This document was too large to scan as a whole document, therefore it required breaking into smaller sections.

DOCUMENT NUMBER: SD-WM-DP-182

SECTION 5 **OF** 10

TITLE: Final Results for Tank 241-U-105 Push Mode Cores 131, 133 and 136

DATE: 7/26/96

ORIGINATOR: Fritts, K.R.

CO: WHC

RECIPIENT:

CO:

REFERENCES: ECN-633312

Identity 1: ICSA Identity 2: Quality Control 1:23 PM April 25, 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	-0.015	0.015	195.273	0.001	0.001	0.001
S.D.	0.000	0.000	0.011	0.002	0.446	0.002	0.000	0.000
% R.S.D.	11.609	5.527	72.076	12.457	0.229	150.440	12.203	23.603

	Zn (ppm)	Ni (ppm)	La (ppm)	Fe (ppm)	Ca (ppm)	Cr (ppm)	Nd (ppm)	U (ppm)
Mean	-0.004	0.010	0.005	95.999	102.276	0.001	0.012	0.084
S.D.	0.001	0.002	0.001	0.403	0.347	0.002	0.004	0.042
% R.S.D.	13.123	15.883	17.405	0.420	0.339	340.732	30.080	50.027

	Ce (ppm)	Sm (ppm)	Ba (ppm)	P (ppm)	S (ppm)	Mg (ppm)	As (ppm)	Na (ppm)
Mean	0.026	0.045	0.004	0.011	0.034	99.276	0.045	190.880
S.D.	0.013	0.005	0.000	0.007	0.005	0.260	0.002	0.385
% R.S.D.	47.189	10.913	7.228	62.234	14.029	0.261	4.293	0.202

	Mo (ppm)	Se (ppm)	Ag (ppm)	Pb (ppm)	Ti (ppm)	Cd (ppm)	B (ppm)	K (ppm)
Mean	-0.000	0.022	0.003	0.014	0.001	-0.000	0.012	-0.056
S.D.	0.000	0.019	0.001	0.005	0.000	0.001	0.001	0.024
% R.S.D.	112.497	89.116	22.993	36.092	21.643	321.550	7.666	42.304

	Mn (ppm)	Sb (ppm)	V (ppm)	Be (ppm)	Tl (ppm)
Mean	0.003	0.018	0.001	0.003	0.009
S.D.	0.000	0.002	0.001	0.000	0.009
% R.S.D.	17.832	13.820	79.521	11.000	109.831

Identity 1: ICSAB Identity 2: Quality Control 1:26 PM April 25, 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	-0.031	0.017	195.649	0.489	0.498	0.938
S.D.	0.002	0.000	0.008	0.002	0.755	0.003	0.002	0.005
% R.S.D.	310.177	6.991	26.592	11.505	0.386	0.614	0.407	0.484

	Zn (ppm)	Ni (ppm)	La (ppm)	Fe (ppm)	Ca (ppm)	Cr (ppm)	Nd (ppm)	U (ppm)
Mean	0.995	0.983	0.005	96.180	101.819	0.504	0.007	0.084
S.D.	0.001	0.005	0.003	0.242	0.364	0.006	0.010	0.057
% R.S.D.	0.131	0.494	50.770	0.251	0.357	1.261	139.863	68.609

	Ce (ppm)	Sm (ppm)	Ba (ppm)	P (ppm)	S (ppm)	Mg (ppm)	As (ppm)	Na (ppm)
Mean	0.029	0.033	0.506	0.046	0.064	100.651	0.047	190.891
S.D.	0.016	0.009	0.002	0.008	0.010	0.188	0.006	0.849
% R.S.D.	56.547	27.858	0.361	16.559	14.998	0.187	13.529	0.445

	Mo (ppm)	Se (ppm)	Ag (ppm)	Pb (ppm)	Tl (ppm)	Cd (ppm)	B (ppm)	K (ppm)
Mean	-0.001	0.004	1.010	1.000	0.001	0.994	0.014	-0.009
S.D.	0.001	0.010	0.002	0.008	0.000	0.004	0.001	0.013
% R.S.D.	34.254	230.023	0.158	0.849	32.088	0.352	6.627	148.613

	Mn (ppm)	Sb (ppm)	V (ppm)	Be (ppm)	Tl (ppm)
Mean	0.501	0.004	0.500	0.502	0.036
S.D.	0.002	0.010	0.002	0.001	0.025
% R.S.D.	0.474	233.606	0.319	0.269	69.316

Identity 1: prepblkarl Identity 2: .250ml-10ml 1:31 PM April 25, 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	0.001	-0.010	-0.011	-0.007	0.001	-0.001	0.001
S.D.	0.000	0.000	0.010	0.005	0.010	0.000	0.001	0.000
% R.S.D.	3.111	23.130	102.548	39.552	139.072	0.261	71.755	14.780

	Zn (ppm)	Ni (ppm)	La (ppm)	Fe (ppm)	Ca (ppm)	Cr (ppm)	Nd (ppm)	U (ppm)
Mean	0.003	0.155	0.003	0.004	0.004	-0.003	0.007	0.143
S.D.	0.001	0.001	0.001	0.003	0.000	0.002	0.009	0.020
% R.S.D.	21.639	0.768	28.364	65.113	4.992	58.310	121.743	14.003

	Ce (ppm)	Sm (ppm)	Ba (ppm)	P (ppm)	S (ppm)	Mg (ppm)	As (ppm)	Na (ppm)
Mean	0.010	0.011	0.001	-0.021	-0.016	0.003	-0.006	0.114
S.D.	0.008	0.004	0.000	0.013	0.003	0.000	0.007	0.001
% R.S.D.	77.009	32.192	9.231	63.450	20.861	8.646	120.314	1.211

	Mo (ppm)	Se (ppm)	Ag (ppm)	Pb (ppm)	Ti (ppm)	Cd (ppm)	B (ppm)	K (ppm)
Mean	-0.002	-0.003	0.002	-0.003	0.001	0.000	-0.002	328.223
S.D.	0.000	0.016	0.001	0.002	0.000	0.000	0.000	0.796
% R.S.D.	20.399	545.379	29.970	71.842	72.040	34.386	13.396	0.242

	Mn (ppm)	Sb (ppm)	V (ppm)	Be (ppm)	Tl (ppm)
Mean	-0.000	-0.021	-0.001	0.000	-0.001
S.D.	0.000	0.011	0.001	0.000	0.030
% R.S.D.	41.344	52.632	96.794	694.985	4538.009

Identity 1: S96T000928_L Identity 2: .250ml-10ml-2ml-8ml 1:35 PM April 25, 1996
Task name : OPTIMA
Sample Weight : 1.0000 Solution Volume : 205.00
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	-0.523	0.121	2.082	22.763	58.652	-0.409	-0.035	0.175
S.D.	0.101	0.016	0.838	0.778	1.884	0.000	0.060	0.028
% R.S.D.	19.301	12.830	40.245	3.418	3.213	0.048	168.893	15.754

	Zn (ppm)	Ni (ppm)	La (ppm)	Fe (ppm)	Ca (ppm)	Cr (ppm)	Nd (ppm)	U (ppm)
Mean	0.509	10.747	-0.099	15.085	11.001	6.970	1.536	-11.847
S.D.	0.098	0.270	0.283	1.370	0.815	0.648	1.505	1.508
% R.S.D.	19.177	2.515	287.040	9.079	7.406	9.295	98.028	12.731

	Ce (ppm)	Sm (ppm)	Ba (ppm)	P (ppm)	S (ppm)	Mg (ppm)	As (ppm)	Na (ppm)
Mean	1.110	-3.670	0.231	0.076	10.909	6.717	-1.017	344.801
S.D.	1.459	0.665	0.026	1.836	1.017	0.773	0.407	2.250
% R.S.D.	131.526	18.107	11.123	2412.005	9.319	11.509	40.045	0.653

	Mo (ppm)	Se (ppm)	Ag (ppm)	Pb (ppm)	Ti (ppm)	Cd (ppm)	B (ppm)	K (ppm)
Mean	0.135	-6.744	0.165	0.446	0.738	0.144	-0.464	12913.628
S.D.	0.196	4.563	0.120	1.447	0.048	0.086	0.229	67.864
% R.S.D.	145.562	67.661	72.805	324.854	6.552	59.429	49.305	0.526

	Mn (ppm)	Sb (ppm)	V (ppm)	Be (ppm)	Tl (ppm)
Mean	0.825	6.316	-0.051	0.014	-1.376
S.D.	0.033	2.208	0.037	0.000	2.219
% R.S.D.	3.996	34.965	72.563	1.307	161.240

Identity 1: S96T000928 Identity 2: .250ml-10ml 1:38 PM April 25, 1996
Task name : OPTIMA
Sample Weight : 1.0000 Solution Volume : 41.00
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	0.053	-0.049	24.234	49.097	0.123	0.002	0.017
S.D.	0.035	0.002	0.061	0.157	0.194	0.142	0.014	0.010
% R.S.D.	762.877	2.936	123.260	0.647	0.394	115.715	659.479	57.573

	Zn (ppm)	Ni (ppm)	La (ppm)	Fe (ppm)	Ca (ppm)	Cr (ppm)	Nd (ppm)	U (ppm)
Mean	0.191	9.633	-0.054	10.209	6.177	6.927	0.201	2.248
S.D.	0.013	0.105	0.065	0.209	0.025	0.063	0.241	0.411
% R.S.D.	7.002	1.090	119.982	2.050	0.413	0.905	119.458	18.302

	Ce (ppm)	Sm (ppm)	Ba (ppm)	P (ppm)	S (ppm)	Mg (ppm)	As (ppm)	Na (ppm)
Mean	0.310	0.019	0.093	3.059	10.998	1.785	-0.127	325.295
S.D.	0.129	0.179	0.004	0.237	0.239	0.016	0.116	0.345
% R.S.D.	41.497	964.086	4.185	7.742	2.177	0.879	91.413	0.106

	Mo (ppm)	Se (ppm)	Ag (ppm)	Pb (ppm)	Ti (ppm)	Cd (ppm)	B (ppm)	K (ppm)
Mean	0.050	0.434	0.056	0.367	0.815	0.106	0.000	12273.829
S.D.	0.052	0.162	0.008	0.282	0.012	0.020	0.025	35.255
% R.S.D.	103.485	37.279	13.695	76.942	1.422	18.597	7863.970	0.287

	Mn (ppm)	Sb (ppm)	V (ppm)	Be (ppm)	Tl (ppm)
Mean	0.881	0.867	0.014	-0.006	0.057
S.D.	0.000	0.826	0.010	0.009	0.145
% R.S.D.	0.008	95.370	74.473	150.282	256.203

Identity 1: S96T000928_D Identity 2: .250ml-10ml 1:41 PM April 25, 1996
Task name : OPTIMA
Sample Weight : 1.0000 Solution Volume : 41.00
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	0.110	0.021	-0.204	9.608	46.322	-0.165	-0.025	-0.004
S.D.	0.103	0.008	0.234	0.066	0.111	0.071	0.037	0.027
% R.S.D.	94.386	37.653	114.836	0.684	0.240	43.098	147.982	617.142

	Zn (ppm)	Ni (ppm)	La (ppm)	Fe (ppm)	Ca (ppm)	Cr (ppm)	Nd (ppm)	U (ppm)
Mean	0.119	3.303	0.040	7.750	1.968	7.182	0.100	2.371
S.D.	0.026	0.079	0.099	0.070	0.036	0.082	0.382	3.515
% R.S.D.	21.994	2.391	248.311	0.908	1.816	1.141	380.661	148.240

	Ce (ppm)	Sm (ppm)	Ba (ppm)	P (ppm)	S (ppm)	Mg (ppm)	As (ppm)	Na (ppm)
Mean	-0.980	0.017	0.021	3.113	11.385	0.516	-0.365	337.437
S.D.	0.966	0.789	0.015	0.533	0.144	0.032	0.134	3.661
% R.S.D.	98.615	4612.066	69.195	17.108	1.262	6.219	36.570	1.085

	Mo (ppm)	Se (ppm)	Ag (ppm)	Pb (ppm)	Ti (ppm)	Cd (ppm)	B (ppm)	K (ppm)
Mean	0.110	2.493	-0.031	0.178	0.181	0.058	0.005	11170.722
S.D.	0.047	0.374	0.074	0.590	0.040	0.020	0.047	107.413
% R.S.D.	42.434	15.010	239.589	330.517	21.939	34.405	952.864	0.962

	Mn (ppm)	Sb (ppm)	V (ppm)	Be (ppm)	Tl (ppm)
Mean	0.839	0.951	-0.115	-0.003	-1.760
S.D.	0.020	1.098	0.035	0.011	1.743
% R.S.D.	2.395	115.468	30.792	367.147	99.075

Identity 1: S96T000928_A Identity 2: .250ml-2ml-8ml 1:45 PM April 25, 1996
Task name : OPTIMA
Sample Weight : 1.0000 Solution Volume : 41.00
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	40.154	40.350	39.706	62.763	87.846	39.413	41.296	38.902
S.D.	0.038	0.094	0.177	0.068	0.274	0.188	0.136	0.218
% R.S.D.	0.095	0.232	0.445	0.108	0.312	0.478	0.330	0.560

	Zn (ppm)	Ni (ppm)	La (ppm)	Fe (ppm)	Ca (ppm)	Cr (ppm)	Nd (ppm)	U (ppm)
Mean	39.748	48.988	40.896	51.020	46.770	46.657	43.524	79.763
S.D.	0.030	0.097	0.343	0.281	0.123	0.066	0.298	0.913
% R.S.D.	0.075	0.197	0.840	0.552	0.264	0.142	0.685	1.144

	Ce (ppm)	Sm (ppm)	Ba (ppm)	P (ppm)	S (ppm)	Mg (ppm)	As (ppm)	Na (ppm)
Mean	40.430	41.128	40.516	42.000	49.273	39.155	39.683	368.224
S.D.	0.377	0.212	0.117	0.363	0.316	0.038	0.088	1.840
% R.S.D.	0.932	0.515	0.289	0.864	0.642	0.098	0.221	0.500

	Mo (ppm)	Se (ppm)	Ag (ppm)	Pb (ppm)	Ti (ppm)	Cd (ppm)	B (ppm)	K (ppm)
Mean	39.151	43.854	33.995	39.998	39.790	39.478	40.051	12511.647
S.D.	0.209	1.233	0.155	0.547	0.047	0.070	0.110	71.282
% R.S.D.	0.534	2.812	0.456	1.367	0.118	0.176	0.275	0.570

	Mn (ppm)	Sb (ppm)	V (ppm)	Be (ppm)	Tl (ppm)
Mean	40.641	37.747	40.573	40.520	37.311
S.D.	0.037	0.667	0.015	0.051	0.804
% R.S.D.	0.090	1.768	0.037	0.126	2.154

Identity 1: CCV Identity 2: Quality Control 1:48 PM April 25, 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	4.946	4.949	4.940	4.775	4.831	4.981	5.044	4.962
S.D.	0.004	0.012	0.015	0.011	0.002	0.017	0.008	0.032
% R.S.D.	0.091	0.238	0.304	0.228	0.043	0.332	0.151	0.649

	Zn (ppm)	Ni (ppm)	La (ppm)	Fe (ppm)	Ca (ppm)	Cr (ppm)	Nd (ppm)	U (ppm)
Mean	5.022	4.980	5.032	5.110	4.972	4.970	5.273	9.671
S.D.	0.013	0.007	0.002	0.016	0.004	0.012	0.013	0.013
% R.S.D.	0.268	0.139	0.032	0.306	0.085	0.236	0.252	0.132

	Ce (ppm)	Sm (ppm)	Ba (ppm)	P (ppm)	S (ppm)	Mg (ppm)	As (ppm)	Na (ppm)
Mean	5.031	5.027	4.965	4.935	4.839	4.810	5.040	4.937
S.D.	0.025	0.008	0.011	0.041	0.048	0.010	0.007	0.028
% R.S.D.	0.492	0.151	0.215	0.839	0.996	0.198	0.145	0.572

	Mo (ppm)	Se (ppm)	Ag (ppm)	Pb (ppm)	Ti (ppm)	Cd (ppm)	B (ppm)	K (ppm)
Mean	4.937	5.258	4.889	5.009	4.838	4.981	5.095	5.077
S.D.	0.016	0.058	0.007	0.022	0.010	0.006	0.002	0.009
% R.S.D.	0.321	1.101	0.153	0.439	0.212	0.113	0.048	0.183

	Mn (ppm)	Sb (ppm)	V (ppm)	Be (ppm)	Tl (ppm)
Mean	4.989	4.753	5.059	5.148	4.831
S.D.	0.011	0.012	0.003	0.006	0.024
% R.S.D.	0.217	0.244	0.058	0.115	0.500

Identity 1: CCB Identity 2: Quality Control 1:51 PM April 25, 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	0.004	0.007	-0.015	-0.001	-0.001	-0.000
S.D.	0.001	0.000	0.012	0.002	0.007	0.002	0.000	0.000
% R.S.D.	16.209	119.911	282.499	25.889	45.068	169.582	6.545	312.419

	Zn (ppm)	Ni (ppm)	La (ppm)	Fe (ppm)	Ca (ppm)	Cr (ppm)	Nd (ppm)	U (ppm)
Mean	0.001	0.010	0.002	0.001	0.001	-0.003	-0.009	0.154
S.D.	0.000	0.002	0.001	0.003	0.001	0.001	0.005	0.056
% R.S.D.	21.628	18.066	41.205	213.951	48.016	19.059	52.441	36.191

	Ce (ppm)	Sm (ppm)	Ba (ppm)	P (ppm)	S (ppm)	Mg (ppm)	As (ppm)	Na (ppm)
Mean	-0.021	0.016	-0.000	0.016	-0.003	0.001	0.006	-0.013
S.D.	0.020	0.013	0.000	0.005	0.001	0.001	0.004	0.005
% R.S.D.	94.754	79.652	1670.329	29.106	23.507	48.219	65.523	39.036

	Mo (ppm)	Se (ppm)	Ag (ppm)	Pb (ppm)	Ti (ppm)	Cd (ppm)	B (ppm)	K (ppm)
Mean	-0.000	-0.018	0.002	0.020	0.002	0.000	0.002	0.020
S.D.	0.001	0.014	0.001	0.001	0.000	0.000	0.000	0.004
% R.S.D.	675.932	80.902	59.793	7.469	12.854	99.178	21.794	19.926

	Mn (ppm)	Sb (ppm)	V (ppm)	Be (ppm)	Tl (ppm)
Mean	-0.001	-0.000	-0.002	0.000	-0.040
S.D.	0.001	0.005	0.001	0.000	0.035
% R.S.D.	97.444	3027.096	35.143	138.526	88.030

Identity 1: S96T000933_L Identity 2: .250ml-10ml-2ml-8ml 1:54 PM April 25, 1996
Task name : OPTIMA
Sample Weight : 1.0000 Solution Volume : 205.00
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	-0.044	0.153	1.416	3.002	24.457	-1.027	-0.099	0.111
S.D.	0.201	0.023	1.140	0.359	0.262	0.001	0.056	0.055
% R.S.D.	452.955	15.283	80.528	11.956	1.070	0.054	56.852	49.506

	Zn (ppm)	Ni (ppm)	La (ppm)	Fe (ppm)	Ca (ppm)	Cr (ppm)	Nd (ppm)	U (ppm)
Mean	0.261	2.638	-0.281	2.351	1.650	8.667	0.935	2.218
S.D.	0.024	0.412	0.163	0.209	0.014	0.240	0.944	4.298
% R.S.D.	9.371	15.620	57.969	8.909	0.855	2.763	100.904	193.751

	Ce (ppm)	Sm (ppm)	Ba (ppm)	P (ppm)	S (ppm)	Mg (ppm)	As (ppm)	Na (ppm)
Mean	-1.609	-2.005	0.155	4.448	18.124	0.385	-1.669	446.262
S.D.	1.700	1.614	0.040	1.325	0.792	0.034	0.821	0.567
% R.S.D.	105.669	80.507	26.099	29.776	4.371	8.824	49.193	0.127

	Mo (ppm)	Se (ppm)	Ag (ppm)	Pb (ppm)	Ti (ppm)	Cd (ppm)	B (ppm)	K (ppm)
Mean	0.212	-2.311	0.333	-0.191	0.184	0.214	-0.049	10832.542
S.D.	0.312	1.038	0.088	2.428	0.048	0.200	0.195	5.566
% R.S.D.	147.264	44.931	26.586	1273.436	26.147	93.537	398.158	0.051

	Mn (ppm)	Sb (ppm)	V (ppm)	Be (ppm)	Tl (ppm)
Mean	0.756	3.623	0.194	0.093	-11.498
S.D.	0.032	1.494	0.098	0.054	1.389
% R.S.D.	4.279	41.246	50.738	58.282	12.076

Identity 1: S96T000933 Identity 2: .250ml-10ml 1:57 PM April 25, 1996
Task name : OPTIMA
Sample Weight : 1.0000 Solution Volume : 41.00
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	-0.029	0.032	0.283	2.645	24.964	0.041	0.032	0.029
S.D.	0.033	0.002	0.284	0.137	0.146	0.123	0.006	0.003
% R.S.D.	113.169	4.811	100.354	5.183	0.585	298.607	18.043	11.128

	Zn (ppm)	Ni (ppm)	La (ppm)	Fe (ppm)	Ca (ppm)	Cr (ppm)	Nd (ppm)	U (ppm)
Mean	0.262	2.040	-0.189	2.106	1.537	8.586	0.309	-1.218
S.D.	0.017	0.007	0.057	0.073	0.009	0.075	0.230	1.191
% R.S.D.	6.470	0.327	30.213	3.460	0.561	0.871	74.413	97.782

	Ce (ppm)	Sm (ppm)	Ba (ppm)	P (ppm)	S (ppm)	Mg (ppm)	As (ppm)	Na (ppm)
Mean	0.095	-0.098	0.038	2.374	17.953	0.134	-0.535	434.446
S.D.	0.268	0.272	0.004	0.879	0.498	0.010	0.134	1.825
% R.S.D.	282.466	278.635	10.112	37.040	2.773	7.767	25.012	0.420

	Mo (ppm)	Se (ppm)	Ag (ppm)	Pb (ppm)	Ti (ppm)	Cd (ppm)	B (ppm)	K (ppm)
Mean	0.073	0.530	0.046	0.923	0.036	0.105	0.018	10387.887
S.D.	0.009	0.220	0.012	0.283	0.015	0.025	0.014	37.433
% R.S.D.	12.005	41.526	25.143	30.722	41.246	23.705	75.355	0.360

	Mn (ppm)	Sb (ppm)	V (ppm)	Be (ppm)	Tl (ppm)
Mean	0.741	0.726	0.023	0.003	0.528
S.D.	0.007	0.234	0.039	0.009	0.587
% R.S.D.	0.903	32.240	171.725	352.601	111.044

Identity 1: S96T000933_D Identity 2: .250ml-10ml 2:00 PM April 25, 1996
Task name : OPTIMA
Sample Weight : 1.0000 Solution Volume : 41.00
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	-0.090	0.031	-0.833	2.374	24.730	-0.082	0.003	0.015
S.D.	0.013	0.002	0.190	0.048	0.161	0.123	0.006	0.014
% R.S.D.	14.926	4.949	22.785	2.032	0.649	150.947	190.127	96.910

	Zn (ppm)	Ni (ppm)	La (ppm)	Fe (ppm)	Ca (ppm)	Cr (ppm)	Nd (ppm)	U (ppm)
Mean	0.249	5.492	-0.246	1.989	1.856	8.589	0.325	-3.385
S.D.	0.003	0.095	0.056	0.035	0.002	0.086	0.085	0.240
% R.S.D.	1.286	1.728	22.936	1.759	0.088	1.005	26.068	7.098

	Ce (ppm)	Sm (ppm)	Ba (ppm)	P (ppm)	S (ppm)	Mg (ppm)	As (ppm)	Na (ppm)
Mean	0.559	-0.349	0.040	3.441	18.098	0.109	0.098	435.854
S.D.	0.238	0.087	0.004	0.321	0.111	0.004	0.219	0.484
% R.S.D.	42.649	24.907	10.939	9.332	0.614	3.608	222.769	0.111

	Mo (ppm)	Se (ppm)	Ag (ppm)	Pb (ppm)	Ti (ppm)	Cd (ppm)	B (ppm)	K (ppm)
Mean	0.029	-0.164	0.053	0.042	-0.004	0.095	-0.001	12951.076
S.D.	0.049	0.329	0.013	0.785	0.005	0.021	0.031	2.602
% R.S.D.	168.111	200.049	25.209	1846.504	121.295	21.665	3998.272	0.020

	Mn (ppm)	Sb (ppm)	V (ppm)	Be (ppm)	Tl (ppm)
Mean	0.745	1.125	0.072	0.015	-1.660
S.D.	0.007	1.090	0.009	0.005	0.041
% R.S.D.	0.878	96.860	12.322	36.244	2.475

Identity 1: S96T000933_A Identity 2: .250ml-2ml-8ml 2:03 PM April 25, 1996
Task name : OPTIMA
Sample Weight : 1.0000 Solution Volume : 41.00
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	40.148	40.224	40.195	42.192	64.044	40.357	40.808	38.575
S.D.	0.054	0.106	0.443	0.153	0.112	0.142	0.143	0.143
% R.S.D.	0.133	0.265	1.101	0.361	0.174	0.353	0.350	0.372

	Zn (ppm)	Ni (ppm)	La (ppm)	Fe (ppm)	Ca (ppm)	Cr (ppm)	Nd (ppm)	U (ppm)
Mean	40.350	42.088	40.558	42.247	40.960	48.692	41.954	82.671
S.D.	0.039	0.249	0.314	0.144	0.138	0.103	0.331	1.286
% R.S.D.	0.096	0.592	0.774	0.341	0.337	0.212	0.789	1.556

	Ce (ppm)	Sm (ppm)	Ba (ppm)	P (ppm)	S (ppm)	Mg (ppm)	As (ppm)	Na (ppm)
Mean	39.725	41.923	40.113	42.955	57.297	38.387	40.031	466.116
S.D.	0.525	0.389	0.129	0.774	0.511	0.018	0.457	1.767
% R.S.D.	1.323	0.927	0.321	1.802	0.893	0.047	1.143	0.379

	Mo (ppm)	Se (ppm)	Ag (ppm)	Pb (ppm)	Ti (ppm)	Cd (ppm)	B (ppm)	K (ppm)
Mean	40.133	42.991	33.632	40.466	39.256	39.926	40.041	10146.465
S.D.	0.171	0.754	0.134	0.167	0.101	0.200	0.104	29.041
% R.S.D.	0.427	1.754	0.398	0.412	0.257	0.501	0.260	0.286

	Mn (ppm)	Sb (ppm)	V (ppm)	Be (ppm)	Tl (ppm)
Mean	40.884	38.091	40.804	40.674	37.249
S.D.	0.067	0.439	0.122	0.087	0.789
% R.S.D.	0.163	1.152	0.298	0.215	2.117

Identity 1: S96T000940_L Identity 2: .250ml-10ml-2ml-8ml 2:06 PM April 25, 1996
Task name : OPTIMA
Sample Weight : 1.0000 Solution Volume : 205.00
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	0.230	0.009	2.628	2.105	16.198	-0.823	-0.379	-0.064
S.D.	0.303	0.021	2.090	0.347	0.539	0.357	0.135	0.042
% R.S.D.	131.751	229.129	79.513	16.489	3.325	43.335	35.730	66.113

	Zn (ppm)	Ni (ppm)	La (ppm)	Fe (ppm)	Ca (ppm)	Cr (ppm)	Nd (ppm)	U (ppm)
Mean	0.912	5.538	-0.371	-0.475	2.737	4.661	-2.731	11.816
S.D.	0.058	0.306	0.287	0.144	0.051	0.487	0.702	10.318
% R.S.D.	6.324	5.534	77.300	30.423	1.859	10.455	25.722	87.318

	Ce (ppm)	Sm (ppm)	Ba (ppm)	P (ppm)	S (ppm)	Mg (ppm)	As (ppm)	Na (ppm)
Mean	-6.512	5.164	-0.053	6.936	8.897	0.181	-1.163	455.263
S.D.	1.715	1.621	0.033	1.113	0.177	0.034	0.760	5.125
% R.S.D.	26.343	31.383	62.354	16.041	1.993	18.750	65.290	1.126

	Mo (ppm)	Se (ppm)	Ag (ppm)	Pb (ppm)	Ti (ppm)	Cd (ppm)	B (ppm)	K (ppm)
Mean	-0.259	2.301	-0.109	-2.078	0.219	-0.066	-0.574	12904.265
S.D.	0.159	1.157	0.071	1.453	0.090	0.125	0.223	157.022
% R.S.D.	61.242	50.308	64.468	69.949	41.393	190.144	38.904	1.217

	Mn (ppm)	Sb (ppm)	V (ppm)	Be (ppm)	Tl (ppm)
Mean	0.261	6.237	-0.645	-0.091	0.044
S.D.	0.088	3.640	0.113	0.028	3.567
% R.S.D.	33.648	58.359	17.534	30.337	8136.814

Identity 1: S96T000940 Identity 2: .250ml-10ml 2:09 PM April 25, 1996
Task name : OPTIMA
Sample Weight : 1.0000 Solution Volume : 41.00
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	-0.032	0.024	0.249	0.468	18.248	0.123	0.001	0.037
S.D.	0.046	0.004	0.581	0.081	0.197	0.071	0.013	0.007
% R.S.D.	142.569	16.973	233.633	17.264	1.081	57.594	1146.641	19.811

	Zn (ppm)	Ni (ppm)	La (ppm)	Fe (ppm)	Ca (ppm)	Cr (ppm)	Nd (ppm)	U (ppm)
Mean	0.131	3.886	-0.019	0.661	2.020	4.768	0.105	0.535
S.D.	0.014	0.036	0.098	0.052	0.007	0.069	0.201	1.474
% R.S.D.	10.674	0.919	528.628	7.876	0.323	1.439	192.733	275.456

	Ce (ppm)	Sm (ppm)	Ba (ppm)	P (ppm)	S (ppm)	Mg (ppm)	As (ppm)	Na (ppm)
Mean	0.581	-0.723	0.026	3.465	9.335	0.045	-0.199	447.310
S.D.	0.342	0.313	0.006	0.443	0.291	0.004	0.132	2.848
% R.S.D.	58.758	43.262	21.091	12.775	3.114	8.660	66.202	0.637

	Mo (ppm)	Se (ppm)	Ag (ppm)	Pb (ppm)	Ti (ppm)	Cd (ppm)	B (ppm)	K (ppm)
Mean	0.010	-1.107	0.073	0.811	0.009	0.066	-0.062	12373.766
S.D.	0.035	0.425	0.031	0.305	0.015	0.006	0.008	82.628
% R.S.D.	359.511	38.381	41.866	37.630	160.585	8.762	13.234	0.668

	Mn (ppm)	Sb (ppm)	V (ppm)	Be (ppm)	Tl (ppm)
Mean	0.347	1.292	-0.005	0.006	0.317
S.D.	0.017	0.774	0.047	0.005	0.803
% R.S.D.	5.039	59.892	914.246	89.940	253.277

Identity 1: S96T000940_D Identity 2: .250ml-10ml 2:12 PM April 25, 1996
Task name : OPTIMA
Sample Weight : 1.0000 Solution Volume : 41.00
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	0.063	0.019	-0.309	0.495	18.011	0.287	-0.004	0.005
S.D.	0.026	0.002	0.666	0.080	0.343	0.000	0.009	0.002
% R.S.D.	41.390	8.248	215.715	16.253	1.906	0.007	221.893	34.859

	Zn (ppm)	Ni (ppm)	La (ppm)	Fe (ppm)	Ca (ppm)	Cr (ppm)	Nd (ppm)	U (ppm)
Mean	0.102	3.489	-0.111	0.856	1.792	4.690	0.199	3.175
S.D.	0.026	0.059	0.086	0.029	0.003	0.047	0.057	0.149
% R.S.D.	25.707	1.682	77.360	3.408	0.158	1.003	28.622	4.706

	Ce (ppm)	Sm (ppm)	Ba (ppm)	P (ppm)	S (ppm)	Mg (ppm)	As (ppm)	Na (ppm)
Mean	0.457	0.710	0.022	2.438	9.475	0.048	0.033	434.251
S.D.	0.222	0.053	0.002	0.182	0.200	0.004	0.147	1.782
% R.S.D.	48.579	7.504	8.813	7.479	2.106	8.248	447.330	0.410

	Mo (ppm)	Se (ppm)	Ag (ppm)	Pb (ppm)	Ti (ppm)	Cd (ppm)	B (ppm)	K (ppm)
Mean	0.031	-0.308	0.007	1.181	0.044	0.089	-0.001	11239.501
S.D.	0.040	0.345	0.007	0.190	0.005	0.017	0.025	61.477
% R.S.D.	130.465	111.827	94.248	16.073	12.039	19.265	2513.203	0.547

	Mn (ppm)	Sb (ppm)	V (ppm)	Be (ppm)	Tl (ppm)
Mean	0.362	0.550	0.016	0.003	-0.037
S.D.	0.011	0.155	0.010	0.009	0.210
% R.S.D.	3.137	28.241	64.824	277.815	573.436

Identity 1: S961000940_A Identity 2: .250ml-2ml-8ml 2:15 PM April 25, 1996
Task name : OPTIMA
Sample Weight : 1.0000 Solution Volume : 41.00
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	40.250	40.203	38.980	39.631	56.272	39.207	41.064	38.355
S.D.	0.105	0.111	0.471	0.203	0.318	0.000	0.129	0.115
% R.S.D.	0.261	0.277	1.208	0.512	0.564	0.000	0.315	0.301

	Zn (ppm)	Ni (ppm)	La (ppm)	Fe (ppm)	Ca (ppm)	Cr (ppm)	Nd (ppm)	U (ppm)
Mean	39.619	43.713	40.878	41.787	41.640	44.159	43.565	83.157
S.D.	0.141	0.311	0.117	0.185	0.166	0.092	0.412	1.294
% R.S.D.	0.356	0.712	0.286	0.444	0.399	0.209	0.947	1.556

	Ce (ppm)	Sm (ppm)	Ba (ppm)	P (ppm)	S (ppm)	Mg (ppm)	As (ppm)	Na (ppm)
Mean	39.161	41.036	40.237	42.415	47.198	37.646	39.565	476.362
S.D.	0.506	0.253	0.117	2.526	1.314	0.076	0.232	1.525
% R.S.D.	1.291	0.617	0.291	5.956	2.785	0.203	0.586	0.320

	Mo (ppm)	Se (ppm)	Ag (ppm)	Pb (ppm)	Ti (ppm)	Cd (ppm)	B (ppm)	K (ppm)
Mean	39.255	42.321	33.269	40.113	38.999	39.722	40.064	12344.974
S.D.	0.165	0.463	0.021	0.223	0.146	0.125	0.083	40.622
% R.S.D.	0.420	1.095	0.064	0.555	0.375	0.314	0.208	0.329

	Mn (ppm)	Sb (ppm)	V (ppm)	Be (ppm)	Tl (ppm)
Mean	40.277	37.252	40.582	40.625	38.244
S.D.	0.068	1.843	0.155	0.094	0.223
% R.S.D.	0.170	4.947	0.383	0.231	0.583

Identity 1: ICSA Identity 2: Quality Control 2:18 PM April 25, 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	-0.033	0.015	194.093	-0.002	0.000	0.001
S.D.	0.001	0.000	0.003	0.004	0.210	0.002	0.000	0.000
% R.S.D.	141.012	0.000	10.455	27.742	0.108	97.055	101.293	22.025

	Zn (ppm)	Ni (ppm)	La (ppm)	Fe (ppm)	Ca (ppm)	Cr (ppm)	Nd (ppm)	U (ppm)
Mean	-0.005	0.012	0.004	96.980	102.715	-0.001	-0.009	0.060
S.D.	0.000	0.003	0.001	0.107	0.148	0.001	0.005	0.005
% R.S.D.	8.246	21.097	20.840	0.110	0.144	96.631	53.266	8.097

	Ce (ppm)	Sm (ppm)	Ba (ppm)	P (ppm)	S (ppm)	Mg (ppm)	As (ppm)	Na (ppm)
Mean	-0.004	0.020	0.003	0.024	0.033	97.196	0.059	191.850
S.D.	0.006	0.002	0.000	0.006	0.011	0.061	0.008	0.554
% R.S.D.	154.974	10.213	1.076	24.116	34.521	0.063	14.313	0.289

	Mo (ppm)	Se (ppm)	Ag (ppm)	Pb (ppm)	Ti (ppm)	Cd (ppm)	B (ppm)	K (ppm)
Mean	-0.002	0.012	0.004	0.014	0.001	0.000	0.010	-0.060
S.D.	0.001	0.007	0.001	0.010	0.000	0.001	0.001	0.004
% R.S.D.	49.453	56.776	17.450	74.094	25.077	609.969	7.845	6.546

	Mn (ppm)	Sb (ppm)	V (ppm)	Be (ppm)	Tl (ppm)
Mean	0.002	0.007	-0.000	0.003	-0.036
S.D.	0.001	0.021	0.001	0.000	0.000
% R.S.D.	26.180	296.261	289.707	4.911	0.050

Identity 1: ICSA8 Identity 2: Quality Control 2:21 PM April 25, 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	-0.050	0.013	192.780	0.483	0.497	0.926
S.D.	0.001	0.000	0.007	0.001	0.627	0.000	0.002	0.009
% R.S.D.	126.601	8.444	14.921	8.052	0.325	0.003	0.320	0.941

	Zn (ppm)	Ni (ppm)	La (ppm)	Fe (ppm)	Ca (ppm)	Cr (ppm)	Nd (ppm)	U (ppm)
Mean	0.978	0.971	0.004	96.862	101.778	0.493	-0.002	0.090
S.D.	0.002	0.003	0.001	0.089	0.211	0.003	0.008	0.084
% R.S.D.	0.191	0.313	32.996	0.092	0.208	0.650	341.767	93.472

	Ce (ppm)	Sm (ppm)	Ba (ppm)	P (ppm)	S (ppm)	Mg (ppm)	As (ppm)	Na (ppm)
Mean	-0.008	0.031	0.505	0.026	0.036	98.342	0.061	189.362
S.D.	0.023	0.016	0.002	0.008	0.004	0.134	0.008	1.566
% R.S.D.	284.174	53.173	0.352	28.930	11.849	0.136	13.103	0.827

	Mo (ppm)	Se (ppm)	Ag (ppm)	Pb (ppm)	Ti (ppm)	Cd (ppm)	B (ppm)	K (ppm)
Mean	-0.001	0.027	1.000	1.003	0.001	0.989	0.012	-0.006
S.D.	0.001	0.014	0.001	0.005	0.000	0.001	0.001	0.017
% R.S.D.	186.694	50.180	0.082	0.543	47.496	0.080	4.524	307.181

	Mn (ppm)	Sb (ppm)	V (ppm)	Be (ppm)	Tl (ppm)
Mean	0.499	-0.009	0.492	0.499	-0.027
S.D.	0.000	0.011	0.001	0.000	0.032
% R.S.D.	0.077	126.352	0.195	0.027	117.714

Identity 1: CCV Identity 2: Quality Control 2:23 PM April 25, 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	4.947	4.940	4.937	4.776	4.824	4.995	5.023	4.897
S.D.	0.007	0.005	0.019	0.005	0.005	0.023	0.003	0.008
% R.S.D.	0.134	0.099	0.379	0.107	0.095	0.456	0.066	0.168

	Zn (ppm)	Ni (ppm)	La (ppm)	Fe (ppm)	Ca (ppm)	Cr (ppm)	Nd (ppm)	U (ppm)
Mean	5.032	4.978	5.019	5.089	4.957	4.984	5.263	9.645
S.D.	0.006	0.011	0.003	0.020	0.007	0.017	0.017	0.038
% R.S.D.	0.110	0.215	0.057	0.394	0.149	0.338	0.315	0.389

	Ce (ppm)	Sm (ppm)	Ba (ppm)	P (ppm)	S (ppm)	Mg (ppm)	As (ppm)	Na (ppm)
Mean	4.994	5.005	4.951	5.109	4.922	4.820	5.028	4.905
S.D.	0.014	0.005	0.005	0.105	0.041	0.002	0.029	0.015
% R.S.D.	0.274	0.097	0.105	2.050	0.840	0.037	0.579	0.298

	Mo (ppm)	Se (ppm)	Ag (ppm)	Pb (ppm)	Ti (ppm)	Cd (ppm)	B (ppm)	K (ppm)
Mean	4.939	5.189	4.890	4.969	4.831	4.981	5.074	5.026
S.D.	0.009	0.013	0.008	0.037	0.005	0.009	0.010	0.017
% R.S.D.	0.188	0.254	0.161	0.740	0.106	0.179	0.206	0.342

	Mn (ppm)	Sb (ppm)	V (ppm)	Be (ppm)	Tl (ppm)
Mean	4.998	4.711	5.058	5.144	4.820
S.D.	0.010	0.078	0.009	0.003	0.003
% R.S.D.	0.196	1.651	0.182	0.055	0.059

Identity 1: CCB Identity 2: Quality Control 2:25 PM April 25, 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	0.012	0.001	-0.000	-0.005	-0.000	0.001
S.D.	0.001	0.000	0.017	0.002	0.003	0.003	0.001	0.000
% R.S.D.	68.066	21.452	140.077	177.513	25557.832	59.944	120.641	17.557

	Zn (ppm)	Ni (ppm)	La (ppm)	Fe (ppm)	Ca (ppm)	Cr (ppm)	Nd (ppm)	U (ppm)
Mean	0.002	0.010	0.000	0.003	0.005	-0.004	-0.002	0.036
S.D.	0.001	0.001	0.001	0.003	0.001	0.000	0.004	0.003
% R.S.D.	38.542	14.830	167.299	73.435	32.324	6.543	201.217	8.806

	Ce (ppm)	Sm (ppm)	Ba (ppm)	P (ppm)	S (ppm)	Mg (ppm)	As (ppm)	Na (ppm)
Mean	-0.010	0.024	0.001	-0.002	-0.003	0.004	-0.006	0.014
S.D.	0.002	0.003	0.000	0.008	0.001	0.001	0.004	0.003
% R.S.D.	23.165	12.271	11.863	323.526	23.139	35.852	70.405	19.243

	Mo (ppm)	Se (ppm)	Ag (ppm)	Pb (ppm)	Ti (ppm)	Cd (ppm)	B (ppm)	K (ppm)
Mean	0.002	0.022	0.001	-0.008	0.002	0.001	0.006	0.023
S.D.	0.000	0.004	0.001	0.005	0.000	0.001	0.001	0.017
% R.S.D.	5.769	17.266	54.119	69.168	31.002	53.888	20.555	73.995

	Mn (ppm)	Sb (ppm)	V (ppm)	Be (ppm)	Tl (ppm)
Mean	0.000	0.004	-0.000	0.001	-0.051
S.D.	0.000	0.014	0.000	0.000	0.007
% R.S.D.	180.573	339.252	214.950	29.811	14.147

FILE # 960504A.DAT

LABCORE Data Entry Template for Worklist# 7946

Analyst: B. Goecke **Instrument:** ICP01 _____ **Book#** 53B984

Method: LA-505-151/~~161~~ 155 5-2-96 Rev/Mod 0-3

Worklist Comment: ICP U-105 (FUSION)

S	Type	Sample#	R	A	Test	Matrix	Group#	Project
1	ICV				@ICP-QC	QC		
2	ICB				@ICP-QC	QC		
3	ICSA				@ICP-QC	QC		
4	ICSAB				@ICP-QC	QC		
5	PREPBLKARL				@ICP-F01	SOLID		
6	SERDIL	S96T000947	0	F	@ICP-F01	SOLID		
7	SAMPLE	S96T000947	0	F	@ICP-F01	SOLID	96000092	U-105 (R)
	Analytes Requested:				AL-F-01 , BI-F-01 , FE-F-01 , LI-F-01 , NA-F-01 , P-F-01 , SI-F-01			
8	DUP	S96T000947	0	F	@ICP-F01	SOLID		
9	SPK	S96T000947	0	F	@ICP-F01	SOLID		
10	CCV				@ICP-QC	QC		
11	CCB				@ICP-QC	QC		
12	SERDIL	S96T000954	0	F	@ICP-F01	SOLID		
13	SAMPLE	S96T000954	0	F	@ICP-F01	SOLID	96000092	U-105 (R)
	Analytes Requested:				AL-F-01 , BI-F-01 , FE-F-01 , LI-F-01 , NA-F-01 , P-F-01 , SI-F-01			
14	DUP	S96T000954	0	F	@ICP-F01	SOLID		
15	SPK	S96T000954	0	F	@ICP-F01	SOLID		
16	SERDIL	S96T000961	0	F	@ICP-F01	SOLID		
17	SAMPLE	S96T000961	0	F	@ICP-F01	SOLID	96000092	U-105 (R)

Data Entry Comments: ICP dil. factor are already incorporated w/ raw data. Sample prep. dil. factor can be found in sample prep. worklist.
Example calculation results:

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

S96T000947 Al = $29.911 \frac{ug}{ml} \times \frac{1}{2.085 \frac{g}{L} \times \frac{1L}{1000 ml}} = 1.43e4 \frac{ug}{g}$

LABCORE Data Entry Template for Worklist# 7946

S	Type	Sample#	R	A	Test	Matrix	Group#	Project
		Analytes Requested:			AL-F-01 , BI-F-01 , FE-F-01 , LI-F-01 , NA-F-01 , P-F-01 , SI-F-01			
18	DUP	S96T000961	0	F	@ICP-F01	SOLID		
19	SPK	S96T000961	0	F	@ICP-F01	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 # 7946

Analyst Signature: [signature] Date: 5-2-96

Reviewed by: Saul M. Perez Date: 5/9/96

Analyst Signature Date

		D.F.
PREPBLK ALL	.250-L-10-L	1
S967000947-L	.250-L-10-L-2-L-8-L	205
S967000947	.250-L-10-L	41
S967000947-D	.250-L-10-L	41
S967000947-A	.250-L-2-L-8-L	41
S967000954-L	.250-L-10-L-2-L-8-L	205
S967000954	.250-L-10-L	41
S967000954-D	.250-L-10-L	41
S967000954-A	.250-L-2-L-8-L	41
S967000961-L	.250-L-10-L-2-L-8-L	205
S967000961	.250-L-10-L	41
S967000961-D	.250-L-10-L	41
S967000961-A	.250-L-2-L-8-L	41

Data Entry Comments: Actual spiking amount for all elements needed for this worklist is 1.0 ppm. ICP dilution factor is listed above.

Example calculation of Spike Recovery:

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

S967000947 $Al = \frac{\left(\frac{68.837}{41.0}\right) - \left(\frac{29.911}{41.0}\right)}{1} \times 100 = 94.9\ \%$

Identity 1: ICV Identity 2: Quality Control 1:36 PM May 2, 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	4.917	4.920	4.946	4.752	4.910	5.082	5.020	4.996
S.D.	0.010	0.008	0.018	0.010	0.020	0.028	0.007	0.015
% R.S.D.	0.205	0.159	0.363	0.220	0.413	0.545	0.138	0.294

	Zn (ppm)	Ni (ppm)	La (ppm)	Fe (ppm)	Ca (ppm)	Cr (ppm)	Nd (ppm)	U (ppm)
Mean	5.121	5.020	4.944	5.049	4.917	5.068	5.043	9.699
S.D.	0.011	0.010	0.004	0.018	0.010	0.012	0.029	0.031
% R.S.D.	0.211	0.189	0.073	0.356	0.209	0.244	0.579	0.315

	Ce (ppm)	Sm (ppm)	Ba (ppm)	P (ppm)	S (ppm)	Mg (ppm)	As (ppm)	Na (ppm)
Mean	4.984	4.934	4.934	5.040	4.958	4.889	5.078	4.949
S.D.	0.021	0.008	0.007	0.064	0.040	0.016	0.029	0.007
% R.S.D.	0.427	0.155	0.148	1.272	0.812	0.335	0.575	0.148

	Mo (ppm)	Se (ppm)	Ag (ppm)	Pb (ppm)	Ti (ppm)	Cd (ppm)	B (ppm)	K (ppm)
Mean	5.051	5.170	4.960	5.000	4.896	5.010	5.070	5.090
S.D.	0.019	0.050	0.012	0.035	0.012	0.026	0.008	0.007
% R.S.D.	0.368	0.973	0.233	0.698	0.235	0.514	0.159	0.128

	Mn (ppm)	Sb (ppm)	V (ppm)	Be (ppm)	Tl (ppm)
Mean	5.040	4.640	5.075	5.138	4.896
S.D.	0.014	0.012	0.013	0.016	0.026
% R.S.D.	0.270	0.267	0.261	0.310	0.523

[signature]
5-2-96
U-105 Fusion
5967000 947, 954, 961
.250-1-10-1
File # 960502A.DAT

SIGNATURE ABOVE REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 1078 TO 1100.

Identity 1: ICB Identity 2: Quality Control 1:40 PM May 2, 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	0.003	0.002	-0.007	0.008	-0.000	0.000
S.D.	0.001	0.000	0.009	0.004	0.006	0.002	0.001	0.000
% R.S.D.	71.545	91.652	328.396	199.800	83.457	21.652	992.672	35.249

	Zn (ppm)	Ni (ppm)	La (ppm)	Fe (ppm)	Ca (ppm)	Cr (ppm)	Nd (ppm)	U (ppm)
Mean	0.001	-0.001	0.002	0.001	0.004	0.001	0.002	0.021
S.D.	0.001	0.001	0.001	0.002	0.000	0.000	0.005	0.013
% R.S.D.	65.054	118.298	74.662	164.278	8.490	60.515	197.188	60.068

	Ce (ppm)	Sm (ppm)	Ba (ppm)	P (ppm)	S (ppm)	Mg (ppm)	As (ppm)	Na (ppm)
Mean	0.008	-0.007	0.000	-0.002	-0.001	0.000	0.009	-0.002
S.D.	0.006	0.002	0.000	0.010	0.003	0.000	0.001	0.001
% R.S.D.	70.792	22.096	74.598	543.392	497.045	37.500	14.439	86.587

	Mo (ppm)	Se (ppm)	Ag (ppm)	Pb (ppm)	Ti (ppm)	Cd (ppm)	B (ppm)	K (ppm)
Mean	-0.001	-0.011	0.001	0.031	0.001	0.001	0.007	0.079
S.D.	0.001	0.002	0.001	0.016	0.001	0.001	0.000	0.010
% R.S.D.	47.031	15.825	56.780	52.686	107.384	62.411	4.622	12.481

	Mn (ppm)	Sb (ppm)	V (ppm)	Be (ppm)	Tl (ppm)
Mean	0.001	0.045	0.000	0.001	0.008
S.D.	0.000	0.030	0.001	0.000	0.012
% R.S.D.	65.806	66.292	161.010	21.639	141.876

Identity 1: ICSA Identity 2: Quality Control 1:43 PM May 2, 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	-0.025	0.017	199.041	0.002	0.001	0.001
S.D.	0.001	0.000	0.005	0.003	0.265	0.000	0.001	0.000
% R.S.D.	244.113	1.750	18.696	15.368	0.133	0.189	47.854	8.540

	Zn (ppm)	Ni (ppm)	La (ppm)	Fe (ppm)	Ca (ppm)	Cr (ppm)	Nd (ppm)	U (ppm)
Mean	-0.005	0.009	0.008	96.407	105.147	0.002	-0.008	0.006
S.D.	0.000	0.002	0.003	0.214	0.106	0.002	0.004	0.017
% R.S.D.	2.271	24.906	36.284	0.222	0.101	107.109	46.875	278.878

	Ce (ppm)	Sm (ppm)	Ba (ppm)	P (ppm)	S (ppm)	Mg (ppm)	As (ppm)	Na (ppm)
Mean	0.009	0.023	0.004	0.026	0.029	99.347	0.070	194.564
S.D.	0.002	0.005	0.000	0.003	0.015	0.073	0.003	0.770
% R.S.D.	27.435	20.462	2.249	12.679	52.669	0.073	4.955	0.396

	Mo (ppm)	Se (ppm)	Ag (ppm)	Pb (ppm)	Tl (ppm)	Cd (ppm)	B (ppm)	K (ppm)
Mean	-0.002	0.007	0.002	0.029	0.000	0.000	0.017	-0.031
S.D.	0.001	0.005	0.000	0.009	0.000	0.001	0.001	0.007
% R.S.D.	42.578	71.548	20.135	29.300	90.388	467.433	3.351	24.057

	Mn (ppm)	Sb (ppm)	V (ppm)	Be (ppm)	Tl (ppm)
Mean	0.003	0.012	0.002	0.003	0.028
S.D.	0.001	0.039	0.000	0.000	0.013
% R.S.D.	27.992	326.392	6.953	8.086	48.090

Identity 1: ICSAB Identity 2: Quality Control 1:45 PM May 2, 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	-0.053	0.003	198.521	0.499	0.504	0.955
S.D.	0.003	0.000	0.005	0.006	1.074	0.005	0.003	0.010
% R.S.D.	64.558	8.170	9.062	202.924	0.541	0.931	0.641	1.065

	Zn (ppm)	Ni (ppm)	La (ppm)	Fe (ppm)	Ca (ppm)	Cr (ppm)	Nd (ppm)	U (ppm)
Mean	1.001	0.985	0.003	95.967	104.289	0.502	-0.019	-0.027
S.D.	0.003	0.005	0.003	0.142	0.383	0.003	0.004	0.090
% R.S.D.	0.312	0.544	96.354	0.148	0.367	0.609	18.548	327.338

	Ce (ppm)	Sm (ppm)	Ba (ppm)	P (ppm)	S (ppm)	Mg (ppm)	As (ppm)	Na (ppm)
Mean	0.034	-0.025	0.511	0.014	0.026	99.500	0.065	194.077
S.D.	0.023	0.018	0.003	0.010	0.011	0.368	0.006	1.778
% R.S.D.	67.170	73.482	0.593	73.993	42.045	0.370	9.441	0.916

	Mo (ppm)	Se (ppm)	Ag (ppm)	Pb (ppm)	Ti (ppm)	Cd (ppm)	B (ppm)	K (ppm)
Mean	-0.000	0.068	1.017	1.005	0.000	0.999	0.016	-0.025
S.D.	0.001	0.005	0.002	0.009	0.001	0.003	0.001	0.024
% R.S.D.	3715.931	7.675	0.173	0.849	2443.720	0.282	6.981	97.834

	Mn (ppm)	Sb (ppm)	V (ppm)	Be (ppm)	Tl (ppm)
Mean	0.503	0.031	0.498	0.503	0.067
S.D.	0.001	0.010	0.002	0.003	0.040
% R.S.D.	0.187	31.416	0.371	0.517	59.744

Identity 1: prepblkarl Identity 2: .250ml-10ml 1:52 PM May 2, 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	0.012	-0.017	-0.001	0.013	0.001	0.001
S.D.	0.001	0.000	0.002	0.001	0.005	0.000	0.001	0.000
% R.S.D.	79.088	11.547	20.503	7.404	808.589	0.039	52.692	69.596

	Zn (ppm)	Ni (ppm)	La (ppm)	Fe (ppm)	Ca (ppm)	Cr (ppm)	Nd (ppm)	U (ppm)
Mean	0.001	0.165	0.000	0.004	0.026	0.004	0.007	-0.082
S.D.	0.000	0.002	0.001	0.001	0.001	0.001	0.008	0.040
% R.S.D.	12.086	1.073	329.458	35.624	4.603	19.714	121.713	48.542

	Ce (ppm)	Sm (ppm)	Ba (ppm)	P (ppm)	S (ppm)	Mg (ppm)	As (ppm)	Na (ppm)
Mean	0.038	-0.003	0.001	-0.005	0.002	0.002	-0.006	0.145
S.D.	0.007	0.008	0.000	0.016	0.001	0.001	0.002	0.004
% R.S.D.	19.158	252.283	18.047	323.220	33.996	52.138	39.017	2.518

	Mo (ppm)	Se (ppm)	Ag (ppm)	Pb (ppm)	Ti (ppm)	Cd (ppm)	B (ppm)	K (ppm)
Mean	-0.000	0.006	0.001	0.018	0.000	0.000	0.003	426.636
S.D.	0.001	0.013	0.000	0.004	0.001	0.001	0.001	2.097
% R.S.D.	255.219	214.213	47.711	22.195	154.573	268.566	16.431	0.492

	Mn (ppm)	Sb (ppm)	V (ppm)	Be (ppm)	Tl (ppm)
Mean	0.003	0.064	0.003	0.000	0.037
S.D.	0.000	0.020	0.001	0.000	0.018
% R.S.D.	11.153	31.568	28.193	348.804	48.071

Identity 1: S96I000947_L Identity 2: .250ml-10ml-2ml-8ml 1:56 PM May 2, 1996
Task name : OPTIMA
Sample Weight : 1.0000 Solution Volume : 205.00
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	-0.203	0.031	-2.633	0.523	30.584	0.626	0.184	-0.021
S.D.	0.274	0.034	1.336	0.791	0.610	0.362	0.100	0.056
% R.S.D.	135.108	107.855	50.715	151.294	1.994	57.853	54.292	262.724

	Zn (ppm)	Ni (ppm)	La (ppm)	Fe (ppm)	Ca (ppm)	Cr (ppm)	Nd (ppm)	U (ppm)
Mean	-0.050	4.534	0.093	0.133	0.686	4.069	2.553	-0.392
S.D.	0.033	0.293	0.486	0.651	0.052	0.197	2.237	9.503
% R.S.D.	65.654	6.468	525.424	489.425	7.623	4.842	87.622	2425.410

	Ce (ppm)	Sm (ppm)	Ba (ppm)	P (ppm)	S (ppm)	Mg (ppm)	As (ppm)	Na (ppm)
Mean	4.459	-4.305	0.096	1.314	8.875	0.046	0.812	464.153
S.D.	2.501	2.090	0.038	1.228	0.422	0.040	0.795	3.937
% R.S.D.	56.083	48.543	39.848	93.421	4.753	86.603	97.967	0.848

	Mo (ppm)	Se (ppm)	Ag (ppm)	Pb (ppm)	Tl (ppm)	Cd (ppm)	B (ppm)	K (ppm)
Mean	-0.010	2.592	0.269	5.222	0.100	0.284	0.227	18452.483
S.D.	0.119	1.980	0.204	0.719	0.091	0.226	0.122	159.034
% R.S.D.	1232.733	76.385	75.721	13.776	90.873	79.611	53.589	0.862

	Mn (ppm)	Sb (ppm)	V (ppm)	Be (ppm)	Tl (ppm)
Mean	0.422	2.289	0.308	-0.046	4.936
S.D.	0.034	2.783	0.343	0.054	4.211
% R.S.D.	7.985	121.622	111.386	115.908	85.315

WHC-SD-WM-DP-182, REV. 1

Identity 1: S96T000947 Identity 2: .250ml-10m. 1:58 PM May 2, 1996
Task name : OPTIMA
Sample Weight : 1.0000 Solution Volume : 41.00
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	-0.132	0.025	-0.482	-0.372	29.911	0.168	0.034	0.013
S.D.	0.020	0.006	0.344	0.065	0.103	0.125	0.014	0.003
% R.S.D.	14.998	22.304	71.432	17.561	0.345	74.818	40.559	25.105

	Zn (ppm)	Ni (ppm)	La (ppm)	Fe (ppm)	Ca (ppm)	Cr (ppm)	Nd (ppm)	U (ppm)
Mean	0.030	4.415	0.035	0.523	2.016	4.656	0.469	-4.304
S.D.	0.008	0.027	0.065	0.052	0.007	0.050	0.194	1.483
% R.S.D.	27.647	0.602	184.806	9.956	0.345	1.081	41.429	34.458

	Ce (ppm)	Sm (ppm)	Ba (ppm)	P (ppm)	S (ppm)	Mg (ppm)	As (ppm)	Na (ppm)
Mean	1.204	-0.701	0.036	2.381	7.661	0.021	-0.233	453.158
S.D.	0.266	0.342	0.007	0.173	0.118	0.004	0.172	4.270
% R.S.D.	22.060	48.776	18.459	7.266	1.535	19.245	74.071	0.942

	Mo (ppm)	Se (ppm)	Ag (ppm)	Pb (ppm)	Ti (ppm)	Cd (ppm)	B (ppm)	K (ppm)
Mean	0.079	-0.514	0.065	0.371	-0.008	0.047	0.129	17762.479
S.D.	0.010	0.214	0.027	0.342	0.014	0.031	0.058	168.959
% R.S.D.	12.961	41.753	41.995	92.281	178.739	65.871	44.744	0.951

	Mn (ppm)	Sb (ppm)	V (ppm)	Be (ppm)	Tl (ppm)
Mean	0.394	1.637	0.109	-0.007	3.067
S.D.	0.007	1.174	0.053	0.009	0.528
% R.S.D.	1.729	71.714	48.692	136.287	17.221

Identity 1: S96T000947_D Identity 2: .250ml-10ml 2:01 PM May 2, 1996
Task name : OPTIMA
Sample Weight : 1.0000 Solution Volume : 41.00
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	-0.055	0.022	0.340	-0.467	31.411	0.250	0.010	0.001
S.D.	0.041	0.003	0.137	0.160	0.131	0.072	0.018	0.010
% R.S.D.	74.070	13.856	40.242	34.211	0.418	28.790	182.226	1017.323

	Zn (ppm)	Ni (ppm)	La (ppm)	Fe (ppm)	Ca (ppm)	Cr (ppm)	Nd (ppm)	U (ppm)
Mean	0.036	2.977	0.056	0.600	1.276	4.790	0.028	-0.241
S.D.	0.007	0.134	0.116	0.052	0.003	0.108	0.163	1.490
% R.S.D.	18.780	4.504	209.007	8.661	0.217	2.263	589.822	617.358

	Ce (ppm)	Sm (ppm)	Ba (ppm)	P (ppm)	S (ppm)	Mg (ppm)	As (ppm)	Na (ppm)
Mean	0.207	-0.196	0.022	2.278	8.130	0.016	-0.132	449.493
S.D.	0.414	0.152	0.005	0.325	0.184	0.004	0.142	0.428
% R.S.D.	200.506	77.552	23.316	14.257	2.263	24.744	108.129	0.095

	Mo (ppm)	Se (ppm)	Ag (ppm)	Pb (ppm)	Ti (ppm)	Cd (ppm)	B (ppm)	K (ppm)
Mean	0.104	0.227	-0.022	0.244	0.006	0.030	0.111	15746.236
S.D.	0.057	0.051	0.018	0.327	0.010	0.017	0.053	25.310
% R.S.D.	54.880	22.547	80.026	134.094	160.230	58.042	47.713	0.161

	Mn (ppm)	Sb (ppm)	V (ppm)	Be (ppm)	Tl (ppm)
Mean	0.383	-0.103	-0.016	0.006	1.565
S.D.	0.013	0.381	0.020	0.005	0.347
% R.S.D.	3.436	371.048	121.034	89.844	22.152

Identity 1: S96I000947_A Identity 2: .250ml-2ml(sst5)-8ml 2:05 PM May 2, 1996
Task name : OPTIMA
Sample Weight : 1.0000 Solution Volume : 41.00
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	39.641	39.602	39.218	38.030	68.837	39.763	40.466	37.489
S.D.	0.017	0.147	0.544	0.135	0.569	0.191	0.124	0.233
% R.S.D.	0.044	0.371	1.388	0.356	0.827	0.480	0.306	0.621

	Zn (ppm)	Ni (ppm)	La (ppm)	Fe (ppm)	Ca (ppm)	Cr (ppm)	Nd (ppm)	U (ppm)
Mean	39.978	44.347	40.276	40.547	40.979	44.861	41.028	76.905
S.D.	0.040	0.076	0.212	0.292	0.087	0.149	0.914	2.177
% R.S.D.	0.099	0.172	0.526	0.719	0.212	0.332	2.228	2.830

	Ce (ppm)	Sm (ppm)	Ba (ppm)	P (ppm)	S (ppm)	Mg (ppm)	As (ppm)	Na (ppm)
Mean	38.607	39.717	39.606	41.303	46.505	37.881	40.158	488.027
S.D.	0.283	0.313	0.153	0.494	0.348	0.032	0.606	2.725
% R.S.D.	0.734	0.789	0.386	1.197	0.747	0.084	1.510	0.558

	Mo (ppm)	Se (ppm)	Ag (ppm)	Pb (ppm)	Ti (ppm)	Cd (ppm)	B (ppm)	K (ppm)
Mean	39.606	40.177	34.565	40.487	39.063	39.675	39.640	17909.193
S.D.	0.101	0.549	0.079	0.568	0.097	0.045	0.110	52.939
% R.S.D.	0.254	1.367	0.229	1.402	0.249	0.114	0.277	0.296

	Mn (ppm)	Sb (ppm)	V (ppm)	Be (ppm)	Tl (ppm)
Mean	40.483	37.407	40.646	40.101	41.064
S.D.	0.059	0.660	0.030	0.066	0.864
% R.S.D.	0.146	1.765	0.073	0.164	2.104

Identity 1: CCV Identity 2: Quality Control 2:07 PM May 2, 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	4.929	4.920	4.894	4.687	4.869	4.982	5.044	4.943
S.D.	0.003	0.007	0.023	0.013	0.010	0.023	0.002	0.007
% R.S.D.	0.058	0.143	0.479	0.269	0.204	0.452	0.047	0.141

	Zn (ppm)	Ni (ppm)	La (ppm)	Fe (ppm)	Ca (ppm)	Cr (ppm)	Nd (ppm)	U (ppm)
Mean	5.028	4.973	4.996	5.087	4.942	5.004	5.174	9.921
S.D.	0.012	0.003	0.007	0.006	0.002	0.016	0.018	0.028
% R.S.D.	0.241	0.069	0.139	0.120	0.048	0.317	0.339	0.278

	Ce (ppm)	Sm (ppm)	Ba (ppm)	P (ppm)	S (ppm)	Mg (ppm)	As (ppm)	Na (ppm)
Mean	4.940	5.002	4.950	4.904	4.832	4.813	5.018	4.909
S.D.	0.033	0.003	0.004	0.052	0.011	0.013	0.031	0.025
% R.S.D.	0.664	0.054	0.081	1.062	0.235	0.277	0.619	0.516

	Mo (ppm)	Se (ppm)	Ag (ppm)	Pb (ppm)	Ti (ppm)	Cd (ppm)	B (ppm)	K (ppm)
Mean	4.949	5.150	4.911	4.984	4.860	4.981	5.080	5.062
S.D.	0.032	0.054	0.005	0.017	0.007	0.012	0.010	0.030
% R.S.D.	0.641	1.046	0.099	0.334	0.136	0.248	0.197	0.589

	Mn (ppm)	Sb (ppm)	V (ppm)	Be (ppm)	Tl (ppm)
Mean	5.007	4.731	5.051	5.142	4.880
S.D.	0.002	0.040	0.007	0.001	0.012
% R.S.D.	0.046	0.851	0.129	0.020	0.239

Identity 1: CCB Identity 2: Quality Control 2:11 PM May 2, 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	-0.002	0.002	0.007	0.001	0.000
S.D.	0.001	0.000	0.011	0.002	0.006	0.006	0.001	0.001
% R.S.D.	96.908	95.119	96.131	117.016	304.622	85.541	43.832	190.788

	Zn (ppm)	Ni (ppm)	La (ppm)	Fe (ppm)	Ca (ppm)	Cr (ppm)	Nd (ppm)	U (ppm)
Mean	0.002	0.004	0.001	0.003	0.004	-0.001	0.021	-0.082
S.D.	0.000	0.003	0.002	0.002	0.001	0.001	0.003	0.055
% R.S.D.	15.549	77.993	242.075	71.168	21.837	101.200	16.679	66.570

	Ce (ppm)	Sm (ppm)	Ba (ppm)	P (ppm)	S (ppm)	Mg (ppm)	As (ppm)	Na (ppm)
Mean	0.028	-0.024	0.001	0.001	-0.006	0.001	-0.001	0.011
S.D.	0.005	0.012	0.001	0.009	0.004	0.001	0.004	0.005
% R.S.D.	19.502	47.340	71.349	1379.614	61.225	80.364	390.372	44.605

	Mo (ppm)	Se (ppm)	Ag (ppm)	Pb (ppm)	Ti (ppm)	Cd (ppm)	B (ppm)	K (ppm)
Mean	0.001	0.005	0.003	0.031	0.000	0.001	0.007	0.101
S.D.	0.001	0.008	0.001	0.018	0.001	0.000	0.000	0.061
% R.S.D.	177.646	167.268	29.949	58.908	654.299	20.290	6.433	60.153

	Mn (ppm)	Sb (ppm)	V (ppm)	Be (ppm)	Tl (ppm)
Mean	0.001	0.066	0.001	0.001	0.079
S.D.	0.000	0.019	0.001	0.000	0.016
% R.S.D.	64.430	28.096	92.766	71.515	20.700

Identity 1: S96T000954_L Identity 2: .250ml-10ml-2ml-8ml 2:14 PM May 2, 1996
Task name : OPTIMA
Sample Weight : 1.0000 Solution Volume : 205.00
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	0.229	0.031	-1.074	1.004	33.866	0.416	0.164	0.058
S.D.	0.205	0.008	0.804	0.260	0.929	0.362	0.042	0.064
% R.S.D.	89.719	24.744	74.909	25.880	2.744	87.039	25.783	110.332

	Zn (ppm)	Ni (ppm)	La (ppm)	Fe (ppm)	Ca (ppm)	Cr (ppm)	Nd (ppm)	U (ppm)
Mean	0.441	4.143	0.007	1.121	0.295	4.483	3.503	13.956
S.D.	0.049	0.626	0.427	0.385	0.008	0.245	0.998	4.293
% R.S.D.	11.124	15.119	6428.926	34.309	2.706	5.457	28.479	30.760

	Ce (ppm)	Sm (ppm)	Ba (ppm)	P (ppm)	S (ppm)	Mg (ppm)	As (ppm)	Na (ppm)
Mean	3.606	1.826	0.071	2.680	7.964	0.012	-0.513	444.029
S.D.	1.572	1.378	0.024	0.936	0.750	0.040	0.957	1.022
% R.S.D.	43.600	75.442	33.405	34.918	9.423	346.412	186.429	0.230

	Mo (ppm)	Se (ppm)	Ag (ppm)	Pb (ppm)	Ti (ppm)	Cd (ppm)	B (ppm)	K (ppm)
Mean	0.461	-1.241	0.249	8.661	0.121	0.134	0.652	17483.006
S.D.	0.045	2.310	0.109	0.933	0.039	0.058	0.025	10.841
% R.S.D.	9.748	186.208	43.615	10.778	32.558	43.343	3.876	0.062

	Mn (ppm)	Sb (ppm)	V (ppm)	Be (ppm)	Tl (ppm)
Mean	0.363	13.663	0.174	0.063	11.734
S.D.	0.034	3.366	0.038	0.001	3.809
% R.S.D.	9.307	24.638	22.010	0.877	32.460

Identity 1: S96T000954 Identity 2: .250ml-10ml 2:17 PM May 2, 1996
Task name : OPTIMA
Sample Weight : 1.0000 Solution Volume : 41.00
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	-0.073	0.020	-0.116	0.903	34.712	0.083	0.043	0.009
S.D.	0.055	0.005	0.262	0.130	0.146	0.073	0.027	0.011
% R.S.D.	75.102	22.592	226.241	14.350	0.420	86.956	63.615	120.960

	Zn (ppm)	Ni (ppm)	La (ppm)	Fe (ppm)	Ca (ppm)	Cr (ppm)	Nd (ppm)	U (ppm)
Mean	0.337	3.649	0.186	0.603	1.346	4.374	0.426	0.928
S.D.	0.005	0.069	0.056	0.078	0.010	0.026	0.261	2.707
% R.S.D.	1.480	1.886	30.059	13.021	0.711	0.598	61.307	291.703

	Ce (ppm)	Sm (ppm)	Ba (ppm)	P (ppm)	S (ppm)	Mg (ppm)	As (ppm)	Na (ppm)
Mean	0.097	-0.608	0.021	2.903	8.453	0.016	0.188	432.347
S.D.	0.603	0.529	0.011	0.170	0.230	0.004	0.133	3.407
% R.S.D.	621.133	87.008	50.029	5.859	2.726	24.744	70.707	0.788

