GAMMA SPECTROMETRY

SAMPLES

(VOLUME 7)

(0 LEVEL, NOPAL I)

308 --- Q200408170007
Supplemental Material, Technical Activity
Supporting Documentation: Experimental Data
for Gamma Spectrometry Samples, Nopal I,
Level 0, Volume 7 (03/11/1994 through
05/31/1994)

3/11/94 Preparation of whole rock powders for gamma analysis.
Samples consist of portions of whole rock (WR) powder prepared previously

	Vial wt	Vial + Sample	Sample wt
NOPI-330-GAM1	2.087g	6.355g	4.268g ✓
NOPI-331-GAM1	2.076g	6.318g	4.242g ✓
NOPI-332-GAM1	2.077g	6.186g	4.109g ✓
NOPI-333-GAM1	2.073g	5.681g	3.608g ✓
NOPI-334-GAM1	2.076g	6.364g	4.288g ✓
NOPI-335-GAM1	2.068g	6.121g	4.053g ✓
NOPI-336-GAM1	2.055g	6.063g	4.008g ✓
NOPI-337-GAM1	2.073g	6.132g	4.059g ✓
NOPI-363-GAM1	2.076g	6.052g	3.976g ✓
NOPI-364-GAM1	2.058g	6.186g	4.128g ✓
NOPI-365-GAM1	2.074g	6.193g	4.119g ✓
NOPI-366-GAM1	2.059g	6.952g	4.893g ✓
NOPI-367-GAM1	2.069g	6.720g	4.651g ✓
NOPI-368-GAM1	2.066g	6.481g	4.415g ✓
NOPI-369-GAM1	2.063g	6.311g	4.248g ✓

NOPI-370-GAM1	2.068g	6.721g	4.653g ✓
NOPI-371-GAM1	2.068g	5952g	3.884g ✓

HI samples were dried in an oven at 100°C for at least 24 hours before placing into vials.

3/11/94

~~NOPI-333-XRD~~ – ~~yellow-brown mineral powder + powdered for XRD analysis. Probably opal-CT.~~

3/8/94 Prepared powders for gamma analysis
Samples consist of portion of whole rock powders (wet) prepared previously

	Wt vial	Wt sample	Wt sample
NOPI-308-GAM1	2.060g	2.3g	4.340g ✓
NOPI-309-GAM1	2.073g	2.5g	4.202g ✓
NOPI-310-GAM1	2.063g	2.9g	4.066g ✓
NOPI-311-GAM1	2.056g	2.24g	4.268g ✓
NOPI-312-GAM1	2.075g	2.040g	3.965g ✓
NOPI-313-GAM1	2.075g	2.056g	4.181g ✓
NOPI-314-GAM1	2.064g	2.338g	4.324g ✓
NOPI-315-GAM1	2.072g	2.330g	4.258g ✓
NOPI-316-GAM1	2.056g	2.295g	4.239g ✓
NOPI-317-GAM1	2.069g	2.183g	4.214g ✓
NOPI-318-GAM1	2.083g	2.186g	4.263g ✓
NOPI-319-GAM1	2.074g	1.8-g	3.867g ✓
NOPI-320-GAM1	2.056g	1.7-g	3.783g ✓
NOPI-321-GAM1	2.056g	1.8-g	3.816g ✓
NOPI-322-GAM1	2.073g	1.93g	3.600g ✓

NOPI-323-GAM1	2.072g	5.848g	3.776g ✓
NOPI-324-GAM1	2.078g	6.028g	3.950g ✓
NOPI-325-GAM1	2.068g	6.206g	4.138g ✓
NOPI-326-GAM1	2.059g	6.313g	4.254g ✓
NOPI-327-GAM1	2.074g	6.040g	3.966g ✓
NOPI-328-GAM1	2.055g	5.949g	3.894g ✓
NOPI-329-GAM1	2.071g	6.180g	4.109g ✓

Pata Calculation

Sample #	NOPI-308-GAM1 7.0cm									
Weight(g)	4.34	Geometry	7.0 cm			Counting Time(min)		311		
time of background minutes			4320							
Nuclides	Total Counts	Bkgd(1)	Blank(2) (cpm)	Eblank cpm	Net counts	c. eff. (%)	intensity (%)	Activity (dpm/g)		
Pb-210	45 kev									
210	1764	1335	0.2666	0.00976	346.0874	1.9406	4.1	322.27	±	67.56
Th-234										
62	2654	1630	0.3939	0.01249	901.4971	6.0258	5.7	194.46	±	9.70
(93Kev)										
93	3083	1471	0.8309	0.01996	1353.5901	8.9688	6.8	164.43	±	4.46
Ra-226										
295	4748	594	0.0927	0.00564	4125.1703	5.365	18	316.48	±	1.61
352	7463	504	0.1756	0.0029	6904.3884	4.757	35	307.24	±	0.72
609	4888	236	0.223	0.0026	4582.647	2.4858	43	317.64	±	1.38
183.7	3788	1228	0.5414	0.0139	2391.6246	17.4114	3.3	308.39	±	3.56
Th-228	583 kev									
228	394	255	0.1591	0.00914	89.5199	0.897	86	8.60	±	13.70
Ra-228										
338	588	476	0.0582	0.00591	93.8998	4.4504	12	13.03	±	19.32
911	281	136	0.1737	0.00936	90.9793	1.8052	29	12.88	±	20.03
964	408	273	0.3092	0.00844	38.8388	1.6902	21.8	7.81	±	43.55
Ra-226 weighted average =			310.36	±	0.585	U (ppm)=		415.4	±	0.78
Ra-228 weighted average =			13.57	±	12.74	Th (ppm) =		50.21	±	47.1
210PB/234Th av =			380.82	±	5.51	U (ppm)=		509.8	±	7.38
	63 kev									
Ra-228 av&Th228 =			14.43	±	7.8	Th (ppm) =		53.39	±	28.9

Calculation of weighted average (up to 200 data sets can be input)

	weighted average=		310.363		average=	311.1				
	weighted error=		0.58533		std.=	5.702				
data	±	err	error^2	1/error^2	data/error^2					
316.48	±	1.61	2.5921	0.385788	122.094					
307.24	±	0.72	0.5184	1.929012	592.67					
317.64	±	1.38	1.9044	0.5251	166.793					
308.39	±	3.56	12.6736	0.078904	24.3333					

NOPI-309-GAM1 calc

Sample #	NOPI-309-GAM1 7.0cm									
Weight(g)	4.202	Geometry	7.0 cm			Counting Time(min)		300		
time of background minutes			4320							

Nuclides	Total Counts	Bkgd(1)	Blank(2) (cpm)	Eblank cpm	Net counts	c. eff. (%)	intensity (%)	Activity (dpm/g)		
Pb-210	45 kev									
210	3452	2637	0.2666	0.00976	735.02	1.9406	4.1	732.83	±	46.36
Th-234										
62	5829	3356	0.3939	0.01249	2354.83	6.0258	5.7	543.87	±	6.00
(93Kev)										
93	7121	2867	0.8309	0.01996	4004.73	8.9688	6.8	520.90	±	2.59
Ra-226										
295	10470	993	0.0927	0.00564	9449.19	5.365	18	776.20	±	1.07
352	16523	824	0.1756	0.0029	15646.32	4.757	35	745.48	±	0.48
609	10707	382	0.223	0.0026	10258.1	2.4858	43	761.30	±	0.92
183.7	8057	2187	0.5414	0.0139	5707.58	17.4114	3.3	788.00	±	2.30
Th-228	583 kev									
228	484	447	0.1591	0.00914	-10.73	0.897	86	-1.10	±	-39.57
Ra-228										
338	959	834	0.0582	0.00591	107.54	4.4504	12	15.97	±	18.06
911	382	244	0.1737	0.00936	85.89	1.8052	29	13.01	±	20.61
964	532	461	0.3092	0.00844	-21.76	1.6902	21.8	-4.68	±	-58.18

Ra-226 weighted average =	753.61	±	0.39	U (ppm)=		1009	±	0.52
Ra-228 weighted average =	13.57	±	12.74	Th (ppm) =		50.21	±	47.1
210PB/234Th av =	380.82	±	5.51	U (ppm)=		509.8	±	7.38
63 kev								
Ra-228 av&Th228 =	14.43	±	7.8	Th (ppm) =		53.39	±	28.9

Calculation of weighted average (up to 200 data sets can be input)

	weighted average=		753.615		average=	764.9				
	weighted error=		0.38972		std.=	21.49				
data	±	err	error^2	1/error^2	data/error^2					
776.20	±	1.07	1.1449	0.873439	677.963					
745.48	±	0.48	0.2304	4.340278	3235.59					
761.30	±	0.92	0.8464	1.181474	899.457					
788.00	±	2.30	5.29	0.189036	148.96					

Sample #	NOPI-310-GAM1 7.0cm									
Weight(g)	4.086	Geometry	7.0 cm			Counting Time(min)		280		
time of background minutes			4320							
Nuclides	Total Counts	Bkgd(1)	Blank(2) (cpm)	Eblank cpm	Net counts	c. eff. (%)	intensity (%)	Activity (dpm/g)		
Pb-210	45 kev									
210	2535	1955	0.2666	0.00976	505.352	1.9406	4.1	555.16	±	55.91
Th-234										
62	4410	2502	0.3939	0.01249	1797.708	6.0258	5.7	457.48	±	6.87
(93Kev)										
93	5452	2184	0.8309	0.01996	3035.348	8.9688	6.8	435.02	±	2.98
Ra-226										
295	7663	757	0.0927	0.00564	6880.044	5.365	18	622.72	±	1.25
352	12021	636	0.1756	0.0029	11335.832	4.757	35	595.11	±	0.56
609	7836	346	0.223	0.0026	7427.56	2.4858	43	607.37	±	1.09
183.7	6022	1643	0.5414	0.0139	4227.408	17.4114	3.3	643.09	±	2.68
Th-228	583 kev									
228	411	314	0.1591	0.00914	52.452	0.897	86	5.94	±	17.90
Ra-228										
338	748	663	0.0582	0.00591	68.704	4.4504	12	11.24	±	22.59
911	277	186	0.1737	0.00936	42.364	1.8052	29	7.07	±	29.35
964	400	356	0.3092	0.00844	-42.576	1.6902	21.8	-10.10	±	-41.59
Ra-226 weighted average =			602.32	±	0.456	U (ppm)=		806.3	±	0.61
Ra-228 weighted average =			13.57	±	12.74	Th (ppm) =		50.21	±	47.1
210PB/234Th av =			380.82	±	5.51	U (ppm)=		509.8	±	7.38
	63 kev									
Ra-228 av&Th228 =			14.43	±	7.8	Th (ppm) =		53.39	±	28.9

Calculation of weighted average (up to 200 data sets can be input)

	weighted average=		602.318		average=	615.2				
	weighted error=		0.45598		std.=	24.93				
data	±	err	error^2	1/error^2	data/error^2					
622.72	±	1.25	1.5625	0.64	398.541					
595.11	±	0.56	0.3136	3.188776	1897.67					
607.37	±	1.09	1.1881	0.84168	511.211					
643.09	±	2.68	7.1824	0.139229	89.5369					

NOPI-311-GAM1 calc

Sample #	NOPI-311-GAM1 7.0cm									
Weight(g)	4.268	Geometry	7.0 cm			Counting Time(min)		222		
time of background minutes			4320							

Nuclides	Total Counts	Bkgd(1)	Blank(2) (cpm)	Eblank cpm	Net counts	c. eff. (%)	intensity (%)	Activity (dpm/g)		
Pb-210	45 kev									
210	1954	1504	0.2666	0.00976	390.8148	1.9406	4.1	518.41	±	63.58
Th-234										
62	3159	1865	0.3939	0.01249	1206.5542	6.0258	5.7	370.75	±	8.38
(93Kev)										
93	3918	1676	0.8309	0.01996	2057.5402	8.9688	6.8	356.06	±	3.61
Ra-226										
295	5831	595	0.0927	0.00564	5215.4206	5.365	18	569.99	±	1.43
352	9208	501	0.1756	0.0029	8668.0168	4.757	35	549.47	±	0.65
609	6128	251	0.223	0.0026	5827.494	2.4858	43	575.40	±	1.23
183.7	4527	1351	0.5414	0.0139	3055.8092	17.4114	3.3	561.31	±	3.15
Th-228	583 kev									
228	315	254	0.1591	0.00914	25.6798	0.897	86	3.51	±	25.58
Ra-228										
338	574	481	0.0582	0.00591	80.0796	4.4504	12	15.83	±	20.92
911	230	135	0.1737	0.00936	56.4386	1.8052	29	11.38	±	25.43
964	371	257	0.3092	0.00844	45.3576	1.6902	21.8	12.99	±	40.30
Ra-226 weighted average =			557.31	±	0.526	U (ppm)=		746	±	0.70
Ra-228 weighted average =			13.57	±	12.74	Th (ppm) =		50.21	±	47.1
210PB/234Th av =			380.82	±	5.51	U (ppm)=		509.8	±	7.38
	63 kev									
Ra-228 av&Th228 =			14.43	±	7.8	Th (ppm) =		53.39	±	28.9

Calculation of weighted average (up to 200 data sets can be input)

	weighted average=		557.311		average=	562.1				
	weighted error=		0.52576		std.=	12.98				
data	±	err	error^2	1/error^2	data/error^2					
569.99	±	1.43	2.0449	0.489021	278.737					
549.47	±	0.65	0.4225	2.366864	1300.52					
575.40	±	1.23	1.5129	0.660982	380.329					
561.31	±	3.15	9.9225	0.100781	56.5694					

NOPI-312-GAM1 calc

Sample #	NOPI-312-GAM1 7.0cm									
Weight(g)	3.965	Geometry	7.0 cm				Counting Time(min)	278		
time of background minutes			4320							

