L * DF * DDF / (EFF * SS * 2220000dpm/µCi)

ALPHA TOTAL µCi/mL = ALPHA TOTAL µCi/L / 1000mL/L

Instrument Code
WB27809

Relative Counting Error = [|(The Square Root of TC + BKG * CT) / (TC - BKG * CT)|] * 1.96 * 100

Detection Levels and Less Than Values are determined from Procedure LA-508-002.

Prepared By
SEH

Chemist
SLF

ALPHA TOTAL in µCi/mL (Maximum)	=	< 1.16E-02	DETECTION LEVEL
LESS THAN Value was Determined from Rs.			1.94E-02 µCi/mL
RELATIVE COUNTING ERROR		500.0%	

Analyst
SLH

Date Complete
07/09/96

Analysis Date
06/29/96

Analysis Time
03:00 AM

Sample Point
AW-101 PUSH

{/ system;exit}yes~

Analyst:	SLH	Date: 09-Jul-96	
Signature of Chemist:	SLF	Date: 7/9/96	

SAMPLE.WB1 Rev. 1.0 508101ML

WORKBOOK PAGE: SAM9

AT : LA-508-101 (D-2) LIQUIDS

			SAMPLE	REPLICATE
Type	DETECTOR NUMBER		18	18
SAMPLE	DISH SIZE (1 , 2 , or 5)	(MS)	2	2
Work Id	GROSS COUNTS	(GC)	8	6
10342	COUNT TIME in MINUTES	(CT)	30	30
Alpha Bkg	BACKGROUND in cpm	(BKG)	0.17	0.17
AT	SAMPLE SIZE in mL	(SS)	0.500	0.500
Test Code	DILUTION FACTOR	(DF)	10201	10201
@ALPHA01	DIGEST DILUTION FACTOR	(DDF)	1	1
Matrix	EFFICIENCY FACTOR	(EFF)	0.2095	0.2095
LIQUID	Lc, Rmax, or Rs,(SAMPLE RATE) as APPROPRIATE		0.296	0.213

Blank Number			
96006590	Blank Concentration in µCi/L	<	1.30E+01
Replicate	Replicate Concentration in µCi/L	<	9.35E+00
0	Maximum Concentration in µCi/L	<	1.2973E+01

Sample Count

N/A — Rs (Sample Count Rate) = (TC / CT) - BKG

Sample — ALPHA TOTAL µCi/L = Rs * 1000mL/L * DF * DDF / (EFF * SS * 2220000dpm/µCi)

S96T001960 — ALPHA TOTAL µCi/mL = ALPHA TOTAL µCi/L / 1000mL/L

Instrument Code — Relative Counting Error = { |(The Square Root of TC + BKG * CT) / (TC - BKG * CT)| } * 1.96 * 100

WB27809 — Detection Levels and Less Than Values are determined from Procedure LA-508-002.

Prepared By: SEH

Chemist: SLF

Analyst: SLH

Data Computer: 07/09/96

Analysis Date: 06/29/96

Analysis Time: 03:00 AM

Sample Point: AW-101 PUSH

			DETECTION LEVEL
ALPHA TOTAL in µCi/mL (Maximum)	=	< 1.30E-02	1.94E-02 µCi/mL
LESS THAN Value was Determined from Rmax.			
RELATIVE COUNTING ERROR		500.0%	

{/ system,exit}yes~

Analyst:	SLH		Date: 09-Jul-96
Signature of Chemist:		SLF	Date: 7/8/96

SAMPLE.WB1 Rev. 1.0 508101ML

WORKBOOK PAGE: DUP10

AT : LA-508-101 (D-2) LIQUIDS

			DUP	REPLICATE
Type	DETECTOR NUMBER		18	18
DUP	DISH SIZE (1 , 2 , or 5)	(MS)	2	2
Count Time	GROSS COUNTS	(GC)	8	16
10342	COUNT TIME in MINUTES	(CT)	30	30
Background	BACKGROUND in cpm	(BKG)	0.17	0.17
AT	SAMPLE SIZE in mL	(SS)	0.500	0.500
Dil Factor	DILUTION FACTOR	(DF)	10201	10201
@ALPHA01	DIGEST DILUTION FACTOR	(DDF)	1	1
Weight	EFFICIENCY FACTOR	(EFF)	0.2095	0.2095
LIQUID	Lc, Rmax, or Rs,(SAMPLE RATE) as APPROPRIATE		0.296	0.363

Blank Number			
96006590	Blank Concentration in µCi/L	<	1.30E+01
Replicate	Replicate Concentration in µCi/L		1.59E+01
0	Maximum Concentration in µCi/L	<	1.5938E+01

Sample Prep
N/A

Sample 2
S96T001960

Instrument Code
WB27809

Prepared By
SEH

Chemist
SLF

Analyst
SLH

Date Completed
07/09/96

Analysis Date
06/29/96

Analysis Time
03:00 AM

Sample Point
AW-101 PUSH

Rs (Sample Count Rate) = (TC / CT) - BKG
ALPHA TOTAL µCi/L = Rs * 1000mL/L * DF * DDF / (EFF * SS * 2220000dpm/µCi)
ALPHA TOTAL µCi/mL = ALPHA TOTAL µCi/L / 1000mL/L
Relative Counting Error = [|(The Square Root of TC + BKG * CT) / (TC - BKG * CT)|] * 1.96 * 100
Detection Levels and Less Than Values are determined from Procedure LA-508-002.

ALPHA TOTAL in µCi/mL (Maximum)	=	< 1.59E-02	DETECTION LEVEL	
LESS THAN Value was Determined from Rmax.			1.94E-02 µCi/mL	
RELATIVE COUNTING ERROR		244.6%		

(/ system.exit)yes~

Analyst:	SLH		Date: 09-Jul-96
Signature of Chemist:		SLF	Date: 7/9/96

SAMPLE.WB1 Rev. 1.0 508101ML

WORKBOOK PAGE: SAM11

AT : LA-508-101 (D-2) LIQUIDS

			SAMPLE	REPLICATE
Type	DETECTOR NUMBER		18	18
SAMPLE	DISH SIZE (1 , 2 , or 5)	(MS)	2	2
Work Id	GROSS COUNTS	(GC)	7	7
10342	COUNT TIME in MINUTES	(CT)	30	30
Tech Id	BACKGROUND in cpm	(BKG)	0.17	0.17
AT	SAMPLE SIZE in mL	(SS)	0.500	0.500
Test Code	DILUTION FACTOR	(DF)	10201	10201
@ALPHA01	DIGEST DILUTION FACTOR	(DDF)	1	1
Matrix	EFFICIENCY FACTOR	(EFF)	0.2095	0.2095
LIQUID	Lc, Rmax, or Rs,(SAMPLE RATE) as APPROPRIATE		0.256	0.256

Batch Number			
96006590	Blank Concentration in µCi/L	<	1.12E+01
Replicate	Replicate Concentration in µCi/L	<	1.12E+01
0	Maximum Concentration in µCi/L	<	1.1171E+01

Sample Prep
N/A

Rs (Sample Count Rate) = (TC / CT) - BKG
ALPHA TOTAL µCi/L = Rs * 1000mL/L * DF * DDF / (EFF * SS * 2220000dpm/µCi)
ALPHA TOTAL µCi/mL = ALPHA TOTAL µCi/L / 1000mL/L
Relative Counting Error = [|(The Square Root of TC + BKG * CT) / (TC - BKG * CT)|] * 1.96 * 100
Detection Levels and Less Than Values are determined from Procedure LA-508-002.

Sample Id
S96T001964

Instrument Code
WB27809

Prepared By
SEH

Chemist
SLF

Analyst
SLH

Date Completed
07/09/96

Analysis Date
06/29/96

Analysis Time
03:00 AM

Sample Point
AW-101 PUSH

ALPHA TOTAL in µCi/mL (Maximum) =	< 1.12E-02	DETECTION LEVEL
LESS THAN Value was Determined from Rmax.		1.94E-02 µCi/mL
RELATIVE COUNTING ERROR	500.0%	

{/ system.exit}yes~

Analyst:	SLH	Date: 09-Jul-96	
Signature of Chemist:	SLF	Date: 7/9/96	

SAMPLE.WB1 Rev. 1.0 508101ML

AT : LA-508-101 (D-2) LIQUIDS

			DUP	REPLICATE
AT	DETECTOR NUMBER		18	18
DUP	DISH SIZE (1 , 2 , or 5)	(MS)	2	2
Matrix	GROSS COUNTS	(GC)	3	3
10342	COUNT TIME in MINUTES	(CT)	30	30
Matrix	BACKGROUND in cpm	(BKG)	0.17	0.17
AT	SAMPLE SIZE in mL	(SS)	0.500	0.500
Calc Code	DILUTION FACTOR	(DF)	10201	10201
@ALPHA01	DIGEST DILUTION FACTOR	(DDF)	1	1
Matrix	EFFICIENCY FACTOR	(EFF)	0.2095	0.2095
LIQUID	Lc, Rmax, or Rs,(SAMPLE RATE) as APPROPRIATE		0.176	0.176
Batch Number				
96006590	Blank Concentration in µCi/L	<	7.71E+00	
Rmax	Replicate Concentration in µCi/L	<	7.71E+00	
0	Maximum Concentration in µCi/L	<	7.7055E+00	
Sample Code				
N/A	Rs (Sample Count Rate) = (TC / CT) - BKG			
Sample #	ALPHA TOTAL µCi/L = Rs * 1000mL/L * DF * DDF / (EFF * SS * 2220000dpm/µCi)			
S96T001964	ALPHA TOTAL µCi/mL = ALPHA TOTAL µCi/L / 1000mL/L			
Instrument Code	Relative Counting Error = [|(The Square Root of TC + BKG * CT) / (TC - BKG * CT)|] * 1.96 * 100			
WB27809	Detection Levels and Less Than Values are determined from Procedure LA-508-002.			
Prepared By				
SEH				
Chemist				
SLF	ALPHA TOTAL in µCi/mL (Maximum) =		< 7.71E-03	DETECTION LEVEL
Analyst				
SLH	LESS Than Value was Determined from Lc.			
Date Completed				1.94E-02 µCi/mL
07/09/96	RELATIVE COUNTING ERROR		500.0%	
Analysis Date				
06/29/96				
Analysis Time				
03:00 AM				
Sample Point				
AW-101 PUSH				

{/ system;exit}yes~

Analyst:	SLH		Date: 09-Jul-96
Signature of Chemist:		SLF	Date: 7/9/96

SAMPLE.WB1 Rev. 1.0 508101ML

WORKBOOK PAGE: SAM13

AT : LA-508-101 (D-2) LIQUIDS

			SAMPLE	REPLICATE
AT	DETECTOR NUMBER		18	18
SAMPLE	DISH SIZE (1 , 2 , or 5)	(MS)	2	2
Vial Size	GROSS COUNTS	(GC)	7	10
10342	COUNT TIME in MINUTES	(CT)	30	30
Vial Type	BACKGROUND in cpm	(BKG)	0.17	0.17
AT	SAMPLE SIZE in mL	(SS)	0.500	0.500
Lab Code	DILUTION FACTOR	(DF)	10201	10201
@ALPHA01	DIGEST DILUTION FACTOR	(DDF)	1	1
Matrix	EFFICIENCY FACTOR	(EFF)	0.2095	0.2095
LIQUID	Lc, Rmax, or Rs,(SAMPLE RATE) as APPROPRIATE		0.255	0.377

Batch Number			
960065B0	Blank Concentration in µCi/L	<	1.12E+01
Batch	Replicate Concentration in µCi/L	<	1.65E+01
0	Maximum Concentration in µCi/L	<	1.6540E+01

Input Form	
N/A	Rs (Sample Count Rate) = (TC / CT) - BKG
Sample #	ALPHA TOTAL µCi/L = Rs * 1000mL/L * DF * DDF / (EFF * SS * 2220000dpm/µCi)
S96T001968	ALPHA TOTAL µCi/mL = ALPHA TOTAL µCi/L / 1000mL/L
Instrument Log #	Relative Counting Error = [|(The Square Root of TC + BKG * CT) / (TC - BKG * CT)|] * 1.96 * 100
WB27808	Detection Levels and Less Than Values are determined from Procedure LA-508-002.
Prepared By	
SEH	
Chemist	
SLF	ALPHA TOTAL in µCi/mL (Maximum) = < 1.65E-02
Analyst	
SLH	LESS THAN Value was Determined from Rmax.
Date Complete	
07/09/96	RELATIVE COUNTING ERROR 500.0%
Analysis Date	
06/29/96	
Analysis Time	
03:00 AM	
Sample Point	
AW-101 PUSH	

DETECTION LEVEL
1.94E-02 µCi/mL

{/ system,exit}yes~

Analyst:		SLH	Date: 09-Jul-96
Signature of Chemist:		SLF	Date: 7/9/96

SAMPLE.WB1 Rev. 1.0 508101ML

WORKBOOK PAGE: DUP14

AT : LA-508-101 (D-2) LIQUIDS

			DUP	REPLICATE
Vial	DETECTOR NUMBER		18	18
DUP	DISH SIZE (1 , 2 , or 5)	(MS)	2	2
Work Set	GROSS COUNTS	(GC)	1	9
10342	COUNT TIME in MINUTES	(CT)	30	30
Vial Size	BACKGROUND in cpm	(BKG)	0.17	0.17
AT	SAMPLE SIZE in mL	(SS)	0.500	0.500
Alpha Code	DILUTION FACTOR	(DF)	10201	10201
@ALPHA01	DIGEST DILUTION FACTOR	(DDF)	1	1
Matrix	EFFICIENCY FACTOR	(EFF)	0.2095	0.2095
LIQUID	Lc, Rmax, or Rs,(SAMPLE RATE) as APPROPRIATE		0.176	0.337

Batch Number			
96006590	Blank Concentration in µCi/L	<	7.71E+00
Replicate	Replicate Concentration in µCi/L	<	1.48E+01
0	Maximum Concentration in µCi/L	<	1.4762E+01

Sample Prep
N/A

Rs (Sample Count Rate) = (TC / CT) - BKG

Sample #
S96T001968

ALPHA TOTAL µCi/L = Rs * 1000mL/L * DF * DDF / (EFF * SS * 2220000dpm/µCi)

ALPHA TOTAL µCi/mL = ALPHA TOTAL µCi/L / 1000mL/L

Instrument Data
WB27809

Relative Counting Error = [|(The Square Root of TC + BKG * CT) / (TC - BKG * CT)|] * 1.96 * 100

Detection Levels and Less Than Values are determined from Procedure LA-508-002.