	Mo (ppm)	Se (ppm)	Ag (ppm)	Pb (ppm)	Ti (ppm)	Cd (ppm)	B (ppm)	K (ppm)
Mean	0.045	-0.258	0.036	0.840	0.031	0.050	0.111	16775.433
S.D.	0.043	0.513	0.034	0.297	0.008	0.010	0.012	98.501
% R.S.D.	93.995	199.039	94.983	35.294	24.808	20.131	10.364	0.587

	Mn (ppm)	Sb (ppm)	V (ppm)	Be (ppm)	Tl (ppm)
Mean	0.333	2.197	0.019	-0.006	2.942
S.D.	0.007	0.571	0.022	0.010	0.844
% R.S.D.	2.060	25.990	115.938	154.477	28.697

Identity 1: S96T000954_D Identity 2: .250ml-10ml 2:20 PM May 2, 1996
Task name : OPTIMA
Sample Weight : 1.0000 Solution Volume : 41.00
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	-0.170	0.025	0.184	0.952	33.299	0.418	0.061	0.013
S.D.	0.086	0.006	0.274	0.113	0.061	0.125	0.019	0.022
% R.S.D.	50.762	24.744	148.904	11.894	0.183	29.874	31.207	174.004

	Zn (ppm)	Ni (ppm)	La (ppm)	Fe (ppm)	Ca (ppm)	Cr (ppm)	Nd (ppm)	U (ppm)
Mean	0.099	3.336	-0.058	0.550	2.228	4.289	0.431	-4.202
S.D.	0.017	0.113	0.086	0.153	0.007	0.072	0.572	3.331
% R.S.D.	16.888	3.373	149.806	27.769	0.312	1.683	132.639	79.289

	Ce (ppm)	Sm (ppm)	Ba (ppm)	P (ppm)	S (ppm)	Mg (ppm)	As (ppm)	Na (ppm)
Mean	0.917	-1.726	0.032	3.282	7.877	0.018	0.212	441.411
S.D.	0.828	0.524	0.016	0.281	0.100	0.007	0.175	4.025
% R.S.D.	90.286	30.369	50.649	8.566	1.273	37.500	82.900	0.912

	Mo (ppm)	Se (ppm)	Ag (ppm)	Pb (ppm)	Ti (ppm)	Cd (ppm)	B (ppm)	K (ppm)
Mean	0.083	-0.546	0.056	1.022	-0.017	0.187	0.080	13666.836
S.D.	0.027	0.385	0.062	0.571	0.014	0.012	0.030	94.863
% R.S.D.	32.144	70.492	110.621	55.867	82.015	6.204	37.998	0.694

	Mn (ppm)	Sb (ppm)	V (ppm)	Be (ppm)	Tl (ppm)
Mean	0.333	2.797	0.085	0.015	2.730
S.D.	0.006	1.519	0.043	0.006	1.487
% R.S.D.	1.953	54.304	50.491	37.642	54.478

Identity 1: S96T000954_A Identity 2: .250ml-2ml(sst5)-8ml 2:23 PM May 2, 1996
Task name : OPTIMA
Sample Weight : 1.0000 Solution Volume : 41.00
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	39.415	39.224	38.772	39.280	73.621	40.473	40.167	37.488
S.D.	0.091	0.084	0.382	0.100	0.326	0.331	0.063	0.272
% R.S.D.	0.231	0.215	0.985	0.254	0.443	0.819	0.156	0.726

	Zn (ppm)	Ni (ppm)	La (ppm)	Fe (ppm)	Ca (ppm)	Cr (ppm)	Nd (ppm)	U (ppm)
Mean	40.482	43.411	39.719	41.142	40.100	44.842	41.169	75.457
S.D.	0.052	0.245	0.140	0.147	0.093	0.292	0.213	0.318
% R.S.D.	0.128	0.565	0.352	0.357	0.233	0.652	0.516	0.421

	Ce (ppm)	Sm (ppm)	Ba (ppm)	P (ppm)	S (ppm)	Mg (ppm)	As (ppm)	Na (ppm)
Mean	40.134	38.525	39.174	43.118	47.190	38.064	40.711	469.573
S.D.	0.120	0.037	0.098	1.547	0.306	0.056	0.351	3.105
% R.S.D.	0.300	0.096	0.251	3.587	0.648	0.147	0.863	0.661

	Mo (ppm)	Se (ppm)	Ag (ppm)	Pb (ppm)	Ti (ppm)	Cd (ppm)	B (ppm)	K (ppm)
Mean	39.824	40.390	34.237	41.750	38.879	39.722	39.795	16664.741
S.D.	0.109	0.396	0.112	0.676	0.091	0.087	0.145	73.896
% R.S.D.	0.274	0.982	0.326	1.620	0.234	0.218	0.366	0.443

	Mn (ppm)	Sb (ppm)	V (ppm)	Be (ppm)	Tl (ppm)
Mean	40.480	39.220	40.710	39.911	42.118
S.D.	0.161	1.667	0.062	0.152	0.260
% R.S.D.	0.398	4.250	0.151	0.380	0.617

Identity 1: S96T000961_L Identity 2: .250ml-10ml-2ml-8ml 2:26 PM May 2, 1996
Task name : OPTIMA
Sample Weight : 1.0000 Solution Volume : 205.00
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	-0.131	-0.013	2.307	0.504	28.621	0.834	0.085	-0.042
S.D.	0.115	0.015	1.141	0.360	1.241	0.000	0.101	0.018
% R.S.D.	87.381	115.470	49.471	71.405	4.337	0.033	118.273	43.251

	Zn (ppm)	Ni (ppm)	La (ppm)	Fe (ppm)	Ca (ppm)	Cr (ppm)	Nd (ppm)	U (ppm)
Mean	0.152	2.557	0.280	0.653	0.635	2.805	-0.013	2.913
S.D.	0.082	0.417	0.160	0.412	0.048	0.066	0.355	2.121
% R.S.D.	54.157	16.297	57.176	63.074	7.531	2.341	2768.190	72.804

	Ce (ppm)	Sm (ppm)	Ba (ppm)	P (ppm)	S (ppm)	Mg (ppm)	As (ppm)	Na (ppm)
Mean	-1.349	-6.554	0.002	0.749	6.511	0.046	-1.329	485.749
S.D.	1.682	0.543	0.026	0.944	0.902	0.020	0.422	1.858
% R.S.D.	124.639	8.291	1249.000	126.079	13.851	43.301	31.706	0.383

	Mo (ppm)	Se (ppm)	Ag (ppm)	Pb (ppm)	Ti (ppm)	Cd (ppm)	B (ppm)	K (ppm)
Mean	0.471	-4.484	0.090	4.952	0.155	0.067	0.547	14466.361
S.D.	0.267	1.293	0.034	0.844	0.094	0.145	0.095	75.410
% R.S.D.	56.698	28.839	37.639	17.050	60.673	216.747	17.454	0.521

	Mn (ppm)	Sb (ppm)	V (ppm)	Be (ppm)	Tl (ppm)
Mean	0.383	11.237	0.002	0.077	11.693
S.D.	0.057	4.350	0.034	0.026	2.767
% R.S.D.	14.982	38.712	1536.817	34.188	23.667

Identity 1: S96T000961 Identity 2: .250ml-10ml 2:29 PM May 2, 1996
Task name : OPTIMA
Sample Weight : 1.0000 Solution Volume : 41.00
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	-0.170	0.020	-0.170	-0.031	30.429	0.460	0.040	0.005
S.D.	0.058	0.005	0.116	0.045	0.181	0.072	0.016	0.005
% R.S.D.	33.885	26.087	68.220	146.585	0.595	15.716	41.065	92.590

	Zn (ppm)	Ni (ppm)	La (ppm)	Fe (ppm)	Ca (ppm)	Cr (ppm)	Nd (ppm)	U (ppm)
Mean	0.024	1.769	0.016	0.410	1.468	3.091	0.351	-5.387
S.D.	0.013	0.055	0.148	0.032	0.006	0.066	0.076	1.574
% R.S.D.	54.315	3.089	923.879	7.931	0.435	2.133	21.546	29.335

	Ce (ppm)	Sm (ppm)	Ba (ppm)	P (ppm)	S (ppm)	Mg (ppm)	As (ppm)	Na (ppm)
Mean	0.198	-2.391	0.016	2.194	6.000	0.053	0.057	479.205
S.D.	0.348	0.236	0.003	0.098	0.218	0.007	0.122	4.626
% R.S.D.	175.438	9.871	17.765	4.480	3.641	13.044	213.051	0.965

	Mo (ppm)	Se (ppm)	Ag (ppm)	Pb (ppm)	Ti (ppm)	Cd (ppm)	B (ppm)	K (ppm)
Mean	0.110	-1.212	0.064	1.603	-0.013	0.130	0.078	14023.065
S.D.	0.034	0.456	0.012	0.109	0.008	0.020	0.032	104.987
% R.S.D.	30.894	37.626	18.385	6.771	58.716	15.380	41.225	0.749

	Mn (ppm)	Sb (ppm)	V (ppm)	Be (ppm)	Tl (ppm)
Mean	0.295	0.792	0.084	0.002	1.618
S.D.	0.000	0.934	0.007	0.009	0.607
% R.S.D.	0.061	117.940	8.455	410.043	37.519

Identity 1: S96T000961_D Identity 2: .250ml-10ml 2:32 PM May 2, 1996
Task name : OPTIMA
Sample Weight : 1.0000 Solution Volume : 41.00
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	-0.124	0.033	0.196	-0.122	23.267	0.626	0.090	0.047
S.D.	0.073	0.004	0.529	0.181	0.092	0.072	0.017	0.016
% R.S.D.	58.617	12.385	270.462	148.521	0.396	11.541	18.477	34.348

	Zn (ppm)	Ni (ppm)	La (ppm)	Fe (ppm)	Ca (ppm)	Cr (ppm)	Nd (ppm)	U (ppm)
Mean	0.114	2.001	-0.132	0.560	2.720	2.665	1.633	-3.309
S.D.	0.003	0.096	0.032	0.072	0.012	0.096	0.039	1.454
% R.S.D.	2.877	4.799	23.971	12.795	0.458	3.585	2.390	43.940

	Ce (ppm)	Sm (ppm)	Ba (ppm)	P (ppm)	S (ppm)	Mg (ppm)	As (ppm)	Na (ppm)
Mean	1.874	-2.017	0.053	1.504	6.004	0.021	-0.222	458.983
S.D.	0.436	0.249	0.008	0.265	0.161	0.008	0.062	3.438
% R.S.D.	23.257	12.333	15.369	17.637	2.674	38.490	27.794	0.749

	Mo (ppm)	Se (ppm)	Ag (ppm)	Pb (ppm)	Ti (ppm)	Cd (ppm)	B (ppm)	K (ppm)
Mean	0.145	0.793	0.103	1.004	-0.014	0.113	0.130	12365.036
S.D.	0.044	1.330	0.027	0.205	0.019	0.035	0.028	78.954
% R.S.D.	30.403	167.739	26.634	20.436	141.756	31.103	21.796	0.639

	Mn (ppm)	Sb (ppm)	V (ppm)	Be (ppm)	Tl (ppm)
Mean	0.298	3.909	0.192	-0.013	3.601
S.D.	0.007	0.055	0.020	0.014	0.476
% R.S.D.	2.191	1.395	10.324	110.774	13.230

Identity 1: S96T000961_A Identity 2: .250ml-2ml(sst5)-8ml 2:35 PM May 2, 1996
Task name : OPTIMA
Sample Weight : 1.0000 Solution Volume : 41.00
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	39.524	39.212	38.441	38.749	68.863	40.472	40.075	37.303
S.D.	0.039	0.070	0.177	0.114	0.499	0.250	0.107	0.340
% R.S.D.	0.099	0.179	0.461	0.294	0.725	0.618	0.268	0.912

	Zn (ppm)	Ni (ppm)	La (ppm)	Fe (ppm)	Ca (ppm)	Cr (ppm)	Nd (ppm)	U (ppm)
Mean	40.874	42.103	40.092	41.229	40.057	43.616	41.049	79.727
S.D.	0.039	0.233	0.263	0.251	0.114	0.234	0.544	2.178
% R.S.D.	0.097	0.553	0.656	0.608	0.284	0.536	1.325	2.732

	Ce (ppm)	Sm (ppm)	Ba (ppm)	P (ppm)	S (ppm)	Mg (ppm)	As (ppm)	Na (ppm)
Mean	40.762	38.269	39.088	42.439	45.695	38.401	40.393	499.251
S.D.	0.700	0.180	0.083	0.251	0.525	0.075	0.263	4.252
% R.S.D.	1.717	0.470	0.213	0.592	1.150	0.194	0.652	0.852

	Mo (ppm)	Se (ppm)	Ag (ppm)	Pb (ppm)	Ti (ppm)	Cd (ppm)	B (ppm)	K (ppm)
Mean	39.987	39.988	34.029	41.512	38.932	39.842	39.761	13645.192
S.D.	0.150	0.351	0.072	0.538	0.054	0.161	0.248	112.628
% R.S.D.	0.376	0.877	0.211	1.297	0.140	0.405	0.623	0.825

	Mn (ppm)	Sb (ppm)	V (ppm)	Be (ppm)	Tl (ppm)
Mean	40.771	38.287	40.835	40.040	39.195
S.D.	0.007	0.788	0.029	0.040	1.184
% R.S.D.	0.016	2.058	0.071	0.100	3.020

Identity 1: ICSA Identity 2: Quality Control 2:38 PM May 2, 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	-0.028	0.014	199.577	0.002	0.000	0.000
S.D.	0.001	0.000	0.004	0.004	0.412	0.000	0.000	0.000
% R.S.D.	77.603	1.862	13.300	27.750	0.207	0.647	82.714	74.167

	Zn (ppm)	Ni (ppm)	La (ppm)	Fe (ppm)	Ca (ppm)	Cr (ppm)	Nd (ppm)	U (ppm)
Mean	-0.005	0.007	0.004	97.224	105.094	0.002	-0.025	0.049
S.D.	0.000	0.001	0.003	0.310	0.218	0.001	0.012	0.012
% R.S.D.	1.206	8.123	71.387	0.319	0.208	62.257	47.976	24.715

	Ce (ppm)	Sm (ppm)	Ba (ppm)	P (ppm)	S (ppm)	Mg (ppm)	As (ppm)	Na (ppm)
Mean	0.002	0.021	0.003	0.031	0.057	100.983	0.045	192.706
S.D.	0.006	0.004	0.000	0.003	0.008	0.482	0.005	0.940
% R.S.D.	394.154	18.186	1.967	11.143	13.603	0.478	10.729	0.488

	Mo (ppm)	Se (ppm)	Ag (ppm)	Pb (ppm)	Tl (ppm)	Cd (ppm)	B (ppm)	K (ppm)
Mean	0.001	0.015	0.001	0.005	0.001	-0.000	0.016	0.110
S.D.	0.001	0.012	0.001	0.008	0.000	0.000	0.001	0.005
% R.S.D.	87.980	82.184	90.811	151.729	35.867	120.137	5.505	4.917

	Mn (ppm)	Sb (ppm)	V (ppm)	Be (ppm)	Tl (ppm)
Mean	0.002	0.034	0.001	0.003	0.022
S.D.	0.000	0.028	0.000	0.000	0.030
% R.S.D.	10.579	81.203	40.170	7.431	138.156

Identity 1: ICSAB Identity 2: Quality Control 2:41 PM May 2, 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	-0.029	0.010	196.819	0.494	0.498	0.930
S.D.	0.000	0.000	0.013	0.003	0.550	0.003	0.000	0.003
% R.S.D.	15.366	1.804	43.946	31.458	0.280	0.617	0.082	0.274

	Zn (ppm)	Ni (ppm)	La (ppm)	Fe (ppm)	Ca (ppm)	Cr (ppm)	Nd (ppm)	U (ppm)
Mean	0.999	0.988	0.005	96.827	104.099	0.503	-0.006	-0.018
S.D.	0.000	0.005	0.002	0.117	0.058	0.002	0.006	0.017
% R.S.D.	0.029	0.493	39.236	0.121	0.056	0.385	97.726	92.178

	Ce (ppm)	Sm (ppm)	Ba (ppm)	P (ppm)	S (ppm)	Mg (ppm)	As (ppm)	Na (ppm)
Mean	0.008	0.013	0.505	0.035	0.049	99.386	0.062	190.255
S.D.	0.006	0.004	0.001	0.002	0.008	0.350	0.001	0.669
% R.S.D.	77.606	30.141	0.153	6.091	16.673	0.352	2.125	0.352

	Mo (ppm)	Se (ppm)	Ag (ppm)	Pb (ppm)	Ti (ppm)	Cd (ppm)	B (ppm)	K (ppm)
Mean	0.001	0.051	1.014	1.027	0.000	0.997	0.016	0.102
S.D.	0.001	0.021	0.000	0.010	0.000	0.001	0.001	0.013
% R.S.D.	50.534	41.128	0.019	0.954	75.758	0.147	8.101	12.850

	Mn (ppm)	Sb (ppm)	V (ppm)	Be (ppm)	Tl (ppm)
Mean	0.503	-0.016	0.499	0.502	0.049
S.D.	0.001	0.025	0.001	0.001	0.012
% R.S.D.	0.184	153.443	0.160	0.262	23.570

Identity 1: CCV Identity 2: Quality Control 2:44 PM May 2, 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	4.922	4.906	4.898	4.703	4.886	5.003	5.024	4.923
S.D.	0.007	0.010	0.035	0.011	0.016	0.006	0.013	0.022
% R.S.D.	0.144	0.212	0.710	0.224	0.318	0.127	0.268	0.456

	Zn (ppm)	Ni (ppm)	La (ppm)	Fe (ppm)	Ca (ppm)	Cr (ppm)	Nd (ppm)	U (ppm)
Mean	5.075	4.997	4.974	5.099	4.923	5.012	5.166	9.843
S.D.	0.006	0.016	0.005	0.008	0.015	0.007	0.025	0.019
% R.S.D.	0.126	0.326	0.103	0.165	0.314	0.149	0.485	0.196

	Ce (ppm)	Sm (ppm)	Ba (ppm)	P (ppm)	S (ppm)	Mg (ppm)	As (ppm)	Na (ppm)
Mean	4.930	4.965	4.927	5.075	4.934	4.839	5.030	4.923
S.D.	0.008	0.006	0.011	0.062	0.009	0.007	0.012	0.030
% R.S.D.	0.166	0.129	0.221	1.217	0.181	0.153	0.233	0.609

	Mo (ppm)	Se (ppm)	Ag (ppm)	Pb (ppm)	Ti (ppm)	Cd (ppm)	B (ppm)	K (ppm)
Mean	4.959	5.175	4.946	5.019	4.852	4.984	5.097	5.100
S.D.	0.012	0.027	0.009	0.022	0.007	0.004	0.013	0.026
% R.S.D.	0.232	0.515	0.177	0.444	0.151	0.077	0.265	0.509

	Mn (ppm)	Sb (ppm)	V (ppm)	Be (ppm)	Tl (ppm)
Mean	5.022	4.720	5.061	5.127	4.872
S.D.	0.000	0.008	0.004	0.011	0.017
% R.S.D.	0.009	0.159	0.078	0.206	0.356

Identity 1: CCB Identity 2: Quality Control 2:47 PM May 2, 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	-0.010	0.000	-0.015	0.008	0.000	0.000
S.D.	0.000	0.000	0.008	0.002	0.004	0.002	0.001	0.000
% R.S.D.	23.162	103.923	83.004	9683.163	23.483	21.665	156.385	49.997

	Zn (ppm)	Ni (ppm)	La (ppm)	Fe (ppm)	Ca (ppm)	Cr (ppm)	Nd (ppm)	U (ppm)
Mean	0.001	0.001	0.002	0.001	0.004	0.003	0.012	-0.024
S.D.	0.000	0.002	0.001	0.001	0.000	0.001	0.004	0.019
% R.S.D.	53.898	261.852	35.186	108.675	4.267	45.987	32.583	81.013

	Ce (ppm)	Sm (ppm)	Ba (ppm)	P (ppm)	S (ppm)	Mg (ppm)	As (ppm)	Na (ppm)
Mean	0.002	-0.031	0.000	0.015	0.002	0.001	0.008	0.018
S.D.	0.005	0.003	0.000	0.004	0.005	0.000	0.002	0.001
% R.S.D.	202.419	9.998	98.255	24.370	295.837	21.651	24.132	7.531

	Mo (ppm)	Se (ppm)	Ag (ppm)	Pb (ppm)	Ti (ppm)	Cd (ppm)	B (ppm)	K (ppm)
Mean	0.002	-0.013	-0.000	0.031	0.001	0.001	0.006	0.128
S.D.	0.001	0.002	0.001	0.003	0.000	0.000	0.001	0.003
% R.S.D.	44.116	18.708	17138.641	10.263	35.348	10.223	19.680	2.340

	Mn (ppm)	Sb (ppm)	V (ppm)	Be (ppm)	Tl (ppm)
Mean	-0.000	0.039	0.000	0.001	0.038
S.D.	0.000	0.033	0.000	0.000	0.004
% R.S.D.	2.456	85.248	167.946	30.356	10.810

LABCORE Data Entry Template for Worklist# 7947

Analyst: J. CIORNIELLI **Instrument:** ICP01 _____ **Book#** 53B4RB

Method: LA-505-151/~~161~~ 06 Rev/Mod D-3

Worklist Comment: ICP U-105 (FUSION)

S	Type	Sample#	R	A	Test	Matrix	Group#	Project
1	ICV				@ICP-QC	QC		
2	ICB				@ICP-QC	QC		
3	ICSA				@ICP-QC	QC		
4	ICSAB				@ICP-QC	QC		
5	PREPBLKARL				@ICP-F01	SOLID		
6	SERDIL	S96T000968	0	F	@ICP-F01	SOLID		
7	SAMPLE	S96T000968	0	F	@ICP-F01	SOLID	96000092	U-105 (R)
	Analytes Requested:	AL-F-01 , BI-F-01 , FE-F-01 , LI-F-01 , NA-F-01 , P-F-01 , SI-F-01						
8	DUP	S96T000968	0	F	@ICP-F01	SOLID		
9	SPK	S96T000968	0	F	@ICP-F01	SOLID		
10	CCV				@ICP-QC	QC		
11	CCB				@ICP-QC	QC		
12	SERDIL	S96T000975	0	F	@ICP-F01	SOLID		
13	SAMPLE	S96T000975	0	F	@ICP-F01	SOLID	96000092	U-105 (R)
	Analytes Requested:	AL-F-01 , BI-F-01 , FE-F-01 , LI-F-01 , NA-F-01 , P-F-01 , SI-F-01						
14	DUP	S96T000975	0	F	@ICP-F01	SOLID		
15	SPK	S96T000975	0	F	@ICP-F01	SOLID		
16	SERDIL	S96T000984	0	F	@ICP-F01	SOLID		
17	SAMPLE	S96T000984	0	F	@ICP-F01	SOLID	96000092	U-105 (R)

Data Entry Comments: Raw data in this worklist are already multiplied by ICP dilution factor but not with sample prep dilution factor which can be found in sample prep worklist. Example for calculation of sample results:

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

S96T000968 $Al = 8.942 \frac{ug}{ml} \times \frac{1}{1.83 \frac{g}{L} \times \frac{1}{1000 ml}} = 4.89e3 \frac{ug}{g}$

LABCORE Data Entry Template for Worklist# 7947

S	Type	Sample#	R	A	Test	Matrix	Group#	Project
		Analytes Requested:			AL-F-01 , BI-F-01 , FE-F-01 , LI-F-01 , NA-F-01 , P-F-01 , SI-F-01			
18	DUP	S96T000984	0	F	@ICP-F01	SOLID		
19	SPK	S96T000984	0	F	@ICP-F01	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 # 7947

John H Nowell 5-8-96
Analyst Signature Date

Reviewed by:
Samuel N. Parry 5/10/96
Analyst Signature Date

		D.F.
PREPARATION	.250-L-10-L	1
S96T000968-L	.250-L-10-L-2-L-F-L	205
S96T000968	.250-L-10-L	41
S96T000968-D	.250-L-10-L	41
S96T000968-A	.250-L-2-L-F-L	41
S96T000975-L	.250-L-10-L-2-L-F-L	205
S96T000975	.250-L-10-L	41
S96T000975-D	.250-L-10-L	41
S96T000975-A	.250-L-2-L-F-L	41
S96T000984-L	.250-L-10-L-2-L-F-L	205
S96T000984	.250-L-10-L	41
S96T000984-D	.250-L-10-L	41
S96T000984-A	.250-L-2-L-F-L	41

Data Entry Comments: Post spike was done on this batch and the actual spiking amount for all elements is 1.0 ppm. Example for calculation of spike recovery:

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

S96T000968 $Al = \frac{\left(\frac{47.973}{41.0}\right) - \left(\frac{8.942}{41.0}\right)}{1} \times 100 = 95.2\%$

Identity 1: ICV Identity 2: Quality Control 1:29 PM May 8, 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	4.954	4.958	4.947	4.719	4.875	5.000	5.042	4.932
S.D.	0.023	0.028	0.031	0.030	0.037	0.043	0.024	0.037
% R.S.D.	0.462	0.558	0.622	0.630	0.767	0.850	0.467	0.748

	Zn (ppm)	Ni (ppm)	La (ppm)	Fe (ppm)	Ca (ppm)	Cr (ppm)	Nd (ppm)	U (ppm)
Mean	5.009	5.016	5.063	5.153	5.007	5.028	5.293	9.662
S.D.	0.025	0.030	0.036	0.013	0.022	0.035	0.026	0.037
% R.S.D.	0.501	0.591	0.705	0.255	0.446	0.689	0.492	0.382

	Ce (ppm)	Sm (ppm)	Ba (ppm)	P (ppm)	S (ppm)	Mg (ppm)	As (ppm)	Na (ppm)
Mean	4.987	4.552	4.972	5.165	4.839	4.826	5.028	4.883
S.D.	0.044	0.016	0.027	0.118	0.023	0.028	0.020	0.039
% R.S.D.	0.884	0.345	0.537	2.280	0.474	0.575	0.406	0.806

	Mo (ppm)	Se (ppm)	Ag (ppm)	Pb (ppm)	Ti (ppm)	Cd (ppm)	B (ppm)	K (ppm)
Mean	4.931	5.759	4.868	4.997	4.831	5.044	5.082	4.819
S.D.	0.042	0.046	0.018	0.017	0.029	0.027	0.016	0.038
% R.S.D.	0.843	0.794	0.369	0.347	0.596	0.539	0.312	0.778

	Mn (ppm)	Sb (ppm)	V (ppm)	Be (ppm)	Tl (ppm)
Mean	4.991	4.701	5.081	5.237	4.823
S.D.	0.020	0.060	0.021	0.024	0.015
% R.S.D.	0.391	1.273	0.416	0.462	0.301

J H Worrell
5-8-96
U-105 fusion
596T000968, 975, 984
FILE No. 960508A.DAT

SIGNATURE ABOVE REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 1103 TO 1125.

Identity 1: ICB Identity 2: Quality Control 1:33 PM May 8, 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	0.013	0.012	-0.010	-0.004	0.001	-0.000
S.D.	0.001	0.000	0.003	0.001	0.006	0.002	0.000	0.000
% R.S.D.	42.196	606.218	20.908	5.631	58.358	43.131	7.642	76.380

	Zn (ppm)	Ni (ppm)	La (ppm)	Fe (ppm)	Ca (ppm)	Cr (ppm)	Nd (ppm)	U (ppm)
Mean	0.000	0.002	0.001	-0.002	0.001	-0.006	-0.001	0.074
S.D.	0.000	0.003	0.001	0.003	0.000	0.000	0.004	0.041
% R.S.D.	47.252	133.550	163.597	195.702	43.899	8.374	372.299	54.700

	Ce (ppm)	Sm (ppm)	Ba (ppm)	P (ppm)	S (ppm)	Mg (ppm)	As (ppm)	Na (ppm)
Mean	-0.032	0.027	-0.000	-0.006	-0.001	0.000	-0.006	-0.017
S.D.	0.012	0.008	0.000	0.010	0.001	0.000	0.009	0.004
% R.S.D.	36.691	30.283	112.398	151.146	89.068	114.564	155.687	24.745

	Mo (ppm)	Se (ppm)	Ag (ppm)	Pb (ppm)	Ti (ppm)	Cd (ppm)	B (ppm)	K (ppm)
Mean	0.002	-0.022	-0.002	-0.005	0.001	-0.001	0.000	-0.181
S.D.	0.001	0.001	0.001	0.006	0.000	0.000	0.001	0.008
% R.S.D.	46.252	6.574	34.150	125.452	1.334	38.198	565.982	4.364

	Mn (ppm)	Sb (ppm)	V (ppm)	Be (ppm)	Tl (ppm)
Mean	0.001	-0.018	-0.005	-0.000	-0.065
S.D.	0.000	0.014	0.001	0.000	0.013
% R.S.D.	50.569	77.160	15.588	119.218	19.738

Identity 1: ICSA Identity 2: Quality Control 1:36 PM May 8, 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	0.010	199.777	-0.001	0.001	0.000
S.D.	0.001	0.000	0.006	0.000	0.471	0.000	0.001	0.000
% R.S.D.	92.814	5.905	28.164	4.370	0.236	1.999	43.507	216.699

	Zn (ppm)	Ni (ppm)	La (ppm)	Fe (ppm)	Ca (ppm)	Cr (ppm)	Nd (ppm)	U (ppm)
Mean	-0.006	0.004	0.006	98.154	104.517	-0.002	-0.001	0.052
S.D.	0.000	0.003	0.000	0.158	0.098	0.001	0.003	0.057
% R.S.D.	6.955	83.853	0.386	0.161	0.094	34.605	546.005	110.278

	Ce (ppm)	Sm (ppm)	Ba (ppm)	P (ppm)	S (ppm)	Mg (ppm)	As (ppm)	Na (ppm)
Mean	-0.002	0.034	0.003	0.043	0.017	99.192	0.057	192.372
S.D.	0.014	0.008	0.000	0.008	0.006	0.327	0.005	1.268
% R.S.D.	736.052	24.350	7.635	18.388	37.458	0.330	9.103	0.659

	Mo (ppm)	Se (ppm)	Ag (ppm)	Pb (ppm)	Ti (ppm)	Cd (ppm)	B (ppm)	K (ppm)
Mean	0.002	-0.041	0.000	-0.026	-0.000	-0.001	0.010	-0.168
S.D.	0.001	0.022	0.001	0.018	0.000	0.002	0.001	0.025
% R.S.D.	57.284	54.134	477.199	67.624	2201.370	186.169	13.115	15.178

	Mn (ppm)	Sb (ppm)	V (ppm)	Be (ppm)	Tl (ppm)
Mean	0.001	-0.049	-0.004	0.003	-0.020
S.D.	0.001	0.004	0.001	0.000	0.006
% R.S.D.	63.815	7.896	21.934	0.295	29.606

Identity 1: ICSAB Identity 2: Quality Control 1:40 PM May 8, 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	-0.023	0.010	197.775	0.494	0.507	0.938
S.D.	0.002	0.000	0.009	0.002	0.201	0.003	0.002	0.006
% R.S.D.	368.843	6.000	37.938	16.616	0.102	0.631	0.357	0.628

	Zn (ppm)	Ni (ppm)	La (ppm)	Fe (ppm)	Ca (ppm)	Cr (ppm)	Nd (ppm)	U (ppm)
Mean	1.002	0.997	0.003	99.416	105.203	0.510	0.011	0.034
S.D.	0.001	0.008	0.004	0.182	0.098	0.001	0.008	0.064
% R.S.D.	0.111	0.814	122.609	0.183	0.093	0.113	75.524	186.241

	Ce (ppm)	Sm (ppm)	Ba (ppm)	P (ppm)	S (ppm)	Mg (ppm)	As (ppm)	Na (ppm)
Mean	0.014	0.052	0.514	0.008	0.034	100.891	0.066	191.216
S.D.	0.020	0.013	0.001	0.012	0.010	0.211	0.008	0.975
% R.S.D.	147.101	25.771	0.252	164.564	28.623	0.209	11.818	0.510

	Mo (ppm)	Se (ppm)	Ag (ppm)	Pb (ppm)	Ti (ppm)	Cd (ppm)	B (ppm)	K (ppm)
Mean	-0.001	-0.018	1.018	0.984	0.000	1.021	0.014	-0.086
S.D.	0.001	0.019	0.001	0.006	0.000	0.000	0.001	0.020
% R.S.D.	119.308	106.650	0.066	0.607	119.079	0.040	9.938	23.423

	Mn (ppm)	Sb (ppm)	V (ppm)	Be (ppm)	Tl (ppm)
Mean	0.507	0.044	0.503	0.518	-0.025
S.D.	0.001	0.049	0.001	0.001	0.018
% R.S.D.	0.214	111.469	0.245	0.266	70.175

Identity 1: Prepblkarl Identity 2: .250ml-10ml 1:45 PM May 8, 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	0.009	-0.003	-0.005	-0.005	0.001	-0.000
S.D.	0.001	0.000	0.012	0.002	0.006	0.003	0.000	0.000
% R.S.D.	174.995	78.062	130.646	66.824	117.078	60.033	19.381	83.396

	Zn (ppm)	Ni (ppm)	La (ppm)	Fe (ppm)	Ca (ppm)	Cr (ppm)	Nd (ppm)	U (ppm)
Mean	0.005	0.384	0.004	0.001	0.053	-0.003	-0.014	0.021
S.D.	0.000	0.002	0.002	0.001	0.002	0.002	0.006	0.049
% R.S.D.	4.564	0.576	43.772	71.116	3.331	50.735	44.285	236.471

	Ce (ppm)	Sm (ppm)	Ba (ppm)	P (ppm)	S (ppm)	Mg (ppm)	As (ppm)	Na (ppm)
Mean	-0.028	0.036	0.000	-0.010	0.010	0.003	-0.003	0.128
S.D.	0.018	0.015	0.000	0.008	0.003	0.002	0.001	0.006
% R.S.D.	63.419	42.000	243.130	75.793	25.843	59.074	41.608	4.385

	Mo (ppm)	Se (ppm)	Ag (ppm)	Pb (ppm)	Ti (ppm)	Cd (ppm)	B (ppm)	K (ppm)
Mean	0.003	-0.035	-0.001	-0.013	0.000	0.001	-0.002	370.731
S.D.	0.000	0.003	0.001	0.014	0.000	0.000	0.001	2.807
% R.S.D.	6.546	9.462	155.741	109.259	82.744	51.021	23.026	0.757

	Mn (ppm)	Sb (ppm)	V (ppm)	Be (ppm)	Tl (ppm)
Mean	0.001	-0.035	-0.004	-0.001	-0.029
S.D.	0.000	0.031	0.001	0.000	0.025
% R.S.D.	21.104	89.457	20.195	56.858	86.629

Identity 1: s96t000968_l Identity 2: .250ml-10ml-2ml-8ml 1:51 PM May 8, 1996
Task name : OPTIMA
Sample Weight : 1.0000 Solution Volume : 205.00
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	-0.163	0.060	2.544	0.408	10.278	0.427	0.331	0.038
S.D.	0.068	0.000	0.601	0.077	0.530	0.369	0.011	0.009
% R.S.D.	41.880	0.000	23.637	18.907	5.152	86.427	3.255	24.754

	Zn (ppm)	Ni (ppm)	La (ppm)	Fe (ppm)	Ca (ppm)	Cr (ppm)	Nd (ppm)	U (ppm)
Mean	1.529	1.103	-0.492	0.455	3.595	1.128	1.187	-10.524
S.D.	0.038	0.405	0.169	0.030	0.036	0.306	0.671	3.355
% R.S.D.	2.484	36.666	34.471	6.504	1.011	27.170	56.558	31.883

	Ce (ppm)	Sm (ppm)	Ba (ppm)	P (ppm)	S (ppm)	Mg (ppm)	As (ppm)	Na (ppm)
Mean	2.289	-1.221	0.061	2.905	4.644	0.164	-0.561	268.828
S.D.	1.366	0.571	0.023	1.912	0.650	0.061	1.065	2.457
% R.S.D.	59.674	46.721	37.115	65.830	14.004	37.116	189.814	0.914

	Mo (ppm)	Se (ppm)	Ag (ppm)	Pb (ppm)	Tl (ppm)	Cd (ppm)	B (ppm)	K (ppm)
Mean	0.725	-15.010	-0.035	0.501	-0.020	-0.156	-0.347	10682.953
S.D.	0.260	1.575	0.090	1.483	0.083	0.285	0.073	90.759
% R.S.D.	35.902	10.491	255.900	296.155	420.310	183.099	21.005	0.850

	Mn (ppm)	Sb (ppm)	V (ppm)	Be (ppm)	Tl (ppm)
Mean	0.232	-6.982	-0.360	-0.082	-8.045
S.D.	0.000	5.871	0.083	0.056	3.712
% R.S.D.	0.175	84.085	23.086	68.319	46.136

Identity 1: s96t000968 Identity 2 .250ml-10ml 1:56 PM May 8, 1996
Task name : OPTIMA
Sample Weight : 1.0000 Solution Volume : 41.00
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	0.071	0.012	0.254	0.136	8.942	-0.085	0.026	-0.021
S.D.	0.032	0.003	0.603	0.140	0.200	0.128	0.030	0.010
% R.S.D.	45.233	23.077	236.913	103.110	2.237	149.359	114.696	48.181

	Zn (ppm)	Ni (ppm)	La (ppm)	Fe (ppm)	Ca (ppm)	Cr (ppm)	Nd (ppm)	U (ppm)
Mean	0.810	1.350	0.001	-0.029	1.688	1.159	-0.256	2.666
S.D.	0.011	0.148	0.000	0.118	0.009	0.039	0.261	0.888
% R.S.D.	1.305	10.982	38.823	406.703	0.550	3.374	101.757	33.309

	Ce (ppm)	Sm (ppm)	Ba (ppm)	P (ppm)	S (ppm)	Mg (ppm)	As (ppm)	Na (ppm)
Mean	-0.902	1.221	-0.000	1.709	4.345	0.037	0.070	257.437
S.D.	0.180	0.133	0.003	0.308	0.085	0.015	0.073	1.631
% R.S.D.	19.919	10.869	624.500	18.040	1.967	39.031	104.438	0.634

	Mo (ppm)	Se (ppm)	Ag (ppm)	Pb (ppm)	Ti (ppm)	Cd (ppm)	B (ppm)	K (ppm)
Mean	0.163	-3.050	-0.045	-0.223	0.032	0.104	-0.041	10242.668
S.D.	0.060	0.312	0.022	0.110	0.019	0.022	0.031	71.331
% R.S.D.	36.635	10.230	48.799	49.188	59.179	20.803	76.295	0.696

	Mn (ppm)	Sb (ppm)	V (ppm)	Be (ppm)	Tl (ppm)
Mean	0.209	-1.699	-0.101	0.004	-2.035
S.D.	0.012	1.173	0.046	0.006	0.674
% R.S.D.	5.549	69.047	45.695	161.256	33.112

Identity 1: s96t000968_d Identity 2: .250ml-10ml 1:59 PM May 8, 1996
Task name : OPTIMA
Sample Weight : 1.0000 Solution Volume : 41.00
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	-0.042	0.023	0.071	0.253	16.518	-0.043	0.053	-0.003
S.D.	0.044	0.005	0.126	0.098	0.050	0.074	0.017	0.009
% R.S.D.	105.041	20.785	178.666	38.837	0.302	172.970	32.432	262.214

	Zn (ppm)	Ni (ppm)	La (ppm)	Fe (ppm)	Ca (ppm)	Cr (ppm)	Nd (ppm)	U (ppm)
Mean	0.103	2.251	-0.117	0.293	1.625	1.767	-0.601	-0.133
S.D.	0.011	0.083	0.059	0.052	0.016	0.026	0.464	1.321
% R.S.D.	10.293	3.688	50.135	17.927	0.990	1.487	77.143	992.910

	Ce (ppm)	Sm (ppm)	Ba (ppm)	P (ppm)	S (ppm)	Mg (ppm)	As (ppm)	Na (ppm)
Mean	-0.494	1.092	0.008	1.294	4.258	0.023	0.253	364.171
S.D.	0.386	0.324	0.008	0.306	0.315	0.008	0.156	1.431
% R.S.D.	78.071	29.667	105.848	23.661	7.393	34.641	61.716	0.393

	Mo (ppm)	Se (ppm)	Ag (ppm)	Pb (ppm)	Ti (ppm)	Cd (ppm)	B (ppm)	K (ppm)
Mean	0.044	-0.832	-0.032	-0.758	0.019	0.055	-0.096	13285.109
S.D.	0.048	0.517	0.034	0.492	0.012	0.022	0.045	40.529
% R.S.D.	110.044	62.149	106.109	64.970	64.938	39.135	47.544	0.305

	Mn (ppm)	Sb (ppm)	V (ppm)	Be (ppm)	Tl (ppm)
Mean	0.248	0.519	-0.161	-0.023	-1.774
S.D.	0.013	0.408	0.029	0.000	1.070
% R.S.D.	5.434	78.604	18.172	0.760	60.293

Identity 1: s96t000968_a Identity 2: .250ml-2-ml-8ml 2:03 PM May 8, 1996
Task name : OPTIMA
Sample Weight : 1.0000 Solution Volume : 41.00
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	40.315	40.189	40.762	38.314	47.973	40.177	41.001	38.245
S.D.	0.118	0.186	0.261	0.078	0.109	0.074	0.173	0.306
% R.S.D.	0.292	0.463	0.639	0.204	0.228	0.183	0.422	0.800

	Zn (ppm)	Ni (ppm)	La (ppm)	Fe (ppm)	Ca (ppm)	Cr (ppm)	Nd (ppm)	U (ppm)
Mean	40.455	42.136	41.436	42.012	40.719	41.791	42.948	77.028
S.D.	0.061	0.237	0.154	0.234	0.166	0.190	0.516	1.582
% R.S.D.	0.150	0.562	0.371	0.557	0.407	0.455	1.202	2.054

	Ce (ppm)	Sm (ppm)	Ba (ppm)	P (ppm)	S (ppm)	Mg (ppm)	As (ppm)	Na (ppm)
Mean	38.313	42.025	40.166	41.703	42.479	38.155	40.739	290.800
S.D.	0.298	0.212	0.194	0.818	0.497	0.088	0.366	1.985
% R.S.D.	0.778	0.505	0.484	1.961	1.170	0.231	0.899	0.683

	Mo (ppm)	Se (ppm)	Ag (ppm)	Pb (ppm)	Ti (ppm)	Cd (ppm)	B (ppm)	K (ppm)
Mean	39.357	42.357	33.487	39.682	38.888	41.173	40.133	10125.016
S.D.	0.049	0.554	0.243	0.318	0.109	0.036	0.267	62.690
% R.S.D.	0.124	1.308	0.725	0.800	0.281	0.088	0.664	0.619

	Mn (ppm)	Sb (ppm)	V (ppm)	Be (ppm)	Tl (ppm)
Mean	40.693	38.755	40.782	41.652	37.729
S.D.	0.082	1.136	0.084	0.077	1.137
% R.S.D.	0.202	2.931	0.206	0.186	3.013

Identity 1: CCV Identity 2: Quality Control 2:08 PM May 8, 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	5.050	5.030	5.046	4.738	4.892	5.029	5.134	4.952
S.D.	0.007	0.003	0.024	0.002	0.006	0.002	0.000	0.010
% R.S.D.	0.148	0.060	0.481	0.038	0.121	0.036	0.007	0.207

	Zn (ppm)	Ni (ppm)	La (ppm)	Fe (ppm)	Ca (ppm)	Cr (ppm)	Nd (ppm)	U (ppm)
Mean	5.048	5.091	5.175	5.272	5.110	5.079	5.453	10.017
S.D.	0.010	0.010	0.011	0.012	0.003	0.003	0.020	0.040
% R.S.D.	0.197	0.192	0.214	0.236	0.053	0.049	0.359	0.402

	Ce (ppm)	Sm (ppm)	Ba (ppm)	P (ppm)	S (ppm)	Mg (ppm)	As (ppm)	Na (ppm)
Mean	4.953	5.207	5.054	5.227	4.844	4.861	5.089	4.912
S.D.	0.019	0.007	0.002	0.115	0.046	0.009	0.036	0.006
% R.S.D.	0.389	0.125	0.045	2.199	0.950	0.183	0.715	0.131

	Mo (ppm)	Se (ppm)	Ag (ppm)	Pb (ppm)	Ti (ppm)	Cd (ppm)	B (ppm)	K (ppm)
Mean	4.943	5.809	4.924	5.076	4.887	5.112	5.163	4.885
S.D.	0.015	0.023	0.008	0.029	0.004	0.006	0.013	0.015
% R.S.D.	0.309	0.397	0.155	0.563	0.086	0.118	0.250	0.305

	Mn (ppm)	Sb (ppm)	V (ppm)	Be (ppm)	Tl (ppm)
Mean	5.067	4.744	5.150	5.320	4.781
S.D.	0.009	0.032	0.008	0.000	0.027
% R.S.D.	0.174	0.677	0.146	0.003	0.563

Identity 1: CCB Identity 2: Quality Control 2:12 PM May 8, 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	0.017	0.005	-0.015	0.001	0.001	-0.000
S.D.	0.001	0.000	0.007	0.002	0.005	0.003	0.000	0.000
% R.S.D.	73.549	249.800	39.549	43.316	33.011	301.660	63.411	151.572

	Zn (ppm)	Ni (ppm)	La (ppm)	Fe (ppm)	Ca (ppm)	Cr (ppm)	Nd (ppm)	U (ppm)
Mean	0.001	-0.002	-0.003	0.002	0.001	-0.001	-0.008	0.035
S.D.	0.000	0.003	0.000	0.001	0.000	0.001	0.004	0.059
% R.S.D.	87.280	114.838	0.969	33.614	39.131	154.247	55.312	168.811

	Ce (ppm)	Sm (ppm)	Ba (ppm)	P (ppm)	S (ppm)	Mg (ppm)	As (ppm)	Na (ppm)
Mean	-0.024	0.030	0.000	-0.009	0.001	0.000	-0.007	-0.010
S.D.	0.015	0.009	0.000	0.007	0.004	0.000	0.003	0.002
% R.S.D.	59.547	28.764	361.663	74.038	692.950	346.410	40.832	25.005

	Mo (ppm)	Se (ppm)	Ag (ppm)	Pb (ppm)	Ti (ppm)	Cd (ppm)	B (ppm)	K (ppm)
Mean	0.002	-0.079	-0.001	-0.014	0.000	0.000	0.001	-0.161
S.D.	0.001	0.014	0.001	0.014	0.001	0.000	0.000	0.019
% R.S.D.	58.278	17.602	116.435	103.489	413.240	150.550	16.049	12.040

	Mn (ppm)	Sb (ppm)	V (ppm)	Be (ppm)	Tl (ppm)
Mean	0.001	-0.021	-0.004	0.000	-0.037
S.D.	0.000	0.010	0.001	0.001	0.023
% R.S.D.	86.227	47.504	24.089	12913.373	64.063

Identity 1: s96t000975_1 Identity 2: .250ml-10ml-2ml-8ml 2:18 PM May 8, 1996
Task name : OPTIMA
Sample Weight : 1.0000 Solution Volume : 205.00
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	-0.119	0.037	2.545	1.217	27.586	1.065	0.292	-0.011
S.D.	0.304	0.035	1.132	0.168	1.782	0.369	0.087	0.041
% R.S.D.	254.743	94.373	44.496	13.786	6.459	34.689	29.813	375.776

	Zn (ppm)	Ni (ppm)	La (ppm)	Fe (ppm)	Ca (ppm)	Cr (ppm)	Nd (ppm)	U (ppm)
Mean	4.462	0.936	-0.196	1.605	1.680	3.092	1.107	-3.344
S.D.	0.067	0.219	0.442	0.384	0.017	0.088	1.491	10.114
% R.S.D.	1.492	23.430	225.577	23.929	0.993	2.831	134.719	302.413

	Ce (ppm)	Sm (ppm)	Ba (ppm)	P (ppm)	S (ppm)	Mg (ppm)	As (ppm)	Na (ppm)
Mean	1.065	-0.345	0.026	3.708	9.246	0.047	1.953	440.518
S.D.	3.086	2.567	0.059	0.657	0.094	0.020	1.024	3.869
% R.S.D.	289.692	743.877	224.072	17.721	1.015	43.301	52.439	0.878

	Mo (ppm)	Se (ppm)	Ag (ppm)	Pb (ppm)	Ti (ppm)	Cd (ppm)	B (ppm)	K (ppm)
Mean	0.864	-11.615	-0.181	-0.325	0.038	0.138	0.102	10418.706
S.D.	0.195	2.951	0.085	0.743	0.111	0.090	0.249	111.059
% R.S.D.	22.609	25.409	47.150	228.961	291.414	65.111	242.843	1.066

	Mn (ppm)	Sb (ppm)	V (ppm)	Be (ppm)	Tl (ppm)
Mean	0.525	12.019	-0.420	0.048	0.480
S.D.	0.059	1.720	0.210	0.029	5.371
% R.S.D.	11.328	14.315	50.059	61.129	1118.313

Identity 1: s96t000975 Identity 2: .250ml-10ml 2:21 PM May 8, 1996
Task name : OPTIMA
Sample Weight : 1.0000 Solution Volume : 41.00
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	0.166	0.000	-0.012	0.247	25.684	-0.086	-0.023	-0.041
S.D.	0.036	0.007	0.159	0.083	0.254	0.128	0.009	0.011
% R.S.D.	21.588	412907216850.000	1366.955	33.503	0.988	148.410	40.325	27.694

	Zn (ppm)	Ni (ppm)	La (ppm)	Fe (ppm)	Ca (ppm)	Cr (ppm)	Nd (ppm)	U (ppm)
Mean	1.032	1.139	0.062	1.062	1.257	2.984	-0.252	8.358
S.D.	0.017	0.019	0.059	0.089	0.021	0.177	0.227	2.319
% R.S.D.	1.604	1.673	95.371	8.364	1.662	5.947	89.989	27.742

	Ce (ppm)	Sm (ppm)	Ba (ppm)	P (ppm)	S (ppm)	Mg (ppm)	As (ppm)	Na (ppm)
Mean	-2.771	1.224	-0.030	2.150	7.900	0.033	-0.109	433.113
S.D.	0.475	0.426	0.011	0.167	0.083	0.007	0.169	2.485
% R.S.D.	17.152	34.842	37.694	7.784	1.047	21.429	155.065	0.574

	Mo (ppm)	Se (ppm)	Ag (ppm)	Pb (ppm)	Ti (ppm)	Cd (ppm)	B (ppm)	K (ppm)
Mean	0.103	-2.506	-0.173	-1.739	0.057	-0.028	-0.033	10141.694
S.D.	0.003	0.433	0.048	0.239	0.014	0.026	0.053	60.888
% R.S.D.	3.324	17.299	27.975	13.746	25.523	94.384	160.801	0.600

	Mn (ppm)	Sb (ppm)	V (ppm)	Be (ppm)	Tl (ppm)
Mean	0.376	-0.817	-0.296	-0.015	-1.422
S.D.	0.018	0.696	0.006	0.011	1.164
% R.S.D.	4.678	85.204	2.017	72.300	81.817

Identity 1: s96t000975_d Identity 2: .250ml-10ml 2:25 PM May 8, 1996
Task name : OPTIMA
Sample Weight : 1.0000 Solution Volume : 41.00
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	0.045	0.006	0.092	-0.136	25.237	-0.170	0.030	-0.012
S.D.	0.018	0.003	0.322	0.164	0.133	0.074	0.024	0.010
% R.S.D.	40.091	42.857	348.533	120.627	0.527	43.223	78.378	87.343

	Zn (ppm)	Ni (ppm)	La (ppm)	Fe (ppm)	Ca (ppm)	Cr (ppm)	Nd (ppm)	U (ppm)
Mean	0.096	1.421	0.215	0.386	0.875	3.175	-0.302	1.608
S.D.	0.008	0.019	0.089	0.100	0.010	0.016	0.204	0.699
% R.S.D.	7.914	1.321	41.643	25.905	1.159	0.503	67.650	43.434

	Ce (ppm)	Sm (ppm)	Ba (ppm)	P (ppm)	S (ppm)	Mg (ppm)	As (ppm)	Na (ppm)
Mean	-1.595	0.726	-0.010	1.899	7.707	0.021	-0.053	429.991
S.D.	0.087	0.099	0.003	0.536	0.280	0.004	0.228	1.149
% R.S.D.	5.436	13.593	31.458	28.244	3.638	19.245	430.846	0.267

	Mo (ppm)	Se (ppm)	Ag (ppm)	Pb (ppm)	Ti (ppm)	Cd (ppm)	B (ppm)	K (ppm)
Mean	0.068	-2.355	-0.124	-1.633	0.018	-0.007	-0.075	15960.740
S.D.	0.003	0.477	0.016	0.261	0.026	0.030	0.045	33.668
% R.S.D.	5.085	20.264	12.686	16.002	148.012	430.056	60.218	0.211

	Mn (ppm)	Sb (ppm)	V (ppm)	Be (ppm)	Tl (ppm)
Mean	0.404	-0.282	-0.235	-0.026	-0.462
S.D.	0.013	0.409	0.034	0.011	0.562
% R.S.D.	3.333	144.783	14.423	43.116	121.636

Identity 1: s96t000975_a Identity 2: .250ml-2ml-8ml 2:30 PM May 8, 1996
Task name : OPTIMA
Sample Weight : 1.0000 Solution Volume : 41.00
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	40.138	39.835	40.938	38.445	64.785	40.049	40.656	37.584
S.D.	0.089	0.075	0.225	0.089	0.123	0.390	0.108	0.068
% R.S.D.	0.221	0.189	0.549	0.231	0.190	0.974	0.265	0.180

	Zn (ppm)	Ni (ppm)	La (ppm)	Fe (ppm)	Ca (ppm)	Cr (ppm)	Nd (ppm)	U (ppm)
Mean	40.669	41.635	40.912	42.625	40.498	43.880	43.238	79.435
S.D.	0.072	0.241	0.254	0.212	0.093	0.178	0.537	1.198
% R.S.D.	0.176	0.578	0.622	0.497	0.229	0.407	1.242	1.509

	Ce (ppm)	Sm (ppm)	Ba (ppm)	P (ppm)	S (ppm)	Mg (ppm)	As (ppm)	Na (ppm)
Mean	39.289	42.051	39.730	42.416	46.767	38.325	40.424	455.218
S.D.	0.029	0.102	0.084	0.391	0.684	0.071	0.156	0.734
% R.S.D.	0.073	0.242	0.211	0.921	1.463	0.186	0.386	0.161

	Mo (ppm)	Se (ppm)	Ag (ppm)	Pb (ppm)	Ti (ppm)	Cd (ppm)	B (ppm)	K (ppm)
Mean	39.520	43.641	33.114	39.297	38.703	40.475	40.207	9851.356
S.D.	0.169	0.274	0.089	0.482	0.083	0.199	0.120	15.120
% R.S.D.	0.428	0.627	0.267	1.227	0.215	0.492	0.298	0.153

	Mn (ppm)	Sb (ppm)	V (ppm)	Be (ppm)	Tl (ppm)
Mean	40.923	38.667	40.715	41.334	36.678
S.D.	0.024	0.313	0.114	0.082	0.818
% R.S.D.	0.060	0.809	0.279	0.199	2.231

Identity 1: s96t000984_l Identity 2: .250ml-10ml-2ml-8ml 2:34 PM May 8, 1996
Task name : OPTIMA
Sample Weight : 1.0000 Solution Volume : 205.00
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	0.624	0.018	1.553	2.644	32.043	-0.216	0.129	-0.054
S.D.	0.205	0.024	3.333	0.511	0.127	0.368	0.105	0.057
% R.S.D.	32.780	129.904	214.695	19.332	0.398	170.264	81.210	105.246

	Zn (ppm)	Ni (ppm)	La (ppm)	Fe (ppm)	Ca (ppm)	Cr (ppm)	Nd (ppm)	U (ppm)
Mean	3.519	3.190	0.596	1.878	3.258	4.277	-0.730	25.907
S.D.	0.081	0.266	0.585	0.566	0.014	0.031	1.757	7.427
% R.S.D.	2.307	8.339	98.100	30.147	0.443	0.734	240.721	28.670

	Ce (ppm)	Sm (ppm)	Ba (ppm)	P (ppm)	S (ppm)	Mg (ppm)	As (ppm)	Na (ppm)
Mean	-2.923	3.346	-0.030	1.463	12.050	0.457	-1.405	427.732
S.D.	0.948	1.149	0.046	2.223	0.486	0.020	0.634	2.013
% R.S.D.	32.415	34.337	150.000	151.906	4.031	4.441	45.140	0.471

	Mo (ppm)	Se (ppm)	Ag (ppm)	Pb (ppm)	Ti (ppm)	Cd (ppm)	B (ppm)	K (ppm)
Mean	0.119	-5.540	-0.449	-9.269	0.253	-0.397	-0.287	13884.792
S.D.	0.136	0.524	0.053	1.653	0.109	0.216	0.196	45.074
% R.S.D.	114.402	9.463	11.744	17.830	43.040	54.275	68.161	0.325

	Mn (ppm)	Sb (ppm)	V (ppm)	Be (ppm)	Tl (ppm)
Mean	0.968	2.954	-0.919	-0.077	-14.684
S.D.	0.068	9.815	0.172	0.027	2.445
% R.S.D.	7.060	332.330	18.721	35.232	16.653

Identity 1: s96t000984 Identity 2: .250ml-10ml-~~2ml-8ml~~ 2:38 PM May 8, 1996
Task name : OPTIMA
Sample Weight : 1.0000 Solution Volume : 41.00
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	-0.039	0.010	0.190	-0.083	33.023	0.000	0.015	-0.016
S.D.	0.037	0.003	0.471	0.112	0.106	0.074	0.004	0.011
% R.S.D.	95.595	31.492	247.921	135.334	0.321	33586.614	24.630	69.034

	Zn (ppm)	Ni (ppm)	La (ppm)	Fe (ppm)	Ca (ppm)	Cr (ppm)	Nd (ppm)	U (ppm)
Mean	0.229	1.908	-0.176	1.995	1.303	4.795	0.147	-1.399
S.D.	0.027	0.187	0.102	0.076	0.009	0.068	0.146	1.691
% R.S.D.	11.944	9.824	57.820	3.811	0.678	1.410	99.160	120.905

	Ce (ppm)	Sm (ppm)	Ba (ppm)	P (ppm)	S (ppm)	Mg (ppm)	As (ppm)	Na (ppm)
Mean	-1.172	1.169	-0.009	2.480	11.258	0.375	0.081	415.877
S.D.	0.256	0.356	0.009	0.101	0.266	0.008	0.156	2.149
% R.S.D.	21.862	30.452	108.167	4.055	2.367	2.165	193.268	0.517

	Mo (ppm)	Se (ppm)	Ag (ppm)	Pb (ppm)	Ti (ppm)	Cd (ppm)	B (ppm)	K (ppm)
Mean	0.135	-2.322	-0.158	-0.892	-0.013	-0.028	0.018	13279.964
S.D.	0.107	2.202	0.028	0.776	0.019	0.022	0.026	53.271
% R.S.D.	79.097	94.815	17.434	87.007	142.980	76.321	146.166	0.401

	Mn (ppm)	Sb (ppm)	V (ppm)	Be (ppm)	Tl (ppm)
Mean	0.837	41.657	-0.168	-0.026	-2.247
S.D.	0.013	70.937	0.010	0.006	0.546
% R.S.D.	1.600	170.288	5.870	22.203	24.321

Identity 1: s96t000984_d Identity 2: .250ml-10ml 2:42 PM May 8, 1996
Task name : OPTIMA
Sample Weight : 1.0000 Solution Volume : 41.00
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	0.047	0.025	0.069	-0.328	34.152	0.213	0.085	0.010
S.D.	0.036	0.004	0.671	0.036	0.202	0.074	0.008	0.014
% R.S.D.	75.893	16.973	977.943	11.107	0.592	34.660	9.470	146.205

	Zn (ppm)	Ni (ppm)	La (ppm)	Fe (ppm)	Ca (ppm)	Cr (ppm)	Nd (ppm)	U (ppm)
Mean	0.309	3.161	0.001	1.733	2.189	4.923	0.446	1.911
S.D.	0.004	0.135	0.001	0.070	0.043	0.046	0.032	1.597
% R.S.D.	1.230	4.257	77.186	4.028	1.954	0.931	7.274	83.553

	Ce (ppm)	Sm (ppm)	Ba (ppm)	P (ppm)	S (ppm)	Mg (ppm)	As (ppm)	Na (ppm)
Mean	0.168	0.247	0.025	2.801	11.775	0.386	0.400	415.212
S.D.	0.423	0.431	0.010	0.304	0.250	0.004	0.050	0.926
% R.S.D.	251.960	174.959	39.852	10.863	2.119	1.050	12.464	0.223

	Mo (ppm)	Se (ppm)	Ag (ppm)	Pb (ppm)	Ti (ppm)	Cd (ppm)	B (ppm)	K (ppm)
Mean	0.242	-2.435	-0.040	-0.697	0.026	0.045	0.022	20108.655
S.D.	0.023	0.028	0.036	0.303	0.010	0.016	0.009	28.500
% R.S.D.	9.303	1.137	89.129	43.523	40.338	35.471	41.489	0.142

	Mn (ppm)	Sb (ppm)	V (ppm)	Be (ppm)	Tl (ppm)
Mean	0.840	0.377	-0.122	-0.003	-0.362
S.D.	0.000	1.905	0.011	0.017	0.975
% R.S.D.	0.018	505.253	9.122	532.450	269.065

Identity 1: s96t000984_a Identity 2: .250ml-2ml-8ml 2:45 PM May 8, 1996
Task name : OPTIMA
Sample Weight : 1.0000 Solution Volume : 41.00
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	40.472	40.169	40.301	38.299	71.976	40.048	40.975	38.079
S.D.	0.029	0.163	0.679	0.077	0.265	0.195	0.189	0.522
% R.S.D.	0.071	0.406	1.684	0.202	0.368	0.487	0.462	1.371

	Zn (ppm)	Ni (ppm)	La (ppm)	Fe (ppm)	Ca (ppm)	Cr (ppm)	Nd (ppm)	U (ppm)
Mean	40.334	42.135	41.557	43.867	41.269	44.956	43.807	84.462
S.D.	0.040	0.012	0.234	0.644	0.169	0.115	0.516	2.617
% R.S.D.	0.099	0.028	0.564	1.469	0.409	0.256	1.178	3.099

	Ce (ppm)	Sm (ppm)	Ba (ppm)	P (ppm)	S (ppm)	Mg (ppm)	As (ppm)	Na (ppm)
Mean	39.379	41.592	40.146	42.816	49.493	38.337	40.390	446.915
S.D.	0.463	0.351	0.190	0.161	0.244	0.026	0.236	5.530
% R.S.D.	1.177	0.845	0.474	0.375	0.494	0.067	0.585	1.237

	Mo (ppm)	Se (ppm)	Ag (ppm)	Pb (ppm)	Ti (ppm)	Cd (ppm)	B (ppm)	K (ppm)
Mean	39.430	43.973	32.805	40.239	38.795	40.222	40.258	13154.873
S.D.	0.075	1.195	0.159	0.461	0.104	0.085	0.051	140.893
% R.S.D.	0.191	2.718	0.485	1.146	0.267	0.211	0.126	1.071

	Mn (ppm)	Sb (ppm)	V (ppm)	Be (ppm)	Tl (ppm)
Mean	40.996	37.416	40.603	41.341	36.943
S.D.	0.044	0.509	0.122	0.053	1.455
% R.S.D.	0.108	1.360	0.300	0.129	3.938

Identity 1: ICSA Identity 2: Quality Control 2:48 PM May 8, 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	-0.028	0.010	199.555	0.000	0.002	-0.000
S.D.	0.001	0.000	0.010	0.001	0.880	0.002	0.001	0.000
% R.S.D.	65.305	2.014	35.982	8.479	0.441	604.058	22.093	336.956

	Zn (ppm)	Ni (ppm)	La (ppm)	Fe (ppm)	Ca (ppm)	Cr (ppm)	Nd (ppm)	U (ppm)
Mean	-0.005	0.005	0.002	99.047	104.180	-0.001	-0.004	-0.081
S.D.	0.000	0.000	0.001	0.451	0.363	0.002	0.001	0.013
% R.S.D.	7.213	7.154	67.782	0.456	0.348	155.438	38.479	16.157

	Ce (ppm)	Sm (ppm)	Ba (ppm)	P (ppm)	S (ppm)	Mg (ppm)	As (ppm)	Na (ppm)
Mean	-0.003	0.029	0.003	0.040	0.029	97.603	0.064	189.519
S.D.	0.013	0.004	0.000	0.007	0.007	0.219	0.010	1.081
% R.S.D.	375.524	14.490	4.042	16.574	22.669	0.225	14.993	0.570

	Mo (ppm)	Se (ppm)	Ag (ppm)	Pb (ppm)	Ti (ppm)	Cd (ppm)	B (ppm)	K (ppm)
Mean	0.002	-0.039	0.000	-0.024	0.000	-0.000	0.010	-0.118
S.D.	0.001	0.012	0.001	0.013	0.000	0.001	0.001	0.017
% R.S.D.	30.824	31.632	219.357	54.205	56.776	690.818	8.962	14.359

	Mn (ppm)	Sb (ppm)	V (ppm)	Be (ppm)	Tl (ppm)
Mean	0.001	-0.007	-0.001	0.002	-0.001
S.D.	0.000	0.015	0.001	0.000	0.007
% R.S.D.	29.797	217.760	86.432	11.569	806.985

Identity 1: ICSAB Identity 2: Quality Control 2:52 PM May 8, 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	-0.019	0.027	196.675	0.480	0.504	0.928
S.D.	0.000	0.000	0.003	0.002	0.672	0.004	0.001	0.004
% R.S.D.	16.681	1.883	15.977	7.764	0.342	0.750	0.281	0.417

	Zn (ppm)	Ni (ppm)	La (ppm)	Fe (ppm)	Ca (ppm)	Cr (ppm)	Nd (ppm)	U (ppm)
Mean	0.986	0.982	0.001	99.269	103.928	0.503	0.006	-0.029
S.D.	0.002	0.003	0.004	0.294	0.247	0.003	0.006	0.016
% R.S.D.	0.191	0.350	351.186	0.296	0.238	0.643	104.734	54.517

	Ce (ppm)	Sm (ppm)	Ba (ppm)	P (ppm)	S (ppm)	Mg (ppm)	As (ppm)	Na (ppm)
Mean	0.014	0.033	0.507	0.033	0.085	98.355	0.074	189.305
S.D.	0.001	0.005	0.001	0.007	0.008	0.219	0.008	0.774
% R.S.D.	4.927	16.168	0.177	21.399	9.846	0.223	10.872	0.409

	Mo (ppm)	Se (ppm)	Ag (ppm)	Pb (ppm)	Ti (ppm)	Cd (ppm)	B (ppm)	K (ppm)
Mean	0.003	-0.021	1.000	0.984	0.000	1.003	0.014	-0.078
S.D.	0.001	0.008	0.003	0.022	0.000	0.001	0.001	0.015
% R.S.D.	32.559	39.229	0.282	2.188	28.998	0.126	4.470	18.852

	Mn (ppm)	Sb (ppm)	V (ppm)	Be (ppm)	Tl (ppm)
Mean	0.502	-0.032	0.499	0.512	-0.067
S.D.	0.001	0.020	0.001	0.002	0.014
% R.S.D.	0.158	63.338	0.144	0.351	20.858

Identity 1: CCV Identity 2: Quality Control 2:55 PM May 8, 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	4.965	4.934	4.980	4.686	4.900	4.949	5.036	4.861
S.D.	0.012	0.012	0.029	0.012	0.018	0.006	0.015	0.029
% R.S.D.	0.235	0.250	0.590	0.264	0.361	0.126	0.298	0.600

	Zn (ppm)	Ni (ppm)	La (ppm)	Fe (ppm)	Ca (ppm)	Cr (ppm)	Nd (ppm)	U (ppm)
Mean	5.031	5.028	5.090	5.223	4.993	5.025	5.399	9.725
S.D.	0.009	0.012	0.026	0.006	0.016	0.006	0.010	0.064
% R.S.D.	0.177	0.236	0.519	0.117	0.311	0.127	0.194	0.657

	Ce (ppm)	Sm (ppm)	Ba (ppm)	P (ppm)	S (ppm)	Mg (ppm)	As (ppm)	Na (ppm)
Mean	4.925	5.069	4.949	5.101	4.815	4.824	5.038	4.879
S.D.	0.021	0.025	0.014	0.098	0.008	0.008	0.018	0.021
% R.S.D.	0.420	0.485	0.278	1.912	0.156	0.169	0.350	0.424

	Mo (ppm)	Se (ppm)	Ag (ppm)	Pb (ppm)	Ti (ppm)	Cd (ppm)	B (ppm)	K (ppm)
Mean	4.878	5.650	4.922	5.049	4.794	5.049	5.108	4.937
S.D.	0.015	0.039	0.013	0.030	0.009	0.017	0.027	0.034
% R.S.D.	0.302	0.696	0.271	0.587	0.197	0.328	0.532	0.690

	Mn (ppm)	Sb (ppm)	V (ppm)	Be (ppm)	Tl (ppm)
Mean	5.022	4.731	5.071	5.229	4.799
S.D.	0.016	0.030	0.012	0.015	0.044
% R.S.D.	0.310	0.642	0.234	0.286	0.907

Identity 1: CCB Identity 2: Quality Control 2:57 PM May 8, 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	0.026	0.007	-0.022	-0.005	-0.001	-0.001
S.D.	0.001	0.000	0.005	0.000	0.012	0.000	0.000	0.000
% R.S.D.	139.018	158.745	19.356	6.537	54.550	0.097	16.047	17.842

	Zn (ppm)	Ni (ppm)	La (ppm)	Fe (ppm)	Ca (ppm)	Cr (ppm)	Nd (ppm)	U (ppm)
Mean	0.001	0.003	-0.007	0.004	-0.000	-0.006	-0.013	0.017
S.D.	0.000	0.001	0.001	0.007	0.005	0.001	0.008	0.040
% R.S.D.	79.287	18.232	12.505	193.513	2288.913	15.075	58.442	235.543

	Ce (ppm)	Sm (ppm)	Ba (ppm)	P (ppm)	S (ppm)	Mg (ppm)	As (ppm)	Na (ppm)
Mean	-0.061	0.033	-0.001	0.007	0.010	0.004	0.004	-0.003
S.D.	0.009	0.005	0.000	0.006	0.002	0.006	0.003	0.007
% R.S.D.	15.320	14.432	17.854	98.556	21.896	159.238	78.617	216.638

	Mo (ppm)	Se (ppm)	Ag (ppm)	Pb (ppm)	Ti (ppm)	Cd (ppm)	B (ppm)	K (ppm)
Mean	0.002	-0.063	-0.004	-0.046	0.001	0.001	0.003	-0.037
S.D.	0.001	0.010	0.001	0.008	0.000	0.000	0.001	0.014
% R.S.D.	31.227	16.064	17.980	16.593	10.121	24.673	16.980	38.421

	Mn (ppm)	Sb (ppm)	V (ppm)	Be (ppm)	Tl (ppm)
Mean	0.000	0.005	-0.007	0.000	-0.062
S.D.	0.000	0.008	0.000	0.000	0.029
% R.S.D.	88.522	166.466	5.965	149.269	46.733

04/23/96 08:12
A-0004-1

LABCORE Data Entry Template for Worklist# 7949

Analyst: B. Goecke **Instrument:** ~~ICP01~~ ICP02 **Book#** 566484

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

Worklist Comment: ICP U-105 (FUSION)

S	Type	Sample#	R	A	Test	Matrix	Group#	Project
1	ICV				@ICP-QC	QC		
2	ICB LLS				@ICP-QC	QC		
3	ICSA				@ICP-QC	QC		
4	ICSAB				@ICP-QC	QC		
5	PREPBLKARL				@ICP-F01	SOLID		
6	SERDIL	S96T000991	0	F	@ICP-F01	SOLID		
7	SAMPLE	S96T000991	0	F	@ICP-F01	SOLID	96000092	U-105 (R)
	Analytes Requested:	AL-F-01 , BI-F-01 , FE-F-01 , LI-F-01 , NA-F-01 , P-F-01 , SI-F-01						
8	DUP	S96T000991	0	F	@ICP-F01	SOLID		
9	SPK	S96T000991	0	F	@ICP-F01	SOLID		
10	CCV				@ICP-QC	QC		
11	CCB				@ICP-QC	QC		
12	SERDIL	S96T000998	0	F	@ICP-F01	SOLID		
13	SAMPLE	S96T000998	0	F	@ICP-F01	SOLID	96000092	U-105 (R)
	Analytes Requested:	AL-F-01 , BI-F-01 , FE-F-01 , LI-F-01 , NA-F-01 , P-F-01 , SI-F-01						
14	DUP	S96T000998	0	F	@ICP-F01	SOLID		
15	SPK	S96T000998	0	F	@ICP-F01	SOLID		
16	SERDIL	S96T001005	0	F	@ICP-F01	SOLID		
17	SAMPLE	S96T001005	0	F	@ICP-F01	SOLID	96000092	U-105 (R)

Data Entry Comments: Example for calculation of sample result:

S96T000991 $Al = 29.25 \frac{ug}{ml} \times \frac{1}{2.017 \frac{g}{L} \times \frac{1L}{1000ml}} = 1.45e+4 \frac{ug}{g}$

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

Note: $2.017 \frac{g}{L}$ is sample prep dilution factor which can be found in sample prep worklist.