Nuclides	Total Counts	Bkgd(1)	Blank(2) (cpm)	Eblank cpm	Net counts	c. eff. (%)	intensity (%)	Activity (dpm/g)		
Pb-210	45 kev									
210	1931	1433	0.2666	0.00976	423.8852	1.9406	4.1	483.33	±	61.05
Th-234										
62	3146	1824	0.3939	0.01249	1212.4958	6.0258	5.7	320.26	±	8.36
(93Kev)										
93	3868	1632	0.8309	0.01996	2005.0098	8.9688	6.8	298.25	±	3.66
Ra-226										
295	5440	655	0.0927	0.00564	4759.2294	5.365	18	447.10	±	1.50
352	8379	613	0.1756	0.0029	7717.1832	4.757	35	420.50	±	0.68
609	5675	276	0.223	0.0026	5337.006	2.4858	43	452.98	±	1.28
183.7	4299	1297	0.5414	0.0139	2851.4908	17.4114	3.3	450.23	±	3.26
Th-228	583 kev									
228	344	277	0.1591	0.00914	22.7702	0.897	86	2.68	±	27.17
Ra-228										
338	611	542	0.0582	0.00591	52.8204	4.4504	12	8.97	±	25.76
911	298	203	0.1737	0.00936	46.7114	1.8052	29	8.09	±	27.95
964	353	285	0.3092	0.00844	-17.9576	1.6902	21.8	-4.42	±	-64.04
Ra-226 weighted average =			430.90	±	0.549	U (ppm)=		576.8	±	0.73
Ra-228 weighted average =			13.57	±	12.74	Th (ppm) =		50.21	±	47.1
210PB/234Th av =			380.82	±	5.51	U (ppm)=		509.8	±	7.38
	63 kev									
Ra-228 av&Th228 =			14.43	±	7.8	Th (ppm) =		53.39	±	28.9

Calculation of weighted average (up to 200 data sets can be input)

	weighted average=		430.901		average=	441.2				
	weighted error=		0.54952		std.=	18.01				
data	±	err	error^2	1/error^2	data/error^2					
447.10	±	1.50	2.25	0.444444	198.711					
420.50	±	0.68	0.4624	2.16263	909.386					
452.98	±	1.28	1.6384	0.610352	276.477					
450.23	±	3.26	10.6276	0.094095	42.3642					

Sample #	NOPI-313-GAM1 7.0cm									
Weight(g)	4.181	Geometry	7.0 cm			Counting Time(min)		267		
time of background minutes			4320							

Nuclides	Total Counts	Bkgd(1)	Blank(2) (cpm)	Eblank cpm	Net counts	c. eff. (%)	intensity (%)	Activity (dpm/g)		
Pb-210	45 kev									
210	2790	2181	0.2666	0.00976	537.8178	1.9406	4.1	605.51	±	54.20
Th-234										
62	4742	2735	0.3939	0.01249	1901.8287	6.0258	5.7	496.01	±	6.68
(93Kev)										
93	5817	2459	0.8309	0.01996	3136.1497	8.9688	6.8	460.64	±	2.93
Ra-226										
295	8594	815	0.0927	0.00564	7754.2491	5.365	18	719.29	±	1.18
352	13651	768	0.1756	0.0029	12836.115	4.757	35	690.62	±	0.53
609	9025	344	0.223	0.0026	8621.459	2.4858	43	722.53	±	1.01
183.7	6627	1804	0.5414	0.0139	4678.4462	17.4114	3.3	729.39	±	2.54
Th-228	583 kev									
228	435	362	0.1591	0.00914	30.5203	0.897	86	3.54	±	23.46
Ra-228										
338	752	733	0.0582	0.00591	3.4606	4.4504	12	0.58	±	100.66
911	300	196	0.1737	0.00936	57.6221	1.8052	29	9.86	±	25.16
964	474	347	0.3092	0.00844	44.4436	1.6902	21.8	10.80	±	40.71
Ra-226 weighted average =			701.31	±	0.43	U (ppm)=		938.8	±	0.58
Ra-228 weighted average =			13.57	±	12.74	Th (ppm) =		50.21	±	47.1
210PB/234Th av =			380.82	±	5.51	U (ppm)=		509.8	±	7.38
	63 kev									
Ra-228 av&Th228 =			14.43	±	7.8	Th (ppm) =		53.39	±	28.9

Calculation of weighted average (up to 200 data sets can be input)

	weighted average=		701.312		average=	714.2				
	weighted error=		0.4298		std.=	20.69				
data	±	err	error^2	1/error^2	data/error^2					
719.29	±	1.18	1.3924	0.718184	516.583					
690.62	±	0.53	0.2809	3.559986	2458.6					
722.53	±	1.01	1.0201	0.980296	708.293					
729.39	±	2.54	6.4516	0.155	113.056					

Sample #	NOPI-314-GAM1 7.0cm									
Weight(g)	4.324	Geometry	7.0 cm			Counting Time(min)		251		
time of background minutes			4320							
Nuclides	Total Counts	Bkgd(1)	Blank(2) (cpm)	Eblank cpm	Net counts	c. eff. (%)	intensity (%)	Activity (dpm/g)		
Pb-210	45 kev									
210	2621	1893	0.2666	0.00976	661.0834	1.9406	4.1	765.56	±	48.88
Th-234										
62	4534	2492	0.3939	0.01249	1943.1311	6.0258	5.7	521.26	±	6.60
(93Kev)										
93	5610	2341	0.8309	0.01996	3060.4441	8.9688	6.8	462.36	±	2.96
Ra-226										
295	7761	729	0.0927	0.00564	7008.7323	5.365	18	668.71	±	1.24
352	12237	714	0.1756	0.0029	11478.924	4.757	35	635.24	±	0.56
609	8072	339	0.223	0.0026	7677.027	2.4858	43	661.76	±	1.07
183.7	6054	1780	0.5414	0.0139	4138.1086	17.4114	3.3	663.58	±	2.71
Th-228	583 kev									
228	361	349	0.1591	0.00914	-27.9341	0.897	86	-3.34	±	-24.53
Ra-228										
338	748	654	0.0582	0.00591	79.3918	4.4504	12	13.70	±	21.02
911	290	214	0.1737	0.00936	32.4013	1.8052	29	5.70	±	33.56
964	436	345	0.3092	0.00844	13.3908	1.6902	21.8	3.35	±	74.17
Ra-226 weighted average =			645.30	±	0.454	U (ppm)=		863.8	±	0.61
Ra-228 weighted average =			13.57	±	12.74	Th (ppm) =		50.21	±	47.1
210PB/234Th av =			380.82	±	5.51	U (ppm)=		509.8	±	7.38
	63 kev									
Ra-228 av&Th228 =			14.43	±	7.8	Th (ppm) =		53.39	±	28.9
Calculation of weighted average (up to 200 data sets can be input)										
	weighted average=		645.302		average=	653.5				
	weighted error=		0.45414		std.=	15.86				
data	±	err	error^2	1/error^2	data/error^2					
668.71	±	1.24	1.5376	0.650364	434.905					
635.24	±	0.56	0.3136	3.188776	2025.64					
661.76	±	1.07	1.1449	0.873439	578.007					
663.58	±	2.71	7.3441	0.136164	90.3555					

Sample #	NOPI-315-GAM1 7.0cm									
Weight(g)	4.258	Geometry	7.0 cm				Counting Time(min)	151		
time of background minutes			4320							
Nuclides	Total Counts	Bkgd(1)	Blank(2) (cpm)	Eblank cpm	Net counts	c. eff. (%)	intensity (%)	Activity (dpm/g)		
Pb-210	45 kev									
210	1208	837	0.2666	0.00976	330.7434	1.9406	4.1	646.53	±	69.11
Th-234										
62	1941	1128	0.3939	0.01249	753.5211	6.0258	5.7	341.21	±	10.61
(93Kev)										
93	2358	982	0.8309	0.01996	1250.5341	8.9688	6.8	318.91	±	4.64
Ra-226										
295	3427	361	0.0927	0.00564	3052.0023	5.365	18	491.54	±	1.87
352	5551	340	0.1756	0.0029	5184.4844	4.757	35	484.31	±	0.83
609	3486	159	0.223	0.0026	3293.327	2.4858	43	479.20	±	1.63
183.7	2632	740	0.5414	0.0139	1810.2486	17.4114	3.3	490.01	±	4.09
Th-228	583 kev									
228	195	151	0.1591	0.00914	19.9759	0.897	86	4.03	±	29.00
Ra-228										
338	362	296	0.0582	0.00591	57.2118	4.4504	12	16.66	±	24.76
911	129	107	0.1737	0.00936	-4.2287	1.8052	29	-1.26	±	-92.89
964	226	180	0.3092	0.00844	-0.6892	1.6902	21.8	-0.29	±	-326.91
Ra-226 weighted average =			484.53	±	0.678	U (ppm)=		648.6	±	0.91
Ra-228 weighted average =			13.57	±	12.74	Th (ppm) =		50.21	±	47.1
210PB/234Th av =			380.82	±	5.51	U (ppm)=		509.8	±	7.38
	63 kev									
Ra-228 av&Th228 =			14.43	±	7.8	Th (ppm) =		53.39	±	28.9

Calculation of weighted average (up to 200 data sets can be input)

	weighted average=		484.533		average=	484.5				
	weighted error=		0.67826		std.=	5.408				
data	±	err	error^2	1/error^2	data/error^2					
491.54	±	1.87	3.4969	0.285968	140.564					
484.31	±	0.83	0.6889	1.451589	703.019					
479.20	±	1.63	2.6569	0.376378	180.361					
490.01	±	4.09	16.7281	0.05978	29.2926					

NOPI-316-GAM1 calc

Sample #	NOPI-316-GAM1 7.0cm									
Weight(g)	4.239	Geometry	7.0 cm			Counting Time(min)		188		
time of background minutes			4320							

Nuclides	Total Counts	Bkgd(1)	Blank(2) (cpm)	Eblank cpm	Net counts	c. eff. (%)	intensity (%)	Activity (dpm/g)		
Pb-210	45 kev									
210	1669	1301	0.2666	0.00976	317.8792	1.9406	4.1	501.33	±	70.49
Th-234										
62	3077	1591	0.3939	0.01249	1411.9468	6.0258	5.7	515.83	±	7.75
(93Kev)										
93	3892	1503	0.8309	0.01996	2232.7908	8.9688	6.8	459.39	±	3.47
Ra-226										
295	4650	481	0.0927	0.00564	4151.5724	5.365	18	539.45	±	1.61
352	7459	470	0.1756	0.0029	6955.9872	4.757	35	524.25	±	0.72
609	4887	203	0.223	0.0026	4642.076	2.4858	43	544.95	±	1.37
183.7	3951	1061	0.5414	0.0139	2788.2168	17.4114	3.3	608.92	±	3.30
Th-228	583 kev									
228	252	206	0.1591	0.00914	16.0892	0.897	86	2.62	±	32.32
Ra-228										
338	526	414	0.0582	0.00591	101.0584	4.4504	12	23.74	±	18.63
911	191	145	0.1737	0.00936	13.3444	1.8052	29	3.20	±	52.29
964	294	242	0.3092	0.00844	-6.1296	1.6902	21.8	-2.09	±	-109.62
Ra-226 weighted average =			532.64	±	0.583	U (ppm)=		713	±	0.78
Ra-228 weighted average =			13.57	±	12.74	Th (ppm) =		50.21	±	47.1
210PB/234Th av =			380.82	±	5.51	U (ppm)=		509.8	±	7.38
	63 kev									
Ra-228 av&Th228 =			14.43	±	7.8	Th (ppm) =		53.39	±	28.9

Calculation of weighted average (up to 200 data sets can be input)

	weighted average=		532.642		average=	559.4				
	weighted error=		0.58327		std.=	44.14				
data	±	err	error^2	1/error^2	data/error^2					
539.45	±	1.61	2.5921	0.385788	208.113					
524.25	±	0.72	0.5184	1.929012	1011.28					
544.95	±	1.37	1.8769	0.532793	290.346					
608.92	±	3.30	10.89	0.091827	55.9155					

Sample #	NOPI-317-GAM1 7.0cm									
Weight(g)	4.214	Geometry	7.0 cm				Counting Time(min)	277		
time of background minutes			4320							
Nuclides	Total Counts	Bkgd(1)	Blank(2) (cpm)	Eblank cpm	Net counts	c. eff. (%)	intensity (%)	Activity (dpm/g)		
Pb-210	45 kev									
210	2444	1693	0.2666	0.00976	677.1518	1.9406	4.1	729.11	±	48.30
Th-234										
62	3950	2354	0.3939	0.01249	1486.8897	6.0258	5.7	370.86	±	7.55
(93Kev)										
93	4732	2062	0.8309	0.01996	2439.8407	8.9688	6.8	342.72	±	3.32
Ra-226										
295	7476	699	0.0927	0.00564	6751.3221	5.365	18	598.92	±	1.26
352	11688	620	0.1756	0.0029	11019.359	4.757	35	567.00	±	0.57
609	7702	350	0.223	0.0026	7290.229	2.4858	43	584.30	±	1.10
183.7	5402	1652	0.5414	0.0139	3600.0322	17.4114	3.3	536.77	±	2.90
Th-228	583 kev									
228	387	324	0.1591	0.00914	18.9293	0.897	86	2.10	±	29.79
Ra-228										
338	797	661	0.0582	0.00591	119.8786	4.4504	12	19.23	±	17.10
911	296	167	0.1737	0.00936	80.8851	1.8052	29	13.24	±	21.24
964	435	386	0.3092	0.00844	-36.6484	1.6902	21.8	-8.52	±	-44.83
Ra-226 weighted average =			573.62	±	0.464	U (ppm)=		767.8	±	0.62
Ra-228 weighted average =			13.57	±	12.74	Th (ppm) =		50.21	±	47.1
210PB/234Th av =			380.82	±	5.51	U (ppm)=		509.8	±	7.38
	63 kev									
Ra-228 av&Th228 =			14.43	±	7.8	Th (ppm) =		53.39	±	28.9