Prepared By
SEH

Chemist
SLF

ALPHA TOTAL in µCi/mL (Maximum)	=	< 1.48E-02	DETECTION LEVEL
LESS Than Value was Determined from Lc.			1.94E-02 µCi/mL
RELATIVE COUNTING ERROR		500.0%	

Analyst
SLH

Date Completed
07/09/96

Analysis Date
06/29/96

Analysis Time
03:00 AM

Sample Point
AW-101 PUSH

{/ system;exit}yes~

Analyst:	SLH		Date: 09-Jul-96
Signature of Chemist:		SLF	Date: 7/9/96

SAMPLE.WB1 Rev. 1.0 508101ML

06/27/96 10:11
A-0004-1

LABCORE Data Entry Template for Worklist# 10352

Analyst: KNT **Instrument:** AB00 15 **Book#** 47856

Method: LA-508-101 Rev/Mod 0-2

Worklist Comment: Determine sample size using ludlum.For spike use: 0.1ml.new

S	Type	Sample#	R	A	Test	Matrix	Group#	Project
1	STD				@ALPHA01	LIQUID		
2	BLNK				@ALPHA01	LIQUID		
3	BLNK/BKG				@ALPHA01	LIQUID		
4	SAMPLE	S96T002422	0	D	@ALPHA01	LIQUID	96000462	AW-101 PUSH
		Analytes Requested: ALPHA01 , ALPHA01E						
5	DUP	S96T002422	0	D	@ALPHA01	LIQUID		
6	SPK	S96T002422	0	D	@ALPHA01	LIQUID		
7	SAMPLE	S96T002430	0	D	@ALPHA01	LIQUID	96000462	AW-101 PUSH
		Analytes Requested: ALPHA01 , ALPHA01E						
8	DUP	S96T002430	0	D	@ALPHA01	LIQUID		

Final page for worklist # 10352

Kim Thomas 6-28-96
Analyst Signature **Date**

Sharon J Uhlik 7-8-96
Analyst Signature **Date**

Sue E. Hogan 7-8-96

Data Entry Comments:

S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

worklistrad Version 0.0 04/18/96
07/08/96 10:55

LABCORE Completed RadChem Report for Worklist#: 10352

Analyst: knt **Instrument:** AB15 **Book#** _____

Method: _____ Rev/Mod _____

Worklist Comment: Determine sample size using ludlum.For spike use: 0.1ml.new

Seq	Type	Sample#	R	A	Test	Matrix	Actual	Found	DL or Yield	Unit
1	STD		0	@ALPHA01	ALPHA01	LIQUID	1.28E-04	1.29E-4	100.781	% Recovery
1	STD		0	@ALPHA01	ALPHA01E	LIQUID	1.00	4.42E+00	4.420	% Ct. Erro
2	BLNK		0	@ALPHA01	ALPHA01	LIQUID	1	<5.93E-3		uCi/mL
2	BLNK		0	@ALPHA01	ALPHA01E	LIQUID	1.00	5.00E+02	500.000	uCi/mL
3	BLNK/BKG		0	@ALPHA01	ALPHA01	LIQUID	1.00E+00	3.85E-01	0.385	BLNK/BKG
4	SAMPLE	S96T002422	0	@ALPHA01	ALPHA01	LIQUID	N/A <	7.75E-03	154.0e-004	uCi/mL
4	SAMPLE	S96T002422	0	@ALPHA01	ALPHA01E	LIQUID	N/A	5.00E+02	0.0e+000	% Ct. Error
5	DUP	S96T002422	0	@ALPHA01	ALPHA01	LIQUID	<7.75E-3	<5.93E-3		RPD
5	DUP	S96T002422	0	@ALPHA01	ALPHA01E	LIQUID	1.00	5.00E+02	500.000	% Ct. Erro
6	SPK	S96T002422	0	@ALPHA01	ALPHA01	LIQUID	3.59E-02	3.29E-02	91.643	% Recovery
7	SAMPLE	S96T002430	0	@ALPHA01	ALPHA01	LIQUID	N/A <	9.39E-03	154.0e-004	uCi/mL
7	SAMPLE	S96T002430	0	@ALPHA01	ALPHA01E	LIQUID	N/A	5.00E+02	0.0e+000	% Ct. Error
8	DUP	S96T002430	0	@ALPHA01	ALPHA01	LIQUID	<9.39E-3	<1.10E-2		RPD
8	DUP	S96T002430	0	@ALPHA01	ALPHA01E	LIQUID	1.00	5.00E+02	500.000	% Ct. Erro

Final page for worklist# 10352

Analyst Signature **Date** **Analyst Signature** **Date**

7/8/96

Reviewer Signature **Date**

Units shown for QC (BLK/BKG) may not reflect the actual units.

WORKBOOK PAGE: STD1

AT : LA-508-101 (D-2) **LA-508-113 (A-2) STANDARD**

			STANDARD	REPLICATE
	DETECTOR NUMBER		15	15
STD	DISH SIZE (1 , 2 , or 5)	(MS)	2	2
	GROSS COUNTS	(GC)	2119	1982
10352	COUNT TIME in MINUTES	(CT)	30	30
	BACKGROUND in cpm	(BKG)	0.13	0.13
AT	SAMPLE SIZE in mL	(SS)	1.000	1.000
	DILUTION FACTOR	(DF)	1	1
@ALPHA01	STANDARD BOOK NUMBER	(Std BN)	47B56	47B56
	EFFICIENCY FACTOR	(EFF)	0.2380	0.2380
LIQUID	Lc, Rmax, or Rs,(SAMPLE RATE) as APPROPRIATE		70.503	65.937
	Standard Value in µCi/mL		1.28E-04	
96006591	Concentration in µCi/L	=	1.33E-01	
	Replicate Concentration in µCi/L	=	1.25E-01	
0	AVERAGE CONCENTRATION in µCi/L	=	1.2912E-01	

N/A

WL10352

WB26872

SLH2

SLF

KNT

07/08/96

06/28/96

05:15 AM

AW-101 PUSH

Rs (Sample Count Rate) = (TC / CT) - BKG

ALPHA TOTAL µCi/L = Rs * 1000mL/L * DF / (EFF * SS * 2220000dpm/µCi)

ALPHA TOTAL µCi/mL = ALPHA TOTAL µCi/L / 1000mL/L

Relative Counting Error = [|(The Square Root of TC + BKG * CT) / (TC - BKG * CT)|] * 1.96 * 100

Detection Levels and Less Than Values are determined from Procedure LA-508-002.

ALPHA TOTAL CONCENTRATION in µCi/mL	=	1.29E-04	DETECTION LEVEL
RELATIVE COUNTING ERROR	=	4.4%	7.53E-07 µCi/mL

Analyst:		SLH2	Date: 08-Jul-96
Signature of Chemist:		SLF	Date: 7/8/96 SLF

STANDARD.WB1 Rev. 1.0 508101ML

WORKBOOK PAGE: BLANK2

AT : LA-508-101 (D-2) LIQUIDS

			BLNK	REPLICATE
Type	DETECTOR NUMBER		15	15
BLNK	DISH SIZE (1 , 2 , or 5)	(MS)	2	2
Workbook	GROSS COUNTS	(GC)	1	2
10352	COUNT TIME in MINUTES	(CT)	30	30
Analysis Set	BACKGROUND in cpm	(BKG)	0.13	0.13
AT	SAMPLE SIZE in mL	(SS)	0.500	0.500
Test Code	DILUTION FACTOR	(DF)	10201	10201
@ALPHA01	DIGEST DILUTION FACTOR	(DDF)	1	1
Matrix	EFFICIENCY FACTOR	(EFF)	0.2380	0.2380
LIQUID	Lc, Rmax, or Rs,(SAMPLE RATE) as APPROPRIATE		0.154	0.154

Error Number			
96006591	Blank Concentration in µCi/L	<	5.93E+00
Replicate	Replicate Concentration in µCi/L	<	5.93E+00
0	Maximum Concentration in µCi/L	<	5.9313E+00

Sample Prep
N/A

Rs (Sample Count Rate) = (TC / CT) - BKG

Rs Sample Id
WL10352

ALPHA TOTAL µCi/L = Rs * 1000mL/L * DF * DDF / (EFF * SS * 2220000dpm/µCi)

ALPHA TOTAL µCi/mL = ALPHA TOTAL µCi/L / 1000mL/L

Instrument Id
WB26872

Relative Counting Error = [|(The Square Root of TC + BKG * CT) / (TC - BKG * CT)|] * 1.96 * 100

Detection Levels and Less Than Values are determined from Procedure LA-508-002.

Prepared By
SLH2

Chemist
SLF

ALPHA TOTAL in µCi/mL (Maximum) = < 5.93E-03

Analyst
KNT

LESS Than Value was Determined from Lc.

Date Complete
07/08/96

RELATIVE COUNTING ERROR 500.0%

DETECTION LEVEL
1.54E-02 µCi/mL

Analysis Date
06/28/96

Analysis Time
05:15 AM

Sample Point
AW-101 PUSH

Analyst:	KNT		Date: 08-Jul-96
Signature of Chemist:		SLF	Date: 7/8/96

BLANK.WB1 Rev. 1.0 508101ML

WORKBOOK PAGE: SAM4

AT : LA-508-101 (D-2) LIQUIDS

			SAMPLE	REPLICATE
Type	DETECTOR NUMBER		15	15
SAMPLE	DISH SIZE (1 , 2 , or 5)	(MS)	2	2
Work Unit	GROSS COUNTS	(GC)	3	5
10352	COUNT TIME in MINUTES	(CT)	30	30
Analyst	BACKGROUND in cpm	(BKG)	0.13	0.13
AT	SAMPLE SIZE in mL	(SS)	0.500	0.500
Procedure	DILUTION FACTOR	(DF)	10201	10201
@ALPHA01	DIGEST DILUTION FACTOR	(DDF)	1	1
Matrix	EFFICIENCY FACTOR	(EFF)	0.2380	0.2380
LIQUID	Lc, Rmax, or Rs,(SAMPLE RATE) as APPROPRIATE		0.154	0.201

Batch Number			
96006591	Blank Concentration in µCi/L	<	5.93E+00
Replicate	Replicate Concentration in µCi/L	<	7.75E+00
0	Maximum Concentration in µCi/L	<	7.7516E+00

Sample Plan	
N/A	Rs (Sample Count Rate) = (TC / CT) - BKG
Sample#	ALPHA TOTAL µCi/L = Rs * 1000mL/L * DF * DDF / (EFF * SS * 2220000dpm/µCi)
S96T002422	ALPHA TOTAL µCi/mL = ALPHA TOTAL µCi/L / 1000mL/L
Instrument Stock	Relative Counting Error = [|(The Square Root of TC + BKG * CT) / (TC - BKG * CT)|] * 1.96 * 100
WB26872	Detection Levels and Less Than Values are determined from Procedure LA-508-002.
Prepared By	
SLH2	
Chemist	
SLF	
Analyst	
KNT	
Date Complete	
07/08/96	
Analysis Date	
06/28/96	
Analysis Time	
05:15 AM	
Sample Point	
AW-101 PUSH	

ALPHA TOTAL in µCi/mL (Maximum)	=	< 7.75E-03	DETECTION LEVEL
LESS Than Value was Determined from Lc.			1.54E-02 µCi/mL
RELATIVE COUNTING ERROR		500.0%	

Analyst:	KNT		Date: 08-Jul-96
Signature of Chemist:		SLF	Date: 7/8/96

SAMPLE.WB1 Rev. 1.0 508101ML

WORKBOOK PAGE: DUP5

AT : LA-508-101 (D-2) LIQUIDS

			DUP	REPLICATE
Type	DETECTOR NUMBER		15	15
DUP	DISH SIZE (1 , 2 , or 5)	(MS)	2	2
Workbook	GROSS COUNTS	(GC)	3	3
10352	COUNT TIME in MINUTES	(CT)	30	30
Analysis	BACKGROUND in cpm	(BKG)	0.13	0.13
AT	SAMPLE SIZE in mL	(SS)	0.500	0.500
Test Code	DILUTION FACTOR	(DF)	10201	10201
@ALPHA01	DIGEST DILUTION FACTOR	(DDF)	1	1
Matrix	EFFICIENCY FACTOR	(EFF)	0.2380	0.2380
LIQUID	Lc, Rmax, or Rs,(SAMPLE RATE) as APPROPRIATE		0.154	0.154

Control Number			
96006591	Blank Concentration in µCi/L	<	5.93E+00
Replicate	Replicate Concentration in µCi/L	<	5.93E+00
0	Maximum Concentration in µCi/L	<	5.9313E+00