LABCORE Data Entry Template for Worklist# 7949

S	Type	Sample#	R	A	Test	Matrix	Group#	Project
		Analytes Requested: AL-F-01 , BI-F-01 , FE-F-01 , LI-F-01 , NA-F-01 , P-F-01 , SI-F-01						
18	DUP	S96T001005	0	F	@ICP-F01	SOLID		
19	SPK	S96T001005	0	F	@ICP-F01	SOLID		
20	CCV				@ICP-QC	QC		
21	CCB				@ICP-QC	QC		
22	SERDIL	S96T001012	0	F	@ICP-F01	SOLID		
23	SAMPLE	S96T001012	0	F	@ICP-F01	SOLID	96000092	U-105 (R)
		Analytes Requested: AL-F-01 , BI-F-01 , FE-F-01 , LI-F-01 , NA-F-01 , P-F-01 , SI-F-01						
24	DUP	S96T001012	0	F	@ICP-F01	SOLID		
25	SPK	S96T001012	0	F	@ICP-F01	SOLID		
26	ICSA				@ICP-QC	QC		
27	ICSAB				@ICP-QC	QC		
28	CCV				@ICP-QC	QC		
29	CCB				@ICP-QC	QC		

Final page for worklist # 7949

Analyst Signature: [signature] Date: 6-6-96

		D.F.
Prep blk TSA	.250ml - 10ml	1
S96T000991-L	.250ml - 10ml - 2ml - 5ml	20.5
991	.250ml - 10ml	41
991-D	.250ml - 10ml	41
991-A	.250ml - 2ml - 5ml	41
S96T000998-L	.250ml - 10ml - 2ml - 5ml	20.5
998	.250ml - 10ml	41
998-D	.250ml - 10ml	41
998-A	.250ml - 2ml - 5ml	41

Reviewed by: [signature] Date: 6/7/96

Analyst Signature

		D.F.
S96T001005-L	.250ml - 10ml - 2ml - 5ml	20.5
1005	.250ml - 10ml	41
1005-D	.250ml - 10ml	41
1005-A	.250ml - 2ml - 5ml	41
S96T001012-L	.250ml - 10ml - 2ml - 5ml	20.5
1012	.250ml - 10ml	41
1012-D	.250ml - 10ml	41
1012-A	.250ml - 2ml - 5ml	41

Data Entry Comments:

Example for calculation of spike recovery:

S96T000991 $Al = \left(\frac{67.90}{41}\right) - \left(\frac{29.25}{41}\right) \times 100 = 94.3\%$

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

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

Analysis Report Summary Thu 06-06-96 06:20:03 PM page 1

#	Sample Name	File	Method	Date	Time	OpID	Type	Mode
1	ICV	960606B	ICP2	06/06/96	16:32	BJG	Q	CONC
2	ICB	960606B	ICP2	06/06/96	16:35	BJG	Q	CONC
3	LLS	960606B	ICP2	06/06/96	16:38	BJG	Q	CONC
4	ICSA	960606B	ICP2	06/06/96	16:41	BJG	Q	CONC
5	ICSAB	960606B	ICP2	06/06/96	16:44	BJG	Q	CONC
6	PREPBLKTJA	960606B	ICP2	06/06/96	16:49	BJG	S	CONC
7	S96T000991_L	960606B	ICP2	06/06/96	16:53	BJG	S	CONC
8	S96T000991_	960606B	ICP2	06/06/96	16:56	BJG	S	CONC
9	S96T000991_D	960606B	ICP2	06/06/96	16:59	BJG	S	CONC
10	S96T000991_A	960606B	ICP2	06/06/96	17:03	BJG	S	CONC
11	CCV	960606B	ICP2	06/06/96	17:06	BJG	Q	CONC
12	CCB	960606B	ICP2	06/06/96	17:09	BJG	Q	CONC
13	S96T000998_L	960606B	ICP2	06/06/96	17:13	BJG	S	CONC
14	S96T000998_	960606B	ICP2	06/06/96	17:16	BJG	S	CONC
15	S96T000998_D	960606B	ICP2	06/06/96	17:20	BJG	S	CONC
16	S96T000998_A	960606B	ICP2	06/06/96	17:23	BJG	S	CONC
17	S96T001005_L	960606B	ICP2	06/06/96	17:27	BJG	S	CONC
18	S96T001005_	960606B	ICP2	06/06/96	17:31	BJG	S	CONC
19	S96T001005_D	960606B	ICP2	06/06/96	17:34	BJG	S	CONC
20	S96T001005_A	960606B	ICP2	06/06/96	17:37	BJG	S	CONC
21	CCV	960606B	ICP2	06/06/96	17:43	BJG	Q	CONC
22	CCB	960606B	ICP2	06/06/96	17:46	BJG	Q	CONC
23	S96T001012_L	960606B	ICP2	06/06/96	17:50	BJG	S	CONC
24	S96T001012_	960606B	ICP2	06/06/96	17:54	BJG	S	CONC
25	S96T001012_D	960606B	ICP2	06/06/96	17:58	BJG	S	CONC
26	S96T001012_A	960606B	ICP2	06/06/96	18:01	BJG	S	CONC
27	ICSA	960606B	ICP2	06/06/96	18:07	BJG	Q	CONC
28	ICSAB	960606B	ICP2	06/06/96	18:10	BJG	Q	CONC
29	CCV	960606B	ICP2	06/06/96	18:13	BJG	Q	CONC
30	CCB	960606B	ICP2	06/06/96	18:16	BJG	Q	CONC

SIGNATURE BELOW REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 1128 TO 1133.

[signature]
6-6-96
U-105 FUSION DIGEST
S96T000991, 998, 1005, 1012
.250mL - 10mL
FILE # 0960606B.TXT

Analysis Report Averages Thu 06-06-96 06:20:03 PM page 2

#	Sample Name	Ag	Al	As	B	Ba	Be
1	ICV	4.875	4.850	5.071	4.977	4.972	5.080
2	ICB	.0015	.0120	.0174	.0141	.0002	.0003
3	LLS	.0205	.1145	.2155	.1068	.0983	.0106
4	ICSA	.0047	237.7	-.0783	.0106	.0032	.0005
5	ICSAB	.9639	238.0	-.0640	.0011	.4879	.4801
6	PREPBLKTJA	.0004	.0100	.0198	.0025	.0003	.0001
7	S96T000991_L	.3270	31.47	1.864	.5226	.0374	.0381
8	S96T000991_	.0805	29.25	.7369	.3159	.0190	.0137
9	S96T000991_D	.0374	31.00	-.1575	.2632	.0171	.0107
10	S96T000991_A	37.20	67.90	42.39	38.89	39.35	39.96
11	CCV	4.871	4.851	5.078	4.940	4.954	5.078
12	CCB	.0025	.0123	.0225	.0086	.0003	.0004
13	S96T000998_L	.4365	29.86	5.087	1.055	.0585	.0527
14	S96T000998_	.1061	27.73	.1702	.1611	.0376	.0031
15	S96T000998_D	.1175	27.68	.5480	.2839	.0412	.0061
16	S96T000998_A	36.72	65.86	41.32	38.61	38.76	39.66
17	S96T001005_L	.3033	21.94	3.666	1.319	.0409	.0600
18	S96T001005_	.0918	19.05	1.157	.1082	.0376	.0105
19	S96T001005_D	.1085	18.22	.4567	.2488	.0409	.0105
20	S96T001005_A	36.91	56.85	41.04	38.72	38.86	39.87
21	CCV	4.885	4.818	5.046	4.908	4.937	5.044
22	CCB	.0009	.0118	.0217	.0060	.0001	.0003
23	S96T001012_L	.3499	22.21	6.486	1.498	.0674	.0298
24	S96T001012_	.0836	20.50	.4220	.1124	.0610	.0117
25	S96T001012_D	.0943	19.57	.6589	.1486	.0655	.0070
26	S96T001012_A	36.62	58.17	41.35	38.62	38.45	39.65
27	ICSA	.0022	237.4	-.0764	.0016	.0030	.0004
28	ICSAB	.9611	236.0	-.0483	.0099	.4807	.4754
29	CCV	4.885	4.862	5.087	4.962	4.970	5.094
30	CCB	.0015	.0087	.0135	.0098	.0001	.0003

#	Sample Name	Bi	Ca	Cd	Ce	Co	Cr
1	ICV	4.955	4.973	4.848	5.042	4.866	4.939
2	ICB	-.0272	.0010	.0008	.0003	-.0020	-.0004
3	LLS	.1735	.2146	.0101	.2070	.0399	.0207
4	ICSA	.0144	247.0	-.0012	.0266	.0004	.0004
5	ICSAB	.0058	247.5	.9332	.0145	.4568	.4729
6	PREPBLKTJA	-.0365	.0017	-.0005	-.0055	-.0014	-.0010
7	S96T000991_L	-5.252	1.099	.0350	-.5840	.3333	3.053
8	S96T000991_	.2375	1.931	.0343	-.0381	-.0164	3.132
9	S96T000991_D	-.0862	.5080	-.0251	-.2861	.0326	3.266
10	S96T000991_A	39.76	42.30	39.19	40.87	39.32	43.19
11	CCV	5.030	4.998	4.842	5.045	4.861	4.941
12	CCB	.0201	.0016	.0007	.0109	.0013	.0011
13	S96T000998_L	-4.983	.2092	-.0606	-1.497	.0589	4.805
14	S96T000998_	-.8345	.8112	-.0282	-.0964	-.0784	4.802
15	S96T000998_D	-1.604	2.375	.0007	.2151	.0854	4.771
16	S96T000998_A	39.09	41.42	39.00	40.11	39.20	44.36
17	S96T001005_L	-4.537	.9002	.1327	-.1003	-.2607	4.434
18	S96T001005_	-.9315	1.841	.0604	-.0646	.0604	4.473
19	S96T001005_D	-.3250	1.286	.0339	-.0177	.0380	4.361

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#	Sample Name	Bi	Ca	Cd	Ce	Co	Cr
20	S96T001005_A	38.99	41.61	39.08	40.03	38.99	44.09
21	CCV	5.051	5.032	4.858	5.045	4.872	4.964
22	CCB	-.0016	-.0013	-.0003	-.0028	.0002	-.0012
23	S96T001012_L	-4.317	.9998	.0846	.2896	-.1017	11.59
24	S96T001012	-.9076	1.681	.0554	-.3086	-.0045	11.60
25	S96T001012_D	.0685	.9213	.0761	.1778	.0797	11.12
26	S96T001012_A	39.08	42.47	39.18	39.90	39.22	51.40
27	ICSA	-.0402	249.1	.0000	.0142	-.0001	.0015
28	ICSAB	.0164	247.5	.9274	.0164	.4598	.4719
29	CCV	5.026	4.998	4.840	5.052	4.859	4.938
30	CCB	-.0104	-.0009	.0003	.0003	-.0011	.0003

#	Sample Name	Cu	Eu	Fe	K	La	Li
1	ICV	5.140	-.0032	4.980	4.816	4.960	5.053
2	ICB	.0007	-.0014	.0007	.1285	.0003	-.0003
3	LLS	.0218	-.0007	.1012	Q.7237	.0995	.0205
4	ICSA	-.0105	-.0372	92.18	.4423	-.0040	.0032
5	ICSAB	.4891	-.0352	92.12	.3576	-.0044	.9860
6	PREPBLKTJA	.0001	-.0014	-.0011	332.6	-.0011	-.0006
7	S96T000991_L	.0554	-.4250	1.967	14910.	.1745	-.2820
8	S96T000991	.0290	-.0566	1.949	14670.	.0092	-.0375
9	S96T000991_D	.0562	-.0577	1.881	13590.	-.0230	-.0139
10	S96T000991_A	40.89	-.0571	41.94	14450.	39.90	39.08
11	CCV	5.137	-.0035	4.974	4.587	4.952	5.053
12	CCB	.0011	-.0010	.0001	.3782	.0007	.0002
13	S96T000998_L	.0923	-.3006	8.373	10240.	-.0614	-.0938
14	S96T000998	.0351	-.0450	8.667	10020.	.0714	-.0236
15	S96T000998_D	.0258	-.0369	8.633	12650.	.0900	-.0093
16	S96T000998_A	40.51	-.0555	48.35	9926.	39.42	38.94
17	S96T001005_L	.0942	-.3584	8.559	9986.	.1270	-.1645
18	S96T001005	.0713	-.0509	8.711	9779.	.0609	-.0093
19	S96T001005_D	.0438	-.0572	8.687	9625.	.0660	-.0188
20	S96T001005_A	40.63	-.0516	48.54	9670.	39.58	39.11
21	CCV	5.093	-.0029	4.992	4.650	4.950	4.966
22	CCB	-.0002	-.0017	.0010	.2618	-.0000	-.0003
23	S96T001012_L	.1320	-.3261	15.92	10010.	.0601	-.1649
24	S96T001012	.0361	-.0584	16.05	9876.	.0801	-.0145
25	S96T001012_D	.0615	-.0202	17.34	10290.	.1154	.0325
26	S96T001012_A	40.00	-.0252	55.60	9606.	39.20	38.40
27	ICSA	-.0104	-.0415	92.40	.2685	-.0045	.0039
28	ICSAB	.4824	-.0379	91.68	.4243	-.0048	.9744
29	CCV	5.170	-.0032	4.970	4.536	4.980	5.122
30	CCB	.0005	-.0015	.0006	.2558	.0006	-.0008

#	Sample Name	Mg	Mn	Mo	Na	Nd	Ni
1	ICV	4.824	4.795	4.915	4.974	5.029	4.870
2	ICB	-.0109	-.0002	-.0007	-.0056	-.0050	.0007
3	LLS	.1845	.0186	.0937	.2004	.1903	.0464
4	ICSA	239.7	-.0070	-.0119	196.6	.0015	-.0080
5	ICSAB	239.5	.4410	-.0142	198.0	.0015	.9137

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#	Sample Name	Mg	Mn	Mo	Na	Nd	Ni
6	PREPBLKTJA	-.0110	.0003	-.0013	.1186	-.0068	.1977
7	S96T000991_L	-1.904	.6946	-.7516	432.2	-.8784	1.816
8	S96T000991	-.3592	.8236	-.0161	425.7	-.0664	2.288
9	S96T000991_D	-.3847	.8179	.0612	446.2	-.0301	5.785
10	S96T000991_A	38.01	38.50	39.95	457.7	40.22	41.62
11	CCV	4.831	4.770	4.909	4.961	5.018	4.887
12	CCB	-.0024	-.0001	-.0036	-.0021	-.0013	.0076
13	S96T000998_L	-2.460	2.794	-.3915	427.0	-.3057	10.54
14	S96T000998	-.3109	2.832	-.0199	420.5	.0058	10.40
15	S96T000998_D	-.2161	2.893	-.1105	420.8	.1000	13.37
16	S96T000998_A	37.97	40.21	39.52	455.4	39.93	49.61
17	S96T001005_L	-2.237	2.701	-.4576	456.6	-.2346	7.510
18	S96T001005	-.2419	2.749	.0116	450.1	.1164	6.932
19	S96T001005_D	.1162	2.848	-.0656	460.5	.2291	5.540
20	S96T001005_A	37.79	40.20	39.54	482.7	39.81	45.80
21	CCV	4.811	4.789	4.932	4.922	5.004	4.875
22	CCB	-.0165	-.0002	-.0033	-.0051	-.0060	.0003
23	S96T001012_L	-.0462	5.406	-.3560	400.6	-.6311	11.98
24	S96T001012	.4178	5.493	.0288	396.3	.1052	11.77
25	S96T001012_D	.7115	5.636	.0759	389.9	.1532	11.00
26	S96T001012_A	38.85	42.97	39.55	423.2	39.58	50.54
27	ICSA	239.6	-.0069	-.0157	195.6	.0005	.0008
28	ICSAB	237.7	.4395	-.0119	195.5	.0008	.9072
29	CCV	4.852	4.777	4.908	4.998	5.051	4.868
30	CCB	-.0099	-.0005	-.0010	-.0094	-.0038	.0029

#	Sample Name	P	Pb	S	Sb	Se	Si
1	ICV	4.979	4.840	4.870	4.691	4.874	4.647
2	ICB	-.0183	.0033	-.0092	.0031	.0448	-.0018
3	LLS	.4091	.2151	.1986	.1043	.2453	.1454
4	ICSA	.0184	.0216	.0256	.0066	-.0379	.0097
5	ICSAB	.0499	1.008	.0230	.0090	-.0413	.0138
6	PREPBLKTJA	-.0087	-.0013	-.0083	.0063	.0398	.0086
7	S96T000991_L	4.484	-1.981	9.194	.3952	9.029	.9447
8	S96T000991	4.208	-.1545	7.332	.6300	1.761	.9067
9	S96T000991_D	4.517	.0656	7.322	.1115	2.204	.8517
10	S96T000991_A	43.74	39.99	46.96	38.04	41.23	39.76
11	CCV	4.910	4.847	4.852	4.694	4.852	4.650
12	CCB	-.0035	.0107	-.0111	.0008	.0412	.0001
13	S96T000998_L	18.19	-.7990	2.247	.9188	9.688	2.337
14	S96T000998	20.21	.4004	4.430	.0779	1.840	1.338
15	S96T000998_D	18.71	.6874	4.411	.1805	2.766	1.331
16	S96T000998_A	59.25	39.58	43.29	37.81	41.02	39.66
17	S96T001005_L	23.22	.5818	5.940	1.613	9.297	2.007
18	S96T001005	22.25	.8422	4.393	.6203	2.334	1.301
19	S96T001005_D	23.16	.0667	4.366	.3329	2.563	1.265
20	S96T001005_A	62.89	39.27	43.50	37.89	41.81	39.71
21	CCV	4.869	4.895	4.842	4.688	4.830	4.648
22	CCB	-.0042	.0030	-.0016	.0100	.0496	-.0022
23	S96T001012_L	30.08	1.377	2.401	.9723	10.81	2.379
24	S96T001012	30.73	1.058	2.394	-.0828	2.450	1.505
25	S96T001012_D	31.18	1.208	2.360	.3788	2.892	1.670

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#	Sample Name	P	Pb	S	Sb	Se	Si
26	S96T001012_A	70.15	40.44	41.12	37.87	40.92	40.06
27	ICSA	.0145	.0409	.0142	.0080	-.0258	.0103
28	ICSAB	.0154	.9966	.0198	.0087	-.0385	.0131
29	CCV	4.948	4.867	4.854	4.693	4.867	4.652
30	CCB	.0056	-.0025	-.0038	.0039	.0547	-.0029

#	Sample Name	Sm	Sr	Th	Ti	Tl	U
1	ICV	4.839	4.911	.0383	4.776	4.723	9.567
2	ICB	-.0133	-.0001	.0086	.0003	.0012	-.0629
3	LLS	.1900	.0199	.0085	.0195	.4183	.4620
4	ICSA	-.0107	-.0021	.0284	.0018	.0297	-.0285
5	ICSAB	-.0134	-.0022	.0222	.0015	.0134	-.0403
6	PREPBLKTJA	-.0164	-.0000	.0105	-.0001	.0024	-.1662
7	S96T000991_L	-5.460	-.0509	2.240	-.0340	3.026	-25.06
8	S96T000991	-.6647	.0089	.6302	-.0146	.7990	-5.889
9	S96T000991_D	-.6994	.0026	.4817	.0038	-.2055	-5.464
10	S96T000991_A	38.44	39.27	.9900	38.64	38.81	72.25
11	CCV	4.840	4.910	.0358	4.789	4.711	9.559
12	CCB	-.0096	.0001	.0112	.0005	-.0077	-.0423
13	S96T000998_L	-3.442	-.0202	1.692	.0559	.6105	-11.55
14	S96T000998	-.3918	.0086	.5429	.0124	.6971	-2.075
15	S96T000998_D	-.3787	.0149	.6237	.0318	.2906	-1.766
16	S96T000998_A	37.98	38.70	.9500	38.01	37.21	74.06
17	S96T001005_L	-3.088	-.0412	2.073	.0115	3.535	-14.50
18	S96T001005	-.3753	.0086	.6748	.0994	-.5494	-1.915
19	S96T001005_D	-.5917	.0086	.6304	.0506	-.4744	-1.599
20	S96T001005_A	37.98	38.91	.8199	38.13	38.26	75.15
21	CCV	4.830	4.898	.0376	4.770	4.716	9.516
22	CCB	-.0150	-.0001	.0075	-.0002	.0132	-.0684
23	S96T001012_L	-3.571	-.0312	1.895	.2466	.7404	-7.062
24	S96T001012	-.5112	.0143	.6545	.0665	.0378	5.454
25	S96T001012_D	.0628	.0203	.4583	.0260	.2226	9.417
26	S96T001012_A	37.84	38.45	.7878	38.02	38.23	82.83
27	ICSA	-.0042	-.0021	.0129	.0012	-.0394	-.0378
28	ICSAB	-.0125	-.0022	.0211	.0017	.0265	-.0500
29	CCV	4.872	4.936	.0371	4.807	4.729	9.610
30	CCB	-.0146	-.0001	.0087	.0001	.0041	-.0714

#	Sample Name	V	Y	Zn	Zr
1	ICV	4.906	.0057	4.917	4.810
2	ICB	-.0025	-.0006	.0010	-.0023
3	LLS	.0990	.0000	.0223	.0182
4	ICSA	-.0025	.0066	-.0010	-.0062
5	ICSAB	.4643	.0064	.9582	-.0065
6	PREPBLKTJA	-.0034	-.0007	.0017	-.0030
7	S96T000991_L	-1.007	-.2304	.5130	-.9071
8	S96T000991	-.0996	-.0200	.2181	-.1109
9	S96T000991_D	-.1073	-.0202	.1504	-.0860
10	S96T000991_A	39.50	.0529	40.02	38.67
11	CCV	4.904	.0056	4.918	4.805

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#	Sample Name	V	Y	Zn	Zr
12	CCB	-.0017	-.0005	.0010	-.0018
13	S96T000998_L	-.5260	-.1076	.4590	-.2521
14	S96T000998	-.0716	.0105	.3051	.1856
15	S96T000998_D	-.0362	.0168	.1981	.1930
16	S96T000998_A	39.04	.0650	39.76	38.39
17	S96T001005_L	-.7383	-.1385	.5706	-.5589
18	S96T001005	-.0867	.0008	.4903	.0207
19	S96T001005_D	-.0654	-.0058	.1806	-.0182
20	S96T001005_A	39.12	.0549	39.78	38.36
21	CCV	4.915	.0059	4.934	4.814
22	CCB	-.0029	-.0007	.0006	-.0022
23	S96T001012_L	-.6448	-.1095	.3286	-.4131
24	S96T001012	-.0726	.0073	.2005	.0560
25	S96T001012_D	.0287	.0378	.2501	.2622
26	S96T001012_A	39.09	.0902	40.05	38.15
27	ICSA	-.0015	.0068	-.0013	-.0047
28	ICSAB	.4619	.0066	.9531	-.0057
29	CCV	4.915	.0053	4.923	4.821
30	CCB	-.0031	-.0008	.0007	-.0026

File # 09606040.TXT

05/30/96 13:39
A-0004-1

LABCORE Data Entry Template for Worklist# 8084

Analyst: B. GOELKE **Instrument:** ~~ICP01~~ ICP02 **Book#** 58848A

Method: LA-505-~~151~~ 161/161 Rev/Mod B-1 (6-4-96)

Worklist Comment: ICP U-105 (SOLID ACID DIGEST)

S	Type	Sample#	R	A	Test	Matrix	Group#	Project
1	ICV				@ICP-QC	QC		
2	ICB				@ICP-QC	QC		
3	ICSA (LLS)				@ICP-QC	QC		
4	ICSAB				@ICP-QC	QC		
5	PREPSTD~~ARL~~ TJA 6/6				@ICP-A01	SOLID		
6	PREPBLK~~ARL~~ TJA 6-4-96				@ICP-A01	SOLID		
7	SERDIL	S96T001800	0	A	@ICP-A01	SOLID		
8	SAMPLE	S96T001800	0	A	@ICP-A01	SOLID	96000323	U-105 (R)
	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						
9	DUP	S96T001800	0	A	@ICP-A01	SOLID		
10	SERDIL	S96T001801	0	A	@ICP-A01	SOLID		
11	SAMPLE	S96T001801	0	A	@ICP-A01	SOLID	96000323	U-105 (R)
	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						
12	DUP	S96T001801	0	A	@ICP-A01	SOLID		

Data Entry Comments: Example for calculation of sample result:

S96T001802 $Ca = 1.585 \frac{ug}{ml} \times \frac{1}{5.9140 \frac{g}{L} \times \frac{1L}{1000ml}} = 2.68e+2 \frac{ug}{g}$

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

Note: 5.9140 g/L is sample prep dilution factor which can be found in sample prep worklist.

LABCORE Data Entry Template for Worklist# 8084

S	Type	Sample#	R	A	Test	Matrix	Group#	Project
13	CCV				@ICP-QC	QC		
14	CCB				@ICP-QC	QC		
15	SERDIL	S96T001802	0	A	@ICP-A01	SOLID		
16	SAMPLE	S96T001802	0	A	@ICP-A01	SOLID	96000323	U-105 (R)

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

17	DUP	S96T001802	0	A	@ICP-A01	SOLID		
18	SPK-PREDIG	S96T001802	0	A	@ICP-A01	SOLID		
19	SERDIL	S96T001803	0	A	@ICP-A01	SOLID		
20	SAMPLE	S96T001803	0	A	@ICP-A01	SOLID	96000323	U-105 (R)

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	S96T001803	0	A	@ICP-A01	SOLID		
22	SERDIL	S96T001804	0	A	@ICP-A01	SOLID		
23	SAMPLE	S96T001804	0	A	@ICP-A01	SOLID	96000323	U-105 (R)

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

Data Entry Comments: Example for calculation of spike recovery:

S96T001802 $Ca = \frac{6.425 - 1.585}{5} \times 100 = 96.8\%$

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

Note Spike true value is 5.0 ppm on all elements except for Ag = 1.0 and U = 10.0 ppm.

LABCORE Data Entry Template for Worklist# 8084

S	Type	Sample#	R	A	Test	Matrix	Group#	Project
24	DUP	S96T001804	0	A	@ICP-A01	SOLID		
25	CCV				@ICP-QC	QC		
26	CCB				@ICP-QC	QC		
27	SERDIL	S96T001805	0	A	@ICP-A01	SOLID		
28	SAMPLE	S96T001805	0	A	@ICP-A01	SOLID	96000323	U-105 (R)

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
29	DUP	S96T001805	0	A	@ICP-A01	SOLID
30	ICSA				@ICP-QC	QC
31	ICSAB				@ICP-QC	QC
32	CCV				@ICP-QC	QC
33	CCB				@ICP-QC	QC

Final page for worklist # 8084

Analyst Signature	Date	D.F.
[illegible]	6-4-96	
PREPSTD TTA	DIRECT	1
PREPBLK TTA	DIRECT	1
S96T001800_L	4mL-4mL-2mL-5mL	10
1800	4mL-4mL	2
1800-D	4mL-4mL	2
S96T001801_L	4mL-4mL-2mL-5mL	10
1801	4mL-4mL	2
1801-D	4mL-4mL	2
S96T001802_L	4mL-4mL-2mL-5mL	10
1802	4mL-4mL	2
1802-D	4mL-4mL	2
1802_S	4mL-4mL	2

Reviewed by:

Analyst Signature	Date	D.F.
[illegible]	6/6/96	
S96T001803_L		10
1803		2
1803-D		2
S96T001804_L		10
1804		2
1804-D		2
S96T001805_L		10
1805		2
1805-D		2

Data Entry Comments:

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

Analysis Report Summary Tue 06-04-96 03:06:09 PM page 1

#	Sample Name	File	Method	Date	Time	OpID	Type	Mode
1	ICV	960604C	ICP2	06/04/96	13:04	BJG	Q	CONC
2	ICB	960604C	ICP2	06/04/96	13:07	BJG	Q	CONC
3	LLS	960604C	ICP2	06/04/96	13:11	BJG	Q	CONC
4	ICSA	960604C	ICP2	06/04/96	13:14	BJG	Q	CONC
5	ICSAB	960604C	ICP2	06/04/96	13:17	BJG	Q	CONC
6	PREPSTDTJA	960604C	ICP2	06/04/96	13:21	BJG	S	CONC
7	PREPBLKTJA	960604C	ICP2	06/04/96	13:24	BJG	S	CONC
8	S96T001800_L	960604C	ICP2	06/04/96	13:28	BJG	S	CONC
9	S96T001800	960604C	ICP2	06/04/96	13:31	BJG	S	CONC
10	S96T001800_D	960604C	ICP2	06/04/96	13:36	BJG	S	CONC
11	S96T001801_L	960604C	ICP2	06/04/96	13:41	BJG	S	CONC
12	S96T001801	960604C	ICP2	06/04/96	13:44	BJG	S	CONC
13	S96T001801_D	960604C	ICP2	06/04/96	13:47	BJG	S	CONC
14	CCV	960604C	ICP2	06/04/96	13:51	BJG	Q	CONC
15	CCB	960604C	ICP2	06/04/96	13:56	BJG	Q	CONC
16	S96T001802_L	960604C	ICP2	06/04/96	14:00	BJG	S	CONC
17	S96T001802	960604C	ICP2	06/04/96	14:03	BJG	S	CONC
18	S96T001802_D	960604C	ICP2	06/04/96	14:06	BJG	S	CONC
19	S96T001802_S	960604C	ICP2	06/04/96	14:10	BJG	S	CONC
20	S96T001803_L	960604C	ICP2	06/04/96	14:13	BJG	S	CONC
21	S96T001803	960604C	ICP2	06/04/96	14:16	BJG	S	CONC
22	S96T001803_D	960604C	ICP2	06/04/96	14:20	BJG	S	CONC
23	S96T001804_L	960604C	ICP2	06/04/96	14:25	BJG	S	CONC
24	S96T001804	960604C	ICP2	06/04/96	14:28	BJG	S	CONC
25	S96T001804_D	960604C	ICP2	06/04/96	14:31	BJG	S	CONC
26	CCV	960604C	ICP2	06/04/96	14:35	BJG	Q	CONC
27	CCB	960604C	ICP2	06/04/96	14:38	BJG	Q	CONC
28	S96T001805_L	960604C	ICP2	06/04/96	14:41	BJG	S	CONC
29	S96T001805	960604C	ICP2	06/04/96	14:45	BJG	S	CONC
30	S96T001805_D	960604C	ICP2	06/04/96	14:48	BJG	S	CONC
31	ICSA	960604C	ICP2	06/04/96	14:52	BJG	Q	CONC
32	ICSAB	960604C	ICP2	06/04/96	14:55	BJG	Q	CONC
33	CCV	960604C	ICP2	06/04/96	14:59	BJG	Q	CONC
34	CCB	960604C	ICP2	06/04/96	15:02	BJG	Q	CONC

6-4-96
U-105 ACID DIGEST
S96T001800-05
4ml-4ml
FILE # 0960604C.TXT

SIGNATURE ABOVE REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 1137 TO 1142.

Analysis Report Averages Tue 06-04-96 03:06:09 PM page 2

#	Sample Name	Ag	Al	As	B	Ba	Be
1	ICV	4.960	4.949	5.269	5.104	5.074	5.341
2	ICB	.0011	.0069	-.0061	.0044	.0001	.0003
3	LLS	.0212	.1140	.2110	.1067	.1007	.0110
4	ICSA	.0042	245.7	-.0603	.0012	.0031	.0005
5	ICSAB	.9941	248.3	-.0715	-.0012	.5065	.5066
6	PREPSTDTJA	.9198	4.733	4.897	5.203	4.845	5.215
7	PREPBLKTJA	.0012	.1441	-.0046	.7110	.0007	.0003
8	S96T001800_L	.0908	72.96	-.1139	.6188	.0293	.0038
9	S96T001800	.0760	68.04	-.1077	.5759	.0269	.0015
10	S96T001800_D	.0780	63.52	-.1162	.4414	.0255	.0015
11	S96T001801_L	.0955	67.18	-.0684	.6521	.0157	.0019
12	S96T001801	.0896	63.19	-.0929	.5875	.0155	.0013
13	S96T001801_D	.0777	59.20	-.0727	.6399	.0146	.0013
14	CCV	5.057	4.986	5.302	5.106	5.153	5.355
15	CCB	.0023	.0207	-.0014	.0057	.0003	.0003
16	S96T001802_L	.0964	98.15	-.2418	.5300	.0200	.0042
17	S96T001802	.0866	93.47	-.1039	.4776	.0190	.0015
18	S96T001802_D	.0864	96.18	-.1504	.7232	.0188	.0015
19	S96T001802_S	1.049	95.56	5.009	5.301	4.938	5.069
20	S96T001803_L	.1043	98.46	-.1278	.7967	.0193	.0042
21	S96T001803	.0919	93.70	-.1442	.7424	.0174	.0017
22	S96T001803_D	.0936	95.51	-.1453	.6890	.0160	.0018
23	S96T001804_L	.1005	104.0	-.2792	.7283	.0297	.0053
24	S96T001804	.0913	97.75	-.1581	.6932	.0280	.0019
25	S96T001804_D	.0916	102.5	-.1393	.6948	.0257	.0019
26	CCV	5.036	5.001	5.346	5.120	5.142	5.396
27	CCB	.0026	.0237	-.0036	.0083	.0003	.0005
28	S96T001805_L	.1057	70.85	-.0619	.5093	.0251	.0061
29	S96T001805	.0847	67.09	-.0893	.4979	.0227	.0014
30	S96T001805_D	.0875	60.33	-.1003	.6334	.0219	.0015
31	ICSA	.0028	243.8	-.0362	.0042	.0031	.0007
32	ICSAB	1.004	249.2	-.0599	.0015	.5097	.5109
33	CCV	5.044	5.002	5.367	5.131	5.174	5.407
34	CCB	.0023	.0202	-.0148	.0066	.0002	.0005

#	Sample Name	Bi	Ca	Cd	Ce	Co	Cr
1	ICV	5.165	5.107	5.028	5.185	5.031	5.094
2	ICB	-.0027	.0024	.0013	-.0052	.0016	.0002
3	LLS	.2090	.2297	.0124	.2084	.0427	.0211
4	ICSA	-.0238	255.1	.0014	.0130	.0015	.0009
5	ICSAB	-.0430	256.8	.9711	.0065	.4764	.4973
6	PREPSTDTJA	4.668	4.767	4.551	5.027	4.690	4.647
7	PREPBLKTJA	.0068	.3208	.0014	-.0038	.0004	.0022
8	S96T001800_L	.1126	1.781	.1161	.1218	.0087	18.68
9	S96T001800	.1317	1.589	.0891	.1141	.0150	17.12
10	S96T001800_D	.1605	1.596	.0844	.1063	.0146	16.51
11	S96T001801_L	-.1874	1.561	.0963	-.0277	-.0019	11.31
12	S96T001801	.0380	1.509	.0896	.0863	.0126	10.77
13	S96T001801_D	.0624	1.491	.0837	.0636	.0122	10.05
14	CCV	5.234	5.330	5.133	5.235	5.146	5.214
15	CCB	.0048	.0039	.0019	-.0009	.0010	.0005

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#	Sample Name	Bi	Ca	Cd	Ce	Co	Cr
16	S96T001802_L	-.0787	1.712	.1540	.0279	.0120	12.81
17	S96T001802	.0789	1.585	.1330	.0803	.0139	12.19
18	S96T001802_D	.0487	1.896	.1367	.0874	.0155	12.23
19	S96T001802_S	4.916	6.425	4.887	5.211	4.860	16.78
20	S96T001803_L	-.0291	1.737	.1315	.0208	.0182	11.41
21	S96T001803	.0655	1.614	.1146	.0803	.0111	10.75
22	S96T001803_D	.1201	1.504	.1138	.0958	.0101	9.858
23	S96T001804_L	-.0385	1.720	.1108	.1851	.0264	16.03
24	S96T001804	.0035	1.499	.0983	.1672	.0111	14.86
25	S96T001804_D	.0490	1.886	.1000	.1625	.0113	13.81
26	CCV	5.221	5.266	5.113	5.220	5.128	5.189
27	CCB	-.0040	.0045	.0026	.0023	.0011	.0004
28	S96T001805_L	.2748	1.345	.0995	.1726	.0264	10.67
29	S96T001805	.0228	1.203	.0726	.1401	.0114	10.02
30	S96T001805_D	.0200	1.087	.0683	.1533	.0100	9.594
31	ICSA	-.0116	261.5	.0003	.0166	-.0001	.0004
32	ICSAB	-.0432	262.5	.9823	.0099	.4853	.5026
33	CCV	5.196	5.295	5.122	5.256	5.126	5.203
34	CCB	.0299	.0035	.0023	.0078	-.0002	.0010

#	Sample Name	Cu	Eu	Fe	K	La	Li
1	ICV	5.287	-.0046	5.135	4.865	5.126	5.128
2	ICB	.0005	-.0020	.0014	.1026	.0008	-.0017
3	LLS	.0210	-.0010	.1053	Q.6689	.1044	.0197
4	ICSA	-.0109	-.0484	95.45	.1970	-.0038	.0018
5	ICSAB	.5120	-.0467	96.20	.0065	-.0043	1.022
6	PREPSTDTJA	4.795	-.0063	4.704	4.676	4.905	4.968
7	PREPBLKTJA	.0069	-.0039	.0195	.2046	.0004	-.0038
8	S96T001800_L	.0574	-.0168	7.060	10.81	.0866	-.0138
9	S96T001800	.0508	-.0036	6.500	8.921	.0779	-.0044
10	S96T001800_D	.0529	-.0028	6.865	8.520	.0748	-.0040
11	S96T001801_L	.0465	-.0225	2.928	8.733	.0490	.1406
12	S96T001801	.0430	-.0015	2.681	8.800	.0519	.1500
13	S96T001801_D	.0460	-.0020	2.592	7.641	.0454	.1382
14	CCV	5.281	-.0038	5.228	4.874	5.181	5.071
15	CCB	.0002	-.0016	.0012	-.0991	.0011	-.0010
16	S96T001802_L	.0730	-.0168	3.466	12.28	.0599	.1394
17	S96T001802	.0652	-.0019	3.286	11.04	.0633	.1495
18	S96T001802_D	.0629	-.0002	3.278	11.51	.0640	.1481
19	S96T001802_S	4.855	-.0041	8.067	15.39	5.088	5.059
20	S96T001803_L	.0708	-.0060	3.393	11.78	.0669	.0138
21	S96T001803	.0633	-.0003	3.193	10.72	.0598	.0177
22	S96T001803_D	.0650	.0001	2.900	10.76	.0586	.0122
23	S96T001804_L	.0799	-.0160	7.260	12.33	.1122	-.0139
24	S96T001804	.0679	-.0024	6.733	11.13	.0996	-.0008
25	S96T001804_D	.0738	-.0014	6.223	11.69	.0943	-.0005
26	CCV	5.320	-.0044	5.221	4.759	5.165	5.128
27	CCB	.0002	-.0012	.0022	.2372	.0016	-.0007
28	S96T001805_L	.1205	-.0166	6.217	9.810	.0925	-.0081
29	S96T001805	.1042	-.0025	5.834	7.753	.0813	-.0010
30	S96T001805_D	.0449	-.0009	5.721	6.967	.0803	.0064
31	ICSA	-.0104	-.0621	96.40	.1871	-.0047	.0036

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#	Sample Name	Cu	Eu	Fe	K	La	Li
32	ICSAB	.5135	-.0563	97.60	.3435	-.0050	1.022
33	CCV	5.334	-.0040	5.220	4.871	5.194	5.141
34	CCB	.0005	-.0009	.0014	.1822	.0017	-.0007

#	Sample Name	Mg	Mn	Mo	Na	Nd	Ni
1	ICV	4.959	4.935	5.057	5.050	5.186	5.042
2	ICB	.0079	-.0004	-.0028	-.0160	.0029	.0011
3	LLS	.2101	.0193	.0977	.2017	.2025	.0435
4	ICSA	247.3	-.0071	-.0145	203.7	.0037	-.0112
5	ICSAB	256.1	.4578	-.0073	205.2	.0035	.9426
6	PREPSTDTJA	4.493	4.528	4.650	5.479	4.889	4.686
7	PREPBLKTJA	.0310	-.0003	.0013	1.004	.0002	-.0022
8	S96T001800_L	.1068	1.801	.1655	1056.	.2408	.8786
9	S96T001800	.1234	1.664	.1906	992.5	.2577	.7265
10	S96T001800_D	.1256	1.604	.1792	1009.	.2429	.6980
11	S96T001801_L	.0081	.9175	.1555	1240.	.1487	.9323
12	S96T001801	.0711	.8771	.1919	1150.	.1724	.9045
13	S96T001801_D	.0806	.8165	.1772	1048.	.1595	.8494
14	CCV	4.998	5.047	5.154	5.018	5.215	5.140
15	CCB	.0078	-.0003	-.0026	-.0112	-.0000	-.0050
16	S96T001802_L	.0515	1.126	.2711	1231.	.2220	1.354
17	S96T001802	.0466	1.081	.2692	1166.	.2123	1.332
18	S96T001802_D	.0636	1.081	.2773	1121.	.2119	1.344
19	S96T001802_S	4.570	5.722	5.142	1167.	5.157	6.136
20	S96T001803_L	.0841	1.097	.2536	1281.	.1906	1.014
21	S96T001803	.0790	1.038	.2572	1218.	.1978	.9702
22	S96T001803_D	.0763	.9510	.2657	1160.	.1835	.9256
23	S96T001804_L	.0980	2.193	.2864	1164.	.2820	.7038
24	S96T001804	.0816	2.046	.2697	1096.	.2887	.6460
25	S96T001804_D	.0537	1.904	.2797	1102.	.2729	.6736
26	CCV	5.035	5.031	5.144	5.045	5.208	5.129
27	CCB	.0023	.0001	-.0005	-.0039	.0022	-.0004
28	S96T001805_L	.1433	1.849	.2033	1137.	.2199	.4342
29	S96T001805	.0631	1.746	.1867	1076.	.2242	.4653
30	S96T001805_D	.0713	1.669	.1645	1096.	.2189	.4160
31	ICSA	247.1	-.0065	-.0156	198.6	.0010	-.0080
32	ICSAB	258.2	.4648	-.0123	204.2	.0017	.9730
33	CCV	5.005	5.033	5.161	5.059	5.234	5.106
34	CCB	.0031	.0001	-.0012	-.0043	.0006	-.0021

#	Sample Name	P	Pb	S	Sb	Se	Si
1	ICV	5.317	4.970	4.980	4.834	5.059	4.737
2	ICB	.0012	-.0174	-.0143	.0041	.0563	-.0099
3	LLS	.4128	.2072	.1936	.1032	.2465	Q.1087
4	ICSA	.0162	.0234	-.0068	.0079	-.0107	.0012
5	ICSAB	.0256	.9915	-.0248	.0032	-.0426	-.0185
6	PREPSTDTJA	4.957	4.336	4.654	4.699	4.579	6.134
7	PREPBLKTJA	.0363	-.0143	.0998	.0080	.0616	.3359
8	S96T001800_L	11.72	.7918	34.95	.0693	.6280	2.311
9	S96T001800	11.11	.7320	32.27	.0209	.1024	2.218

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#	Sample Name	P	Pb	S	Sb	Se	Si
10	S96T001800_D	17.62	.7791	30.27	-.0003	.1291	1.505
11	S96T001801_L	13.72	.2950	27.21	-.0468	.6398	.4204
12	S96T001801_	12.81	.4428	25.44	.0118	.1428	.4543
13	S96T001801_D	12.20	.4117	23.88	-.0109	.1514	.4628
14	CCV	5.234	5.096	4.977	4.927	5.066	4.851
15	CCB	-.0116	-.0112	-.0187	-.0009	.0725	-.0009
16	S96T001802_L	9.371	.5025	27.09	.0183	.6135	1.010
17	S96T001802_	9.171	.5476	25.88	-.0046	.1557	1.050
18	S96T001802_D	9.904	.5791	26.31	.0067	.1520	1.161
19	S96T001802_S	14.46	5.231	30.14	5.025	4.865	5.279
20	S96T001803_L	8.491	.5330	24.27	.0222	.7220	.6683
21	S96T001803_	7.902	.5281	23.09	-.0015	.1639	.6384
22	S96T001803_D	7.417	.5363	21.48	.0026	.1922	.5334
23	S96T001804_L	13.55	1.126	28.52	.0607	.6911	.9223
24	S96T001804_	12.99	.9615	27.07	.0163	.1527	.9240
25	S96T001804_D	12.78	.9110	25.59	-.0168	.1699	.9189
26	CCV	5.264	5.071	5.006	4.927	5.084	4.834
27	CCB	.0046	-.0123	-.0154	.0033	.0727	.0024
28	S96T001805_L	9.840	.7704	15.46	.1421	.8648	1.565
29	S96T001805_	9.490	.7438	14.72	-.0011	.1605	1.537
30	S96T001805_D	8.654	.7182	13.35	.0213	.1886	1.565
31	ICSA	.0193	.0166	.0149	.0079	.0151	.0187
32	ICSAB	.0325	1.035	-.0461	.0130	.0030	-.0079
33	CCV	5.194	5.058	4.984	4.916	5.123	4.835
34	CCB	.0036	-.0075	-.0131	-.0003	.0777	.0042

#	Sample Name	Sm	Sr	Th	Ti	Tl	U
1	ICV	4.999	5.069	-.0079	4.948	4.926	9.903
2	ICB	-.0253	-.0001	.0089	.0003	.0074	-.0897
3	LLS	.1895	.0204	.0015	.0204	.3923	.4557
4	ICSA	-.0240	-.0022	.0083	.0010	.0025	-.0429
5	ICSAB	-.0273	.0016	.0022	.0017	-.0100	-.0560
6	PREPSTDTJA	4.801	4.819	-.0100	4.409	4.395	9.464
7	PREPBLKTJA	-.0592	-.0001	.0170	.0015	-.0204	-.2078
8	S96T001800_L	-.1546	.0171	.2653	.0250	-.1228	.1079
9	S96T001800_	-.0352	.0176	.1675	.0249	-.0255	.7186
10	S96T001800_D	-.0271	.0168	.1569	.0341	.0218	.7107
11	S96T001801_L	-.2907	.0075	.1553	.0053	-.3767	-.5437
12	S96T001801_	-.0130	.0112	.1116	.0128	-.0307	.4662
13	S96T001801_D	-.0154	.0105	.1040	.0060	.0235	.4199
14	CCV	5.046	5.116	-.0081	5.006	4.937	10.02
15	CCB	-.0155	-.0001	.0091	-.0002	-.0114	-.0595
16	S96T001802_L	-.1777	.0112	.2029	.0055	-.1833	-.1294
17	S96T001802_	-.0167	.0123	.1311	.0075	-.0497	.4875
18	S96T001802_D	.0027	.0129	.1280	.0085	-.0368	.5462
19	S96T001802_S	4.902	4.901	.1207	4.548	4.534	10.17
20	S96T001803_L	-.0295	.0117	.1695	.0077	-.0046	.4666
21	S96T001803_	.0126	.0110	.1255	.0099	-.0162	.5887
22	S96T001803_D	.0163	.0100	.1193	.0118	-.0403	.5542
23	S96T001804_L	-.1513	.0127	.3120	.0174	.1561	1.194
24	S96T001804_	-.0046	.0136	.2459	.0190	.0125	1.611
25	S96T001804_D	.0130	.0134	.2240	.0113	-.0012	1.548

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#	Sample Name	Sm	Sr	Th	Ti	Tl	U
26	CCV	5.042	5.109	-.0071	5.005	4.970	10.00
27	CCB	-.0120	.0001	.0083	-.0002	-.0087	-.0438
28	S96T001805_L	-.1748	.0074	.3002	.0030	-.1057	.7417
29	S96T001805_	-.0019	.0098	.1956	.0050	-.0098	1.274
30	S96T001805_D	.0156	.0091	.1966	.0079	-.0252	1.262
31	ICSA	-.0050	-.0022	.0108	.0010	.0125	-.0370
32	ICSAB	-.0174	.0016	.0105	.0013	.0348	-.0607
33	CCV	5.068	5.133	-.0076	5.023	4.974	10.04
34	CCB	-.0076	.0000	.0079	.0000	.0007	-.0309

#	Sample Name	V	Y	Zn	Zr
1	ICV	5.056	.0051	5.018	4.973
2	ICB	-.0035	-.0009	-.0002	-.0044
3	LLS	.1012	-.0000	.0219	.0184
4	ICSA	-.0033	.0061	.0002	-.0068
5	ICSAB	.4806	.0058	.9800	-.0076
6	PREPSTDTJA	4.665	.0029	4.392	4.919
7	PREPBLKTJA	-.0094	-.0025	.0153	-.0056
8	S96T001800_L	-.0282	.0274	.1737	.0747
9	S96T001800_	-.0078	.0307	.1629	.0926
10	S96T001800_D	-.0009	.0296	.1663	.1126
11	S96T001801_L	-.0478	.0096	.1231	.0276
12	S96T001801_	-.0002	.0191	.1308	.0684
13	S96T001801_D	-.0019	.0175	.1304	.0648
14	CCV	5.151	.0062	5.130	5.058
15	CCB	-.0028	-.0007	-.0004	-.0031
16	S96T001802_L	-.0288	.0197	.1296	.0480
17	S96T001802_	-.0038	.0247	.1243	.0781
18	S96T001802_D	-.0006	.0255	.1495	.0818
19	S96T001802_S	4.788	.0306	4.789	5.212
20	S96T001803_L	-.0005	.0249	.1560	.0816
21	S96T001803_	.0008	.0247	.1494	.0848
22	S96T001803_D	.0013	.0230	.1408	.0754
23	S96T001804_L	-.0195	.0316	.1727	.2610
24	S96T001804_	-.0017	.0348	.1451	.2704
25	S96T001804_D	.0014	.0332	.1459	.2310
26	CCV	5.139	.0058	5.115	5.041
27	CCB	-.0016	-.0006	-.0003	-.0023
28	S96T001805_L	-.0238	.0224	.2772	.1316
29	S96T001805_	.0004	.0274	.2261	.1586
30	S96T001805_D	.0042	.0264	.1801	.1508
31	ICSA	.0002	.0070	-.0008	-.0043
32	ICSAB	.4894	.0065	.9965	-.0066
33	CCV	5.154	.0058	5.110	5.062
34	CCB	-.0007	-.0002	.0002	-.0023

File # 960529c.DAT

LABCORE Data Entry Template for Worklist# 8085

Analyst: B. Goecke **Instrument:** ICP01 _____ **Book#** 53B9F6

Method: LA-505-151/~~161~~ 165 Rev/Mod D-3 (5-29-96)

Worklist Comment: ICP U-105 (SOLID ACID DIGEST)

S	Type	Sample#	R	A	Test	Matrix	Group#	Project
1	ICV				@ICP-QC	QC		
2	ICB				@ICP-QC	QC		
	LLS							
3	ICSA				@ICP-QC	QC		
4	ICSAB				@ICP-QC	QC		
5	PREPSTDARL				@ICP-A01	SOLID		
6	PREPBLKARL				@ICP-A01	SOLID		
7	SERDIL	S96T001806	0	A	@ICP-A01	SOLID		
8	SAMPLE	S96T001806	0	A	@ICP-A01	SOLID	96000323	U-105 (R)
	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						
9	DUP	S96T001806	0	A	@ICP-A01	SOLID		
10	CCV				@ICP-QC	QC		
11	CCB				@ICP-QC	QC		
12	SERDIL	S96T001807	0	A	@ICP-A01	SOLID		
13	SAMPLE	S96T001807	0	A	@ICP-A01	SOLID	96000323	U-105 (R)
	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 ,						

Data Entry Comments: Example for calculation of sample results:

S96T001807 $Cr = 12.444 \frac{ug}{ml} \times \frac{1}{5.196 \frac{g}{L} \times \frac{1L}{1000ml}} = 2.39e+3 \frac{ug}{g}$

SP 6/3/96

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

Note: 5.196 is sample prep dilution factor which can be found in sample prep worklist.

LABCORE Data Entry Template for Worklist# 8085

S	Type	Sample#	R	A	Test	Matrix	Group#	Project
					SM-A-01 , SR-A-01 , TI-A-01 , TL-A-01 , U-A-01 , V-A-01 , ZN-A-01 , ZR-A-01			
14	DUP	S96T001807	0	A	@ICP-A01	SOLID		
15	SPK-PREDIG	S96T001807	0	A	@ICP-A01	SOLID		
16	SERDIL	S96T001808	0	A	@ICP-A01	SOLID		
17	SAMPLE	S96T001808	0	A	@ICP-A01	SOLID	96000323	U-105 (R)
		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	S96T001808	0	A	@ICP-A01	SOLID		
19	SERDIL	S96T001809	0	A	@ICP-A01	SOLID		
20	SAMPLE	S96T001809	0	A	@ICP-A01	SOLID	96000323	U-105 (R)
		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	S96T001809	0	A	@ICP-A01	SOLID		
22	CCV				@ICP-QC	QC		
23	CCB				@ICP-QC	QC		
24	SERDIL	S96T001810	0	A	@ICP-A01	SOLID		
25	SAMPLE	S96T001810	0	A	@ICP-A01	SOLID	96000323	U-105 (R)
		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: Spike true value is 5.0 ppm for all elements except for Ag = 1.0 and U = 10.0 ppm.

Example for calculation of spike recovery:

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

S96T001807 $Cr = \frac{17.808 - 12.444}{5} \times 100 = 107.3\%$

LABCORE Data Entry Template for Worklist# 8085

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	S96T001810	0	A	@ICP-A01	SOLID		
	SPK - PRENG S96T001810							
27	ICSA				@ICP-QC	QC		
28	ICSAB				@ICP-QC	QC		
29	CCV				@ICP-QC	QC		
30	CCB				@ICP-QC	QC		

Final page for worklist # 8085

Reviewed by:

Analyst Signature	Date		Analyst Signature	Date
[signature]	5-29-96		[signature]	6/4/96

PREPSTD ML	DIRECT	D.F.
PREPBLK ML	DIRECT	1
		1
S96T001806-L	2ml-f-l - 2ml-f-l	25
1806	2ml-f-l	5
1806-D	2 - f	5
S96T001807-L	2-f-2-f	25
1807	2-f	5
1807-D	2-f	5
1807-S	2-f	5
S96T001808-L	2-f-2-f	25
1808	2-f	5
1808-D	2-f	5
S96T001808-L	2-f-2-f	25
1809	2-f	5
1809-D	2-f	5
S96T001810-L	2-f-2-f	25
1810	2-f	5
1810-D	2-f	5
1810-S	2-f	5

Data Entry Comments:

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

Identity 1: ICV Identity 2: Quality Control 5:57 PM May 29, 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	4.959	5.058	5.015	4.814	4.908	4.976	5.111	5.178
S.D.	0.019	0.019	0.027	0.012	0.011	0.023	0.012	0.020
% R.S.D.	0.386	0.380	0.540	0.255	0.232	0.459	0.242	0.392

	Zn (ppm)	Ni (ppm)	La (ppm)	Fe (ppm)	Ca (ppm)	Cr (ppm)	Nd (ppm)	U (ppm)
Mean	4.985	4.974	5.116	5.101	5.017	4.980	5.430	9.803
S.D.	0.013	0.021	0.019	0.049	0.020	0.016	0.026	0.049
% R.S.D.	0.259	0.415	0.367	0.959	0.396	0.326	0.486	0.496

	Ce (ppm)	Sm (ppm)	Ba (ppm)	P (ppm)	S (ppm)	Mg (ppm)	As (ppm)	Na (ppm)
Mean	5.191	5.120	5.087	5.293	5.017	4.787	5.094	5.165
S.D.	0.019	0.021	0.019	0.018	0.011	0.017	0.038	0.023
% R.S.D.	0.374	0.404	0.369	0.332	0.227	0.350	0.746	0.452

	Mo (ppm)	Se (ppm)	Ag (ppm)	Pb (ppm)	Ti (ppm)	Cd (ppm)	B (ppm)	K (ppm)
Mean	4.969	5.237	4.723	5.011	4.885	4.979	5.093	5.192
S.D.	0.011	0.019	0.063	0.048	0.016	0.012	0.032	0.043
% R.S.D.	0.229	0.363	1.343	0.955	0.334	0.249	0.626	0.833

	Mn (ppm)	Sb (ppm)	V (ppm)	Be (ppm)	Tl (ppm)
Mean	4.990	4.705	5.020	5.205	4.910
S.D.	0.017	0.025	0.017	0.019	0.017
% R.S.D.	0.344	0.534	0.334	0.356	0.341

5-29-96
U-105 AND DIGEST
836T001806-10
FILE # 960529C.DAT

SIGNATURE ABOVE REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 1146 TO 1177.

Identity 1: ICB Identity 2: Quality Control 5:59 PM May 29, 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	-0.012	0.001	-0.006	0.004	0.002	0.002
S.D.	0.001	0.001	0.015	0.002	0.001	0.002	0.001	0.001
% R.S.D.	124.945	40.000	122.705	137.446	17.478	43.304	61.293	39.059

	Zn (ppm)	Ni (ppm)	La (ppm)	Fe (ppm)	Ca (ppm)	Cr (ppm)	Nd (ppm)	U (ppm)
Mean	0.001	0.002	0.000	0.002	-0.002	0.001	0.005	-0.000
S.D.	0.001	0.001	0.002	0.002	0.001	0.001	0.005	0.001
% R.S.D.	86.733	55.711	655618.832	122.210	37.517	117.478	85.962	34152.633

	Ce (ppm)	Sm (ppm)	Ba (ppm)	P (ppm)	S (ppm)	Mg (ppm)	As (ppm)	Na (ppm)
Mean	0.022	0.002	0.002	-0.002	-0.006	0.001	0.006	0.036
S.D.	0.009	0.004	0.001	0.005	0.003	0.000	0.005	0.001
% R.S.D.	39.679	199.601	29.395	251.631	43.757	32.826	84.484	3.685

	Mo (ppm)	Se (ppm)	Ag (ppm)	Pb (ppm)	Ti (ppm)	Cd (ppm)	B (ppm)	K (ppm)
Mean	0.000	-0.001	0.062	-0.016	0.002	0.002	0.006	0.069
S.D.	0.002	0.013	0.016	0.017	0.000	0.001	0.001	0.012
% R.S.D.	347.676	1515.777	26.276	106.650	31.207	66.640	12.664	17.854

	Mn (ppm)	Sb (ppm)	V (ppm)	Be (ppm)	Tl (ppm)
Mean	0.001	0.061	0.003	0.001	-0.001
S.D.	0.000	0.050	0.001	0.001	0.015
% R.S.D.	30.492	81.207	22.186	39.729	1202.825

Identity 1: LLS Identity 2: Quality Control 6:02 PM May 29, 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	0.024	0.022	0.199	0.130	0.093	0.040	0.021	0.022
S.D.	0.001	0.000	0.006	0.003	0.005	0.003	0.000	0.000
% R.S.D.	2.353	0.701	2.826	2.212	4.925	7.698	0.427	1.214

	Zn (ppm)	Ni (ppm)	La (ppm)	Fe (ppm)	Ca (ppm)	Cr (ppm)	Nd (ppm)	U (ppm)
Mean	0.022	0.042	0.108	0.105	0.190	0.021	0.199	0.558
S.D.	0.000	0.002	0.002	0.002	0.000	0.001	0.006	0.026
% R.S.D.	0.742	4.372	2.066	1.817	0.134	5.499	2.894	4.731

	Ce (ppm)	Sm (ppm)	Ba (ppm)	P (ppm)	S (ppm)	Mg (ppm)	As (ppm)	Na (ppm)
Mean	0.209	0.228	0.103	0.442	0.198	0.196	0.205	0.229
S.D.	0.007	0.005	0.000	0.007	0.007	0.000	0.007	0.003
% R.S.D.	3.165	1.982	0.347	1.661	3.635	0.216	3.215	1.159

	Mo (ppm)	Se (ppm)	Ag (ppm)	Pb (ppm)	Ti (ppm)	Cd (ppm)	B (ppm)	K (ppm)
Mean	0.098	0.222	0.026	0.187	0.023	0.011	0.106	0.568
S.D.	0.001	0.016	0.001	0.017	0.000	0.000	0.002	0.019
% R.S.D.	0.604	7.260	2.087	8.849	1.407	2.274	1.417	3.308

	Mn (ppm)	Sb (ppm)	V (ppm)	Be (ppm)	Tl (ppm)
Mean	0.022	0.110	0.101	0.012	0.381
S.D.	0.000	0.049	0.001	0.000	0.016
% R.S.D.	1.610	44.310	0.756	3.132	4.191

Identity 1: ICSA Identity 2: Quality Control 6:05 PM May 29, 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	0.018	196.560	0.003	0.001	0.001
S.D.	0.001	0.000	0.003	0.003	0.233	0.002	0.001	0.000
% R.S.D.	29.876	1.589	11.380	15.251	0.119	54.837	36.150	0.036

	Zn (ppm)	Ni (ppm)	La (ppm)	Fe (ppm)	Ca (ppm)	Cr (ppm)	Nd (ppm)	U (ppm)
Mean	-0.005	0.006	0.008	97.051	104.687	0.001	-0.003	0.063
S.D.	0.000	0.001	0.002	0.212	0.160	0.002	0.003	0.019
% R.S.D.	5.877	26.030	26.516	0.218	0.153	156.672	111.063	30.307

	Ce (ppm)	Sm (ppm)	Ba (ppm)	P (ppm)	S (ppm)	Mg (ppm)	As (ppm)	Na (ppm)
Mean	0.010	0.042	0.004	0.008	-0.047	101.353	0.011	194.574
S.D.	0.004	0.006	0.000	0.022	0.011	0.184	0.003	0.818
% R.S.D.	40.244	14.230	2.566	261.843	24.165	0.181	25.242	0.420

	Mo (ppm)	Se (ppm)	Ag (ppm)	Pb (ppm)	Ti (ppm)	Cd (ppm)	B (ppm)	K (ppm)
Mean	-0.002	0.038	0.002	-0.015	0.002	-0.001	0.014	-0.075
S.D.	0.003	0.016	0.000	0.007	0.000	0.001	0.001	0.004
% R.S.D.	154.695	41.442	17.362	46.227	15.259	122.784	8.424	5.453

	Mn (ppm)	Sb (ppm)	V (ppm)	Be (ppm)	Tl (ppm)
Mean	0.005	0.060	-0.001	0.003	-0.029
S.D.	0.001	0.012	0.000	0.000	0.018
% R.S.D.	16.903	19.914	27.090	7.754	62.348

Identity 1: ICSAB Identity 2: Quality Control 6:08 PM May 29, 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	-0.032	0.010	196.198	0.492	0.502	0.965
S.D.	0.001	0.000	0.003	0.003	0.206	0.004	0.001	0.008
% R.S.D.	404.464	2.857	9.226	26.816	0.105	0.727	0.240	0.803

	Zn (ppm)	Ni (ppm)	La (ppm)	Fe (ppm)	Ca (ppm)	Cr (ppm)	Nd (ppm)	U (ppm)
Mean	0.987	0.977	0.008	97.033	104.627	0.501	0.024	0.083
S.D.	0.002	0.005	0.002	0.195	0.033	0.006	0.002	0.043
% R.S.D.	0.243	0.531	20.263	0.201	0.032	1.126	10.061	51.158

	Ce (ppm)	Sm (ppm)	Ba (ppm)	P (ppm)	S (ppm)	Mg (ppm)	As (ppm)	Na (ppm)
Mean	0.007	0.019	0.512	0.056	-0.019	103.360	0.016	193.604
S.D.	0.013	0.009	0.001	0.011	0.005	0.239	0.003	1.347
% R.S.D.	202.809	49.234	0.241	19.084	29.069	0.231	20.823	0.696

	Mo (ppm)	Se (ppm)	Ag (ppm)	Pb (ppm)	Ti (ppm)	Cd (ppm)	B (ppm)	K (ppm)
Mean	-0.002	0.013	1.008	0.990	0.001	0.993	0.015	0.022
S.D.	0.001	0.035	0.001	0.019	0.000	0.005	0.002	0.008
% R.S.D.	47.856	268.769	0.137	1.875	27.261	0.487	12.707	37.424

	Mn (ppm)	Sb (ppm)	V (ppm)	Be (ppm)	Tl (ppm)
Mean	0.503	0.110	0.495	0.503	0.003
S.D.	0.001	0.040	0.001	0.001	0.016
% R.S.D.	0.244	36.671	0.108	0.193	572.023

Identity 1: prepstdarl Identity 2: direct 6:13 PM May 29, 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	5.038	4.844	4.583	6.561	4.813	4.819	4.608	4.799
S.D.	0.015	0.008	0.012	0.018	0.010	0.027	0.003	0.025
% R.S.D.	0.301	0.173	0.258	0.273	0.205	0.561	0.075	0.522

	Zn (ppm)	Ni (ppm)	La (ppm)	Fe (ppm)	Ca (ppm)	Cr (ppm)	Nd (ppm)	U (ppm)
Mean	4.564	4.791	4.923	4.955	5.034	4.740	5.055	9.429
S.D.	0.017	0.018	0.026	0.047	0.016	0.014	0.034	0.063
% R.S.D.	0.379	0.378	0.529	0.945	0.312	0.286	0.682	0.671

	Ce (ppm)	Sm (ppm)	Ba (ppm)	P (ppm)	S (ppm)	Mg (ppm)	As (ppm)	Na (ppm)
Mean	5.120	4.966	4.870	5.163	4.869	4.562	4.812	5.546
S.D.	0.024	0.014	0.007	0.059	0.064	0.019	0.039	0.027
% R.S.D.	0.471	0.280	0.154	1.149	1.313	0.418	0.809	0.481

	Mo (ppm)	Se (ppm)	Ag (ppm)	Pb (ppm)	Ti (ppm)	Cd (ppm)	B (ppm)	K (ppm)
Mean	4.791	4.812	0.910	4.527	4.459	4.670	5.282	4.889
S.D.	0.024	0.007	0.002	0.056	0.012	0.013	0.026	0.015
% R.S.D.	0.500	0.142	0.217	1.234	0.263	0.273	0.486	0.316

	Mn (ppm)	Sb (ppm)	V (ppm)	Be (ppm)	Tl (ppm)
Mean	4.751	4.758	4.754	5.103	4.429
S.D.	0.020	0.059	0.016	0.018	0.028
% R.S.D.	0.421	1.245	0.327	0.343	0.623

Identity 1: prepblkarl Identity 2: direct 6:16 PM May 29, 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	0.003	0.186	0.105	0.003	0.011	0.002
S.D.	0.000	0.000	0.002	0.003	0.007	0.003	0.000	0.000
% R.S.D.	19.201	4.879	63.629	1.399	6.344	100.049	4.019	9.800

	Zn (ppm)	Ni (ppm)	La (ppm)	Fe (ppm)	Ca (ppm)	Cr (ppm)	Nd (ppm)	U (ppm)
Mean	0.012	-0.001	0.002	0.036	0.243	0.011	0.010	-0.016
S.D.	0.000	0.001	0.001	0.003	0.002	0.000	0.004	0.035
% R.S.D.	2.718	51.051	75.664	8.758	0.939	1.928	42.275	224.204

	Ce (ppm)	Sm (ppm)	Ba (ppm)	P (ppm)	S (ppm)	Mg (ppm)	As (ppm)	Na (ppm)
Mean	0.060	-0.012	0.002	0.025	0.108	0.030	-0.002	0.789
S.D.	0.007	0.009	0.000	0.008	0.007	0.002	0.002	0.004
% R.S.D.	11.875	72.439	5.292	33.106	6.637	6.631	93.139	0.505

	Mo (ppm)	Se (ppm)	Ag (ppm)	Pb (ppm)	Ti (ppm)	Cd (ppm)	B (ppm)	K (ppm)
Mean	0.003	-0.007	0.010	0.010	0.002	0.001	0.426	0.289
S.D.	0.001	0.008	0.000	0.001	0.000	0.001	0.004	0.006
% R.S.D.	16.701	104.769	4.344	12.229	13.234	57.576	0.921	2.138

	Mn (ppm)	Sb (ppm)	V (ppm)	Be (ppm)	Tl (ppm)
Mean	0.002	0.028	0.004	0.001	0.027
S.D.	0.000	0.017	0.000	0.000	0.018
% R.S.D.	15.068	61.015	9.596	25.170	65.363

Identity 1: S96T001806_L Identity 2: 2ml-8ml-2ml-8ml 6:20 PM May 29, 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	0.586	0.035	0.007	1.073	72.302	0.103	0.088	0.019
S.D.	0.053	0.003	0.105	0.083	0.152	0.045	0.008	0.009
% R.S.D.	8.997	9.758	1498.437	7.771	0.210	43.514	9.025	44.995

	Zn (ppm)	Ni (ppm)	La (ppm)	Fe (ppm)	Ca (ppm)	Cr (ppm)	Nd (ppm)	U (ppm)
Mean	0.274	1.537	0.296	18.979	2.044	16.959	0.262	6.704
S.D.	0.010	0.035	0.056	0.223	0.019	0.067	0.335	1.887
% R.S.D.	3.677	2.292	18.991	1.175	0.928	0.397	128.049	28.140

	Ce (ppm)	Sm (ppm)	Ba (ppm)	P (ppm)	S (ppm)	Mg (ppm)	As (ppm)	Na (ppm)
Mean	0.086	0.740	0.074	6.422	22.324	0.408	0.075	1129.193
S.D.	0.391	0.383	0.010	0.038	0.226	0.018	0.022	9.213
% R.S.D.	455.209	51.752	13.441	0.585	1.011	4.494	29.529	0.816

	Mo (ppm)	Se (ppm)	Ag (ppm)	Pb (ppm)	Ti (ppm)	Cd (ppm)	B (ppm)	K (ppm)
Mean	0.132	0.425	-0.036	1.114	0.061	0.300	0.714	11.761
S.D.	0.026	0.422	0.032	0.081	0.008	0.010	0.012	0.811
% R.S.D.	19.392	99.522	89.245	7.282	12.945	3.274	1.618	6.893

	Mn (ppm)	Sb (ppm)	V (ppm)	Be (ppm)	Tl (ppm)
Mean	5.554	0.511	-0.097	0.002	-1.013
S.D.	0.024	0.212	0.025	0.004	0.917
% R.S.D.	0.436	41.516	25.809	159.813	90.449

Identity 1: S96T001806 Identity 2: 2ml-8ml 6:24 PM May 29, 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	0.509	0.019	-0.146	0.899	71.629	0.036	0.100	0.006
S.D.	0.006	0.000	0.013	0.004	0.208	0.009	0.001	0.001
% R.S.D.	1.134	2.604	8.911	0.400	0.290	24.974	1.450	20.975

	Zn (ppm)	Ni (ppm)	La (ppm)	Fe (ppm)	Ca (ppm)	Cr (ppm)	Nd (ppm)	U (ppm)
Mean	0.223	1.537	0.268	18.102	1.880	16.438	0.619	3.909
S.D.	0.001	0.003	0.007	0.066	0.002	0.034	0.038	0.098
% R.S.D.	0.657	0.205	2.725	0.363	0.098	0.208	6.123	2.507