Calculation of weighted average (up to 200 data sets can be input)

	weighted average=		573.621		average=	562.7				
	weighted error=		0.46358		std.=	24.06				
data	±	err	error^2	1/error^2	data/error^2					
598.92	±	1.26	1.5876	0.629882	377.249					
567.00	±	0.57	0.3249	3.07787	1745.15					
584.30	±	1.10	1.21	0.826446	482.893					
536.77	±	2.90	8.41	0.118906	63.8252					

NOPI-318-GAM1 calc

Sample #	NOPI-318-GAM1 7.0cm									
Weight(g)	4.263	Geometry	7.0 cm			Counting Time(min)		306		
time of background minutes			4320							

Nuclides	Total Counts	Bkgd(1)	Blank(2) (cpm)	Eblank cpm	Net counts	c. eff. (%)	intensity (%)	Activity (dpm/g)		
Pb-210	45 kev									
210	2717	2127	0.2666	0.00976	508.4204	1.9406	4.1	489.85	±	55.74
Th-234										
62	4791	2840	0.3939	0.01249	1830.4666	6.0258	5.7	408.54	±	6.81
(93Kev)										
93	5856	2428	0.8309	0.01996	3173.7446	8.9688	6.8	398.93	±	2.91
Ra-226										
295	8148	971	0.0927	0.00564	7148.6338	5.365	18	567.47	±	1.22
352	12585	805	0.1756	0.0029	11726.266	4.757	35	539.91	±	0.55
609	8376	413	0.223	0.0026	7894.762	2.4858	43	566.20	±	1.05
183.7	6349	1950	0.5414	0.0139	4233.3316	17.4114	3.3	564.80	±	2.67
Th-228	583 kev									
228	537	380	0.1591	0.00914	108.3154	0.897	86	10.76	±	12.46
Ra-228										
338	888	809	0.0582	0.00591	61.1908	4.4504	12	8.78	±	23.94
911	336	256	0.1737	0.00936	26.8478	1.8052	29	3.93	±	36.87
964	541	436	0.3092	0.00844	10.3848	1.6902	21.8	2.16	±	84.22
Ra-226 weighted average =			549.04	±	0.446	U (ppm)=		734.9	±	0.60
Ra-228 weighted average =			13.57	±	12.74	Th (ppm) =		50.21	±	47.1
210PB/234Th av =			380.82	±	5.51	U (ppm)=		509.8	±	7.38
	63 kev									
Ra-228 av&Th228 =			14.43	±	7.8	Th (ppm) =		53.39	±	28.9

Calculation of weighted average (up to 200 data sets can be input)

	weighted average=		549.035		average=	557				
	weighted error=		0.4461		std.=	14.79				
data	±	err	error^2	1/error^2	data/error^2					
567.47	±	1.22	1.4884	0.671862	381.262					
539.91	±	0.55	0.3025	3.305785	1784.83					
566.20	±	1.05	1.1025	0.907029	513.56					
564.80	±	2.67	7.1289	0.140274	79.2268					

Sample #	NOPI-319-GAM1 7.0cm									
Weight(g)	3.867	Geometry	7.0 cm				Counting Time(min)	291		
time of background minutes			4320							
Nuclides	Total Counts	Bkgd(1)	Blank(2) (cpm)	Eblank cpm	Net counts	c. eff. (%)	intensity (%)	Activity (dpm/g)		
Pb-210	45 kev									
210	1229	946	0.2666	0.00976	205.4194	1.9406	4.1	229.43	±	87.69
Th-234										
62	2094	1169	0.3939	0.01249	810.3751	6.0258	5.7	209.67	±	10.23
(93Kev)										
93	2796	1139	0.8309	0.01996	1415.2081	8.9688	6.8	206.21	±	4.36
Ra-226										
295	2896	452	0.0927	0.00564	2417.0243	5.365	18	222.42	±	2.11
352	4326	362	0.1756	0.0029	3912.9004	4.757	35	208.85	±	0.96
609	2972	210	0.223	0.0026	2697.107	2.4858	43	224.23	±	1.80
183.7	2665	814	0.5414	0.0139	1693.4526	17.4114	3.3	261.91	±	4.23
Th-228	583 kev									
228	326	187	0.1591	0.00914	92.7019	0.897	86	10.68	±	13.46
Ra-228										
338	471	374	0.0582	0.00591	80.0638	4.4504	12	13.32	±	20.93
911	250	129	0.1737	0.00936	70.4533	1.8052	29	11.96	±	22.76
964	341	242	0.3092	0.00844	9.0228	1.6902	21.8	2.18	±	90.35
Ra-226 weighted average =			215.28	±	0.773	U (ppm)=		288.2	±	1.03
Ra-228 weighted average =			13.57	±	12.74	Th (ppm) =		50.21	±	47.1
210PB/234Th av =			380.82	±	5.51	U (ppm)=		509.8	±	7.38
	63 kev									
Ra-228 av&Th228 =			14.43	±	7.8	Th (ppm) =		53.39	±	28.9
Calculation of weighted average (up to 200 data sets can be input)										
	weighted average=		215.277		average=	231.7				
	weighted error=		0.77285		std.=	27.3				
data	±	err	error^2	1/error^2	data/error^2					
222.42	±	2.11	4.4521	0.224613	49.9584					
208.85	±	0.96	0.9216	1.085069	226.617					
224.23	±	1.80	3.24	0.308642	69.2068					
261.91	±	4.23	17.8929	0.055888	14.6376					

Sample #	NOPI-320-GAM1 7.0cm									
Weight(g)	3.783	Geometry	7.0 cm			Counting Time(min)		1481		
time of background minutes			4320							
Nuclides	Total Counts	Bkgd(1)	Blank(2) (cpm)	Eblank cpm	Net counts	c. eff. (%)	intensity (%)	Activity (dpm/g)		
Pb-210	45 kev									
210	5140	4023	0.2666	0.00976	722.1654	1.9406	4.1	162.00	±	46.77
Th-234										
62	9258	4951	0.3939	0.01249	3723.6341	6.0258	5.7	193.50	±	4.77
(93Kev)										
93	12964	4736	0.8309	0.01996	6997.4371	8.9688	6.8	204.79	±	1.96
Ra-226										
295	10897	2048	0.0927	0.00564	8711.7113	5.365	18	161.02	±	1.11
352	16420	1693	0.1756	0.0029	14466.936	4.757	35	155.09	±	0.50
609	10814	975	0.223	0.0026	9508.737	2.4858	43	158.78	±	0.96
183.7	11612	3742	0.5414	0.0139	7068.1866	17.4114	3.3	219.57	±	2.07
Th-228	583 kev									
228	1452	946	0.1591	0.00914	270.3729	0.897	86	6.26	±	7.88
Ra-228										
338	2091	1672	0.0582	0.00591	332.8058	4.4504	12	11.12	±	10.26
911	1053	578	0.1737	0.00936	217.7503	1.8052	29	7.42	±	12.94
964	1463	1075	0.3092	0.00844	-69.9252	1.6902	21.8	-3.39	±	-32.46
Ra-226 weighted average =			158.98	±	0.404	U (ppm)=		212.8	±	0.54
Ra-228 weighted average =			13.57	±	12.74	Th (ppm) =		50.21	±	47.1
210PB/234Th av =			380.82	±	5.51	U (ppm)=		509.8	±	7.38
	63 kev									
Ra-228 av&Th228 =			14.43	±	7.8	Th (ppm) =		53.39	±	28.9
Calculation of weighted average (up to 200 data sets can be input)										
	weighted average=		158.983		average=	177.8				
	weighted error=		0.40389		std.=	36.21				
data	±	err	error^2	1/error^2	data/error^2					
161.02	±	1.11	1.2321	0.811622	130.687					
155.09	±	0.50	0.25	4	620.36					
158.78	±	0.96	0.9216	1.085069	172.287					
219.57	±	2.07	4.2849	0.233378	51.2427					

Sample #	NOPI-321-GAM1 7.0cm									
Weight(g)	3.816	Geometry	7.0 cm				Counting Time(min)	1111		
time of background minutes			4320							
Nuclides	Total Counts	Bkgd(1)	Blank(2) (cpm)	Eblank cpm	Net counts	c. eff. (%)	intensity (%)	Activity (dpm/g)		
Pb-210	45 kev									
210	3164	2430	0.2666	0.00976	437.8074	1.9406	4.1	129.79	±	60.07
Th-234										
62	4700	2817	0.3939	0.01249	1445.3771	6.0258	5.7	99.26	±	7.66
(93Kev)										
93	5857	2745	0.8309	0.01996	2188.8701	8.9688	6.8	84.66	±	3.50
Ra-226										
295	6499	1404	0.0927	0.00564	4992.0103	5.365	18	121.93	±	1.47
352	9830	1202	0.1756	0.0029	8432.9084	4.757	35	119.47	±	0.65
609	6465	639	0.223	0.0026	5578.247	2.4858	43	123.10	±	1.25
183.7	6286	2382	0.5414	0.0139	3302.5046	17.4114	3.3	135.57	±	3.03
Th-228	583 kev									
228	1193	684	0.1591	0.00914	332.2399	0.897	86	10.16	±	7.11
Ra-228										
338	1589	1231	0.0582	0.00591	293.3398	4.4504	12	12.96	±	10.93
911	824	436	0.1737	0.00936	195.0193	1.8052	29	8.79	±	13.68
964	1165	724	0.3092	0.00844	97.4788	1.6902	21.8	6.24	±	27.49
Ra-226 weighted average =			120.93	±	0.53	U (ppm)=		161.9	±	0.71
Ra-228 weighted average =			13.57	±	12.74	Th (ppm) =		50.21	±	47.1
210PB/234Th av =			380.82	±	5.51	U (ppm)=		509.8	±	7.38
	63 kev									
Ra-228 av&Th228 =			14.43	±	7.8	Th (ppm) =		53.39	±	28.9
Calculation of weighted average (up to 200 data sets can be input)										
	weighted average=		120.927		average=	126				
	weighted error=		0.52862		std.=	8.445				
data	±	err	error^2	1/error^2	data/error^2					
121.93	±	1.47	2.1609	0.46277	56.4256					
119.47	±	0.65	0.4225	2.366864	282.769					
123.10	±	1.25	1.5625	0.64	78.784					
135.57	±	3.03	9.1809	0.108922	14.7665					

Sample #	NOPI-322-GAM1 7.0cm									
Weight(g)	3.6	Geometry	7.0 cm				Counting Time(min)	2000		
time of background minutes			4320							
Nuclides	Total Counts	Bkgd(1)	Blank(2) (cpm)	Eblank cpm	Net counts	c. eff. (%)	intensity (%)	Activity (dpm/g)		
Pb-210	45 kev									
210	3504	2806	0.2666	0.00976	164.8	1.9406	4.1	28.77	±	97.90
Th-234										
62	5230	3149	0.3939	0.01249	1293.2	6.0258	5.7	52.29	±	8.10
(93Kev)										
93	6811	3067	0.8309	0.01996	2082.2	8.9688	6.8	47.42	±	3.59
Ra-226										
295	4781	1982	0.0927	0.00564	2613.6	5.365	18	37.59	±	2.03
352	6472	1657	0.1756	0.0029	4463.8	4.757	35	37.24	±	0.90
609	4373	942	0.223	0.0026	2985	2.4858	43	38.79	±	1.71
183.7	6345	3089	0.5414	0.0139	2173.2	17.4114	3.3	52.53	±	3.73
Th-228	583 kev									
228	1554	936	0.1591	0.00914	299.8	0.897	86	5.40	±	7.49
Ra-228										
338	2078	1744	0.0582	0.00591	217.6	4.4504	12	5.66	±	12.69
911	1169	578	0.1737	0.00936	243.6	1.8052	29	6.46	±	12.24
964	1641	1157	0.3092	0.00844	-134.4	1.6902	21.8	-5.07	±	-23.41
Ra-226 weighted average =			38.15	±	0.727	U (ppm)=		51.06	±	0.97
Ra-228 weighted average =			13.57	±	12.74	Th (ppm) =		50.21	±	47.1
210PB/234Th av =			380.82	±	5.51	U (ppm)=		509.8	±	7.38
	63 kev									
Ra-228 av&Th228 =			14.43	±	7.8	Th (ppm) =		53.39	±	28.9
Calculation of weighted average (up to 200 data sets can be input)										
	weighted average=		38.1463		average=	42.85				
	weighted error=		0.72718		std.=	8.416				
data	±	err	error^2	1/error^2	data/error^2					
37.59	±	2.03	4.1209	0.242665	9.12179					
37.24	±	0.90	0.81	1.234568	45.9753					
38.79	±	1.71	2.9241	0.341986	13.2656					
52.53	±	3.73	13.9129	0.071876	3.77563					