Sample Prep	
N/A	Rs (Sample Count Rate) = (TC / CT) - BKG
Sample #	ALPHA TOTAL µCi/L = Rs * 1000mL/L * DF * DDF / (EFF * SS * 2220000dpm/µCi)
S96T002422	ALPHA TOTAL µCi/mL = ALPHA TOTAL µCi/L / 1000mL/L
Instrument Code	Relative Counting Error = [|(The Square Root of TC + BKG * CT) / (TC - BKG * CT)|] * 1.96 * 100
WB26872	Detection Levels and Less Than Values are determined from Procedure LA-508-002.
Prepared By	
SLH2	
Technical	
SLF	ALPHA TOTAL in µCi/mL (Maximum) = < 5.93E-03
Analyst	
KNT	LESS Than Value was Determined from Lc.
Date Complete	
07/08/96	RELATIVE COUNTING ERROR 500.0%
Analysis Date	
06/28/96	
Analysis Time	
05:15 AM	
Sample Point	
AW-101 PUSH	

DETECTION LEVEL
1.54E-02 µCi/mL

Analyst:		KNT	Date: 08-Jul-96
Signature of Chemist:		SLF	Date: 7/8/96

SAMPLE.WB1 Rev. 1.0 508101ML

WORKBOOK PAGE: SPK6

AT : LA-508-101 (D-2) LA-508-113 (A-2) SPIKED SAMPLE

				SPIKE	REPLICATE
Type	DETECTOR NUMBER			15	15
SPK	DISH SIZE 1 , 2 , or 5		(MS)	2	2
Work List	TOTAL COUNTS		(TC)	52180	52053
10352	COUNT TIME in MINUTES		(CT)	30	30
AT 0218B2	BACKGROUND in cpm		(BKG)	0.13	0.13
AT	SAMPLE VOLUME in mL	(Spiked Vial)	(SS)	0.500	0.500
Test Code	SAMPLE DILUTION FACTOR	(Spiked Vial)	(DF)	10201	10201
@ALPHA01	DIGEST DILUTION FACTOR		(DDF)	1	1
Matrix	SPIKE VOLUME in mL		(SVol)	0.100	0.100
LIQUID	SPIKE DILUTION FACTOR		(SDF)	1	1
Batch Number	SPIKE BOOK NUMBER		(Spk BN)	123B43	123B43
96006591	SPIKE VALUE in µCi/mL		(SVal)	3.5884E-02	3.5884E-02
Rerun	INSTRUMENT EFFICIENCY FACTOR		(EFF)	0.238	0.238
0	SAMPLE + SPIKE µCi/mL		(S+S)	6.72E+01	6.70E+01
Sample Prep	AVERAGE or MAXIMUM µCi/mL in SAMPLE		<	7.7516E-03	
N/A					
Sample #					
S96T002422	Rs (Sample Count Rate) = (TC / CT) - BKG				
Instrument Code	SAMPLE + SPIKE µCi/mL = Rs * DF * DDF / (EFF * SS * 2220000dpm/µCi)				
WB26872	QC ACTUAL = SVal				
Prepared By	QC FOUND = (((S+S µCi/mL - SAMPLE µCi/mL) * ((SDF/SVol)/(DF*DDF/SS))))				
SLH2	PERCENT SPIKE RECOVERY = (QC FOUND / QC ACTUAL) *100				
Chemist					
SLF					
Analyst					
KNT					
Date Completed	NOTE: Original Sample result was a LESS THAN value. Zero (0) was subtracted from the spiked value for QC found calculation.				
07/08/96					
Analysis Date					
06/28/96	QC ACTUAL		=	3.59E-02	
Analysis Time	QC FOUND		=	3.29E-02	
05:15 AM	AVG. PERCENT SPIKE RECOVERY		=	91.6%	
Sample Point					
AW-101 PUSH					

Analyst:		SLH2	Date: 08-Jul-96
Signature of Chemist:		SLF	Date: 7/8/96

SPIKE.WB1 Rev. 1.0 508101ML

WORKBOOK PAGE: SAM7

AT : LA-508-101 (D-2) LIQUIDS

			SAMPLE	REPLICATE
Type	DETECTOR NUMBER		15	15
SAMPLE	DISH SIZE (1 , 2 , or 5)	(MS)	2	2
Work List	GROSS COUNTS	(GC)	6	1
10352	COUNT TIME in MINUTES	(CT)	30	30
AT or AT-2	BACKGROUND in cpm	(BKG)	0.13	0.13
AT	SAMPLE SIZE in mL	(SS)	0.500	0.500
Test Code	DILUTION FACTOR	(DF)	10201	10201
@ALPHA01	DIGEST DILUTION FACTOR	(DDF)	1	1
Matrix	EFFICIENCY FACTOR	(EFF)	0.2380	0.2380
LIQUID	Lc, Rmax, or Rs,(SAMPLE RATE) as APPROPRIATE		0.243	0.154

Batch Number			
96006591	Blank Concentration in µCi/L	<	9.39E+00
Rerun	Replicate Concentration in µCi/L	<	5.93E+00
0	Maximum Concentration in µCi/L	<	9.3852E+00

Sample Prep
N/A

Sample #
S96T002430

Instrument Code
WB26872

Prepared By
SLH2

Chemist
SLF

Analyst
KNT

Date Complete
07/08/96

Analysis Date
06/28/96

Analysis Time
05:15 AM

Sample Point
AW-101 PUSH

Rs (Sample Count Rate) = (TC / CT) - BKG
ALPHA TOTAL µCi/L = Rs * 1000mL/L * DF * DDF / (EFF * SS * 2220000dpm/µCi)
ALPHA TOTAL µCi/mL = ALPHA TOTAL µCi/L / 1000mL/L
Relative Counting Error = [|(The Square Root of TC + BKG * CT) / (TC - BKG * CT)|] * 1.96 * 100
Detection Levels and Less Than Values are determined from Procedure LA-508-002.

ALPHA TOTAL in µCi/mL (Maximum)	=	< 9.39E-03	DETECTION LEVEL
LESS THAN Value was Determined from Rmax.			1.54E-02 µCi/mL
RELATIVE COUNTING ERROR		500.0%	

Analyst:	KNT		Date: 08-Jul-96
Signature of Chemist:		SLF	Date: 7/8/96

SAMPLE.WB1 Rev. 1.0 508101ML

WORKBOOK PAGE: DUP8

AT : LA-508-101 (D-2) LIQUIDS

Type			DUP	REPLICATE
DUP	DETECTOR NUMBER		15	15
	DISH SIZE (1 , 2 , or 5)	(MS)	2	2
Work Unit	GROSS COUNTS	(GC)	7	2
10352	COUNT TIME in MINUTES	(CT)	30	30
Analysis	BACKGROUND in cpm	(BKG)	0.13	0.13
AT	SAMPLE SIZE in mL	(SS)	0.500	0.500
Test Code	DILUTION FACTOR	(DF)	10201	10201
@ALPHA01	DIGEST DILUTION FACTOR	(DDF)	1	1
Matrix	EFFICIENCY FACTOR	(EFF)	0.2380	0.2380
LIQUID	Lc, Rmax, or Rs,(SAMPLE RATE) as APPROPRIATE		0.285	0.154

Batch Number			
96006591	Blank Concentration in µCi/L	<	1.10E+01
Rerun	Replicate Concentration in µCi/L	<	5.93E+00
0	Maximum Concentration in µCi/L	<	1.1002E+01

Sample Prep: N/A

Sample #: S96T002430

Instrument Code: WB26872

Prepared By: SLH2

Chemist: SLF

Analyst: KNT

Date Complete: 07/08/96

Analysis Date: 06/28/96

Analysis Time: 05:15 AM

Sample Point: AW-101 PUSH

Rs (Sample Count Rate) = (TC / CT) - BKG

ALPHA TOTAL µCi/L = Rs * 1000mL/L * DF * DDF / (EFF * SS * 2220000dpm/µCi)

ALPHA TOTAL µCi/mL = ALPHA TOTAL µCi/L / 1000mL/L

Relative Counting Error = [|(The Square Root of TC + BKG * CT) / (TC - BKG * CT)|] * 1.96 * 100

Detection Levels and Less Than Values are determined from Procedure LA-508-002.

ALPHA TOTAL in µCi/mL (Maximum)	=	< 1.10E-02	DETECTION LEVEL
LESS THAN Value was Determined from Rmax.			1.54E-02 µCi/mL
RELATIVE COUNTING ERROR		500.0%	

Analyst:	KNT		Date: 08-Jul-96
Signature of Chemist:		SLF	Date: 7/8/96

SAMPLE.WB1 Rev. 1.0 508101ML

worklistrad Version 0.0 04/18/96
07/08/96 14:57

LABCORE Completed RadChem Report for Worklist#: 10353

Analyst: knt **Instrument:** AB13 **Book#** _____

Method: _____ Rev/Mod _____

Worklist Comment: Determine sample size using ludlum.For spike use: 0.1ml.new

Seq	Type	Sample#	R	A	Test	Matrix	Actual	Found	DL or Yield	Unit
1	STD		0	@ALPHA01	ALPHA01	LIQUID	1.28E-04	1.29E-4	100.781	% Recovery
1	STD		0	@ALPHA01	ALPHA01E	LIQUID	1.00	4.25E+00	4.250	% Ct. Erro
2	BLNK		0	@ALPHA01	ALPHA01	LIQUID	1	<5.86E-3		uCi/mL
2	BLNK		0	@ALPHA01	ALPHA01E	LIQUID	1.00	5.00E+02	500.000	uCi/mL
3	SAMPLE	S96T002439	0	@ALPHA01	ALPHA01	LIQUID	N/A <	9.02E-03	148.0e-004	uCi/mL
3	SAMPLE	S96T002439	0	@ALPHA01	ALPHA01E	LIQUID	N/A	5.00E+02	0.0e+000	% Ct. Error
4	DUP	S96T002439	0	@ALPHA01	ALPHA01	LIQUID	<9.02E-3	<9.02E-3		RPD
4	DUP	S96T002439	0	@ALPHA01	ALPHA01E	LIQUID	1.00	5.00E+02	500.000	% Ct. Erro
5	SPK	S96T002439	0	@ALPHA01	ALPHA01	LIQUID	3.59E-02	3.33E-02	92.758	% Recovery
6	SAMPLE	S96T002454	0	@ALPHA01	ALPHA01	LIQUID	N/A	6.93E-03	148.0e-004	uCi/mL
6	SAMPLE	S96T002454	0	@ALPHA01	ALPHA01E	LIQUID	N/A	1.38E+02	0.0e+000	% Ct. Error
7	DUP	S96T002454	0	@ALPHA01	ALPHA01	LIQUID	6.93E-3	<1.21E-2		RPD
7	DUP	S96T002454	0	@ALPHA01	ALPHA01E	LIQUID	1.00	5.00E+02	500.000	% Ct. Erro
8	SAMPLE	S96T002462	0	@ALPHA01	ALPHA01	LIQUID	N/A <	7.45E-03	148.0e-004	uCi/mL
8	SAMPLE	S96T002462	0	@ALPHA01	ALPHA01E	LIQUID	N/A	5.00E+02	0.0e+000	% Ct. Error
9	DUP	S96T002462	0	@ALPHA01	ALPHA01	LIQUID	<7.45E-3	<9.02E-3		RPD
9	DUP	S96T002462	0	@ALPHA01	ALPHA01E	LIQUID	1.00	5.00E+02	500.000	% Ct. Erro

Final page for worklist# 10353

Analyst Signature **Date** **Analyst Signature** **Date**

7/9/96

Reviewer Signature **Date**

Units shown for QC (BLK/BKG) may not reflect the actual units.

LABCORE Data Entry Template for Worklist# 10353

Analyst: KNT **Instrument:** AB00 13 **Book#** 47B56

Method: LA-508-101 Rev/Mod D-2

Worklist Comment: Determine sample size using ludlum.For spike use: 0.1ml.new

S	Type	Sample#	R	A	Test	Matrix	Group#	Project
1	STD				@ALPHA01	LIQUID		
2	BLNK				@ALPHA01	LIQUID		
3	SAMPLE	S96T002439	0	D	@ALPHA01	LIQUID	96000462	AW-101 PUSH
		Analytes Requested: ALPHA01 , ALPHA01E						
4	DUP	S96T002439	0	D	@ALPHA01	LIQUID		
5	SPK	S96T002439	0	D	@ALPHA01	LIQUID		
6	SAMPLE	S96T002454	0	D	@ALPHA01	LIQUID	96000462	AW-101 PUSH
		Analytes Requested: ALPHA01 , ALPHA01E						
7	DUP	S96T002454	0	D	@ALPHA01	LIQUID		
8	SAMPLE	S96T002462	0	D	@ALPHA01	LIQUID	96000462	AW-101 PUSH
		Analytes Requested: ALPHA01 , ALPHA01E						
9	DUP	S96T002462	0	D	@ALPHA01	LIQUID		

Final page for worklist # 10353

Kim Thomas 6-28-96
Analyst Signature **Date**

C.J. Ojinen 7/8/96
Analyst Signature **Date**

Sue E. Hogan 7-8-96

Data Entry Comments:

S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

WORKBOOK PAGE: STD1

AT : LA-508-101 (D-2)

	LA-508-113 (A-2) STANDARD		STANDARD	REPLICATE
	DETECTOR NUMBER		13	13
STD	DISH SIZE (1 , 2 , or 5)	(MS)	2	2
	GROSS COUNTS	(GC)	2136	2140
10353	COUNT TIME in MINUTES	(CT)	30	30
	BACKGROUND in cpm	(BKG)	0.13	0.13
AT	SAMPLE SIZE in mL	(SS)	1.000	1.000
	DILUTION FACTOR	(DF)	1	1
@ALPHA01	STANDARD BOOK NUMBER	(Std BN)	47B56	47B56
	EFFICIENCY FACTOR	(EFF)	0.2477	0.2477
LIQUID	Lc, Rmax, or Rs,(SAMPLE RATE) as APPROPRIATE		71.070	71.203
	Standard Value in µCi/mL		1.28E-04	
96006593	Concentration in µCi/L	=	1.29E-01	
	Replicate Concentration in µCi/L	=	1.29E-01	
0	AVERAGE CONCENTRATION in µCi/L	=	1.2936E-01	

N/A

wl10353

WB27810

CJO

SLF

KNT

07/08/96

06/28/96

05:00 AM

AW101

Rs (Sample Count Rate) = (TC / CT) - BKG

ALPHA TOTAL µCi/L = Rs * 1000mL/L * DF / (EFF * SS * 2220000dpm/µCi)

ALPHA TOTAL µCi/mL = ALPHA TOTAL µCi/L / 1000mL/L

Relative Counting Error = [|(The Square Root of TC + BKG * CT) / (TC - BKG * CT)|] * 1.96 * 100

Detection Levels and Less Than Values are determined from Procedure LA-508-002.