	Ce (ppm)	Sm (ppm)	Ba (ppm)	P (ppm)	S (ppm)	Mg (ppm)	As (ppm)	Na (ppm)
Mean	0.439	0.127	0.063	6.656	21.568	0.124	-0.028	1098.726
S.D.	0.020	0.023	0.000	0.087	0.100	0.004	0.007	3.320
% R.S.D.	4.460	18.375	0.705	1.311	0.462	2.966	26.398	0.302

	Mo (ppm)	Se (ppm)	Ag (ppm)	Pb (ppm)	Ti (ppm)	Cd (ppm)	B (ppm)	K (ppm)
Mean	0.187	0.341	0.019	1.762	0.020	0.302	0.621	8.203
S.D.	0.006	0.100	0.004	0.032	0.001	0.002	0.004	0.078
% R.S.D.	3.082	29.311	20.992	1.827	6.150	0.735	0.626	0.955

	Mn (ppm)	Sb (ppm)	V (ppm)	Be (ppm)	Tl (ppm)
Mean	5.355	0.068	-0.033	0.003	-0.178
S.D.	0.005	0.034	0.002	0.001	0.061
% R.S.D.	0.097	50.163	6.597	51.367	34.492

HC-SD-WM-DP-182, REV. 1

Identity 1: S96T001806_D Identity 2: 2ml-8ml 6:28 PM May 29, 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	0.474	0.019	-0.126	0.783	66.893	0.057	0.103	0.009
S.D.	0.007	0.000	0.003	0.014	0.120	0.009	0.002	0.002
% R.S.D.	1.565	1.001	2.726	1.833	0.179	15.818	2.218	16.155

	Zn (ppm)	Ni (ppm)	La (ppm)	Fe (ppm)	Ca (ppm)	Cr (ppm)	Nd (ppm)	U (ppm)
Mean	0.209	1.429	0.239	17.218	1.558	15.567	0.693	3.458
S.D.	0.003	0.005	0.007	0.044	0.002	0.012	0.048	0.122
% R.S.D.	1.383	0.360	3.061	0.255	0.142	0.078	6.950	3.523

	Ce (ppm)	Sm (ppm)	Ba (ppm)	P (ppm)	S (ppm)	Mg (ppm)	As (ppm)	Na (ppm)
Mean	0.665	0.060	0.062	5.195	20.344	0.107	0.027	1060.902
S.D.	0.044	0.019	0.001	0.140	0.129	0.001	0.022	4.566
% R.S.D.	6.594	31.877	0.860	2.700	0.635	0.905	84.056	0.430

	Mo (ppm)	Se (ppm)	Ag (ppm)	Pb (ppm)	Ti (ppm)	Cd (ppm)	B (ppm)	K (ppm)
Mean	0.180	0.243	0.027	1.800	0.012	0.282	0.420	8.270
S.D.	0.005	0.031	0.003	0.033	0.002	0.002	0.003	0.077
% R.S.D.	2.695	12.919	11.624	1.810	14.604	0.699	0.619	0.934

	Mn (ppm)	Sb (ppm)	V (ppm)	Be (ppm)	Tl (ppm)
Mean	5.091	0.577	-0.018	0.001	-0.042
S.D.	0.005	0.131	0.006	0.001	0.065
% R.S.D.	0.102	22.674	30.521	47.527	155.131

Identity 1: CCV Identity 2: Quality Control 6:32 PM May 29, 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	5.010	5.130	5.037	4.853	4.981	5.004	5.177	5.215
S.D.	0.014	0.013	0.002	0.008	0.009	0.028	0.005	0.032
% R.S.D.	0.271	0.252	0.045	0.157	0.175	0.562	0.094	0.617

	Zn (ppm)	Ni (ppm)	La (ppm)	Fe (ppm)	Ca (ppm)	Cr (ppm)	Nd (ppm)	U (ppm)
Mean	4.996	5.013	5.157	5.148	5.075	5.011	5.458	9.993
S.D.	0.008	0.013	0.005	0.005	0.009	0.015	0.036	0.016
% R.S.D.	0.158	0.258	0.099	0.091	0.183	0.290	0.660	0.157

	Ce (ppm)	Sm (ppm)	Ba (ppm)	P (ppm)	S (ppm)	Mg (ppm)	As (ppm)	Na (ppm)
Mean	5.258	5.227	5.162	5.476	5.091	4.823	5.133	5.257
S.D.	0.026	0.007	0.011	0.019	0.033	0.017	0.025	0.032
% R.S.D.	0.498	0.140	0.210	0.341	0.640	0.352	0.481	0.613

	Mo (ppm)	Se (ppm)	Ag (ppm)	Pb (ppm)	Ti (ppm)	Cd (ppm)	B (ppm)	K (ppm)
Mean	5.021	5.220	3.762	5.002	4.945	5.009	5.122	5.174
S.D.	0.023	0.020	0.127	0.036	0.014	0.018	0.006	0.050
% R.S.D.	0.455	0.375	3.364	0.717	0.275	0.361	0.111	0.957

	Mn (ppm)	Sb (ppm)	V (ppm)	Be (ppm)	Tl (ppm)
Mean	5.019	4.743	5.056	5.253	4.872
S.D.	0.010	0.009	0.012	0.010	0.013
% R.S.D.	0.205	0.182	0.231	0.181	0.263

Identity 1: CCB Identity 2: Quality Control 6:35 PM May 29, 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	-0.006	0.006	-0.005	0.006	0.001	0.001
S.D.	0.001	0.000	0.002	0.003	0.004	0.003	0.000	0.000
% R.S.D.	40.215	19.516	38.391	46.990	71.951	50.113	51.433	3.685

	Zn (ppm)	Ni (ppm)	La (ppm)	Fe (ppm)	Ca (ppm)	Cr (ppm)	Nd (ppm)	U (ppm)
Mean	0.000	-0.000	0.006	0.002	-0.002	0.003	-0.018	0.080
S.D.	0.000	0.002	0.002	0.004	0.000	0.000	0.006	0.032
% R.S.D.	520.199	1641.650	28.702	184.045	8.006	7.314	30.725	39.526

	Ce (ppm)	Sm (ppm)	Ba (ppm)	P (ppm)	S (ppm)	Mg (ppm)	As (ppm)	Na (ppm)
Mean	0.035	0.001	0.001	-0.038	0.000	0.001	0.002	0.062
S.D.	0.005	0.004	0.000	0.015	0.003	0.000	0.000	0.008
% R.S.D.	15.168	244.099	6.453	39.540	922.454	13.324	21.698	12.830

	Mo (ppm)	Se (ppm)	Ag (ppm)	Pb (ppm)	Ti (ppm)	Cd (ppm)	B (ppm)	K (ppm)
Mean	-0.001	0.035	0.327	-0.023	0.001	0.000	0.003	0.045
S.D.	0.001	0.003	0.039	0.013	0.000	0.000	0.001	0.005
% R.S.D.	105.850	9.914	11.873	56.493	7.330	34.077	49.640	12.000

	Mn (ppm)	Sb (ppm)	V (ppm)	Be (ppm)	Tl (ppm)
Mean	0.000	-0.029	0.000	0.001	0.008
S.D.	0.000	0.026	0.000	0.000	0.001
% R.S.D.	93.914	89.460	1389.475	63.533	12.850

Identity 1: S96T001807_L Identity 2: 2ml-8ml-2ml-8ml 6:39 PM May 29, 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	0.464	0.028	-0.095	1.239	52.177	-0.001	0.075	0.010
S.D.	0.030	0.002	0.113	0.054	0.217	0.000	0.001	0.009
% R.S.D.	6.431	5.882	118.800	4.323	0.416	20.135	1.650	84.125

	Zn (ppm)	Ni (ppm)	La (ppm)	Fe (ppm)	Ca (ppm)	Cr (ppm)	Nd (ppm)	U (ppm)
Mean	0.191	1.287	0.308	13.512	1.358	12.584	-0.066	6.912
S.D.	0.011	0.038	0.073	0.136	0.006	0.033	0.115	1.216
% R.S.D.	5.646	2.964	23.755	1.007	0.455	0.262	175.067	17.598

	Ce (ppm)	Sm (ppm)	Ba (ppm)	P (ppm)	S (ppm)	Mg (ppm)	As (ppm)	Na (ppm)
Mean	0.067	0.779	0.060	5.821	16.857	0.111	-0.011	1125.514
S.D.	0.306	0.245	0.004	0.536	0.138	0.002	0.081	1.120
% R.S.D.	453.518	31.508	6.748	9.210	0.817	2.193	742.596	0.099

	Mo (ppm)	Se (ppm)	Ag (ppm)	Pb (ppm)	Ti (ppm)	Cd (ppm)	B (ppm)	K (ppm)
Mean	0.142	1.004	0.524	0.839	0.069	0.301	0.743	6.765
S.D.	0.004	0.396	0.036	0.362	0.005	0.023	0.028	0.253
% R.S.D.	2.900	39.479	6.815	43.179	6.923	7.482	3.749	3.742

	Mn (ppm)	Sb (ppm)	V (ppm)	Be (ppm)	Tl (ppm)
Mean	4.047	-0.102	-0.040	0.016	0.270
S.D.	0.015	0.532	0.004	0.004	0.280
% R.S.D.	0.373	520.496	11.030	22.033	103.665

Identity 1: S96T001807 Identity 2: 2ml-8ml 6:43 PM May 29, 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	0.366	0.017	-0.123	0.844	52.063	0.015	0.092	0.006
S.D.	0.005	0.000	0.067	0.006	0.076	0.000	0.002	0.001
% R.S.D.	1.360	1.961	54.717	0.703	0.146	0.133	2.340	9.496

	Zn (ppm)	Ni (ppm)	La (ppm)	Fe (ppm)	Ca (ppm)	Cr (ppm)	Nd (ppm)	U (ppm)
Mean	0.161	1.196	0.214	13.305	1.406	12.444	0.608	2.576
S.D.	0.001	0.001	0.004	0.064	0.002	0.008	0.053	0.158
% R.S.D.	0.667	0.117	1.944	0.484	0.153	0.067	8.791	6.116

	Ce (ppm)	Sm (ppm)	Ba (ppm)	P (ppm)	S (ppm)	Mg (ppm)	As (ppm)	Na (ppm)
Mean	0.448	0.084	0.050	5.187	16.555	0.092	0.018	1091.976
S.D.	0.044	0.050	0.001	0.297	0.222	0.000	0.020	2.757
% R.S.D.	9.851	60.026	1.729	5.733	1.338	0.527	108.103	0.252

	Mo (ppm)	Se (ppm)	Ag (ppm)	Pb (ppm)	Ti (ppm)	Cd (ppm)	B (ppm)	K (ppm)
Mean	0.137	0.305	0.422	1.312	0.014	0.251	0.706	5.677
S.D.	0.012	0.070	0.008	0.011	0.001	0.004	0.009	0.027
% R.S.D.	8.496	22.877	1.951	0.856	4.042	1.475	1.235	0.471

	Mn (ppm)	Sb (ppm)	V (ppm)	Be (ppm)	Tl (ppm)
Mean	3.968	0.036	-0.011	0.002	-0.006
S.D.	0.012	0.177	0.002	0.000	0.038
% R.S.D.	0.307	487.375	14.649	0.920	658.443

Identity 1: S96T001807_D Identity 2: 2ml-8ml 6:46 PM May 29, 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	0.383	0.016	-0.111	0.807	54.514	0.057	0.095	0.007
S.D.	0.005	0.000	0.067	0.030	0.078	0.009	0.002	0.001
% R.S.D.	1.234	1.162	60.548	3.773	0.144	15.839	1.944	17.459

	Zn (ppm)	Ni (ppm)	La (ppm)	Fe (ppm)	Ca (ppm)	Cr (ppm)	Nd (ppm)	U (ppm)
Mean	0.191	1.236	0.199	13.542	1.457	12.775	0.547	2.901
S.D.	0.001	0.018	0.008	0.088	0.001	0.037	0.019	0.139
% R.S.D.	0.329	1.447	4.168	0.651	0.073	0.287	3.444	4.778

	Ce (ppm)	Sm (ppm)	Ba (ppm)	P (ppm)	S (ppm)	Mg (ppm)	As (ppm)	Na (ppm)
Mean	0.525	0.048	0.051	9.307	17.131	0.092	-0.011	1052.814
S.D.	0.031	0.031	0.001	0.127	0.128	0.000	0.016	6.283
% R.S.D.	5.907	65.461	1.369	1.364	0.747	0.528	142.559	0.597

	Mo (ppm)	Se (ppm)	Ag (ppm)	Pb (ppm)	Ti (ppm)	Cd (ppm)	B (ppm)	K (ppm)
Mean	0.140	0.053	0.346	1.391	0.014	0.257	0.735	6.350
S.D.	0.004	0.038	0.004	0.064	0.001	0.004	0.007	0.115
% R.S.D.	2.804	70.893	1.077	4.568	6.862	1.529	0.940	1.816

	Mn (ppm)	Sb (ppm)	V (ppm)	Be (ppm)	Tl (ppm)
Mean	4.051	0.313	-0.010	0.002	-0.053
S.D.	0.004	0.180	0.002	0.001	0.051
% R.S.D.	0.110	57.640	16.255	35.757	95.509

Identity 1: S96T001807_S Identity 2: 2ml-8ml 6:48 PM May 29, 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	5.628	5.083	4.758	6.699	59.268	5.025	4.999	4.948
S.D.	0.011	0.010	0.032	0.017	0.039	0.009	0.009	0.025
% R.S.D.	0.203	0.196	0.672	0.257	0.067	0.178	0.174	0.514

	Zn (ppm)	Ni (ppm)	La (ppm)	Fe (ppm)	Ca (ppm)	Cr (ppm)	Nd (ppm)	U (ppm)
Mean	5.004	6.336	5.398	18.797	6.156	17.808	5.861	13.149
S.D.	0.011	0.022	0.023	0.060	0.008	0.062	0.090	0.163
% R.S.D.	0.229	0.341	0.433	0.318	0.128	0.351	1.540	1.242

	Ce (ppm)	Sm (ppm)	Ba (ppm)	P (ppm)	S (ppm)	Mg (ppm)	As (ppm)	Na (ppm)
Mean	5.593	5.302	5.133	13.417	22.097	4.665	5.102	1073.530
S.D.	0.021	0.016	0.010	0.346	0.141	0.009	0.049	4.978
% R.S.D.	0.367	0.303	0.192	2.576	0.640	0.191	0.956	0.464

	Mo (ppm)	Se (ppm)	Ag (ppm)	Pb (ppm)	Ti (ppm)	Cd (ppm)	B (ppm)	K (ppm)
Mean	5.043	5.242	1.032	6.274	4.660	5.158	5.934	11.414
S.D.	0.008	0.034	0.008	0.064	0.007	0.023	0.027	0.020
% R.S.D.	0.168	0.643	0.788	1.015	0.146	0.441	0.455	0.179

	Mn (ppm)	Sb (ppm)	V (ppm)	Be (ppm)	Tl (ppm)
Mean	9.068	5.210	4.946	5.099	4.525
S.D.	0.023	0.098	0.012	0.004	0.073
% R.S.D.	0.256	1.873	0.244	0.071	1.619

Identity 1: S96T001808_L Identity 2: 2ml-8ml-2ml-8ml 6:51 PM May 29, 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	0.474	0.017	-0.306	1.062	36.642	0.051	0.044	0.010
S.D.	0.024	0.005	0.303	0.050	0.242	0.089	0.017	0.009
% R.S.D.	4.997	30.136	99.016	4.726	0.661	175.101	38.602	87.161

	Zn (ppm)	Ni (ppm)	La (ppm)	Fe (ppm)	Ca (ppm)	Cr (ppm)	Nd (ppm)	U (ppm)
Mean	0.177	0.873	0.392	13.678	1.427	9.594	0.045	5.184
S.D.	0.002	0.061	0.042	0.043	0.012	0.060	0.386	0.738
% R.S.D.	1.157	7.001	10.670	0.314	0.839	0.625	858.398	14.232

	Ce (ppm)	Sm (ppm)	Ba (ppm)	P (ppm)	S (ppm)	Mg (ppm)	As (ppm)	Na (ppm)
Mean	-0.188	0.390	0.046	23.096	8.602	0.094	0.061	1152.217
S.D.	0.224	0.204	0.006	0.849	0.305	0.006	0.109	1.663
% R.S.D.	119.103	52.267	12.192	3.674	3.540	6.840	179.131	0.144

	Mo (ppm)	Se (ppm)	Ag (ppm)	Pb (ppm)	Ti (ppm)	Cd (ppm)	B (ppm)	K (ppm)
Mean	0.138	0.605	0.311	0.852	0.048	0.194	0.598	3.508
S.D.	0.015	0.171	0.017	0.186	0.009	0.013	0.031	0.506
% R.S.D.	10.739	28.211	5.520	21.868	18.343	6.899	5.254	14.435

	Mn (ppm)	Sb (ppm)	V (ppm)	Be (ppm)	Tl (ppm)
Mean	4.069	0.277	-0.068	0.012	-0.469
S.D.	0.013	1.343	0.011	0.006	0.392
% R.S.D.	0.319	484.553	16.682	49.360	83.546

Identity 1: S96T001808 Identity 2 2ml-8ml 6:54 PM May 29, 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	0.417	0.013	-0.081	0.863	36.905	0.036	0.074	0.015
S.D.	0.001	0.000	0.018	0.010	0.191	0.009	0.001	0.001
% R.S.D.	0.302	2.439	22.281	1.164	0.517	24.877	1.671	3.804

	Zn (ppm)	Ni (ppm)	La (ppm)	Fe (ppm)	Ca (ppm)	Cr (ppm)	Nd (ppm)	U (ppm)
Mean	0.139	0.855	0.173	13.435	0.972	9.599	0.381	2.671
S.D.	0.003	0.008	0.007	0.056	0.003	0.025	0.024	0.185
% R.S.D.	2.075	0.888	4.253	0.415	0.314	0.261	6.249	6.923

	Ce (ppm)	Sm (ppm)	Ba (ppm)	P (ppm)	S (ppm)	Mg (ppm)	As (ppm)	Na (ppm)
Mean	0.435	-0.004	0.049	21.924	8.579	0.079	0.030	1095.312
S.D.	0.033	0.030	0.001	0.655	0.168	0.000	0.016	3.321
% R.S.D.	7.627	827.699	1.568	2.987	1.961	0.612	54.073	0.303

	Mo (ppm)	Se (ppm)	Ag (ppm)	Pb (ppm)	Ti (ppm)	Cd (ppm)	B (ppm)	K (ppm)
Mean	0.088	0.192	0.225	1.231	0.008	0.173	0.586	4.168
S.D.	0.005	0.071	0.006	0.025	0.001	0.005	0.006	0.039
% R.S.D.	5.654	36.661	2.491	2.065	13.664	2.676	1.076	0.926

	Mn (ppm)	Sb (ppm)	V (ppm)	Be (ppm)	Tl (ppm)
Mean	4.009	-0.086	0.011	0.003	0.092
S.D.	0.023	0.022	0.002	0.001	0.051
% R.S.D.	0.565	25.813	13.612	23.860	55.348

Identity 1: S96T001808_D Identity 2: 2ml-8ml 6:57 PM May 29, 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	0.434	0.013	0.005	0.921	37.210	0.031	0.069	0.014
S.D.	0.005	0.001	0.049	0.003	0.131	0.000	0.001	0.002
% R.S.D.	1.125	4.441	925.582	0.301	0.353	0.117	1.706	12.929

	Zn (ppm)	Ni (ppm)	La (ppm)	Fe (ppm)	Ca (ppm)	Cr (ppm)	Nd (ppm)	U (ppm)
Mean	0.124	0.869	0.180	13.954	1.017	9.827	0.449	3.435
S.D.	0.002	0.009	0.022	0.087	0.003	0.018	0.035	0.278
% R.S.D.	1.546	0.983	12.141	0.625	0.308	0.184	7.811	8.090

	Ce (ppm)	Sm (ppm)	Ba (ppm)	P (ppm)	S (ppm)	Mg (ppm)	As (ppm)	Na (ppm)
Mean	0.416	0.144	0.048	16.176	8.792	0.080	0.022	1059.394
S.D.	0.083	0.066	0.001	0.801	0.094	0.000	0.002	2.348
% R.S.D.	20.016	45.942	2.357	4.952	1.071	0.606	7.767	0.222

	Mo (ppm)	Se (ppm)	Ag (ppm)	Pb (ppm)	Ti (ppm)	Cd (ppm)	B (ppm)	K (ppm)
Mean	0.091	0.255	0.177	1.125	0.016	0.175	0.686	4.560
S.D.	0.001	0.013	0.007	0.056	0.001	0.004	0.003	0.034
% R.S.D.	0.778	5.026	4.141	4.981	7.448	2.525	0.429	0.738

	Mn (ppm)	Sb (ppm)	V (ppm)	Be (ppm)	Tl (ppm)
Mean	4.108	0.132	-0.002	0.004	-0.033
S.D.	0.010	0.201	0.004	0.001	0.084
% R.S.D.	0.239	151.909	249.694	14.584	254.383

Identity 1: S96T001809_L Identity 2: 2ml-8ml-2ml-8ml 7:00 PM May 29, 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	0.794	0.021	0.225	3.342	49.923	0.050	0.071	0.007
S.D.	0.011	0.000	0.171	0.083	0.148	0.089	0.007	0.002
% R.S.D.	1.444	0.000	76.019	2.469	0.297	180.304	10.277	31.902

	Zn (ppm)	Ni (ppm)	La (ppm)	Fe (ppm)	Ca (ppm)	Cr (ppm)	Nd (ppm)	U (ppm)
Mean	0.225	0.834	0.279	29.720	0.948	13.749	0.344	17.026
S.D.	0.009	0.020	0.000	0.128	0.006	0.139	0.084	0.615
% R.S.D.	4.151	2.436	0.096	0.431	0.651	1.013	24.370	3.614

	Ce (ppm)	Sm (ppm)	Ba (ppm)	P (ppm)	S (ppm)	Mg (ppm)	As (ppm)	Na (ppm)
Mean	0.421	0.491	0.104	96.087	9.200	0.684	0.104	1064.787
S.D.	0.102	0.046	0.001	3.398	0.122	0.002	0.025	6.604
% R.S.D.	24.151	9.336	1.134	3.536	1.326	0.355	24.198	0.620

	Mo (ppm)	Se (ppm)	Ag (ppm)	Pb (ppm)	Ti (ppm)	Cd (ppm)	B (ppm)	K (ppm)
Mean	0.040	0.032	0.215	1.667	0.073	0.115	0.698	4.559
S.D.	0.021	0.352	0.007	0.120	0.002	0.011	0.035	0.409
% R.S.D.	53.795	1114.154	3.457	7.172	2.247	9.709	5.025	8.962

	Mn (ppm)	Sb (ppm)	V (ppm)	Be (ppm)	Tl (ppm)
Mean	13.081	-0.176	0.035	-0.002	-0.929
S.D.	0.020	0.543	0.015	0.003	0.475
% R.S.D.	0.151	308.118	43.405	154.171	51.077

Identity 1: S96T001809 Identity 2: 2ml-8ml 7:03 PM May 29, 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	0.667	0.020	0.154	2.965	49.690	0.061	0.076	0.010
S.D.	0.006	0.000	0.047	0.018	0.085	0.015	0.003	0.002
% R.S.D.	0.859	2.560	30.241	0.592	0.171	25.565	3.538	21.610

	Zn (ppm)	Ni (ppm)	La (ppm)	Fe (ppm)	Ca (ppm)	Cr (ppm)	Nd (ppm)	U (ppm)
Mean	0.227	0.780	0.235	29.287	1.039	13.588	0.565	11.919
S.D.	0.002	0.006	0.018	0.024	0.004	0.029	0.046	0.319
% R.S.D.	0.829	0.717	7.799	0.083	0.344	0.217	8.110	2.677

	Ce (ppm)	Sm (ppm)	Ba (ppm)	P (ppm)	S (ppm)	Mg (ppm)	As (ppm)	Na (ppm)
Mean	0.562	0.042	0.097	95.971	9.247	0.675	0.003	1024.225
S.D.	0.093	0.056	0.001	1.090	0.057	0.001	0.022	7.721
% R.S.D.	16.575	132.751	1.360	1.135	0.615	0.191	816.429	0.754

	Mo (ppm)	Se (ppm)	Ag (ppm)	Pb (ppm)	Ti (ppm)	Cd (ppm)	B (ppm)	K (ppm)
Mean	0.081	0.226	0.178	1.707	0.030	0.146	0.715	4.028
S.D.	0.003	0.032	0.005	0.024	0.003	0.005	0.006	0.120
% R.S.D.	3.531	14.143	2.795	1.426	9.338	3.552	0.810	2.976

	Mn (ppm)	Sb (ppm)	V (ppm)	Be (ppm)	Tl (ppm)
Mean	12.897	0.398	0.085	0.002	-0.057
S.D.	0.028	0.181	0.007	0.001	0.174
% R.S.D.	0.215	45.425	8.622	53.740	308.326

Identity 1: S96T001809_D Identity 2: 2ml-8ml 7:06 PM May 29, 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	0.649	0.019	0.120	2.993	46.541	0.040	0.076	0.009
S.D.	0.006	0.000	0.033	0.008	0.226	0.009	0.000	0.002
% R.S.D.	0.924	2.649	27.530	0.255	0.486	22.493	0.318	17.033

	Zn (ppm)	Ni (ppm)	La (ppm)	Fe (ppm)	Ca (ppm)	Cr (ppm)	Nd (ppm)	U (ppm)
Mean	0.166	0.780	0.223	28.648	1.064	12.601	0.498	12.194
S.D.	0.002	0.013	0.013	0.056	0.003	0.016	0.053	0.159
% R.S.D.	1.130	1.678	5.672	0.194	0.235	0.127	10.713	1.305

	Ce (ppm)	Sm (ppm)	Ba (ppm)	P (ppm)	S (ppm)	Mg (ppm)	As (ppm)	Na (ppm)
Mean	0.553	0.165	0.093	94.761	9.198	0.666	0.015	993.379
S.D.	0.045	0.036	0.001	2.374	0.209	0.002	0.004	6.615
% R.S.D.	8.146	21.798	0.723	2.506	2.271	0.292	28.453	0.666

	Mo (ppm)	Se (ppm)	Ag (ppm)	Pb (ppm)	Ti (ppm)	Cd (ppm)	B (ppm)	K (ppm)
Mean	0.086	0.059	0.150	1.768	0.034	0.132	0.700	4.340
S.D.	0.002	0.095	0.005	0.046	0.002	0.005	0.003	0.013
% R.S.D.	2.893	161.092	3.245	2.598	6.044	3.941	0.484	0.308

	Mn (ppm)	Sb (ppm)	V (ppm)	Be (ppm)	Tl (ppm)
Mean	12.771	0.285	0.077	0.003	-0.101
S.D.	0.022	0.037	0.003	0.000	0.039
% R.S.D.	0.173	12.945	3.450	0.605	38.185

Identity 1: CCV Identity 2: Quality Control 7:09 PM May 29, 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	4.987	5.066	5.044	4.832	4.898	4.978	5.113	5.084
S.D.	0.005	0.008	0.016	0.008	0.003	0.017	0.013	0.015
% R.S.D.	0.109	0.153	0.324	0.168	0.062	0.343	0.245	0.300

	Zn (ppm)	Ni (ppm)	La (ppm)	Fe (ppm)	Ca (ppm)	Cr (ppm)	Nd (ppm)	U (ppm)
Mean	4.997	5.010	5.159	5.159	5.041	5.006	5.494	9.873
S.D.	0.006	0.006	0.004	0.011	0.009	0.012	0.018	0.007
% R.S.D.	0.114	0.114	0.085	0.212	0.181	0.233	0.335	0.066

	Ce (ppm)	Sm (ppm)	Ba (ppm)	P (ppm)	S (ppm)	Mg (ppm)	As (ppm)	Na (ppm)
Mean	5.146	5.182	5.094	5.090	4.906	4.812	5.105	5.213
S.D.	0.013	0.012	0.009	0.107	0.056	0.004	0.019	0.014
% R.S.D.	0.253	0.231	0.176	2.099	1.151	0.082	0.377	0.268

	Mo (ppm)	Se (ppm)	Ag (ppm)	Pb (ppm)	Ti (ppm)	Cd (ppm)	B (ppm)	K (ppm)
Mean	4.975	5.248	3.478	5.056	4.903	5.012	5.126	5.235
S.D.	0.003	0.049	0.158	0.030	0.005	0.003	0.009	0.012
% R.S.D.	0.067	0.925	4.548	0.588	0.100	0.050	0.174	0.223

	Mn (ppm)	Sb (ppm)	V (ppm)	Be (ppm)	Tl (ppm)
Mean	5.031	4.699	5.054	5.227	4.850
S.D.	0.002	0.027	0.004	0.009	0.006
% R.S.D.	0.045	0.573	0.073	0.166	0.116

Identity 1: CCB Identity 2: Quality Control 7:12 PM May 29, 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	-0.021	0.002	-0.000	0.005	0.001	0.002
S.D.	0.001	0.000	0.010	0.003	0.008	0.002	0.001	0.000
% R.S.D.	429.252	17.321	48.621	131.466	4028.725	34.596	63.152	24.052

	Zn (ppm)	Ni (ppm)	La (ppm)	Fe (ppm)	Ca (ppm)	Cr (ppm)	Nd (ppm)	U (ppm)
Mean	0.001	-0.001	0.003	0.002	-0.002	0.005	-0.011	-0.052
S.D.	0.001	0.001	0.001	0.002	0.000	0.002	0.011	0.018
% R.S.D.	56.777	194.477	43.277	108.717	15.283	39.724	95.459	34.868

	Ce (ppm)	Sm (ppm)	Ba (ppm)	P (ppm)	S (ppm)	Mg (ppm)	As (ppm)	Na (ppm)
Mean	0.009	-0.007	0.002	0.004	-0.002	0.001	0.011	0.119
S.D.	0.007	0.004	0.000	0.007	0.005	0.000	0.004	0.007
% R.S.D.	79.121	55.766	14.957	195.586	285.706	14.286	39.492	5.588

	Mo (ppm)	Se (ppm)	Ag (ppm)	Pb (ppm)	Ti (ppm)	Cd (ppm)	B (ppm)	K (ppm)
Mean	-0.000	0.035	0.252	-0.011	0.001	0.002	0.004	0.003
S.D.	0.001	0.007	0.008	0.011	0.001	0.000	0.001	0.008
% R.S.D.	386.055	19.777	3.032	104.576	82.274	22.989	37.540	305.099

	Mn (ppm)	Sb (ppm)	V (ppm)	Be (ppm)	Tl (ppm)
Mean	0.002	-0.002	0.001	0.001	-0.026
S.D.	0.000	0.012	0.000	0.000	0.015
% R.S.D.	8.530	608.145	55.275	20.631	59.689

C-SD-WM-DP-182, REV. 1

Identity 1: S96T001810_L Identity 2: 2ml-8ml-2ml-8ml 7:16 PM May 29, 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	4.455	4.935	5.919	7.009	612.275	5.054	4.906	4.905
S.D.	0.019	0.008	0.161	0.021	0.963	0.118	0.008	0.008
% R.S.D.	0.432	0.167	2.718	0.294	0.157	2.343	0.163	0.154

	Zn (ppm)	Ni (ppm)	La (ppm)	Fe (ppm)	Ca (ppm)	Cr (ppm)	Nd (ppm)	U (ppm)
Mean	5.284	5.655	5.038	56.460	6.845	23.011	5.489	269.388
S.D.	0.013	0.109	0.021	0.403	0.012	0.172	0.049	0.197
% R.S.D.	0.248	1.921	0.418	0.713	0.169	0.746	0.890	0.073

	Ce (ppm)	Sm (ppm)	Ba (ppm)	P (ppm)	S (ppm)	Mg (ppm)	As (ppm)	Na (ppm)
Mean	5.839	4.972	4.972	14.070	8.109	5.538	4.997	495.546
S.D.	0.033	0.037	0.005	0.130	0.146	0.009	0.131	0.374
% R.S.D.	0.559	0.745	0.094	0.927	1.803	0.159	2.629	0.075

	Mo (ppm)	Se (ppm)	Ag (ppm)	Pb (ppm)	Ti (ppm)	Cd (ppm)	B (ppm)	K (ppm)
Mean	4.874	5.474	1.195	7.193	4.605	5.009	5.419	11.655
S.D.	0.021	0.308	0.007	0.247	0.010	0.029	0.067	0.302
% R.S.D.	0.438	5.634	0.618	3.435	0.218	0.587	1.230	2.588

	Mn (ppm)	Sb (ppm)	V (ppm)	Be (ppm)	Tl (ppm)
Mean	12.420	6.149	4.983	5.049	3.748
S.D.	0.022	0.883	0.014	0.009	0.115
% R.S.D.	0.174	14.360	0.288	0.177	3.061

Spike Sample 8 6/4/96

Identity 1: S96T001810 Identity 2: 2ml-8ml 7:18 PM May 29, 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	4.512	4.972	5.599	6.962	617.707	4.920	4.942	4.840
S.D.	0.008	0.021	0.052	0.023	3.167	0.018	0.019	0.026
% R.S.D.	0.179	0.413	0.936	0.328	0.513	0.365	0.388	0.544

	Zn (ppm)	Ni (ppm)	La (ppm)	Fe (ppm)	Ca (ppm)	Cr (ppm)	Nd (ppm)	U (ppm)
Mean	5.146	5.582	5.090	56.251	7.044	22.869	5.467	272.499
S.D.	0.010	0.013	0.023	0.212	0.024	0.085	0.055	1.012
% R.S.D.	0.196	0.226	0.450	0.376	0.337	0.374	1.010	0.371

	Ce (ppm)	Sm (ppm)	Ba (ppm)	P (ppm)	S (ppm)	Mg (ppm)	As (ppm)	Na (ppm)
Mean	5.530	4.715	5.024	13.946	8.118	5.481	4.846	488.208
S.D.	0.034	0.045	0.022	0.130	0.084	0.012	0.027	2.812
% R.S.D.	0.622	0.954	0.433	0.932	1.040	0.227	0.564	0.576

	Mo (ppm)	Se (ppm)	Ag (ppm)	Pb (ppm)	Ti (ppm)	Cd (ppm)	B (ppm)	K (ppm)
Mean	4.864	4.942	1.023	6.840	4.594	4.913	5.348	8.918
S.D.	0.014	0.058	0.001	0.084	0.011	0.024	0.005	0.131
% R.S.D.	0.292	1.167	0.072	1.230	0.240	0.491	0.092	1.471

	Mn (ppm)	Sb (ppm)	V (ppm)	Be (ppm)	Tl (ppm)
Mean	12.358	4.791	5.008	5.011	4.327
S.D.	0.005	0.144	0.021	0.013	0.144
% R.S.D.	0.042	3.002	0.419	0.260	3.320

Identity 1: S96T001810_D Identity 2: 2ml-8ml 7:22 PM May 29, 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	0.178	0.056	0.471	1.838	351.304	0.047	0.203	0.015
S.D.	0.008	0.000	0.048	0.011	1.225	0.016	0.001	0.000
% R.S.D.	4.640	0.339	10.101	0.573	0.349	32.876	0.694	1.469

	Zn (ppm)	Ni (ppm)	La (ppm)	Fe (ppm)	Ca (ppm)	Cr (ppm)	Nd (ppm)	U (ppm)
Mean	0.287	0.574	0.092	24.182	1.759	14.261	0.291	237.117
S.D.	0.002	0.003	0.015	0.031	0.002	0.028	0.037	0.129
% R.S.D.	0.572	0.533	16.447	0.129	0.099	0.194	12.615	0.054

	Ce (ppm)	Sm (ppm)	Ba (ppm)	P (ppm)	S (ppm)	Mg (ppm)	As (ppm)	Na (ppm)
Mean	0.524	-0.217	0.062	6.393	2.712	0.797	-0.015	557.479
S.D.	0.036	0.018	0.000	0.044	0.046	0.001	0.003	0.869
% R.S.D.	6.938	8.302	0.248	0.695	1.693	0.122	19.897	0.156

	Mo (ppm)	Se (ppm)	Ag (ppm)	Pb (ppm)	Ti (ppm)	Cd (ppm)	B (ppm)	K (ppm)
Mean	0.058	0.254	0.287	1.701	0.036	0.117	0.228	3.414
S.D.	0.005	0.056	0.001	0.034	0.002	0.004	0.004	0.100
% R.S.D.	8.808	22.204	0.299	2.017	6.863	3.168	1.562	2.940

	Mn (ppm)	Sb (ppm)	V (ppm)	Be (ppm)	Tl (ppm)
Mean	5.666	-0.065	0.153	0.006	-0.106
S.D.	0.010	0.149	0.005	0.001	0.058
% R.S.D.	0.172	230.146	3.301	11.432	54.375

Sample 6/4/96

Identity 1: S96T001810 S Identity 2: 2ml-8ml 7:25 PM May 29, 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	0.236	0.062	0.715	2.205	431.171	0.034	0.221	0.009
S.D.	0.005	0.000	0.004	0.009	0.793	0.009	0.002	0.001
% R.S.D.	1.982	0.529	0.575	0.421	0.184	26.266	0.814	16.005

	Zn (ppm)	Ni (ppm)	La (ppm)	Fe (ppm)	Ca (ppm)	Cr (ppm)	Nd (ppm)	U (ppm)
Mean	0.353	0.714	0.095	31.003	2.458	19.507	0.412	257.538
S.D.	0.003	0.016	0.011	0.040	0.005	0.058	0.015	0.681
% R.S.D.	0.748	2.267	11.363	0.130	0.208	0.298	3.691	0.264

	Ce (ppm)	Sm (ppm)	Ba (ppm)	P (ppm)	S (ppm)	Mg (ppm)	As (ppm)	Na (ppm)
Mean	0.415	-0.279	0.075	11.466	3.321	1.072	-0.038	447.751
S.D.	0.042	0.039	0.001	0.127	0.033	0.002	0.040	3.986
% R.S.D.	10.084	13.879	1.214	1.109	1.000	0.164	107.234	0.890

	Mo (ppm)	Se (ppm)	Ag (ppm)	Pb (ppm)	Ti (ppm)	Cd (ppm)	B (ppm)	K (ppm)
Mean	0.070	0.353	0.236	1.961	0.056	0.135	0.192	4.457
S.D.	0.005	0.072	0.005	0.039	0.001	0.006	0.004	0.054
% R.S.D.	7.541	20.260	2.316	2.012	2.243	4.283	2.293	1.212

	Mn (ppm)	Sb (ppm)	V (ppm)	Be (ppm)	Tl (ppm)
Mean	7.739	-0.151	0.169	0.005	-0.196
S.D.	0.016	0.082	0.009	0.002	0.124
% R.S.D.	0.211	54.148	5.442	35.955	63.358

Identity 1: ICSA Identity 2: Quality Control 7:28 PM May 29, 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	-0.012	0.013	198.114	0.004	-0.001	-0.000
S.D.	0.002	0.000	0.002	0.001	0.514	0.003	0.000	0.000
% R.S.D.	57.427	6.928	16.984	11.489	0.259	73.585	9.218	125.321

	Zn (ppm)	Ni (ppm)	La (ppm)	Fe (ppm)	Ca (ppm)	Cr (ppm)	Nd (ppm)	U (ppm)
Mean	-0.005	0.003	0.006	98.119	104.980	0.002	-0.010	0.111
S.D.	0.000	0.002	0.001	0.247	0.271	0.003	0.008	0.067
% R.S.D.	1.248	70.142	15.266	0.252	0.258	115.657	77.148	60.371

	Ce (ppm)	Sm (ppm)	Ba (ppm)	P (ppm)	S (ppm)	Mg (ppm)	As (ppm)	Na (ppm)
Mean	-0.025	0.035	0.003	0.039	-0.014	104.631	0.011	191.616
S.D.	0.015	0.013	0.000	0.005	0.009	0.252	0.007	0.443
% R.S.D.	60.492	36.976	9.874	13.484	62.916	0.241	70.449	0.231

	Mo (ppm)	Se (ppm)	Ag (ppm)	Pb (ppm)	Ti (ppm)	Cd (ppm)	B (ppm)	K (ppm)
Mean	-0.004	0.016	0.013	-0.005	0.001	-0.001	0.016	0.147
S.D.	0.001	0.012	0.001	0.007	0.000	0.001	0.001	0.013
% R.S.D.	36.659	74.703	11.650	127.981	14.002	117.596	6.591	8.970

	Mn (ppm)	Sb (ppm)	V (ppm)	Be (ppm)	Tl (ppm)
Mean	0.005	0.034	-0.003	0.003	-0.080
S.D.	0.000	0.032	0.000	0.000	0.018
% R.S.D.	5.855	96.424	10.059	9.172	22.185

Identity 1: ICSAB Identity 2: Quality Control 7:30 PM May 29, 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	-0.030	0.015	203.764	0.491	0.529	0.996
S.D.	0.001	0.000	0.021	0.002	0.436	0.005	0.002	0.004
% R.S.D.	86.575	5.774	69.820	14.095	0.214	1.093	0.307	0.450

	Zn (ppm)	Ni (ppm)	La (ppm)	Fe (ppm)	Ca (ppm)	Cr (ppm)	Nd (ppm)	U (ppm)
Mean	0.993	0.993	0.003	99.432	107.843	0.502	-0.006	0.165
S.D.	0.001	0.003	0.001	0.162	0.195	0.003	0.005	0.040
% R.S.D.	0.063	0.347	30.250	0.163	0.181	0.517	97.827	24.139

	Ce (ppm)	Sm (ppm)	Ba (ppm)	P (ppm)	S (ppm)	Mg (ppm)	As (ppm)	Na (ppm)
Mean	-0.006	0.061	0.538	0.053	-0.062	103.393	0.015	201.789
S.D.	0.011	0.009	0.001	0.011	0.006	0.007	0.005	0.871
% R.S.D.	187.441	14.601	0.178	20.027	9.359	0.007	34.073	0.432

	Mo (ppm)	Se (ppm)	Ag (ppm)	Pb (ppm)	Ti (ppm)	Cd (ppm)	B (ppm)	K (ppm)
Mean	-0.002	0.023	1.134	1.012	0.002	1.011	0.011	-0.061
S.D.	0.000	0.008	0.041	0.007	0.000	0.005	0.001	0.019
% R.S.D.	26.623	35.184	3.611	0.712	19.907	0.522	5.412	31.068

	Mn (ppm)	Sb (ppm)	V (ppm)	Be (ppm)	Tl (ppm)
Mean	0.512	0.082	0.505	0.520	-0.030
S.D.	0.001	0.042	0.001	0.003	0.021
% R.S.D.	0.197	51.818	0.241	0.539	70.881

Identity 1: CCV Identity 2: Quality Control 7:37 PM May 29, 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	5.047	5.144	5.087	4.911	5.072	5.050	5.209	5.273
S.D.	0.012	0.019	0.012	0.007	0.018	0.016	0.024	0.070
% R.S.D.	0.229	0.363	0.228	0.151	0.347	0.309	0.461	1.332

	Zn (ppm)	Ni (ppm)	La (ppm)	Fe (ppm)	Ca (ppm)	Cr (ppm)	Nd (ppm)	U (ppm)
Mean	5.093	5.050	5.188	5.221	5.110	5.067	5.485	9.893
S.D.	0.010	0.010	0.020	0.013	0.016	0.020	0.010	0.007
% R.S.D.	0.204	0.198	0.380	0.258	0.318	0.392	0.184	0.073

	Ce (ppm)	Sm (ppm)	Ba (ppm)	P (ppm)	S (ppm)	Mg (ppm)	As (ppm)	Na (ppm)
Mean	5.290	5.237	5.173	5.239	5.085	4.899	5.186	5.304
S.D.	0.016	0.013	0.022	0.125	0.044	0.015	0.025	0.061
% R.S.D.	0.298	0.243	0.418	2.376	0.866	0.298	0.490	1.144

	Mo (ppm)	Se (ppm)	Ag (ppm)	Pb (ppm)	Ti (ppm)	Cd (ppm)	B (ppm)	K (ppm)
Mean	5.055	5.330	4.944	5.082	4.969	5.057	5.220	5.370
S.D.	0.016	0.030	0.010	0.030	0.013	0.011	0.012	0.056
% R.S.D.	0.318	0.570	0.200	0.581	0.269	0.218	0.232	1.035

	Mn (ppm)	Sb (ppm)	V (ppm)	Be (ppm)	Tl (ppm)
Mean	5.060	4.831	5.112	5.289	4.986
S.D.	0.015	0.013	0.013	0.015	0.013
% R.S.D.	0.301	0.271	0.252	0.280	0.266

Identity 1: CCB Identity 2: Quality Control 7:39 PM May 29, 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	0.002	0.007	0.038	0.003	0.000	0.001
S.D.	0.002	0.001	0.017	0.005	0.012	0.003	0.002	0.001
% R.S.D.	84.126	113.430	961.564	72.109	31.168	100.397	399.533	75.298

	Zn (ppm)	Ni (ppm)	La (ppm)	Fe (ppm)	Ca (ppm)	Cr (ppm)	Nd (ppm)	U (ppm)
Mean	0.001	0.002	0.005	0.022	0.018	-0.001	-0.023	0.117
S.D.	0.002	0.004	0.003	0.004	0.002	0.002	0.005	0.030
% R.S.D.	232.789	250.834	59.387	15.871	8.990	192.072	21.228	26.144

	Ce (ppm)	Sm (ppm)	Ba (ppm)	P (ppm)	S (ppm)	Mg (ppm)	As (ppm)	Na (ppm)
Mean	-0.002	0.032	0.001	-0.019	0.004	0.020	0.001	0.070
S.D.	0.010	0.005	0.001	0.014	0.003	0.002	0.002	0.009
% R.S.D.	431.265	15.649	76.921	75.125	70.662	8.466	423.734	12.480

	Mo (ppm)	Se (ppm)	Ag (ppm)	Pb (ppm)	Ti (ppm)	Cd (ppm)	B (ppm)	K (ppm)
Mean	-0.001	0.033	0.045	-0.007	0.002	0.000	0.004	0.017
S.D.	0.003	0.005	0.007	0.019	0.002	0.001	0.002	0.012
% R.S.D.	292.968	15.563	15.855	258.661	87.938	534.108	41.873	72.936

	Mn (ppm)	Sb (ppm)	V (ppm)	Be (ppm)	Tl (ppm)
Mean	0.001	0.046	-0.000	0.001	-0.062
S.D.	0.001	0.011	0.002	0.001	0.019
% R.S.D.	92.335	23.166	1755.402	88.015	30.656

05/13/96 14:42
A-0004-1

Cell 35 File #: 9605290.TXT

LABCORE Data Entry Template for Worklist# 8627

Analyst: JKSeth **Instrument:** ICP01 JK 5-28-96 **Book#** 53B48B

Method: LA-505-~~151~~/161 Rev/Mod B-0
JK 5-28-96 U-105

Worklist Comment: ICP-~~S-102~~ (FUSION) JK 5-28-96

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	PREPBLKTJA				@ICP-F01	SOLID		
7	SERDIL	S96T001774	0	F	@ICP-F01	SOLID		
8	SAMPLE	S96T001774	0	F	@ICP-F01	SOLID	96000323	U-105 (R)
	Analytes Requested:	AL-F-01 , BI-F-01 , FE-F-01 , LI-F-01 , NA-F-01 , P-F-01 , SI-F-01						
9	DUP	S96T001774	0	F	@ICP-F01	SOLID		
10	SPK	S96T001774	0	F	@ICP-F01	SOLID		
11	CCV				@ICP-QC	QC		
12	CCB				@ICP-QC	QC		
13	SERDIL	S96T001775	0	F	@ICP-F01	SOLID		
14	SAMPLE	S96T001775	0	F	@ICP-F01	SOLID	96000323	U-105 (R)
	Analytes Requested:	AL-F-01 , BI-F-01 , FE-F-01 , LI-F-01 , NA-F-01 , P-F-01 , SI-F-01						
15	DUP	S96T001775	0	F	@ICP-F01	SOLID		
16	SPK	S96T001775	0	F	@ICP-F01	SOLID		
17	SERDIL	S96T001776	0	F	@ICP-F01	SOLID		

Data Entry Comments: Example for calculation of single result:

$$Al = 24.75 \frac{ug}{ml} \left(\frac{1}{1.902 \frac{g}{L} \times \frac{1L}{1000ml}} \right) = 1.30e+4 \ ug/g$$

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

1.902 g/L is single prep dilution factor which can be found in single prep worklist.

LABCORE Data Entry Template for Worklist# 8627

S	Type	Sample#	R	A	Test	Matrix	Group#	Project
18	SAMPLE	S96T001776	0	F	@ICP-F01	SOLID	96000323	U-105 (R)
		Analytes Requested:			AL-F-01 , BI-F-01 , FE-F-01 , LI-F-01 , NA-F-01 , P-F-01 , SI-F-01			
19	DUP	S96T001776	0	F	@ICP-F01	SOLID		
20	SPK	S96T001776	0	F	@ICP-F01	SOLID		
21	ICSA				@ICP-QC	QC		
22	ICSAB				@ICP-QC	QC		
23	CCV				@ICP-QC	QC		
24	CCB				@ICP-QC	QC		

Final page for worklist # 8627

JK Lito 05-29-96
Analyst Signature **Date**

Reviewed by:
Karl M. Parry 5/30/96
Analyst Signature **Date**

cpblkDIQ , .25-10 ml
6T001774_L , .25-10-2.8 , DF 205
6T001774 .25-10 41
6T001774_D .25-10 41
6T001774_Q .25-10 41 , .25 ml sample + 2.05 ml 5575 + 7.95 ml HNO_3
6T001775_L , .25-10-2.8 , DF 205
6T001775 .25-10 41
6T001775_D .25-10 41
6T001775_Q .25-10 41 , .25 ml sample + 2.05 ml 5575 + 7.95 ml HNO_3
6T001776_L , ~~DF~~ .25-10-2.8 , DF 205 JK 5-29-96
6T001776 .25-10 41
6T001776_D .25-10 41
6T001776_Q .25-10 41 , .25 ml sample + 2.05 ml 5575 + 7.95 ml HNO_3

Data Entry Comments: Exaple for spike recovery result:

$$al = \left(\frac{65.47}{41}\right) - \left(\frac{24.75}{41}\right) \times 100 = 99.4\%$$

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

True value for spiking amount is 1.0 ppm on all elements.

Analysis Report Summary Wed 05-29-96 06:28:24 PM page 1

#	Sample Name	File	Method	Date	Time	OpID	Type	Mode
1	ICV	960529D	ICP2	05/29/96	17:03	DKS	Q	CONC
2	ICB	960529D	ICP2	05/29/96	17:06	DKS	Q	CONC
3	LLS	960529D	ICP2	05/29/96	17:09	DKS	Q	CONC
4	ICSA	960529D	ICP2	05/29/96	17:12	DKS	Q	CONC
5	ICSAB	960529D	ICP2	05/29/96	17:15	DKS	Q	CONC
6	PREPBLKTJA	960529D	ICP2	05/29/96	17:20	DKS	S	CONC
7	S96T001774_L	960529D	ICP2	05/29/96	17:23	DKS	S	CONC
8	S96T001774	960529D	ICP2	05/29/96	17:26	DKS	S	CONC
9	S96T001774_D	960529D	ICP2	05/29/96	17:29	DKS	S	CONC
10	S96T001774_A	960529D	ICP2	05/29/96	17:33	DKS	S	CONC
11	CCV	960529D	ICP2	05/29/96	17:37	DKS	Q	CONC
12	CCB	960529D	ICP2	05/29/96	17:40	DKS	Q	CONC
13	S96T001775_L	960529D	ICP2	05/29/96	17:43	DKS	S	CONC
14	S96T001775	960529D	ICP2	05/29/96	17:50	DKS	S	CONC
15	S96T001775_D	960529D	ICP2	05/29/96	17:53	DKS	S	CONC
16	S96T001775_A	960529D	ICP2	05/29/96	17:56	DKS	S	CONC
17	S96T001776_L	960529D	ICP2	05/29/96	18:00	DKS	S	CONC
18	S96T001776	960529D	ICP2	05/29/96	18:02	DKS	S	CONC
19	S96T001776_D	960529D	ICP2	05/29/96	18:05	DKS	S	CONC
20	S96T001776_A	960529D	ICP2	05/29/96	18:09	DKS	S	CONC
21	ICSA	960529D	ICP2	05/29/96	18:13	DKS	Q	CONC
22	ICSAB	960529D	ICP2	05/29/96	18:16	DKS	Q	CONC
23	CCV_1	960529D	ICP2	05/29/96	18:19	DKS	Q	CONC
24	CCB_1	960529D	ICP2	05/29/96	18:23	DKS	Q	CONC

JK [illegible]
05-29-96
4-105 S96T001774
S96T001775
S96T001776
Work list #8427

SIGNATURE ABOVE REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 1180 TO 1184.

Analysis Report Averages Wed 05-29-96 06:28:24 PM page 2

#	Sample Name	Ag	Al	As	B	Ba	Be
1	ICV	4.911	4.858	5.102	4.977	4.901	5.113
2	ICB	.0004	-.0080	-.0023	.0025	-.0000	-.0002
3	LLS	.0229	.0917	.2273	.1036	.0977	.0103
4	ICSA	.0025	241.7	-.0788	-.0019	.0018	-.0001
5	ICSAB	.9776	243.0	-.1011	.0071	.4849	.4841
6	PREPBLKTJA	.0007	-.0100	.0030	.0004	.0001	-.0002
7	S96T001774_L	.0205	23.54	.8573	-.6947	.0014	-.0216
8	S96T001774	.0491	24.75	.4162	.1204	.0145	-.0042
9	S96T001774_D	.0636	27.59	.5101	-.1032	.0152	-.0103
10	S96T001774_A	38.00	65.47	42.96	40.97	40.29	41.56
11	CCV	4.923	4.914	5.146	5.047	4.994	5.176
12	CCB	.0008	-.0079	.0000	.0034	-.0000	-.0002
13	S96T001775_L	.0765	24.13	1.528	-.2629	-.0001	-.0441
14	S96T001775	.0527	25.01	.7410	-.0525	.0079	-.0087
15	S96T001775_D	.0358	23.30	.4597	.0164	.0059	-.0072
16	S96T001775_A	37.87	64.96	42.01	40.23	39.86	41.34
17	S96T001776_L	.0831	34.32	2.447	-.3480	-.0052	-.0443
18	S96T001776	.0274	35.97	.1378	-.1908	.0058	-.0101
19	S96T001776_D	.0731	35.60	-.0901	.1891	.0078	-.0101
20	S96T001776_A	37.98	76.16	42.43	39.85	39.86	41.43
21	ICSA	.0032	243.5	-.1151	.0007	.0018	-.0000
22	ICSAB	.9750	242.2	-.0954	-.0009	.4825	.4830
23	CCV_1	4.908	4.882	5.118	5.043	4.940	5.156
24	CCB_1	.0009	-.0098	.0097	.0008	-.0001	-.0002

#	Sample Name	Bi	Ca	Cd	Ce	Co	Cr
1	ICV	5.041	4.980	4.897	5.072	4.925	4.986
2	ICB	-.0122	-.0016	-.0017	-.0042	-.0001	-.0002
3	LLS	.2163	.2014	.0101	.2057	.0409	.0219
4	ICSA	-.0157	245.1	-.0008	.0137	.0012	.0098
5	ICSAB	.0074	247.0	.9446	.0172	.4670	.4847
6	PREPBLKTJA	.0076	-.0011	-.0008	-.0035	.0016	.0005
7	S96T001774_L	2.071	.1302	-.0367	-.9556	.3374	6.323
8	S96T001774	.4765	.6155	.0361	.1616	.0594	6.071
9	S96T001774_D	.0656	.5333	.0222	.1490	.0315	6.870
10	S96T001774_A	42.10	41.34	40.31	42.32	40.35	46.98
11	CCV	5.051	4.983	4.908	5.162	4.928	4.996
12	CCB	-.0214	-.0032	-.0009	-.0050	.0024	.0013
13	S96T001775_L	-2.504	-.5884	.0563	.0407	-.3019	3.829
14	S96T001775	.3519	.4140	.0228	.0868	.0108	3.995
15	S96T001775_D	-.3237	.2949	.0060	-.0678	.0360	4.013
16	S96T001775_A	40.45	41.40	40.29	41.96	40.35	44.86
17	S96T001776_L	-5.896	.5444	.0114	.2118	.2697	5.090
18	S96T001776	-.3245	.5032	.0054	-.2842	.0643	4.873
19	S96T001776_D	.8889	.4748	.0200	-.1139	.0587	4.777
20	S96T001776_A	40.80	42.04	40.39	42.09	40.69	46.07
21	ICSA	.0026	249.5	-.0003	.0166	.0016	.0093
22	ICSAB	-.0004	247.6	.9404	.0022	.4644	.4832
23	CCV_1	5.034	4.960	4.885	5.098	4.906	4.972
24	CCB_1	-.0108	-.0031	-.0006	-.0012	-.0001	.0016

Analysis Report Averages Wed 05-29-96 06:28:24 PM page 3

#	Sample Name	Cu	Eu	Fe	K	La	Li
1	ICV	5.157	-.0027	5.014	4.726	4.989	5.092
2	ICB	-.0006	-.0014	-.0019	-.0578	-.0005	-.0008
3	LLS	.0205	-.0004	.1016	.5321	.1004	.0204
4	ICSA	-.0103	-.0309	92.88	.1288	-.0050	.0018
5	ICSAB	.4991	-.0303	93.33	.0818	-.0041	1.012
6	PREPBLKTJA	.0001	-.0011	-.0015	278.0	-.0000	-.0011
7	S96T001774_L	-.1251	-.4117	2.236	11050.	-.1048	-.3615
8	S96T001774	.0109	-.0819	2.481	11010.	-.0081	-.0722
9	S96T001774_D	.0368	-.0558	3.793	10970.	.0377	-.0450
10	S96T001774_A	42.82	-.0956	43.61	11150.	41.59	41.98
11	CCV	5.246	-.0037	5.043	4.886	5.077	5.214
12	CCB	.0005	-.0012	-.0014	.1569	-.0004	-.0012
13	S96T001775_L	-.1226	-.4820	.2830	11620.	-.0058	-.3161
14	S96T001775	.0198	-.0522	.7619	11480.	.0230	.0139
15	S96T001775_D	.0287	-.0651	.6694	10420.	-.0048	.0230
16	S96T001775_A	42.21	-.0706	41.76	11550.	41.03	41.09
17	S96T001776_L	-.0852	-.2382	.7150	10610.	-.0495	-.1353
18	S96T001776	.0288	-.0700	1.046	10610.	-.0195	.0049
19	S96T001776_D	.0289	-.0688	1.125	11390.	.0253	.0094
20	S96T001776_A	42.22	-.0550	42.24	10730.	41.17	41.07
21	ICSA	-.0100	-.0371	94.17	.1569	-.0039	.0013
22	ICSAB	.4959	-.0326	93.28	.1751	-.0054	1.004
23	CCV_1	5.219	-.0030	5.005	4.558	5.021	5.195
24	CCB_1	.0005	-.0017	-.0009	.1707	.0007	-.0012

#	Sample Name	Mg	Mn	Mo	Na	Nd	Ni
1	ICV	4.874	4.838	4.972	5.009	5.071	4.928
2	ICB	.0063	-.0003	-.0002	-.0129	.0005	.0017
3	LLS	.2126	.0190	.0961	.2050	.2018	.0412
4	ICSA	249.3	-.0068	-.0087	200.5	.0058	-.0072
5	ICSAB	250.4	.4472	-.0069	202.8	.0056	.9222
6	PREPBLKTJA	.0059	.0006	.0005	.0847	.0019	.1931
7	S96T001774_L	1.740	.4602	-.1110	387.2	.3298	8.065
8	S96T001774	.3331	.5525	-.0366	386.0	.1230	8.582
9	S96T001774_D	.4125	.7055	.0808	425.4	.1617	32.62
10	S96T001774_A	39.93	39.39	41.01	431.8	42.41	49.43
11	CCV	4.925	4.857	4.986	5.087	5.178	4.935
12	CCB	.0051	-.0003	.0038	-.0133	.0024	-.0050
13	S96T001775_L	-.3357	.1940	.2456	430.6	-.0734	27.62
14	S96T001775	.1023	.3460	.1068	426.8	.1003	26.24
15	S96T001775_D	.2418	.2979	.1649	427.5	.1286	9.903
16	S96T001775_A	39.96	39.16	41.03	467.7	41.83	66.63
17	S96T001776_L	.8133	.3477	.1865	467.1	.2528	10.69
18	S96T001776	.1391	.4147	.0611	465.8	.0685	8.949
19	S96T001776_D	.4529	.3981	.0740	485.2	.1317	11.40
20	S96T001776_A	40.25	39.42	41.15	510.6	41.91	49.30
21	ICSA	251.5	-.0069	-.0078	201.5	.0065	-.0047
22	ICSAB	249.8	.4467	-.0081	201.4	.0063	.9093
23	CCV_1	4.905	4.832	4.961	5.062	5.111	4.903
24	CCB_1	.0018	-.0007	.0007	-.0199	.0012	.0020

Analysis Report Averages Wed 05-29-96 06:28:24 PM page 4

#	Sample Name	P	Pb	S	Sb	Se	Si
1	ICV	5.357	4.889	5.013	4.739	4.831	4.732
2	ICB	.0159	-.0116	-.0058	-.0080	.0303	-.0067
3	LLS	.4359	.2147	.1950	.1019	.2347	.1142
4	ICSA	.0306	.0392	-.0456	.0100	-.0558	-.0114
5	ICSAB	.0072	.9947	-.0384	.0040	-.0412	-.0106
6	PREPBLKTJA	.0069	.0096	-.0035	.0056	.0345	-.0049
7	S96T001774_L	4.668	1.062	10.42	.8841	5.515	.4825
8	S96T001774_	5.692	-.0776	11.55	.0869	1.028	2.428
9	S96T001774_D	6.109	-.1557	13.08	.0932	1.242	1.859
10	S96T001774_A	49.55	40.44	53.05	39.91	40.43	42.19
11	CCV	5.318	4.890	4.965	4.775	4.895	4.754
12	CCB	-.0095	.0015	-.0005	.0012	.0279	-.0036
13	S96T001775_L	8.237	-.8737	9.608	.7201	4.539	-1.504
14	S96T001775_	5.536	.3400	9.667	.0140	1.372	.1592
15	S96T001775_D	6.128	-.2012	9.945	-.3787	1.019	.1300
16	S96T001775_A	50.02	40.84	50.64	39.08	40.65	39.83
17	S96T001776_L	4.975	-.3223	9.874	.1527	5.030	.8276
18	S96T001776_	4.469	.2270	10.88	.1107	.9055	.4924
19	S96T001776_D	4.386	.3340	10.19	-.2912	.9051	.6703
20	S96T001776_A	48.12	40.49	52.07	39.37	41.49	40.38
21	ICSA	.0227	.0322	-.0311	.0033	-.0495	-.0077
22	ICSAB	.0408	1.006	-.0390	.0018	-.0612	-.0055
23	CCV_1	5.289	4.876	4.988	4.766	4.897	4.746
24	CCB_1	.0043	.0015	-.0001	-.0041	.0359	-.0069

#	Sample Name	Sm	Sr	Th	Ti	Tl	U
1	ICV	4.880	4.928	-.0042	4.829	4.706	9.633
2	ICB	-.0148	-.0003	.0052	.0005	.0129	-.0645
3	LLS	.1921	.0201	.0014	.0212	.4146	.4686
4	ICSA	-.0110	.0016	.0057	.0014	.0407	.0009
5	ICSAB	-.0151	.0016	.0105	.0012	.0623	-.0082
6	PREPBLKTJA	-.0172	-.0000	.0090	.0008	.0129	-.1392
7	S96T001774_L	-5.133	-.0713	2.013	.1092	8.115	-23.78
8	S96T001774_	-1.138	-.0015	.4702	.0520	.9591	-7.024
9	S96T001774_D	-.6461	.0047	.3615	.0707	1.286	-5.496
10	S96T001774_A	39.65	40.79	.3381	40.06	39.53	73.74
11	CCV	4.957	5.005	.0029	4.885	4.772	9.809
12	CCB	-.0153	-.0001	.0007	.0014	.0242	-.0584
13	S96T001775_L	-6.191	-.0817	1.095	.0083	6.325	-25.16
14	S96T001775_	-.7300	.0047	.3257	.0512	1.158	-5.552
15	S96T001775_D	-.8689	-.0016	.3828	.0322	1.370	-5.857
16	S96T001775_A	39.17	40.26	.3076	39.71	39.22	73.46
17	S96T001776_L	-3.497	-.0303	1.239	.1031	6.087	-13.48
18	S96T001776_	-.9190	-.0016	.3858	.0323	1.115	-6.341
19	S96T001776_D	-.7979	.0005	.3234	.0418	.5735	-6.160
20	S96T001776_A	39.50	40.29	.3750	39.72	38.87	74.45
21	ICSA	-.0110	.0016	.0106	.0014	.0001	-.0161
22	ICSAB	-.0100	.0016	.0044	.0014	.0205	-.0059
23	CCV_1	4.914	4.954	-.0016	4.854	4.733	9.706
24	CCB_1	-.0170	-.0002	.0029	.0010	.0377	-.0808

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#	Sample Name	V	Y	Zn	Zr
1	ICV	4.947	.0059	4.978	4.864
2	ICB	-.0031	-.0008	.0003	-.0030
3	LLS	.1003	.0002	.0208	.0194
4	ICSA	-.0037	.0064	-.0004	-.0059
5	ICSAB	.4685	.0063	.9708	-.0060
6	PREPBLKTJA	-.0031	-.0008	-.0007	-.0033
7	S96T001774_L	-1.123	-.1988	.1870	-.9633
8	S96T001774_	-.1922	-.0324	.0414	-.1673
9	S96T001774_D	-.1516	-.0170	.0300	-.1193
10	S96T001774_A	40.54	.0233	41.14	39.94
11	CCV	4.985	.0055	4.972	4.919
12	CCB	-.0026	-.0007	.0001	-.0024
13	S96T001775_L	-1.191	-.2304	-.1528	-.8903
14	S96T001775_	-.1145	-.0201	.0308	-.0741
15	S96T001775_D	-.1504	-.0297	.0314	-.1342
16	S96T001775_A	40.45	.0427	40.96	39.69
17	S96T001776_L	-.6322	-.1389	.1148	-.5672
18	S96T001776_	-.1640	-.0327	.0574	-.1337
19	S96T001776_D	-.1497	-.0263	.0222	-.1293
20	S96T001776_A	40.63	.0455	41.26	39.77
21	ICSA	-.0029	.0064	-.0001	-.0056
22	ICSAB	.4679	.0064	.9698	-.0052
23	CCV_1	4.956	.0055	4.968	4.876
24	CCB_1	-.0034	-.0009	-.0006	-.0035

DK Lad
05-29-96

960605A.DAT

05/13/96 14:47
A-0004-1

Cell 15

LABCORE Data Entry Template for Worklist# 8628

Analyst: J. Worrell **Instrument:** ICP01 _____ **Book#** 56B48A

Method: LA-505-151/~~161~~ Rev/Mod D3
JW 6-5-96

Worklist Comment: ICP U-105 (FUSION)

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	PREPBLK ~~TJA~~ ARL				@ICP-F01	SOLID		
7	SERDIL	S96T001777	0	F	@ICP-F01	SOLID		
8	SAMPLE	S96T001777	0	F	@ICP-F01	SOLID	96000323	U-105 (R)
	Analytes Requested:	AL-F-01 , BI-F-01 , FE-F-01 , LI-F-01 , NA-F-01 , P-F-01 , SI-F-01						
9	DUP	S96T001777	0	F	@ICP-F01	SOLID		
10	SPK	S96T001777	0	F	@ICP-F01	SOLID		
11	CCV				@ICP-QC	QC		
12	CCB				@ICP-QC	QC		
13	SERDIL	S96T001778	0	F	@ICP-F01	SOLID		
14	SAMPLE	S96T001778	0	F	@ICP-F01	SOLID	96000323	U-105 (R)
	Analytes Requested:	AL-F-01 , BI-F-01 , FE-F-01 , LI-F-01 , NA-F-01 , P-F-01 , SI-F-01						
15	DUP	S96T001778	0	F	@ICP-F01	SOLID		
16	SPK	S96T001778	0	F	@ICP-F01	SOLID		
17	SERDIL	S96T001779	0	F	@ICP-F01	SOLID		

Data Entry Comments: Example for calculation of sample result.

S96T001777 $Al = 33.602 \frac{ug}{ml} \times \frac{1}{(2.135 \frac{g}{L})(\frac{1L}{1000ml})} = 1.57e+4 \frac{ug}{g}$

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

Note: $2.135 \frac{g}{L}$ is sample prep dilution factor which can be found in sample prep worklist.

06/05/96 13:38 ☎509 372 2929 WESTINGHOUSE →→→ MO-924 200W 001

LABCORE Data Entry Template for Worklist# 8628

S	Type	Sample#	R	A	Test	Matrix	Group#	Project
18	SAMPLE	S96T001779	0	F	@ICP-F01	SOLID	96000323	U-105 (R)
		Analytes Requested:			AL-F-01 , BI-F-01 , FE-F-01 , LI-F-01 , NA-F-01 , P-F-01 , SI-F-01			
19	DUP	S96T001779	0	F	@ICP-F01	SOLID		
20	SPK	S96T001779	0	F	@ICP-F01	SOLID		
21	ICSA				@ICP-QC	QC		
22	ICSAB				@ICP-QC	QC		
23	CCV				@ICP-QC	QC		
24	CCB				@ICP-QC	QC		

Final page for worklist # 8628

John Worrell 6-5-96
Analyst Signature **Date**

Reviewed by:
Saul R. Parry 6/6/96
Analyst Signature **Date**

			D.F.
S96T001777	DIL 5X	–	205
	SAMPLE	–	41
	DUP	–	41
	SPK	–	41
1778	DIL 5X	–	205
	SAMPLE	–	41
	DUP	–	41
	SPK	–	41
1779	DIL 5X	–	205
	SAMPLE	–	41
	DUP	–	41
	SPK	–	41

Data Entry Comments: Example for calculation for spike recovery:

S96T001777 $Al = \left(\frac{73.113}{41}\right) - \left(\frac{33.602}{41}\right) \times 100 = 96.3\%$

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

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

06/05/96 13:38 ☎509 372 2929 WESTINGHOUSE →→→ MO-924 200W 002

Identity 1: ICV Identity 2: Quality Control 12:59 PM June 5, 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	5.027	5.108	5.046	4.833	5.130	5.104	5.177	5.166
S.D.	0.004	0.004	0.009	0.007	0.002	0.010	0.005	0.020
% R.S.D.	0.083	0.078	0.173	0.147	0.045	0.189	0.088	0.382

	Zn (ppm)	Ni (ppm)	La (ppm)	Fe (ppm)	Ca (ppm)	Cr (ppm)	Nd (ppm)	U (ppm)
Mean	5.093	5.025	5.113	5.119	5.100	5.027	5.355	10.134
S.D.	0.012	0.013	0.003	0.021	0.004	0.011	0.008	0.030
% R.S.D.	0.238	0.261	0.049	0.407	0.083	0.219	0.150	0.299

	Ce (ppm)	Sm (ppm)	Ba (ppm)	P (ppm)	S (ppm)	Mg (ppm)	As (ppm)	Na (ppm)
Mean	5.281	5.132	5.119	5.422	5.156	4.923	5.134	5.188
S.D.	0.009	0.008	0.004	0.140	0.076	0.010	0.020	0.016
% R.S.D.	0.169	0.146	0.088	2.586	1.484	0.210	0.381	0.302

	Mo (ppm)	Se (ppm)	Ag (ppm)	Pb (ppm)	Ti (ppm)	Cd (ppm)	B (ppm)	K (ppm)
Mean	5.092	5.424	4.940	5.056	4.971	5.023	5.111	4.986
S.D.	0.012	0.022	0.006	0.015	0.006	0.009	0.005	0.028
% R.S.D.	0.228	0.408	0.117	0.305	0.127	0.171	0.102	0.554

	Mn (ppm)	Sb (ppm)	V (ppm)	Be (ppm)	Tl (ppm)
Mean	5.000	4.771	5.101	5.228	4.894
S.D.	0.009	0.008	0.005	0.004	0.029
% R.S.D.	0.190	0.172	0.094	0.080	0.585

John H Wiewell
6-5-96

SIGNATURE ABOVE REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 1187 TO 1210.