Sample #	NOPI-323-GAM1 7.0cm									
Weight(g)	3.776	Geometry	7.0 cm				Counting Time(min)	1168		
time of background minutes			4320							
Nuclides	Total Counts	Bkgd(1)	Blank(2) (cpm)	Eblank cpm	Net counts	c. eff. (%)	intensity (%)	Activity (dpm/g)		
Pb-210	45 kev									
210	5944	4487	0.2666	0.00976	1145.6112	1.9406	4.1	326.47	±	37.13
Th-234										
62	10882	5685	0.3939	0.01249	4736.9248	6.0258	5.7	312.70	±	4.23
(93Kev)										
93	14718	5387	0.8309	0.01996	8360.5088	8.9688	6.8	310.82	±	1.79
Ra-226										
295	14679	2099	0.0927	0.00564	12471.726	5.365	18	292.83	±	0.93
352	22555	1714	0.1756	0.0029	20635.899	4.757	35	281.03	±	0.42
609	14737	941	0.223	0.0026	13535.536	2.4858	43	287.12	±	0.80
183.7	13320	4053	0.5414	0.0139	8634.6448	17.4114	3.3	340.74	±	1.87
Th-228	583 kev									
228	1269	948	0.1591	0.00914	135.1712	0.897	86	3.97	±	11.15
Ra-228										
338	2035	1853	0.0582	0.00591	114.0224	4.4504	12	4.84	±	17.54
911	980	530	0.1737	0.00936	247.1184	1.8052	29	10.70	±	12.15
964	1345	1061	0.3092	0.00844	-77.1456	1.6902	21.8	-4.75	±	-30.90
Ra-226 weighted average =			285.67	±	0.34	U (ppm)=		382.4	±	0.46
Ra-228 weighted average =			13.57	±	12.74	Th (ppm) =		50.21	±	47.1
210PB/234Th av =			380.82	±	5.51	U (ppm)=		509.8	±	7.38
	63 kev									
Ra-228 av&Th228 =			14.43	±	7.8	Th (ppm) =		53.39	±	28.9
Calculation of weighted average (up to 200 data sets can be input)										
	weighted average=		285.669		average=	303				
	weighted error=		0.33955		std.=	32.86				
data	±	err	error^2	1/error^2	data/error^2					
292.83	±	0.93	0.8649	1.156203	338.571					
281.03	±	0.42	0.1764	5.668934	1593.14					
287.12	±	0.80	0.64	1.5625	448.625					
340.74	±	1.87	3.4969	0.285968	97.4406					

NOPI-324-GAM1 calc

Sample #	NOPI-324-GAM1 7.0cm									
Weight(g)	3.95	Geometry	7.0 cm			Counting Time(min)		1087		
time of background minutes			4320							

Nuclides	Total Counts	Bkgd(1)	Blank(2) (cpm)	Eblank cpm	Net counts	c. eff. (%)	intensity (%)	Activity (dpm/g)		
Pb-210	45 kev									
210	3988	3133	0.2666	0.00976	565.2058	1.9406	4.1	165.45	±	52.87
Th-234										
62	6575	3848	0.3939	0.01249	2298.8307	6.0258	5.7	155.88	±	6.07
(93Kev)										
93	7961	3467	0.8309	0.01996	3590.8117	8.9688	6.8	137.13	±	2.74
Ra-226										
295	9860	1656	0.0927	0.00564	8103.2351	5.365	18	195.43	±	1.15
352	15273	1339	0.1756	0.0029	13743.123	4.757	35	192.25	±	0.51
609	10106	747	0.223	0.0026	9116.599	2.4858	43	198.64	±	0.98
183.7	8446	2908	0.5414	0.0139	4949.4982	17.4114	3.3	200.63	±	2.47
Th-228	583 kev									
228	1021	793	0.1591	0.00914	55.0583	0.897	86	1.66	±	17.47
Ra-228										
338	1672	1446	0.0582	0.00591	162.7366	4.4504	12	7.10	±	14.68
911	738	475	0.1737	0.00936	74.1881	1.8052	29	3.30	±	22.18
964	1161	845	0.3092	0.00844	-20.1004	1.6902	21.8	-1.27	±	-60.53

Ra-226 weighted average =	194.05	±	0.415	U (ppm)=	259.8	±	0.56	
Ra-228 weighted average =	13.57	±	12.74	Th (ppm) =	50.21	±	47.1	
210PB/234Th av =	380.82	±	5.51	U (ppm)=	509.8	±	7.38	
63 kev								
Ra-228 av&Th228 =	14.43	±	7.8	Th (ppm) =	53.39	±	28.9	

Calculation of weighted average (up to 200 data sets can be input)

weighted average=	194.047		average=	197.2	
weighted error=	0.41501		std.=	4.378	

data	±	err	error^2	1/error^2	data/error^2
195.43	±	1.15	1.3225	0.756144	147.773
192.25	±	0.51	0.2601	3.844675	739.139
198.64	±	0.98	0.9604	1.041233	206.83
200.63	±	2.47	6.1009	0.16391	32.8853

Sample #	NOPI-325-GAM1 7.0cm									
Weight(g)	4.138	Geometry	7.0 cm			Counting Time(min)		1189		
time of background minutes			4320							
Nuclides	Total Counts	Bkgd(1)	Blank(2) (cpm)	Eblank cpm	Net counts	c. eff. (%)	intensity (%)	Activity (dpm/g)		
Pb-210	45 kev									
210	2345	1709	0.2666	0.00976	319.0126	1.9406	4.1	81.49	±	70.37
Th-234										
62	3373	2087	0.3939	0.01249	817.6529	6.0258	5.7	48.38	±	10.18
(93Kev)										
93	4450	1970	0.8309	0.01996	1492.0599	8.9688	6.8	49.72	±	4.24
Ra-226										
295	3628	1252	0.0927	0.00564	2265.7797	5.365	18	47.69	±	2.18
352	5219	1010	0.1756	0.0029	4000.2116	4.757	35	48.83	±	0.95
609	3427	658	0.223	0.0026	2503.853	2.4858	43	47.61	±	1.87
183.7	4331	2052	0.5414	0.0139	1635.2754	17.4114	3.3	57.85	±	4.30
Th-228	583 kev									
228	881	630	0.1591	0.00914	61.8301	0.897	86	1.63	±	16.49
Ra-228										
338	1180	1096	0.0582	0.00591	14.8002	4.4504	12	0.56	±	48.67
911	670	387	0.1737	0.00936	76.4707	1.8052	29	2.97	±	21.84
964	915	701	0.3092	0.00844	-153.6388	1.6902	21.8	-8.47	±	-21.90
Ra-226 weighted average =			48.77	±	0.776	U (ppm)=		65.28	±	1.04
Ra-228 weighted average =			13.57	±	12.74	Th (ppm) =		50.21	±	47.1
210PB/234Th av =			380.82	±	5.51	U (ppm)=		509.8	±	7.38
	63 kev									
Ra-228 av&Th228 =			14.43	±	7.8	Th (ppm) =		53.39	±	28.9
Calculation of weighted average (up to 200 data sets can be input)										
	weighted average=		48.7691		average=	51.43				
	weighted error=		0.7765		std.=	5.593				
data	±	err	error^2	1/error^2	data/error^2					
47.69	±	2.18	4.7524	0.21042	10.0349					
48.83	±	0.95	0.9025	1.108033	54.1053					
47.61	±	1.87	3.4969	0.285968	13.6149					
57.85	±	4.30	18.49	0.054083	3.12872					

Sample #	NOPI-326-GAM1 7.0cm									
Weight(g)	4.254	Geometry	7.0 cm			Counting Time(min)		1148		
time of background minutes			4320							
Nuclides	Total Counts	Bkgd(1)	Blank(2) (cpm)	Eblank cpm	Net counts	c. eff. (%)	intensity (%)	Activity (dpm/g)		
Pb-210	45 kev									
210	2484	1894	0.2666	0.00976	283.9432	1.9406	4.1	73.08	±	74.59
Th-234										
62	3732	2305	0.3939	0.01249	974.8028	6.0258	5.7	58.11	±	9.33
(93Kev)										
93	4436	2120	0.8309	0.01996	1362.1268	8.9688	6.8	45.73	±	4.44
Ra-226										
295	4886	1328	0.0927	0.00564	3451.5804	5.365	18	73.19	±	1.76
352	7095	1048	0.1756	0.0029	5845.4112	4.757	35	71.89	±	0.79
609	4687	606	0.223	0.0026	3824.996	2.4858	43	73.28	±	1.51
183.7	4819	2108	0.5414	0.0139	2089.4728	17.4114	3.3	74.46	±	3.81
Th-228	583 kev									
228	838	602	0.1591	0.00914	53.3532	0.897	86	1.42	±	17.75
Ra-228										
338	1229	1119	0.0582	0.00591	43.1864	4.4504	12	1.66	±	28.49
911	686	376	0.1737	0.00936	110.5924	1.8052	29	4.33	±	18.16
964	928	703	0.3092	0.00844	-129.9616	1.6902	21.8	-7.22	±	-23.81
Ra-226 weighted average =			72.39	±	0.64	U (ppm)=		96.9	±	0.86
Ra-228 weighted average =			13.57	±	12.74	Th (ppm) =		50.21	±	47.1
210PB/234Th av =			380.82	±	5.51	U (ppm)=		509.8	±	7.38
	63 kev									
Ra-228 av&Th228 =			14.43	±	7.8	Th (ppm) =		53.39	±	28.9

Calculation of weighted average (up to 200 data sets can be input)

	weighted average=		72.3859		average=	73.21				
	weighted error=		0.64116		std.=	1.286				
data	±	err	error^2	1/error^2	data/error^2					
73.19	±	1.76	3.0976	0.322831	23.628					
71.89	±	0.79	0.6241	1.602307	115.19					
73.28	±	1.51	2.2801	0.438577	32.1389					
74.46	±	3.81	14.5161	0.068889	5.12948					

Sample #	NOPI-327-GAM1 7.0cm									
Weight(g)	3.966	Geometry	7.0 cm			Counting Time(min)		1000		
time of background minutes			4320							
Nuclides	Total Counts	Bkgd(1)	Blank(2) (cpm)	Eblank cpm	Net counts	c. eff. (%)	intensity (%)	Activity (dpm/g)		
Pb-210	45 kev									
210	2208	1657	0.2666	0.00976	284.4	1.9406	4.1	90.13	±	74.53
Th-234										
62	3302	1994	0.3939	0.01249	914.1	6.0258	5.7	67.10	±	9.63
(93Kev)										
93	4149	1872	0.8309	0.01996	1446.1	8.9688	6.8	59.79	±	4.31
Ra-226										
295	3755	1092	0.0927	0.00564	2570.3	5.365	18	67.11	±	2.04
352	5457	868	0.1756	0.0029	4413.4	4.757	35	66.84	±	0.90
609	3605	498	0.223	0.0026	2884	2.4858	43	68.03	±	1.74
183.7	4208	1722	0.5414	0.0139	1944.6	17.4114	3.3	85.34	±	3.95
Th-228	583 kev									
228	822	492	0.1591	0.00914	170.9	0.897	86	5.59	±	9.92
Ra-228										
338	1118	938	0.0582	0.00591	121.8	4.4504	12	5.75	±	16.97
911	620	300	0.1737	0.00936	146.3	1.8052	29	7.05	±	15.79
964	827	603	0.3092	0.00844	-85.2	1.6902	21.8	-5.83	±	-29.40
Ra-226 weighted average =			67.72	±	0.73	U (ppm)=		90.65	±	0.98
Ra-228 weighted average =			13.57	±	12.74	Th (ppm) =		50.21	±	47.1
210PB/234Th av =			380.82	±	5.51	U (ppm)=		509.8	±	7.38
	63 kev									
Ra-228 av&Th228 =			14.43	±	7.8	Th (ppm) =		53.39	±	28.9

Calculation of weighted average (up to 200 data sets can be input)

	weighted average=		67.7193		average=	73.4				
	weighted error=		0.73142		std.=	10.35				
data	±	err	error^2	1/error^2	data/error^2					
67.11	±	2.04	4.1616	0.240292	16.126					
66.84	±	0.90	0.81	1.234568	82.5185					
68.03	±	1.74	3.0276	0.330295	22.4699					
85.34	±	3.95	15.6025	0.064092	5.46964					

Sample #	NOPI-328-GAM1 7.0cm									
Weight(g)	3.894	Geometry	7.0 cm			Counting Time(min)		1000		
time of background minutes			4320							
Nuclides	Total Counts	Bkgd(1)	Blank(2) (cpm)	Eblank cpm	Net counts	c. eff. (%)	intensity (%)	Activity (dpm/g)		
Pb-210	45 kev									
210	3334	2593	0.2666	0.00976	474.4	1.9406	4.1	153.12	±	57.70
Th-234										
62	5693	3094	0.3939	0.01249	2205.1	6.0258	5.7	164.87	±	6.20
(93Kev)										
93	7626	3039	0.8309	0.01996	3756.1	8.9688	6.8	158.16	±	2.68
Ra-226										
295	7403	1360	0.0927	0.00564	5950.3	5.365	18	158.23	±	1.34
352	11345	1084	0.1756	0.0029	10085.4	4.757	35	155.56	±	0.60
609	7372	604	0.223	0.0026	6545	2.4858	43	157.25	±	1.16
183.7	7230	2431	0.5414	0.0139	4257.6	17.4114	3.3	190.29	±	2.67
Th-228	583 kev									
228	829	582	0.1591	0.00914	87.9	0.897	86	2.93	±	13.83
Ra-228										
338	1298	1115	0.0582	0.00591	124.8	4.4504	12	6.00	±	16.76
911	600	383	0.1737	0.00936	43.3	1.8052	29	2.12	±	29.03
964	943	679	0.3092	0.00844	-45.2	1.6902	21.8	-3.15	±	-40.37
Ra-226 weighted average =			157.37	±	0.487	U (ppm)=		210.7	±	0.65
Ra-228 weighted average =			13.57	±	12.74	Th (ppm) =		50.21	±	47.1
210PB/234Th av =			380.82	±	5.51	U (ppm)=		509.8	±	7.38
	63 kev									
Ra-228 av&Th228 =			14.43	±	7.8	Th (ppm) =		53.39	±	28.9

Calculation of weighted average (up to 200 data sets can be input)

	weighted average=		157.365		average=	167.7				
	weighted error=		0.4869		std.=	19.58				
data	±	err	error^2	1/error^2	data/error^2					
158.23	±	1.34	1.7956	0.556917	88.121					
155.56	±	0.60	0.36	2.777778	432.111					
157.25	±	1.16	1.3456	0.743163	116.862					
190.29	±	2.67	7.1289	0.140274	26.6928					