			DETECTION LEVEL
ALPHA TOTAL CONCENTRATION in µCi/mL	=	1.29E-04	
RELATIVE COUNTING ERROR	=	4.3%	7.24E-07 µCi/mL

Analyst:	CJO		Date: 08-Jul-96
Signature of Chemist:		SLF	Date: 7/9/96

STANDARD.WB1 Rev. 1.0 508101ML

2259

WORKBOOK PAGE: BLANK2

AT : LA-508-101 (D-2) LIQUIDS

			BLNK	REPLICATE
	DETECTOR NUMBER		13	13
BLNK	DISH SIZE (1 , 2 , or 5)	(MS)	2	2
	GROSS COUNTS	(GC)	4	2
10353	COUNT TIME in MINUTES	(CT)	30	30
	BACKGROUND in cpm	(BKG)	0.13	0.13
AT	SAMPLE SIZE in mL	(SS)	0.500	0.500
	DILUTION FACTOR	(DF)	10201	10201
@ALPHA01	DIGEST DILUTION FACTOR	(DDF)	1	1
	EFFICIENCY FACTOR	(EFF)	0.2477	0.2477
LIQUID	Lc, Rmax, or Rs,(SAMPLE RATE) as APPROPRIATE		0.158	0.154

96006593	Blank Concentration in µCi/L	<	5.86E+00
	Replicate Concentration in µCi/L	<	5.70E+00
0	Maximum Concentration in µCi/L	<	5.8592E+00

N/A — Rs (Sample Count Rate) = (TC / CT) - BKG

ALPHA TOTAL µCi/L = Rs * 1000mL/L * DF * DDF / (EFF * SS * 2220000dpm/µCi)

WL10353 — ALPHA TOTAL µCi/mL = ALPHA TOTAL µCi/L / 1000mL/L

Relative Counting Error = [|(The Square Root of TC + BKG * CT) / (TC - BKG * CT)|] * 1.96 * 100

WB27810 — Detection Levels and Less Than Values are determined from Procedure LA-508-002.

CJO

SLF — ALPHA TOTAL in µCi/mL (Maximum) = < 5.86E-03

KNT — LESS THAN Value was Determined from Rmax.

07/08/96 — RELATIVE COUNTING ERROR 500.0%

DETECTION LEVEL 1.48E-02 µCi/mL

06/28/96

05:00 AM

AW101

Analyst:	KNT		Date: 08-Jul-96
Signature of Chemist:		SLF	Date: 7/9/96

BLANK.WB1 Rev. 1.0 508101ML

2260

WORKBOOK PAGE: SAM3

AT : LA-508-101 (D-2) LIQUIDS

			SAMPLE	REPLICATE
	DETECTOR NUMBER		13	13
SAMPLE	DISH SIZE (1 , 2 , or 5)	(MS)	2	2
	GROSS COUNTS	(GC)	5	6
10353	COUNT TIME in MINUTES	(CT)	30	30
	BACKGROUND in cpm	(BKG)	0.13	0.13
AT	SAMPLE SIZE in mL	(SS)	0.500	0.500
	DILUTION FACTOR	(DF)	10201	10201
@ALPHA01	DIGEST DILUTION FACTOR	(DDF)	1	1
	EFFICIENCY FACTOR	(EFF)	0.2477	0.2477
LIQUID	Lc, Rmax, or Rs,(SAMPLE RATE) as APPROPRIATE		0.201	0.243

96006593	Blank Concentration in µCi/L	<	7.45E+00
	Replicate Concentration in µCi/L	<	9.02E+00
0	Maximum Concentration in µCi/L	<	9.0177E+00

N/A

Rs (Sample Count Rate) = (TC / CT) - BKG

ALPHA TOTAL µCi/L = Rs * 1000mL/L * DF * DDF / (EFF * SS * 2220000dpm/µCi)

S96T002439

ALPHA TOTAL µCi/mL = ALPHA TOTAL µCi/L / 1000mL/L

Relative Counting Error = [|(The Square Root of TC + BKG * CT) / (TC - BKG * CT)|] * 1.96 * 100

WB27810

Detection Levels and Less Than Values are determined from Procedure LA-508-002.

CJO

SLF

ALPHA TOTAL in µCi/mL (Maximum) = < 9.02E-03

DETECTION LEVEL

KNT

LESS THAN Value was Determined from Rmax.

1.48E-02 µCi/mL

07/08/96

RELATIVE COUNTING ERROR 500.0%

06/28/96

05:00 AM

AW101

Analyst:	KNT	Date: 08-Jul-96	
Signature of Chemist:	SLF	Date: 7/9/96	

SAMPLE.WB1 Rev. 1.0 508101ML

2251

WORKBOOK PAGE: DUP4

AT : LA-508-101 (D-2) LIQUIDS

			DUP	REPLICATE
	DETECTOR NUMBER		13	13
DUP	DISH SIZE (1 , 2 , or 5)	(MS)	2	2
	GROSS COUNTS	(GC)	4	6
10353	COUNT TIME in MINUTES	(CT)	30	30
	BACKGROUND in cpm	(BKG)	0.13	0.13
AT	SAMPLE SIZE in mL	(SS)	0.500	0.500
	DILUTION FACTOR	(DF)	10201	10201
@ALPHA01	DIGEST DILUTION FACTOR	(DDF)	1	1
	EFFICIENCY FACTOR	(EFF)	0.2477	0.2477
LIQUID	Lc, Rmax, or Rs,(SAMPLE RATE) as APPROPRIATE		0.158	0.243

96006593	Blank Concentration in µCi/L	<	5.86E+00
	Replicate Concentration in µCi/L	<	9.02E+00
0	Maximum Concentration in µCi/L	<	9.0177E+00

N/A

S96T002439

WB27810

CJO

SLF

KNT

07/08/96

06/28/96

05:00 AM

AW101

Rs (Sample Count Rate) = (TC / CT) - BKG

ALPHA TOTAL µCi/L = Rs * 1000mL/L * DF * DDF / (EFF * SS * 2220000dpm/µCi)

ALPHA TOTAL µCi/mL = ALPHA TOTAL µCi/L / 1000mL/L

Relative Counting Error = [|(The Square Root of TC + BKG * CT) / (TC - BKG * CT)|] * 1.96 * 100

Detection Levels and Less Than Values are determined from Procedure LA-508-002.

ALPHA TOTAL in µCi/mL	(Maximum)	=	< 9.02E-03	DETECTION LEVEL
LESS THAN Value was Determined from Rmax.				1.48E-02 µCi/mL
RELATIVE COUNTING ERROR			500.0%	

Analyst:	KNT		Date: 08-Jul-96
Signature of Chemist:		SLF	Date: 7/9/96

SAMPLE.WB1 Rev. 1.0 508101ML

2268

WORKBOOK PAGE: SPK5

AT : LA-508-101 (D-2) LA-508-113 (A-2) SPIKED SAMPLE

				SPIKE	REPLICATE
	DETECTOR NUMBER			13	13
SPK	DISH SIZE 1 , 2 , or 5		(MS)	2	2
	TOTAL COUNTS		(TC)	53520	56418
10353	COUNT TIME in MINUTES		(CT)	30	30
	BACKGROUND in cpm		(BKG)	0.13	0.13
AT	SAMPLE VOLUME in mL	(Spiked Vial)	(SS)	0.500	0.500
	SAMPLE DILUTION FACTOR	(Spiked Vial)	(DF)	10201	10201
@ALPHA01	DIGEST DILUTION FACTOR		(DDF)	1	1
	SPIKE VOLUME in mL		(SVol)	0.100	0.100
LIQUID	SPIKE DILUTION FACTOR		(SDF)	1	1
	SPIKE BOOK NUMBER		(Spk BN)	123B43	123B43
96006593	SPIKE VALUE in µCi/mL		(SVal)	3.5884E-02	3.5884E-02
	INSTRUMENT EFFICIENCY FACTOR		(EFF)	0.2477	0.2477
0	SAMPLE + SPIKE µCi/mL		(S+S)	6.62E+01	6.98E+01
	AVERAGE or MAXIMUM µCi/mL in SAMPLE			< 9.0177E-03	

N/A

S96T002439

WB27810

CJO

SLF

KNT

07/08/96

06/28/96

05:00 AM

AW101

Rs (Sample Count Rate) = (TC / CT) - BKG

SAMPLE + SPIKE µCi/mL = Rs * DF * DDF / (EFF * SS * 2220000dpm/µCi)

QC ACTUAL = SVal

QC FOUND = (((S+S µCi/mL - SAMPLE µCi/mL) * ((SDF/SVol)/(DF*DDF/SS))))

PERCENT SPIKE RECOVERY = (QC FOUND / QC ACTUAL) *100

NOTE: **Original Sample result was a LESS THAN value. Zero (0) was subtracted from the spiked value for QC found calculation.**

QC ACTUAL	=	3.59E-02
QC FOUND	=	3.33E-02
AVG. PERCENT SPIKE RECOVERY	=	92.9%

Analyst:		CJO	Date: 08-Jul-96
Signature of Chemist:		SLF	Date: 7/9/96

SPIKE.WB1 Rev. 1.0 508101ML

2263

WORKBOOK PAGE: SAM6

AT : LA-508-101 (D-2) LIQUIDS

			SAMPLE	REPLICATE
	DETECTOR NUMBER		13	13
SAMPLE	DISH SIZE (1 , 2 , or 5)	(MS)	2	2
	GROSS COUNTS	(GC)	10	9
10353	COUNT TIME in MINUTES	(CT)	30	30
	BACKGROUND in cpm	(BKG)	0.13	0.13
AT	SAMPLE SIZE in mL	(SS)	0.500	0.500
	DILUTION FACTOR	(DF)	10201	10201
@ALPHA01	DIGEST DILUTION FACTOR	(DDF)	1	1
	EFFICIENCY FACTOR	(EFF)	0.2477	0.2477
LIQUID	Lc, Rmax, or Rs,(SAMPLE RATE) as APPROPRIATE		0.203	0.170

96006593	Blank Concentration in µCi/L	7.54E+00
	Replicate Concentration in µCi/L	6.31E+00
0	Average Concentration in µCi/L	6.9256E+00

N/A

Rs (Sample Count Rate) = (TC / CT) - BKG

ALPHA TOTAL µCi/L = Rs * 1000mL/L * DF * DDF / (EFF * SS * 2220000dpm/µCi)

S96T002454

ALPHA TOTAL µCi/mL = ALPHA TOTAL µCi/L / 1000mL/L

Relative Counting Error = [|(The Square Root of TC + BKG * CT) / (TC - BKG * CT)|] * 1.96 * 100

WB27810

Detection Levels and Less Than Values are determined from Procedure LA-508-002.

CJO

SLF

ALPHA TOTAL in µCi/mL (Average) = 6.93E-03

DETECTION LEVEL

KNT

1.48E-02 µCi/mL

07/08/96

RELATIVE COUNTING ERROR 138.0%

06/28/96

05:00 AM

AW101

Analyst:	KNT	Date: 08-Jul-96	
Signature of Chemist:	SLF	Date: 7/9/96	

SAMPLE.WB1 Rev. 1.0 508101ML

2264

WORKBOOK PAGE: DUP7

AT : LA-508-101 (D-2) LIQUIDS

			DUP	REPLICATE
	DETECTOR NUMBER		13	13
DUP	DISH SIZE (1 , 2 , or 5)	(MS)	2	2
	GROSS COUNTS	(GC)	6	8
10353	COUNT TIME in MINUTES	(CT)	30	30
	BACKGROUND in cpm	(BKG)	0.13	0.13
AT	SAMPLE SIZE in mL	(SS)	0.500	0.500
	DILUTION FACTOR	(DF)	10201	10201
@ALPHA01	DIGEST DILUTION FACTOR	(DDF)	1	1
	EFFICIENCY FACTOR	(EFF)	0.2477	0.2477
LIQUID	Lc, Rmax, or Rs,(SAMPLE RATE) as APPROPRIATE		0.243	0.326

96006593	Blank Concentration in µCi/L	<	9.02E+00
	Replicate Concentration in µCi/L	<	1.21E+01
0	Maximum Concentration in µCi/L	<	1.2110E+01

N/A

S96T002454

WB27B10

CJO

SLF

KNT

07/08/96

06/28/96

05:00 AM

AW101

Rs (Sample Count Rate) = (TC / CT) - BKG
ALPHA TOTAL µCi/L = Rs * 1000mL/L * DF * DDF / (EFF * SS * 2220000dpm/µCi)
ALPHA TOTAL µCi/mL = ALPHA TOTAL µCi/L / 1000mL/L
Relative Counting Error = [|(The Square Root of TC + BKG * CT) / (TC - BKG * CT)|] * 1.96 * 100
Detection Levels and Less Than Values are determined from Procedure LA-508-002.