06/05/96 13:39 ☎509 372 2929 WESTINGHOUSE →→→ MO-924 200W 003

Identity 1: ICB Identity 2: Quality Control 1:02 PM June 5, 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	-0.007	0.012	0.027	0.001	0.002	0.002
S.D.	0.001	0.000	0.002	0.001	0.002	0.002	0.001	0.000
% R.S.D.	108.461	20.277	35.944	9.632	7.344	172.276	32.084	17.717

	Zn (ppm)	Ni (ppm)	La (ppm)	Fe (ppm)	Ca (ppm)	Cr (ppm)	Nd (ppm)	U (ppm)
Mean	0.003	0.004	0.002	0.014	0.011	0.002	0.012	-0.038
S.D.	0.001	0.002	0.002	0.004	0.001	0.001	0.018	0.031
% R.S.D.	22.375	43.727	104.913	29.087	13.746	39.482	148.155	81.955

	Ce (ppm)	Sm (ppm)	Ba (ppm)	P (ppm)	S (ppm)	Mg (ppm)	As (ppm)	Na (ppm)
Mean	-0.006	0.002	0.002	0.029	0.002	0.013	-0.000	0.013
S.D.	0.009	0.006	0.001	0.004	0.003	0.001	0.003	0.004
% R.S.D.	143.822	310.497	24.938	14.002	156.429	10.631	37175.526	33.335

	Mo (ppm)	Se (ppm)	Ag (ppm)	Pb (ppm)	Ti (ppm)	Cd (ppm)	B (ppm)	K (ppm)
Mean	0.003	0.010	0.002	0.014	0.002	0.003	0.002	-0.135
S.D.	0.001	0.006	0.000	0.005	0.000	0.000	0.001	0.013
% R.S.D.	19.053	58.044	18.594	33.997	14.921	12.724	42.891	9.618

	Mn (ppm)	Sb (ppm)	V (ppm)	Be (ppm)	Tl (ppm)
Mean	0.002	0.019	0.001	0.003	0.011
S.D.	0.000	0.012	0.001	0.001	0.022
% R.S.D.	28.469	62.038	60.723	20.474	191.773

06/05/96 13:39 ☎509 372 2929 WESTINGHOUSE →→→ MO-924 200W 004

Identity 1: LLS Identity 2: Quality Control 1:08 PM June 5, 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	0.022	0.199	0.137	0.112	0.038	0.021	0.021
S.D.	0.001	0.000	0.004	0.003	0.006	0.002	0.000	0.000
% R.S.D.	5.408	0.584	2.237	2.129	5.146	4.813	2.091	0.848

	Zn (ppm)	Ni (ppm)	La (ppm)	Fe (ppm)	Ca (ppm)	Cr (ppm)	Nd (ppm)	U (ppm)
Mean	0.023	0.047	0.108	0.106	0.212	0.021	0.211	0.520
S.D.	0.000	0.002	0.002	0.002	0.000	0.000	0.009	0.047
% R.S.D.	1.632	4.552	2.043	2.090	0.127	1.994	4.199	9.016

	Ce (ppm)	Sm (ppm)	Ba (ppm)	P (ppm)	S (ppm)	Mg (ppm)	As (ppm)	Na (ppm)
Mean	0.186	0.240	0.105	0.475	0.215	0.210	0.205	0.208
S.D.	0.012	0.009	0.000	0.003	0.005	0.001	0.011	0.003
% R.S.D.	6.214	3.871	0.249	0.536	2.482	0.329	5.350	1.637

	Mo (ppm)	Se (ppm)	Ag (ppm)	Pb (ppm)	Ti (ppm)	Cd (ppm)	B (ppm)	K (ppm)
Mean	0.104	0.251	0.019	0.194	0.022	0.012	0.106	0.435
S.D.	0.000	0.008	0.001	0.012	0.000	0.001	0.003	0.016
% R.S.D.	0.159	3.083	5.214	6.151	1.128	6.751	2.796	3.622

	Mn (ppm)	Sb (ppm)	V (ppm)	Be (ppm)	Tl (ppm)
Mean	0.020	0.097	0.104	0.012	0.418
S.D.	0.000	0.017	0.001	0.000	0.024
% R.S.D.	1.701	17.217	0.983	3.126	5.763

06/05/96 13:40 ☎509 372 2929 WESTINGHOUSE →→→ MO-924 200W 005

Identity 1: ICSA Identity 2: Quality Control 1:11 PM June 5, 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	-0.018	0.014	203.245	0.000	0.000	0.001
S.D.	0.001	0.000	0.001	0.005	0.489	0.000	0.000	0.000
% R.S.D.	990.395	0.000	3.410	33.924	0.241	1.864	120.618	4.185

	Zn (ppm)	Ni (ppm)	La (ppm)	Fe (ppm)	Ca (ppm)	Cr (ppm)	Nd (ppm)	U (ppm)
Mean	-0.005	0.004	0.002	97.300	101.836	0.007	0.025	0.046
S.D.	0.000	0.002	0.002	0.206	0.229	0.001	0.003	0.025
% R.S.D.	4.127	60.431	115.957	0.211	0.225	13.913	12.005	53.902

	Ce (ppm)	Sm (ppm)	Ba (ppm)	P (ppm)	S (ppm)	Mg (ppm)	As (ppm)	Na (ppm)
Mean	0.007	0.030	0.004	0.042	0.031	102.181	0.006	195.891
S.D.	0.008	0.004	0.000	0.009	0.009	0.224	0.004	1.091
% R.S.D.	109.849	14.547	2.611	21.579	29.482	0.219	77.709	0.557

	Mo (ppm)	Se (ppm)	Ag (ppm)	Pb (ppm)	Ti (ppm)	Cd (ppm)	B (ppm)	K (ppm)
Mean	0.002	-0.010	0.001	0.007	0.001	-0.001	0.012	-0.089
S.D.	0.003	0.016	0.000	0.009	0.000	0.001	0.000	0.008
% R.S.D.	164.585	165.010	30.232	132.088	53.173	83.413	2.725	9.273

	Mn (ppm)	Sb (ppm)	V (ppm)	Be (ppm)	Tl (ppm)
Mean	0.009	-0.043	0.000	0.003	0.034
S.D.	0.000	0.034	0.000	0.000	0.004
% R.S.D.	3.513	78.797	97.665	10.549	11.073

06/05/96 13:40 ☎509 372 2929 WESTINGHOUSE →→→ MO-924 200W 006

Identity 1: ICSAB Identity 2: Quality Control 1:14 PM June 5, 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	0.015	201.442	0.497	0.517	0.961
S.D.	0.001	0.000	0.004	0.004	0.655	0.002	0.001	0.002
% R.S.D.	70.026	1.533	8.929	25.295	0.325	0.367	0.207	0.249

	Zn (ppm)	Ni (ppm)	La (ppm)	Fe (ppm)	Ca (ppm)	Cr (ppm)	Nd (ppm)	U (ppm)
Mean	1.003	0.988	0.007	97.457	101.944	0.508	0.054	0.088
S.D.	0.002	0.002	0.004	0.315	0.267	0.003	0.007	0.022
% R.S.D.	0.185	0.190	52.074	0.323	0.262	0.625	11.944	24.895

	Ce (ppm)	Sm (ppm)	Ba (ppm)	P (ppm)	S (ppm)	Mg (ppm)	As (ppm)	Na (ppm)
Mean	-0.001	0.050	0.523	0.051	0.019	100.630	0.029	195.905
S.D.	0.006	0.004	0.001	0.021	0.008	0.240	0.004	0.643
% R.S.D.	936.366	7.898	0.257	41.517	40.102	0.239	13.374	0.328

	Mo (ppm)	Se (ppm)	Ag (ppm)	Pb (ppm)	Ti (ppm)	Cd (ppm)	B (ppm)	K (ppm)
Mean	0.002	-0.021	1.028	0.989	0.001	1.005	0.012	-0.135
S.D.	0.000	0.009	0.002	0.019	0.000	0.003	0.001	0.003
% R.S.D.	20.735	40.472	0.150	1.874	36.669	0.256	5.010	2.212

	Mn (ppm)	Sb (ppm)	V (ppm)	Be (ppm)	Tl (ppm)
Mean	0.511	0.047	0.503	0.510	-0.000
S.D.	0.001	0.029	0.002	0.001	0.010
% R.S.D.	0.133	62.029	0.451	0.160	3781.157

06/05/96 13:41 ☎509 372 2929 WESTINGHOUSE →→→ MO-924 200W 007

Identity 1: prep blk arl Identity 2: direct 1:20 PM June 5, 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	0.001	-0.004	0.014	0.141	-0.005	0.000	0.001
S.D.	0.000	0.000	0.008	0.000	0.027	0.002	0.000	0.000
% R.S.D.	6.262	12.000	220.854	3.166	19.354	34.780	37.281	34.647

	Zn (ppm)	Ni (ppm)	La (ppm)	Fe (ppm)	Ca (ppm)	Cr (ppm)	Nd (ppm)	U (ppm)
Mean	0.022	0.347	0.001	0.073	0.086	-0.000	0.006	-0.165
S.D.	0.000	0.002	0.003	0.012	0.014	0.001	0.002	0.007
% R.S.D.	1.870	0.665	325.540	16.743	15.978	1796.510	25.472	4.441

	Ce (ppm)	Sm (ppm)	Ba (ppm)	P (ppm)	S (ppm)	Mg (ppm)	As (ppm)	Na (ppm)
Mean	-0.004	0.005	0.001	0.009	0.003	0.067	-0.007	0.229
S.D.	0.004	0.005	0.000	0.006	0.002	0.013	0.005	0.026
% R.S.D.	88.804	89.797	10.184	65.213	70.498	19.152	77.128	11.373

	Mo (ppm)	Se (ppm)	Ag (ppm)	Pb (ppm)	Ti (ppm)	Cd (ppm)	B (ppm)	K (ppm)
Mean	0.001	-0.010	0.002	0.004	-0.001	0.001	-0.004	277.344
S.D.	0.000	0.019	0.000	0.007	0.000	0.001	0.000	1.049
% R.S.D.	43.648	190.403	25.953	194.174	24.873	120.306	12.499	0.378

	Mn (ppm)	Sb (ppm)	V (ppm)	Be (ppm)	Tl (ppm)
Mean	0.000	0.035	-0.000	-0.000	0.005
S.D.	0.000	0.024	0.001	0.000	0.007
% R.S.D.	5.169	68.839	236.541	407.911	135.555

06/05/96 13:41 ☎509 372 2929 WESTINGHOUSE →→→ MO-924 200W 008

Identity 1: s96t001777_l Identity 2: .250ml-10ml-2ml-8ml 1:28 PM June 5, 1996
Task name : OPTIMA
Sample Weight : 1.0000 Solution Volume : 205.00
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	-0.589	0.070	-0.891	2.961	36.415	-0.213	0.077	0.188
S.D.	0.258	0.023	1.439	0.317	0.678	0.645	0.051	0.060
% R.S.D.	43.876	32.476	161.472	10.693	1.861	303.092	67.194	31.916

	Zn (ppm)	Ni (ppm)	La (ppm)	Fe (ppm)	Ca (ppm)	Cr (ppm)	Nd (ppm)	U (ppm)
Mean	4.682	9.303	-0.009	2.557	3.738	4.608	5.320	-20.251
S.D.	0.103	0.592	0.455	0.466	0.060	0.286	2.202	10.489
% R.S.D.	2.205	6.367	4848.191	18.230	1.616	6.214	41.389	51.794

	Ce (ppm)	Sm (ppm)	Ba (ppm)	P (ppm)	S (ppm)	Mg (ppm)	As (ppm)	Na (ppm)
Mean	4.036	1.473	0.130	3.404	7.775	1.247	-1.029	490.567
S.D.	2.247	2.680	0.057	0.633	1.098	0.040	0.981	2.792
% R.S.D.	55.671	181.930	44.246	18.598	14.127	3.238	95.341	0.569

	Mo (ppm)	Se (ppm)	Ag (ppm)	Pb (ppm)	Tl (ppm)	Cd (ppm)	B (ppm)	K (ppm)
Mean	0.644	3.394	0.184	-2.641	-0.031	0.069	-0.545	12033.456
S.D.	0.045	0.879	0.154	1.766	0.063	0.052	0.325	64.645
% R.S.D.	6.943	25.895	83.545	66.856	204.932	75.828	59.673	0.537

	Mn (ppm)	Sb (ppm)	V (ppm)	Be (ppm)	Tl (ppm)
Mean	0.162	0.318	0.025	0.045	10.628
S.D.	0.036	5.023	0.194	0.029	6.934
% R.S.D.	22.466	1578.416	766.886	64.191	65.240

06/05/96 13:42 ☎509 372 2929 WESTINGHOUSE →→→ MO-924 200W 009

Identity 1: s96t001777 Identity 2: .250ml-10ml 1:34 PM June 5, 1996
Task name : OPTIMA
Sample Weight : 1.0000 Solution Volume : 41.00
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	-0.150	0.027	-0.454	0.466	33.602	0.130	0.106	0.038
S.D.	0.050	0.005	0.277	0.125	0.097	0.074	0.021	0.010
% R.S.D.	33.419	16.762	60.958	26.847	0.290	57.297	20.062	27.055

	Zn (ppm)	Ni (ppm)	La (ppm)	Fe (ppm)	Ca (ppm)	Cr (ppm)	Nd (ppm)	U (ppm)
Mean	0.588	8.628	-0.159	1.065	2.731	3.988	0.791	-4.505
S.D.	0.017	0.069	0.091	0.038	0.006	0.054	0.141	1.679
% R.S.D.	2.960	0.802	56.863	3.610	0.213	1.349	17.790	37.268

	Ce (ppm)	Sm (ppm)	Ba (ppm)	P (ppm)	S (ppm)	Mg (ppm)	As (ppm)	Na (ppm)
Mean	1.153	-0.187	0.035	3.448	8.418	0.175	0.222	479.053
S.D.	0.517	0.449	0.007	0.105	0.143	0.007	0.170	0.798
% R.S.D.	44.821	239.345	18.459	3.059	1.696	4.000	76.768	0.167

	Mo (ppm)	Se (ppm)	Ag (ppm)	Pb (ppm)	Ti (ppm)	Cd (ppm)	B (ppm)	K (ppm)
Mean	0.189	-0.527	0.072	0.571	-0.026	0.091	-0.151	11613.365
S.D.	0.006	0.435	0.031	0.111	0.015	0.022	0.036	9.947
% R.S.D.	3.090	82.438	42.800	19.510	55.914	24.155	24.065	0.086

	Mn (ppm)	Sb (ppm)	V (ppm)	Be (ppm)	Tl (ppm)
Mean	0.363	0.156	0.028	0.002	0.574
S.D.	0.000	0.782	0.040	0.011	0.857
% R.S.D.	0.053	500.830	141.985	457.843	149.426

06/05/96 13:42 ☎509 372 2929 WESTINGHOUSE →→→ MO-924 200W 010

Identity 1: s96t001777_d Identity 2: .250ml-10ml 1:37 PM June 5, 1996
Task name : OPTIMA
Sample Weight : 1.0000 Solution Volume : 41.00
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	-0.045	0.008	-1.020	0.444	33.101	-0.000	-0.026	0.006
S.D.	0.059	0.004	0.321	0.035	0.112	0.075	0.017	0.007
% R.S.D.	131.225	50.918	31.456	7.816	0.339	61536.615	65.995	127.073

	Zn (ppm)	Ni (ppm)	La (ppm)	Fe (ppm)	Ca (ppm)	Cr (ppm)	Nd (ppm)	U (ppm)
Mean	0.161	8.005	0.158	0.958	1.517	3.785	-0.027	1.207
S.D.	0.009	0.156	0.060	0.102	0.017	0.055	0.266	1.920
% R.S.D.	5.313	1.953	37.913	10.646	1.153	1.463	1000.929	159.122

	Ce (ppm)	Sm (ppm)	Ba (ppm)	P (ppm)	S (ppm)	Mg (ppm)	As (ppm)	Na (ppm)
Mean	-0.480	1.019	0.009	2.420	8.136	0.098	0.041	472.413
S.D.	0.255	0.437	0.007	0.878	0.134	0.012	0.076	3.067
% R.S.D.	53.032	42.857	78.261	36.289	1.642	12.372	184.908	0.649

	Mo (ppm)	Se (ppm)	Ag (ppm)	Pb (ppm)	Ti (ppm)	Cd (ppm)	B (ppm)	K (ppm)
Mean	0.092	-0.564	-0.005	-0.030	0.000	0.049	-0.091	11059.066
S.D.	0.028	0.818	0.019	0.500	0.010	0.006	0.004	73.525
% R.S.D.	30.117	145.062	415.269	1681.050	2218.005	12.421	4.941	0.665

	Mn (ppm)	Sb (ppm)	V (ppm)	Be (ppm)	Tl (ppm)
Mean	0.360	1.376	-0.142	-0.003	-0.168
S.D.	0.007	0.466	0.024	0.009	0.353
% R.S.D.	1.964	33.861	17.277	294.219	210.662

06/05/96 13:43 ☎509 372 2929 WESTINGHOUSE →→→ MO-924 200W 011

Identity 1: s96t001777_A Identity 2: .250ml-2ml-8ml 1:41 PM June 5, 1996
Task name : OPTIMA
Sample Weight : 1.0000 Solution Volume : 41.00
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	40.107	40.797	39.402	39.689	73.113	39.895	41.668	39.506
S.D.	0.099	0.154	0.242	0.200	0.114	0.129	0.116	0.035
% R.S.D.	0.247	0.378	0.614	0.503	0.156	0.324	0.279	0.088

	Zn (ppm)	Ni (ppm)	La (ppm)	Fe (ppm)	Ca (ppm)	Cr (ppm)	Nd (ppm)	U (ppm)
Mean	39.873	48.347	41.625	41.023	40.575	43.378	44.214	82.355
S.D.	0.107	0.289	0.238	0.044	0.088	0.241	0.208	0.761
% R.S.D.	0.269	0.598	0.572	0.108	0.217	0.556	0.471	0.925

	Ce (ppm)	Sm (ppm)	Ba (ppm)	P (ppm)	S (ppm)	Mg (ppm)	As (ppm)	Na (ppm)
Mean	41.544	41.802	40.862	45.672	48.147	37.610	40.248	526.225
S.D.	0.204	0.009	0.139	1.070	0.780	0.099	0.180	0.422
% R.S.D.	0.490	0.021	0.340	2.343	1.620	0.264	0.448	0.080

	Mo (ppm)	Se (ppm)	Ag (ppm)	Pb (ppm)	Ti (ppm)	Cd (ppm)	B (ppm)	K (ppm)
Mean	39.774	42.629	23.690	39.566	39.319	39.299	39.805	11828.543
S.D.	0.205	1.192	0.216	0.337	0.148	0.261	0.145	23.506
% R.S.D.	0.515	2.796	0.911	0.852	0.377	0.665	0.365	0.199

	Mn (ppm)	Sb (ppm)	V (ppm)	Be (ppm)	Tl (ppm)
Mean	39.703	38.328	40.263	40.496	37.435
S.D.	0.046	0.263	0.063	0.114	0.412
% R.S.D.	0.116	0.687	0.157	0.282	1.100

06/05/96 13:43 ☎509 372 2929 WESTINGHOUSE →→→ MO-924 200W 012

Identity 1: CCV Identity 2: Quality Control 1:45 PM June 5, 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	5.063	5.144	5.062	4.850	5.051	5.093	5.235	5.212
S.D.	0.001	0.005	0.014	0.001	0.003	0.003	0.008	0.014
% R.S.D.	0.029	0.097	0.268	0.022	0.064	0.062	0.158	0.262

	Zn (ppm)	Ni (ppm)	La (ppm)	Fe (ppm)	Ca (ppm)	Cr (ppm)	Nd (ppm)	U (ppm)
Mean	5.098	5.039	5.182	5.114	5.126	5.030	5.458	10.292
S.D.	0.007	0.002	0.007	0.022	0.007	0.012	0.030	0.010
% R.S.D.	0.140	0.042	0.139	0.426	0.141	0.241	0.555	0.097

	Ce (ppm)	Sm (ppm)	Ba (ppm)	P (ppm)	S (ppm)	Mg (ppm)	As (ppm)	Na (ppm)
Mean	5.247	5.204	5.165	5.462	5.169	4.891	5.145	5.181
S.D.	0.005	0.009	0.006	0.073	0.018	0.005	0.003	0.019
% R.S.D.	0.103	0.177	0.125	1.333	0.350	0.109	0.056	0.361

	Mo (ppm)	Se (ppm)	Ag (ppm)	Pb (ppm)	Ti (ppm)	Cd (ppm)	B (ppm)	K (ppm)
Mean	5.098	5.437	4.939	5.053	4.993	5.042	5.175	5.260
S.D.	0.006	0.007	0.003	0.021	0.002	0.005	0.011	0.036
% R.S.D.	0.114	0.120	0.064	0.408	0.031	0.104	0.204	0.682

	Mn (ppm)	Sb (ppm)	V (ppm)	Be (ppm)	Tl (ppm)
Mean	5.020	4.769	5.125	5.267	4.915
S.D.	0.001	0.040	0.003	0.001	0.013
% R.S.D.	0.021	0.837	0.058	0.027	0.257

06/05/96 13:44 ☎509 372 2929 WESTINGHOUSE →→→ MO-924 200W 013

Identity 1: CCB Identity 2: Quality Control 1:48 PM June 5, 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	0.004	-0.000	0.011	0.007	0.004	0.003	0.004
S.D.	0.003	0.001	0.002	0.001	0.004	0.002	0.001	0.001
% R.S.D.	115.934	22.284	45819.451	8.883	63.688	43.098	24.345	23.854

	Zn (ppm)	Ni (ppm)	La (ppm)	Fe (ppm)	Ca (ppm)	Cr (ppm)	Nd (ppm)	U (ppm)
Mean	0.003	0.005	0.004	0.004	0.002	0.004	0.005	-0.007
S.D.	0.000	0.004	0.002	0.004	0.001	0.001	0.010	0.071
% R.S.D.	13.530	65.129	39.213	96.449	49.608	17.315	196.228	975.360

	Ce (ppm)	Sm (ppm)	Ba (ppm)	P (ppm)	S (ppm)	Mg (ppm)	As (ppm)	Na (ppm)
Mean	0.013	0.007	0.004	0.016	-0.002	0.004	0.006	0.006
S.D.	0.019	0.015	0.001	0.012	0.001	0.001	0.001	0.006
% R.S.D.	151.545	228.787	26.730	73.498	29.227	17.592	15.271	94.387

	Mo (ppm)	Se (ppm)	Ag (ppm)	Pb (ppm)	Ti (ppm)	Cd (ppm)	B (ppm)	K (ppm)
Mean	0.007	-0.005	0.006	-0.004	0.003	0.003	0.004	-0.093
S.D.	0.000	0.005	0.002	0.002	0.001	0.001	0.001	0.045
% R.S.D.	2.423	99.220	28.913	47.523	32.012	35.538	33.314	48.434

	Mn (ppm)	Sb (ppm)	V (ppm)	Be (ppm)	Tl (ppm)
Mean	0.002	0.039	0.002	0.003	0.028
S.D.	0.001	0.034	0.001	0.001	0.026
% R.S.D.	41.558	86.624	53.893	20.879	96.057

06/05/96 13:44 ☎509 372 2929 WESTINGHOUSE →→→ MO-924 200W ☑014

Identity 1: s96t001778_L Identity 2: .250ml-10ml-2ml-8ml 1:53 PM June 5, 1996
Task name : OPTIMA
Sample Weight : 1.0000 Solution Volume : 205.00
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	0.517	0.310	0.317	4.319	38.231	-0.216	0.140	0.277
S.D.	0.068	0.075	0.951	0.415	0.689	0.000	0.038	0.075
% R.S.D.	13.128	24.026	300.030	9.607	1.803	0.110	27.177	26.971

	Zn (ppm)	Ni (ppm)	La (ppm)	Fe (ppm)	Ca (ppm)	Cr (ppm)	Nd (ppm)	U (ppm)
Mean	3.884	9.657	-0.095	2.478	8.598	6.293	0.621	7.185
S.D.	0.102	0.216	0.295	0.615	0.097	0.420	1.640	1.874
% R.S.D.	2.620	2.239	310.510	24.823	1.124	6.668	264.319	26.082

	Ce (ppm)	Sm (ppm)	Ba (ppm)	P (ppm)	S (ppm)	Mg (ppm)	As (ppm)	Na (ppm)
Mean	-1.646	6.681	0.313	2.416	10.422	0.548	0.777	468.178
S.D.	0.916	0.971	0.106	1.648	0.292	0.081	0.589	1.055
% R.S.D.	55.681	14.528	33.726	68.238	2.799	14.741	75.861	0.225

	Mo (ppm)	Se (ppm)	Ag (ppm)	Pb (ppm)	Ti (ppm)	Cd (ppm)	B (ppm)	K (ppm)
Mean	0.809	-4.531	0.059	-3.325	0.443	0.700	0.125	11133.441
S.D.	0.294	1.166	0.123	1.747	0.070	0.139	0.123	30.097
% R.S.D.	36.376	25.728	207.924	52.541	15.851	19.849	98.254	0.270

	Mn (ppm)	Sb (ppm)	V (ppm)	Be (ppm)	Tl (ppm)
Mean	0.966	4.001	-0.015	0.318	-0.342
S.D.	0.105	8.334	0.219	0.095	2.789
% R.S.D.	10.889	208.313	1424.222	29.965	814.350

06/05/96 13:45 ☎509 372 2929 WESTINGHOUSE →→→ MO-924 200W 015

Identity 1: s96t001778 Identity 2: .250ml-10ml 1:57 PM June 5, 1996
Task name : OPTIMA
Sample Weight : 1.0000 Solution Volume : 41.00
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	-0.035	0.041	-0.492	0.598	39.497	0.000	0.076	0.053
S.D.	0.066	0.003	0.386	0.152	0.243	0.075	0.017	0.005
% R.S.D.	188.551	7.370	78.468	25.478	0.615	22726.145	21.981	8.496

	Zn (ppm)	Ni (ppm)	La (ppm)	Fe (ppm)	Ca (ppm)	Cr (ppm)	Nd (ppm)	U (ppm)
Mean	0.728	8.358	0.058	2.316	1.391	5.807	0.623	-2.151
S.D.	0.012	0.213	0.122	0.170	0.005	0.132	0.333	1.565
% R.S.D.	1.679	2.549	209.693	7.340	0.361	2.275	53.492	72.742

	Ce (ppm)	Sm (ppm)	Ba (ppm)	P (ppm)	S (ppm)	Mg (ppm)	As (ppm)	Na (ppm)
Mean	1.443	0.011	0.064	4.760	10.539	0.075	0.086	466.899
S.D.	0.392	0.346	0.008	0.375	0.254	0.004	0.072	1.267
% R.S.D.	27.183	3274.160	11.773	7.870	2.407	5.413	83.974	0.271

	Mo (ppm)	Se (ppm)	Ag (ppm)	Pb (ppm)	Ti (ppm)	Cd (ppm)	B (ppm)	K (ppm)
Mean	0.234	0.408	0.128	0.281	-0.012	0.073	-0.081	10822.368
S.D.	0.022	0.096	0.014	0.356	0.017	0.012	0.030	6.627
% R.S.D.	9.457	23.437	11.084	126.356	142.925	16.711	37.426	0.061

	Mn (ppm)	Sb (ppm)	V (ppm)	Be (ppm)	Tl (ppm)
Mean	0.843	0.658	0.030	0.015	0.386
S.D.	0.007	1.448	0.016	0.000	0.666
% R.S.D.	0.815	219.865	51.837	1.291	172.770

06/05/96 13:45 ☎509 372 2929 WESTINGHOUSE →→→ MO-924 200W 016

Identity 1: s96t001778_d Identity 2: .250ml-10ml 2:00 PM June 5, 1996
Task name : OPTIMA
Sample Weight : 1.0000 Solution Volume : 41.00
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	0.035	0.012	-0.154	0.688	38.818	-0.129	-0.005	0.004
S.D.	0.022	0.002	0.147	0.010	0.206	0.075	0.008	0.000
% R.S.D.	62.574	12.372	95.593	1.423	0.530	57.753	149.952	0.009

	Zn (ppm)	Ni (ppm)	La (ppm)	Fe (ppm)	Ce (ppm)	Cr (ppm)	Nd (ppm)	U (ppm)
Mean	0.391	8.850	0.020	1.896	0.560	5.743	-0.030	0.804
S.D.	0.005	0.082	0.090	0.148	0.002	0.082	0.413	1.509
% R.S.D.	1.319	0.931	446.309	7.810	0.299	1.422	1365.468	187.636

	Ce (ppm)	Sm (ppm)	Ba (ppm)	P (ppm)	S (ppm)	Mg (ppm)	As (ppm)	Na (ppm)
Mean	-0.948	1.300	0.012	5.284	10.827	0.051	-0.228	470.097
S.D.	0.267	0.224	0.006	0.229	0.166	0.004	0.225	0.920
% R.S.D.	28.151	17.233	47.258	4.342	1.537	7.873	98.439	0.196

	Mo (ppm)	Se (ppm)	Ag (ppm)	Pb (ppm)	Ti (ppm)	Cd (ppm)	B (ppm)	K (ppm)
Mean	0.104	-0.018	-0.026	-0.562	0.005	-0.007	-0.057	10920.802
S.D.	0.026	0.497	0.019	0.824	0.005	0.018	0.015	25.665
% R.S.D.	25.471	2733.725	73.105	146.600	102.394	243.434	26.893	0.235

	Mn (ppm)	Sb (ppm)	V (ppm)	Be (ppm)	Tl (ppm)
Mean	0.819	2.941	-0.143	-0.006	0.495
S.D.	0.014	1.324	0.012	0.005	0.602
% R.S.D.	1.701	45.033	8.503	82.363	121.547

06/05/96 13:46 ☎509 372 2929 WESTINGHOUSE →→→ MO-924 200W 017

Identity 1: s96t001778_A Identity 2: .250ml-2ml-8ml 2:03 PM June 5, 1996
Task name : OPTIMA
Sample Weight : 1.0000 Solution Volume : 41.00
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	40.285	40.985	39.288	40.082	79.660	39.636	41.981	40.216
S.D.	0.073	0.025	0.207	0.090	0.122	0.000	0.072	0.072
% R.S.D.	0.181	0.061	0.527	0.224	0.154	0.000	0.171	0.180

	Zn (ppm)	Ni (ppm)	La (ppm)	Fe (ppm)	Ca (ppm)	Cr (ppm)	Nd (ppm)	U (ppm)
Mean	40.016	47.994	41.212	42.282	41.280	44.896	44.089	80.811
S.D.	0.024	0.176	0.207	0.306	0.038	0.036	0.229	0.455
% R.S.D.	0.059	0.366	0.502	0.725	0.091	0.079	0.518	0.563

	Ce (ppm)	Sm (ppm)	Ba (ppm)	P (ppm)	S (ppm)	Mg (ppm)	As (ppm)	Na (ppm)
Mean	40.426	41.383	41.105	48.149	50.647	37.441	39.986	519.310
S.D.	0.235	0.115	0.035	0.439	0.356	0.053	0.252	1.365
% R.S.D.	0.582	0.277	0.085	0.912	0.702	0.142	0.631	0.263

	Mo (ppm)	Se (ppm)	Ag (ppm)	Pb (ppm)	Ti (ppm)	Cd (ppm)	B (ppm)	K (ppm)
Mean	39.785	42.307	24.655	39.817	39.431	39.075	40.068	11066.546
S.D.	0.083	0.780	0.103	0.076	0.050	0.089	0.194	39.683
% R.S.D.	0.209	1.844	0.416	0.190	0.126	0.229	0.485	0.359

	Mn (ppm)	Sb (ppm)	V (ppm)	Be (ppm)	Tl (ppm)
Mean	40.255	37.777	40.294	40.604	37.479
S.D.	0.134	0.441	0.055	0.069	0.114
% R.S.D.	0.333	1.168	0.136	0.169	0.304

06/05/96 13:47 ☎509 372 2929 WESTINGHOUSE →→→ MO-924 200W 018

JW 6-5-96

1779

Identity 1: s96t00~~1778~~_L Identity 2: .250ml-10ml-2ml-8ml 2:08 PM June 5, 1996
Task name : OPTIMA
Sample Weight : 1.0000 Solution Volume : 205.00
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	0.074	0.096	-1.368	5.058	26.913	0.646	-0.031	0.138
S.D.	0.092	0.013	1.686	0.313	1.212	0.373	0.049	0.030
% R.S.D.	125.102	13.636	123.244	6.186	4.502	57.733	160.353	21.437

	Zn (ppm)	Ni (ppm)	La (ppm)	Fe (ppm)	Ca (ppm)	Cr (ppm)	Nd (ppm)	U (ppm)
Mean	4.105	8.520	1.080	1.440	3.418	4.210	1.666	0.610
S.D.	0.094	0.213	0.512	0.228	0.060	0.280	1.051	4.296
% R.S.D.	2.301	2.497	47.380	15.810	1.767	6.641	63.124	704.820

	Ce (ppm)	Sm (ppm)	Ba (ppm)	P (ppm)	S (ppm)	Mg (ppm)	As (ppm)	Na (ppm)
Mean	-1.355	5.485	0.097	3.250	6.858	0.210	1.487	503.361
S.D.	0.576	0.939	0.006	1.362	1.260	0.035	0.825	0.951
% R.S.D.	42.489	17.114	6.383	41.892	18.377	16.667	55.468	0.189

	Mo (ppm)	Se (ppm)	Ag (ppm)	Pb (ppm)	Ti (ppm)	Cd (ppm)	B (ppm)	K (ppm)
Mean	0.478	4.224	-0.012	-3.825	0.201	0.157	-0.481	11277.032
S.D.	0.192	0.691	0.040	1.731	0.052	0.121	0.202	45.250
% R.S.D.	40.132	16.365	348.363	45.249	25.963	77.181	41.878	0.401

	Mn (ppm)	Sb (ppm)	V (ppm)	Be (ppm)	Tl (ppm)
Mean	0.565	11.793	-0.367	0.079	-5.903
S.D.	0.070	6.228	0.130	0.001	3.036
% R.S.D.	12.442	52.813	35.463	0.712	51.437

06/05/96 13:47 ☎509 372 2929 WESTINGHOUSE →→→ MO-924 200W ☑019

JW 6-5-96

Identity 1: s96t00~~1778~~ 1779 Identity 2: .250ml-10ml 2:12 PM June 5, 1996
Task name : OPTIMA
Sample Weight : 1.0000 Solution Volume : 41.00
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	-0.051	0.010	0.366	1.580	27.347	0.000	-0.020	-0.009
S.D.	0.038	0.002	0.270	0.122	0.333	0.074	0.033	0.007
% R.S.D.	76.015	15.746	73.661	7.732	1.218	117131.407	169.127	76.562

	Zn (ppm)	Ni (ppm)	La (ppm)	Fe (ppm)	Ca (ppm)	Cr (ppm)	Nd (ppm)	U (ppm)
Mean	0.609	7.435	-0.039	2.101	2.010	4.076	-0.996	-0.210
S.D.	0.020	0.086	0.091	0.150	0.017	0.039	0.186	1.699
% R.S.D.	3.355	1.159	231.553	7.150	0.846	0.967	18.655	810.928

	Ce (ppm)	Sm (ppm)	Ba (ppm)	P (ppm)	S (ppm)	Mg (ppm)	As (ppm)	Na (ppm)
Mean	-1.176	0.548	0.005	5.367	6.126	0.063	-0.061	494.192
S.D.	0.423	0.347	0.005	0.204	0.102	0.000	0.397	2.332
% R.S.D.	35.936	63.341	118.879	3.791	1.663	0.000	650.625	0.472

	Mo (ppm)	Se (ppm)	Ag (ppm)	Pb (ppm)	Ti (ppm)	Cd (ppm)	B (ppm)	K (ppm)
Mean	0.090	0.615	-0.028	-0.452	0.009	-0.011	-0.109	10826.741
S.D.	0.037	0.320	0.047	0.190	0.024	0.016	0.025	43.334
% R.S.D.	40.657	52.106	167.028	41.912	258.926	145.187	23.380	0.400

	Mn (ppm)	Sb (ppm)	V (ppm)	Be (ppm)	Tl (ppm)
Mean	0.737	-0.963	-0.139	-0.019	-0.591
S.D.	0.014	0.411	0.026	0.005	1.109
% R.S.D.	1.932	42.676	19.008	27.547	187.467

06/05/96 13:48 ☎509 372 2929 WESTINGHOUSE →→→ MO-924 200W 020

JW 6-5-96

1779

Identity 1: s96t0~~04778~~_d Identity 2: .250ml-10ml 2:14 PM June 5, 1996

Task name : OPTIMA

Sample Weight : 1.0000 Solution Volume : 41.00

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	0.020	0.291	1.607	28.989	-0.000	0.039	0.013
S.D.	0.027	0.004	0.386	0.125	0.172	0.075	0.018	0.005
% R.S.D.	485.249	19.924	132.409	7.784	0.593	88136.172	46.264	40.131

	Zn (ppm)	Ni (ppm)	La (ppm)	Fe (ppm)	Ca (ppm)	Cr (ppm)	Nd (ppm)	U (ppm)
Mean	0.854	8.032	0.099	1.937	0.747	4.240	0.567	0.957
S.D.	0.000	0.076	0.059	0.153	0.028	0.018	0.101	0.496
% R.S.D.	0.002	0.950	59.759	7.917	3.748	0.418	17.838	51.828

	Ce (ppm)	Sm (ppm)	Ba (ppm)	P (ppm)	S (ppm)	Mg (ppm)	As (ppm)	Na (ppm)
Mean	-0.104	0.753	0.028	4.066	6.376	0.051	0.285	510.184
S.D.	0.205	0.133	0.003	0.294	0.118	0.028	0.049	0.158
% R.S.D.	196.892	17.682	10.942	7.232	1.853	55.111	17.252	0.031

	Mo (ppm)	Se (ppm)	Ag (ppm)	Pb (ppm)	Ti (ppm)	Cd (ppm)	B (ppm)	K (ppm)
Mean	0.168	-0.220	0.023	-0.828	0.047	0.021	-0.029	11038.039
S.D.	0.041	0.215	0.025	0.254	0.017	0.012	0.029	42.127
% R.S.D.	24.477	98.075	107.880	30.743	35.988	59.257	98.480	0.382

	Mn (ppm)	Sb (ppm)	V (ppm)	Be (ppm)	Tl (ppm)
Mean	0.754	2.946	-0.092	-0.013	-0.046
S.D.	0.012	0.150	0.009	0.000	0.629
% R.S.D.	1.622	5.083	9.852	0.509	1378.369

06/05/96 13:48 ☎509 372 2929 WESTINGHOUSE →→→ MO-924 200W 021

Identity 1: s96t001779_A Identity 2: .250ml-2ml-8ml 2:20 PM June 5, 1996
Task name : OPTIMA
Sample Weight : 1.0000 Solution Volume : 41.00
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	40.599	41.119	39.637	40.973	66.967	39.636	41.956	39.549
S.D.	0.044	0.169	0.391	0.040	0.160	0.000	0.131	0.201
% R.S.D.	0.109	0.412	0.987	0.098	0.239	0.001	0.313	0.507

	Zn (ppm)	Ni (ppm)	La (ppm)	Fe (ppm)	Ca (ppm)	Cr (ppm)	Nd (ppm)	U (ppm)
Mean	40.030	47.533	41.861	42.628	40.970	43.872	43.645	83.198
S.D.	0.088	0.049	0.279	0.309	0.123	0.210	0.151	1.828
% R.S.D.	0.220	0.104	0.665	0.726	0.300	0.478	0.347	2.197

	Ce (ppm)	Sm (ppm)	Ba (ppm)	P (ppm)	S (ppm)	Mg (ppm)	As (ppm)	Na (ppm)
Mean	40.234	42.810	41.170	45.187	45.109	37.836	39.965	540.633
S.D.	0.162	0.284	0.174	1.378	0.535	0.057	0.504	2.624
% R.S.D.	0.402	0.664	0.423	3.049	1.186	0.152	1.261	0.485

	Mo (ppm)	Se (ppm)	Ag (ppm)	Pb (ppm)	Ti (ppm)	Cd (ppm)	B (ppm)	K (ppm)
Mean	39.928	43.132	23.489	39.968	39.639	39.635	40.214	11069.826
S.D.	0.160	0.289	0.314	0.367	0.128	0.100	0.079	36.821
% R.S.D.	0.400	0.670	1.336	0.918	0.324	0.253	0.197	0.333

	Mn (ppm)	Sb (ppm)	V (ppm)	Be (ppm)	Tl (ppm)
Mean	40.478	38.669	40.611	40.931	38.422
S.D.	0.079	0.459	0.038	0.150	0.906
% R.S.D.	0.196	1.187	0.094	0.368	2.359

06/05/96 13:49 ☎509 372 2929 WESTINGHOUSE →→→ MO-924 200W 022

Identity 1: ICSA Identity 2: Quality Control 2:23 PM June 5, 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	-0.027	0.015	200.746	0.000	0.000	0.001
S.D.	0.001	0.000	0.007	0.001	0.719	0.000	0.000	0.000
% R.S.D.	113.073	1.665	27.097	5.698	0.358	7.576	159.006	22.941

	Zn (ppm)	Ni (ppm)	La (ppm)	Fe (ppm)	Ca (ppm)	Cr (ppm)	Nd (ppm)	U (ppm)
Mean	-0.004	0.008	0.003	97.333	101.768	0.006	0.018	0.011
S.D.	0.000	0.001	0.001	0.252	0.320	0.002	0.001	0.011
% R.S.D.	7.333	10.156	49.961	0.259	0.314	30.102	8.015	95.270

	Ce (ppm)	Sm (ppm)	Ba (ppm)	P (ppm)	S (ppm)	Mg (ppm)	As (ppm)	Na (ppm)
Mean	-0.013	0.030	0.004	0.047	0.013	100.627	0.011	195.721
S.D.	0.003	0.001	0.000	0.009	0.018	0.597	0.003	0.491
% R.S.D.	22.750	4.306	0.492	20.074	134.311	0.594	24.540	0.251

	Mo (ppm)	Se (ppm)	Ag (ppm)	Pb (ppm)	Ti (ppm)	Cd (ppm)	B (ppm)	K (ppm)
Mean	0.001	-0.030	0.001	0.015	0.001	0.001	0.012	0.033
S.D.	0.002	0.004	0.000	0.010	0.001	0.000	0.001	0.030
% R.S.D.	142.131	14.574	38.192	70.641	102.559	39.978	8.624	92.161

	Mn (ppm)	Sb (ppm)	V (ppm)	Be (ppm)	Tl (ppm)
Mean	0.009	-0.032	-0.002	0.003	-0.009
S.D.	0.001	0.038	0.001	0.000	0.002
% R.S.D.	7.087	118.094	28.882	4.435	19.911

06/05/96 13:49 ☎509 372 2929 WESTINGHOUSE →→→ MO-924 200W 023

Identity 1: ICSAB Identity 2: Quality Control 2:26 PM June 5, 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	-0.040	0.016	200.037	0.488	0.521	0.962
S.D.	0.002	0.000	0.004	0.005	1.033	0.007	0.004	0.015
% R.S.D.	60.317	7.475	10.956	32.467	0.517	1.489	0.693	1.545

	Zn (ppm)	Ni (ppm)	La (ppm)	Fe (ppm)	Ca (ppm)	Cr (ppm)	Nd (ppm)	U (ppm)
Mean	0.988	0.977	-0.001	97.525	101.999	0.501	0.032	0.014
S.D.	0.001	0.007	0.001	0.186	0.268	0.003	0.010	0.086
% R.S.D.	0.098	0.703	106.193	0.191	0.262	0.589	30.561	599.873

	Ce (ppm)	Sm (ppm)	Ba (ppm)	P (ppm)	S (ppm)	Mg (ppm)	As (ppm)	Na (ppm)
Mean	-0.024	0.034	0.526	0.022	0.007	98.989	0.012	196.468
S.D.	0.019	0.014	0.003	0.010	0.015	0.160	0.002	2.551
% R.S.D.	77.969	41.012	0.483	44.051	204.756	0.162	19.556	1.298

	Mo (ppm)	Se (ppm)	Ag (ppm)	Pb (ppm)	Ti (ppm)	Cd (ppm)	B (ppm)	K (ppm)
Mean	0.001	0.037	1.018	1.012	0.001	0.997	0.009	-0.107
S.D.	0.000	0.014	0.000	0.024	0.001	0.000	0.000	0.040
% R.S.D.	31.149	37.336	0.033	2.321	93.004	0.026	1.330	36.889

	Mn (ppm)	Sb (ppm)	V (ppm)	Be (ppm)	Tl (ppm)
Mean	0.507	0.066	0.503	0.511	-0.013
S.D.	0.001	0.023	0.000	0.001	0.028
% R.S.D.	0.119	34.964	0.082	0.224	211.563

06/05/96 13:50 ☎509 372 2929 WESTINGHOUSE →→→ MO-924 200W 024

Identity 1: CCV Identity 2: Quality Control 2:29 PM June 5, 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	5.044	5.109	5.047	4.814	5.186	5.059	5.200	5.135
S.D.	0.005	0.001	0.025	0.007	0.039	0.005	0.009	0.034
% R.S.D.	0.094	0.018	0.493	0.145	0.744	0.108	0.177	0.653

	Zn (ppm)	Ni (ppm)	La (ppm)	Fe (ppm)	Ca (ppm)	Cr (ppm)	Nd (ppm)	U (ppm)
Mean	5.073	5.017	5.158	5.233	5.200	5.008	5.504	10.141
S.D.	0.008	0.008	0.020	0.029	0.018	0.006	0.029	0.008
% R.S.D.	0.158	0.168	0.380	0.546	0.338	0.122	0.521	0.081

	Ce (ppm)	Sm (ppm)	Ba (ppm)	P (ppm)	S (ppm)	Mg (ppm)	As (ppm)	Na (ppm)
Mean	5.232	5.149	5.132	5.333	5.027	4.958	5.116	5.318
S.D.	0.008	0.002	0.002	0.198	0.082	0.024	0.018	0.026
% R.S.D.	0.161	0.042	0.046	3.716	1.626	0.482	0.350	0.484

	Mo (ppm)	Se (ppm)	Ag (ppm)	Pb (ppm)	Ti (ppm)	Cd (ppm)	B (ppm)	K (ppm)
Mean	5.053	5.422	4.937	5.065	4.959	5.025	5.160	5.080
S.D.	0.013	0.020	0.009	0.027	0.006	0.017	0.006	0.043
% R.S.D.	0.253	0.372	0.189	0.541	0.115	0.339	0.124	0.846

	Mn (ppm)	Sb (ppm)	V (ppm)	Be (ppm)	Tl (ppm)
Mean	5.013	4.761	5.112	5.239	4.932
S.D.	0.011	0.045	0.008	0.003	0.030
% R.S.D.	0.219	0.945	0.157	0.056	0.605

06/05/96 13:50 ☎509 372 2929 WESTINGHOUSE →→→ MO-924 200W 025

Identity 1: CCB Identity 2: Quality Control 2:32 PM June 5, 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	0.003	0.005	0.016	0.104	-0.001	0.002	0.003
S.D.	0.001	0.001	0.013	0.004	0.011	0.003	0.001	0.001
% R.S.D.	40.360	17.671	257.170	22.509	10.497	299.203	31.332	20.649

	Zn (ppm)	Ni (ppm)	La (ppm)	Fe (ppm)	Ca (ppm)	Cr (ppm)	Nd (ppm)	U (ppm)
Mean	0.004	0.011	0.002	0.056	0.055	0.002	-0.009	0.008
S.D.	0.001	0.003	0.001	0.005	0.005	0.002	0.007	0.033
% R.S.D.	19.912	25.851	59.926	8.887	9.080	66.407	78.826	415.945

	Ce (ppm)	Sm (ppm)	Ba (ppm)	P (ppm)	S (ppm)	Mg (ppm)	As (ppm)	Na (ppm)
Mean	-0.032	0.035	0.003	0.009	0.003	0.054	0.000	0.108
S.D.	0.005	0.007	0.001	0.003	0.006	0.005	0.002	0.009
% R.S.D.	16.156	19.449	20.802	34.147	176.998	8.778	1486.828	8.555

	Mo (ppm)	Se (ppm)	Ag (ppm)	Pb (ppm)	Ti (ppm)	Cd (ppm)	B (ppm)	K (ppm)
Mean	0.007	0.003	0.002	0.008	0.004	0.003	0.004	-0.157
S.D.	0.001	0.006	0.001	0.003	0.001	0.001	0.001	0.013
% R.S.D.	19.736	165.577	28.266	35.516	20.277	37.303	31.741	8.196

	Mn (ppm)	Sb (ppm)	V (ppm)	Be (ppm)	Tl (ppm)
Mean	0.002	-0.000	0.001	0.004	-0.015
S.D.	0.001	0.024	0.001	0.001	0.013
% R.S.D.	34.998	46329.132	72.045	16.523	85.164

06/05/96 13:51 ☎509 372 2929 WESTINGHOUSE →→→ MO-924 200W 026

05/13/96 14:54
A-0004-1

File #: 960604C.DAT

LABCORE Data Entry Template for Worklist# 8632

Analyst: JK Soto **Instrument:** ICP01 _____ **Book#** 568489

Method: LA-505-151/~~161~~-Rev/Mod D-3
JK 6-4-96

Worklist Comment: ICP U-105 (FUSION)

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	PREPBLKTJA				@ICP-F01	SOLID		
7	SERDIL	S96T001780	0	F	@ICP-F01	SOLID		
8	SAMPLE	S96T001780	0	F	@ICP-F01	SOLID	96000323	U-105 (R)
	Analytes Requested:	AL-F-01 , BI-F-01 , FE-F-01 , LI-F-01 , NA-F-01 , P-F-01 , SI-F-01						
9	DUP	S96T001780	0	F	@ICP-F01	SOLID		
10	SPK	S96T001780	0	F	@ICP-F01	SOLID		
11	CCV				@ICP-QC	QC		
12	CCB				@ICP-QC	QC		
13	SERDIL	S96T001781	0	F	@ICP-F01	SOLID		
14	SAMPLE	S96T001781	0	F	@ICP-F01	SOLID	96000323	U-105 (R)
	Analytes Requested:	AL-F-01 , BI-F-01 , FE-F-01 , LI-F-01 , NA-F-01 , P-F-01 , SI-F-01						
15	DUP	S96T001781	0	F	@ICP-F01	SOLID		
16	SPK	S96T001781	0	F	@ICP-F01	SOLID		
17	SERDIL	S96T001782	0	F	@ICP-F01	SOLID		

Data Entry Comments:

Example for calculation of sample results:

S96T001780 $Al = 28.889 \frac{ug}{ml} \times \frac{1}{2.192 \frac{g}{L} \times \frac{1L}{1000ml}} = 1.32 \frac{ug}{g}$ 2-44

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

Note: 2.192 $\frac{g}{L}$ is sample prep dilution factor which can be found in sample prep worksheet.

LABCORE Data Entry Template for Worklist# 8632

S	Type	Sample#	R	A	Test	Matrix	Group#	Project
18	SAMPLE	S96T001782	0	F	@ICP-F01	SOLID	96000323	U-105 (R)
		Analytes Requested:			AL-F-01 , BI-F-01 , FE-F-01 , LI-F-01 , NA-F-01 , P-F-01 , SI-F-01			
19	DUP	S96T001782	0	F	@ICP-F01	SOLID		
20	SPK	S96T001782	0	F	@ICP-F01	SOLID		
21	ICSA				@ICP-QC	QC		
22	ICSAB				@ICP-QC	QC		
23	CCV				@ICP-QC	QC		
24	CCB				@ICP-QC	QC		

Final page for worklist # 8632

JK Jolo 06-04-96
Analyst Signature **Date**

Reviewed by: Sa[illegible] 6/6/96
Analyst Signature **Date**

PrepBlkGrL , .25-10 ml
S96T001780_L , .25-10-2.8 , DF 205
S96T001780 , .25-10 41
S96T001780_D .25-10 41
S96T001780_G .25-10 41 , .25 ml sample + 2.05 ml SSTS + 7.95 ml HNO_3
S96T001781_L , .25-10-2.8 , DF 205
S96T001781 , .25-10 41
S96T001781_D , .25-10 41
S96T001781_G , .25-10 41 , .25 ml sample + 2.05 ml SSTS + 7.95 ml HNO_3
S96T001782_L , .25-10-2.8 , DF 205
S96T001782 , .25-10 41
S96T001782_D , .25-10 41
S96T001782_G , .25-10 41 , .25 ml sample + 2.05 ml SSTS + 7.95 ml HNO_3

Data Entry Comments: Spike true value is 1.0 ppm on all elements except for Al = 2.0 ppm. Example for calculation of spike recovery.

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

S96T001780 Al = $\frac{\left(\frac{71.181}{41}\right) - \left(\frac{28.889}{41}\right)}{1} \times 100 = 103.1\ \%$

Identity 1: ICV Identity 2: Quality Control 7:29 PM June 4, 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	4.898	5.018	5.049	4.810	4.987	5.080	4.988	5.098
S.D.	0.012	0.015	0.040	0.006	0.011	0.012	0.015	0.017
% R.S.D.	0.247	0.299	0.795	0.134	0.223	0.236	0.299	0.335

	Zn (ppm)	Ni (ppm)	La (ppm)	Fe (ppm)	Ca (ppm)	Cr (ppm)	Nd (ppm)	U (ppm)
Mean	5.136	5.089	5.015	5.083	4.863	5.148	5.009	9.793
S.D.	0.007	0.006	0.015	0.015	0.015	0.002	0.020	0.026
% R.S.D.	0.132	0.118	0.298	0.302	0.308	0.040	0.392	0.266

	Ce (ppm)	Sm (ppm)	Ba (ppm)	P (ppm)	S (ppm)	Mg (ppm)	As (ppm)	Na (ppm)
Mean	5.134	5.020	5.023	4.845	4.940	4.993	5.198	5.012
S.D.	0.023	0.013	0.016	0.144	0.022	0.007	0.029	0.009
% R.S.D.	0.455	0.253	0.313	2.963	0.445	0.150	0.560	0.185

	Mo (ppm)	Se (ppm)	Ag (ppm)	Pb (ppm)	Ti (ppm)	Cd (ppm)	B (ppm)	K (ppm)
Mean	5.094	5.395	5.072	5.082	4.892	5.086	5.025	5.123
S.D.	0.004	0.043	0.011	0.010	0.010	0.018	0.011	0.028
% R.S.D.	0.078	0.805	0.221	0.202	0.201	0.347	0.209	0.538

	Mn (ppm)	Sb (ppm)	V (ppm)	Be (ppm)	Tl (ppm)
Mean	5.106	4.691	5.031	5.193	4.853
S.D.	0.010	0.060	0.008	0.014	0.010
% R.S.D.	0.188	1.271	0.155	0.273	0.210

JK
06-04-96
W-105 596T001780
596T001781
596T001782
Worklist # 8632

SIGNATURE ABOVE REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 1213 TO 1236.

Identity 1: ICB Identity 2: Quality Control 7:32 PM June 4, 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	-0.001	0.007	-0.013	-0.003	-0.001	-0.000
S.D.	0.002	0.000	0.006	0.004	0.003	0.002	0.001	0.001
% R.S.D.	77.064	129.904	902.405	50.171	25.274	57.504	73.693	188.904

	Zn (ppm)	Ni (ppm)	La (ppm)	Fe (ppm)	Ca (ppm)	Cr (ppm)	Nd (ppm)	U (ppm)
Mean	0.000	0.004	0.002	0.001	0.001	-0.002	-0.010	0.006
S.D.	0.000	0.001	0.001	0.003	0.000	0.002	0.008	0.064
% R.S.D.	21.585	29.863	75.583	479.708	23.094	113.982	76.941	1051.341

	Ce (ppm)	Sm (ppm)	Ba (ppm)	P (ppm)	S (ppm)	Mg (ppm)	As (ppm)	Na (ppm)
Mean	-0.055	0.043	-0.000	-0.011	-0.007	0.000	-0.001	-0.030
S.D.	0.017	0.013	0.000	0.008	0.003	0.000	0.001	0.006
% R.S.D.	31.182	29.436	130.171	74.057	38.446	43.301	108.216	19.358

	Mo (ppm)	Se (ppm)	Ag (ppm)	Pb (ppm)	Ti (ppm)	Cd (ppm)	B (ppm)	K (ppm)
Mean	-0.001	0.008	-0.001	0.008	0.002	-0.001	0.007	-0.031
S.D.	0.002	0.009	0.001	0.004	0.001	0.001	0.000	0.014
% R.S.D.	116.755	112.226	102.065	50.123	52.813	142.302	6.495	47.206

	Mn (ppm)	Sb (ppm)	V (ppm)	Be (ppm)	Tl (ppm)
Mean	0.001	0.025	-0.002	0.001	-0.052
S.D.	0.000	0.011	0.001	0.001	0.035
% R.S.D.	20.832	42.467	54.342	80.305	67.516

Identity 1: LLS Identity 2: Quality Control 7:35 PM June 4, 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	0.022	0.021	0.189	0.129	0.102	0.039	0.019	0.021
S.D.	0.000	0.000	0.012	0.001	0.005	0.002	0.000	0.000
% R.S.D.	1.517	0.179	6.455	1.097	5.229	4.692	2.047	1.102

	Zn (ppm)	Ni (ppm)	La (ppm)	Fe (ppm)	Ca (ppm)	Cr (ppm)	Nd (ppm)	U (ppm)
Mean	0.022	0.044	0.101	0.103	0.192	0.024	0.193	0.467
S.D.	0.001	0.002	0.000	0.002	0.000	0.002	0.001	0.020
% R.S.D.	3.047	3.870	0.009	2.076	0.136	6.947	0.333	4.325

	Ce (ppm)	Sm (ppm)	Ba (ppm)	P (ppm)	S (ppm)	Mg (ppm)	As (ppm)	Na (ppm)
Mean	0.191	0.209	0.102	0.398	0.183	0.205	0.205	0.187
S.D.	0.003	0.003	0.000	0.018	0.007	0.000	0.004	0.004
% R.S.D.	1.504	1.292	0.080	4.538	4.080	0.049	2.184	2.130

	Mo (ppm)	Se (ppm)	Ag (ppm)	Pb (ppm)	Ti (ppm)	Cd (ppm)	B (ppm)	K (ppm)
Mean	0.098	0.197	0.019	0.202	0.021	0.009	0.105	0.584
S.D.	0.002	0.008	0.000	0.010	0.000	0.000	0.002	0.005
% R.S.D.	1.795	4.084	2.278	5.120	2.048	5.319	1.516	0.898

	Mn (ppm)	Sb (ppm)	V (ppm)	Be (ppm)	Tl (ppm)
Mean	0.021	0.093	0.101	0.011	0.422
S.D.	0.000	0.025	0.001	0.000	0.014
% R.S.D.	0.855	26.881	0.728	3.258	3.324

Identity 1: ICSA Identity 2: Quality Control 7:38 PM June 4, 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	-0.021	0.017	201.424	-0.002	-0.000	-0.001
S.D.	0.001	0.000	0.009	0.003	0.189	0.002	0.000	0.000
% R.S.D.	25.684	8.151	41.139	16.751	0.094	92.846	233.645	52.333

	Zn (ppm)	Ni (ppm)	La (ppm)	Fe (ppm)	Ca (ppm)	Cr (ppm)	Nd (ppm)	U (ppm)
Mean	-0.005	0.003	0.004	97.922	104.229	0.002	-0.018	0.079
S.D.	0.000	0.001	0.001	0.082	0.025	0.002	0.008	0.054
% R.S.D.	7.752	32.595	39.387	0.084	0.024	78.711	46.589	68.521

	Ce (ppm)	Sm (ppm)	Ba (ppm)	P (ppm)	S (ppm)	Mg (ppm)	As (ppm)	Na (ppm)
Mean	-0.031	0.063	0.003	0.011	-0.026	104.103	0.015	192.125
S.D.	0.015	0.008	0.000	0.006	0.007	0.161	0.006	0.834
% R.S.D.	47.643	13.436	10.349	52.199	26.073	0.155	43.220	0.434

	Mo (ppm)	Se (ppm)	Ag (ppm)	Pb (ppm)	Ti (ppm)	Cd (ppm)	B (ppm)	K (ppm)
Mean	0.001	-0.035	-0.001	-0.003	0.001	-0.003	0.015	0.020
S.D.	0.002	0.010	0.001	0.005	0.000	0.001	0.001	0.011
% R.S.D.	309.715	27.158	54.887	187.859	13.193	23.645	7.901	56.845

	Mn (ppm)	Sb (ppm)	V (ppm)	Be (ppm)	Tl (ppm)
Mean	0.008	-0.039	-0.002	0.003	-0.030
S.D.	0.000	0.025	0.001	0.000	0.024
% R.S.D.	2.186	64.297	32.770	4.931	78.919

Identity 1: ICSAB Identity 2: Quality Control 7:40 PM June 4, 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	-0.051	0.013	202.028	0.500	0.500	0.955
S.D.	0.001	0.000	0.014	0.004	0.402	0.002	0.002	0.005
% R.S.D.	50.434	3.704	27.559	32.732	0.199	0.367	0.330	0.524

	Zn (ppm)	Ni (ppm)	La (ppm)	Fe (ppm)	Ca (ppm)	Cr (ppm)	Nd (ppm)	U (ppm)
Mean	1.010	1.009	0.000	97.363	104.266	0.519	-0.028	0.046
S.D.	0.001	0.005	0.001	0.095	0.136	0.005	0.005	0.023
% R.S.D.	0.061	0.539	360.592	0.098	0.130	1.001	17.329	51.013

	Ce (ppm)	Sm (ppm)	Ba (ppm)	P (ppm)	S (ppm)	Mg (ppm)	As (ppm)	Na (ppm)
Mean	-0.051	0.038	0.517	0.020	-0.044	103.722	0.021	194.102
S.D.	0.007	0.004	0.002	0.011	0.002	0.112	0.002	0.989
% R.S.D.	13.186	11.652	0.341	54.951	3.536	0.108	11.412	0.509

	Mo (ppm)	Se (ppm)	Ag (ppm)	Pb (ppm)	Ti (ppm)	Cd (ppm)	B (ppm)	K (ppm)
Mean	-0.003	-0.009	1.049	1.025	0.000	1.018	0.015	-0.027
S.D.	0.001	0.021	0.002	0.008	0.000	0.001	0.001	0.014
% R.S.D.	22.700	242.920	0.227	0.752	144.247	0.077	4.173	52.060

	Mn (ppm)	Sb (ppm)	V (ppm)	Be (ppm)	Tl (ppm)
Mean	0.520	-0.005	0.498	0.510	-0.039
S.D.	0.002	0.016	0.001	0.002	0.011
% R.S.D.	0.431	310.831	0.267	0.413	28.245

Identity 1: PREPBLK Identity 2: Quality Control 7:44 PM June 4, 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	0.003	0.000	0.001	-0.004	-0.001	-0.001
S.D.	0.000	0.000	0.007	0.001	0.011	0.003	0.000	0.000
% R.S.D.	74.161	21.651	284.047	359.259	1205.348	75.076	21.690	23.521

	Zn (ppm)	Ni (ppm)	La (ppm)	Fe (ppm)	Ca (ppm)	Cr (ppm)	Nd (ppm)	U (ppm)
Mean	0.000	0.089	-0.004	0.011	0.007	-0.002	-0.012	-0.029
S.D.	0.001	0.003	0.001	0.004	0.004	0.000	0.003	0.026
% R.S.D.	285.613	3.446	37.078	32.225	49.030	7.197	23.828	91.706

	Ce (ppm)	Sm (ppm)	Ba (ppm)	P (ppm)	S (ppm)	Mg (ppm)	As (ppm)	Na (ppm)
Mean	-0.043	0.036	-0.001	0.015	-0.014	0.011	-0.005	0.095
S.D.	0.010	0.006	0.000	0.005	0.002	0.004	0.002	0.007
% R.S.D.	22.856	16.735	24.216	32.093	17.195	32.447	42.145	7.258

	Mo (ppm)	Se (ppm)	Ag (ppm)	Pb (ppm)	Ti (ppm)	Cd (ppm)	B (ppm)	K (ppm)
Mean	-0.001	-0.022	-0.002	0.009	0.001	-0.002	0.002	285.946
S.D.	0.001	0.008	0.000	0.001	0.000	0.001	0.002	1.591
% R.S.D.	59.995	36.598	0.137	6.299	31.149	67.978	105.846	0.556

	Mn (ppm)	Sb (ppm)	V (ppm)	Be (ppm)	Tl (ppm)
Mean	0.001	-0.014	-0.003	-0.000	-0.039
S.D.	0.000	0.001	0.000	0.000	0.014
% R.S.D.	49.578	9.860	4.422	161.443	35.890

Identity 1: S96T001780_L Identity 2: .25-10-2-8 ml 7:49 PM June 4, 1996
Task name : OPTIMA
Sample Weight : 1.0000 Solution Volume : 205.00
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	-0.073	-0.076	-1.048	0.360	30.952	-0.433	-0.379	-0.174
S.D.	0.317	0.020	1.876	0.555	0.811	0.374	0.072	0.067
% R.S.D.	432.020	26.956	179.034	154.128	2.620	86.394	19.095	38.448

	Zn (ppm)	Ni (ppm)	La (ppm)	Fe (ppm)	Ca (ppm)	Cr (ppm)	Nd (ppm)	U (ppm)
Mean	-0.104	7.415	-1.076	9.321	3.449	6.507	-4.580	-5.032
S.D.	0.061	0.469	0.885	0.953	0.465	0.235	0.527	12.270
% R.S.D.	58.967	6.323	82.228	10.225	13.490	3.618	11.506	243.826

	Ce (ppm)	Sm (ppm)	Ba (ppm)	P (ppm)	S (ppm)	Mg (ppm)	As (ppm)	Na (ppm)
Mean	-10.844	6.614	-0.143	1.571	5.799	3.451	-0.657	457.663
S.D.	2.524	2.366	0.057	2.854	0.275	0.451	0.350	2.491
% R.S.D.	23.276	35.781	39.787	181.714	4.737	13.063	53.317	0.544

	Mo (ppm)	Se (ppm)	Ag (ppm)	Pb (ppm)	Ti (ppm)	Cd (ppm)	B (ppm)	K (ppm)
Mean	-0.685	-4.288	-0.864	-5.050	-0.182	-0.591	0.086	11126.273
S.D.	0.075	1.314	0.212	1.787	0.059	0.062	0.119	79.753
% R.S.D.	10.945	30.637	24.572	35.376	32.207	10.526	137.678	0.717

	Mn (ppm)	Sb (ppm)	V (ppm)	Be (ppm)	Tl (ppm)
Mean	2.275	2.159	-0.795	0.031	-10.873
S.D.	0.095	7.155	0.119	0.028	4.047
% R.S.D.	4.191	331.371	14.899	90.188	37.218

Identity 1: S96T001780 Identity 2: .25-10 ml 7:52 PM June 4, 1996
Task name : OPTIMA
Sample Weight : 1.0000 Solution Volume : 41.00
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	0.092	0.003	-0.171	-0.022	28.889	0.044	-0.009	-0.015
S.D.	0.023	0.003	0.332	0.058	0.234	0.075	0.011	0.009
% R.S.D.	25.339	100.000	194.631	259.603	0.809	171.221	119.910	57.542

	Zn (ppm)	Ni (ppm)	La (ppm)	Fe (ppm)	Ca (ppm)	Cr (ppm)	Nd (ppm)	U (ppm)
Mean	0.096	8.057	-0.059	7.006	0.740	6.813	-0.015	-3.654
S.D.	0.007	0.133	0.068	0.111	0.023	0.204	0.257	1.181
% R.S.D.	7.387	1.657	114.711	1.588	3.078	2.996	1664.056	32.326

	Ce (ppm)	Sm (ppm)	Ba (ppm)	P (ppm)	S (ppm)	Mg (ppm)	As (ppm)	Na (ppm)
Mean	-1.244	0.080	0.009	1.857	7.872	0.241	-0.195	445.770
S.D.	0.350	0.166	0.006	0.495	0.202	0.026	0.142	1.959
% R.S.D.	28.157	208.280	71.429	26.671	2.561	10.710	73.104	0.439

	Mo (ppm)	Se (ppm)	Ag (ppm)	Pb (ppm)	Ti (ppm)	Cd (ppm)	B (ppm)	K (ppm)
Mean	-0.037	-1.531	-0.077	0.841	-0.020	0.027	0.121	10660.078
S.D.	0.036	0.202	0.026	0.068	0.011	0.011	0.023	42.568
% R.S.D.	96.716	13.176	33.793	8.098	54.508	40.072	19.241	0.399

	Mn (ppm)	Sb (ppm)	V (ppm)	Be (ppm)	Tl (ppm)
Mean	2.170	1.202	-0.057	0.002	-1.452
S.D.	0.014	0.284	0.027	0.010	0.421
% R.S.D.	0.656	23.662	46.532	384.657	29.009

6-4-96 D .25-10 ml 6-4-96

Identity 1: S96T001780 Identity 2: ~~.25ml+2.05ml+7.95~~ 7:56 PM June 4, 1996

Task name : OPTIMA

Sample Weight : 1.0000 Solution Volume : 41.00

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	0.167	-0.006	0.073	0.032	24.562	-0.044	-0.042	-0.039
S.D.	0.025	0.002	0.217	0.162	0.281	0.130	0.013	0.005
% R.S.D.	15.235	24.744	299.827	507.082	1.144	297.126	30.106	12.046

	Zn (ppm)	Ni (ppm)	La (ppm)	Fe (ppm)	Ce (ppm)	Cr (ppm)	Nd (ppm)	U (ppm)
Mean	0.066	10.654	-0.056	5.671	0.531	6.157	-0.088	3.770
S.D.	0.023	0.218	0.033	0.326	0.020	0.046	0.095	1.279
% R.S.D.	34.509	2.049	59.744	5.741	3.835	0.740	107.685	33.939

	Ce (ppm)	Sm (ppm)	Ba (ppm)	P (ppm)	S (ppm)	Mg (ppm)	As (ppm)	Na (ppm)
Mean	-2.006	1.119	-0.016	3.144	6.844	0.129	-0.129	456.188
S.D.	0.240	0.189	0.002	0.471	0.427	0.023	0.135	2.428
% R.S.D.	11.971	16.856	12.059	14.993	6.240	17.859	104.760	0.532

	Mo (ppm)	Se (ppm)	Ag (ppm)	Pb (ppm)	Ti (ppm)	Cd (ppm)	B (ppm)	K (ppm)
Mean	0.010	-0.279	-0.143	0.874	0.044	0.027	0.114	11327.366
S.D.	0.047	0.496	0.023	0.475	0.010	0.011	0.046	54.085
% R.S.D.	457.371	177.600	16.231	54.372	23.387	39.447	40.367	0.477

	Mn (ppm)	Sb (ppm)	V (ppm)	Be (ppm)	Tl (ppm)
Mean	1.829	0.553	-0.110	-0.009	-1.652
S.D.	0.019	0.778	0.016	0.005	0.458
% R.S.D.	1.037	140.817	14.244	58.280	27.710

Identity 1: S96T001780_A Identity 2: .25sam+2.05sst5+7.95 7:59 PM June 4, 1996
Task name : OPTIMA
Sample Weight : 1.0000 Solution Volume : 41.00
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	41.323	42.170	41.867	40.774	71.181	42.355	41.771	40.423
S.D.	0.072	0.121	0.271	0.103	0.328	0.130	0.177	0.252
% R.S.D.	0.174	0.286	0.648	0.253	0.461	0.307	0.423	0.623

	Zn (ppm)	Ni (ppm)	La (ppm)	Fe (ppm)	Ca (ppm)	Cr (ppm)	Nd (ppm)	U (ppm)
Mean	42.294	50.198	41.994	48.765	40.509	49.729	40.721	85.873
S.D.	0.086	0.396	0.089	0.388	0.129	0.080	0.312	1.566
% R.S.D.	0.204	0.790	0.211	0.795	0.318	0.161	0.765	1.823