Sample #	NOPI-329-GAM1 7.0cm									
Weight(g)	4.109	Geometry	7.0 cm			Counting Time(min)		1176		
time of background minutes			4320							
Nuclides	Total Counts	Bkgd(1)	Blank(2) (cpm)	Eblank cpm	Net counts	c. eff. (%)	intensity (%)	Activity (dpm/g)		
Pb-210	45 kev									
210	2588	2037	0.2666	0.00976	237.4784	1.9406	4.1	61.77	±	81.56
Th-234										
62	3684	2319	0.3939	0.01249	901.7736	6.0258	5.7	54.33	±	9.70
(93Kev)										
93	4680	2207	0.8309	0.01996	1495.8616	8.9688	6.8	50.76	±	4.24
Ra-226										
295	4696	1277	0.0927	0.00564	3309.9848	5.365	18	70.93	±	1.80
352	6761	1052	0.1756	0.0029	5502.4944	4.757	35	68.39	±	0.81
609	4520	585	0.223	0.0026	3672.752	2.4858	43	71.11	±	1.54
183.7	4939	2208	0.5414	0.0139	2094.3136	17.4114	3.3	75.43	±	3.80
Th-228	583 kev									
228	901	575	0.1591	0.00914	138.8984	0.897	86	3.73	±	11.00
Ra-228										
338	1314	1120	0.0582	0.00591	125.5568	4.4504	12	4.87	±	16.71
911	695	391	0.1737	0.00936	99.7288	1.8052	29	3.94	±	19.13
964	947	691	0.3092	0.00844	-107.6192	1.6902	21.8	-6.04	±	-26.16
Ra-226 weighted average =			69.43	±	0.656	U (ppm)=		92.94	±	0.88
Ra-228 weighted average =			13.57	±	12.74	Th (ppm) =		50.21	±	47.1
210PB/234Th av =			380.82	±	5.51	U (ppm)=		509.8	±	7.38
	63 kev									
Ra-228 av&Th228 =			14.43	±	7.8	Th (ppm) =		53.39	±	28.9

Calculation of weighted average (up to 200 data sets can be input)

	weighted average=		69.4307		average=	71.64				
	weighted error=		0.65601		std.=	3.55				
data	±	err	error^2	1/error^2	data/error^2					
70.93	±	1.80	3.24	0.308642	21.892					
68.39	±	0.81	0.6561	1.524158	104.237					
71.11	±	1.54	2.3716	0.421656	29.984					
75.43	±	3.80	14.44	0.069252	5.22368					

Sample #	NOPI-330-GAM1 7.0cm									
Weight(g)	4.268	Geometry	7.0 cm				Counting Time(min)	1000		
time of background minutes			4320							
Nuclides	Total Counts	Bkgd(1)	Blank(2) (cpm)	Eblank cpm	Net counts	c. eff. (%)	intensity (%)	Activity (dpm/g)		
Pb-210	45 kev									
210	3550	2811	0.2666	0.00976	472.4	1.9406	4.1	139.11	±	57.83
Th-234										
62	6931	3682	0.3939	0.01249	2855.1	6.0258	5.7	194.76	±	5.45
(93Kev)										
93	9352	3509	0.8309	0.01996	5012.1	8.9688	6.8	192.55	±	2.32
Ra-226										
295	7901	1413	0.0927	0.00564	6395.3	5.365	18	155.17	±	1.29
352	12079	1175	0.1756	0.0029	10728.4	4.757	35	150.98	±	0.58
609	7691	652	0.223	0.0026	6816	2.4858	43	149.41	±	1.13
183.7	9035	2622	0.5414	0.0139	5871.6	17.4114	3.3	239.43	±	2.27
Th-228	583 kev									
228	847	622	0.1591	0.00914	65.9	0.897	86	2.00	±	15.97
Ra-228										
338	1401	1271	0.0582	0.00591	71.8	4.4504	12	3.15	±	22.10
911	472	495	0.1737	0.00936	-196.7	1.8052	29	-8.80	±	-13.62
964	972	713	0.3092	0.00844	-50.2	1.6902	21.8	-3.19	±	-38.30
Ra-226 weighted average =			155.03	±	0.47	U (ppm)=		207.5	±	0.63
Ra-228 weighted average =			13.57	±	12.74	Th (ppm) =		50.21	±	47.1
210PB/234Th av =			380.82	±	5.51	U (ppm)=		509.8	±	7.38
	63 kev									
Ra-228 av&Th228 =			14.43	±	7.8	Th (ppm) =		53.39	±	28.9
Calculation of weighted average (up to 200 data sets can be input)										
	weighted average=		155.035		average=	179.9				
	weighted error=		0.46877		std.=	51.53				
data	±	err	error^2	1/error^2	data/error^2					
155.17	±	1.29	1.6641	0.600925	93.2456					
150.98	±	0.58	0.3364	2.972652	448.811					
149.41	±	1.13	1.2769	0.783147	117.01					
239.43	±	2.27	5.1529	0.194065	46.4651					

Sample #	NOPI-331-GAM1 7.0cm									
Weight(g)	4.242	Geometry	7.0 cm			Counting Time(min)		347		
time of background minutes			4320							
Nuclides	Total Counts	Bkgd(1)	Blank(2) (cpm)	Eblank cpm	Net counts	c. eff. (%)	intensity (%)	Activity (dpm/g)		
Pb-210	45 kev									
210	2627	2110	0.2666	0.00976	424.4898	1.9406	4.1	362.45	±	61.00
Th-234										
62	4501	2785	0.3939	0.01249	1579.3167	6.0258	5.7	312.38	±	7.33
(93Kev)										
93	5147	2376	0.8309	0.01996	2482.6777	8.9688	6.8	276.55	±	3.29
Ra-226										
295	8339	936	0.0927	0.00564	7370.8331	5.365	18	518.53	±	1.21
352	13290	783	0.1756	0.0029	12446.067	4.757	35	507.84	±	0.54
609	8577	434	0.223	0.0026	8065.619	2.4858	43	512.63	±	1.04
183.7	6679	1986	0.5414	0.0139	4505.1342	17.4114	3.3	532.67	±	2.59
Th-228	583 kev									
228	434	429	0.1591	0.00914	-50.2077	0.897	86	-4.42	±	-18.29
Ra-228										
338	899	797	0.0582	0.00591	81.8046	4.4504	12	10.41	±	20.70
911	290	239	0.1737	0.00936	-9.2739	1.8052	29	-1.20	±	-62.73
964	567	432	0.3092	0.00844	27.7076	1.6902	21.8	5.11	±	51.56
Ra-226 weighted average =			510.82	±	0.44	U (ppm)=		683.8	±	0.59
Ra-228 weighted average =			13.57	±	12.74	Th (ppm) =		50.21	±	47.1
210PB/234Th av =			380.82	±	5.51	U (ppm)=		509.8	±	7.38
	63 kev									
Ra-228 av&Th228 =			14.43	±	7.8	Th (ppm) =		53.39	±	28.9
Calculation of weighted average (up to 200 data sets can be input)										
	weighted average=		510.816		average=	517.7				
	weighted error=		0.43912		std.=	13.17				
data	±	err	error^2	1/error^2	data/error^2					
518.53	±	1.21	1.4641	0.683013	354.163					
507.84	±	0.54	0.2916	3.429355	1741.56					
512.63	±	1.04	1.0816	0.924556	473.955					
532.67	±	2.59	6.7081	0.149074	79.407					

Sample #	NOPI-332-GAM1 7.0cm									
Weight(g)	4.109	Geometry	7.0 cm			Counting Time(min)		1057		
time of background minutes			4320							
Nuclides	Total Counts	Bkgd(1)	Blank(2) (cpm)	Eblank cpm	Net counts	c. eff. (%)	intensity (%)	Activity (dpm/g)		
Pb-210	45 kev									
210	2900	2421	0.2666	0.00976	197.2038	1.9406	4.1	57.07	±	89.50
Th-234										
62	5715	2943	0.3939	0.01249	2355.6477	6.0258	5.7	157.91	±	6.00
(93Kev)										
93	8056	2826	0.8309	0.01996	4351.7387	8.9688	6.8	164.29	±	2.49
Ra-226										
295	5126	1414	0.0927	0.00564	3614.0161	5.365	18	86.17	±	1.72
352	7303	1149	0.1756	0.0029	5968.3908	4.757	35	82.54	±	0.78
609	4824	626	0.223	0.0026	3962.289	2.4858	43	85.35	±	1.49
183.7	6600	2331	0.5414	0.0139	3696.7402	17.4114	3.3	148.14	±	2.86
Th-228	583 kev									
228	911	664	0.1591	0.00914	78.8313	0.897	86	2.35	±	14.60
Ra-228										
338	1267	1188	0.0582	0.00591	17.4826	4.4504	12	0.75	±	44.78
911	612	448	0.1737	0.00936	-19.6009	1.8052	29	-0.86	±	-43.15
964	940	779	0.3092	0.00844	-165.8244	1.6902	21.8	-10.36	±	-21.08
Ra-226 weighted average =			86.66	±	0.63	U (ppm)=		116	±	0.84
Ra-228 weighted average =			13.57	±	12.74	Th (ppm) =		50.21	±	47.1
210PB/234Th av =			380.82	±	5.51	U (ppm)=		509.8	±	7.38
	63 kev									
Ra-228 av&Th228 =			14.43	±	7.8	Th (ppm) =		53.39	±	28.9
Calculation of weighted average (up to 200 data sets can be input)										
	weighted average=		86.6556		average=	105.3				
	weighted error=		0.62569		std.=	37.09				
data	±	err	error^2	1/error^2	data/error^2					
86.17	±	1.72	2.9584	0.338021	29.1272					
82.54	±	0.78	0.6084	1.643655	135.667					
85.35	±	1.49	2.2201	0.45043	38.4442					
148.14	±	2.86	8.1796	0.122255	18.1109					

NOPI-333-GAM1 calc

Sample #	NOPI-333-GAM1 7.0cm									
Weight(g)	3.608	Geometry	7.0 cm			Counting Time(min)		403		
time of background minutes			4320							

Nuclides	Total Counts	Bkgd(1)	Blank(2) (cpm)	Eblank cpm	Net counts	c. eff. (%)	intensity (%)	Activity (dpm/g)		
Pb-210	45 kev									
210	1835	1578	0.2666	0.00976	149.5602	1.9406	4.1	129.28	±	102.77
Th-234										
62	5679	1963	0.3939	0.01249	3557.2583	6.0258	5.7	712.29	±	4.88
(93Kev)										
93	9132	2281	0.8309	0.01996	6516.1473	8.9688	6.8	734.81	±	2.03
Ra-226										
295	2859	562	0.0927	0.00564	2259.6419	5.365	18	160.93	±	2.18
352	4321	453	0.1756	0.0029	3797.2332	4.757	35	156.85	±	0.97
609	2732	273	0.223	0.0026	2369.131	2.4858	43	152.43	±	1.92
183.7	5799	1156	0.5414	0.0139	4424.8158	17.4114	3.3	529.63	±	2.62
Th-228	583 kev									
228	348	238	0.1591	0.00914	45.8827	0.897	86	4.09	±	19.14
Ra-228										
338	600	527	0.0582	0.00591	49.5454	4.4504	12	6.38	±	26.60
911	272	174	0.1737	0.00936	27.9989	1.8052	29	3.68	±	36.10
964	354	289	0.3092	0.00844	-59.6076	1.6902	21.8	-11.13	±	-35.15

Ra-226 weighted average =		188.78	±	0.77	U (ppm)=		252.7	±	1.03
Ra-228 weighted average =		13.57	±	12.74	Th (ppm) =		50.21	±	47.1
210PB/234Th av =		380.82	±	5.51	U (ppm)=		509.8	±	7.38
63 kev									
Ra-228 av&Th228 =		14.43	±	7.8	Th (ppm) =		53.39	±	28.9

Calculation of weighted average (up to 200 data sets can be input)

	weighted average=		188.779		average=	279.6				
	weighted error=		0.76919		std.=	216.5				
data	±	err	error^2	1/error^2	data/error^2					
160.93	±	2.18	4.7524	0.21042	33.8629					
156.85	±	0.97	0.9409	1.062812	166.702					
152.43	±	1.92	3.6864	0.271267	41.3493					
529.63	±	2.62	6.8644	0.145679	77.1561					

Sample #	NOPI-334-GAM1 7.0cm									
Weight(g)	4.288	Geometry	7.0 cm			Counting Time(min)		600		
time of background minutes			4320							
Nuclides	Total Counts	Bkgd(1)	Blank(2) (cpm)	Eblank cpm	Net counts	c. eff. (%)	intensity (%)	Activity (dpm/g)		
Pb-210	45 kev									
210	4386	3531	0.2666	0.00976	695.04	1.9406	4.1	339.53	±	47.67
Th-234										
62	6981	4739	0.3939	0.01249	2005.66	6.0258	5.7	226.97	±	6.50
(93Kev)										
93	7783	3851	0.8309	0.01996	3433.46	8.9688	6.8	218.82	±	2.80
Ra-226										
295	13830	2053	0.0927	0.00564	11721.38	5.365	18	471.77	±	0.96
352	21258	1647	0.1756	0.0029	19505.64	4.757	35	455.36	±	0.43
609	13803	929	0.223	0.0026	12740.2	2.4858	43	463.27	±	0.83
183.7	10410	3629	0.5414	0.0139	6456.16	17.4114	3.3	436.74	±	2.17
Th-228	583 kev									
228	1007	987	0.1591	0.00914	-75.46	0.897	86	-3.80	±	-14.92
Ra-228										
338	1728	1645	0.0582	0.00591	48.08	4.4504	12	3.50	±	27.00
911	668	589	0.1737	0.00936	-25.22	1.8052	29	-1.87	±	-38.04
964	1069	1006	0.3092	0.00844	-122.52	1.6902	21.8	-12.92	±	-24.52
Ra-226 weighted average =			458.47	±	0.35	U (ppm)=		613.7	±	0.47
Ra-228 weighted average =			13.57	±	12.74	Th (ppm) =		50.21	±	47.1
210PB/234Th av =			380.82	±	5.51	U (ppm)=		509.8	±	7.38
	63 kev									
Ra-228 av&Th228 =			14.43	±	7.8	Th (ppm) =		53.39	±	28.9