				DETECTION LEVEL
ALPHA TOTAL in µCi/mL (Maximum)	=	< 1.21E-02		
LESS THAN Value was Determined from Rmax.				
RELATIVE COUNTING ERROR		500.0%		1.48E-02 µCi/mL

Analyst:	KNT	Date: 08-Jul-96	
Signature of Chemist:	SLF	Date: 7/9/96	

SAMPLE.WB1 Rev. 1.0 508101ML

2265

WORKBOOK PAGE: SAM8

AT : LA-508-101 (D-2) LIQUIDS

			SAMPLE	REPLICATE
	DETECTOR NUMBER		13	13
SAMPLE	DISH SIZE (1 , 2 , or 5)	(MS)	2	2
	GROSS COUNTS	(GC)	5	5
10353	COUNT TIME in MINUTES	(CT)	30	30
	BACKGROUND in cpm	(BKG)	0.13	0.13
AT	SAMPLE SIZE in mL	(SS)	0.500	0.500
	DILUTION FACTOR	(DF)	10201	10201
@ALPHA01	DIGEST DILUTION FACTOR	(DDF)	1	1
	EFFICIENCY FACTOR	(EFF)	0.2477	0.2477
LIQUID	Lc, Rmax, or Rs,(SAMPLE RATE) as APPROPRIATE		0.201	0.201

96006593	Blank Concentration in µCi/L	<	7.45E+00
	Replicate Concentration in µCi/L	<	7.45E+00
0	Maximum Concentration in µCi/L	<	7.4481E+00

N/A

S96T002462

WB27810

CJO

SLF

KNT

07/08/96

06/28/96

05:00 AM

AW101

Rs (Sample Count Rate) = (TC / CT) - BKG

ALPHA TOTAL µCi/L = Rs * 1000mL/L * DF * DDF / (EFF * SS * 2220000dpm/µCi)

ALPHA TOTAL µCi/mL = ALPHA TOTAL µCi/L / 1000mL/L

Relative Counting Error = [|(The Square Root of TC + BKG * CT) / (TC - BKG * CT)|] * 1.96 * 100

Detection Levels and Less Than Values are determined from Procedure LA-508-002.

ALPHA TOTAL in µCi/mL (Maximum)	=	< 7.45E-03		DETECTION LEVEL
LESS THAN Value was Determined from Rmax.				1.48E-02 µCi/mL
RELATIVE COUNTING ERROR		500.0%		

Analyst:	KNT		Date: 08-Jul-96
Signature of Chemist:		SLF	Date: 7/9/96

SAMPLE.WB1 Rev. 1.0 508101ML

2266

WORKBOOK PAGE: DUP9

WHC-SD-WM-DP-192, REV. 0

AT : LA-508-101 (D-2) LIQUIDS

			DUP	REPLICATE
	DETECTOR NUMBER		13	13
DUP	DISH SIZE (1 , 2 , or 5)	(MS)	2	2
	GROSS COUNTS	(GC)	6	3
10353	COUNT TIME in MINUTES	(CT)	30	30
	BACKGROUND in cpm	(BKG)	0.13	0.13
AT	SAMPLE SIZE in mL	(SS)	0.500	0.500
	DILUTION FACTOR	(DF)	10201	10201
@ALPHA01	DIGEST DILUTION FACTOR	(DDF)	1	1
	EFFICIENCY FACTOR	(EFF)	0.2477	0.2477
LIQUID	Lc, Rmax, or Rs,(SAMPLE RATE) as APPROPRIATE		0.243	0.154

96006593	Blank Concentration in µCi/L	<	9.02E+00
	Replicate Concentration in µCi/L	<	5.70E+00
0	Maximum Concentration in µCi/L	<	9.0177E+00

N/A

S96T002462

WB27810

CJO

SLF

KNT

07/08/96

06/28/96

05:00 AM

AW101

Rs (Sample Count Rate) = (TC / CT) - BKG

ALPHA TOTAL µCi/L = Rs * 1000mL/L * DF * DDF / (EFF * SS * 2220000dpm/µCi)

ALPHA TOTAL µCi/mL = ALPHA TOTAL µCi/L / 1000mL/L

Relative Counting Error = [|(The Square Root of TC + BKG * CT) / (TC - BKG * CT)|] * 1.96 * 100

Detection Levels and Less Than Values are determined from *Procedure LA-508-002*.

ALPHA TOTAL in µCi/mL (Maximum)	=	< 9.02E-03	DETECTION LEVEL
LESS THAN Value was Determined from Rmax.			1.48E-02 µCi/mL
RELATIVE COUNTING ERROR		500.0%	

Analyst:	KNT		Date: 08-Jul-96
Signature of Chemist:		SLF	Date: 7/9/96

SAMPLE.WB1 Rev. 1.0 508101ML

2267

LABCORE Completed RadChem Report for Worklist#: 10358

Analyst: dgg **Instrument:** AB15 **Book#** _____

Method: _____ Rev/Mod _____

Worklist Comment: Detemine sample size using ludlum.For spike use: 0.1ml.new

Seq	Type	Sample#	R	A	Test	Matrix	Actual	Found	DL or Yield	Unit
1	STD		0	@ALPHA01	ALPHA01	LIQUID	1.28E-04	1.28E-4	100.000	% Recovery
1	STD		0	@ALPHA01	ALPHA01E	LIQUID	1.00	4.41E+00	4.410	% Ct. Erro
2	BLNK		0	@ALPHA01	ALPHA01	LIQUID	1	<1.27E-2		uCi/mL
2	BLNK		0	@ALPHA01	ALPHA01E	LIQUID	1.00	5.00E+02	500.000	uCi/mL
3	BLNK/BKG		0	@ALPHA01	ALPHA01	LIQUID	1.00E+00	1.23E+00	1.230	BLNK/BKG
4	SAMPLE	S96T002527	0	@ALPHA01	ALPHA01	LIQUID	N/A <	7.89E-03	193.0e-004	uCi/mL
4	SAMPLE	S96T002527	0	@ALPHA01	ALPHA01E	LIQUID	N/A	5.00E+02	0.0e+000	% Ct. Error
5	DUP	S96T002527	0	@ALPHA01	ALPHA01	LIQUID	<7.89E-3	<7.89E-3	RPD	
5	DUP	S96T002527	0	@ALPHA01	ALPHA01E	LIQUID	1.00	5.00E+02	500.000	% Ct. Erro
6	SPK	S96T002527	0	@ALPHA01	ALPHA01	LIQUID	3.59E-02	3.22E-02	89.694	% Recovery
7	SAMPLE	S96T002558	0	@ALPHA01	ALPHA01	LIQUID	N/A <	7.89E-03	193.0e-004	uCi/mL
7	SAMPLE	S96T002558	0	@ALPHA01	ALPHA01E	LIQUID	N/A	5.00E+02	0.0e+000	% Ct. Error
8	DUP	S96T002558	0	@ALPHA01	ALPHA01	LIQUID	<7.89E-3	<7.89E-3	RPD	
8	DUP	S96T002558	0	@ALPHA01	ALPHA01E	LIQUID	1.00	5.00E+02	500.000	% Ct. Erro
9	SAMPLE	S96T002575	0	@ALPHA01	ALPHA01	LIQUID	N/A <	8.05E-03	193.0e-004	uCi/mL
9	SAMPLE	S96T002575	0	@ALPHA01	ALPHA01E	LIQUID	N/A	5.00E+02	0.0e+000	% Ct. Error
10	DUP	S96T002575	0	@ALPHA01	ALPHA01	LIQUID	<8.05E-3	<8.05E-3	RPD	
10	DUP	S96T002575	0	@ALPHA01	ALPHA01E	LIQUID	1.00	5.00E+02	500.000	% Ct. Erro
11	SAMPLE	S96T002584	0	@ALPHA01	ALPHA01	LIQUID	N/A <	7.89E-03	193.0e-004	uCi/mL
11	SAMPLE	S96T002584	0	@ALPHA01	ALPHA01E	LIQUID	N/A	5.00E+02	0.0e+000	% Ct. Error
12	DUP	S96T002584	0	@ALPHA01	ALPHA01	LIQUID	<7.89E-3	<7.89E-3	RPD	
12	DUP	S96T002584	0	@ALPHA01	ALPHA01E	LIQUID	1.00	5.00E+02	500.000	% Ct. Erro

Final page for worklist# 10358

Analyst Signature **Date** **Analyst Signature** **Date**

7/9/96

Reviewer Signature **Date**

Units shown for QC (BLK/BKG) may not reflect the actual units.

LABCORE Data Entry Template for Worklist# 10358

Analyst: DSS **Instrument:** AB00 15 **Book#** 47B56

Method: LA-508-101 Rev/Mod D-2 Spk# 123B43

Worklist Comment: Detemine sample size using ludlum.For spike use: 0.1ml.new

S	Type	Sample#	R	A	Test	Matrix	Group#	Project
1	STD				@ALPHA01	LIQUID		
2	BLNK				@ALPHA01	LIQUID		
3	BLNK/BKG				@ALPHA01	LIQUID		
4	SAMPLE	S96T002527	0	D	@ALPHA01	LIQUID	96000462	AW-101 PUSH
	Analytes Requested:				ALPHA01 , ALPHA01E			
5	DUP	S96T002527	0	D	@ALPHA01	LIQUID		
6	SPK	S96T002527	0	D	@ALPHA01	LIQUID		
7	SAMPLE	S96T002558	0	D	@ALPHA01	LIQUID	96000462	AW-101 PUSH
	Analytes Requested:				ALPHA01 , ALPHA01E			
8	DUP	S96T002558	0	D	@ALPHA01	LIQUID		
9	SAMPLE	S96T002575	0	D	@ALPHA01	LIQUID	96000462	AW-101 PUSH
	Analytes Requested:				ALPHA01 , ALPHA01E			
10	DUP	S96T002575	0	D	@ALPHA01	LIQUID		
11	SAMPLE	S96T002584	0	D	@ALPHA01	LIQUID	96000462	AW-101 PUSH
	Analytes Requested:				ALPHA01 , ALPHA01E			
12	DUP	S96T002584	0	D	@ALPHA01	LIQUID		

Final page for worklist # 10358

DS Suffin 7-1-96
Analyst Signature **Date**

Sue E. Horgan 7-9-96
Analyst Signature **Date**

M Sivinski 7/9/96

Data Entry Comments:

S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

WORKBOOK PAGE: STD1

AT : LA-508-101 (D-2) **LA-508-113 (A-2) STANDARD**

			STANDARD	REPLICATE
[illegible]	DETECTOR NUMBER		15	15
STD	DISH SIZE (1 , 2 , or 5)	(MS)	2	2
[illegible]	GROSS COUNTS	(GC)	1997	2072
10358	COUNT TIME in MINUTES	(CT)	30	30
[illegible]	BACKGROUND in cpm	(BKG)	0.23	0.23
AT	SAMPLE SIZE in mL	(SS)	1.000	1.000
[illegible]	DILUTION FACTOR	(DF)	1	1
@ALPHA01	STANDARD BOOK NUMBER	(Std BN)	47B56	47B56
[illegible]	EFFICIENCY FACTOR	(EFF)	0.2380	0.2380
LIQUID	Lc, Rmax, or Rs,(SAMPLE RATE) as APPROPRIATE		66.337	68.937
[illegible]	Standard Value in µCi/mL		1.28E-04	
96006594	Concentration in µCi/L	=	1.26E-01	
[illegible]	Replicate Concentration in µCi/L	=	1.30E-01	
0	AVERAGE CONCENTRATION in µCi/L	=	1.2792E-01	

[illegible]	
N/A	Rs (Sample Count Rate) = (TC / CT) - BKG
[illegible]	ALPHA TOTAL µCi/L = Rs * 1000mL/L * DF / (EFF * SS * 2220000dpm/µCi)
WL10368	ALPHA TOTAL µCi/mL = ALPHA TOTAL µCi/L / 1000mL/L
[illegible]	Relative Counting Error = [|(The Square Root of TC + BKG * CT) / (TC - BKG * CT)|] * 1.96 * 100
WB26872	Detection Levels and Less Than Values are determined from Procedure LA-508-002.
[illegible]	
SEH	
[illegible]	
SLF	ALPHA TOTAL CONCENTRATION in µCi/mL = 1.28E-04
[illegible]	
DGG	
[illegible]	
07/09/96	RELATIVE COUNTING ERROR = 4.4%
[illegible]	
07/01/96	
[illegible]	
02:30 AM	
[illegible]	
AW-101 PUSH	

DETECTION LEVEL
[illegible]
9.45E-07 µCi/mL

Analyst:		SEH	Date: 09-Jul-96
Signature of Chemist:		SLF	Date: 7/9/96

STANDARD.WB1 Rev. 1.0 508101ML

AT : LA-508-101 (D-2) LIQUIDS

			BLNK	REPLICATE
Type	DETECTOR NUMBER		16	16
BLNK	DISH SIZE (1 , 2 , or 5)	(MS)	2	2
Total Cts	GROSS COUNTS	(GC)	7	10
10358	COUNT TIME in MINUTES	(CT)	30	30
Avg Cpm	BACKGROUND in cpm	(BKG)	0.23	0.23
AT	SAMPLE SIZE in mL	(SS)	0.500	0.500
Dil Factor	DILUTION FACTOR	(DF)	10201	10201
@ALPHA01	DIGEST DILUTION FACTOR	(DDF)	1	1
Eff	EFFICIENCY FACTOR	(EFF)	0.2380	0.2380
LIQUID	Lc, Rmax, or Rs,(SAMPLE RATE) as APPROPRIATE		0.208	0.329

Batch Number			
96006594	Blank Concentration in µCi/L	<	8.05E+00
Replicate	Replicate Concentration in µCi/L	<	1.27E+01
0	Maximum Concentration in µCi/L	<	1.2721E+01

Sample Type	
N/A	Rs (Sample Count Rate) = (TC / CT) - BKG
Sample	ALPHA TOTAL µCi/L = Rs * 1000mL/L * DF * DDF / (EFF * SS * 2220000dpm/µCi)
WL10358	ALPHA TOTAL µCi/mL = ALPHA TOTAL µCi/L / 1000mL/L
Instrument Code	Relative Counting Error = [|(The Square Root of TC + BKG * CT) / (TC - BKG * CT)|] * 1.96 * 100
WB26872	Detection Levels and Less Than Values are determined from Procedure LA-508-002.
Prepared By	
SEH	
Chemist	
SLF	
Analyst	
DGG	
Date Complete	
07/09/96	
Analysis Date	
07/01/96	
Analysis Time	
02:30 AM	
Sample Point	
AW-101 PUSH	