	Ce (ppm)	Sm (ppm)	Ba (ppm)	P (ppm)	S (ppm)	Mg (ppm)	As (ppm)	Na (ppm)
Mean	41.099	43.313	42.012	43.957	50.538	40.907	42.899	487.398
S.D.	0.492	0.386	0.140	1.484	0.540	0.007	0.243	2.793
% R.S.D.	1.196	0.890	0.333	3.377	1.069	0.018	0.567	0.573

	Mo (ppm)	Se (ppm)	Ag (ppm)	Pb (ppm)	Ti (ppm)	Cd (ppm)	B (ppm)	K (ppm)
Mean	42.322	45.091	35.210	42.002	40.986	42.053	40.649	10623.810
S.D.	0.215	0.408	0.018	0.664	0.083	0.047	0.252	70.280
% R.S.D.	0.507	0.906	0.052	1.581	0.202	0.111	0.619	0.662

	Mn (ppm)	Sb (ppm)	V (ppm)	Be (ppm)	Tl (ppm)
Mean	44.657	38.417	41.795	42.532	37.399
S.D.	0.043	0.417	0.112	0.053	0.423
% R.S.D.	0.096	1.086	0.268	0.124	1.130

Identity 1: CCV Identity 2: Quality Control 8:02 PM June 4, 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	4.904	5.004	5.064	4.825	5.047	5.166	4.943	4.942
S.D.	0.006	0.010	0.016	0.006	0.011	0.013	0.009	0.016
% R.S.D.	0.132	0.206	0.314	0.131	0.212	0.246	0.176	0.318

	Zn (ppm)	Ni (ppm)	La (ppm)	Fe (ppm)	Ca (ppm)	Cr (ppm)	Nd (ppm)	U (ppm)
Mean	5.196	5.136	4.995	5.102	4.877	5.218	4.900	9.697
S.D.	0.005	0.020	0.007	0.007	0.006	0.013	0.009	0.011
% R.S.D.	0.091	0.392	0.141	0.140	0.129	0.252	0.174	0.111

	Ce (ppm)	Sm (ppm)	Ba (ppm)	P (ppm)	S (ppm)	Mg (ppm)	As (ppm)	Na (ppm)
Mean	5.157	4.968	4.993	4.955	5.023	5.061	5.224	4.894
S.D.	0.010	0.007	0.012	0.061	0.030	0.008	0.013	0.013
% R.S.D.	0.197	0.150	0.240	1.234	0.595	0.154	0.242	0.275

	Mo (ppm)	Se (ppm)	Ag (ppm)	Pb (ppm)	Ti (ppm)	Cd (ppm)	B (ppm)	K (ppm)
Mean	5.136	5.395	5.112	5.146	4.912	5.131	5.002	5.052
S.D.	0.003	0.057	0.001	0.024	0.008	0.008	0.009	0.020
% R.S.D.	0.060	1.064	0.011	0.461	0.162	0.147	0.183	0.406

	Mn (ppm)	Sb (ppm)	V (ppm)	Be (ppm)	Tl (ppm)
Mean	5.157	4.714	5.064	5.202	4.932
S.D.	0.006	0.048	0.007	0.004	0.034
% R.S.D.	0.112	1.010	0.132	0.069	0.680

Identity 1: CCB Identity 2: Quality Control 8:05 PM June 4, 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	0.008	0.004	-0.014	-0.005	-0.002	-0.001
S.D.	0.001	0.000	0.003	0.002	0.006	0.002	0.000	0.000
% R.S.D.	31.502	34.641	37.333	37.847	41.642	34.520	4.041	32.145

	Zn (ppm)	Ni (ppm)	La (ppm)	Fe (ppm)	Ca (ppm)	Cr (ppm)	Nd (ppm)	U (ppm)
Mean	-0.001	-0.001	-0.003	-0.000	0.001	-0.003	-0.002	0.128
S.D.	0.000	0.002	0.003	0.002	0.000	0.002	0.009	0.036
% R.S.D.	36.081	356.244	118.013	550.516	8.813	72.829	400.433	28.354

	Ce (ppm)	Sm (ppm)	Ba (ppm)	P (ppm)	S (ppm)	Mg (ppm)	As (ppm)	Na (ppm)
Mean	-0.042	0.049	-0.001	0.018	-0.008	0.001	-0.008	-0.021
S.D.	0.005	0.005	0.000	0.004	0.002	0.000	0.003	0.004
% R.S.D.	11.222	10.277	29.794	24.734	27.340	13.324	35.120	16.365

	Mo (ppm)	Se (ppm)	Ag (ppm)	Pb (ppm)	Ti (ppm)	Cd (ppm)	B (ppm)	K (ppm)
Mean	-0.002	-0.003	0.001	-0.014	0.001	-0.002	0.007	0.086
S.D.	0.001	0.015	0.001	0.008	0.000	0.001	0.000	0.013
% R.S.D.	36.914	504.181	80.960	58.375	11.776	34.679	5.343	15.308

	Mn (ppm)	Sb (ppm)	V (ppm)	Be (ppm)	Tl (ppm)
Mean	-0.000	0.002	-0.002	0.000	-0.023
S.D.	0.000	0.013	0.000	0.000	0.009
% R.S.D.	41.486	512.384	17.250	158.665	37.209

Identity 1: S96T001781_L Identity 2: .25-10-2-8 ml 8:08 PM June 4, 1996
Task name : OPTIMA
Sample Weight : 1.0000 Solution Volume : 205.00
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	0.132	0.031	-3.893	2.580	21.376	-0.000	0.030	-0.010
S.D.	0.052	0.028	0.986	0.661	1.125	0.376	0.076	0.054
% R.S.D.	38.979	89.214	25.324	25.627	5.262	171662.433	252.027	524.841

	Zn (ppm)	Ni (ppm)	La (ppm)	Fe (ppm)	Ca (ppm)	Cr (ppm)	Nd (ppm)	U (ppm)
Mean	0.072	11.457	0.881	5.262	0.319	6.258	1.697	2.115
S.D.	0.043	0.515	0.449	0.797	0.041	0.243	1.632	2.721
% R.S.D.	58.969	4.491	50.925	15.139	12.736	3.882	96.170	128.654

	Ce (ppm)	Sm (ppm)	Ba (ppm)	P (ppm)	S (ppm)	Mg (ppm)	As (ppm)	Na (ppm)
Mean	-1.545	1.420	0.017	2.610	3.158	0.513	-2.191	430.363
S.D.	1.365	1.083	0.031	1.005	1.086	0.055	0.642	1.245
% R.S.D.	88.372	76.257	184.983	38.522	34.389	10.657	29.289	0.289

	Mo (ppm)	Se (ppm)	Ag (ppm)	Pb (ppm)	Ti (ppm)	Cd (ppm)	B (ppm)	K (ppm)
Mean	-0.228	-9.733	0.000	-0.797	0.071	-0.304	0.319	11859.363
S.D.	0.241	3.725	0.091	2.049	0.109	0.062	0.180	54.332
% R.S.D.	105.546	38.269	34336.828	257.015	153.054	20.340	56.306	0.458

	Mn (ppm)	Sb (ppm)	V (ppm)	Be (ppm)	Tl (ppm)
Mean	1.718	8.104	-0.236	0.016	-5.167
S.D.	0.072	3.214	0.271	0.048	2.313
% R.S.D.	4.183	39.656	114.709	297.253	44.771

.25-10 ml JK 6-4-96 -SD-WM-DP-182, REV. 1

Identity 1: S96T001781 Identity 2: ~~.25-10-2-8 ml~~ 8:12 PM June 4, 1996
Task name : OPTIMA
Sample Weight : 1.0000 Solution Volume : 41.00
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	0.133	0.007	-0.333	0.299	23.521	0.043	-0.000	-0.011
S.D.	0.005	0.002	0.463	0.087	0.100	0.075	0.011	0.008
% R.S.D.	3.844	21.651	139.063	28.911	0.426	173.342	7324.900	68.385

	Zn (ppm)	Ni (ppm)	La (ppm)	Fe (ppm)	Ca (ppm)	Cr (ppm)	Nd (ppm)	U (ppm)
Mean	0.173	11.325	0.021	5.258	0.592	5.708	0.392	0.963
S.D.	0.016	0.097	0.059	0.071	0.002	0.078	0.331	0.689
% R.S.D.	9.279	0.854	284.402	1.343	0.275	1.358	84.479	71.597

	Ce (ppm)	Sm (ppm)	Ba (ppm)	P (ppm)	S (ppm)	Mg (ppm)	As (ppm)	Na (ppm)
Mean	-0.695	1.359	0.008	2.794	6.593	0.103	-0.347	421.201
S.D.	0.203	0.110	0.003	0.148	0.176	0.004	0.126	2.507
% R.S.D.	29.234	8.122	32.868	5.303	2.664	4.028	36.333	0.595

	Mo (ppm)	Se (ppm)	Ag (ppm)	Pb (ppm)	Ti (ppm)	Cd (ppm)	B (ppm)	K (ppm)
Mean	0.052	-2.469	-0.041	1.464	0.005	0.066	0.160	11299.842
S.D.	0.026	0.825	0.014	0.576	0.019	0.016	0.035	69.028
% R.S.D.	50.072	33.399	35.468	39.362	380.213	24.572	21.911	0.611

	Mn (ppm)	Sb (ppm)	V (ppm)	Be (ppm)	Tl (ppm)
Mean	1.751	-0.023	0.011	0.010	-0.047
S.D.	0.012	1.829	0.017	0.006	0.533
% R.S.D.	0.705	7782.853	149.630	58.382	1135.300

Identity 1: S96T001781_D Identity 2: .25-10 ml 8:14 PM June 4, 1996
Task name : OPTIMA
Sample Weight : 1.0000 Solution Volume : 41.00
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	0.211	-0.008	-0.541	0.431	23.210	-0.217	-0.075	-0.049
S.D.	0.018	0.000	0.264	0.127	0.236	0.150	0.026	0.002
% R.S.D.	8.706	0.000	48.862	29.385	1.015	69.087	34.217	3.605

	Zn (ppm)	Ni (ppm)	La (ppm)	Fe (ppm)	Ca (ppm)	Cr (ppm)	Nd (ppm)	U (ppm)
Mean	0.028	7.645	0.042	5.327	0.482	5.878	-0.566	4.774
S.D.	0.024	0.051	0.034	0.069	0.004	0.053	0.074	0.285
% R.S.D.	84.615	0.672	80.288	1.286	0.892	0.895	13.058	5.963

	Ce (ppm)	Sm (ppm)	Ba (ppm)	P (ppm)	S (ppm)	Mg (ppm)	As (ppm)	Na (ppm)
Mean	-2.454	1.559	-0.024	2.164	6.801	0.098	-0.048	445.582
S.D.	0.213	0.085	0.003	0.223	0.035	0.000	0.341	1.461
% R.S.D.	8.668	5.455	13.925	10.287	0.510	0.000	714.584	0.328

	Mo (ppm)	Se (ppm)	Ag (ppm)	Pb (ppm)	Ti (ppm)	Cd (ppm)	B (ppm)	K (ppm)
Mean	-0.065	-1.067	-0.136	1.092	0.022	0.017	0.079	10735.912
S.D.	0.078	0.584	0.025	0.217	0.018	0.011	0.032	24.598
% R.S.D.	119.070	54.755	18.584	19.923	79.988	64.476	39.928	0.229

	Mn (ppm)	Sb (ppm)	V (ppm)	Be (ppm)	Tl (ppm)
Mean	1.780	-0.696	-0.132	-0.012	-2.355
S.D.	0.007	0.265	0.033	0.006	0.487
% R.S.D.	0.404	38.121	25.107	44.551	20.683

Identity 1: S96T001781_A Identity 2: .25-10 ml 8:17 PM June 4, 1996
Task name : OPTIMA .25 ml sample/L + 2.05 ml SST5 + 7.95 ml HNO_3
Sample Weight : 1.0000 Solution Volume : 41.00 6-4-96
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	41.033	41.807	41.612	40.472	65.229	41.964	41.460	39.783
S.D.	0.070	0.109	0.326	0.085	0.297	0.225	0.129	0.396
% R.S.D.	0.171	0.261	0.783	0.209	0.455	0.537	0.311	0.996

	Zn (ppm)	Ni (ppm)	La (ppm)	Fe (ppm)	Ca (ppm)	Cr (ppm)	Nd (ppm)	U (ppm)
Mean	41.911	53.446	41.799	47.387	40.090	48.313	41.762	87.757
S.D.	0.094	0.284	0.101	0.190	0.058	0.245	0.393	1.462
% R.S.D.	0.225	0.532	0.243	0.402	0.146	0.506	0.941	1.666

	Ce (ppm)	Sm (ppm)	Ba (ppm)	P (ppm)	S (ppm)	Mg (ppm)	As (ppm)	Na (ppm)
Mean	42.465	42.861	41.658	42.376	47.589	40.496	42.343	466.939
S.D.	0.240	0.208	0.121	0.828	0.234	0.047	0.112	4.643
% R.S.D.	0.566	0.486	0.291	1.955	0.492	0.116	0.265	0.994

	Mo (ppm)	Se (ppm)	Ag (ppm)	Pb (ppm)	Ti (ppm)	Cd (ppm)	B (ppm)	K (ppm)
Mean	41.947	41.615	34.755	43.497	40.638	41.822	40.479	11393.490
S.D.	0.139	0.048	0.131	0.289	0.094	0.048	0.192	68.011
% R.S.D.	0.330	0.115	0.376	0.665	0.231	0.115	0.474	0.597

	Mn (ppm)	Sb (ppm)	V (ppm)	Be (ppm)	Tl (ppm)
Mean	43.920	38.865	41.663	42.137	38.794
S.D.	0.133	0.525	0.037	0.081	0.521
% R.S.D.	0.302	1.350	0.090	0.192	1.343

Identity 1: S96T001782_L Identity 2: .25-10-2-8 ml 8:21 PM June 4, 1996
Task name : OPTIMA
Sample Weight : 1.0000 Solution Volume : 205.00
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	0.118	-0.053	0.380	1.321	12.277	-1.518	-0.239	-0.189
S.D.	0.135	0.000	1.357	0.360	0.759	0.000	0.032	0.027
% R.S.D.	114.299	0.000	357.231	27.253	6.184	0.016	13.287	14.043

	Zn (ppm)	Ni (ppm)	La (ppm)	Fe (ppm)	Ca (ppm)	Cr (ppm)	Nd (ppm)	U (ppm)
Mean	-0.103	10.861	-0.098	4.788	-0.113	3.761	-0.480	-1.389
S.D.	0.029	0.230	0.449	0.460	0.014	0.251	1.039	1.856
% R.S.D.	28.578	2.122	459.392	9.599	12.500	6.667	216.244	133.607

	Ce (ppm)	Sm (ppm)	Ba (ppm)	P (ppm)	S (ppm)	Mg (ppm)	As (ppm)	Na (ppm)
Mean	-6.039	4.720	-0.128	6.726	0.496	0.346	-0.126	469.902
S.D.	0.235	0.481	0.013	1.819	0.835	0.000	0.963	1.697
% R.S.D.	3.885	10.186	10.238	27.046	168.348	0.000	765.318	0.361

	Mo (ppm)	Se (ppm)	Ag (ppm)	Pb (ppm)	Ti (ppm)	Cd (ppm)	B (ppm)	K (ppm)
Mean	-0.208	-9.033	-0.779	0.448	-0.024	-0.340	0.436	11490.217
S.D.	0.091	0.209	0.036	2.870	0.048	0.107	0.083	57.860
% R.S.D.	43.680	2.309	4.587	640.780	200.948	31.444	19.032	0.504

	Mn (ppm)	Sb (ppm)	V (ppm)	Be (ppm)	Tl (ppm)
Mean	1.615	-0.440	-0.463	-0.048	-6.189
S.D.	0.000	5.073	0.098	0.028	1.753
% R.S.D.	0.014	1153.466	21.097	57.659	28.320

Identity 1: S96T001782 Identity 2: .25-10 ml 8:24 PM June 4, 1996
Task name : OPTIMA
Sample Weight : 1.0000 Solution Volume : 41.00
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	0.217	-0.004	0.096	0.652	14.981	-0.087	-0.028	-0.024
S.D.	0.025	0.004	0.551	0.016	0.091	0.075	0.021	0.005
% R.S.D.	11.717	114.564	573.016	2.483	0.605	85.932	77.073	19.901

	Zn (ppm)	Ni (ppm)	La (ppm)	Fe (ppm)	Ca (ppm)	Cr (ppm)	Nd (ppm)	U (ppm)
Mean	0.056	10.027	0.042	5.079	0.411	4.193	-0.183	5.330
S.D.	0.010	0.092	0.034	0.178	0.003	0.028	0.089	0.960
% R.S.D.	17.659	0.918	81.030	3.500	0.685	0.661	48.543	18.020

	Ce (ppm)	Sm (ppm)	Ba (ppm)	P (ppm)	S (ppm)	Mg (ppm)	As (ppm)	Na (ppm)
Mean	-1.385	1.560	-0.008	5.807	3.122	0.096	0.011	455.436
S.D.	0.124	0.263	0.007	0.625	0.025	0.004	0.248	0.952
% R.S.D.	8.943	16.843	86.962	10.770	0.803	4.330	2228.414	0.209

	Mo (ppm)	Se (ppm)	Ag (ppm)	Pb (ppm)	Ti (ppm)	Cd (ppm)	B (ppm)	K (ppm)
Mean	-0.008	-1.616	-0.098	0.426	0.049	-0.023	0.089	10964.672
S.D.	0.016	0.158	0.038	0.312	0.014	0.043	0.025	34.596
% R.S.D.	202.687	9.803	39.087	73.341	28.244	191.733	28.204	0.316

	Mn (ppm)	Sb (ppm)	V (ppm)	Be (ppm)	Tl (ppm)
Mean	1.693	-0.606	-0.132	-0.028	-1.974
S.D.	0.007	0.337	0.032	0.005	0.686
% R.S.D.	0.429	55.691	24.568	19.193	34.765

Identity 1: S96T001782_D Identity 2: .25-10 ml 8:28 PM June 4, 1996
Task name : OPTIMA
Sample Weight : 1.0000 Solution Volume : 41.00
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	0.035	0.005	-0.179	0.560	14.602	-0.043	-0.003	-0.005
S.D.	0.028	0.003	0.227	0.042	0.200	0.000	0.013	0.005
% R.S.D.	79.996	50.000	126.607	7.516	1.369	0.290	365.537	91.194

	Zn (ppm)	Ni (ppm)	La (ppm)	Fe (ppm)	Ca (ppm)	Cr (ppm)	Nd (ppm)	U (ppm)
Mean	0.077	14.503	-0.078	5.044	0.295	4.168	0.294	-1.365
S.D.	0.006	0.067	0.034	0.050	0.002	0.067	0.235	0.978
% R.S.D.	7.622	0.461	43.088	0.996	0.552	1.617	80.149	71.622

	Ce (ppm)	Sm (ppm)	Ba (ppm)	P (ppm)	S (ppm)	Mg (ppm)	As (ppm)	Na (ppm)
Mean	-0.683	0.460	0.010	5.760	2.559	0.096	-0.312	466.073
S.D.	0.165	0.217	0.010	0.747	0.193	0.004	0.115	1.767
% R.S.D.	24.081	47.048	104.619	12.970	7.558	4.330	36.690	0.379

	Mo (ppm)	Se (ppm)	Ag (ppm)	Pb (ppm)	Ti (ppm)	Cd (ppm)	B (ppm)	K (ppm)
Mean	-0.047	-0.852	-0.072	0.008	-0.005	-0.008	0.080	10901.237
S.D.	0.052	0.617	0.004	0.621	0.015	0.025	0.044	36.398
% R.S.D.	109.597	72.433	5.591	7567.474	280.741	292.590	55.136	0.334

	Mn (ppm)	Sb (ppm)	V (ppm)	Be (ppm)	Tl (ppm)
Mean	1.689	0.164	-0.024	-0.004	-0.157
S.D.	0.021	0.341	0.005	0.011	0.663
% R.S.D.	1.267	207.814	20.205	316.452	423.336

Identity 1: S96T001782_A Identity 2: .25-10 ml 8:31 PM June 4, 1996
Task name : OPTIMA .25 ml sample + 2.05 ml SSTS + 7.95 ml HNO_3
Sample Weight : 1.0000 Solution Volume : 41.00
On-Peak Integrations : 3 Off-Peak Integrations : 1 6-4-96

	Zr (ppm)	Sr (ppm)	Bi (ppm)	Si (ppm)	Al (ppm)	Co (ppm)	Cu (ppm)	Li (ppm)
Mean	40.842	41.451	41.327	40.777	56.298	42.182	41.186	39.478
S.D.	0.104	0.145	0.474	0.091	0.101	0.327	0.181	0.195
% R.S.D.	0.254	0.350	1.146	0.222	0.180	0.776	0.440	0.495

	Zn (ppm)	Ni (ppm)	La (ppm)	Fe (ppm)	Ca (ppm)	Cr (ppm)	Nd (ppm)	U (ppm)
Mean	42.368	52.055	41.582	46.697	39.621	46.996	41.179	82.996
S.D.	0.102	0.194	0.089	0.646	0.146	0.162	0.542	0.786
% R.S.D.	0.242	0.373	0.214	1.383	0.368	0.344	1.316	0.947

	Ce (ppm)	Sm (ppm)	Ba (ppm)	P (ppm)	S (ppm)	Mg (ppm)	As (ppm)	Na (ppm)
Mean	41.033	42.628	41.245	45.539	43.709	40.716	42.838	501.425
S.D.	0.176	0.050	0.155	0.491	0.276	0.066	0.323	2.881
% R.S.D.	0.430	0.117	0.376	1.079	0.632	0.161	0.754	0.574

	Mo (ppm)	Se (ppm)	Ag (ppm)	Pb (ppm)	Ti (ppm)	Cd (ppm)	B (ppm)	K (ppm)
Mean	42.060	43.146	34.769	42.529	40.512	41.947	40.601	11060.794
S.D.	0.124	1.012	0.091	0.155	0.115	0.273	0.193	56.414
% R.S.D.	0.295	2.345	0.262	0.364	0.285	0.651	0.476	0.510

	Mn (ppm)	Sb (ppm)	V (ppm)	Be (ppm)	Tl (ppm)
Mean	44.195	38.404	41.777	42.072	38.978
S.D.	0.122	1.274	0.086	0.147	0.610
% R.S.D.	0.276	3.317	0.205	0.350	1.565

Identity 1: ICSA Identity 2: Quality Control 8:35 PM June 4, 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	-0.028	0.014	202.283	0.000	-0.001	-0.000
S.D.	0.001	0.000	0.015	0.004	0.815	0.003	0.000	0.000
% R.S.D.	43.654	3.704	54.453	28.649	0.403	2340.458	14.621	28.443

	Zn (ppm)	Ni (ppm)	La (ppm)	Fe (ppm)	Ca (ppm)	Cr (ppm)	Nd (ppm)	U (ppm)
Mean	-0.006	0.000	0.003	98.298	104.719	0.005	-0.028	0.009
S.D.	0.000	0.002	0.002	0.073	0.319	0.001	0.008	0.010
% R.S.D.	6.217	8840.450	61.858	0.074	0.304	13.674	29.988	111.522

	Ce (ppm)	Sm (ppm)	Ba (ppm)	P (ppm)	S (ppm)	Mg (ppm)	As (ppm)	Na (ppm)
Mean	-0.042	0.032	0.002	0.029	-0.034	104.343	0.014	191.176
S.D.	0.006	0.002	0.000	0.011	0.008	0.253	0.012	0.913
% R.S.D.	13.228	7.624	0.716	37.916	22.757	0.242	88.794	0.477

	Mo (ppm)	Se (ppm)	Ag (ppm)	Pb (ppm)	Ti (ppm)	Cd (ppm)	B (ppm)	K (ppm)
Mean	-0.001	-0.009	-0.002	0.015	0.000	-0.003	0.016	0.038
S.D.	0.002	0.019	0.000	0.018	0.000	0.001	0.000	0.003
% R.S.D.	110.628	224.281	18.436	116.444	186.985	29.226	2.484	8.054

	Mn (ppm)	Sb (ppm)	V (ppm)	Be (ppm)	Tl (ppm)
Mean	0.007	-0.013	-0.003	0.003	-0.012
S.D.	0.001	0.006	0.001	0.000	0.018
% R.S.D.	9.354	43.061	43.869	5.286	143.702

Identity 1: ICSAB Identity 2: Quality Control 8:38 PM June 4, 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	-0.039	0.007	200.749	0.505	0.491	0.925
S.D.	0.001	0.000	0.012	0.002	0.247	0.003	0.000	0.005
% R.S.D.	35.951	7.873	30.927	22.339	0.123	0.630	0.075	0.530

	Zn (ppm)	Ni (ppm)	La (ppm)	Fe (ppm)	Ca (ppm)	Cr (ppm)	Nd (ppm)	U (ppm)
Mean	1.019	0.996	-0.001	97.403	103.513	0.525	-0.015	-0.027
S.D.	0.000	0.001	0.000	0.341	0.149	0.001	0.009	0.042
% R.S.D.	0.012	0.101	6.255	0.350	0.144	0.206	61.340	155.181

	Ce (ppm)	Sm (ppm)	Ba (ppm)	P (ppm)	S (ppm)	Mg (ppm)	As (ppm)	Na (ppm)
Mean	-0.006	0.041	0.508	0.046	-0.019	104.901	0.004	189.137
S.D.	0.006	0.007	0.001	0.007	0.005	0.239	0.003	0.757
% R.S.D.	97.578	17.512	0.100	15.245	28.481	0.227	87.601	0.400

	Mo (ppm)	Se (ppm)	Ag (ppm)	Pb (ppm)	Tl (ppm)	Cd (ppm)	B (ppm)	K (ppm)
Mean	-0.002	-0.016	1.054	1.030	0.000	1.018	0.016	0.132
S.D.	0.001	0.021	0.002	0.010	0.000	0.000	0.002	0.008
% R.S.D.	38.910	127.755	0.213	0.972	107.561	0.036	10.074	6.407

	Mn (ppm)	Sb (ppm)	V (ppm)	Be (ppm)	Tl (ppm)
Mean	0.522	0.027	0.501	0.507	-0.015
S.D.	0.001	0.024	0.000	0.001	0.020
% R.S.D.	0.195	86.216	0.088	0.283	132.636

Identity 1: CCV Identity 2: Quality Control 8:42 PM June 4, 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	5.010	5.015	4.787	5.035	5.089	4.975	4.973
S.D.	0.021	0.025	0.033	0.015	0.018	0.025	0.026	0.031
% R.S.D.	0.429	0.493	0.659	0.307	0.367	0.500	0.529	0.629

	Zn (ppm)	Ni (ppm)	La (ppm)	Fe (ppm)	Ca (ppm)	Cr (ppm)	Nd (ppm)	U (ppm)
Mean	5.127	5.091	5.011	5.142	4.930	5.173	5.026	9.748
S.D.	0.021	0.029	0.031	0.024	0.026	0.031	0.041	0.049
% R.S.D.	0.400	0.575	0.620	0.475	0.537	0.601	0.824	0.499

	Ce (ppm)	Sm (ppm)	Ba (ppm)	P (ppm)	S (ppm)	Mg (ppm)	As (ppm)	Na (ppm)
Mean	5.310	5.008	5.019	4.855	4.935	4.998	5.221	4.920
S.D.	0.030	0.026	0.026	0.115	0.015	0.018	0.034	0.024
% R.S.D.	0.568	0.524	0.513	2.375	0.312	0.352	0.657	0.486

	Mo (ppm)	Se (ppm)	Ag (ppm)	Pb (ppm)	Ti (ppm)	Cd (ppm)	B (ppm)	K (ppm)
Mean	5.090	5.377	5.082	5.168	4.894	5.102	5.006	5.047
S.D.	0.023	0.046	0.020	0.036	0.020	0.020	0.029	0.047
% R.S.D.	0.444	0.855	0.397	0.700	0.401	0.400	0.579	0.936

	Mn (ppm)	Sb (ppm)	V (ppm)	Be (ppm)	Tl (ppm)
Mean	5.131	4.668	5.047	5.206	4.941
S.D.	0.022	0.041	0.018	0.023	0.009
% R.S.D.	0.430	0.887	0.365	0.448	0.176

Identity 1: CCB Identity 2: Quality Control 8:45 PM June 4, 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	-0.014	0.002	-0.012	-0.005	-0.001	-0.000
S.D.	0.001	0.000	0.008	0.000	0.005	0.002	0.000	0.000
% R.S.D.	1303.494	300.000	55.031	20.729	40.277	34.659	16.971	76.986

	Zn (ppm)	Ni (ppm)	La (ppm)	Fe (ppm)	Ca (ppm)	Cr (ppm)	Nd (ppm)	U (ppm)
Mean	-0.000	0.000	-0.001	0.006	0.004	-0.001	-0.003	-0.015
S.D.	0.000	0.002	0.002	0.002	0.001	0.001	0.008	0.048
% R.S.D.	57.913	401.556	116.229	37.233	34.921	131.124	305.876	312.354

	Ce (ppm)	Sm (ppm)	Ba (ppm)	P (ppm)	S (ppm)	Mg (ppm)	As (ppm)	Na (ppm)
Mean	-0.032	0.019	-0.000	-0.001	-0.018	0.003	-0.004	-0.008
S.D.	0.011	0.011	0.000	0.003	0.002	0.001	0.004	0.004
% R.S.D.	35.145	59.683	56.773	267.046	12.209	42.067	99.918	47.239

	Mo (ppm)	Se (ppm)	Ag (ppm)	Pb (ppm)	Ti (ppm)	Cd (ppm)	B (ppm)	K (ppm)
Mean	-0.000	-0.024	-0.000	0.016	-0.000	-0.001	0.003	0.059
S.D.	0.001	0.013	0.001	0.002	0.000	0.001	0.001	0.023
% R.S.D.	605.968	55.402	325.250	13.167	7982.202	60.879	24.539	39.122

	Mn (ppm)	Sb (ppm)	V (ppm)	Be (ppm)	Tl (ppm)
Mean	-0.000	0.040	-0.001	-0.001	-0.027
S.D.	0.000	0.010	0.001	0.000	0.017
% R.S.D.	1.918	25.526	48.984	25.602	64.875

DK Lato
06-04-96

05/13/96 14:57
A-0004-1

File #: 960604B.DAT

LABCORE Data Entry Template for Worklist# 8633

Analyst: JK Sato **Instrument:** ICP01 _____ **Book#** 56B48a

Method: LA-505-151/~~161~~ Rev/Mod D-3
6.7.96

Worklist Comment: ICP U-105 (FUSION)

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	PREPBLKTJA				@ICP-F01	SOLID		
7	SERDIL	S96T001783	0	F	@ICP-F01	SOLID		
8	SAMPLE	S96T001783	0	F	@ICP-F01	SOLID	96000323	U-105 (R)
	Analytes Requested:	AL-F-01 , BI-F-01 , FE-F-01 , LI-F-01 , NA-F-01 , P-F-01 , SI-F-01						
9	DUP	S96T001783	0	F	@ICP-F01	SOLID		
10	SPK	S96T001783	0	F	@ICP-F01	SOLID		
11	CCV				@ICP-QC	QC		
12	CCB				@ICP-QC	QC		
13	SERDIL	S96T001784	0	F	@ICP-F01	SOLID		
14	SAMPLE	S96T001784	0	F	@ICP-F01	SOLID	96000323	U-105 (R)
	Analytes Requested:	AL-F-01 , BI-F-01 , FE-F-01 , LI-F-01 , NA-F-01 , P-F-01 , SI-F-01						
15	DUP	S96T001784	0	F	@ICP-F01	SOLID		
16	SPK	S96T001784	0	F	@ICP-F01	SOLID		
17	ICSA				@ICP-QC	QC		

Data Entry Comments: Example for calculation of sample result.

S96T001783 $Al = 19.887 \frac{ug}{ml} \times \frac{1}{2.035 \frac{g}{L} \times \frac{1L}{1000 ml}} = 9.77e+3 \frac{ug}{g}$

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

Note: $2.035 \frac{g}{L}$ is sample prep dilution factor which can be found in Sample prep worklist

05/13/96 14:57
A-0004-1

LABCORE Data Entry Template for Worklist# 8633

S	Type	Sample#	R	A	Test	Matrix	Group#	Project
18	ICSAB				@ICP-QC	QC		
19	CCV				@ICP-QC	QC		
20	CCB				@ICP-QC	QC		

Final page for worklist # 8633

JK [illegible] 06-04-96
Analyst Signature Date

Reviewed by: Saul R. Pang 6/6/96
Analyst Signature Date

rpb11KQrL, .25-10

96T001783_L, .25-10-2-8, DF 205
96T001783 .25-10 41
96T001783_D .25-10 41
96T001783_Q .25-10 41, .25 ml sample + 2.05 ml SSTS + 7.95 ml HNO_3

96T001784_L, .25-10-2-8, DF 205
96T001784 .25-10 41
96T001784_D .25-10 41
96T001784_Q .25-10 41, .25 ml sample + 2.05 ml SSTS + 7.95 ml HNO_3

Data Entry Comments: Example for calculation of spike recovery:

S96T001783 $Al = \frac{\left(\frac{20.966}{41}\right) - \left(\frac{19.887}{41}\right)}{1} \times 100 = 100.3\%$

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

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

File #: 960408

WHC-SD-WM-DP-182, REV. 1

Identity 1: ICV Identity 2: Quality Control 4:26 PM June 4, 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	4.924	5.068	5.074	4.783	5.018	5.054	5.055	5.159
S.D.	0.003	0.008	0.037	0.003	0.008	0.013	0.003	0.004
% R.S.D.	0.052	0.156	0.736	0.062	0.153	0.254	0.053	0.075

	Zn (ppm)	Ni (ppm)	La (ppm)	Fe (ppm)	Ca (ppm)	Cr (ppm)	Nd (ppm)	U (ppm)
Mean	5.069	5.059	5.048	5.077	4.922	5.108	5.123	10.068
S.D.	0.002	0.012	0.004	0.015	0.003	0.006	0.013	0.013
% R.S.D.	0.032	0.234	0.086	0.304	0.059	0.116	0.258	0.128

	Ce (ppm)	Sm (ppm)	Ba (ppm)	P (ppm)	S (ppm)	Mg (ppm)	As (ppm)	Na (ppm)
Mean	5.201	5.095	5.091	4.938	4.943	4.945	5.170	5.070
S.D.	0.020	0.008	0.007	0.044	0.014	0.005	0.012	0.004
% R.S.D.	0.385	0.153	0.128	0.901	0.284	0.097	0.228	0.069

	Mo (ppm)	Se (ppm)	Ag (ppm)	Pb (ppm)	Ti (ppm)	Cd (ppm)	B (ppm)	K (ppm)
Mean	5.054	5.448	5.025	5.071	4.918	5.070	5.021	5.046
S.D.	0.013	0.016	0.004	0.012	0.007	0.004	0.012	0.020
% R.S.D.	0.248	0.291	0.081	0.244	0.132	0.086	0.247	0.406

	Mn (ppm)	Sb (ppm)	V (ppm)	Be (ppm)	Tl (ppm)
Mean	5.079	4.700	5.019	5.227	4.910
S.D.	0.005	0.043	0.004	0.001	0.019
% R.S.D.	0.092	0.917	0.076	0.025	0.381

DK
06-04-96
4-105 5967001783
5967001784
Worklist #8633

SIGNATURE ABOVE REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 1239 TO 1258.

Identity 1: IC8 Identity 2: Quality Control 4:30 PM June 4, 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	0.009	0.005	-0.023	-0.000	-0.001	-0.000
S.D.	0.001	0.000	0.004	0.001	0.003	0.002	0.000	0.000
% R.S.D.	45.739	692.820	41.204	22.300	15.177	192804.515	30.194	117.107

	Zn (ppm)	Ni (ppm)	La (ppm)	Fe (ppm)	Ca (ppm)	Cr (ppm)	Nd (ppm)	U (ppm)
Mean	0.000	0.002	-0.003	-0.002	0.002	0.001	-0.015	0.007
S.D.	0.000	0.001	0.001	0.004	0.001	0.001	0.006	0.016
% R.S.D.	561.332	37.194	24.569	258.338	23.408	62.659	40.991	213.703

	Ce (ppm)	Sm (ppm)	Ba (ppm)	P (ppm)	S (ppm)	Mg (ppm)	As (ppm)	Na (ppm)
Mean	-0.047	0.051	-0.000	-0.008	-0.017	0.002	-0.006	-0.021
S.D.	0.004	0.002	0.000	0.001	0.002	0.001	0.004	0.004
% R.S.D.	7.832	4.435	75.125	18.213	12.387	28.475	68.040	16.972

	Mo (ppm)	Se (ppm)	Ag (ppm)	Pb (ppm)	Ti (ppm)	Cd (ppm)	B (ppm)	K (ppm)
Mean	0.000	-0.033	-0.003	-0.001	0.001	-0.001	0.005	0.024
S.D.	0.001	0.018	0.000	0.002	0.000	0.001	0.001	0.014
% R.S.D.	228.080	54.704	15.042	113.494	30.541	104.251	15.347	61.193

	Mn (ppm)	Sb (ppm)	V (ppm)	Be (ppm)	Tl (ppm)
Mean	0.001	-0.006	-0.003	0.000	-0.047
S.D.	0.000	0.013	0.001	0.000	0.014
% R.S.D.	35.244	242.942	27.347	75.042	30.452

Identity 1: LLS Identity 2: Quality Control 4:33 PM June 4, 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	0.024	0.021	0.186	0.135	0.087	0.041	0.020	0.021
S.D.	0.001	0.000	0.006	0.002	0.006	0.002	0.000	0.000
% R.S.D.	3.417	0.178	3.237	1.697	7.398	4.453	2.388	0.830

	Zn (ppm)	Ni (ppm)	La (ppm)	Fe (ppm)	Ca (ppm)	Cr (ppm)	Nd (ppm)	U (ppm)
Mean	0.021	0.042	0.107	0.103	0.196	0.021	0.189	0.504
S.D.	0.000	0.003	0.001	0.004	0.001	0.002	0.006	0.044
% R.S.D.	1.581	6.314	1.347	4.299	0.282	7.576	3.040	8.661

	Ce (ppm)	Sm (ppm)	Ba (ppm)	P (ppm)	S (ppm)	Mg (ppm)	As (ppm)	Na (ppm)
Mean	0.162	0.232	0.102	0.369	0.179	0.203	0.191	0.191
S.D.	0.010	0.005	0.000	0.006	0.005	0.000	0.004	0.004
% R.S.D.	6.056	2.168	0.194	1.509	2.591	0.050	2.061	2.079

	Mo (ppm)	Se (ppm)	Ag (ppm)	Pb (ppm)	Ti (ppm)	Cd (ppm)	B (ppm)	K (ppm)
Mean	0.095	0.197	0.017	0.189	0.021	0.009	0.104	0.506
S.D.	0.001	0.007	0.001	0.007	0.001	0.001	0.001	0.013
% R.S.D.	1.062	3.371	4.211	3.645	3.024	7.656	0.855	2.659

	Mn (ppm)	Sb (ppm)	V (ppm)	Be (ppm)	Tl (ppm)
Mean	0.021	0.120	0.098	0.011	0.368
S.D.	0.000	0.014	0.001	0.000	0.021
% R.S.D.	2.204	11.769	0.773	2.106	5.822

Identity 1: ICSA Identity 2: Quality Control 4:37 PM June 4, 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	-0.016	0.012	201.051	0.000	-0.000	0.000
S.D.	0.000	0.000	0.008	0.003	0.854	0.000	0.000	0.000
% R.S.D.	30.046	3.892	48.125	23.392	0.425	3.503	134.489	549.011

	Zn (ppm)	Ni (ppm)	La (ppm)	Fe (ppm)	Ca (ppm)	Cr (ppm)	Nd (ppm)	U (ppm)
Mean	-0.005	0.004	0.003	96.663	103.448	0.000	-0.006	-0.027
S.D.	0.000	0.001	0.003	0.391	0.404	0.001	0.006	0.038
% R.S.D.	6.597	31.318	128.245	0.404	0.391	600.813	100.988	140.109

	Ce (ppm)	Sm (ppm)	Ba (ppm)	P (ppm)	S (ppm)	Mg (ppm)	As (ppm)	Na (ppm)
Mean	-0.011	0.032	0.003	0.013	-0.026	102.628	0.004	192.459
S.D.	0.008	0.005	0.000	0.011	0.012	0.345	0.007	0.841
% R.S.D.	70.687	14.382	0.599	83.049	47.220	0.337	173.776	0.437

	Mo (ppm)	Se (ppm)	Ag (ppm)	Pb (ppm)	Ti (ppm)	Cd (ppm)	B (ppm)	K (ppm)
Mean	-0.001	-0.008	-0.001	-0.014	-0.000	-0.003	0.015	0.016
S.D.	0.000	0.022	0.001	0.006	0.000	0.001	0.001	0.008
% R.S.D.	22.915	271.354	65.940	41.731	86.740	34.886	5.862	53.580

	Mn (ppm)	Sb (ppm)	V (ppm)	Be (ppm)	Tl (ppm)
Mean	0.008	0.014	-0.002	0.003	-0.016
S.D.	0.001	0.025	0.001	0.000	0.010
% R.S.D.	11.366	180.428	45.975	4.895	64.677

Identity 1: ICSAB Identity 2: Quality Control 4:40 PM June 4, 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	-0.035	0.014	203.369	0.498	0.501	0.966
S.D.	0.001	0.000	0.008	0.001	0.734	0.000	0.002	0.006
% R.S.D.	139.936	5.973	21.789	9.996	0.361	0.001	0.354	0.641

	Zn (ppm)	Ni (ppm)	La (ppm)	Fe (ppm)	Ca (ppm)	Cr (ppm)	Nd (ppm)	U (ppm)
Mean	1.011	1.004	0.001	97.054	104.513	0.514	-0.030	0.092
S.D.	0.003	0.006	0.003	0.382	0.291	0.001	0.013	0.048
% R.S.D.	0.258	0.562	262.904	0.393	0.279	0.217	41.982	52.023

	Ce (ppm)	Sm (ppm)	Ba (ppm)	P (ppm)	S (ppm)	Mg (ppm)	As (ppm)	Na (ppm)
Mean	-0.049	0.061	0.518	0.031	-0.041	103.876	0.015	195.595
S.D.	0.012	0.011	0.001	0.015	0.015	0.116	0.005	1.169
% R.S.D.	23.617	18.218	0.288	49.482	37.372	0.111	33.309	0.598

	Mo (ppm)	Se (ppm)	Ag (ppm)	Pb (ppm)	Ti (ppm)	Cd (ppm)	B (ppm)	K (ppm)
Mean	-0.005	-0.037	1.048	1.034	0.001	1.020	0.015	-0.019
S.D.	0.001	0.025	0.001	0.011	0.000	0.003	0.001	0.017
% R.S.D.	13.207	66.065	0.095	1.102	30.876	0.290	4.623	91.546

	Mn (ppm)	Sb (ppm)	V (ppm)	Be (ppm)	Tl (ppm)
Mean	0.520	-0.033	0.497	0.511	-0.090
S.D.	0.001	0.023	0.001	0.002	0.026
% R.S.D.	0.229	67.907	0.121	0.301	29.182

Identity 1: PREPBLK Identity 2: Quality Control 4:45 PM June 4, 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	0.000	0.003	-0.000	-0.000
S.D.	0.001	0.000	0.005	0.001	0.005	0.002	0.000	0.000
% R.S.D.	168.521	17.321	55.067	7.994	2130.215	57.856	122.171	74.228

	Zn (ppm)	Ni (ppm)	La (ppm)	Fe (ppm)	Ca (ppm)	Cr (ppm)	Nd (ppm)	U (ppm)
Mean	0.000	0.358	0.002	0.007	0.005	0.000	0.002	0.040
S.D.	0.000	0.009	0.002	0.001	0.002	0.001	0.005	0.026
% R.S.D.	160.270	2.379	69.103	18.347	31.044	856.923	318.016	65.549

	Ce (ppm)	Sm (ppm)	Ba (ppm)	P (ppm)	S (ppm)	Mg (ppm)	As (ppm)	Na (ppm)
Mean	-0.007	0.037	0.000	0.016	-0.008	0.007	-0.009	0.152
S.D.	0.004	0.006	0.000	0.006	0.001	0.002	0.001	0.004
% R.S.D.	56.536	16.718	114.564	38.265	15.182	24.240	11.552	2.611

	Mo (ppm)	Se (ppm)	Ag (ppm)	Pb (ppm)	Tl (ppm)	Cd (ppm)	B (ppm)	K (ppm)
Mean	-0.002	-0.049	-0.001	0.001	0.001	-0.001	0.001	427.397
S.D.	0.002	0.007	0.000	0.005	0.000	0.000	0.000	1.151
% R.S.D.	71.616	13.902	8.152	792.247	44.788	18.750	53.531	0.269

	Mn (ppm)	Sb (ppm)	V (ppm)	Be (ppm)	Tl (ppm)
Mean	0.002	0.001	-0.001	0.000	0.011
S.D.	0.000	0.009	0.001	0.000	0.011
% R.S.D.	9.331	1303.566	55.080	5154.150	98.911

Identity 1: S96T001783_L Identity 2: Fusion .25-10-2-8ml 4:52 PM June 4, 1996
Task name : OPTIMA
Sample Weight : 1.0000 Solution Volume : 205.00
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	0.437	-0.040	-0.138	1.808	21.252	-0.870	-0.291	-0.128
S.D.	0.264	0.035	2.437	0.169	2.044	0.002	0.019	0.116
% R.S.D.	60.277	88.192	1759.576	9.339	9.616	0.257	6.430	90.574

	Zn (ppm)	Ni (ppm)	La (ppm)	Fe (ppm)	Ca (ppm)	Cr (ppm)	Nd (ppm)	U (ppm)
Mean	-0.025	13.523	-0.769	15.658	2.698	5.241	-0.676	23.180
S.D.	0.054	0.670	0.008	1.166	0.509	0.072	1.607	17.466
% R.S.D.	215.678	4.953	1.045	7.449	18.860	1.381	237.585	75.348

	Ce (ppm)	Sm (ppm)	Ba (ppm)	P (ppm)	S (ppm)	Mg (ppm)	As (ppm)	Na (ppm)
Mean	-9.947	8.099	-0.084	39.093	0.764	3.296	-0.008	420.322
S.D.	3.377	2.872	0.070	1.565	0.623	0.522	0.676	0.980
% R.S.D.	33.951	35.458	82.953	4.004	81.529	15.840	8775.316	0.233

	Mo (ppm)	Se (ppm)	Ag (ppm)	Pb (ppm)	Ti (ppm)	Cd (ppm)	B (ppm)	K (ppm)
Mean	-0.576	-10.165	-0.620	-3.328	0.134	-0.271	-0.302	11387.360
S.D.	0.030	0.424	0.200	0.608	0.076	0.163	0.150	53.026
% R.S.D.	5.174	4.173	32.267	18.259	56.677	60.352	49.492	0.466

	Mn (ppm)	Sb (ppm)	V (ppm)	Be (ppm)	Tl (ppm)
Mean	5.420	-0.713	-0.809	-0.061	-12.156
S.D.	0.036	3.935	0.096	0.030	6.357
% R.S.D.	0.660	551.776	11.887	48.245	52.291

Identity 1: S96T001783 Identity 2: Fusion .25-10 ml 4:55 PM June 4, 1996
Task name : OPTIMA
Sample Weight : 1.0000 Solution Volume : 41.00
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	0.402	0.002	0.276	0.775	19.887	-0.218	0.001	-0.025
S.D.	0.022	0.002	0.201	0.183	0.348	0.075	0.019	0.006
% R.S.D.	5.504	86.603	72.916	23.586	1.749	34.394	2176.858	25.981

	Zn (ppm)	Ni (ppm)	La (ppm)	Fe (ppm)	Ca (ppm)	Cr (ppm)	Nd (ppm)	U (ppm)
Mean	0.061	13.684	0.065	12.656	0.545	5.783	-0.367	10.265
S.D.	0.007	0.089	0.068	0.173	0.023	0.071	0.337	0.865
% R.S.D.	11.519	0.653	103.851	1.370	4.300	1.229	92.042	8.430

	Ce (ppm)	Sm (ppm)	Ba (ppm)	P (ppm)	S (ppm)	Mg (ppm)	As (ppm)	Na (ppm)
Mean	-1.051	2.302	0.023	37.053	3.077	0.549	-0.193	411.348
S.D.	0.260	0.127	0.003	1.359	0.267	0.026	0.037	0.567
% R.S.D.	24.724	5.509	11.355	3.667	8.691	4.703	19.187	0.138

	Mo (ppm)	Se (ppm)	Ag (ppm)	Pb (ppm)	Ti (ppm)	Cd (ppm)	B (ppm)	K (ppm)
Mean	-0.129	-1.046	-0.073	0.172	0.057	-0.021	-0.001	10903.102
S.D.	0.042	0.149	0.015	0.467	0.020	0.034	0.008	40.429
% R.S.D.	32.475	14.250	20.641	272.343	34.815	165.589	1036.900	0.371

	Mn (ppm)	Sb (ppm)	V (ppm)	Be (ppm)	Tl (ppm)
Mean	5.552	-1.011	-0.146	-0.009	-1.476
S.D.	0.025	0.494	0.027	0.011	0.419
% R.S.D.	0.448	48.862	18.202	131.794	28.372

Identity 1: S96T001783_D Identity 2: Fusion .25-10 ml 4:58 PM June 4, 1996
Task name : OPTIMA
Sample Weight : 1.0000 Solution Volume : 41.00
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	0.117	-0.003	-0.043	0.479	19.235	-0.217	-0.034	-0.045
S.D.	0.054	0.003	0.265	0.066	0.253	0.075	0.008	0.009
% R.S.D.	45.702	100.000	610.234	13.824	1.314	34.529	21.803	20.815

	Zn (ppm)	Ni (ppm)	La (ppm)	Fe (ppm)	Ca (ppm)	Cr (ppm)	Nd (ppm)	U (ppm)
Mean	0.072	15.842	0.178	11.305	0.364	5.241	-0.226	1.114
S.D.	0.014	0.186	0.090	0.198	0.014	0.094	0.040	1.663
% R.S.D.	19.143	1.171	50.665	1.749	3.892	1.799	17.886	149.271

	Ce (ppm)	Sm (ppm)	Ba (ppm)	P (ppm)	S (ppm)	Mg (ppm)	As (ppm)	Na (ppm)
Mean	-1.902	0.602	0.009	36.589	3.119	0.428	-0.289	410.406
S.D.	0.446	0.313	0.009	1.000	0.311	0.014	0.134	1.747
% R.S.D.	23.426	52.087	100.000	2.734	9.959	3.352	46.145	0.426

	Mo (ppm)	Se (ppm)	Ag (ppm)	Pb (ppm)	Ti (ppm)	Cd (ppm)	B (ppm)	K (ppm)
Mean	-0.032	-0.650	-0.103	0.066	-0.009	-0.081	-0.027	11738.692
S.D.	0.036	0.565	0.040	0.530	0.010	0.011	0.045	42.294
% R.S.D.	114.811	86.930	38.670	806.519	115.829	13.087	167.860	0.360

	Mn (ppm)	Sb (ppm)	V (ppm)	Be (ppm)	Tl (ppm)
Mean	5.151	-0.161	-0.117	-0.000	-2.924
S.D.	0.019	0.530	0.018	0.006	0.728
% R.S.D.	0.372	330.377	15.036	13460.003	24.914

Identity 1: S96T001783_A Identity 2: Fusion .25-10 ml 5:03 PM June 4, 1996
Task name : OPTIMA
Sample Weight : 1.0000 Solution Volume : 41.00
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	40.909	41.546	41.419	40.711	60.966	42.051	41.422	40.470
S.D.	0.058	0.041	0.686	0.101	0.186	0.075	0.103	0.240
% R.S.D.	0.142	0.099	1.657	0.248	0.304	0.179	0.249	0.593

	Zn (ppm)	Ni (ppm)	La (ppm)	Fe (ppm)	Ca (ppm)	Cr (ppm)	Nd (ppm)	U (ppm)
Mean	42.001	55.217	41.683	54.146	39.911	48.056	41.662	87.181
S.D.	0.005	0.058	0.102	0.200	0.047	0.218	0.032	1.237
% R.S.D.	0.012	0.105	0.245	0.369	0.118	0.453	0.078	1.419

	Ce (ppm)	Sm (ppm)	Ba (ppm)	P (ppm)	S (ppm)	Mg (ppm)	As (ppm)	Na (ppm)
Mean	41.566	41.631	41.453	77.647	44.225	40.574	42.165	453.634
S.D.	0.188	0.257	0.052	1.614	0.192	0.059	0.218	2.663
% R.S.D.	0.451	0.618	0.125	2.079	0.433	0.146	0.518	0.587

	Mo (ppm)	Se (ppm)	Ag (ppm)	Pb (ppm)	Ti (ppm)	Cd (ppm)	B (ppm)	K (ppm)
Mean	41.697	43.265	35.661	43.245	40.436	41.695	40.439	10989.905
S.D.	0.246	0.842	0.200	0.458	0.047	0.112	0.083	60.893
% R.S.D.	0.589	1.946	0.560	1.058	0.117	0.269	0.206	0.554

	Mn (ppm)	Sb (ppm)	V (ppm)	Be (ppm)	Tl (ppm)
Mean	47.668	37.449	41.523	42.060	39.776
S.D.	0.141	0.558	0.073	0.073	0.835
% R.S.D.	0.296	1.490	0.177	0.174	2.100

.25 ml sample
2.05 ml SSTS
7.95 ml HNO_3
6-4-96

Identity 1: CCV Identity 2: Quality Control 5:08 PM June 4, 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	4.934	5.065	5.057	4.805	5.055	5.107	5.032	5.122
S.D.	0.012	0.012	0.029	0.006	0.006	0.008	0.016	0.033
% R.S.D.	0.238	0.239	0.565	0.134	0.109	0.156	0.322	0.651

	Zn (ppm)	Ni (ppm)	La (ppm)	Fe (ppm)	Ca (ppm)	Cr (ppm)	Nd (ppm)	U (ppm)
Mean	5.129	5.098	5.036	5.103	4.909	5.163	5.008	9.870
S.D.	0.009	0.008	0.012	0.039	0.014	0.014	0.031	0.024
% R.S.D.	0.181	0.151	0.247	0.756	0.292	0.276	0.614	0.243

	Ce (ppm)	Sm (ppm)	Ba (ppm)	P (ppm)	S (ppm)	Mg (ppm)	As (ppm)	Na (ppm)
Mean	5.211	5.058	5.075	4.975	5.010	5.005	5.232	5.062
S.D.	0.006	0.007	0.015	0.311	0.113	0.008	0.005	0.032
% R.S.D.	0.123	0.130	0.302	6.260	2.252	0.168	0.102	0.624

	Mo (ppm)	Se (ppm)	Ag (ppm)	Pb (ppm)	Ti (ppm)	Cd (ppm)	B (ppm)	K (ppm)
Mean	5.115	5.415	5.061	5.114	4.938	5.109	5.019	5.093
S.D.	0.008	0.062	0.008	0.016	0.010	0.013	0.015	0.030
% R.S.D.	0.164	1.146	0.150	0.315	0.199	0.250	0.294	0.597

	Mn (ppm)	Sb (ppm)	V (ppm)	Be (ppm)	Tl (ppm)
Mean	5.122	4.640	5.051	5.238	4.956
S.D.	0.012	0.056	0.012	0.008	0.010
% R.S.D.	0.231	1.217	0.247	0.162	0.204

Identity 1: CCB Identity 2: Quality Control 5:11 PM June 4, 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	-0.019	0.002	-0.026	-0.002	-0.002	-0.000
S.D.	0.002	0.000	0.005	0.003	0.004	0.002	0.001	0.000
% R.S.D.	2029.427	377486630070.000	23.713	158.233	13.983	86.412	45.792	107.836

	Zn (ppm)	Ni (ppm)	La (ppm)	Fe (ppm)	Ca (ppm)	Cr (ppm)	Nd (ppm)	U (ppm)
Mean	0.000	-0.002	0.002	-0.004	0.001	-0.000	-0.004	-0.018
S.D.	0.001	0.003	0.002	0.002	0.000	0.000	0.003	0.048
% R.S.D.	771.354	134.479	131.263	59.354	18.750	64.791	83.981	267.859

	Ce (ppm)	Sm (ppm)	Ba (ppm)	P (ppm)	S (ppm)	Mg (ppm)	As (ppm)	Na (ppm)
Mean	-0.055	0.025	-0.001	-0.004	-0.012	0.001	-0.008	-0.022
S.D.	0.009	0.009	0.000	0.001	0.003	0.000	0.002	0.006
% R.S.D.	16.853	35.735	73.052	13.663	23.649	62.450	22.356	27.370

	Mo (ppm)	Se (ppm)	Ag (ppm)	Pb (ppm)	Ti (ppm)	Cd (ppm)	B (ppm)	K (ppm)
Mean	-0.002	-0.020	-0.002	-0.016	0.000	-0.001	0.004	0.026
S.D.	0.001	0.005	0.001	0.003	0.001	0.000	0.001	0.019
% R.S.D.	70.873	24.089	45.361	21.198	338.535	32.600	23.288	70.946

	Mn (ppm)	Sb (ppm)	V (ppm)	Be (ppm)	Tl (ppm)
Mean	0.000	-0.009	-0.004	0.000	-0.065
S.D.	0.001	0.013	0.001	0.000	0.024
% R.S.D.	170.626	145.479	26.976	179.676	37.051

Identity 1: S96T001784_L Identity 2: Fusion .25-10-2-8ml 5:14 PM June 4, 1996
Task name : OPTIMA
Sample Weight : 1.0000 Solution Volume : 205.00
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	0.200	0.058	-1.221	4.365	335.989	-0.012	-0.198	-0.128
S.D.	0.155	0.008	2.102	0.617	0.453	0.375	0.084	0.015
% R.S.D.	77.708	13.323	172.198	14.132	0.135	3170.914	42.273	11.945

	Zn (ppm)	Ni (ppm)	La (ppm)	Fe (ppm)	Ca (ppm)	Cr (ppm)	Nd (ppm)	U (ppm)
Mean	0.212	11.311	-0.150	13.872	1.623	7.584	-1.415	92.630
S.D.	0.085	0.625	0.775	0.549	0.008	0.383	0.540	3.016
% R.S.D.	40.196	5.524	515.326	3.961	0.501	5.056	38.137	3.256

	Ce (ppm)	Sm (ppm)	Ba (ppm)	P (ppm)	S (ppm)	Mg (ppm)	As (ppm)	Na (ppm)
Mean	-8.286	4.251	-0.025	2.217	-1.229	0.931	0.046	180.585
S.D.	0.487	0.554	0.017	1.417	0.420	0.021	0.070	0.719
% R.S.D.	5.873	13.030	66.144	63.912	34.134	2.221	150.654	0.398

	Mo (ppm)	Se (ppm)	Ag (ppm)	Pb (ppm)	Ti (ppm)	Cd (ppm)	B (ppm)	K (ppm)
Mean	-0.059	-3.213	-0.192	-3.059	0.152	-0.179	0.167	11938.031
S.D.	0.298	1.744	0.072	2.964	0.112	0.054	0.239	74.358
% R.S.D.	503.363	54.273	37.611	96.900	73.584	29.926	143.190	0.623

	Mn (ppm)	Sb (ppm)	V (ppm)	Be (ppm)	Tl (ppm)
Mean	3.052	-4.669	-0.499	0.108	-8.238
S.D.	0.036	6.315	0.212	0.028	1.659
% R.S.D.	1.166	135.261	42.425	25.450	20.136

Identity 1: S96T001784 Identity 2: Fusion .25-10 ml 5:27 PM June 4, 1996
Task name : OPTIMA
Sample Weight : 1.0000 Solution Volume : 41.00
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	0.128	0.037	0.483	3.032	340.129	-0.055	0.071	0.001
S.D.	0.050	0.008	0.059	0.114	0.733	0.000	0.007	0.013
% R.S.D.	39.091	21.123	12.224	3.747	0.215	0.337	10.452	923.562

	Zn (ppm)	Ni (ppm)	La (ppm)	Fe (ppm)	Ca (ppm)	Cr (ppm)	Nd (ppm)	U (ppm)
Mean	0.283	10.975	0.007	13.784	0.790	7.894	-0.026	93.858
S.D.	0.012	0.046	0.001	0.023	0.018	0.097	0.123	1.451
% R.S.D.	4.334	0.420	10.365	0.164	2.319	1.231	463.570	1.546

	Ce (ppm)	Sm (ppm)	Ba (ppm)	P (ppm)	S (ppm)	Mg (ppm)	As (ppm)	Na (ppm)
Mean	-0.343	1.237	0.037	3.966	0.859	0.545	-0.350	177.353
S.D.	0.345	0.312	0.011	0.611	0.170	0.018	0.193	0.356
% R.S.D.	100.503	25.255	30.745	15.408	19.770	3.312	54.965	0.201

	Mo (ppm)	Se (ppm)	Ag (ppm)	Pb (ppm)	Ti (ppm)	Cd (ppm)	B (ppm)	K (ppm)
Mean	-0.012	0.003	0.021	0.765	0.066	-0.026	0.105	11244.544
S.D.	0.038	0.247	0.015	0.474	0.004	0.021	0.037	29.886
% R.S.D.	326.155	7678.454	68.339	61.926	6.320	82.690	35.639	0.266

	Mn (ppm)	Sb (ppm)	V (ppm)	Be (ppm)	Tl (ppm)
Mean	3.015	-1.110	0.007	0.005	-0.914
S.D.	0.026	0.546	0.010	0.000	0.425
% R.S.D.	0.853	49.161	150.491	3.484	46.534

Identity 1: S96T001784_D Identity 2: Fusion .25-10 ml 5:31 PM June 4, 1996
Task name : OPTIMA
Sample Weight : 1.0000 Solution Volume : 41.00
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	-0.016	0.030	-0.273	3.358	288.924	-0.057	0.078	-0.017
S.D.	0.019	0.002	0.388	0.074	0.973	0.000	0.022	0.008
% R.S.D.	113.563	5.094	141.785	2.214	0.337	0.112	28.552	48.123

	Zn (ppm)	Ni (ppm)	La (ppm)	Fe (ppm)	Ca (ppm)	Cr (ppm)	Nd (ppm)	U (ppm)
Mean	0.206	13.089	-0.086	23.414	0.744	8.712	0.021	102.882
S.D.	0.002	0.027	0.089	0.371	0.006	0.030	0.321	0.493
% R.S.D.	0.988	0.209	104.439	1.584	0.788	0.347	1551.454	0.479

	Ce (ppm)	Sm (ppm)	Ba (ppm)	P (ppm)	S (ppm)	Mg (ppm)	As (ppm)	Na (ppm)
Mean	-0.823	-0.024	0.028	3.150	0.685	0.645	-0.484	187.927
S.D.	0.150	0.072	0.002	0.505	0.116	0.004	0.345	0.821
% R.S.D.	18.195	307.758	6.840	16.030	16.884	0.642	71.233	0.437

	Mo (ppm)	Se (ppm)	Ag (ppm)	Pb (ppm)	Ti (ppm)	Cd (ppm)	B (ppm)	K (ppm)
Mean	-0.073	-0.389	-0.050	0.731	0.229	0.015	-0.036	11129.787
S.D.	0.032	0.323	0.038	0.331	0.021	0.011	0.030	51.874
% R.S.D.	43.108	83.084	76.994	45.254	8.992	72.606	82.414	0.466

	Mn (ppm)	Sb (ppm)	V (ppm)	Be (ppm)	Tl (ppm)
Mean	3.714	-1.399	-0.026	0.000	-1.385
S.D.	0.012	1.590	0.019	0.006	0.779
% R.S.D.	0.333	113.645	74.391	3634.938	56.230

Identity 1: S96T001784_A Identity 2: Fusion .25-10 ml 5:34 PM June 4, 1996
Task name : OPTIMA
Sample Weight : 1.0000 Solution Volume : 41.00
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	40.642	41.553	40.850	43.071	382.624	41.563	41.407	40.320
S.D.	0.121	0.183	0.429	0.103	0.947	0.000	0.178	0.288
% R.S.D.	0.297	0.440	1.051	0.238	0.248	0.000	0.429	0.714

	Zn (ppm)	Ni (ppm)	La (ppm)	Fe (ppm)	Ca (ppm)	Cr (ppm)	Nd (ppm)	U (ppm)
Mean	41.890	52.450	41.588	55.364	40.289	49.946	40.661	177.369
S.D.	0.053	0.305	0.373	0.424	0.178	0.158	0.083	0.715
% R.S.D.	0.127	0.581	0.896	0.765	0.442	0.316	0.203	0.403

	Ce (ppm)	Sm (ppm)	Ba (ppm)	P (ppm)	S (ppm)	Mg (ppm)	As (ppm)	Na (ppm)
Mean	40.815	42.348	41.466	42.023	40.321	40.663	42.008	218.635
S.D.	0.478	0.089	0.195	0.873	0.502	0.086	0.400	1.465
% R.S.D.	1.171	0.211	0.470	2.077	1.246	0.211	0.953	0.670

	Mo (ppm)	Se (ppm)	Ag (ppm)	Pb (ppm)	Ti (ppm)	Cd (ppm)	B (ppm)	K (ppm)
Mean	41.618	43.209	34.819	42.891	40.371	41.612	40.405	11378.690
S.D.	0.062	0.412	0.205	0.385	0.123	0.071	0.273	70.096
% R.S.D.	0.149	0.953	0.590	0.898	0.305	0.171	0.676	0.616

	Mn (ppm)	Sb (ppm)	V (ppm)	Be (ppm)	Tl (ppm)
Mean	45.032	39.332	41.467	42.103	39.480
S.D.	0.156	0.699	0.109	0.112	0.305
% R.S.D.	0.346	1.778	0.262	0.265	0.773

Identity 1: ICSA Identity 2: Quality Control 5:38 PM June 4, 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	-0.031	0.012	202.467	-0.002	-0.000	-0.000
S.D.	0.001	0.000	0.004	0.005	0.711	0.002	0.000	0.000
% R.S.D.	448.485	5.207	13.853	40.866	0.351	94.725	274.878	42.873

	Zn (ppm)	Ni (ppm)	La (ppm)	Fe (ppm)	Ca (ppm)	Cr (ppm)	Nd (ppm)	U (ppm)
Mean	-0.006	0.003	0.002	97.626	104.497	0.006	-0.017	-0.078
S.D.	0.000	0.002	0.001	0.076	0.276	0.002	0.009	0.042
% R.S.D.	5.529	58.515	47.275	0.077	0.264	26.650	55.436	53.138

	Ce (ppm)	Sm (ppm)	Ba (ppm)	P (ppm)	S (ppm)	Mg (ppm)	As (ppm)	Na (ppm)
Mean	-0.036	0.019	0.003	0.023	-0.032	102.884	0.015	193.257
S.D.	0.013	0.011	0.000	0.004	0.013	0.142	0.002	1.131
% R.S.D.	35.212	58.503	6.235	16.499	39.436	0.138	14.398	0.585

	Mo (ppm)	Se (ppm)	Ag (ppm)	Pb (ppm)	Ti (ppm)	Cd (ppm)	B (ppm)	K (ppm)
Mean	-0.002	-0.061	-0.001	0.005	-0.000	-0.001	0.014	0.016
S.D.	0.000	0.004	0.001	0.003	0.000	0.000	0.001	0.018
% R.S.D.	15.004	6.605	75.469	59.408	111.932	31.472	9.390	113.406

	Mn (ppm)	Sb (ppm)	V (ppm)	Be (ppm)	Tl (ppm)
Mean	0.007	-0.027	0.001	0.003	-0.002
S.D.	0.000	0.025	0.001	0.000	0.022
% R.S.D.	4.995	92.747	237.140	7.687	1440.970

Identity 1: ICSAB Identity 2: Quality Control 5:41 PM June 4, 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	-0.019	0.010	200.943	0.499	0.492	0.934
S.D.	0.001	0.000	0.007	0.003	0.440	0.004	0.002	0.006
% R.S.D.	26.220	6.863	39.139	31.173	0.219	0.731	0.311	0.683

	Zn (ppm)	Ni (ppm)	La (ppm)	Fe (ppm)	Ca (ppm)	Cr (ppm)	Nd (ppm)	U (ppm)
Mean	1.012	0.999	0.002	96.978	103.389	0.520	-0.014	0.036
S.D.	0.002	0.004	0.003	0.089	0.239	0.004	0.008	0.050
% R.S.D.	0.187	0.440	181.024	0.092	0.231	0.699	55.540	138.208

	Ce (ppm)	Sm (ppm)	Ba (ppm)	P (ppm)	S (ppm)	Mg (ppm)	As (ppm)	Na (ppm)
Mean	-0.013	0.055	0.509	0.025	-0.013	103.947	0.013	190.649
S.D.	0.008	0.009	0.002	0.011	0.010	0.331	0.006	1.097
% R.S.D.	59.641	16.086	0.312	43.153	82.951	0.318	43.190	0.575

	Mo (ppm)	Se (ppm)	Ag (ppm)	Pb (ppm)	Ti (ppm)	Cd (ppm)	B (ppm)	K (ppm)
Mean	-0.005	0.001	1.049	1.035	0.001	1.016	0.016	0.082
S.D.	0.001	0.039	0.001	0.019	0.000	0.002	0.000	0.006
% R.S.D.	22.192	3716.356	0.126	1.790	55.429	0.231	1.983	7.411

	Mn (ppm)	Sb (ppm)	V (ppm)	Be (ppm)	Tl (ppm)
Mean	0.519	-0.021	0.497	0.506	-0.016
S.D.	0.000	0.030	0.001	0.002	0.007
% R.S.D.	0.051	143.250	0.229	0.325	40.432

Identity 1: CCV Identity 2: Quality Control 5:45 PM June 4, 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	5.058	5.056	4.794	5.027	5.085	5.033	5.082
S.D.	0.005	0.010	0.022	0.004	0.006	0.010	0.018	0.039
% R.S.D.	0.098	0.204	0.437	0.086	0.125	0.191	0.365	0.767

	Zn (ppm)	Ni (ppm)	La (ppm)	Fe (ppm)	Ca (ppm)	Cr (ppm)	Nd (ppm)	U (ppm)
Mean	5.110	5.106	5.073	5.147	4.922	5.163	5.084	9.915
S.D.	0.003	0.012	0.008	0.022	0.010	0.010	0.013	0.014
% R.S.D.	0.059	0.240	0.165	0.425	0.205	0.200	0.264	0.140

	Ce (ppm)	Sm (ppm)	Ba (ppm)	P (ppm)	S (ppm)	Mg (ppm)	As (ppm)	Na (ppm)
Mean	5.139	5.091	5.075	4.930	4.962	4.991	5.195	5.016
S.D.	0.012	0.009	0.014	0.054	0.017	0.009	0.028	0.032
% R.S.D.	0.234	0.173	0.272	1.102	0.351	0.186	0.534	0.636

	Mo (ppm)	Se (ppm)	Ag (ppm)	Pb (ppm)	Ti (ppm)	Cd (ppm)	B (ppm)	K (ppm)
Mean	5.086	5.439	5.054	5.127	4.934	5.112	5.037	5.087
S.D.	0.006	0.016	0.004	0.011	0.003	0.005	0.020	0.037
% R.S.D.	0.109	0.291	0.082	0.210	0.054	0.102	0.397	0.731

	Mn (ppm)	Sb (ppm)	V (ppm)	Be (ppm)	Tl (ppm)
Mean	5.129	4.704	5.055	5.244	4.895
S.D.	0.007	0.018	0.004	0.009	0.032
% R.S.D.	0.140	0.378	0.074	0.166	0.661

Identity 1: CCB Identity 2: Quality Control 5:49 PM June 4, 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	0.014	0.003	-0.027	-0.003	-0.002	-0.001
S.D.	0.001	0.000	0.011	0.002	0.006	0.002	0.000	0.000
% R.S.D.	171.253	94.373	78.246	82.465	22.455	57.892	16.029	62.919

	Zn (ppm)	Ni (ppm)	La (ppm)	Fe (ppm)	Ca (ppm)	Cr (ppm)	Nd (ppm)	U (ppm)
Mean	-0.001	0.002	-0.001	-0.001	0.002	-0.001	-0.005	-0.036
S.D.	0.000	0.001	0.002	0.002	0.001	0.000	0.002	0.030
% R.S.D.	67.290	59.963	254.652	228.620	45.181	30.148	35.717	82.832

	Ce (ppm)	Sm (ppm)	Ba (ppm)	P (ppm)	S (ppm)	Mg (ppm)	As (ppm)	Na (ppm)
Mean	-0.046	0.036	-0.001	-0.006	-0.017	0.001	-0.004	-0.015
S.D.	0.011	0.005	0.000	0.007	0.005	0.001	0.002	0.004
% R.S.D.	23.896	13.715	26.021	117.257	30.589	67.358	60.145	24.119

	Mo (ppm)	Se (ppm)	Ag (ppm)	Pb (ppm)	Ti (ppm)	Cd (ppm)	B (ppm)	K (ppm)
Mean	-0.003	-0.019	0.002	0.001	0.000	-0.003	0.004	0.059
S.D.	0.001	0.003	0.000	0.008	0.000	0.001	0.000	0.012
% R.S.D.	19.879	17.475	26.315	561.222	340.211	30.544	5.426	21.161

	Mn (ppm)	Sb (ppm)	V (ppm)	Be (ppm)	Tl (ppm)
Mean	-0.001	0.025	-0.004	-0.000	-0.067
S.D.	0.000	0.013	0.001	0.000	0.008
% R.S.D.	24.505	50.892	13.396	55.024	11.243

DK Lato
06-04-96

LABCORE Data Entry Template for Worklist# 8714

Analyst: B. Goecke **Instrument:** ~~ICP01~~ ICP02 **Book#** 56B484

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

Worklist Comment: ICP U-105 (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	S96T001838	0	A	@ICP-A01	SOLID		
9	SAMPLE	S96T001838	0	A	@ICP-A01	SOLID	96000092	U-105 (R)
	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	S96T001838	0	A	@ICP-A01	SOLID		
11	SPK-PREDIG	S96T001838	0	A	@ICP-A01	SOLID		
12	CCV				@ICP-QC	QC		
13	CCB				@ICP-QC	QC		
14	SERDIL	S96T001849	0	A	@ICP-A01	SOLID		
15	SAMPLE	S96T001849	0	A	@ICP-A01	SOLID	96000143	U-105 (R)
	Analytes Requested:	AG-A-01 , AL-A-01 , AS-A-01 , B-A-01 , BA-A-01 ,						

Data Entry Comments: Sample vault calculation.