Calculation of weighted average (up to 200 data sets can be input)

	weighted average=		458.466		average=	451.8				
	weighted error=		0.35013		std.=	13.62				
data	±	err	error^2	1/error^2	data/error^2					
471.77	±	0.96	0.9216	1.085069	511.903					
455.36	±	0.43	0.1849	5.408329	2462.74					
463.27	±	0.83	0.6889	1.451589	672.478					
436.74	±	2.17	4.7089	0.212364	92.7478					

Sample #	NOPI-335-GAM1 7.0cm									
Weight(g)	4.053	Geometry	7.0 cm			Counting Time(min)		1425		
time of background minutes			4320							
Nuclides	Total Counts	Bkgd(1)	Blank(2) (cpm)	Eblank cpm	Net counts	c. eff. (%)	intensity (%)	Activity (dpm/g)		
Pb-210	45 kev									
210	2274	1868	0.2666	0.00976	26.095	1.9406	4.1	5.68	±	246.04
Th-234										
62	3440	2101	0.3939	0.01249	777.6925	6.0258	5.7	39.20	±	10.44
(93Kev)										
93	4586	2087	0.8309	0.01996	1314.9675	8.9688	6.8	37.33	±	4.52
Ra-226										
295	2854	1443	0.0927	0.00564	1278.9025	5.365	18	22.93	±	2.90
352	3555	1176	0.1756	0.0029	2128.77	4.757	35	22.14	±	1.30
609	2433	644	0.223	0.0026	1471.225	2.4858	43	23.83	±	2.44
183.7	4016	2188	0.5414	0.0139	1056.505	17.4114	3.3	31.84	±	5.35
Th-228	583 kev									
228	1084	692	0.1591	0.00914	165.2825	0.897	86	3.71	±	10.08
Ra-228										
338	1398	1227	0.0582	0.00591	88.065	4.4504	12	2.86	±	19.95
911	819	450	0.1737	0.00936	121.4775	1.8052	29	4.02	±	17.33
964	1091	784	0.3092	0.00844	-133.61	1.6902	21.8	-6.28	±	-23.48
Ra-226 weighted average =			22.93	±	1.046	U (ppm)=		30.69	±	1.40
Ra-228 weighted average =			13.57	±	12.74	Th (ppm) =		50.21	±	47.1
210PB/234Th av =			380.82	±	5.51	U (ppm)=		509.8	±	7.38
	63 kev									
Ra-228 av&Th228 =			14.43	±	7.8	Th (ppm) =		53.39	±	28.9
Calculation of weighted average (up to 200 data sets can be input)										
	weighted average=		22.9245		average=	25.94				
	weighted error=		1.04626		std.=	5.182				
data	±	err	error^2	1/error^2	data/error^2					
22.93	±	2.90	8.41	0.118906	2.72652					
22.14	±	1.30	1.69	0.591716	13.1006					
23.83	±	2.44	5.9536	0.167966	4.00262					
31.84	±	5.35	28.6225	0.034938	1.11241					

Sample #	NOPI-336-GAM1 7.0cm									
Weight(g)	4.008	Geometry	7.0 cm				Counting Time(min)	1461		
time of background minutes			4320							
Nuclides	Total Counts	Bkgd(1)	Blank(2) (cpm)	Eblank cpm	Net counts	c. eff. (%)	intensity (%)	Activity (dpm/g)		
Pb-210	45 kev									
210	2323	1979	0.2666	0.00976	-45.5026	1.9406	4.1	-9.77	±	-186.32
Th-234										
62	3446	2150	0.3939	0.01249	720.5121	6.0258	5.7	35.82	±	10.85
(93Kev)										
93	4638	2048	0.8309	0.01996	1376.0551	8.9688	6.8	38.53	±	4.42
Ra-226										
295	2687	1326	0.0927	0.00564	1225.5653	5.365	18	21.67	±	2.96
352	3366	1160	0.1756	0.0029	1949.4484	4.757	35	20.00	±	1.36
609	2334	745	0.223	0.0026	1263.197	2.4858	43	20.18	±	2.63
183.7	4222	2186	0.5414	0.0139	1245.0146	17.4114	3.3	37.00	±	4.93
Th-228	583 kev									
228	1066	668	0.1591	0.00914	165.5549	0.897	86	3.66	±	10.07
Ra-228										
338	1425	1215	0.0582	0.00591	124.9698	4.4504	12	4.00	±	16.75
911	760	441	0.1737	0.00936	65.2243	1.8052	29	2.13	±	23.65
964	1133	810	0.3092	0.00844	-128.7412	1.6902	21.8	-5.97	±	-23.92
Ra-226 weighted average =			21.09	±	1.09	U (ppm)=		28.23	±	1.46
Ra-228 weighted average =			13.57	±	12.74	Th (ppm) =		50.21	±	47.1
210PB/234Th av =			380.82	±	5.51	U (ppm)=		509.8	±	7.38
	63 kev									
Ra-228 av&Th228 =			14.43	±	7.8	Th (ppm) =		53.39	±	28.9

Calculation of weighted average (up to 200 data sets can be input)

	weighted average=		21.0899		average=	25.73				
	weighted error=		1.09076		std.=	9.763				
data	±	err	error^2	1/error^2	data/error^2					
21.67	±	2.96	8.7616	0.114134	2.47329					
20.00	±	1.36	1.8496	0.540657	10.8131					
20.18	±	2.63	6.9169	0.144573	2.91749					
37.00	±	4.93	24.3049	0.041144	1.52233					

NOPI-337-GAM1 calc

Sample #	NOPI-337-GAM1 7.0cm									
Weight(g)	4.059	Geometry	7.0 cm				Counting Time(min)	1430		
time of background minutes			4320							

Nuclides	Total Counts	Bkgd(1)	Blank(2) (cpm)	Eblank cpm	Net counts	c. eff. (%)	intensity (%)	Activity (dpm/g)		
Pb-210	45 kev									
210	2139	1755	0.2666	0.00976	2.762	1.9406	4.1	0.60	±	756.26
Th-234										
62	3242	1863	0.3939	0.01249	815.723	6.0258	5.7	40.92	±	10.19
(93Kev)										
93	4598	1987	0.8309	0.01996	1422.813	8.9688	6.8	40.19	±	4.35
Ra-226										
295	2071	1329	0.0927	0.00564	609.439	5.365	18	10.87	±	4.19
352	2336	1027	0.1756	0.0029	1057.892	4.757	35	10.95	±	1.85
609	1690	613	0.223	0.0026	758.11	2.4858	43	12.22	±	3.40
183.7	3874	1950	0.5414	0.0139	1149.798	17.4114	3.3	34.48	±	5.13
Th-228	583 kev									
228	1057	644	0.1591	0.00914	185.487	0.897	86	4.14	±	9.52
Ra-228										
338	1344	1186	0.0582	0.00591	74.774	4.4504	12	2.41	±	21.65
911	801	411	0.1737	0.00936	141.609	1.8052	29	4.66	±	16.05
964	1029	704	0.3092	0.00844	-117.156	1.6902	21.8	-5.48	±	-25.07
Ra-226 weighted average =			13.06	±	1.453	U (ppm)=		17.48	±	1.94
Ra-228 weighted average =			13.57	±	12.74	Th (ppm) =		50.21	±	47.1
210PB/234Th av =			380.82	±	5.51	U (ppm)=		509.8	±	7.38
	63 kev									
Ra-228 av&Th228 =			14.43	±	7.8	Th (ppm) =		53.39	±	28.9

Calculation of weighted average (up to 200 data sets can be input)

	weighted average=		13.06		average=	19.22				
	weighted error=		1.45302		std.=	13.23				
data	±	err	error^2	1/error^2	data/error^2					
10.87	±	4.19	17.5561	0.05696	0.61916					
10.95	±	1.85	3.4225	0.292184	3.19942					
12.22	±	3.40	11.56	0.086505	1.05709					
34.48	±	5.13	26.3169	0.037998	1.31018					

Sample #	NOPI-363-GAM1 7.0cm									
Weight(g)	3.976	Geometry	7.0 cm			Counting Time(min)		1401		
time of background minutes			4320							
Nuclides	Total Counts	Bkgd(1)	Blank(2) (cpm)	Eblank cpm	Net counts	c. eff. (%)	intensity (%)	Activity (dpm/g)		
Pb-210	45 kev									
210	5947	4824	0.2666	0.00976	749.4934	1.9406	4.1	169.11	±	45.91
Th-234										
62	8680	5997	0.3939	0.01249	2131.1461	6.0258	5.7	111.39	±	6.31
(93Kev)										
93	9781	5072	0.8309	0.01996	3544.9091	8.9688	6.8	104.35	±	2.75
Ra-226										
295	18344	2520	0.0927	0.00564	15694.127	5.365	18	291.75	±	0.83
352	28418	2191	0.1756	0.0029	25980.984	4.757	35	280.14	±	0.37
609	18661	1097	0.223	0.0026	17251.577	2.4858	43	289.74	±	0.71
183.7	12534	4916	0.5414	0.0139	6859.4986	17.4114	3.3	214.32	±	2.10
Th-228	583 kev									
228	1519	1100	0.1591	0.00914	196.1009	0.897	86	4.56	±	9.26
Ra-228										
338	2423	2136	0.0582	0.00591	205.4618	4.4504	12	6.91	±	13.06
911	1110	693	0.1737	0.00936	173.6463	1.8052	29	5.95	±	14.50
964	1714	1271	0.3092	0.00844	9.8108	1.6902	21.8	0.48	±	86.65
Ra-226 weighted average =			282.05	±	0.3	U (ppm)=		377.6	±	0.40
Ra-228 weighted average =			13.57	±	12.74	Th (ppm) =		50.21	±	47.1
210PB/234Th av =			380.82	±	5.51	U (ppm)=		509.8	±	7.38
	63 kev									
Ra-228 av&Th228 =			14.43	±	7.8	Th (ppm) =		53.39	±	28.9
Calculation of weighted average (up to 200 data sets can be input)										
	weighted average=		282.052		average=	261.4				
	weighted error=		0.30197		std.=	41.05				
data	±	err	error^2	1/error^2	data/error^2					
291.75	±	0.83	0.6889	1.451589	423.501					
280.14	±	0.37	0.1369	7.304602	2046.31					
289.74	±	0.71	0.5041	1.983733	574.767					
214.32	±	2.10	4.41	0.226757	48.5986					

Sample #	NOPI-364-GAM1 7.0cm									
Weight(g)	4.128	Geometry	7.0 cm			Counting Time(min)		1469		
time of background minutes			4320							
Nuclides	Total Counts	Bkgd(1)	Blank(2) (cpm)	Eblank cpm	Net counts	c. eff. (%)	intensity (%)	Activity (dpm/g)		
Pb-210	45 kev									
210	3546	2701	0.2666	0.00976	453.3646	1.9406	4.1	93.97	±	59.03
Th-234										
62	5889	3110	0.3939	0.01249	2200.3609	6.0258	5.7	105.64	±	6.21
(93Kev)										
93	8256	3041	0.8309	0.01996	3994.4079	8.9688	6.8	108.01	±	2.59
Ra-226										
295	5972	1655	0.0927	0.00564	4180.8237	5.365	18	71.39	±	1.60
352	8528	1316	0.1756	0.0029	6954.0436	4.757	35	68.88	±	0.72
609	5624	767	0.223	0.0026	4529.413	2.4858	43	69.88	±	1.39
183.7	7074	2702	0.5414	0.0139	3576.6834	17.4114	3.3	102.65	±	2.91
Th-228	583 kev									
228	1108	828	0.1591	0.00914	46.2821	0.897	86	0.99	±	19.05
Ra-228										
338	1552	1444	0.0582	0.00591	22.5042	4.4504	12	0.69	±	39.47
911	800	485	0.1737	0.00936	59.8347	1.8052	29	1.88	±	24.69
964	1132	890	0.3092	0.00844	-212.2148	1.6902	21.8	-9.50	±	-18.63
Ra-226 weighted average =			70.74	±	0.58	U (ppm)=		94.69	±	0.78
Ra-228 weighted average =			13.57	±	12.74	Th (ppm) =		50.21	±	47.1
210PB/234Th av =			380.82	±	5.51	U (ppm)=		509.8	±	7.38
	63 kev									
Ra-228 av&Th228 =			14.43	±	7.8	Th (ppm) =		53.39	±	28.9

Calculation of weighted average (up to 200 data sets can be input)

	weighted average=		70.7363		average=	80.47				
	weighted error=		0.5817		std.=	19.21				
data	±	err	error^2	1/error^2	data/error^2					
71.39	±	1.60	2.56	0.390625	27.8867					
68.88	±	0.72	0.5184	1.929012	132.87					
69.88	±	1.39	1.9321	0.517572	36.1679					
102.65	±	2.91	8.4681	0.11809	12.122					

Sample #	NOPI-365-GAM1 7.0cm									
Weight(g)	4.119	Geometry	7.0 cm			Counting Time(min)		2000		
time of background minutes			4320							
Nuclides	Total Counts	Bkgd(1)	Blank(2) (cpm)	Eblank cpm	Net counts	c. eff. (%)	intensity (%)	Activity (dpm/g)		
Pb-210	45 kev									
210	3606	2885	0.2666	0.00976	187.8	1.9406	4.1	28.65	±	91.71
Th-234										
62	6273	3294	0.3939	0.01249	2191.2	6.0258	5.7	77.44	±	6.22
(93Kev)										
93	8866	3349	0.8309	0.01996	3855.2	8.9688	6.8	76.73	±	2.64
Ra-226										
295	4241	1937	0.0927	0.00564	2118.6	5.365	18	26.63	±	2.25
352	5440	1550	0.1756	0.0029	3538.8	4.757	35	25.80	±	1.01
609	3655	925	0.223	0.0026	2284	2.4858	43	25.94	±	1.96
183.7	7258	3002	0.5414	0.0139	3173.2	17.4114	3.3	67.04	±	3.09
Th-228	583 kev									
228	1430	929	0.1591	0.00914	182.8	0.897	86	2.88	±	9.59
Ra-228										
338	2055	1700	0.0582	0.00591	238.6	4.4504	12	5.42	±	12.12
911	1097	638	0.1737	0.00936	111.6	1.8052	29	2.59	±	18.08
964	1566	1166	0.3092	0.00844	-218.4	1.6902	21.8	-7.20	±	-18.36
Ra-226 weighted average =			28.73	±	0.805	U (ppm)=		38.46	±	1.08
Ra-228 weighted average =			13.57	±	12.74	Th (ppm) =		50.21	±	47.1
210PB/234Th av =			380.82	±	5.51	U (ppm)=		509.8	±	7.38
	63 kev									
Ra-228 av&Th228 =			14.43	±	7.8	Th (ppm) =		53.39	±	28.9