ALPHA TOTAL in µCi/mL (Maximum)	=	< 1.27E-02	DETECTION LEVEL
LESS THAN Value was Determined from Rmax.			1.93E-02 µCi/mL
RELATIVE COUNTING ERROR		500.0%	

Analyst:		DGG	Date: 09-Jul-96
Signature of Chemist:		SLF	Date: 7/9/96

BLANK.WB1 Rev. 1.0 508101ML

AT : LA-508-101 (D-2) LIQUIDS

			SAMPLE	REPLICATE
ATC	DETECTOR NUMBER		15	15
SAMPLE	DISH SIZE (1 , 2 , or 5)	(MS)	2	2
Work Id	GROSS COUNTS	(GC)	3	4
10358	COUNT TIME in MINUTES	(CT)	30	30
Analyst	BACKGROUND in cpm	(BKG)	0.23	0.23
AT	SAMPLE SIZE in mL	(SS)	0.500	0.500
Prep Date	DILUTION FACTOR	(DF)	10201	10201
@ALPHA01	DIGEST DILUTION FACTOR	(DDF)	1	1
Matrix	EFFICIENCY FACTOR	(EFF)	0.2380	0.2380
LIQUID	Lc, Rmax, or Rs,(SAMPLE RATE) as APPROPRIATE		0.204	0.204

Blank Number			
96006594	Blank Concentration in µCi/L	<	7.89E+00
Replicate	Replicate Concentration in µCi/L	<	7.89E+00
0	Maximum Concentration in µCi/L	<	7.8894E+00

Limiting Factor

N/A

Sample

S96T002527

Instrument Code

WB26872

Prepared By

SEH

Chemist

SLF

Analyst

DGG

Data Complete

07/09/96

Analysis Date

07/01/96

Analysis Time

02:30 AM

Sample Point

AW-101 PUSH

Rs (Sample Count Rate) = (TC / CT) - BKG

ALPHA TOTAL µCi/L = Rs * 1000mL/L * DF * DDF / (EFF * SS * 2220000dpm/µCi)

ALPHA TOTAL µCi/mL = ALPHA TOTAL µCi/L / 1000mL/L

Relative Counting Error = [|(The Square Root of TC + BKG * CT) / (TC - BKG * CT)|] * 1.96 * 100

Detection Levels and Less Than Values are determined from Procedure LA-508-002.

ALPHA TOTAL in µCi/mL (Maximum)	=	< 7.89E-03	DETECTION LEVEL
LESS Than Value was Determined from Lc.			1.93E-02 µCi/mL
RELATIVE COUNTING ERROR		500.0%	

{/ system;exit}yes~

Analyst:	DGG		Date: 09-Jul-96
Signature of Chemist:		SLF	Date: 7/9/96

SAMPLE.WB1 Rev. 1.0 508101ML

AT : LA-508-101 (D-2) LIQUIDS

			DUP	REPLICATE
Type	DETECTOR NUMBER		15	15
DUP	DISH SIZE (1 , 2 , or 5)	(MS)	2	2
Counts	GROSS COUNTS	(GC)	3	4
10358	COUNT TIME in MINUTES	(CT)	30	30
Background	BACKGROUND in cpm	(BKG)	0.23	0.23
AT	SAMPLE SIZE in mL	(SS)	0.500	0.500
Test Code	DILUTION FACTOR	(DF)	10201	10201
@ALPHA01	DIGEST DILUTION FACTOR	(DDF)	1	1
Eff	EFFICIENCY FACTOR	(EFF)	0.2380	0.2380
LIQUID	Lc, Rmax, or Rs,(SAMPLE RATE) as APPROPRIATE		0.204	0.204

Batch Number			
96006594	Blank Concentration in µCi/L	<	7.89E+00
Rep#	Replicate Concentration in µCi/L	<	7.89E+00
0	Maximum Concentration in µCi/L	<	7.8894E+00

Sample Prep: N/A

Sample #: S96T002527

Instrument Code: WB26872

Prepared By: SEH

Chemist: SLF

Analyst: DGG

Date Complete: 07/09/96

Analysis Date: 07/01/96

Analysis Time: 02:30 AM

Sample Point: AW-101 PUSH

Rs (Sample Count Rate) = (TC / CT) - BKG

ALPHA TOTAL µCi/L = Rs * 1000mL/L * DF * DDF / (EFF * SS * 2220000dpm/µCi)

ALPHA TOTAL µCi/mL = ALPHA TOTAL µCi/L / 1000mL/L

Relative Counting Error = [|(The Square Root of TC + BKG * CT) / (TC - BKG * CT)|] * 1.96 * 100

Detection Levels and Less Than Values are determined from Procedure LA-508-002.

ALPHA TOTAL in µCi/mL (Maximum)	=	< 7.89E-03	DETECTION LEVEL	
LESS Than Value was Determined from Lc.				
RELATIVE COUNTING ERROR		500.0%	1.93E-02 µCi/mL	

(/ system;exit)yes~

Analyst:		DGG	Date: 09-Jul-96
Signature of Chemist:		SLF	Date: 7/9/96

SAMPLE.WB1 Rev. 1.0 508101ML

AT : LA-508-101 (D-2) LA-508-113 (A-2) SPIKED SAMPLE

				SPIKE	REPLICATE
Syst	DETECTOR NUMBER			15	15
SPK	DISH SIZE 1 , 2 , or 5		(MS)	2	2
Work List	TOTAL COUNTS		(TC)	50490	51623
10358	COUNT TIME in MINUTES		(CT)	30	30
Matrix	BACKGROUND in cpm		(BKG)	0.23	0.23
AT	SAMPLE VOLUME in mL	(Spiked Vial)	(SS)	0.500	0.500
Test Code	SAMPLE DILUTION FACTOR	(Spiked Vial)	(DF)	10201	10201
@ALPHA01	DIGEST DILUTION FACTOR		(DDF)	1	1
Form	SPIKE VOLUME in mL		(SVol)	0.100	0.100
LIQUID	SPIKE DILUTION FACTOR		(SDF)	1	1
Batch Number	SPIKE BOOK NUMBER		(Spk BN)	123B43	123B43
96006594	SPIKE VALUE in µCi/mL		(SVal)	3.5884E-02	3.5884E-02
Count	INSTRUMENT EFFICIENCY FACTOR		(EFF)	0.238	0.238
0	SAMPLE + SPIKE µCi/mL		(S+S)	6.50E+01	6.64E+01
Sample Alpha	AVERAGE or MAXIMUM µCi/mL in SAMPLE		<	7.8894E-03	
N/A					
Sample #					
S96T002527	Rs (Sample Count Rate) = (TC / CT) - BKG				
Instrument Code	SAMPLE + SPIKE µCi/mL = Rs * DF * DDF / (EFF * SS * 2220000dpm/µCi)				
WB26872	QC ACTUAL = SVal				
Prepared By	QC FOUND = (((S+S µCi/mL - SAMPLE µCi/mL) * ((SDF/SVol)/(DF*DDF/SS))))				
SEH	PERCENT SPIKE RECOVERY = (QC FOUND / QC ACTUAL) *100				
Chemist					
SLF					
Analyst					
DGG					
Date Completed	NOTE: Original Sample result was a LESS THAN value. Zero (0) was subtracted from the spiked value for QC found calculation.				
07/09/96					
Analysis Date					
07/01/96	QC ACTUAL		=	3.59E-02	
Analysis Time	QC FOUND		=	3.22E-02	
02:30 AM	AVG. PERCENT SPIKE RECOVERY		=	89.8%	
Sample Point					
AW-101 PUSH					

Analyst:		SEH	Date: 09-Jul-96
Signature of Chemist:		SLF	Date: 7/9/96

SPIKE.WB1 Rev. 1.0 508101ML

AT : LA-508-101 (D-2) LIQUIDS

			SAMPLE	REPLICATE
VIAL	DETECTOR NUMBER		15	15
SAMPLE	DISH SIZE (1 , 2 , or 5)	(MS)	2	2
WORK #	GROSS COUNTS	(GC)	3	6
10358	COUNT TIME in MINUTES	(CT)	30	30
BACKGR #	BACKGROUND in cpm	(BKG)	0.23	0.23
AT	SAMPLE SIZE in mL	(SS)	0.500	0.500
METCODE	DILUTION FACTOR	(DF)	10201	10201
@ALPHA01	DIGEST DILUTION FACTOR	(DDF)	1	1
EFF	EFFICIENCY FACTOR	(EFF)	0.2380	0.2380
LIQUID	Lc, Rmax, or Rs,(SAMPLE RATE) as APPROPRIATE		0.204	0.204
BATCH NUMBER				
96006594	Blank Concentration in µCi/L	<	7.89E+00	
KEY	Replicate Concentration in µCi/L	<	7.89E+00	
0	Maximum Concentration in µCi/L	<	7.8894E+00	

Sample Type
N/A

Rs (Sample Count Rate) = (TC / CT) - BKG

Sample #
S96T002558

ALPHA TOTAL µCi/L = Rs * 1000mL/L * DF * DDF / (EFF * SS * 2220000dpm/µCi)

ALPHA TOTAL µCi/mL = ALPHA TOTAL µCi/L / 1000mL/L

Instrument Code
WB26872

Relative Counting Error = [|(The Square Root of TC + BKG * CT) / (TC - BKG * CT)|] * 1.96 * 100

Detection Levels and Less Than Values are determined from Procedure LA-508-002.

Prepared By
SEH

Chemist
SLF

ALPHA TOTAL in µCi/mL (Maximum)	=	< 7.89E-03	DETECTION LEVEL
LESS Than Value was Determined from Lc.			1.93E-02 µCi/mL
RELATIVE COUNTING ERROR		500.0%	

Analyst
DGG

Date Completed
07/09/96

Analyzed Date
07/01/96

Analysis Time
02:30 AM

Sample Point
AW-101 PUSH

{/ system.exit}yes~

Analyst:	DGG		Date: 09-Jul-96
Signature of Chemist:		SLF	Date: 7/9/96

SAMPLE.WB1 Rev. 1.0 508101ML

WORKBOOK PAGE: DUP8

AT : LA-508-101 (D-2) LIQUIDS

			DUP	REPLICATE
Type	DETECTOR NUMBER		15	15
DUP	DISH SIZE (1 , 2 , or 5)	(MS)	2	2
Count	GROSS COUNTS	(GC)	1	4
10368	COUNT TIME in MINUTES	(CT)	30	30
Bkgd	BACKGROUND in cpm	(BKG)	0.23	0.23
AT	SAMPLE SIZE in mL	(SS)	0.500	0.500
Dilution	DILUTION FACTOR	(DF)	10201	10201
@ALPHA01	DIGEST DILUTION FACTOR	(DDF)	1	1
Eff	EFFICIENCY FACTOR	(EFF)	0.2380	0.2380
LIQUID	Lc, Rmax, or Rs,(SAMPLE RATE) as APPROPRIATE		0.204	0.204

Blank Number			
96006594	Blank Concentration in µCi/L	<	7.89E+00
Rep#	Replicate Concentration in µCi/L	<	7.89E+00
0	Maximum Concentration in µCi/L	<	7.8894E+00

Sample Rate
N/A — Rs (Sample Count Rate) = (TC / CT) - BKG

Sample
S96T002558 — ALPHA TOTAL µCi/L = Rs * 1000mL/L * DF * DDF / (EFF * SS * 2220000dpm/µCi)
ALPHA TOTAL µCi/mL = ALPHA TOTAL µCi/L / 1000mL/L

Instrument Code
WB26872 — Relative Counting Error = [|(The Square Root of TC + BKG * CT) / (TC - BKG * CT)|] * 1.96 * 100
Detection Levels and Less Than Values are determined from Procedure LA-508-002.

Transcribed by
SEH

Chemist
SLF — ALPHA TOTAL in µCi/mL (Maximum) = < 7.89E-03

Analyst
DGG — LESS Than Value was Determined from Lc.

Date Completed
07/09/96 — RELATIVE COUNTING ERROR 500.0%

DETECTION LEVEL
1.93E-02 µCi/mL

Analysis Date
07/01/96

Analysis Time
02:30 AM

Sample Point
AW-101 PUSH

{/ system;exit}yes~

Analyst:	DGG		Date: 09-Jul-96
Signature of Chemist:		SLF	Date: 7/9/96

SAMPLE.WB1 Rev. 1.0 508101ML

FILE NO 960730A.DAT

LABCORE Data Entry Template for Worklist# 10275

Analyst: J.WORRELL **Instrument:** ICP01 _____ **Book#** 57B4B

Method: LA-505-151/~~161~~ Rev/Mod D3
JMJ 7-30-96

Worklist Comment: ICP AW-101 (SOLID ACID DIGEST)

S	Type	Sample#	R	A	Test	Matrix	Group#	Project
1	ICV				@ICP-QC	QC		
2	ICB				@ICP-QC	QC		
3	LLS				@ICP-QC	QC		
4	ICSA				@ICP-QC	QC		
5	ICSAB				@ICP-QC	QC		
6	PREPSTDARL				@ICP-A01	SOLID		
7	PREPBLKARL				@ICP-A01	SOLID		
8	SERDIL	S96T002265	0	A	@ICP-A01	SOLID		
9	SAMPLE	S96T002265	0	A	@ICP-A01	SOLID	96000103	AW-101 PUSH

Analytes Requested: AG-A-01 , AL-A-01 , AS-A-01 , B-A-01 , BA-A-01 , BE-A-01 , BI-A-01 , CA-A-01 , CD-A-01 , CE-A-01 , CO-A-01 , CR-A-01 , CU-A-01 , FE-A-01 , K-A-01 , LA-A-01 , LI-A-01 , MG-A-01 , MN-A-01 , MO-A-01 , NA-A-01 , ND-A-01 , NI-A-01 , P-A-01 , PB-A-01 , S-A-01 , SB-A-01 , SE-A-01 , SI-A-01 , SM-A-01 , SR-A-01 , TI-A-01 , TL-A-01 , U-A-01 , V-A-01 , ZN-A-01 , ZR-A-01

10	DUP	S96T002265	0	A	@ICP-A01	SOLID		
11	SPK-PREDIG	S96T002265	0	A	@ICP-A01	SOLID		
12	CCV				@ICP-QC	QC		
13	CCB				@ICP-QC	QC		
14	SERDIL	S96T002266	0	A	@ICP-A01	SOLID		
15	SAMPLE	S96T002266	0	A	@ICP-A01	SOLID	96000103	AW-101 PUSH

Analytes Requested: AG-A-01 , AL-A-01 , AS-A-01 , B-A-01 , BA-A-01 ,

Data Entry Comments: Sample result calculation:

S96T002265 $Ca = 1.581 \frac{ug}{ml} \times \frac{1}{4.7520 \frac{g}{L} \times \frac{1L}{1000ml}} = 3.33e+2 \frac{ug}{g}$

S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

Note: 4.752 $\frac{g}{L}$ is sample prep dilution factor which can be found in sample prep worklist.