S96T001838 $C_x = 10.10 \frac{ug}{ml} \times \frac{1}{4.9160 \frac{g}{L} \times \frac{1L}{1000ml}} = 2.05e+3 \frac{ug}{g}$

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

Note: 4.9160 is sample prep dilution factor which can be found in sample prep worklist.

LABCORE Data Entry Template for Worklist# 8714

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	S96T001849	0	A	@ICP-A01	SOLID		
	spk - PARENTS S96T001849							
17	SERDIL	S96T001857	0	A	@ICP-A01	SOLID		
18	SAMPLE	S96T001857	0	A	@ICP-A01	SOLID	96000323	U-105 (R)
		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	S96T001857	0	A	@ICP-A01	SOLID		
	spk - PARENT S96T001857							
20	ICSA				@ICP-QC	QC		
21	ICSAB				@ICP-QC	QC		
22	CCV				@ICP-QC	QC		
23	CCB				@ICP-QC	QC		

Final page for worklist # 8714

Analyst Signature	Date	DF.
	6-5-96	
PREPBTD TJA	DIRECT	1
PREP 1841 TJA	DIRECT	1
S96T001838-L	4-L-6-L-2-L-8-L	12.5
1838	4-L-6-L	2.5
1838-D	4-L-6-L	2.5
1838-S	4-L-6-L	2.5

Reviewed by:

Analyst Signature	Date	DF.
	6/18/96	
S96T001849-L	4-6-2-8	12.5
1849	4-6	2.5
1849-D	4-6	2.5
1849-S	4-6	2.5
S96T001857-L	4-6-2-8	12.5
1857	4-6	2.5
1857-D	4-6	2.5
1857-S	4-6	2.5

Data Entry Comments: Spike recovery calculation

S96T001838 $Cr = \frac{18.35 - 10.10}{10} \times 100 = 82.5\%$

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

Note: Spike true value is 10.0 ppm on all elements except for Ag = 2.0 ppm and U = 20.0 ppm

Analysis Report Summary Wed 06-05-96 02:44:53 PM page 1

#	Sample Name	File	Method	Date	Time	OpID	Type	Mode
1	ICV	960605C	ICP2	06/05/96	13:13	BJG	Q	CONC
2	ICB	960605C	ICP2	06/05/96	13:16	BJG	Q	CONC
3	LLS	960605C	ICP2	06/05/96	13:22	BJG	Q	CONC
4	ICSA	960605C	ICP2	06/05/96	13:25	BJG	Q	CONC
5	ICSAB	960605C	ICP2	06/05/96	13:28	BJG	Q	CONC
6	PREPSTDTJA	960605C	ICP2	06/05/96	13:31	BJG	S	CONC
7	PREPBLKTJA	960605C	ICP2	06/05/96	13:35	BJG	S	CONC
8	S96T001838_L	960605C	ICP2	06/05/96	13:42	BJG	S	CONC
9	S96T001838	960605C	ICP2	06/05/96	13:47	BJG	S	CONC
10	S96T001838_D	960605C	ICP2	06/05/96	13:51	BJG	S	CONC
11	S96T001838_S	960605C	ICP2	06/05/96	13:54	BJG	S	CONC
12	CCV	960605C	ICP2	06/05/96	13:57	BJG	Q	CONC
13	CCB	960605C	ICP2	06/05/96	14:01	BJG	Q	CONC
14	S96T001849_L	960605C	ICP2	06/05/96	14:05	BJG	S	CONC
15	S96T001849	960605C	ICP2	06/05/96	14:08	BJG	S	CONC
16	S96T001849_D	960605C	ICP2	06/05/96	14:11	BJG	S	CONC
17	S96T001849_S	960605C	ICP2	06/05/96	14:15	BJG	S	CONC
18	S96T001857_L	960605C	ICP2	06/05/96	14:18	BJG	S	CONC
19	S96T001857	960605C	ICP2	06/05/96	14:22	BJG	S	CONC
20	S96T001857_D	960605C	ICP2	06/05/96	14:25	BJG	S	CONC
21	S96T001857_S	960605C	ICP2	06/05/96	14:28	BJG	S	CONC
22	ICSA	960605C	ICP2	06/05/96	14:31	BJG	Q	CONC
23	ICSAB	960605C	ICP2	06/05/96	14:34	BJG	Q	CONC
24	CCV	960605C	ICP2	06/05/96	14:38	BJG	Q	CONC
25	CCB	960605C	ICP2	06/05/96	14:41	BJG	Q	CONC

SIGNATURE BELOW REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 1261 TO 1265.

6-5-96

U-105 ACID DIGEST

S96T001838, 1849, 1857

FILE # 0960605C.TXT

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#	Sample Name	Ag	Al	As	B	Ba	Be
1	ICV	5.002	4.971	5.308	5.122	5.050	5.352
2	ICB	.0026	.0139	.0166	.0039	.0000	.0003
3	LLS	.0222	.1162	.2351	.1058	.0992	.0110
4	ICSA	.0029	243.0	-.0824	-.0001	.0030	.0006
5	ICSAB	.9765	245.9	-.0578	.0020	.4927	.5030
6	PREPSTDTJA	1.918	9.649	10.14	10.32	10.00	10.85
7	PREPBLKTJA	.0013	.0585	.0133	.1141	.0005	.0004
8	S96T001838_L	.1030	61.48	.0038	.5319	.0292	.0023
9	S96T001838_	.0917	60.07	-.0552	.5661	.0293	.0014
10	S96T001838_D	.0938	61.78	-.0485	.8756	.0292	.0019
11	S96T001838_S	1.945	66.29	9.703	9.972	9.442	9.792
12	CCV	4.987	5.019	5.329	5.215	5.136	5.399
13	CCB	.0027	.0225	.0091	.0070	.0000	.0003
14	S96T001849_L	.1351	84.48	.0774	.9665	.0649	.0058
15	S96T001849_	.1158	82.11	-.0917	.9004	.0653	.0021
16	S96T001849_D	.1151	82.17	-.0863	.5825	.0665	.0021
17	S96T001849_S	2.034	97.10	10.12	10.63	9.950	10.39
18	S96T001857_L	.1062	96.10	-.1053	.9670	.0470	.0038
19	S96T001857_	.0943	92.96	-.0608	.8986	.0468	.0017
20	S96T001857_D	.0895	93.05	-.0796	.8252	.0450	.0017
21	S96T001857_S	1.967	103.6	9.921	10.33	9.651	10.00
22	ICSA	.0043	248.6	-.0596	.0042	.0033	.0006
23	ICSAB	.9872	246.7	-.0720	.0022	.5083	.5102
24	CCV	5.017	5.050	5.380	5.245	5.234	5.437
25	CCB	.0023	.0191	.0200	.0079	.0000	.0003

#	Sample Name	Bi	Ca	Cd	Ce	Co	Cr
1	ICV	5.188	5.141	5.075	5.232	5.084	5.145
2	ICB	-.0159	.0003	.0011	-.0044	-.0002	.0005
3	LLS	.1855	.2159	.0112	.1990	.0433	.0203
4	ICSA	-.0365	246.4	-.0000	.0064	.0029	.0010
5	ICSAB	-.0107	249.2	.9532	.0077	.4697	.4885
6	PREPSTDTJA	9.732	9.388	9.394	10.28	9.636	9.495
7	PREPBLKTJA	.0154	.1111	.0007	-.0018	.0014	.0016
8	S96T001838_L	.2732	1.282	.0663	.2112	.0177	10.38
9	S96T001838_	.0261	1.248	.0705	.1592	.0143	10.10
10	S96T001838_D	.0862	1.113	.0756	.1545	.0137	10.09
11	S96T001838_S	9.335	10.32	9.126	9.953	9.253	18.35
12	CCV	5.165	5.092	5.020	5.229	5.039	5.101
13	CCB	.0029	-.0001	.0007	.0028	.0016	.0001
14	S96T001849_L	.1776	1.350	.1086	.2485	.0031	15.93
15	S96T001849_	.3996	1.233	.0942	.2434	.0152	15.46
16	S96T001849_D	.3257	1.217	.0964	.2656	.0153	15.86
17	S96T001849_S	9.991	10.85	9.463	10.49	9.585	25.88
18	S96T001857_L	.2175	1.357	.1470	.2025	.0174	12.20
19	S96T001857_	.1176	1.241	.1357	.2149	.0149	11.75
20	S96T001857_D	.1264	1.261	.1321	.2318	.0168	11.33
21	S96T001857_S	9.543	10.61	9.265	10.21	9.360	21.18
22	ICSA	-.0177	252.4	.0008	.0147	.0038	.0013
23	ICSAB	-.0017	252.3	.9643	.0071	.4746	.4869
24	CCV	5.222	5.134	5.046	5.315	5.056	5.126

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#	Sample Name	Bi	Ca	Cd	Ce	Co	Cr
25	CCB	-.0157	.0007	.0013	.0021	.0009	.0001

#	Sample Name	Cu	Eu	Fe	K	La	Li
1	ICV	5.277	-.0038	5.160	4.950	5.128	5.151
2	ICB	.0005	-.0024	.0007	.0485	-.0002	-.0024
3	LLS	.0207	-.0016	.1036	Q.7183	.1012	.0196
4	ICSA	-.0107	-.0333	93.65	.1637	-.0058	.0015
5	ICSAB	.5055	-.0338	94.71	.2216	-.0063	1.037
6	PREPSTDTJA	9.922	-.0081	9.628	9.538	10.02	10.32
7	PREPBLKTJA	.0470	-.0037	.0462	.1110	.0001	-.0033
8	S96T001838_L	.0411	-.0271	7.980	8.799	.0924	-.0282
9	S96T001838_	.0436	-.0055	7.783	7.924	.0877	-.0048
10	S96T001838_D	.0487	-.0048	7.573	8.323	.0887	-.0042
11	S96T001838_S	9.377	-.0095	16.08	16.70	9.656	9.713
12	CCV	5.361	-.0050	5.154	4.959	5.148	5.310
13	CCB	.0003	-.0028	.0008	-.0088	.0003	-.0020
14	S96T001849_L	.0689	-.0411	18.53	9.331	.1262	-.0211
15	S96T001849_	.0646	-.0094	17.94	8.527	.1297	.0097
16	S96T001849_D	.0710	-.0083	19.06	9.462	.1332	.0115
17	S96T001849_S	9.840	-.0141	28.77	18.54	10.14	10.27
18	S96T001857_L	.0714	-.0412	15.36	6.358	.1241	-.0157
19	S96T001857_	.0644	-.0119	14.70	6.350	.1257	.0139
20	S96T001857_D	.0758	-.0116	13.06	5.910	.1226	.0140
21	S96T001857_S	9.572	-.0167	22.90	15.27	9.852	9.947
22	ICSA	-.0107	-.0385	95.87	.1939	-.0051	.0012
23	ICSAB	.5121	-.0373	95.36	.2724	-.0058	1.042
24	CCV	5.431	-.0050	5.172	4.757	5.231	5.392
25	CCB	.0010	-.0025	.0015	.2631	.0000	-.0027

#	Sample Name	Mg	Mn	Mo	Na	Nd	Ni
1	ICV	4.960	4.989	5.099	5.084	5.196	5.090
2	ICB	.0014	-.0005	.0015	-.0183	-.0022	.0089
3	LLS	.2048	.0189	.0954	.2009	.1984	.0432
4	ICSA	245.7	-.0077	-.0094	203.5	.0019	.0052
5	ICSAB	255.0	.4507	-.0106	205.6	.0004	.9304
6	PREPSTDTJA	9.292	9.486	9.558	10.69	9.987	9.659
7	PREPBLKTJA	.0223	.0006	-.0014	.2701	-.0007	.0058
8	S96T001838_L	.2532	2.296	.1978	1003.	.2241	.7038
9	S96T001838_	.2304	2.245	.1666	978.2	.2395	.5865
10	S96T001838_D	.2261	2.280	.1803	960.4	.2401	.6059
11	S96T001838_S	9.010	11.02	9.333	986.9	9.729	9.848
12	CCV	5.001	4.965	5.066	5.176	5.233	5.018
13	CCB	.0038	-.0005	.0004	-.0183	-.0042	-.0003
14	S96T001849_L	.7920	9.430	.2380	1159.	.3246	.8206
15	S96T001849_	.7732	9.275	.2105	1126.	.3566	.7547
16	S96T001849_D	.8010	9.800	.2091	1118.	.3596	.7618
17	S96T001849_S	9.997	19.50	9.762	1203.	10.32	10.38
18	S96T001857_L	.2271	4.777	.1241	948.8	.3317	.9152
19	S96T001857_	.2298	4.611	.1474	916.2	.3369	.8345
20	S96T001857_D	.2020	4.414	.1392	857.9	.3315	.7966

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#	Sample Name	Mg	Mn	Mo	Na	Nd	Ni
21	S96T001857_S	9.158	13.85	9.435	993.0	10.03	10.15
22	ICSA	251.6	-.0077	-.0129	208.9	.0020	.0013
23	ICSAB	249.1	.4565	-.0120	207.3	.0020	.9440
24	CCV	5.030	4.975	5.100	5.222	5.334	5.075
25	CCB	.0032	-.0006	.0004	-.0209	-.0013	.0041

#	Sample Name	P	Pb	S	Sb	Se	Si
1	ICV	5.042	5.017	4.951	4.862	5.039	4.752
2	ICB	.0157	-.0036	.0011	.0079	.0521	-.0069
3	LLS	.4150	.2041	.1910	.0975	.2477	.1458
4	ICSA	.0374	.0235	.0243	.0051	-.0227	.0000
5	ICSAB	.0460	.9893	-.0177	.0086	-.0117	-.0172
6	PREPSTDTJA	10.10	9.064	9.646	9.963	9.421	10.87
7	PREPBLKTJA	.0148	.0129	.1006	.0052	.0488	.0476
8	S96T001838_L	14.84	.6825	19.88	.0104	.6044	1.464
9	S96T001838_	14.26	.7168	19.22	.0163	.1462	1.461
10	S96T001838_D	15.12	.7188	20.50	.0071	.1349	1.846
11	S96T001838_S	24.66	9.418	28.64	9.695	9.133	10.75
12	CCV	5.090	4.950	5.023	4.842	5.109	4.756
13	CCB	.0170	-.0007	.0016	.0004	.0601	-.0033
14	S96T001849_L	30.40	1.268	15.54	.0264	.7010	1.735
15	S96T001849_	29.91	1.287	15.14	.0228	.1151	1.695
16	S96T001849_D	30.93	1.309	15.03	.0086	.1653	1.226
17	S96T001849_S	44.66	10.51	25.98	9.961	9.539	12.29
18	S96T001857_L	27.43	.9705	14.77	-.0253	.6940	1.796
19	S96T001857_	26.47	1.092	14.23	.0002	.1383	1.729
20	S96T001857_D	23.31	1.062	13.54	.0103	.1683	1.577
21	S96T001857_S	36.06	9.958	24.70	9.747	9.287	11.64
22	ICSA	.0423	.0290	.0261	-.0030	-.0162	.0044
23	ICSAB	.0482	1.007	.0185	.0041	-.0194	.0088
24	CCV	5.035	4.975	4.985	4.874	5.140	4.756
25	CCB	-.0072	-.0061	.0150	.0079	.0608	-.0071

#	Sample Name	Sm	Sr	Th	Ti	Tl	U
1	ICV	5.008	5.069	.0124	4.945	4.910	9.910
2	ICB	-.0321	-.0004	.0094	-.0002	.0075	-.1208
3	LLS	.1798	.0202	.0055	.0200	.4115	.4126
4	ICSA	-.0250	-.0022	.0155	.0012	.0115	.0184
5	ICSAB	-.0318	.0016	.0138	.0007	.0008	.0180
6	PREPSTDTJA	9.834	9.869	.0338	9.136	9.085	19.47
7	PREPBLKTJA	-.0520	-.0002	.0128	-.0002	-.0088	-.1937
8	S96T001838_L	-.3403	.0071	.2785	.0241	-.3846	.5752
9	S96T001838_	-.0494	.0104	.2264	.0221	-.0254	1.547
10	S96T001838_D	-.0338	.0104	.2239	.0125	-.0081	1.590
11	S96T001838_S	9.368	9.370	.2321	8.734	8.720	19.99
12	CCV	5.031	5.097	.0145	4.961	4.877	9.981
13	CCB	-.0397	-.0005	.0093	-.0004	-.0080	-.1295
14	S96T001849_L	-.4590	.0119	.4356	.0189	.0058	5.997
15	S96T001849_	-.0395	.0171	.2990	.0223	.0454	7.456
16	S96T001849_D	-.0143	.0179	.3225	.0217	.0096	7.731

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#	Sample Name	Sm	Sr	Th	Ti	Tl	U
17	S96T001849_S	9.823	9.806	.3573	9.080	9.063	27.72
18	S96T001857_L	-.4174	.0097	.3731	.0197	.1534	15.58
19	S96T001857	-.0299	.0144	.2972	.0189	-.0527	16.55
20	S96T001857_D	-.0234	.0140	.2961	.0156	-.0565	15.99
21	S96T001857_S	9.538	9.530	.3579	8.864	8.831	35.81
22	ICSA	-.0345	-.0023	.0219	.0017	-.0369	-.0111
23	ICSAB	-.0322	-.0023	.0164	.0014	-.0170	-.0139
24	CCV	5.118	5.183	.0136	5.015	4.919	10.13
25	CCB	-.0357	-.0004	.0101	-.0002	-.0054	-.1325

#	Sample Name	V	Y	Zn	Zr
1	ICV	5.094	.0057	5.077	4.993
2	ICB	-.0051	-.0014	.0008	-.0036
3	LLS	.0976	-.0006	.0225	.0176
4	ICSA	-.0063	.0056	.0002	-.0077
5	ICSAB	.4722	.0057	.9721	-.0074
6	PREPSTDTJA	9.580	.0091	9.193	10.43
7	PREPBLKTJA	-.0070	-.0022	.0391	-.0059
8	S96T001838_L	-.0503	.0145	.1495	.1630
9	S96T001838	-.0026	.0264	.1362	.1905
10	S96T001838_D	-.0005	.0260	.1353	.1958
11	S96T001838_S	9.145	.0346	9.086	10.00
12	CCV	5.083	.0050	5.045	4.982
13	CCB	-.0062	-.0015	.0014	-.0043
14	S96T001849_L	-.0561	.0220	.2136	.2995
15	S96T001849	.0092	.0388	.1842	.3544
16	S96T001849_D	.0128	.0404	.1717	.3444
17	S96T001849_S	9.514	.0533	9.433	10.58
18	S96T001857_L	-.0479	.0208	.2634	.2807
19	S96T001857	.0110	.0353	.2552	.3151
20	S96T001857_D	.0088	.0346	.2099	.2866
21	S96T001857_S	9.275	.0481	9.214	10.23
22	ICSA	-.0077	.0055	.0003	-.0087
23	ICSAB	.4773	.0057	.9789	-.0076
24	CCV	5.125	.0048	5.052	5.042
25	CCB	-.0056	-.0015	.0006	-.0044

LABCORE Data Entry Template for Worklist# 9026

Analyst: JK Sch **Instrument:** ICP01 _____ **Book#** 54848a

Method: LA-505-151/~~161~~ Rev/Mod 1-3

Worklist Comment: JK 6-6-96 ICP U-105 (FUSION)

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				@ICP-F01	SOLID		
7	SERDIL	S96T001837	0	F	@ICP-F01	SOLID		
8	SAMPLE	S96T001837	0	F	@ICP-F01	SOLID	96000092	U-105 (R)
	Analytes Requested:	AG-F-01 , AL-F-01 , AS-F-01 , B-F-01 , BA-F-01 , BE-F-01 , BI-F-01 , CA-F-01 , CD-F-01 , CE-F-01 , CO-F-01 , CR-F-01 , CU-F-01 , FE-F-01 , K-F-01 , LA-F-01 , LI-F-01 , MG-F-01 , MN-F-01 , MO-F-01 , NA-F-01 , ND-F-01 , NI-F-01 , P-F-01 , PB-F-01 , S-F-01 , SB-F-01 , SE-F-01 , SI-F-01 , SM-F-01 , SR-F-01 , TI-F-01 , TL-F-01 , U-F-01 , V-F-01 , ZN-F-01 , ZR-F-01						
9	DUP	S96T001837	0	F	@ICP-F01	SOLID		
10	SPK	S96T001837	0	F	@ICP-F01	SOLID		
11	CCV				@ICP-QC	QC		
12	CCB				@ICP-QC	QC		
13	SERDIL	S96T001848	0	F	@ICP-F01	SOLID		
14	SAMPLE	S96T001848	0	F	@ICP-F01	SOLID	96000143	U-105 (R)
	Analytes Requested:	AG-F-01 , AL-F-01 , AS-F-01 , B-F-01 , BA-F-01 , BE-F-01 , BI-F-01 , CA-F-01 , CD-F-01 , CE-F-01 , CO-F-01 , CR-F-01 , CU-F-01 , FE-F-01 , K-F-01 , LA-F-01 , LI-F-01 ,						

Data Entry Comments: Exaple for calculation of sample result:

S96T001837 $Al = 27.354 \frac{ug}{ml} \times \frac{1}{1.938 \frac{g}{L} \times \frac{1L}{1000ml}} = 1.41e+4 \frac{ug}{g}$

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

Note: $1.938 \frac{g}{L}$ is sample prep dilution factor which can be found in sample prep worklist.

LABCORE Data Entry Template for Worklist# 9026

S	Type	Sample#	R	A	Test	Matrix	Group#	Project
					MG-F-01 , MN-F-01 , MO-F-01 , NA-F-01 , ND-F-01 , NI-F-01 , P-F-01 , PB-F-01 , S-F-01 , SB-F-01 , SE-F-01 , SI-F-01 , SM-F-01 , SR-F-01 , TI-F-01 , TL-F-01 , U-F-01 , V-F-01 , ZN-F-01 , ZR-F-01			
15	DUP	S96T001848	0	F	@ICP-F01	SOLID		
16	SPK	S96T001848	0	F	@ICP-F01	SOLID		
17	SERDIL	S96T001856	0	F	@ICP-F01	SOLID		
18	SAMPLE	S96T001856	0	F	@ICP-F01	SOLID	96000323 U-105 (R)	
		Analytes Requested:			AG-F-01 , AL-F-01 , AS-F-01 , B-F-01 , BA-F-01 , BE-F-01 , BI-F-01 , CA-F-01 , CD-F-01 , CE-F-01 , CO-F-01 , CR-F-01 , CU-F-01 , FE-F-01 , K-F-01 , LA-F-01 , LI-F-01 , MG-F-01 , MN-F-01 , MO-F-01 , NA-F-01 , ND-F-01 , NI-F-01 , P-F-01 , PB-F-01 , S-F-01 , SB-F-01 , SE-F-01 , SI-F-01 , SM-F-01 , SR-F-01 , TI-F-01 , TL-F-01 , U-F-01 , V-F-01 , ZN-F-01 , ZR-F-01			
19	DUP	S96T001856	0	F	@ICP-F01	SOLID		
20	SPK	S96T001856	0	F	@ICP-F01	SOLID		
21	ICSA				@ICP-QC	QC		
22	ICSAB				@ICP-QC	QC		
23	CCV				@ICP-QC	QC		
24	CCB				@ICP-QC	QC		

Final page for worklist # 9026

K [illegible] 06-06-96
Analyst Signature **Date**

Reviewed by: [illegible] 6/7/96
Analyst Signature **Date**

PrepblkQNL	.25-10	
S96T001837_L	.25-10-2.8	DF 205
S96T001837	.25-10	41
S96T001837_D	.25-10	41
S96T001837_Q	.25-10	41

S96T001848_L	.25-10-2.8	DF 205
S96T001848	.25-10	41
S96T001848_D	.25-10	41
S96T001848_Q	.25-10	41

S96T001856_L	.25-10-2.8	DF 205
S96T001856	.25-10	41
S96T001856_D	.25-10	41
S96T001856_Q	.25-10	41

Data Entry Comments: All post spikes: .25 ml sample + 2 ml SSTS + 8 ml HNO_3

Example for spike recovery calculation:

S96T001837 Al = $\left(\frac{67.004}{41}\right) - \left(\frac{27.354}{41}\right) \times 100 = 96.7\%$

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

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

Identity 1: ICV Identity 2: Quality Control 2:20 PM June 6, 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	4.995	5.025	4.997	4.800	4.965	5.052	5.152	5.102
S.D.	0.007	0.004	0.016	0.004	0.008	0.008	0.010	0.034
% R.S.D.	0.145	0.078	0.316	0.092	0.160	0.162	0.199	0.665

	Zn (ppm)	Ni (ppm)	La (ppm)	Fe (ppm)	Ca (ppm)	Cr (ppm)	Nd (ppm)	U (ppm)
Mean	5.093	5.001	5.057	5.070	5.006	5.024	5.270	9.990
S.D.	0.009	0.021	0.008	0.026	0.002	0.017	0.016	0.021
% R.S.D.	0.173	0.428	0.160	0.515	0.032	0.346	0.296	0.210

	Ce (ppm)	Sm (ppm)	Ba (ppm)	P (ppm)	S (ppm)	Mg (ppm)	As (ppm)	Na (ppm)
Mean	5.122	5.103	5.060	4.907	4.952	4.886	5.106	5.025
S.D.	0.013	0.005	0.008	0.040	0.013	0.011	0.016	0.031
% R.S.D.	0.261	0.100	0.153	0.814	0.257	0.225	0.306	0.625

	Mo (ppm)	Se (ppm)	Ag (ppm)	Pb (ppm)	Ti (ppm)	Cd (ppm)	B (ppm)	K (ppm)
Mean	5.045	5.309	4.923	5.015	4.950	5.012	5.154	5.067
S.D.	0.013	0.036	0.008	0.019	0.003	0.014	0.011	0.021
% R.S.D.	0.256	0.676	0.167	0.379	0.058	0.287	0.206	0.413

	Mn (ppm)	Sb (ppm)	V (ppm)	Be (ppm)	Tl (ppm)
Mean	5.040	4.797	5.091	5.193	4.914
S.D.	0.014	0.054	0.008	0.005	0.023
% R.S.D.	0.283	1.117	0.161	0.094	0.474

J Worrell
JK Lato
U-105 596T00 1837
596T00 1848
596T00 1856
Worklist # 9026

SIGNATURE ABOVE REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 1268 TO 1291.

Identity 1: ICB Identity 2: Quality Control 2:25 PM June 6, 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	0.003	0.001	0.004	0.009	0.011	0.003	0.003
S.D.	0.001	0.001	0.009	0.003	0.001	0.002	0.000	0.001
% R.S.D.	69.690	17.638	1732.525	64.298	7.633	17.298	11.564	17.830

	Zn (ppm)	Ni (ppm)	La (ppm)	Fe (ppm)	Ca (ppm)	Cr (ppm)	Nd (ppm)	U (ppm)
Mean	0.003	-0.002	0.002	0.001	0.004	0.002	0.023	-0.051
S.D.	0.001	0.001	0.001	0.001	0.001	0.001	0.007	0.041
% R.S.D.	21.247	28.606	75.690	147.368	17.229	79.458	31.861	81.286

	Ce (ppm)	Sm (ppm)	Ba (ppm)	P (ppm)	S (ppm)	Mg (ppm)	As (ppm)	Na (ppm)
Mean	0.037	-0.006	0.003	0.031	-0.002	0.003	0.003	0.009
S.D.	0.007	0.005	0.001	0.012	0.001	0.001	0.004	0.001
% R.S.D.	20.192	81.478	19.372	38.799	65.983	18.909	131.049	14.439

	Mo (ppm)	Se (ppm)	Ag (ppm)	Pb (ppm)	Ti (ppm)	Cd (ppm)	B (ppm)	K (ppm)
Mean	0.006	-0.031	0.005	0.006	0.002	0.005	0.005	-0.051
S.D.	0.002	0.005	0.001	0.011	0.001	0.000	0.000	0.002
% R.S.D.	28.127	17.661	20.028	183.861	25.836	5.172	8.517	4.916

	Mn (ppm)	Sb (ppm)	V (ppm)	Be (ppm)	Tl (ppm)
Mean	0.002	0.010	0.006	0.003	0.036
S.D.	0.000	0.019	0.001	0.000	0.001
% R.S.D.	15.176	194.152	17.639	18.418	2.821

Identity 1: LLS Identity 2: Quality Control 2:29 PM June 6, 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	0.022	0.022	0.189	0.125	0.099	0.045	0.022	0.022
S.D.	0.002	0.000	0.009	0.000	0.004	0.002	0.000	0.000
% R.S.D.	7.588	1.149	4.787	0.202	3.970	4.119	1.160	1.764

	Zn (ppm)	Ni (ppm)	La (ppm)	Fe (ppm)	Ca (ppm)	Cr (ppm)	Nd (ppm)	U (ppm)
Mean	0.023	0.038	0.107	0.104	0.206	0.019	0.206	0.445
S.D.	0.000	0.002	0.004	0.001	0.000	0.002	0.006	0.048
% R.S.D.	0.757	4.555	3.526	1.191	0.154	11.076	2.977	10.666

	Ce (ppm)	Sm (ppm)	Ba (ppm)	P (ppm)	S (ppm)	Mg (ppm)	As (ppm)	Na (ppm)
Mean	0.199	0.209	0.105	0.398	0.196	0.206	0.211	0.205
S.D.	0.010	0.009	0.000	0.018	0.012	0.000	0.003	0.002
% R.S.D.	4.802	4.069	0.119	4.444	6.066	0.150	1.537	1.049

	Mo (ppm)	Se (ppm)	Ag (ppm)	Pb (ppm)	Ti (ppm)	Cd (ppm)	B (ppm)	K (ppm)
Mean	0.101	0.222	0.020	0.217	0.022	0.013	0.106	0.439
S.D.	0.001	0.020	0.001	0.006	0.001	0.001	0.002	0.016
% R.S.D.	0.968	8.901	3.502	2.839	3.546	4.279	1.872	3.733

	Mn (ppm)	Sb (ppm)	V (ppm)	Be (ppm)	Tl (ppm)
Mean	0.021	0.106	0.105	0.012	0.391
S.D.	0.000	0.003	0.001	0.000	0.010
% R.S.D.	1.635	2.579	0.851	1.074	2.488

Identity 1: ICSA Identity 2: Quality Control 2:33 PM June 6, 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	-0.014	0.020	201.591	0.004	0.000	0.000
S.D.	0.001	0.000	0.005	0.004	0.409	0.000	0.000	0.000
% R.S.D.	30.881	4.204	35.401	21.866	0.203	0.175	125.908	167.887

	Zn (ppm)	Ni (ppm)	La (ppm)	Fe (ppm)	Ca (ppm)	Cr (ppm)	Nd (ppm)	U (ppm)
Mean	-0.004	0.003	0.003	98.070	103.191	-0.002	-0.005	0.091
S.D.	0.001	0.001	0.003	0.209	0.158	0.002	0.013	0.046
% R.S.D.	15.328	54.593	100.140	0.213	0.153	124.646	237.643	50.475

	Ce (ppm)	Sm (ppm)	Ba (ppm)	P (ppm)	S (ppm)	Mg (ppm)	As (ppm)	Na (ppm)
Mean	-0.019	0.008	0.003	0.053	-0.012	99.898	0.011	192.257
S.D.	0.009	0.008	0.000	0.011	0.011	0.047	0.003	0.560
% R.S.D.	48.897	108.623	6.562	19.767	90.562	0.047	28.664	0.291

	Mo (ppm)	Se (ppm)	Ag (ppm)	Pb (ppm)	Ti (ppm)	Cd (ppm)	B (ppm)	K (ppm)
Mean	0.002	-0.022	0.002	-0.025	0.001	0.001	0.013	-0.054
S.D.	0.001	0.017	0.001	0.007	0.000	0.000	0.001	0.012
% R.S.D.	36.907	76.803	58.399	27.822	13.800	54.853	5.144	21.320

	Mn (ppm)	Sb (ppm)	V (ppm)	Be (ppm)	Tl (ppm)
Mean	0.010	-0.032	0.000	0.003	0.022
S.D.	0.000	0.028	0.001	0.000	0.022
% R.S.D.	3.878	87.163	243.609	7.787	99.670

Identity 1: ICSAB Identity 2: Quality Control 2:36 PM June 6, 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	-0.007	0.005	201.853	0.508	0.520	0.962
S.D.	0.001	0.000	0.017	0.003	0.202	0.003	0.001	0.007
% R.S.D.	24.966	1.619	232.279	64.984	0.100	0.640	0.120	0.704

	Zn (ppm)	Ni (ppm)	La (ppm)	Fe (ppm)	Ca (ppm)	Cr (ppm)	Nd (ppm)	U (ppm)
Mean	1.010	0.991	0.005	96.731	102.670	0.506	-0.000	-0.069
S.D.	0.001	0.007	0.001	0.315	0.141	0.001	0.004	0.010
% R.S.D.	0.138	0.714	17.476	0.325	0.137	0.103	1365.959	14.085

	Ce (ppm)	Sm (ppm)	Ba (ppm)	P (ppm)	S (ppm)	Mg (ppm)	As (ppm)	Na (ppm)
Mean	-0.003	0.007	0.524	0.012	0.000	98.608	0.016	194.250
S.D.	0.005	0.001	0.001	0.009	0.006	0.237	0.003	1.197
% R.S.D.	194.504	10.652	0.165	75.784	8006.455	0.241	15.650	0.616

	Mo (ppm)	Se (ppm)	Ag (ppm)	Pb (ppm)	Ti (ppm)	Cd (ppm)	B (ppm)	K (ppm)
Mean	0.001	0.006	1.028	1.011	-0.000	1.009	0.012	-0.109
S.D.	0.002	0.017	0.002	0.022	0.000	0.002	0.001	0.003
% R.S.D.	248.068	270.769	0.202	2.130	235.931	0.237	8.174	2.655

	Mn (ppm)	Sb (ppm)	V (ppm)	Be (ppm)	Tl (ppm)
Mean	0.519	-0.090	0.508	0.509	-0.004
S.D.	0.001	0.021	0.002	0.001	0.011
% R.S.D.	0.205	23.096	0.299	0.230	282.343

Identity 1: prep blk Identity 2: 250ml-10ml 2:49 PM June 6, 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	-0.005	0.020	0.007	-0.000	0.000
S.D.	0.001	0.000	0.011	0.000	0.002	0.002	0.000	0.000
% R.S.D.	58.575	24.744	142.205	7.763	10.939	28.855	487.651	208.276

	Zn (ppm)	Ni (ppm)	La (ppm)	Fe (ppm)	Ca (ppm)	Cr (ppm)	Nd (ppm)	U (ppm)
Mean	0.023	0.159	-0.000	0.013	0.021	-0.002	0.008	-0.019
S.D.	0.000	0.001	0.002	0.001	0.002	0.000	0.005	0.006
% R.S.D.	0.962	0.391	18531.132	11.161	10.953	16.370	64.248	33.809

	Ce (ppm)	Sm (ppm)	Ba (ppm)	P (ppm)	S (ppm)	Mg (ppm)	As (ppm)	Na (ppm)
Mean	0.000	-0.023	0.000	0.007	-0.006	0.011	0.009	0.101
S.D.	0.002	0.002	0.000	0.007	0.005	0.002	0.002	0.004
% R.S.D.	684.295	6.935	15.875	102.195	80.666	20.611	23.536	4.461

	Mo (ppm)	Se (ppm)	Ag (ppm)	Pb (ppm)	Ti (ppm)	Cd (ppm)	B (ppm)	K (ppm)
Mean	-0.001	-0.045	0.001	-0.021	-0.000	0.001	-0.003	275.726
S.D.	0.001	0.002	0.000	0.004	0.000	0.000	0.001	0.777
% R.S.D.	120.541	4.217	0.062	20.908	191.210	18.824	23.783	0.282

	Mn (ppm)	Sb (ppm)	V (ppm)	Be (ppm)	Tl (ppm)
Mean	0.000	-0.061	0.003	0.000	0.008
S.D.	0.000	0.010	0.001	0.000	0.009
% R.S.D.	104.860	15.780	21.179	177.608	112.208

Identity 1: s96t001837 Identity 2: .250ml-10ml 2:58 PM June 6, 1996
Task name : OPTIMA
Sample Weight : 1.0000 Solution Volume : 41.00
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	0.017	-0.197	1.052	27.354	0.133	0.035	0.008
S.D.	0.057	0.003	0.266	0.028	0.058	0.154	0.011	0.008
% R.S.D.	965.231	18.232	134.538	2.681	0.213	115.274	30.552	99.842

	Zn (ppm)	Ni (ppm)	La (ppm)	Fe (ppm)	Ca (ppm)	Cr (ppm)	Nd (ppm)	U (ppm)
Mean	1.046	4.366	-0.272	2.883	2.069	4.293	0.275	-0.734
S.D.	0.023	0.135	0.059	0.057	0.013	0.054	0.209	0.892
% R.S.D.	2.195	3.082	21.574	1.987	0.650	1.255	75.829	121.506

	Ce (ppm)	Sm (ppm)	Ba (ppm)	P (ppm)	S (ppm)	Mg (ppm)	As (ppm)	Na (ppm)
Mean	0.345	-0.143	0.042	8.219	8.644	0.244	0.233	419.948
S.D.	0.343	0.211	0.005	0.435	0.145	0.000	0.230	2.077
% R.S.D.	99.490	148.098	11.771	5.293	1.682	0.000	98.670	0.495

	Mo (ppm)	Se (ppm)	Ag (ppm)	Pb (ppm)	Ti (ppm)	Cd (ppm)	B (ppm)	K (ppm)
Mean	0.165	0.075	0.081	0.351	0.048	0.107	-0.092	11891.471
S.D.	0.017	0.205	0.019	0.168	0.010	0.033	0.013	36.143
% R.S.D.	10.549	272.148	23.508	47.875	20.638	30.750	14.344	0.304

	Mn (ppm)	Sb (ppm)	V (ppm)	Be (ppm)	Tl (ppm)
Mean	1.010	-0.934	0.080	-0.013	0.639
S.D.	0.038	0.766	0.026	0.005	0.537
% R.S.D.	3.784	81.994	32.862	41.834	83.996

Identity 1: s96t001837_L Identity 2: .250ml-10ml-2ml-8ml 3:01 PM June 6, 1996
Task name : OPTIMA
Sample Weight : 1.0000 Solution Volume : 205.00
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	-0.089	0.070	2.576	1.730	30.529	1.778	0.164	0.057
S.D.	0.229	0.020	0.885	0.049	0.331	0.000	0.052	0.082
% R.S.D.	257.335	28.641	34.371	2.832	1.085	0.025	31.654	142.290

	Zn (ppm)	Ni (ppm)	La (ppm)	Fe (ppm)	Ca (ppm)	Cr (ppm)	Nd (ppm)	U (ppm)
Mean	4.559	4.406	0.385	2.742	26.385	4.248	0.724	-3.144
S.D.	0.079	1.342	0.002	0.170	0.144	0.481	1.983	3.484
% R.S.D.	1.732	30.447	0.418	6.185	0.547	11.325	273.864	110.832

	Ce (ppm)	Sm (ppm)	Ba (ppm)	P (ppm)	S (ppm)	Mg (ppm)	As (ppm)	Na (ppm)
Mean	5.261	-1.368	0.143	6.695	7.859	0.633	-0.405	432.871
S.D.	0.797	1.372	0.031	0.309	1.056	0.110	0.768	3.184
% R.S.D.	15.144	100.341	21.571	4.614	13.440	17.308	189.809	0.736

	Mo (ppm)	Se (ppm)	Ag (ppm)	Pb (ppm)	Ti (ppm)	Cd (ppm)	B (ppm)	K (ppm)
Mean	0.282	-3.655	0.285	2.218	0.093	0.160	-0.604	12419.287
S.D.	0.046	3.517	0.115	2.335	0.090	0.135	0.083	112.079
% R.S.D.	16.363	96.219	40.390	105.292	97.184	84.270	13.811	0.902

	Mn (ppm)	Sb (ppm)	V (ppm)	Be (ppm)	Tl (ppm)
Mean	0.940	-12.776	0.506	0.031	6.162
S.D.	0.036	6.052	0.266	0.073	3.546
% R.S.D.	3.883	47.372	52.605	234.451	57.550

Identity 1: s96t001837_d Identity 2: .250ml-10ml 3:04 PM June 6, 1996
Task name : OPTIMA
Sample Weight : 1.0000 Solution Volume : 41.00
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	0.036	0.014	0.201	0.548	27.226	-0.044	0.043	0.010
S.D.	0.059	0.004	0.378	0.026	0.035	0.000	0.000	0.009
% R.S.D.	165.379	28.641	188.010	4.787	0.128	0.272	0.342	96.922

	Zn (ppm)	Ni (ppm)	La (ppm)	Fe (ppm)	Ca (ppm)	Cr (ppm)	Nd (ppm)	U (ppm)
Mean	0.343	1.988	-0.058	3.094	0.964	4.317	-0.310	-1.433
S.D.	0.021	0.097	0.034	0.197	0.013	0.149	0.289	0.940
% R.S.D.	6.225	4.865	57.444	6.357	1.394	3.452	93.277	65.557

	Ce (ppm)	Sm (ppm)	Ba (ppm)	P (ppm)	S (ppm)	Mg (ppm)	As (ppm)	Na (ppm)
Mean	0.750	-0.840	0.041	5.864	8.731	0.144	0.217	441.614
S.D.	0.340	0.223	0.007	0.577	0.116	0.011	0.124	1.323
% R.S.D.	45.377	26.546	16.523	9.848	1.330	7.767	57.313	0.300

	Mo (ppm)	Se (ppm)	Ag (ppm)	Pb (ppm)	Ti (ppm)	Cd (ppm)	B (ppm)	K (ppm)
Mean	0.089	-0.226	0.069	-0.591	-0.005	0.064	-0.131	10308.161
S.D.	0.018	0.640	0.004	0.117	0.007	0.035	0.021	36.513
% R.S.D.	20.422	283.516	6.136	19.741	141.634	54.372	15.769	0.354

	Mn (ppm)	Sb (ppm)	V (ppm)	Be (ppm)	Tl (ppm)
Mean	1.003	-1.627	0.009	-0.004	0.044
S.D.	0.012	0.034	0.027	0.006	0.395
% R.S.D.	1.240	2.067	296.468	159.484	896.972

Identity 1: s96t001837_A Identity 2: .250ml-2ml-8ml 3:11 PM June 6, 1996
Task name : OPTIMA
Sample Weight : 1.0000 Solution Volume : 41.00
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	40.634	40.843	40.416	40.765	67.004	40.910	41.800	39.223
S.D.	0.093	0.079	0.580	0.044	0.047	0.077	0.095	0.057
% R.S.D.	0.230	0.193	1.436	0.109	0.070	0.188	0.227	0.146

	Zn (ppm)	Ni (ppm)	La (ppm)	Fe (ppm)	Ca (ppm)	Cr (ppm)	Nd (ppm)	U (ppm)
Mean	41.136	45.121	41.057	43.759	40.630	44.802	42.874	81.685
S.D.	0.056	0.524	0.168	0.226	0.101	0.165	0.103	0.742
% R.S.D.	0.136	1.161	0.409	0.516	0.247	0.369	0.240	0.909

	Ce (ppm)	Sm (ppm)	Ba (ppm)	P (ppm)	S (ppm)	Mg (ppm)	As (ppm)	Na (ppm)
Mean	41.256	40.848	40.928	46.923	48.342	39.005	41.049	458.852
S.D.	0.079	0.140	0.086	2.215	1.159	0.063	0.172	0.588
% R.S.D.	0.192	0.342	0.210	4.721	2.397	0.160	0.419	0.128

	Mo (ppm)	Se (ppm)	Ag (ppm)	Pb (ppm)	Ti (ppm)	Cd (ppm)	B (ppm)	K (ppm)
Mean	40.624	42.158	30.295	41.887	40.058	40.279	40.528	11958.332
S.D.	0.176	0.330	0.095	0.932	0.081	0.062	0.189	11.389
% R.S.D.	0.434	0.783	0.314	2.226	0.203	0.154	0.467	0.095

	Mn (ppm)	Sb (ppm)	V (ppm)	Be (ppm)	Tl (ppm)
Mean	41.685	36.836	41.289	41.019	40.184
S.D.	0.070	1.220	0.125	0.088	0.216
% R.S.D.	0.168	3.312	0.303	0.216	0.537

Identity 1: CCV Identity 2: Quality Control 3:53 PM June 6, 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	4.988	5.024	5.016	4.785	4.971	5.054	5.119	5.041
S.D.	0.011	0.011	0.019	0.015	0.004	0.024	0.016	0.038
% R.S.D.	0.220	0.217	0.370	0.319	0.087	0.474	0.306	0.751

	Zn (ppm)	Ni (ppm)	La (ppm)	Fe (ppm)	Ca (ppm)	Cr (ppm)	Nd (ppm)	U (ppm)
Mean	5.099	5.013	5.067	5.068	4.990	5.024	5.313	9.763
S.D.	0.024	0.019	0.015	0.037	0.013	0.017	0.009	0.060
% R.S.D.	0.475	0.370	0.304	0.734	0.265	0.338	0.169	0.617

	Ce (ppm)	Sm (ppm)	Ba (ppm)	P (ppm)	S (ppm)	Mg (ppm)	As (ppm)	Na (ppm)
Mean	5.172	5.063	5.048	4.956	4.986	4.901	5.108	4.976
S.D.	0.010	0.011	0.012	0.160	0.059	0.017	0.031	0.038
% R.S.D.	0.191	0.208	0.232	3.237	1.190	0.339	0.600	0.758

	Mo (ppm)	Se (ppm)	Ag (ppm)	Pb (ppm)	Ti (ppm)	Cd (ppm)	B (ppm)	K (ppm)
Mean	5.051	5.263	4.918	5.019	4.934	5.018	5.159	5.039
S.D.	0.013	0.030	0.019	0.027	0.011	0.021	0.019	0.015
% R.S.D.	0.266	0.569	0.384	0.532	0.224	0.412	0.374	0.303

	Mn (ppm)	Sb (ppm)	V (ppm)	Be (ppm)	Tl (ppm)
Mean	5.043	4.773	5.098	5.192	4.928
S.D.	0.013	0.085	0.017	0.016	0.028
% R.S.D.	0.249	1.777	0.330	0.302	0.573

Identity 1: CCB Identity 2: Quality Control 3:56 PM June 6, 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	0.016	0.006	-0.014	0.004	0.000	0.000
S.D.	0.002	0.001	0.007	0.004	0.005	0.002	0.001	0.001
% R.S.D.	126.973	69.282	43.264	57.403	38.469	43.205	391.546	119.799

	Zn (ppm)	Ni (ppm)	La (ppm)	Fe (ppm)	Ca (ppm)	Cr (ppm)	Nd (ppm)	U (ppm)
Mean	0.001	-0.003	0.003	-0.003	0.001	-0.003	-0.002	-0.005
S.D.	0.001	0.001	0.003	0.001	0.000	0.001	0.011	0.064
% R.S.D.	114.226	44.604	105.193	26.089	35.670	28.978	620.867	1366.512

	Ce (ppm)	Sm (ppm)	Ba (ppm)	P (ppm)	S (ppm)	Mg (ppm)	As (ppm)	Na (ppm)
Mean	-0.015	-0.011	0.001	0.011	-0.000	0.000	-0.001	-0.002
S.D.	0.016	0.011	0.001	0.004	0.003	0.000	0.002	0.004
% R.S.D.	100.617	102.002	140.972	37.199	1710.272	94.373	178.791	208.235

	Mo (ppm)	Se (ppm)	Ag (ppm)	Pb (ppm)	Tl (ppm)	Cd (ppm)	B (ppm)	K (ppm)
Mean	0.000	-0.019	0.000	-0.009	0.001	0.003	0.003	-0.068
S.D.	0.000	0.015	0.001	0.006	0.001	0.001	0.001	0.014
% R.S.D.	50.932	75.566	345.034	59.505	112.429	28.931	36.450	20.369

	Mn (ppm)	Sb (ppm)	V (ppm)	Be (ppm)	Tl (ppm)
Mean	0.000	-0.056	-0.001	0.000	-0.036
S.D.	0.000	0.026	0.002	0.000	0.033
% R.S.D.	169.676	46.242	152.246	101.681	90.067

Identity 1: S96T001848_L Identity 2: .25-10 ml 4:01 PM June 6, 1996
Task name : OPTIMA
Sample Weight : 1.0000 Solution Volume : 205.00
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	-0.488	0.118	1.929	1.631	30.648	1.335	0.178	0.191
S.D.	0.134	0.013	1.437	0.526	1.209	0.384	0.054	0.054
% R.S.D.	27.506	11.111	74.463	32.265	3.944	28.733	30.407	28.402

	Zn (ppm)	Ni (ppm)	La (ppm)	Fe (ppm)	Ca (ppm)	Cr (ppm)	Nd (ppm)	U (ppm)
Mean	2.591	7.437	-0.976	6.264	2.771	5.717	4.431	-16.039
S.D.	0.109	0.276	0.449	0.354	0.008	0.140	1.691	9.578
% R.S.D.	4.220	3.708	45.968	5.649	0.296	2.446	38.151	59.720

	Ce (ppm)	Sm (ppm)	Ba (ppm)	P (ppm)	S (ppm)	Mg (ppm)	As (ppm)	Na (ppm)
Mean	5.917	-4.313	0.188	13.063	5.444	0.353	0.629	411.971
S.D.	2.063	1.420	0.038	1.182	0.649	0.021	0.316	3.314
% R.S.D.	34.869	32.912	20.364	9.050	11.930	5.973	50.207	0.804

	Mo (ppm)	Se (ppm)	Ag (ppm)	Pb (ppm)	Ti (ppm)	Cd (ppm)	B (ppm)	K (ppm)
Mean	0.696	-0.985	0.652	3.495	-0.092	0.499	-0.086	13290.961
S.D.	0.281	1.164	0.096	2.617	0.038	0.093	0.073	98.511
% R.S.D.	40.386	118.215	14.658	74.873	40.751	18.612	85.392	0.741

	Mn (ppm)	Sb (ppm)	V (ppm)	Be (ppm)	Tl (ppm)
Mean	3.553	3.169	0.669	0.029	11.670
S.D.	0.036	4.001	0.152	0.028	4.208
% R.S.D.	1.011	126.262	22.677	94.538	36.061

Identity 1: S96T001848 Identity 2: .25-10 ml 4:04 PM June 6, 1996
Task name : OPTIMA
Sample Weight : 1.0000 Solution Volume : 41.00
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	0.171	0.014	0.314	2.585	31.034	0.177	-0.002	0.002
S.D.	0.076	0.006	0.162	0.094	0.262	0.077	0.034	0.013
% R.S.D.	44.217	43.301	51.529	3.633	0.843	43.395	1735.780	672.980

	Zn (ppm)	Ni (ppm)	La (ppm)	Fe (ppm)	Ca (ppm)	Cr (ppm)	Nd (ppm)	U (ppm)
Mean	0.928	8.731	0.100	5.969	1.318	5.853	0.244	4.900
S.D.	0.011	0.155	0.088	0.235	0.003	0.023	0.255	2.897
% R.S.D.	1.216	1.773	88.169	3.929	0.249	0.385	104.659	59.129

	Ce (ppm)	Sm (ppm)	Ba (ppm)	P (ppm)	S (ppm)	Mg (ppm)	As (ppm)	Na (ppm)
Mean	-0.278	-0.151	0.041	10.370	5.645	0.297	0.112	402.727
S.D.	0.569	0.550	0.012	0.706	0.236	0.004	0.050	4.439
% R.S.D.	204.718	364.788	28.827	6.804	4.187	1.420	44.582	1.102

	Mo (ppm)	Se (ppm)	Ag (ppm)	Pb (ppm)	Ti (ppm)	Cd (ppm)	B (ppm)	K (ppm)
Mean	0.155	1.222	0.034	0.331	0.041	0.092	0.015	12657.309
S.D.	0.042	0.435	0.049	0.396	0.023	0.016	0.043	142.372
% R.S.D.	26.953	35.629	144.296	119.484	56.810	17.835	280.125	1.125

	Mn (ppm)	Sb (ppm)	V (ppm)	Be (ppm)	Tl (ppm)
Mean	3.514	-0.266	0.022	0.013	0.759
S.D.	0.026	0.196	0.053	0.006	1.939
% R.S.D.	0.734	73.843	235.567	44.646	255.414

Identity 1: S96T001848_D Identity 2: .25-10 ml 4:08 PM June 6, 1996
Task name : OPTIMA
Sample Weight : 1.0000 Solution Volume : 41.00
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	-0.027	0.006	0.194	0.575	29.493	0.178	-0.016	-0.003
S.D.	0.044	0.003	0.215	0.156	0.162	0.077	0.007	0.008
% R.S.D.	159.902	49.487	110.451	27.090	0.551	43.181	44.146	283.552

	Zn (ppm)	Ni (ppm)	La (ppm)	Fe (ppm)	Ca (ppm)	Cr (ppm)	Nd (ppm)	U (ppm)
Mean	0.415	2.293	0.079	6.037	1.204	5.724	0.141	0.443
S.D.	0.019	0.351	0.059	0.160	0.003	0.075	0.149	1.853
% R.S.D.	4.692	15.311	74.681	2.653	0.273	1.303	105.284	418.657

	Ce (ppm)	Sm (ppm)	Ba (ppm)	P (ppm)	S (ppm)	Mg (ppm)	As (ppm)	Na (ppm)
Mean	-0.360	0.384	0.034	12.944	5.068	0.290	0.088	400.284
S.D.	0.396	0.277	0.009	0.045	0.175	0.004	0.132	3.130
% R.S.D.	109.987	72.213	27.277	0.350	3.458	1.456	149.667	0.782

	Mo (ppm)	Se (ppm)	Ag (ppm)	Pb (ppm)	Ti (ppm)	Cd (ppm)	B (ppm)	K (ppm)
Mean	0.101	-1.545	-0.021	-0.872	0.019	0.009	0.034	11303.316
S.D.	0.022	0.072	0.035	0.180	0.008	0.022	0.009	68.011
% R.S.D.	21.584	4.654	165.792	20.649	41.356	242.477	26.825	0.602

	Mn (ppm)	Sb (ppm)	V (ppm)	Be (ppm)	Tl (ppm)
Mean	3.678	-1.743	0.001	-0.000	-0.739
S.D.	0.026	0.926	0.038	0.010	0.415
% R.S.D.	0.704	53.157	3182.987	6545.619	56.117

Identity 1: S96T001848_A Identity 2: .25-10 ml 4:11 PM June 6, 1996
Task name : OPTIMA .25 ml sample + 2 ml SFTS + 8 ml HNO_3 6.6.96
Sample Weight : 1.0000 Solution Volume : 41.00
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	41.050	41.161	41.142	42.352	70.642	41.087	42.026	39.280
S.D.	0.028	0.119	0.928	0.090	0.057	0.077	0.132	0.141
% R.S.D.	0.067	0.289	2.254	0.214	0.080	0.187	0.314	0.359

	Zn (ppm)	Ni (ppm)	La (ppm)	Fe (ppm)	Ca (ppm)	Cr (ppm)	Nd (ppm)	U (ppm)
Mean	41.220	49.581	41.912	47.748	41.093	46.948	43.789	85.125
S.D.	0.073	0.689	0.121	0.254	0.099	0.215	0.221	1.254
% R.S.D.	0.177	1.390	0.289	0.533	0.241	0.458	0.505	1.473

	Ce (ppm)	Sm (ppm)	Ba (ppm)	P (ppm)	S (ppm)	Mg (ppm)	As (ppm)	Na (ppm)
Mean	41.322	41.543	41.238	48.929	45.372	39.395	40.967	443.103
S.D.	0.266	0.242	0.113	1.162	0.857	0.024	0.624	0.821
% R.S.D.	0.643	0.583	0.274	2.375	1.890	0.060	1.523	0.185

	Mo (ppm)	Se (ppm)	Ag (ppm)	Pb (ppm)	Ti (ppm)	Cd (ppm)	B (ppm)	K (ppm)
Mean	40.814	41.034	28.119	40.855	40.200	40.589	41.157	12800.450
S.D.	0.062	1.202	0.050	0.274	0.085	0.097	0.284	23.404
% R.S.D.	0.152	2.929	0.179	0.671	0.211	0.239	0.690	0.183

	Mn (ppm)	Sb (ppm)	V (ppm)	Be (ppm)	Tl (ppm)
Mean	44.552	39.439	41.511	41.216	41.333
S.D.	0.137	0.684	0.026	0.105	1.121
% R.S.D.	0.309	1.733	0.063	0.254	2.713

Identity 1: S96T001856_L Identity 2: .25-10-2-8 ml 4:14 PM June 6, 1996
Task name : OPTIMA
Sample Weight : 1.0000 Solution Volume : 205.00
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	0.088	0.057	0.750	1.788	23.628	1.555	-0.043	0.033
S.D.	0.026	0.020	1.990	0.219	0.507	0.385	0.073	0.030
% R.S.D.	29.571	35.251	265.266	12.255	2.146	24.763	169.834	89.327

	Zn (ppm)	Ni (ppm)	La (ppm)	Fe (ppm)	Ca (ppm)	Cr (ppm)	Nd (ppm)	U (ppm)
Mean	5.797	10.832	0.293	3.277	5.638	4.082	-0.270	3.844
S.D.	0.063	0.258	0.169	0.567	0.022	0.645	0.721	2.325
% R.S.D.	1.090	2.386	57.732	17.316	0.385	15.805	267.173	60.481

	Ce (ppm)	Sm (ppm)	Ba (ppm)	P (ppm)	S (ppm)	Mg (ppm)	As (ppm)	Na (ppm)
Mean	1.661	-1.161	0.063	18.335	6.233	0.231	1.747	372.673
S.D.	0.345	0.517	0.015	1.212	0.813	0.037	1.179	0.919
% R.S.D.	20.761	44.566	24.354	6.608	13.042	15.790	67.484	0.247

	Mo (ppm)	Se (ppm)	Ag (ppm)	Pb (ppm)	Ti (ppm)	Cd (ppm)	B (ppm)	K (ppm)
Mean	0.282	-3.656	0.179	-2.281	0.174	0.142	-0.144	10627.990
S.D.	0.063	1.474	0.021	3.383	0.071	0.135	0.067	44.236
% R.S.D.	22.300	40.311	11.459	148.319	40.826	94.833	46.656	0.416

	Mn (ppm)	Sb (ppm)	V (ppm)	Be (ppm)	Tl (ppm)
Mean	1.960	-7.675	0.230	0.064	-2.085
S.D.	0.036	1.334	0.051	0.072	1.302
% R.S.D.	1.860	17.376	22.011	113.444	62.430

Identity 1: S96T001856 Identity 2: .25-10 ml 4:18 PM June 6, 1996
Task name : OPTIMA
Sample Weight : 1.0000 Solution Volume : 41.00
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	0.137	0.010	0.806	1.077	24.647	0.132	0.007	-0.000
S.D.	0.040	0.004	0.089	0.085	0.282	0.077	0.020	0.006
% R.S.D.	29.072	41.660	11.016	7.879	1.145	58.312	288.765	13802.480

	Zn (ppm)	Ni (ppm)	La (ppm)	Fe (ppm)	Ca (ppm)	Cr (ppm)	Nd (ppm)	U (ppm)
Mean	0.895	10.645	0.102	3.596	2.431	4.604	-0.192	10.445
S.D.	0.009	0.109	0.033	0.172	0.007	0.013	0.257	1.592
% R.S.D.	0.983	1.027	32.265	4.777	0.270	0.286	133.604	15.246

	Ce (ppm)	Sm (ppm)	Ba (ppm)	P (ppm)	S (ppm)	Mg (ppm)	As (ppm)	Na (ppm)
Mean	-0.013	-0.907	0.032	13.043	5.806	0.149	0.018	371.112
S.D.	0.500	0.339	0.008	0.830	0.143	0.000	0.050	0.955
% R.S.D.	3810.707	37.358	24.708	6.365	2.463	0.000	281.772	0.257

	Mo (ppm)	Se (ppm)	Ag (ppm)	Pb (ppm)	Ti (ppm)	Cd (ppm)	B (ppm)	K (ppm)
Mean	0.089	-0.514	0.020	0.056	0.051	0.114	-0.060	10448.332
S.D.	0.055	0.475	0.029	0.268	0.014	0.022	0.018	27.852
% R.S.D.	62.362	92.315	142.804	476.815	27.645	19.672	30.365	0.267

	Mn (ppm)	Sb (ppm)	V (ppm)	Be (ppm)	Tl (ppm)
Mean	2.049	-0.457	-0.038	-0.005	0.681
S.D.	0.019	0.774	0.044	0.006	1.146
% R.S.D.	0.932	169.428	114.477	110.074	168.375

Identity 1: S96T001856_D Identity 2: .25-10 ml 4:21 PM June 6, 1996
Task name : OPTIMA
Sample Weight : 1.0000 Solution Volume : 41.00
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	0.111	0.014	0.035	0.558	48.078	0.399	0.014	0.013
S.D.	0.036	0.004	0.228	0.050	0.260	0.077	0.015	0.008
% R.S.D.	32.519	28.641	648.187	8.998	0.541	19.280	102.437	57.056

	Zn (ppm)	Ni (ppm)	La (ppm)	Fe (ppm)	Ca (ppm)	Cr (ppm)	Nd (ppm)	U (ppm)
Mean	0.312	11.735	-0.092	5.984	0.803	5.058	0.589	9.311
S.D.	0.007	0.119	0.058	0.035	0.000	0.015	0.400	0.656
% R.S.D.	2.333	1.012	63.629	0.593	0.000	0.303	67.946	7.044

	Ce (ppm)	Sm (ppm)	Ba (ppm)	P (ppm)	S (ppm)	Mg (ppm)	As (ppm)	Na (ppm)
Mean	0.256	-0.498	0.041	10.956	5.742	0.124	0.071	396.958
S.D.	0.458	0.261	0.007	0.865	0.223	0.004	0.083	2.653
% R.S.D.	178.863	52.410	17.059	7.899	3.876	3.396	116.438	0.668

	Mo (ppm)	Se (ppm)	Ag (ppm)	Pb (ppm)	Ti (ppm)	Cd (ppm)	B (ppm)	K (ppm)
Mean	0.089	-0.244	0.042	-0.108	0.018	0.060	0.008	10851.643
S.D.	0.052	0.259	0.044	0.405	0.003	0.016	0.010	81.551
% R.S.D.	58.122	105.912	104.988	374.104	16.818	27.539	112.534	0.752

	Mn (ppm)	Sb (ppm)	V (ppm)	Be (ppm)	Tl (ppm)
Mean	2.118	0.064	0.044	-0.012	2.677
S.D.	0.025	0.529	0.021	0.011	1.120
% R.S.D.	1.185	824.795	47.156	93.732	41.852

Identity ": S96T001856_A Identity 2 .25-10 ml 4:25 PM June 6, 1996
Task name : OPTIMA
Sample Weight : 1.0000 Solution Volume : 41.00
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	40.765	41.126	40.443	40.297	65.398	41.131	41.923	39.622
S.D.	0.046	0.082	0.323	0.102	0.198	0.133	0.126	0.433
% R.S.D.	0.112	0.200	0.800	0.253	0.303	0.324	0.301	1.094

	Zn (ppm)	Ni (ppm)	La (ppm)	Fe (ppm)	Ca (ppm)	Cr (ppm)	Nd (ppm)	U (ppm)
Mean	41.354	50.858	41.504	44.219	43.526	45.200	43.009	84.961
S.D.	0.085	0.237	0.147	0.320	0.065	0.052	0.261	0.904
% R.S.D.	0.206	0.466	0.354	0.723	0.149	0.116	0.607	1.064

	Ce (ppm)	Sm (ppm)	Ba (ppm)	P (ppm)	S (ppm)	Mg (ppm)	As (ppm)	Na (ppm)
Mean	41.261	41.775	41.129	52.797	45.512	39.255	41.399	416.110
S.D.	0.446	0.096	0.107	2.153	0.947	0.059	0.576	4.845
% R.S.D.	1.081	0.230	0.261	4.077	2.081	0.150	1.390	1.164

	Mo (ppm)	Se (ppm)	Ag (ppm)	Pb (ppm)	Ti (ppm)	Cd (ppm)	B (ppm)	K (ppm)
Mean	40.959	42.369	26.855	40.380	40.101	40.365	40.577	10469.903
S.D.	0.087	1.116	0.157	1.063	0.012	0.059	0.206	104.510
% R.S.D.	0.214	2.634	0.583	2.633	0.030	0.147	0.507	0.998

	Mn (ppm)	Sb (ppm)	V (ppm)	Be (ppm)	Tl (ppm)
Mean	42.873	35.953	41.330	41.200	40.147
S.D.	0.057	1.504	0.023	0.020	0.826
% R.S.D.	0.134	4.184	0.056	0.048	2.057

Identity 1: ICSA Identity 2: Quality Control 4:30 PM June 6, 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	-0.028	0.015	202.606	0.006	-0.001	-0.000
S.D.	0.001	0.000	0.005	0.001	0.167	0.002	0.000	0.000
% R.S.D.	73.031	3.448	18.544	5.543	0.083	32.948	71.262	55.587

	Zn (ppm)	Ni (ppm)	La (ppm)	Fe (ppm)	Ca (ppm)	Cr (ppm)	Nd (ppm)	U (ppm)
Mean	-0.004	0.003	0.002	98.699	103.504	0.000	-0.020	-0.006
S.D.	0.001	0.000	0.001	0.143	0.178	0.001	0.009	0.057
% R.S.D.	11.667	11.913	51.225	0.145	0.172	472.533	43.052	874.769

	Ce (ppm)	Sm (ppm)	Ba (ppm)	P (ppm)	S (ppm)	Mg (ppm)	As (ppm)	Na (ppm)
Mean	-0.030	0.018	0.003	0.044	-0.000	100.237	0.022	193.389
S.D.	0.013	0.010	0.000	0.013	0.006	0.419	0.003	2.000
% R.S.D.	45.198	57.652	7.311	29.004	6323.818	0.418	11.642	1.034

	Mo (ppm)	Se (ppm)	Ag (ppm)	Pb (ppm)	Ti (ppm)	Cd (ppm)	B (ppm)	K (ppm)
Mean	0.001	-0.025	-0.001	0.007	0.001	0.001	0.013	0.012
S.D.	0.003	0.009	0.001	0.010	0.000	0.001	0.001	0.005
% R.S.D.	289.379	34.912	152.140	149.881	41.043	63.754	9.259	42.846

	Mn (ppm)	Sb (ppm)	V (ppm)	Be (ppm)	Tl (ppm)
Mean	0.009	-0.023	-0.000	0.003	-0.010
S.D.	0.000	0.018	0.001	0.000	0.028
% R.S.D.	1.792	79.774	704.337	5.311	272.645

Identity 1: ICSAB Identity 2: Quality Control 4:33 PM June 6, 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	-0.026	0.009	201.661	0.509	0.517	0.946
S.D.	0.001	0.000	0.011	0.004	0.259	0.002	0.001	0.004
% R.S.D.	15.852	3.535	43.232	41.735	0.129	0.369	0.233	0.429

	Zn (ppm)	Ni (ppm)	La (ppm)	Fe (ppm)	Ca (ppm)	Cr (ppm)	Nd (ppm)	U (ppm)
Mean	1.017	0.995	0.002	98.288	103.186	0.510	-0.002	-0.087
S.D.	0.003	0.004	0.002	0.152	0.031	0.003	0.002	0.023
% R.S.D.	0.317	0.381	105.996	0.155	0.030	0.528	120.025	27.111

	Ce (ppm)	Sm (ppm)	Ba (ppm)	P (ppm)	S (ppm)	Mg (ppm)	As (ppm)	Na (ppm)
Mean	0.009	-0.016	0.522	0.031	-0.009	99.586	0.037	191.954
S.D.	0.010	0.008	0.000	0.011	0.018	0.497	0.002	0.602
% R.S.D.	106.666	47.703	0.064	35.118	204.341	0.499	5.368	0.314

	Mo (ppm)	Se (ppm)	Ag (ppm)	Pb (ppm)	Ti (ppm)	Cd (ppm)	B (ppm)	K (ppm)
Mean	-0.000	0.004	1.036	1.029	-0.000	1.016	0.013	-0.008
S.D.	0.001	0.014	0.001	0.009	0.000	0.003	0.001	0.022
% R.S.D.	289.579	376.117	0.094	0.887	1431.963	0.336	7.803	281.668

	Mn (ppm)	Sb (ppm)	V (ppm)	Be (ppm)	Tl (ppm)
Mean	0.522	-0.054	0.514	0.510	0.035
S.D.	0.002	0.012	0.000	0.001	0.005
% R.S.D.	0.293	23.161	0.063	0.215	13.787

Identity 1: CCV Identity 2: Quality Control 4:38 PM June 6, 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	5.048	5.062	5.049	4.837	5.004	5.093	5.158	5.022
S.D.	0.004	0.009	0.014	0.004	0.013	0.014	0.018	0.067
% R.S.D.	0.084	0.179	0.280	0.079	0.258	0.266	0.355	1.337

	Zn (ppm)	Ni (ppm)	La (ppm)	Fe (ppm)	Ca (ppm)	Cr (ppm)	Nd (ppm)	U (ppm)
Mean	5.149	5.072	5.150	5.184	5.049	5.077	5.442	10.114
S.D.	0.014	0.013	0.010	0.009	0.006	0.030	0.012	0.042
% R.S.D.	0.276	0.263	0.188	0.170	0.121	0.583	0.216	0.415

	Ce (ppm)	Sm (ppm)	Ba (ppm)	P (ppm)	S (ppm)	Mg (ppm)	As (ppm)	Na (ppm)
Mean	5.124	5.140	5.084	4.803	4.913	4.952	5.120	4.985
S.D.	0.006	0.008	0.013	0.048	0.017	0.018	0.040	0.059
% R.S.D.	0.120	0.160	0.250	1.002	0.354	0.361	0.784	1.180

	Mo (ppm)	Se (ppm)	Ag (ppm)	Pb (ppm)	Ti (ppm)	Cd (ppm)	B (ppm)	K (ppm)
Mean	5.058	5.300	4.984	5.054	4.966	5.089	5.225	5.140
S.D.	0.008	0.050	0.014	0.018	0.002	0.011	0.011	0.036
% R.S.D.	0.161	0.949	0.278	0.350	0.048	0.220	0.206	0.708

	Mn (ppm)	Sb (ppm)	V (ppm)	Be (ppm)	Tl (ppm)
Mean	5.112	4.783	5.150	5.241	4.958
S.D.	0.017	0.070	0.014	0.004	0.026
% R.S.D.	0.329	1.464	0.266	0.068	0.524

Identity 1: CCB Identity 2: Quality Control 4:41 PM June 6, 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	0.002	-0.002	0.004	0.007	0.001	0.001
S.D.	0.002	0.001	0.012	0.006	0.011	0.002	0.001	0.001
% R.S.D.	126.691	70.000	508.063	268.724	250.726	28.818	80.097	69.642

	Zn (ppm)	Ni (ppm)	La (ppm)	Fe (ppm)	Ca (ppm)	Cr (ppm)	Nd (ppm)	U (ppm)
Mean	0.001	-0.001	-0.000	0.002	0.003	-0.000	0.011	-0.089
S.D.	0.001	0.002	0.002	0.002	0.002	0.003	0.008	0.020
% R.S.D.	195.209	331.843	5222.891	140.861	45.826	1021.593	66.919	22.847

	Ce (ppm)	Sm (ppm)	Ba (ppm)	P (ppm)	S (ppm)	Mg (ppm)	As (ppm)	Na (ppm)
Mean	0.017	-0.059	0.001	0.009	0.003	0.003	0.003	0.021
S.D.	0.010	0.006	0.001	0.005	0.003	0.002	0.002	0.003
% R.S.D.	62.361	10.816	66.413	58.430	125.667	52.422	86.700	15.798

	Mo (ppm)	Se (ppm)	Ag (ppm)	Pb (ppm)	Ti (ppm)	Cd (ppm)	B (ppm)	K (ppm)
Mean	0.003	-0.041	0.003	-0.001	0.000	0.001	0.004	0.002
S.D.	0.002	0.007	0.001	0.004	0.001	0.002	0.001	0.024
% R.S.D.	56.590	18.204	41.082	438.430	512.563	103.596	35.115	950.631

	Mn (ppm)	Sb (ppm)	V (ppm)	Be (ppm)	Tl (ppm)
Mean	-0.000	-0.051	0.004	0.001	0.059
S.D.	0.001	0.029	0.001	0.001	0.013
% R.S.D.	270.203	55.798	35.387	93.523	22.322

JK
06-06-96

LABCORE Data Entry Template for Worklist# 9624

Analyst: B. GOECKE **Instrument:** ~~ICP01~~ ICP02 **Book#** 568484

Method: LA-505-~~151~~ 166/161 Rev/Mod B-1

Worklist Comment: ICP U-105 (FUSION)

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				@ICP-F01	SOLID		
7	SERDIL	S96T001507	0	F	@ICP-F01	SOLID		
8	SAMPLE	S96T001507	0	F	@ICP-F01	SOLID	96000143	U-105 (R)
	Analytes Requested:	AL-F-01 , BI-F-01 , FE-F-01 , LI-F-01 , NA-F-01 , P-F-01 , SI-F-01						
9	DUP	S96T001507	0	F	@ICP-F01	SOLID		
10	SPK	S96T001507	0	F	@ICP-F01	SOLID		
11	CCV				@ICP-QC	QC		
12	CCB				@ICP-QC	QC		
13	SERDIL	S96T001508	0	F	@ICP-F01	SOLID		
14	SAMPLE	S96T001508	0	F	@ICP-F01	SOLID	96000143	U-105 (R)
	Analytes Requested:	AL-F-01 , BI-F-01 , FE-F-01 , LI-F-01 , NA-F-01 , P-F-01 , SI-F-01						
15	DUP	S96T001508	0	F	@ICP-F01	SOLID		
16	SPK	S96T001508	0	F	@ICP-F01	SOLID		
17	SERDIL	S96T001509	0	F	@ICP-F01	SOLID		

Data Entry Comments: Example for sample result calculation:

S96T001507 $Al = 28.35 \frac{ug}{ml} \times \frac{1}{2.224 \frac{g}{L} \times \frac{1L}{1000ml}} = 1.27e+4 \frac{ug}{g}$

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

Note: $2.224 \frac{g}{L}$ is sample prep dilution factor which can be found in sample prep worklist.