Calculation of weighted average (up to 200 data sets can be input)

	weighted average=		28.7293		average=	39.59				
	weighted error=		0.80507		std.=	23.77				
data	±	err	error^2	1/error^2	data/error^2					
26.63	±	2.25	5.0625	0.197531	5.26025					
25.80	±	1.01	1.0201	0.980296	25.2916					
25.94	±	1.96	3.8416	0.260308	6.75239					
67.04	±	3.09	9.5481	0.104733	7.02129					

NOPI-366-GAM1 calc

Sample #	NOPI-366-GAM1 7.0cm									
Weight(g)	4.893	Geometry	7.0 cm			Counting Time(min)		1494		
time of background minutes			4320							
Nuclides	Total Counts	Bkgd(1)	Blank(2) (cpm)	Eblank cpm	Net counts	c. eff. (%)	intensity (%)	Activity (dpm/g)		
Pb-210	45 kev									
210	6053	4502	0.2666	0.00976	1152.6996	1.9406	4.1	198.18	±	37.02
Th-234										
62	9959	5651	0.3939	0.01249	3719.5134	6.0258	5.7	148.14	±	4.77
(93Kev)										
93	13398	5145	0.8309	0.01996	7011.6354	8.9688	6.8	157.27	±	1.96
Ra-226										
295	14599	2247	0.0927	0.00564	12213.506	5.365	18	173.01	±	0.94
352	22382	1908	0.1756	0.0029	20211.654	4.757	35	166.06	±	0.42
609	14631	1008	0.223	0.0026	13289.838	2.4858	43	170.08	±	0.81
183.7	12986	4284	0.5414	0.0139	7893.1484	17.4114	3.3	187.92	±	1.96
Th-228	583 kev									
228	1280	1003	0.1591	0.00914	39.3046	0.897	86	0.70	±	20.68
Ra-228										
338	2131	2036	0.0582	0.00591	8.0492	4.4504	12	0.21	±	66.00
911	1000	643	0.1737	0.00936	97.4922	1.8052	29	2.55	±	19.35
964	1446	1165	0.3092	0.00844	-180.9448	1.6902	21.8	-6.72	±	-20.18
Ra-226 weighted average =			168.35	±	0.34	U (ppm)=		225.4	±	0.46
Ra-228 weighted average =			13.57	±	12.74	Th (ppm) =		50.21	±	47.1
210PB/234Th av =			380.82	±	5.51	U (ppm)=		509.8	±	7.38
	63 kev									
Ra-228 av&Th228 =			14.43	±	7.8	Th (ppm) =		53.39	±	28.9

Calculation of weighted average (up to 200 data sets can be input)

	weighted average=		168.353		average=	174.7				
	weighted error=		0.34129		std.=	11.64				
data	±	err	error^2	1/error^2	data/error^2					
173.01	±	0.94	0.8836	1.131734	195.801					
166.06	±	0.42	0.1764	5.668934	941.383					
170.08	±	0.81	0.6561	1.524158	259.229					
187.92	±	1.96	3.8416	0.260308	48.9171					

Sample #	NOPI-367-GAM1 7.0cm									
Weight(g)	4.651	Geometry	7.0 cm			Counting Time(min)		500		
time of background minutes			4320							

Nuclides	Total Counts	Bkgd(1)	Blank(2) (cpm)	Eblank cpm	Net counts	c. eff. (%)	intensity (%)	Activity (dpm/g)		
Pb-210	45 kev									
210	6921	5626	0.2666	0.00976	1161.7	1.9406	4.1	627.85	±	36.88
Th-234										
62	8292	7099	0.3939	0.01249	996.05	6.0258	5.7	124.70	±	9.23
(93Kev)										
93	6232	5360	0.8309	0.01996	456.55	8.9688	6.8	32.19	±	7.67
Ra-226										
295	29399	2521	0.0927	0.00564	26831.65	5.365	18	1194.78	±	0.63
352	46347	2392	0.1756	0.0029	43867.2	4.757	35	1132.98	±	0.29
609	30675	1083	0.223	0.0026	29480.5	2.4858	43	1186.00	±	0.54
183.7	15011	5635	0.5414	0.0139	9105.3	17.4114	3.3	681.44	±	1.82
Th-228	583 kev									
228	1041	1114	0.1591	0.00914	-152.55	0.897	86	-8.50	±	-10.50
Ra-228										
338	2137	2187	0.0582	0.00591	-79.1	4.4504	12	-6.37	±	-21.05
911	779	674	0.1737	0.00936	18.15	1.8052	29	1.49	±	44.84
964	1308	1088	0.3092	0.00844	65.4	1.6902	21.8	7.63	±	33.56
Ra-226 weighted average =			1144.10	±	0.235	U (ppm)=		1531	±	0.31
Ra-228 weighted average =			13.57	±	12.74	Th (ppm) =		50.21	±	47.1
210PB/234Th av =			380.82	±	5.51	U (ppm)=		509.8	±	7.38
	63 kev									
Ra-228 av&Th228 =			14.43	±	7.8	Th (ppm) =		53.39	±	28.9

Calculation of weighted average (up to 200 data sets can be input)

	weighted average=		1144.07		average=	1000				
	weighted error=		0.23478		std.=	277.3				
data	±	err	error^2	1/error^2	data/error^2					
1194.78	±	0.63	0.3969	2.51953	3010.28					
1132.98	±	0.29	0.0841	11.8906	13471.8					
1186.00	±	0.54	0.2916	3.42936	4067.22					
681.44	±	1.82	3.3124	0.3019	205.724					

NOPI-368-GAM1 calc

Sample #	NOPI-368-GAM1 7.0cm									
Weight(g)	4.415	Geometry	7.0 cm			Counting Time(min)		1000		
time of background minutes			4320							

Nuclides	Total Counts	Bkgd(1)	Blank(2) (cpm)	Eblank cpm	Net counts	c. eff. (%)	intensity (%)	Activity (dpm/g)		
Pb-210	45 kev									
210	2980	2678	0.2666	0.00976	35.4	1.9406	4.1	10.08	±	211.24
Th-234										
62	7072	3107	0.3939	0.01249	3571.1	6.0258	5.7	235.50	±	4.87
(93Kev)										
93	10304	3091	0.8309	0.01996	6382.1	8.9688	6.8	237.02	±	2.05
Ra-226										
295	4589	1338	0.0927	0.00564	3158.3	5.365	18	74.08	±	1.84
352	6568	1070	0.1756	0.0029	5322.4	4.757	35	72.41	±	0.82
609	4361	611	0.223	0.0026	3527	2.4858	43	74.74	±	1.58
183.7	7152	2305	0.5414	0.0139	4305.6	17.4114	3.3	169.73	±	2.65
Th-228	583 kev									
228	812	588	0.1591	0.00914	64.9	0.897	86	1.91	±	16.09
Ra-228										
338	1240	1048	0.0582	0.00591	133.8	4.4504	12	5.67	±	16.19
911	638	372	0.1737	0.00936	92.3	1.8052	29	3.99	±	19.88
964	844	642	0.3092	0.00844	-107.2	1.6902	21.8	-6.59	±	-26.21
Ra-226 weighted average =			78.98	±	0.656	U (ppm)=		105.7	±	0.88
Ra-228 weighted average =			13.57	±	12.74	Th (ppm) =		50.21	±	47.1
210PB/234Th av =			380.82	±	5.51	U (ppm)=		509.8	±	7.38
	63 kev									
Ra-228 av&Th228 =			14.43	±	7.8	Th (ppm) =		53.39	±	28.9

Calculation of weighted average (up to 200 data sets can be input)

	weighted average=		78.9826		average=	105.6				
	weighted error=		0.65575		std.=	55.53				
data	±	err	error^2	1/error^2	data/error^2					
74.08	±	1.84	3.3856	0.29537	21.8809					
72.41	±	0.82	0.6724	1.48721	107.689					
74.74	±	1.58	2.4964	0.40058	29.9391					
169.73	±	2.65	7.0225	0.1424	24.1695					

Sample #	NOPI-369-GAM1 7.0cm									
Weight(g)	4.248	Geometry	7.0 cm				Counting Time(min)	1000		
time of background minutes			4320							

Nuclides	Total Counts	Bkgd(1)	Blank(2) (cpm)	Eblank cpm	Net counts	c. eff. (%)	intensity (%)	Activity (dpm/g)		
Pb-210	45 kev									
210	2292	2002	0.2666	0.00976	23.4	1.9406	4.1	6.92	±	259.82
Th-234										
62	4473	2206	0.3939	0.01249	1873.1	6.0258	5.7	128.38	±	6.73
(93Kev)										
93	6212	2187	0.8309	0.01996	3194.1	8.9688	6.8	123.29	±	2.90
Ra-226										
295	3531	1038	0.0927	0.00564	2400.3	5.365	18	58.51	±	2.11
352	4742	880	0.1756	0.0029	3686.4	4.757	35	52.12	±	0.99
609	3010	544	0.223	0.0026	2243	2.4858	43	49.40	±	1.98
183.7	5062	1929	0.5414	0.0139	2591.6	17.4114	3.3	106.18	±	3.42
Th-228	583 kev									
228	791	498	0.1591	0.00914	133.9	0.897	86	4.09	±	11.20
Ra-228										
338	1144	951	0.0582	0.00591	134.8	4.4504	12	5.94	±	16.13
911	592	318	0.1737	0.00936	100.3	1.8052	29	4.51	±	19.07
964	781	611	0.3092	0.00844	-139.2	1.6902	21.8	-8.89	±	-23.00

Ra-226 weighted average =	55.50	±	0.794	U (ppm)=	74.29	±	1.06		
Ra-228 weighted average =	13.57	±	12.74	Th (ppm) =	50.21	±	47.1		
210PB/234Th av =	380.82	±	5.51	U (ppm)=	509.8	±	7.38		
63 kev									
Ra-228 av&Th228 =	14.43	±	7.8	Th (ppm) =	53.39	±	28.9		

Calculation of weighted average (up to 200 data sets can be input)

	weighted average=		55.5028		average=	69.23				
	weighted error=		0.79418		std.=	32.03				
data	±	err	error^2	1/error^2	data/error^2					
58.51	±	2.11	4.4521	0.22461	13.1421					
52.12	±	0.99	0.9801	1.0203	53.1782					
49.40	±	1.98	3.9204	0.25508	12.6008					
106.18	±	3.42	11.6964	0.0855	9.07801					

NOPI-370-GAM1 calc

Sample #	NOPI-370-GAM1 7.0cm									
Weight(g)	4.653	Geometry	7.0 cm			Counting Time(min)		272		
time of background minutes			4320							

Nuclides	Total Counts	Bkgd(1)	Blank(2) (cpm)	Eblank cpm	Net counts	c. eff. (%)	intensity (%)	Activity (dpm/g)		
Pb-210	45 kev									
210	2605	1996	0.2666	0.00976	536.4848	1.9406	4.1	532.76	±	54.26
Th-234										
62	4196	2777	0.3939	0.01249	1311.8592	6.0258	5.7	301.78	±	8.04
(93Kev)										
93	4566	2233	0.8309	0.01996	2106.9952	8.9688	6.8	272.97	±	3.57
Ra-226										
295	7943	936	0.0927	0.00564	6981.7856	5.365	18	571.24	±	1.24
352	12406	886	0.1756	0.0029	11472.237	4.757	35	544.43	±	0.56
609	7897	431	0.223	0.0026	7405.344	2.4858	43	547.40	±	1.09
183.7	6066	1870	0.5414	0.0139	4048.7392	17.4114	3.3	556.76	±	2.74
Th-228	583 kev									
228	402	401	0.1591	0.00914	-42.2752	0.897	86	-4.33	±	-19.94
Ra-228										
338	802	729	0.0582	0.00591	57.1696	4.4504	12	8.46	±	24.76
911	285	215	0.1737	0.00936	22.7536	1.8052	29	3.43	±	40.05
964	456	403	0.3092	0.00844	-31.1024	1.6902	21.8	-6.67	±	-48.66
Ra-226 weighted average =			548.91	±	0.456	U (ppm)=		734.8	±	0.61
Ra-228 weighted average =			13.57	±	12.74	Th (ppm) =		50.21	±	47.1
210PB/234Th av =			380.82	±	5.51	U (ppm)=		509.8	±	7.38
	63 kev									
Ra-228 av&Th228 =			14.43	±	7.8	Th (ppm) =		53.39	±	28.9

Calculation of weighted average (up to 200 data sets can be input)

	weighted average=		548.912		average=	549.5				
	weighted error=		0.45577		std.=	6.435				
data	±	err	error^2	1/error^2	data/error^2					
571.24	±	1.24	1.5376	0.65036	371.514					
544.43	±	0.56	0.3136	3.18878	1736.07					
547.40	±	1.09	1.1881	0.84168	460.736					
556.76	±	2.74	7.5076	0.1332	74.1595					