1664

LABCORE Data Entry Template for Worklist# 10275

S	Type	Sample#	R	A	Test	Matrix	Group#	Project
					BE-A-01 , BI-A-01 , CA-A-01 , CD-A-01 , CE-A-01 , CO-A-01 , CR-A-01 , CU-A-01 , FE-A-01 , K-A-01 , LA-A-01 , LI-A-01 , MG-A-01 , MN-A-01 , MO-A-01 , NA-A-01 , ND-A-01 , NI-A-01 , P-A-01 , PB-A-01 , S-A-01 , SB-A-01 , SE-A-01 , SI-A-01 , SM-A-01 , SR-A-01 , TI-A-01 , TL-A-01 , U-A-01 , V-A-01 , ZN-A-01 , ZR-A-01			
16	DUP	S96T002266	0	A	@ICP-A01	SOLID		
17	SERDIL	S96T002267	0	A	@ICP-A01	SOLID		
18	SAMPLE	S96T002267	0	A	@ICP-A01	SOLID	96000103	AW-101 PUSH
		Analytes Requested:			AG-A-01 , AL-A-01 , AS-A-01 , B-A-01 , BA-A-01 , BE-A-01 , BI-A-01 , CA-A-01 , CD-A-01 , CE-A-01 , CO-A-01 , CR-A-01 , CU-A-01 , FE-A-01 , K-A-01 , LA-A-01 , LI-A-01 , MG-A-01 , MN-A-01 , MO-A-01 , NA-A-01 , ND-A-01 , NI-A-01 , P-A-01 , PB-A-01 , S-A-01 , SB-A-01 , SE-A-01 , SI-A-01 , SM-A-01 , SR-A-01 , TI-A-01 , TL-A-01 , U-A-01 , V-A-01 , ZN-A-01 , ZR-A-01			
19	DUP	S96T002267	0	A	@ICP-A01	SOLID		
20	CCV				@ICP-QC	QC		
21	CCB				@ICP-QC	QC		
22	SERDIL	S96T002268	0	A	@ICP-A01	SOLID		
23	SAMPLE	S96T002268	0	A	@ICP-A01	SOLID	96000103	AW-101 PUSH
		Analytes Requested:			AG-A-01 , AL-A-01 , AS-A-01 , B-A-01 , BA-A-01 , BE-A-01 , BI-A-01 , CA-A-01 , CD-A-01 , CE-A-01 , CO-A-01 , CR-A-01 , CU-A-01 , FE-A-01 , K-A-01 , LA-A-01 , LI-A-01 , MG-A-01 , MN-A-01 , MO-A-01 , NA-A-01 , ND-A-01 , NI-A-01 , P-A-01 , PB-A-01 , S-A-01 , SB-A-01 , SE-A-01 , SI-A-01 , SM-A-01 , SR-A-01 , TI-A-01 , TL-A-01 , U-A-01 , V-A-01 , ZN-A-01 , ZR-A-01			
24	DUP	S96T002268	0	A	@ICP-A01	SOLID		
25	ICSA				@ICP-QC	QC		
26	ICSAB				@ICP-QC	QC		
27	CCV				@ICP-QC	QC		

Data Entry Comments:

S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

07/30/96 14:00 ☎509 372 2929 WESTINGHOUSE →→→ MO-924 200W 001

LABCORE Data Entry Template for Worklist# 10275

S Type	Sample#	R	A	Test	Matrix	Group#	Project
28 CCB				@ICP-QC	QC		

Final page for worklist # 10275

Analyst Signature: [signature] Date: 7-30-96

Reviewed by: Analyst Signature: [signature] Date: 8/2/96

			DF
S96T002265	DIL 5X	2-8-2-8	25
	SAM	2-8	5
	DUP	2-8	5
	DIGSPK	2-8	5
S96T002266	DIL 5X	2-8-2-8	25
	SAM	2-8	5
	DUP	2-8	5
	~~DIGSPK~~	JS 7-30-96	~~5~~
S96T002267	DIL 5X	2-8-2-8	25
	SAM	2-8	5
	DUP	2-8	5
S96T002268	DIL 5X	2-8-28	25
	SAM	2-8	5
	DUP	2-8	5

Data Entry Comments: Spike recovery calculation:

S96T002265 $Ca = \frac{5.904 - 1.581}{5} \times 100 = 86.5\%$

S = Worklist Slot Number, R = Replicate Number, A = Aliquot Code.

Note: Spike true value is 5.0 ppm for all elements except for Ag = 1.0 ppm and U = 10.0 ppm.

07/30/96 14:01 ☎509 372 2929 WESTINGHOUSE →→→ MO-924 200W 002

WORKBOOK PAGE: SAM9

AT : LA-508-101 (D-2) LIQUIDS

			SAMPLE	REPLICATE
Type	DETECTOR NUMBER		15	15
SAMPLE	DISH SIZE (1 , 2 , or 5)	(MS)	2	2
Work Unit	GROSS COUNTS	(GC)	7	7
10358	COUNT TIME in MINUTES	(CT)	30	30
Matrix	BACKGROUND in cpm	(BKG)	0.23	0.23
AT	SAMPLE SIZE in mL	(SS)	0.500	0.500
Test Code	DILUTION FACTOR	(DF)	10201	10201
@ALPHA01	DIGEST DILUTION FACTOR	(DDF)	1	1
Matrix	EFFICIENCY FACTOR	(EFF)	0.2380	0.2380
LIQUID	Lc, Rmax, or Rs,(SAMPLE RATE) as APPROPRIATE		0.208	0.208

Batch Number			
96006594	Blank Concentration in µCi/L	<	8.05E+00
Batch	Replicate Concentration in µCi/L	<	8.05E+00
0	Maximum Concentration in µCi/L	<	8.0467E+00

Sample Prep
N/A

Rs (Sample Count Rate) = (TC / CT) - BKG

Sample #
S96T002575

ALPHA TOTAL µCi/L = Rs * 1000mL/L * DF * DDF / (EFF * SS * 2220000dpm/µCi)

ALPHA TOTAL µCi/mL = ALPHA TOTAL µCi/L / 1000mL/L

Relative Counting Error = [|(The Square Root of TC + BKG * CT) / (TC - BKG * CT)|] * 1.96 * 100

Balance Code
WB28872

Detection Levels and Less Than Values are determined from Procedure LA-508-002.

Reported By
SEH

Chemist
SLF

ALPHA TOTAL in µCi/mL (Maximum) = < 8.05E-03		DETECTION LEVEL
LESS THAN Value was Determined from Rmax.		1.93E-02 µCi/mL
RELATIVE COUNTING ERROR	500.0%	

Analyst
DGG

Date Completed
07/09/96

Analysis Date
07/01/96

Analysis Time
02:30 AM

Sample Point
AW-101 PUSH

{/ system:exit}yes~

Analyst:	DGG		Date: 09-Jul-96
Signature of Chemist:		SLF	Date: 7/9/96

SAMPLE.WB1 Rev. 1.0 508101ML

WORKBOOK PAGE: DUP10

WHC-SD-WM-DP-192, REV. 0

AT : LA-508-101 (D-2) LIQUIDS

			DUP	REPLICATE
TYPE	DETECTOR NUMBER		15	15
DUP	DISH SIZE (1 , 2 , or 5)	(MS)	2	2
Total	GROSS COUNTS	(GC)	7	3
10358	COUNT TIME in MINUTES	(CT)	30	30
Background	BACKGROUND in cpm	(BKG)	0.23	0.23
AT	SAMPLE SIZE in mL	(SS)	0.500	0.500
Dilution	DILUTION FACTOR	(DF)	10201	10201
@ALPHA01	DIGEST DILUTION FACTOR	(DDF)	1	1
Matrix	EFFICIENCY FACTOR	(EFF)	0.2380	0.2380
LIQUID	Lc, Rmax, or Rs,(SAMPLE RATE) as APPROPRIATE		0.208	0.204

Batch Number			
96006594	Blank Concentration in µCi/L	<	8.05E+00
Results	Replicate Concentration in µCi/L	<	7.89E+00
0	Maximum Concentration in µCi/L	<	8.0467E+00

Sample Prep
N/A

Rs (Sample Count Rate) = (TC / CT) - BKG

Sample #
S96T002575

ALPHA TOTAL µCi/L = Rs * 1000mL/L * DF * DDF / (EFF * SS * 2220000dpm/µCi)

ALPHA TOTAL µCi/mL = ALPHA TOTAL µCi/L / 1000mL/L

Worksheet #
WB26872

Relative Counting Error = [|(The Square Root of TC + BKG * CT) / (TC - BKG * CT)|] * 1.96 * 100

Detection Levels and Less Than Values are determined from Procedure LA-508-002.

Prepared By
SEH

Chemist
SLF

ALPHA TOTAL in µCi/mL (Maximum) = < 8.05E-03

DETECTION LEVEL 1.93E-02 µCi/mL

Analyst
DGG

LESS THAN Value was Determined from Rmax.

Date Complete
07/09/96

RELATIVE COUNTING ERROR 500.0%

Analysis Date
07/01/96

Analysis Time
02:30 AM

Sample Point
AW-101 PUSH

(/ system.exit)yes~

Analyst:	DGG		Date: 09-Jul-96
Signature of Chemist:		SLF	Date: 7/9/96

SAMPLE.WB1 Rev. 1.0 508101ML

WORKBOOK PAGE: SAM11

AT : LA-508-101 (D-2) LIQUIDS

			SAMPLE	REPLICATE
Vial	DETECTOR NUMBER		16	16
SAMPLE	DISH SIZE (1 , 2 , or 5)	(MS)	2	2
Work Id	GROSS COUNTS	(GC)	6	4
10358	COUNT TIME in MINUTES	(CT)	30	30
Lab Id	BACKGROUND in cpm	(BKG)	0.23	0.23
AT	SAMPLE SIZE in mL	(SS)	0.500	0.500
Test Code	DILUTION FACTOR	(DF)	10201	10201
@ALPHA01	DIGEST DILUTION FACTOR	(DDF)	1	1
Matrix	EFFICIENCY FACTOR	(EFF)	0.2380	0.2380
LIQUID	Lc, Rmax, or Rs,(SAMPLE RATE) as APPROPRIATE		0.204	0.204

Batch Number			
96006584	Blank Concentration in µCi/L	<	7.89E+00
Sample	Replicate Concentration in µCi/L	<	7.89E+00
0	Maximum Concentration in µCi/L	<	7.8894E+00

Sample Prep	
N/A	Rs (Sample Count Rate) = (TC / CT) - BKG
Sample #	ALPHA TOTAL µCi/L = Rs * 1000mL/L * DF * DDF / (EFF * SS * 2220000dpm/µCi)
S96T002584	ALPHA TOTAL µCi/mL = ALPHA TOTAL µCi/L / 1000mL/L
Instrument Code	Relative Counting Error = [|(The Square Root of TC + BKG * CT) / (TC - BKG * CT)|] * 1.96 * 100
WB26872	Detection Levels and Less Than Values are determined from Procedure LA-508-002.
Performed by	
SEH	
Chemist	
SLF	
Analyst	
DGG	
Date Complete	
07/09/96	
Analysis Date	
07/01/96	
Analysis Time	
02:30 AM	
Sample Point	
AW-101 PUSH	

ALPHA TOTAL in µCi/mL (Maximum)	=	< 7.89E-03	DETECTION LEVEL
LESS Than Value was Determined from Lc.			1.93E-02 µCi/mL
RELATIVE COUNTING ERROR		500.0%	