LABCORE Data Entry Template for Worklist# 9624

S	Type	Sample#	R	A	Test	Matrix	Group#	Project
18	SAMPLE	S96T001509	0	F	@ICP-F01	SOLID	96000143	U-105 (R)
		Analytes Requested: AL-F-01 , BI-F-01 , FE-F-01 , LI-F-01 , NA-F-01 , P-F-01 , SI-F-01						
19	DUP	S96T001509	0	F	@ICP-F01	SOLID		
20	SPK	S96T001509	0	F	@ICP-F01	SOLID		
21	CCV				@ICP-QC	QC		
22	CCB				@ICP-QC	QC		
23	SERDIL	S96T001510	0	F	@ICP-F01	SOLID		
24	SAMPLE	S96T001510	0	F	@ICP-F01	SOLID	96000143	U-105 (R)
		Analytes Requested: AL-F-01 , BI-F-01 , FE-F-01 , LI-F-01 , NA-F-01 , P-F-01 , SI-F-01						
25	DUP	S96T001510	0	F	@ICP-F01	SOLID		
26	SPK	S96T001510	0	F	@ICP-F01	SOLID		
27	ICSA				@ICP-QC	QC		
28	ICSAB				@ICP-QC	QC		
29	CCV				@ICP-QC	QC		
30	CCB				@ICP-QC	QC		

Final page for worklist # 9624

Analyst Signature	Date	D.F.
[signature]	6-6-96	
PREPARATION	250mL - 100mL	1
S96T001507-L	250mL-100mL-2mL-8-L	205
1507	250mL-100mL	41
1507-D	250mL-100mL	41
1507-A	250mL-100mL	41
S96T001508-L	250mL-2mL-8-L	41
1508		205
1508-D		41
1508-A		41

Data Entry Comments:

Reviewed by:

Analyst Signature	Date	D.F.
[signature]	6/7/96	
S96T001508-L		205
1508		41
1508-D		41
1508-A		41
S96T001510-L		205
1510		41
1510-D		41
1510-A		41

Example for spike recovery calculation:

S96T001507 $Al = \left(\frac{67.39}{41}\right) - \left(\frac{28.35}{41}\right) \times 100 = 95.3\%$

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 Thu 06-06-96 09:50:47 PM page 1

#	Sample Name	File	Method	Date	Time	OpID	Type	Mode
1	ICV	960606D	ICP2	06/06/96	20:11	BJG	Q	CONC
2	ICB	960606D	ICP2	06/06/96	20:14	BJG	Q	CONC
3	LLS	960606D	ICP2	06/06/96	20:17	BJG	Q	CONC
4	ICSA	960606D	ICP2	06/06/96	20:20	BJG	Q	CONC
5	ICSAB	960606D	ICP2	06/06/96	20:23	BJG	Q	CONC
6	PREPBLKTJA	960606D	ICP2	06/06/96	20:26	BJG	S	CONC
7	S96T001507_L	960606D	ICP2	06/06/96	20:30	BJG	S	CONC
8	S96T001507	960606D	ICP2	06/06/96	20:33	BJG	S	CONC
9	S96T001507_D	960606D	ICP2	06/06/96	20:35	BJG	S	CONC
10	S96T001507_A	960606D	ICP2	06/06/96	20:39	BJG	S	CONC
11	CCV	960606D	ICP2	06/06/96	20:42	BJG	Q	CONC
12	CCB	960606D	ICP2	06/06/96	20:45	BJG	Q	CONC
13	S96T001508_L	960606D	ICP2	06/06/96	20:52	BJG	S	CONC
14	S96T001508	960606D	ICP2	06/06/96	20:55	BJG	S	CONC
15	S96T001508_D	960606D	ICP2	06/06/96	20:58	BJG	S	CONC
16	S96T001508_A	960606D	ICP2	06/06/96	21:02	BJG	S	CONC
17	S96T001509_L	960606D	ICP2	06/06/96	21:07	BJG	S	CONC
18	S96T001509	960606D	ICP2	06/06/96	21:10	BJG	S	CONC
19	S96T001509_D	960606D	ICP2	06/06/96	21:13	BJG	S	CONC
20	S96T001509_A	960606D	ICP2	06/06/96	21:17	BJG	S	CONC
21	CCV	960606D	ICP2	06/06/96	21:20	BJG	Q	CONC
22	CCB	960606D	ICP2	06/06/96	21:23	BJG	Q	CONC
23	S96T001510_L	960606D	ICP2	06/06/96	21:26	BJG	S	CONC
24	S96T001510	960606D	ICP2	06/06/96	21:29	BJG	S	CONC
25	S96T001510_D	960606D	ICP2	06/06/96	21:32	BJG	S	CONC
26	S96T001510_A	960606D	ICP2	06/06/96	21:35	BJG	S	CONC
27	ICSA	960606D	ICP2	06/06/96	21:38	BJG	Q	CONC
28	ICSAB	960606D	ICP2	06/06/96	21:41	BJG	Q	CONC
29	CCV	960606D	ICP2	06/06/96	21:44	BJG	Q	CONC
30	CCB	960606D	ICP2	06/06/96	21:47	BJG	Q	CONC

6-6-96
U-105 Fusion Digest
S96T001507-10
1250-L-10-L
File # 0960606D.TXT

SIGNATURE ABOVE REPRESENTS CHEMICAL TECHNOLOGIST/CHEMIST THAT COMPLETED/VERIFIED THE CALIBRATION/ANALYSIS ON PAGES 1294 TO 1299.

Analysis Report Averages Thu 06-06-96 09:50:47 PM page 2

#	Sample Name	Ag	Al	As	B	Ba	Be
1	ICV	4.988	4.868	5.176	4.973	4.940	5.131
2	ICB	.0011	.0026	.0087	.0004	.0001	.0000
3	LLS	.0202	.1060	.2304	.0968	.0989	.0105
4	ICSA	.0022	240.2	-.0792	-.0059	.0029	.0002
5	ICSAB	.9860	239.9	-.0668	-.0043	.4841	.4861
6	PREPBLKTJA	.0003	.0071	.0089	-.0031	.0001	-.0001
7	S96T001507_L	-.1053	27.97	2.556	-.4475	-.0003	-.0308
8	S96T001507	.0364	28.35	-.1617	-.2319	.0222	-.0029
9	S96T001507_D	.0327	30.27	-.2068	.0737	.0208	.0001
10	S96T001507_A	37.46	67.39	42.18	38.83	39.01	40.33
11	CCV	4.993	4.863	5.165	4.926	4.934	5.123
12	CCB	.0025	.0085	.0032	.0013	.0002	.0003
13	S96T001508_L	.2916	20.29	3.271	-1.075	.0166	.0153
14	S96T001508	.0268	18.75	.6103	-.1585	.0245	-.0061
15	S96T001508_D	.0600	18.48	.3414	-.3379	.0225	-.0030
16	S96T001508_A	37.07	57.32	41.90	38.67	38.97	40.30
17	S96T001509_L	.0600	12.81	1.905	-1.524	-.0013	-.0151
18	S96T001509	.0733	12.96	.6565	-.0509	.0294	.0001
19	S96T001509_D	.0730	11.89	1.035	-.3566	.0257	.0016
20	S96T001509_A	36.71	52.09	42.13	38.72	39.01	40.42
21	CCV	4.997	4.883	5.138	4.936	4.926	5.123
22	CCB	.0015	-.0008	.0055	-.0039	.0000	.0000
23	S96T001510_L	-.0675	38.19	.6843	-.5208	.1188	-.0164
24	S96T001510	.0675	38.50	.5421	-.0540	.1282	-.0041
25	S96T001510_D	.1063	72.13	.7108	-.1720	.1668	-.0060
26	S96T001510_A	35.95	76.18	41.73	38.92	38.58	40.14
27	ICSA	.0036	239.6	-.0658	.0018	.0030	.0002
28	ICSAB	.9842	239.5	-.0967	-.0049	.4796	.4828
29	CCV	5.021	4.904	5.160	4.973	4.950	5.160
30	CCB	.0007	.0001	.0140	.0031	.0001	.0002

#	Sample Name	Bi	Ca	Cd	Ce	Co	Cr
1	ICV	5.063	5.124	5.053	5.105	5.058	5.107
2	ICB	.0096	.0010	-.0007	.0043	.0004	-.0004
3	LLS	.1848	.2249	.0100	.2124	.0413	.0206
4	ICSA	-.0243	254.6	.0003	.0220	.0020	.0009
5	ICSAB	.0178	254.2	.9714	.0134	.4764	.4875
6	PREPBLKTJA	-.0266	.0009	.0006	.0132	.0010	.0001
7	S96T001507_L	-1.002	-.4889	-.0671	.9522	.0679	5.318
8	S96T001507	.4102	.1074	-.0092	.1585	-.0040	5.383
9	S96T001507_D	-.3647	.0185	.0151	.4139	-.0373	5.654
10	S96T001507_A	40.47	42.14	40.67	41.82	40.45	46.31
11	CCV	5.022	5.189	5.069	5.104	5.072	5.132
12	CCB	.0074	.0011	.0002	.0098	.0006	-.0010
13	S96T001508_L	.5099	-.8099	.0817	1.108	-.0060	5.370
14	S96T001508	-.1807	.6676	.0546	.3201	.0061	5.266
15	S96T001508_D	-.2871	.3358	.0263	.0974	-.0649	5.229
16	S96T001508_A	39.25	41.93	40.60	41.01	40.63	46.01
17	S96T001509_L	-3.327	1.342	-.0913	-.7997	-.2457	3.638
18	S96T001509	.0341	.2125	-.0089	.2382	-.0134	3.730
19	S96T001509_D	.0560	.0431	.0349	.4451	.0578	3.159

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#	Sample Name	Bi	Ca	Cd	Ce	Co	Cr
20	S96T001509_A	41.47	42.01	40.73	41.60	40.75	44.90
21	CCV	5.088	5.133	5.041	5.098	5.055	5.105
22	CCB	-.0131	-.0050	.0002	.0039	-.0023	-.0005
23	S96T001510_L	4.221	-.6433	.0132	.6480	-.1732	27.15
24	S96T001510	.4351	.9944	.0235	.2701	.0730	27.02
25	S96T001510_D	.8678	.9704	.1269	.6403	.0006	36.15
26	S96T001510_A	40.16	42.22	40.54	41.40	40.55	67.36
27	ICSA	-.0114	253.5	-.0003	.0157	-.0009	.0000
28	ICSAB	-.0257	253.9	.9644	.0188	.4786	.4843
29	CCV	5.061	5.199	5.073	5.144	5.086	5.143
30	CCB	-.0094	-.0016	-.0001	.0074	.0000	-.0001

#	Sample Name	Cu	Eu	Fe	K	La	Li
1	ICV	5.112	-.0026	5.066	4.899	4.996	4.964
2	ICB	-.0007	.0005	.0009	.0684	.0009	.0005
3	LLS	.0200	.0007	.1029	Q.1700	.1019	.0213
4	ICSA	-.0117	-.0549	93.95	.2150	-.0046	.0043
5	ICSAB	.4877	-.0521	93.58	.0349	-.0049	.9794
6	PREPBLKTJA	.0000	.0009	.0006	294.4	.0004	.0008
7	S96T001507_L	-.0926	.0418	4.533	11680.	.0842	.0948
8	S96T001507	.0360	.0057	4.868	11630.	.0180	.0332
9	S96T001507_D	-.0292	.0281	5.077	12370.	.0634	.0521
10	S96T001507_A	40.66	-.0094	45.15	11550.	40.22	38.90
11	CCV	5.102	-.0025	5.070	4.846	5.007	4.939
12	CCB	.0002	.0008	.0012	-.0320	.0007	.0015
13	S96T001508_L	-.1830	-.0663	8.229	12230.	.1281	.0002
14	S96T001508	-.0021	.0324	7.930	11850.	.0596	.0663
15	S96T001508_D	-.0207	.0333	8.268	12370.	.0901	.0568
16	S96T001508_A	40.75	-.0104	48.28	11670.	40.09	39.06
17	S96T001509_L	-.0464	-.0767	8.350	12260.	.0068	.0713
18	S96T001509	.0082	.0015	8.363	12080.	.0750	.0332
19	S96T001509_D	.0262	.0201	7.201	11680.	.0903	.0426
20	S96T001509_A	40.83	-.0008	49.22	12240.	40.29	39.02
21	CCV	5.120	-.0027	5.062	4.950	5.004	4.989
22	CCB	-.0005	.0003	-.0019	.0014	-.0006	.0007
23	S96T001510_L	-.0675	-.0438	38.61	11310.	.0339	.0701
24	S96T001510	.0227	-.0029	38.71	11110.	.1279	.0274
25	S96T001510_D	.0335	.0197	55.74	11940.	.2158	.0460
26	S96T001510_A	40.17	-.0023	78.07	10880.	39.88	38.77
27	ICSA	-.0110	-.0545	93.44	.2690	-.0044	.0044
28	ICSAB	.4855	-.0518	93.23	.2020	-.0052	.9773
29	CCV	5.143	-.0019	5.078	4.909	5.031	5.006
30	CCB	-.0009	.0009	-.0013	.0335	.0007	.0010

#	Sample Name	Mg	Mn	Mo	Na	Nd	Ni
1	ICV	4.847	4.960	5.046	4.954	5.059	5.011
2	ICB	-.0014	.0000	-.0001	.0004	-.0010	-.0010
3	LLS	.1950	.0197	.0977	.2151	.1970	.0349
4	ICSA	240.9	-.0066	-.0139	196.8	.0051	-.0067
5	ICSAB	240.2	.4574	-.0133	197.6	.0005	.9327

Analysis Report Averages Thu 06-06-96 09:50:47 PM page 4

#	Sample Name	Mg	Mn	Mo	Na	Nd	Ni
6	PREPBLKTJA	.0026	.0013	-.0015	.1041	.0022	.2072
7	S96T001507_L	-.9944	1.511	-.1338	498.3	.2331	9.352
8	S96T001507_	-.0817	1.540	.0186	492.2	.1534	9.266
9	S96T001507_D	.0111	1.625	.0258	510.3	.1444	9.847
10	S96T001507_A	38.63	40.35	40.66	525.7	40.64	49.71
11	CCV	4.849	4.962	5.048	4.932	5.052	5.024
12	CCB	-.0006	.0005	-.0009	.0104	.0023	.0040
13	S96T001508_L	.0442	2.540	-.4344	537.1	.5170	10.17
14	S96T001508_	.0384	2.546	-.0663	519.1	.1815	10.11
15	S96T001508_D	-.2631	2.552	-.0467	514.0	.2120	7.046
16	S96T001508_A	38.54	41.26	40.58	551.2	40.58	49.99
17	S96T001509_L	-.2864	2.580	-.2685	474.8	.1989	9.101
18	S96T001509_	-.0560	2.607	-.0671	467.4	.1254	9.166
19	S96T001509_D	.2393	2.312	-.0537	460.6	.1920	11.68
20	S96T001509_A	38.77	41.69	40.72	508.9	40.70	49.35
21	CCV	4.862	4.948	5.036	4.962	5.052	4.994
22	CCB	-.0069	.0000	.0011	.0000	.0002	.0045
23	S96T001510_L	2.354	26.36	-.2890	407.4	.3340	19.16
24	S96T001510_	2.921	26.25	.0239	399.0	.4256	18.49
25	S96T001510_D	3.500	33.23	-.0256	513.6	.5240	10.40
26	S96T001510_A	41.33	64.71	40.32	426.6	40.31	58.54
27	ICSA	240.5	-.0064	-.0130	196.1	.0045	-.0067
28	ICSAB	239.9	.4564	-.0133	197.0	.0012	.9306
29	CCV	4.873	4.978	5.063	4.964	5.076	5.042
30	CCB	.0008	.0003	.0002	.0048	-.0011	-.0049

#	Sample Name	P	Pb	S	Sb	Se	Si
1	ICV	5.214	5.020	4.996	4.804	4.856	4.718
2	ICB	.0043	-.0171	-.0046	.0071	-.0025	.0086
3	LLS	.4155	.2033	.2086	.0999	.1959	.1551
4	ICSA	.0043	.0262	.0101	.0052	-.0679	.0154
5	ICSAB	.0219	1.017	.0069	-.0102	-.0640	.0180
6	PREPBLKTJA	-.0057	-.0230	.0011	.0078	-.0018	.0099
7	S96T001507_L	3.410	-4.489	6.467	-1.128	-3.090	1.984
8	S96T001507_	4.385	-.5728	5.730	.1269	-.1987	1.141
9	S96T001507_D	4.921	-.2640	6.309	.1170	.3574	1.032
10	S96T001507_A	45.40	40.55	46.05	38.98	39.48	39.74
11	CCV	5.011	5.058	4.922	4.793	4.903	4.705
12	CCB	-.0031	-.0333	-.0043	.0072	.0176	.0085
13	S96T001508_L	12.24	-3.126	2.937	.2778	1.664	1.308
14	S96T001508_	12.94	-.4333	4.567	-.0675	-.2072	1.201
15	S96T001508_D	12.05	-.2928	4.725	-.0143	-.0586	1.041
16	S96T001508_A	51.69	40.44	43.96	38.56	38.78	39.66
17	S96T001509_L	23.03	-4.650	.8311	-.2765	-1.725	.8772
18	S96T001509_	19.74	-.1117	1.528	.2550	-.0952	.8955
19	S96T001509_D	16.87	.4753	1.505	.2169	-.1497	1.036
20	S96T001509_A	60.13	40.62	41.92	39.19	39.24	39.71
21	CCV	5.045	5.021	4.967	4.793	4.879	4.697
22	CCB	-.0014	-.0164	.0014	.0006	.0014	.0075
23	S96T001510_L	52.68	-3.038	.4502	-.3762	-2.018	4.060
24	S96T001510_	53.32	.7495	1.200	.0173	-.5002	3.627
25	S96T001510_D	66.31	2.126	1.710	.0794	-.1272	5.130

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#	Sample Name	P	Pb	S	Sb	Se	Si
26	S96T001510_A	92.47	41.90	41.05	38.80	38.78	42.07
27	ICSA	.0252	.0176	.0341	.0049	-.0871	.0139
28	ICSAB	.0077	1.024	.0216	.0035	-.0781	.0170
29	CCV	5.078	5.045	4.976	4.800	4.898	4.731
30	CCB	-.0024	-.0186	.0023	.0074	-.0097	.0112

#	Sample Name	Sm	Sr	Th	Ti	Tl	U
1	ICV	4.885	4.916	.0218	4.836	4.861	9.603
2	ICB	.0057	.0001	.0020	.0000	.0214	.0130
3	LLS	.2149	.0203	-.0004	.0202	.4380	.5379
4	ICSA	.0043	-.0022	.0180	.0013	-.0293	.0048
5	ICSAB	.0009	-.0023	.0142	.0013	.0117	-.0024
6	PREPBLKTJA	.0075	.0003	.0055	-.0002	.0079	-.0431
7	S96T001507_L	-.1941	.0108	.0165	.0003	1.303	-1.108
8	S96T001507	.1785	.0130	.3069	.0221	.0710	-1.669
9	S96T001507_D	.4633	.0151	.3337	-.0173	.4245	-.6228
10	S96T001507_A	39.13	39.25	.5800	38.89	38.33	75.45
11	CCV	4.896	4.922	.0236	4.864	4.842	9.616
12	CCB	.0095	.0005	-.0004	.0002	.0108	.0505
13	S96T001508_L	-1.097	-.0104	.0253	.0497	-1.632	-3.781
14	S96T001508	.5144	.0171	.2380	.0014	.8666	.7391
15	S96T001508_D	.4085	.0171	.3516	-.0080	-.0118	.3949
16	S96T001508_A	39.17	39.18	.6594	38.85	38.31	75.61
17	S96T001509_L	-.8908	-.0318	1.120	-.1419	4.476	-5.033
18	S96T001509	.1407	.0108	.3163	.0019	-.0120	-.8180
19	S96T001509_D	.1192	.0107	.4229	.0020	.2197	-.2431
20	S96T001509_A	39.24	39.25	.6555	39.07	38.64	76.79
21	CCV	4.896	4.921	.0206	4.857	4.838	9.610
22	CCB	.0017	.0001	.0023	.0002	.0109	.0138
23	S96T001510_L	-.0008	.0307	.2574	.0908	-3.085	17.27
24	S96T001510	.2666	.0433	.3645	.0706	.9262	19.72
25	S96T001510_D	.4508	.0556	.4906	.1076	.9963	26.01
26	S96T001510_A	38.67	38.77	.7610	38.62	38.34	95.64
27	ICSA	.0048	-.0021	.0181	.0013	-.0138	-.0089
28	ICSAB	.0050	-.0023	.0184	.0015	.0286	-.0193
29	CCV	4.918	4.945	.0171	4.884	4.857	9.664
30	CCB	.0109	.0003	-.0010	-.0002	-.0016	.0368

#	Sample Name	V	Y	Zn	Zr
1	ICV	5.008	.0065	5.085	4.911
2	ICB	.0011	.0002	-.0008	.0002
3	LLS	.1047	.0008	.0233	.0221
4	ICSA	.0008	.0074	-.0034	-.0034
5	ICSAB	.4764	.0072	.9823	-.0038
6	PREPBLKTJA	.0021	.0004	.0011	.0007
7	S96T001507_L	.0012	.0648	.5562	.0717
8	S96T001507	.0384	.0361	.1084	.0789
9	S96T001507_D	.0884	.0420	.1052	.1042
10	S96T001507_A	40.19	.0869	40.94	39.35
11	CCV	5.021	.0066	5.092	4.926

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#	Sample Name	V	Y	Zn	Zr
12	CCB	.0024	.0007	.0003	.0017
13	S96T001508_L	-.1061	.0177	.8914	.0748
14	S96T001508	.1005	.0447	.1341	.2686
15	S96T001508_D	.0859	.0448	.1103	.3325
16	S96T001508_A	40.16	.0900	41.08	39.47
17	S96T001509_L	-.2922	-.0139	.8679	-.0791
18	S96T001509	.0213	.0261	.1559	.2793
19	S96T001509_D	.0722	.0290	.1139	.2271
20	S96T001509_A	40.30	.0895	41.13	39.72
21	CCV	5.010	.0063	5.082	4.915
22	CCB	.0005	.0001	.0008	-.0002
23	S96T001510_L	-.0395	.0409	.3445	.1756
24	S96T001510	.0965	.0623	.2378	.3660
25	S96T001510_D	.1184	.0886	.3598	.5792
26	S96T001510_A	40.01	.1233	41.06	39.28
27	ICSA	.0004	.0072	-.0045	-.0040
28	ICSAB	.4752	.0074	.9830	-.0041
29	CCV	5.046	.0066	5.111	4.941
30	CCB	.0017	.0005	.0012	.0011

LABCORE Data Entry Template for Worklist# 6607

Analyst: JLS2 **Instrument:** CARB2 _____ **Book#** 22N12A TIC 24N12A TOC

Method: LA-342-100 Rev/Mod D-0

Worklist Comment: U-105 FOR TICTOC1 jls2

S	Type	Sample#	R	A	Test	Matrix	Group#	Project
1	BLNK				@TICTOC1	SOLID		
2	STD				@TICTOC1	SOLID		
3	SAMPLE	S96T000932	0		@TICTOC1	SOLID	96000092	U-105 (R)
	Analytes Requested:	TIC-02 , TOC-02						
4	DUP	S96T000932	0		@TICTOC1	SOLID		
5	SPK	S96T000932	0		@TICTOC1	SOLID		
6	SAMPLE	S96T000939	0		@TICTOC1	SOLID	96000092	U-105 (R)
	Analytes Requested:	TIC-02 , TOC-02						
7	DUP	S96T000939	0		@TICTOC1	SOLID		
8	SAMPLE	S96T001289	0		@TICTOC1	SOLID	96000143	U-105 (R)
	Analytes Requested:	TIC-02 , TOC-02						
9	DUP	S96T001289	0		@TICTOC1	SOLID		

Final page for worklist # 6607

Jackie Steele 5/24/96

Analyst Signature **Date** **Analyst Signature** **Date**

Data Entry Comments:
new DVD not made.

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

LABCORE Completed Worklist Report for Worklist# 6607

Analyst: jls2 **Instrument:** CARB2 **Book#** _____

Method: _____ Rev/Mod _____

Worklist Comment: U-105 FOR TICTOC1 jls2

Seq	Type	Sample#	R	A	Test	Matrix	Actual	Found	DL or Yield	Unit
1	BLNK			0	@TICTOC1 TIC-02	SOLID	1	1.20E+0	1.200	ug/g
1	BLNK			0	@TICTOC1 TOC-02	SOLID	1	7.80E+0	7.800	ug/g
2	STD			0	@TICTOC1 TIC-02	SOLID	6.02E+02	5.81E+2	96.512	% Recovery
2	STD			0	@TICTOC1 TOC-02	SOLID	3.00E+03	2.86E+3	95.333	% Recovery
3	SAMPLE	S96T000932		0	@TICTOC1 TIC-02	SOLID	N/A	1.89E+04	5.000	ug/g
3	SAMPLE	S96T000932		0	@TICTOC1 TOC-02	SOLID	N/A	1.12E+04	40.000	ug/g
4	DUP	S96T000932		0	@TICTOC1 TIC-02	SOLID	1.89E+4	1.92E+4	1.575	RPD
4	DUP	S96T000932		0	@TICTOC1 TOC-02	SOLID	1.12E+4	1.13E+4	0.889	RPD
5	SPK	S96T000932		0	@TICTOC1 TIC-02	SOLID	1.00E+02	1.01E+02	~~101.000~~	~~% Recovery~~ 87.95 RWS 5/29/
5	SPK	S96T000932		0	@TICTOC1 TOC-02	SOLID	1.00E+02	1.04E+02	~~104.000~~	~~% Recovery~~ 95.96 RWS 5/29
6	SAMPLE	S96T000939		0	@TICTOC1 TIC-02	SOLID	N/A	9.67E+03	5.000	ug/g
6	SAMPLE	S96T000939		0	@TICTOC1 TOC-02	SOLID	N/A	9.12E+03	40.000	ug/g
7	DUP	S96T000939		0	@TICTOC1 TIC-02	SOLID	9.67E+3	9.14E+3	5.635	RPD
7	DUP	S96T000939		0	@TICTOC1 TOC-02	SOLID	9.12E+3	8.54E+3	6.569	RPD
8	SAMPLE	S96T001289		0	@TICTOC1 TIC-02	SOLID	N/A	8.34E+03	5.000	ug/g
8	SAMPLE	S96T001289		0	@TICTOC1 TOC-02	SOLID	N/A	1.29E+04	40.000	ug/g
9	DUP	S96T001289		0	@TICTOC1 TIC-02	SOLID	8.34E+3	8.74E+3	4.684	RPD
9	DUP	S96T001289		0	@TICTOC1 TOC-02	SOLID	1.29E+4	1.29E+4	0.000	RPD

Final page for worklist# 6607

R L Stuck 5-28-96
Analyst Signature **Date**

_____
Analyst Signature **Date**

Robert W Schroeder 5/30/96
Reviewer Signature **Date**

Units shown for QC (BLK/BKG) may not reflect the actual units.

WORKBOOK PAGE: BLANK1

TIC/TOC : LA-342-100 (C-0) SOLIDS

			TIC	TOC
Sample Type	Sample Size in g	(SS)	0.0000	0.0000
BLNK	Dilution Factor	(DF)	1	1
Work List	µg of Carbon in Sample	(C1)	6.8	19.4
6607	µg of Carbon from Baseline	(C2)	8	27.2

Test Code
@TICTOC1

Matrix
SOLID

Batch Number
96005274

Ratio
0

µg of Carbon = |C1-C2|

Sample Prep
N/A

Sample
BLANK

Instrument Code
CARB2

Prepared By
RTS

Chemist
RWS

Analyst
JLS2

Date Complete
05/28/96

Analysis Date
05/24/96

Analysis Time

Sample Point
U-105

	TIC	TOC
Method Detection Limit in ug/g	5	40
µg of Carbon	1.20E+00	7.80E+00

Data Entered By:	RTS	Date:	05/28/96
Signature of Chemist:		Date:	

BLANK.WB1 REV 1.0 342100ML

WORKBOOK PAGE: STD2

TIC/TOC : LA-342-100 (C-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)	588.5	599
6607	µg of Carbon from Baseline	(C2)	8	27.2
Test Code	Standard Book Number		22N12A	24N12A
@TICTOC1	Standard Value (µg/ml)		602	3000.6

Matrix: LIQUID

Batch Number: 96005274

Run: 0

Sample Prep: N/A

Sample Type: STANDARD

Instrument Code: CARB2

Prepared By: RTS

Chemist: RWS

Analyst: JLS2

Date Complete: 05/28/96

Analysis Date: 05/24/96

Analysis Time:

Sample Time: U-105

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	5.81E+02	2.86E+03
Percent Standard Recovery	96.4	95.3

Data Entered By:	RTS	Date:	05/28/96
Signature of Chemist:		Date:	

STANDARD.WB1 REV 1.0 342100ML

WORKBOOK PAGE: SAM3

TIC/TOC : LA-342-100 (C-0) SOLIDS

			TIC	TOC
Type	Sample Size in g	(SS)	0.1330	0.1330
SAMPLE	Dilution Factor	(DF)	1	1
Work List	µg of Carbon in Sample	(C1)	2527.3	1522.6
6607	µg of Carbon from Baseline	(C2)	8	27.2
Test Code				
@TICTOC1				

Matrix: SOLID

Batch Number: 96005274

Rerun: 0

Sample Prep: N/A

Sample #: S96T000932

Instrument Code: CARB2

Prepared By: RTS

Chemist: RWS

Analyst: JLS2

Date Complete: 05/28/96

Analysis Date: 05/24/96

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
Analysis Time	Method Detection Limit in ug/g	5	40
Sample Point	µg of Carbon/g	1.89E+04	1.12E+04
U-105			

Data Entered By:	RTS	Date:	05/28/96
Signature of Chemist:		Date:	

SAMPLE.WB1 REV 1.0 342100ML

WORKBOOK PAGE: DUP4

TIC/TOC : LA-342-100 (C-0) SOLIDS

			TIC	TOC
Type	Sample Size in g	(SS)	0.1028	0.1028
DUP	Dilution Factor	(DF)	1	1
Work List	µg of Carbon in Sample	(C1)	1981.8	1186.5
6607	µg of Carbon from Baseline	(C2)	8	27.2
Test Code	Known µg of C from Original Sample		1.89E+4	1.12E4
@TICTOC1				

Matrix	SOLID
Batch Number	96005274
Rerun	0
Sample Prep	N/A
Sample	S96T000932
Instrument Code	CARB2
Prepared By	RTS
Chemist	RWS
Analyst	JLS2
Date Complete	05/28/96
Analysis Date	05/24/96
Analysis Time	
Sample Point	U-105

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

RPD (of Sample and Dup Results) = | Difference | / Average

	TIC	TOC
Method Detection Limit in ug/g	5	40
µg of Carbon/g	1.92E+04	1.13E+04
RPD (of Sam and Dup Results)	1.6%	0.7%

Data Entered By:	RTS	Date:	05/28/96
Signature of Chemist:		Date:	

SAMPLE.WB1 REV 1.0 342100ML

WORKBOOK PAGE: SPIKE5

TIC/TOC : LA-342-100 (C-0) SOLIDS

Type	Sample Vial Data		TIC	TOC
SPK	Sample Size in g	(SS)	0.1330	0.1330
Work List	Final Coulometer Reading in µg	(C1)	2527.3	1610.5
6607	Spiked Vial Data			
Test Code	Sample Size in g	(SPK SS)	0.1204 ~~0.1028~~	0.1204 0.1028
@TICTOC1	Amount of Spike Std. in mL	(SPK VOL)	0.500	0.100
Matrix	Final Coulometer Reading in µg	(C3)	2276.1	1610.5
SOLID	Spike Book Number		22N12A	24N12A
Batch Number	Spike Standard Value in µg/ml		602	3000.6
96005274	Spike Concentration in µg	(SPK CONC)	301	300.06

Rerun	
0	
Sample Prep	Spike Concentration in µg = (Spike Std. Value in µg/mL)*(SPK VOL)
N/A	
Sample #	Percent Spike Recovery = (C3) / [(C1/SS * SPK SS) + (SPK CONC)] * 100
S96T000932	
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	
RTS	
Chemist	
RWS	
Analyst	
JLS2	
Date Complete	
05/28/96	
Analysis Date	
05/24/96	
Analysis Time	
Sample Point	
U-105	

	TIC	TOC
QC Actual in µg/mL	6.02E+02	3.00E+03
QC Found in µg/mL	~~6.08E+02~~	~~3.13E+03~~
Percent Spike Recovery	~~101.0~~	~~104.2~~
	87.95	95.96

RWS 5/29/96

WORKBOOK PAGE: SAM6

TIC/TOC : LA-342-100 (C-0) SOLIDS

			TIC	TOC
Type	Sample Size in g	(SS)	0.1127	0.1127
SAMPLE	Dilution Factor	(DF)	1	1
Work List	µg of Carbon in Sample	(C1)	1097.8	1055.3
6607	µg of Carbon from Baseline	(C2)	8	27.2
Test Code				
@TICTOC1				

Matrix	SOLID
Batch Number	96005274
Rerun	0
Sample Prep	N/A
Test Sample #	S96T000939
Instrument Code	CARB2
Prepared By	RTS
Chemist	RWS
Analyst	JLS2
Date Complete	05/28/96
Analysis Date	05/24/96
Analysis Time	
Sample Point	U-105

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	9.67E+03	9.12E+03

Data Entered By:	RTS	Date:	05/28/96
Signature of Chemist:		Date:	

SAMPLE.WB1 REV 1.0 342100ML

WORKBOOK PAGE: DUP7

TIC/TOC : LA-342-100 (C-0) SOLIDS

			TIC	TOC
Type	Sample Size in g	(SS)	0.0715	0.0715
DUP	Dilution Factor	(DF)	1	1
Work List	µg of Carbon in Sample	(C1)	661.7	637.6
6607	µg of Carbon from Baseline	(C2)	8	27.2
Testcode	Known µg of C from Original Sample		9.67E3	9.12E3
@TICTOC1				

Matrix
SOLID

Batch Number
96005274

Rerun
0

Sample Prep
N/A

Sample #
S96T000939

Instrument Code
CARB2

Prepared By
RTS

Chemist
RWS

Analyst
JLS2

Date Complete
05/28/96

Analysis Date
05/24/96

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

RPD (of Sample and Dup Results) = | Difference | / Average

		TIC	TOC
Analysis Time	Method Detection Limit in ug/g	5	40
Sample Point	µg of Carbon/g	9.14E+03	8.54E+03
U-105	RPD (of Sam and Dup Results)	5.6%	6.6%

Data Entered By:	RTS	Date:	05/28/96
Signature of Chemist:		Date:	

SAMPLE.WB1 REV 1.0 342100ML

WORKBOOK PAGE: SAM8

TIC/TOC : LA-342-100 (C-0) SOLIDS

			TIC	TOC
Type	Sample Size in g	(SS)	0.0745	0.0745
SAMPLE	Dilution Factor	(DF)	1	1
Work List	µg of Carbon in Sample	(C1)	629.7	988.5
6607	µg of Carbon from Baseline	(C2)	8	27.2
Test Code				
@TICTOC1				

Matrix	SOLID
Batch Number	96004776
Rerun	0
SamplePrep	N/A
Sample #	S96T001289
Instrument Code	CARB2
Prepared By	RTS
Chemist	RWS
Analyst	JLS2
Date Complete	05/28/96
Analysis Date	05/24/96
Analysis Time	
Sample Point	U-105

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
ug of Carbon/g	8.34E+03	1.29E+04

Data Entered By:	RTS	Date:	05/28/96
Signature of Chemist:		Date:	

SAMPLE.WB1 REV 1.0 342100ML

WORKBOOK PAGE: DUP9

TIC/TOC : LA-342-100 (C-0) SOLIDS

			TIC	TOC
Type	Sample Size in g	(SS)	0.1015	0.1015
DUP	Dilution Factor	(DF)	1	1
Work List	µg of Carbon in Sample	(C1)	894.9	1338.1
6607	µg of Carbon from Baseline	(C2)	8	27.2
Test Code	Known µg of C from Original Sample		8.34E+3	1.29E+4
@TICTOC1				

Matrix: SOLID

Batch Number: 96004776

Rerun: 0

Sample Prep: N/A

Sample #: S96T001289

Instrument Code: CARB2

Prepared By: RTS

Chemist: RWS

Analyst: JLS2

Date Complete: 05/28/96

Analysis Date: 05/24/96

Analysis Time:

Sample Point: U-105

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

RPD (of Sample and Dup Results) = | Difference | / Average

	TIC	TOC
Method Detection Limit in ug/g	5	40
µg of Carbon/g	8.74E+03	1.29E+04
RPD (of Sam and Dup Results)	4.7%	0.1%

Data Entered By:	RTS	Date:	05/28/96
Signature of Chemist:		Date:	

SAMPLE.WB1 REV 1.0 342100ML

TIC- TOTAL INORGANIC CARBON ANALYSIS REPORT
TICTOC REV 2.0
<<< BLANK ANALYSIS >>>

Sample: BASELINE Date: 05/24/96 Time: 09:07:59

Sample Size = 1 uL
Dil Factor = 1
Blank ID # = 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	0.70	42.86
3	1.50	1.10	36.36
4	2.00	1.50	26.67
5	2.50	1.90	21.05
6	3.00	2.30	17.39
7	3.50	2.70	14.81
8	4.00	3.10	12.90
9	4.50	3.50	11.43
10	5.00	3.80	7.89
11	5.50	4.30	11.63
12	6.00	4.60	6.52
13	6.50	5.00	8.00
14	7.00	5.30	5.66
15	7.50	5.60	5.36
16	8.00	6.00	6.67
17	8.50	6.30	4.76
18	9.00	6.70	5.97
19	9.50	7.10	5.63
20	10.00	7.40	4.05
21	10.50	7.70	3.90
22	11.00	8.00	3.75

BLANK VALUE = 8 micrograms carbon
BLANK FACTOR = 8 / 10.99786 = +7.3E-01 ug/min Carbon

Sample Run By: Jackie Steele 5/24/96
JL STEELE 00000

TOC- TOTAL ORGANIC CARBON ANALYSIS REPORT
TICTOC REV 2.0
<<< BLANK ANALYSIS >>>

Sample: BASELINE Date: 05/24/96 Time: 09:21:38

Sample Size = 1 uL
Dil Factor = 1
Blank ID # = BASELINE
Blank Value = N/A

Analyst : JL STEELE
Min Readings = 22
Max Readings = 22
% Difference = 10

== Reading	==== Analysis Time	==== Coulometer	==== % Difference ==
1	0.51	0.20	0.00
2	1.01	0.60	66.67
3	1.51	1.80	66.67
4	2.00	5.80	68.97
5	2.50	11.60	50.00
6	3.00	16.20	28.40
7	3.50	19.20	15.62
8	4.00	21.20	9.43
9	4.50	22.10	4.07
10	5.00	22.80	3.07
11	5.50	23.30	2.15
12	6.00	23.80	2.10
13	6.50	24.20	1.65
14	7.00	24.50	1.22
15	7.50	24.90	1.61
16	8.00	25.40	1.97
17	8.50	25.70	1.17
18	9.00	26.00	1.15
19	9.50	26.20	0.76
20	10.00	26.50	1.13
21	10.50	26.90	1.49
22	11.00	27.20	1.10

BLANK VALUE = 27.2 micrograms carbon
BLANK FACTOR = 27.2 / 11.00067 = +2.47E+00 ug/min Carbon

<<<< WARNING - BLANK VALUE EXCEEDS 1.5 ug/min Carbon!!!!!>>>>

Sample Run By: Jackie Steele 5/24/96
JL STEELE 00000

TIC- TOTAL INORGANIC CARBON ANALYSIS REPORT
TICTOC REV 2.0

Sample: STD 22N12A Date: 05/24/96 Time: 09:34:31

Sample Size = 1 uL 1ml
Dil Factor = 1
Blank ID # =
Blank Value = .73 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	25.00	100.00
3	1.51	154.70	83.84
4	2.00	298.00	48.09
5	2.50	411.60	27.60
6	3.00	489.80	15.97
7	3.50	538.10	8.98
8	4.00	561.60	4.18
9	4.50	574.40	2.23
10	5.00	579.60	0.90
11	5.50	582.60	0.51
12	6.00	584.00	0.24
13	6.50	584.90	0.15
14	7.00	585.60	0.12
15	7.50	586.10	0.09
16	8.00	586.50	0.07
17	8.50	586.90	0.07
18	9.00	587.20	0.05
19	9.50	587.60	0.07
20	10.00	587.90	0.05
21	10.50	588.20	0.05
22	11.00	588.50	0.05

USER INPUT BLANK VALUE
BLANK VALUE = 8.03049 micrograms carbon
BLANK FACTOR = 8.03049 / 11.00067 = +7.3E-01 ug/min Carbon

SAMPLE RESULTS:
(588.5 - 8.029778)(1)/(1) = +5.805E+02 g/L Carbon
(588.5 - 8.029778)(1)/(1)(12) = +4.837E+01 Molar Carbon

Sample Run By: Jackie Steele 5/24/96
JL STEELE 00000

580.5 / 600 = 96.42%

TOC- TOTAL ORGANIC CARBON ANALYSIS REPORT
TICTOC REV 2.0

Sample: STD 24N1~~2~~A Date: 05/24/96 Time: 09:47:20

Sample Size = 1 uL. 200ml
Dil Factor = 1
Blank ID # =
Blank Value = 2.47 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	1.01	2.10	95.24
3	1.50	43.00	95.12
4	2.00	195.30	77.98
5	2.50	399.00	51.05
6	3.01	513.10	22.24
7	3.51	562.10	8.72
8	4.00	582.70	3.54
9	4.50	589.30	1.12
10	5.00	592.30	0.51
11	5.50	593.80	0.25
12	6.00	594.80	0.17
13	6.50	595.40	0.10
14	7.00	595.90	0.08
15	7.50	596.40	0.08
16	8.00	596.80	0.07
17	8.50	597.30	0.08
18	9.00	597.70	0.07
19	9.50	598.00	0.05
20	10.00	598.50	0.08
21	10.50	598.80	0.05
22	11.00	599.00	0.03

USER INPUT BLANK VALUE
BLANK VALUE = 27.17166 micrograms carbon
BLANK FACTOR = 27.17166 / 11.00067 = +2.5E+00 ug/min Carbon

SAMPLE RESULTS:
(599 - 27.17151)(1)/(1) = +5.718E+02 g/L Carbon
(599 - 27.17151)(1)/(1)(12) = +4.765E+01 Molar Carbon
<<<< WARNING - BLANK VALUE EXCEEDS 1.5 ug/min Carbon!!!!!>>>>

Sample Run By: Jacque Steele 5/24/96
JL STEELE 00000

$\frac{571.8}{.200ml} - \frac{2859}{3.00E3} = 95.3\%$

TIC- TOTAL INORGANIC CARBON ANALYSIS REPORT
TICTOC REV 2.0

Sample: BLANK Date: 05/24/96 Time: 09:59:31

Sample Size = 1 uL
Dil Factor = 1
Blank ID # =
Blank Value = .73 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	1.01	0.80	87.50
3	1.51	1.90	57.89
4	2.00	2.70	29.63
5	2.50	3.40	20.59
6	3.00	3.60	5.56
7	3.50	4.00	10.00
8	4.00	4.20	4.76
9	4.50	4.40	4.55
10	5.00	4.60	4.35
11	5.50	4.80	4.17
12	6.00	5.00	4.00
13	6.50	5.30	5.66
14	7.00	5.40	1.85
15	7.50	5.70	5.26
16	8.00	5.80	1.72
17	8.50	6.00	3.33
18	9.00	6.20	3.23
19	9.50	6.40	3.13
20	10.00	6.50	1.54
21	10.50	6.70	2.99
22	11.00	6.80	1.47

USER INPUT BLANK VALUE
BLANK VALUE = 8.03049 micrograms carbon
BLANK FACTOR = 8.03049 / 11.00067 = +7.3E-01 ug/min Carbon

SAMPLE RESULTS:
(6.8 - 8.029154)(1)/(1) = < 5.00 E-3 g/L Carbon
(6.8 - 8.029154)(1)/(1)(12) = < 4.17 E-4 Molar Carbon

Sample Run By: Jackie Steele 5/24/96
JL STEELE 00000

16.80 - 8.00 / = 1.2

TOC- TOTAL ORGANIC CARBON ANALYSIS REPORT
TICTOC REV 2.0

Sample: BLANK Date: 05/24/96 Time: 10:11:45

Sample Size = 1 uL
Dil Factor = 1
Blank ID # =
Blank Value = 2.47 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	0.10	100.00
3	1.50	1.20	91.67
4	2.00	4.70	74.47
5	2.50	9.50	50.53
6	3.00	12.70	25.20
7	3.50	15.00	15.33
8	4.00	16.10	6.83
9	4.50	16.70	3.59
10	5.00	17.10	2.34
11	5.50	17.40	1.72
12	6.00	17.60	1.14
13	6.50	17.80	1.12
14	7.00	18.00	1.11
15	7.50	18.30	1.64
16	8.00	18.50	1.08
17	8.50	18.60	0.54
18	9.00	18.80	1.06
19	9.50	18.90	0.53
20	10.00	19.10	1.05
21	10.50	19.20	0.52
22	11.00	19.40	1.03

USER INPUT BLANK VALUE
BLANK VALUE = 27.17166 micrograms carbon
BLANK FACTOR = 27.17166 / 11.00067 = +2.5E+00 ug/min Carbon

SAMPLE RESULTS:
(19.4 - 27.16457)(1)/(1) = < 5.00 E-3 g/L Carbon
(19.4 - 27.16457)(1)/(1)(12) = < 4.17 E-4 Molar Carbon
<<<< WARNING - BLANK VALUE EXCEEDS 1.5 ug/min Carbon!!!!!>>>>

Sample Run By: Jackie Steele 5/24/96
JL STEELE 00000

| 19.40-27.20 | = 7.8

TIC- TOTAL INORGANIC CARBON ANALYSIS REPORT
TICTOC REV 2.0

Sample: S96T000932 Date: 05/24/96 Time: 12:11:51

Sample Size = 1 uL .1330g
Dil Factor = 1
Blank ID # =
Blank Value = .73 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	173.10	100.00
3	1.50	906.00	80.89
4	2.00	1643.60	44.88
5	2.50	2014.50	18.41
6	3.00	2218.70	9.20
7	3.50	2342.20	5.27
8	4.00	2415.60	3.04
9	4.50	2460.90	1.84
10	5.00	2485.00	0.97
11	5.50	2497.80	0.51
12	6.00	2505.50	0.31
13	6.50	2510.30	0.19
14	7.00	2513.90	0.14
15	7.50	2517.60	0.15
16	8.00	2520.00	0.10
17	8.50	2521.90	0.08
18	9.00	2523.40	0.06
19	9.50	2524.50	0.04
20	10.00	2525.60	0.04
21	10.50	2526.50	0.04
22	11.00	2527.30	0.03

USER INPUT BLANK VALUE
BLANK VALUE = 8.03049 micrograms carbon
BLANK FACTOR = 8.03049 / 11.00067 = +7.3E-01 ug/min Carbon

SAMPLE RESULTS:
(2527.3 - 8.029199)(1)/(1) = +2.5193E+03 g/L Carbon
(2527.3 - 8.029199)(1)/(1)(12) = +2.0994E+02 Molar Carbon

Sample Run By: Jacque Steele 5/24/96
JL STEELE 00000

$\frac{2519.3}{.1330g} = 1.8942^{E4}$

TOC- TOTAL ORGANIC CARBON ANALYSIS REPORT
TICTOC REV 2.0

Sample: S96T000932 Date: 05/24/96 Time: 12:24:19

Sample Size = 1 uL .1330g
Dil Factor = 1
Blank ID # =
Blank Value = 2.47 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	1.50	80.00
3	1.51	111.80	98.66
4	2.00	382.90	70.80
5	2.50	782.50	51.07
6	3.00	1117.90	30.00
7	3.50	1301.10	14.08
8	4.00	1391.60	6.50
9	4.50	1440.80	3.41
10	5.00	1469.80	1.97
11	5.50	1485.40	1.05
12	6.00	1494.10	0.58
13	6.50	1500.60	0.43
14	7.00	1504.90	0.29
15	7.50	1508.70	0.25
16	8.00	1511.80	0.21
17	8.50	1514.50	0.18
18	9.00	1516.50	0.13
19	9.50	1518.60	0.14
20	10.00	1520.10	0.10
21	10.50	1521.40	0.09
22	11.00	1522.60	0.08

USER INPUT BLANK VALUE
BLANK VALUE = 27.17166 micrograms carbon
BLANK FACTOR = 27.17166 / 11.00067 = +2.5E+00 ug/min Carbon

SAMPLE RESULTS:
(1522.6 - 27.16714)(1)/(1) = +1.4954E+03 g/L Carbon
(1522.6 - 27.16714)(1)/(1)(12) = +1.2462E+02 Molar Carbon
<<<< WARNING - BLANK VALUE EXCEEDS 1.5 ug/min Carbon!!!!!>>>>

Sample Run By: Jackie Steele 5/24/96
JL STEELE 00000

$\frac{1495.4}{.1330g} = 1.1244^{E4}$

TIC- TOTAL INORGANIC CARBON ANALYSIS REPORT
TICTOC REV 2.0

Sample: 932 DUP Date: 05/24/96 Time: 12:36:39

Sample Size = 1 uL .1028g
Dil Factor = 1
Blank ID # =
Blank Value = .73 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	16.60	96.99
3	1.50	516.70	96.79
4	2.00	1083.80	52.33
5	2.50	1417.40	23.54
6	3.00	1617.90	12.39
7	3.50	1740.10	7.02
8	4.00	1817.60	4.26
9	4.50	1867.10	2.65
10	5.00	1899.30	1.70
11	5.50	1916.40	0.89
12	6.00	1926.80	0.54
13	6.50	1934.70	0.41
14	7.00	1950.60	0.82
15	7.50	1962.10	0.59
16	8.00	1968.40	0.32
17	8.50	1972.40	0.20
18	9.00	1975.50	0.16
19	9.50	1977.70	0.11
20	10.00	1979.20	0.08
21	10.50	1980.60	0.07
22	11.00	1981.80	0.06

USER INPUT BLANK VALUE
BLANK VALUE = 8.03049 micrograms carbon
BLANK FACTOR = 8.03049 / 11.00067 = +7.3E-01 ug/min Carbon

SAMPLE RESULTS:
(1981.8 - 8.029778)(1)/(1) = +1.9738E+03 g/L Carbon
(1981.8 - 8.029778)(1)/(1)(12) = +1.6448E+02 Molar Carbon

Sample Run By: Jackie Steele 5/24/96
JL STEELE 00000

$\frac{1973.8}{.1028g} = 1.9200^{E4}$

TOC- TOTAL ORGANIC CARBON ANALYSIS REPORT
TICTOC REV 2.0

Sample: 932 DUP Date: 05/24/96 Time: 12:48:49

Sample Size = 1 uL .1028g
Dil Factor = 1
Blank ID # =
Blank Value = 2.47 ug/minute C

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	2.60	76.92
3	1.51	79.20	96.72
4	2.00	297.60	73.39
5	2.50	616.30	51.71
6	3.00	877.00	29.73
7	3.50	1010.00	13.17
8	4.00	1082.50	6.70
9	4.50	1123.60	3.66
10	5.00	1144.60	1.83
11	5.50	1156.40	1.02
12	6.00	1163.30	0.59
13	6.50	1168.60	0.45
14	7.00	1172.60	0.34
15	7.50	1175.30	0.23
16	8.00	1177.80	0.21
17	8.50	1179.70	0.16
18	9.00	1181.50	0.15
19	9.50	1182.90	0.12
20	10.00	1184.20	0.11
21	10.50	1185.50	0.11
22	11.00	1186.50	0.08

USER INPUT BLANK VALUE
BLANK VALUE = 27.17166 micrograms carbon
BLANK FACTOR = 27.17166 / 11.00067 = +2.5E+00 ug/min Carbon

SAMPLE RESULTS:
(1186.5 - 27.16714)(1)/(1) = +1.1593E+03 g/L Carbon
(1186.5 - 27.16714)(1)/(1)(12) = +9.6611E+01 Molar Carbon
<<<< WARNING - BLANK VALUE EXCEEDS 1.5 ug/min Carbon!!!!!>>>>

Sample Run By: Jackie Steele 5/24/96
JL STEELE 00000

$\frac{1159.3}{.1028g} = 1.127724$

TIC- TOTAL INORGANIC CARBON ANALYSIS REPORT
TICTOC REV 2.0

Sample: 932 SPIKE Date: 05/24/96 Time: 13:01:25

Sample Size = 1 uL .1204g + .500ml 22N12A
Dil Factor = 1
Blank ID # =
Blank Value = .73 ug/minute C

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	160.70	99.75
3	1.50	880.20	81.74
4	2.00	1520.00	42.09
5	2.50	1827.90	16.84
6	3.00	1999.70	8.59
7	3.50	2107.50	5.12
8	4.00	2172.20	2.98
9	4.50	2212.10	1.80
10	5.00	2235.90	1.06
11	5.50	2247.00	0.49
12	6.00	2254.10	0.31
13	6.50	2258.00	0.17
14	7.00	2261.50	0.15
15	7.50	2263.80	0.10
16	8.00	2266.10	0.10
17	8.50	2268.10	0.09
18	9.00	2269.60	0.07
19	9.50	2271.00	0.06
20	10.00	2272.60	0.07
21	10.50	2274.40	0.08
22	11.00	2276.10	0.07

USER INPUT BLANK VALUE
BLANK VALUE = 8.03049 micrograms carbon
BLANK FACTOR = 8.03049 / 11.00067 = +7.3E-01 ug/min Carbon

SAMPLE RESULTS:
(2276.1 - 8.029866)(1)/(1) = +2.2681E+03 g/L Carbon
(2276.1 - 8.029866)(1)/(1)(12) = +1.8901E+02 Molar Carbon

Sample Run By: Jackie Steele 5/24/96
JL STEELE 00000

$$\frac{\cancel{2268.1}\ 2276.10}{\frac{2527.30}{.1330} \times .1204 + 300} = \frac{2276.10\ \cancel{2268.1}}{2587.87} = 87.9\%$$

TOC- TOTAL ORGANIC CARBON ANALYSIS REPORT
TICTOC REV 2.0

Sample: 932 SPIKE Date: 05/24/96 Time: 13:13:28

Sample Size = 1 uL .1204g + .100ml 24N12A
Dil Factor = 1
Blank ID # =
Blank Value = 2.47 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	3.70	72.97
3	1.50	100.60	96.32
4	2.00	353.00	71.50
5	2.50	750.40	52.96
6	3.00	1128.10	33.48
7	3.50	1345.20	16.14
8	4.00	1450.40	7.25
9	4.50	1510.30	3.97
10	5.00	1546.50	2.34
11	5.50	1567.00	1.31
12	6.00	1577.20	0.65
13	6.50	1584.50	0.46
14	7.00	1589.80	0.33
15	7.50	1593.60	0.24
16	8.00	1596.70	0.19
17	8.50	1599.50	0.18
18	9.00	1601.70	0.14
19	9.50	1604.00	0.14
20	10.00	1606.20	0.14
21	10.50	1608.30	0.13
22	11.00	1610.50	0.14

USER INPUT BLANK VALUE
BLANK VALUE = 27.17166 micrograms carbon
BLANK FACTOR = 27.17166 / 11.00067 = +2.5E+00 ug/min Carbon

SAMPLE RESULTS:
(1610.5 - 27.16714)(1)/(1) = +1.5833E+03 g/L Carbon
(1610.5 - 27.16714)(1)/(1)(12) = +1.3194E+02 Molar Carbon
<<<< WARNING - BLANK VALUE EXCEEDS 1.5 ug/min Carbon!!!!!>>>>

Sample Run By: Jacque Steele 5/24/96
JL STEELE 00000

$$\frac{1610.50}{\frac{1522.60}{.1330} \times .1204 + 300} = \frac{1610.50}{1678.35} = 95.96\%$$

TIC- TOTAL INORGANIC CARBON ANALYSIS REPORT
TICTOC REV 2.0

Sample: S96T000939 Date: 05/24/96 Time: 13:27:38

Sample Size = 1 uL .1127g
Dil Factor = 1
Blank ID # =
Blank Value = .73 ug/minute C

Analyst : JL STEELE
Min Readings = 22
Max Readings = 22
% Difference = 10

== Reading	==== Analysis Time	==== Coulometer	==== % Difference ==
1	0.51	0.70	0.00
2	1.01	5.80	87.93
3	1.51	233.40	97.51
4	2.00	528.70	55.85
5	2.50	700.10	24.48
6	3.00	802.00	12.71
7	3.50	865.20	7.30
8	4.00	908.30	4.75
9	4.50	938.70	3.24
10	5.00	969.20	3.15
11	5.50	991.90	2.29
12	6.00	1006.80	1.48
13	6.50	1017.30	1.03
14	7.00	1029.90	1.22
15	7.50	1057.00	2.56
16	8.00	1075.40	1.71
17	8.50	1084.60	0.85
18	9.00	1089.60	0.46
19	9.50	1093.00	0.31
20	10.00	1095.00	0.18
21	10.50	1096.60	0.15
22	11.00	1097.80	0.11

USER INPUT BLANK VALUE
BLANK VALUE = 8.03049 micrograms carbon
BLANK FACTOR = 8.03049 / 11.00067 = +7.3E-01 ug/min Carbon

SAMPLE RESULTS:
(1097.8 - 8.028574)(1)/(1) = +1.0898E+03 g/L Carbon
(1097.8 - 8.028574)(1)/(1)(12) = +9.0814E+01 Molar Carbon

Sample Run By: Jackie Steele 5/24/96
JL STEELE 00000

$\frac{1089.8}{.1127} = 9.6760^{E3}$

TOC- TOTAL ORGANIC CARBON ANALYSIS REPORT
TICTOC REV 2.0

Sample: S96T000939 Date: 05/24/96 Time: 13:39:38

Sample Size = 1 uL .1127g
Dil Factor = 1
Blank ID # =
Blank Value = 2.47 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	1.60	81.25
3	1.51	52.80	96.97
4	2.00	235.00	77.53
5	2.50	512.70	54.16
6	3.00	745.10	31.19
7	3.50	874.20	14.77
8	4.00	941.70	7.17
9	4.50	983.10	4.21
10	5.00	1009.20	2.59
11	5.50	1022.40	1.29
12	6.00	1030.40	0.78
13	6.50	1036.40	0.58
14	7.00	1040.50	0.39
15	7.50	1043.20	0.26
16	8.00	1045.80	0.25
17	8.50	1048.00	0.21
18	9.00	1050.00	0.19
19	9.50	1051.50	0.14
20	10.00	1052.90	0.13
21	10.50	1054.10	0.11
22	11.00	1055.30	0.11

USER INPUT BLANK VALUE
BLANK VALUE = 27.17166 micrograms carbon
BLANK FACTOR = 27.17166 / 11.00067 = +2.5E+00 ug/min Carbon

SAMPLE RESULTS:
(1055.3 - 27.17151)(1)/(1) = +1.0281E+03 g/L Carbon
(1055.3 - 27.17151)(1)/(1)(12) = +8.5677E+01 Molar Carbon
<<<< WARNING - BLANK VALUE EXCEEDS 1.5 ug/min Carbon!!!!!>>>>

Sample Run By: Jackie Steele 5/24/96
JL STEELE 00000

$\frac{1028.1}{.1127g} = 9.122^{E3}$

TIC- TOTAL INORGANIC CARBON ANALYSIS REPORT
TICTOC REV 2.0

Sample: 939 DUP Date: 05/24/96 Time: 13:51:45

Sample Size = 1 uL .0715g
Dil Factor = 1
Blank ID # =
Blank Value = .73 ug/minute C

Analyst : JL STEELE
Min Readings = 22
Max Readings = 22
% Difference = 10

Reading	Analysis Time	Coulometer	% Difference
1	0.51	0.40	0.00
2	1.00	2.20	81.82
3	1.50	116.00	98.10
4	2.00	268.70	56.83
5	2.50	380.30	29.35
6	3.00	458.60	17.07
7	3.50	514.90	10.93
8	4.00	553.10	6.91
9	4.50	581.40	4.87
10	5.00	605.00	3.90
11	5.50	622.20	2.76
12	6.00	635.50	2.09
13	6.50	644.10	1.34
14	7.00	648.70	0.71
15	7.50	652.10	0.52
16	8.00	654.40	0.35
17	8.50	656.20	0.27
18	9.00	657.50	0.20
19	9.50	658.70	0.18
20	10.00	659.90	0.18
21	10.50	660.80	0.14
22	11.00	661.70	0.14

USER INPUT BLANK VALUE
BLANK VALUE = 8.03049 micrograms carbon
BLANK FACTOR = 8.03049 / 11.00067 = +7.3E-01 ug/min Carbon

SAMPLE RESULTS:
(661.7 - 8.029154)(1)/(1) = +6.537E+02 g/L Carbon
(661.7 - 8.029154)(1)/(1)(12) = +5.447E+01 Molar Carbon

Sample Run By: Jackie Steele 5/24/96
JL STEELE 00000

$\frac{653.7}{.0715g} = 9.1483$

TOC- TOTAL ORGANIC CARBON ANALYSIS REPORT
TICTOC REV 2.0

Sample: 939 DUP Date: 05/24/96 Time: 14:05:08

Sample Size = 1 uL .0715g
Dil Factor = 1
Blank ID # =
Blank Value = 2.47 ug/minute C

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	2.40	75.00
3	1.51	35.10	93.16
4	2.00	147.30	76.17
5	2.51	314.50	53.16
6	3.00	443.70	29.12
7	3.50	521.20	14.87
8	4.00	566.40	7.98
9	4.50	593.10	4.50
10	5.00	607.00	2.29
11	5.50	615.10	1.32
12	6.00	620.40	0.85
13	6.50	624.20	0.61
14	7.00	626.70	0.40
15	7.50	628.70	0.32
16	8.00	630.60	0.30
17	8.50	632.10	0.24
18	9.00	633.70	0.25
19	9.50	634.70	0.16
20	10.00	635.80	0.17
21	10.50	636.90	0.17
22	11.00	637.60	0.11

USER INPUT BLANK VALUE
BLANK VALUE = 27.17166 micrograms carbon
BLANK FACTOR = 27.17166 / 11.00067 = +2.5E+00 ug/min Carbon

SAMPLE RESULTS:
(637.6 - 27.17151)(1)/(1) = +6.104E+02 g/L Carbon
(637.6 - 27.17151)(1)/(1)(12) = +5.087E+01 Molar Carbon
<<<< WARNING - BLANK VALUE EXCEEDS 1.5 ug/min Carbon!!!!!>>>>

Sample Run By: Jackie Steele 5/24/96
JL STEELE 00000

$\frac{610.4}{.0715g} = 8.537E3$

TIC- TOTAL INORGANIC CARBON ANALYSIS REPORT
TICTOC REV 2.0 WHC-SD-WM-DP-182, REV. 1

Sample: S96T001289 Date: 05/24/96 Time: 14:17:33

Sample Size = 1 uL .0745g
Dil Factor = 1
Blank ID # =
Blank Value = .73 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	1.01	0.80	87.50
3	1.51	61.80	98.71
4	2.00	216.30	71.43
5	2.50	350.80	38.34
6	3.00	442.50	20.72
7	3.50	505.70	12.50
8	4.00	548.10	7.74
9	4.50	576.70	4.96
10	5.00	594.30	2.96
11	5.50	603.40	1.51
12	6.00	608.50	0.84
13	6.50	612.10	0.59
14	7.00	615.40	0.54
15	7.50	618.10	0.44
16	8.00	620.80	0.43
17	8.50	623.00	0.35
18	9.00	624.50	0.24
19	9.50	625.80	0.21
20	10.00	627.40	0.26
21	10.50	628.80	0.22
22	11.00	629.70	0.14

USER INPUT BLANK VALUE
BLANK VALUE = 8.03049 micrograms carbon
BLANK FACTOR = 8.03049 / 11.00067 = +7.3E-01 ug/min Carbon

SAMPLE RESULTS:
(629.7 - 8.02853)(1)/(1) = +6.217E+02 g/L Carbon
(629.7 - 8.02853)(1)/(1)(12) = +5.181E+01 Molar Carbon

Sample Run By: Jackie Steele 5/24/96
JL STEELE 00000

$\frac{621.7}{.0745g} = 8.345^{E3}$

TOC- TOTAL ORGANIC CARBON ANALYSIS REPORT
TICTOC REV 2.0

WHC-SD-WM-DP-182, REV. 1

Sample: S96T001289 Date: 05/24/96 Time: 14:29:39

Sample Size = 1 uL . 0746g
Dil Factor = 1
Blank ID # =
Blank Value = 2.47 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	2.20	77.27
3	1.51	50.10	95.61
4	2.00	213.50	76.53
5	2.50	478.10	55.34
6	3.00	690.30	30.74
7	3.50	811.90	14.98
8	4.00	875.20	7.23
9	4.50	913.60	4.20
10	5.00	937.90	2.59
11	5.50	953.00	1.58
12	6.00	960.60	0.79
13	6.50	967.00	0.66
14	7.00	971.70	0.48
15	7.50	975.50	0.39
16	8.00	978.40	0.30
17	8.50	980.40	0.20
18	9.00	982.70	0.23
19	9.50	984.30	0.16
20	10.00	985.80	0.15
21	10.50	987.20	0.14
22	11.00	988.50	0.13

USER INPUT BLANK VALUE
BLANK VALUE = 27.17166 micrograms carbon
BLANK FACTOR = 27.17166 / 11.00067 = +2.5E+00 ug/min Carbon

SAMPLE RESULTS:
(988.5 - 27.16925)(1)/(1) = +9.613E+02 g/L Carbon
(988.5 - 27.16925)(1)/(1)(12) = +8.011E+01 Molar Carbon
<<<< WARNING - BLANK VALUE EXCEEDS 1.5 ug/min Carbon!!!!!>>>>

Sample Run By: Jeanne Steele 5/24/96
JL STEELE 00000

$\frac{961.3}{.0746g} = 1.2903^{E4}$

TIC- TOTAL INORGANIC CARBON ANALYSIS REPORT
TICTOC REV 2.0

WHC-SD-WM-DP-182, REV. 1

Sample: 1289 DUP Date: 05/24/96 Time: 14:41:49

Sample Size = 1 uL .10159
Dil Factor = 1
Blank ID # =
Blank Value = .73 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	1.40	78.57
3	1.51	60.20	97.67
4	2.01	222.50	72.94
5	2.51	377.60	41.08
6	3.00	489.00	22.78
7	3.50	565.90	13.59
8	4.00	619.60	8.67
9	4.50	658.40	5.89
10	5.00	688.60	4.39
11	5.50	714.90	3.68
12	6.00	735.20	2.76
13	6.50	756.90	2.87
14	7.00	783.20	3.36
15	7.50	806.40	2.88
16	8.00	822.20	1.92
17	8.50	838.60	1.96
18	9.00	861.30	2.64
19	9.50	877.30	1.82
20	10.00	886.40	1.03
21	10.50	891.30	0.55
22	11.00	894.90	0.40

USER INPUT BLANK VALUE
BLANK VALUE = 8.03049 micrograms carbon
BLANK FACTOR = 8.03049 / 11.00067 = +7.3E-01 ug/min Carbon

SAMPLE RESULTS:
(894.9 - 8.031248)(1)/(1) = +8.869E+02 g/L Carbon
(894.9 - 8.031248)(1)/(1)(12) = +7.391E+01 Molar Carbon

Sample Run By: Jacque Steele 5/24/96
JL STEELE 00000

$\frac{886.9}{.10159} = 8.738^{E3}$