{/ system.exit}yes~

Analyst:	DGG		Date: 09-Jul-96
Signature of Chemist:		SLF	Date: 7/9/96

SAMPLE.WB1 Rev. 1.0 508101ML

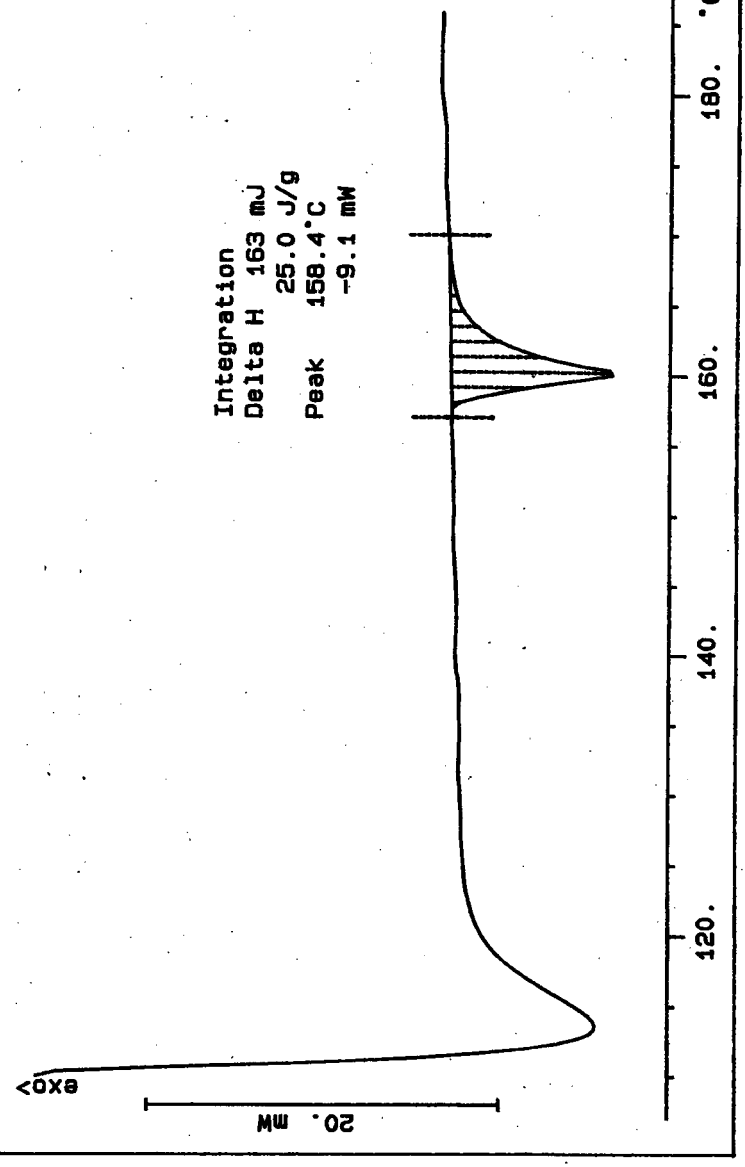
Drainable Liquid: Drainable Liquid

Sample#	R	A#	Analyte	Unit	Standard %	Blank	Result	Duplicate	Average	RPD %	Spk Rec %	Det Limit	Count Err%
S96T001747		D	Silver-ICP-Acid Dil.	ug/mL	96.40	<1.00e-02	< 12.00	<1.20e1	n/a	n/a	91.80	12.00	n/a
S96T001747		D	Aluminium-ICP-Acid Dil.	ug/mL	99.20	<5.00e-02	3.14e+04	3.97e+04	3.56e+04	23.3	2.39e+03	60.10	n/a
S96T001747		D	Arsenic-ICP-Acid Dil.	ug/mL	101.4	<1.00e-01	<1.20e+02	<1.20e2	n/a	n/a	101.0	120.0	n/a
S96T001747		D	Boron-ICP-Acid Dil.	ug/mL	100.2	<5.00e-02	60.10	74.20	67.15	21.0	104.0	60.10	n/a
S96T001747		D	Barium-ICP-Acid Dil.	ug/mL	101.0	<5.00e-02	< 60.10	<6.01e1	n/a	n/a	102.0	60.10	n/a
S96T001747		D	Beryllium-ICP-Acid Dil.	ug/mL	102.8	<5.00e-03	< 6.000	<6.00e0	n/a	n/a	104.0	6.000	n/a
S96T001747		D	Bismuth-ICP-Acid Dil.	ug/mL	98.80	<1.00e-01	<1.20e+02	<1.20e2	n/a	n/a	96.00	120.0	n/a
S96T001747		D	Calcium-ICP-Acid Dil.	ug/mL	98.80	<1.00e-01	<1.20e+02	<1.20e2	n/a	n/a	98.90	120.0	n/a
S96T001747		D	Cadmium-ICP-Acid Dil.	ug/mL	98.60	<5.00e-03	< 6.000	<6.00e0	n/a	n/a	102.0	6.000	n/a
S96T001747		D	Cerium-ICP-Acid Dil.	ug/mL	102.4	<1.00e-01	<1.20e+02	<1.20e2	n/a	n/a	93.90	120.0	n/a
S96T001747		D	Cobalt-ICP-Acid Dil.	ug/mL	99.80	<2.00e-02	< 24.00	<2.40e1	n/a	n/a	102.0	24.00	n/a
S96T001747		D	Chromium-ICP-Acid Dil.	ug/mL	98.80	<1.00e-02	1.16e+02	137.0	126.5	16.6	109.0	12.00	n/a
S96T001747		D	Copper-ICP-Acid Dil.	ug/mL	102.6	<1.00e-02	< 12.00	<1.20e1	n/a	n/a	104.0	12.00	n/a
S96T001747		D	Iron-ICP-Acid Dil.	ug/mL	99.00	<5.00e-02	< 60.10	<6.01e1	n/a	n/a	104.0	60.10	n/a
S96T001747		D	Potassium-ICP-Acid Dil.	ug/mL	100.8	<5.00e-01	3.37e+04	4.00e+04	3.68e+04	17.1	2.15e+03	600.0	n/a
S96T001747		D	Lanthanum-ICP-Acid Dil.	ug/mL	99.60	<5.00e-02	< 60.10	<6.01e1	n/a	n/a	102.0	60.10	n/a
S96T001747		D	Lithium-ICP-Acid Dil.	ug/mL	103.4	<1.00e-02	< 12.00	<1.20e1	n/a	n/a	101.0	12.00	n/a
S96T001747		D	Magnesium-ICP-Acid Dil.	ug/mL	95.60	<1.00e-01	<1.20e+02	<1.20e2	n/a	n/a	96.30	120.0	n/a
S96T001747		D	Manganese-ICP-Acid Dil.	ug/mL	98.60	<1.00e-02	< 12.00	<1.20e1	n/a	n/a	102.0	12.00	n/a
S96T001747		D	Molybdenum-ICP-Acid Dil.	ug/mL	100.0	<5.00e-02	60.60	76.70	68.65	23.5	107.0	60.10	n/a
S96T001747		D	Sodium-ICP-Acid Dil.	ug/mL	102.2	<1.00e-01	2.40e+05	2.92e+05	2.66e+05	19.5	1.64e+04	120.0	n/a
S96T001747		D	Neodymium-ICP-Acid Dil.	ug/mL	101.6	<1.00e-01	<1.20e+02	<1.20e2	n/a	n/a	98.10	120.0	n/a
S96T001747		D	Nickel-ICP-Acid Dil.	ug/mL	98.60	<2.00e-02	< 24.00	<2.40e1	n/a	n/a	107.0	24.00	n/a
S96T001747		D	Phosphorus-ICP-Acid Dil.	ug/mL	95.80	<2.00e-01	<2.40e+02	244.0	n/a	n/a	174.0	240.0	n/a
S96T001747		D	Lead-ICP-Acid Dil.	ug/mL	98.40	<1.00e-01	<1.20e+02	<1.20e2	n/a	n/a	124.0	120.0	n/a
S96T001747		D	Sulfur-ICP-Acid Dil.	ug/mL	97.80	<1.00e-01	4.27e+02	540.0	483.5	23.4	129.0	120.0	n/a
S96T001747		D	Antimony-ICP-Acid Dil.	ug/mL	92.60	<6.00e-02	< 72.10	<7.21e1	n/a	n/a	103.0	72.10	n/a
S96T001747		D	Selenium-ICP-Acid Dil.	ug/mL	100.8	<1.00e-01	<1.20e+02	<1.20e2	n/a	n/a	121.0	120.0	n/a
S96T001747		D	Silicon-ICP-Acid Dil.	ug/mL	95.20	<5.00e-02	2.50e+02	329.0	289.5	27.3	128.0	60.10	n/a
S96T001747		D	Samarium-ICP-Acid Dil.	ug/mL	102.0	<1.00e-01	<1.20e+02	<1.20e2	n/a	n/a	106.0	120.0	n/a
S96T001747		D	Strontium-ICP-Acid Dil.	ug/mL	100.2	<1.00e-02	< 12.00	<1.20e1	n/a	n/a	102.0	12.00	n/a
S96T001747		D	Titanium-ICP-Acid Dil.	ug/mL	97.80	<1.00e-02	< 12.00	<1.20e1	n/a	n/a	101.0	12.00	n/a
S96T001747		D	Thallium-ICP-Acid Dil.	ug/mL	97.00	<2.00e-01	<2.40e+02	<2.40e2	n/a	n/a	102.0	240.0	n/a
S96T001747		D	Uranium-ICP-Acid Dil.	ug/mL	98.40	<5.00e-01	<6.00e+02	<6.00e2	n/a	n/a	117.5	600.0	n/a
S96T001747		D	Vanadium-ICP-Acid Dil.	ug/mL	100.0	<5.00e-02	< 60.10	<6.01e1	n/a	n/a	102.0	60.10	n/a
S96T001747		D	Zinc-ICP-Acid Dil.	ug/mL	100.4	<1.00e-02	< 12.00	12.40	n/a	n/a	106.0	12.00	n/a
S96T001747		D	Zirconium-ICP-Acid Dil.	ug/mL	98.20	<1.00e-02	15.30	24.80	20.05	47.4	102.0	12.00	n/a

SIGNATURE ABOVE REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 662 TO 667

DSC STD 12N14B N2
6.530 mg
Rate: 10.0 °C/min
File: 00058.001 DSC METTLER 03-Jul-96
Ident: 0.0 222-8 Laboratory

Integration
Delta H 163 mJ
25.0 J/g
Peak 158.4°C
-9.1 mW



Data Reprocessed On 07/22/1996 13:12:19

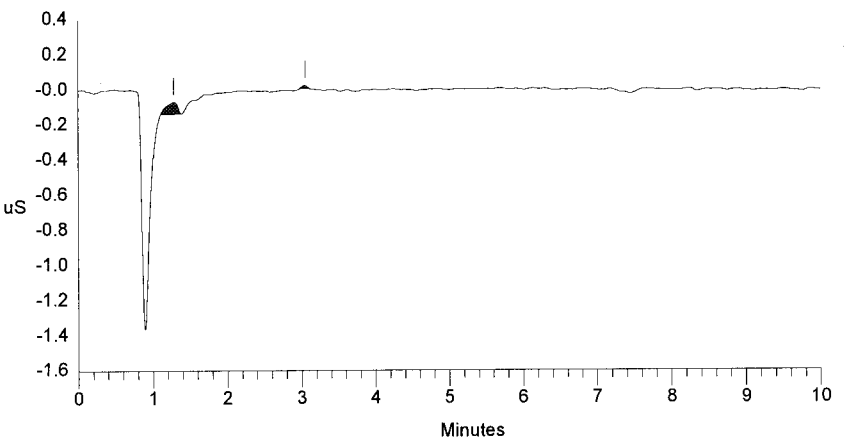
Sample Name: BLANK PREP	Date: 07/22/1996 01:59:33
Data File : E:\DATA\96072241.d01	
Method : C:\DX\METHOD\ANIONS.MET	
ACI Address: 1 System: 2 Inject#: 1	Detector:CDM-1
Analyst : Column:	

Calibration	Volume	Dilution	Points	Rate	Start	Stop	Area Reject
External	1	1	3000	5Hz	0.00	10.00	200

********** Peak Report: All Peaks **********

Pk. Num	Ret Time	Component Name	Concentration ug/ml	Height	Area	Bl. Code	%Delta
1	1.28		0.000	67	699	1	
		Totals	0.000	67	699		

File: 96072241.d01 Sample: BLANK PREP



WORKBOOK PAGE: DUP5

AT : LA-508-101 (D-2) SOLIDS

			DUP	REPLICATE
Type	DETECTOR NUMBER		16	16
DUP	DISH SIZE (1, 2, or 6)	(MS)	2	2
Work List	GROSS COUNTS	(GC)	3	3
10645	COUNT TIME in MINUTES	(CT)	30	30
AT or TB ?	BACKGROUND in cpm	(BKG)	0.13	0.13
AT	SAMPLE SIZE in mL	(SS)	0.500	0.500
Test Code	DILUTION FACTOR	(DF)	1	1
@ALPHA01	DIGEST GRAMS of SOLIDS / L	(Dg/L)	2.1396	2.1396
Matrix	EFFICIENCY FACTOR	(EFF)	0.2380	0.2380
SOLID	Lc, Rmax, or Rs,(SAMPLE RATE) as APPROPRIATE		0.154	0.154

Batch Number			
96006917	Blank Concentration in µCi/g	<	2.72E-04
Rerun	Replicate Concentration in µCi/g	<	2.72E-04
0	Maximum Concentration in µCi/g	<	2.7175E-04

Sample Prep: FUSION01

Sample #: S96T002465

Instrument Code: WB26872

Prepared By: SEH

Chemist: SLF

Analyst: SCL

Date Complete: 07/16/96

Analysis Date: 07/16/96

Analysis Time: 11:30 AM

Sample Point: AW-101 PUSH

Rs (Sample Count Rate) = (TC / CT) - BKG

ALPHA TOTAL µCi/g = Rs * 1000mL/L * DF / (EFF * SS * Dg/L * 2220000dpm/µCi)

Relative Counting Error = [|(The Square Root of TC + BKG * CT) / (TC - BKG * CT)|] * 1.96 * 100

Detection Levels and Less Than Values are determined from Procedure LA-508-002.

ALPHA TOTAL in µCi/g (Maximum)	=	< 2.72E-04	DETECTION LEVEL
LESS Than Value was Determined from Lc.			7.04E-04 µCi/g
RELATIVE COUNTING ERROR		500.0%	

{/ system;exit}yes-

Analyst:		SCL	Date: 16-Jul-96
Signature of Chemist:		SLF	Date: 7/17/96

SAMPLE.WS1 Rev. 1.0 508101ML