Sample #	NOPI-371-GAM1 7.0cm									
Weight(g)	3.884	Geometry	7.0 cm				Counting Time(min)	2000		
time of background minutes			4320							
Nuclides	Total Counts	Bkgd(1)	Blank(2) (cpm)	Eblank cpm	Net counts	c. eff. (%)	intensity (%)	Activity (dpm/g)		
Pb-210	45 kev									
210	3281	2606	0.2666	0.00976	141.8	1.9406	4.1	22.94	±	105.55
Th-234										
62	3871	2837	0.3939	0.01249	246.2	6.0258	5.7	9.23	±	18.56
(93Kev)										
93	4921	2641	0.8309	0.01996	618.2	8.9688	6.8	13.05	±	6.59
Ra-226										
295	4360	1928	0.0927	0.00564	2246.6	5.365	18	29.95	±	2.18
352	5346	1529	0.1756	0.0029	3465.8	4.757	35	26.80	±	1.02
609	3740	964	0.223	0.0026	2330	2.4858	43	28.06	±	1.94
183.7	5043	2930	0.5414	0.0139	1030.2	17.4114	3.3	23.08	±	5.42
Th-228	583 kev									
228	1472	911	0.1591	0.00914	242.8	0.897	86	4.05	±	8.32
Ra-228										
338	1981	1740	0.0582	0.00591	124.6	4.4504	12	3.00	±	16.77
911	1150	631	0.1737	0.00936	171.6	1.8052	29	4.22	±	14.58
964	1611	1184	0.3092	0.00844	-191.4	1.6902	21.8	-6.69	±	-19.62
Ra-226 weighted average =			27.39	±	0.824	U (ppm)=		36.66	±	1.10
Ra-228 weighted average =			13.57	±	12.74	Th (ppm) =		50.21	±	47.1
210PB/234Th av =			380.82	±	5.51	U (ppm)=		509.8	±	7.38
	63 kev									
Ra-228 av&Th228 =			14.43	±	7.8	Th (ppm) =		53.39	±	28.9
Calculation of weighted average (up to 200 data sets can be input)										
	weighted average=		27.392		average=	25.98				
	weighted error=		0.82441		std.=	2.589				
data	±	err	error^2	1/error^2	data/error^2					
29.95	±	2.18	4.7524	0.21042	6.30208					
26.80	±	1.02	1.0404	0.96117	25.7593					
28.06	±	1.94	3.7636	0.2657	7.45563					
23.08	±	5.42	29.3764	0.03404	0.78566					

Analysis Sheet

Sample sheet	**NOPI-308*GAM1 data**			*DATE*	3/29/94	*TIME (MIN)*	311
Isotope	E. (Kev)	Channels	Back Chan.	Counts	Back Count	Net Count	**CPM**
210 Pb	45	89-94	86-88	1764	**1335**	*429*	1.38
			95-97	**3099**			
234 Th	63	122-127	119-121	2654	**1630**	*1024*	3.29
			128-130	**4284**			
234 Th	92	182-186	180-181	3083	**1471**	*1612*	5.18
			187-189	**4554**			
226Ra/235U	186	367-372	364-366	3788	**1228**	*2560*	8.23
			373-375	**5016**			
214 Pb	295	585-592	581-584	4748	**594**	*4154*	13.36
			593-596	**5342**			
228 Ac	338	671-678	667-670	588	**476**	*112*	0.36
			679-682	**1064**			
214 Pb	352	698-705	694-697	7463	**504**	*6959*	22.38
			706-709	**7967**			
208 Tl	583	1160-1167	1156-1159	394	**255**	*139*	0.45
			1168-1171	**649**			
214 Bi	609	1213-1220	1209-1212	4888	**236**	*4652*	14.96
			1221-1224	**5124**			
228 Ac	911	1816-1823	1813-1815	281	**136**	*145*	0.47
			1824-1828	**417**			
228 Ac	964	1924-1941	1915-1923	408	**273**	*135*	0.43
228Ac	969		1942-1950	**681**			

Sample sheet	**NOPI-309*GAM1 data**			*DATE*	3/30/94	*TIME (MIN)*	300
Isotope	E. (Kev)	Channels	Back Chan.	Counts	Back Count	Net Count	**CPM**
210 Pb	45	89-94	86-88	3452	**2637**	*815*	2.72
			95-97	**6089**			
234 Th	63	122-127	119-121	5829	**3356**	*2473*	8.24
			128-130	**9185**			
234 Th	92	182-186	180-181	7121	**2867**	*4254*	14.18
			187-189	**9988**			
226Ra/235U	186	367-372	364-366	8057	**2187**	*5870*	19.57
			373-375	**10244**			
214 Pb	295	585-592	581-584	10470	**993**	*9477*	31.59
			593-596	**11463**			
228 Ac	338	671-678	667-670	959	**834**	*125*	0.42
			679-682	**1793**			
214 Pb	352	698-705	694-697	16523	**824**	*15699*	52.33
			706-709	**17347**			
208 Tl	583	1160-1167	1156-1159	484	**447**	*37*	0.12
			1168-1171	**931**			
214 Bi	609	1213-1220	1209-1212	10707	**382**	*10325*	34.42
			1221-1224	**11089**			
228 Ac	911	1816-1823	1813-1815	382	**244**	*138*	0.46
			1824-1828	**626**			
228 Ac	964	1924-1941	1915-1923	~~288~~ 577	~~705~~ 461	~~417~~ 71	-1.39
228Ac	969		1942-1950	**993**			

Sample sheet	**NOPI-310*GAM1 data**			*DATE*	3/30/94	*TIME (MIN)*	280
Isotope	E. (Kev)	Channels	Back Chan.	Counts	Back Count	Net Count	**CPM**
210 Pb	45	89-94	86-88	2535	**1955**	*580*	2.07
			95-97	**4490**			
234 Th	63	122-127	119-121	4410	**2502**	*1908*	6.81
			128-130	**6912**			
234 Th	92	182-186	180-181	5452	**2184**	*3268*	11.67
			187-189	**7636**			
226Ra/235U	186	367-372	364-366	6022	**1643**	*4379*	15.64
			373-375	**7665**			
214 Pb	295	585-592	581-584	7663	**757**	*6906*	24.66
			593-596	**8420**			
228 Ac	338	671-678	667-670	748	**663**	*85*	0.30
			679-682	**1411**			
214 Pb	352	698-705	694-697	12021	**636**	*11385*	40.66
			706-709	**12657**			
208 Tl	583	1160-1167	1156-1159	411	**314**	*97*	0.35
			1168-1171	**725**			
214 Bi	609	1213-1220	1209-1212	7836	**346**	*7490*	26.75
			1221-1224	**8182**			
228 Ac	911	1816-1823	1813-1815	277	**186**	*91*	0.33
			1824-1828	**463**			
228 Ac	964	1924-1941	1915-1923	400 214	356 ~~**542**~~	~~328~~ 44	-1.17
228Ac	969		1942-1950	**756**			

Sample sheet	**NOPI-311*GAM1 data**			*DATE*	3/31/94	*TIME (MIN)*	222
Isotope	E. (Kev)	Channels	Back Chan.	Counts	Back Count	Net Count	**CPM**
210 Pb	45	89-94	86-88	1954	**1504**	*450*	2.03
			95-97	**3458**			
234 Th	63	122-127	119-121	3159	**1865**	*1294*	5.83
			128-130	**5024**			
234 Th	92	182-186	180-181	3918	**1676**	*2242*	10.10
			187-189	**5594**			
226Ra/235U	186	367-372	364-366	4527	**1351**	*3176*	14.31
			373-375	**5878**			
214 Pb	295	585-592	581-584	5831	**595**	*5236*	23.59
			593-596	**6426**			
228 Ac	338	671-678	667-670	574	**481**	*93*	0.42
			679-682	**1055**			
214 Pb	352	698-705	694-697	9208	**501**	*8707*	39.22
			706-709	**9709**			
208 Tl	583	1160-1167	1156-1159	315	**254**	*61*	0.27
			1168-1171	**569**			
214 Bi	609	1213-1220	1209-1212	6128	**251**	*5877*	26.47
			1221-1224	**6379**			
228 Ac	911	1816-1823	1813-1815	230	**135**	*95*	0.43
			1824-1828	**365**			
228 Ac	964	1924-1941	1915-1923	371	**257**	*114*	0.51
228Ac	969		1942-1950	**628**			

Sample sheet	**NOPI-312*GAM1 data**			*DATE*	4/1/94	*TIME (MIN)*	278
Isotope	E. (Kev)	Channels	Back Chan.	Counts	Back Count	Net Count	**CPM**
210 Pb	45	89-94	86-88	1931	**1433**	*498*	1.79
			95-97	**3364**			
234 Th	63	122-127	119-121	3146	**1824**	*1322*	4.76
			128-130	**4970**			
234 Th	92	182-186	180-181	3868	**1632**	*2236*	8.04
			187-189	**5500**			
226Ra/235U	186	367-372	364-366	4299	**1297**	*3002*	10.80
			373-375	**5596**			
214 Pb	295	585-592	581-584	5440	**655**	*4785*	17.21
			593-596	**6095**			
228 Ac	338	671-678	667-670	611	**542**	*69*	0.25
			679-682	**1153**			
214 Pb	352	698-705	694-697	8379	**613**	*7766*	27.94
			706-709	**8992**			
208 Tl	583	1160-1167	1156-1159	344	**277**	*67*	0.24
			1168-1171	**621**			
214 Bi	609	1213-1220	1209-1212	5675	**276**	*5399*	19.42
			1221-1224	**5951**			
228 Ac	911	1816-1823	1813-1815	298	**203**	*95*	0.34
			1824-1828	**501**			
228 Ac	964	1924-1941	1915-1923	353	**285**	*68*	0.24
228Ac	969		1942-1950	**638**			

Sample sheet	**NOPI-313*GAM1 data**			*DATE*	4/4/94	*TIME (MIN)*	267
Isotope	E. (Kev)	Channels	Back Chan.	Counts	Back Count	Net Count	**CPM**
210 Pb	45	89-94	86-88	2790	**2181**	*609*	2.28
			95-97	**4971**			
234 Th	63	122-127	119-121	4742	**2735**	*2007*	7.52
			128-130	**7477**			
234 Th	92	182-186	180-181	5817	**2459**	*3358*	12.58
			187-189	**8276**			
226Ra/235U	186	367-372	364-366	6627	**1804**	*4823*	18.06
			373-375	**8431**			
214 Pb	295	585-592	581-584	8594	**815**	*7779*	29.13
			593-596	**9409**			
228 Ac	338	671-678	667-670	752	**733**	*19*	0.07
			679-682	**1485**			
214 Pb	352	698-705	694-697	13651	**768**	*12883*	48.25
			706-709	**14419**			
208 Tl	583	1160-1167	1156-1159	435	**362**	*73*	0.27
			1168-1171	**797**			
214 Bi	609	1213-1220	1209-1212	9025	**344**	*8681*	32.51
			1221-1224	**9369**			
228 Ac	911	1816-1823	1813-1815	300	**196**	*104*	0.39
			1824-1828	**496**			
228 Ac	964	1924-1941	1915-1923	474	**347**	*127*	0.48
228Ac	969		1942-1950	**821**			

Sample sheet	**NOPI-314*GAM1 data**			*DATE*	4/5/94	*TIME (MIN)*	251
Isotope	E. (Kev)	Channels	Back Chan.	Counts	Back Count	Net Count	**CPM**
210 Pb	45	89-94	86-88	2621	**1893**	*728*	2.90
			95-97	**4514**			
234 Th	63	122-127	119-121	4534	**2492**	*2042*	8.14
			128-130	**7026**			
234 Th	92	182-186	180-181	5610	**2341**	*3269*	13.02
			187-189	**7951**			
226Ra/235U	186	367-372	364-366	6054	**1780**	*4274*	17.03
			373-375	**7834**			
214 Pb	295	585-592	581-584	7761	**729**	*7032*	28.02
			593-596	**8490**			
228 Ac	338	671-678	667-670	748	**654**	*94*	0.37
			679-682	**1402**			
214 Pb	352	698-705	694-697	12237	**714**	*11523*	45.91
			706-709	**12951**			
208 Tl	583	1160-1167	1156-1159	361	**349**	*12*	0.05
			1168-1171	**710**			
214 Bi	609	1213-1220	1209-1212	8072	**339**	*7733*	30.81
			1221-1224	**8411**			
228 Ac	911	1816-1823	1813-1815	290	**214**	*76*	0.30
			1824-1828	**504**			
228 Ac	964	1924-1941	1915-1923	436	**345**	*91*	0.36
228Ac	969		1942-1950	**781**			

Sample sheet	**NOPI-315*GAM1 data**			*DATE*	4/6/94	*TIME (MIN)*	151
Isotope	E. (Kev)	Channels	Back Chan.	Counts	Back Count	Net Count	**CPM**
210 Pb	45	89-94	86-88	1208	**837**	*371*	2.46
			95-97	**2045**			
234 Th	63	122-127	119-121	1941	**1128**	*813*	5.38
			128-130	**3069**			
234 Th	92	182-186	180-181	2358	**982**	*1376*	9.11
			187-189	**3340**			
226Ra/235U	186	367-372	364-366	2632	**740**	*1892*	12.53
			373-375	**3372**			
214 Pb	295	585-592	581-584	3427	**361**	*3066*	20.30
			593-596	**3788**			
228 Ac	338	671-678	667-670	362	**296**	*66*	0.44
			679-682	**658**			
214 Pb	352	698-705	694-697	5551	**340**	*5211*	34.51
			706-709	**5891**			
208 Tl	583	1160-1167	1156-1159	195	**151**	*44*	0.29
			1168-1171	**346**			
214 Bi	609	1213-1220	1209-1212	3486	**159**	*3327*	22.03
			1221-1224	**3645**			
228 Ac	911	1816-1823	1813-1815	129	**107**	*22*	0.15
			1824-1828	**236**			
228 Ac	964	1924-1941	1915-1923	226	**180**	*46*	0.30
228Ac	969		1942-1950	**406**			

Sample sheet	**NOPI-316*GAM1 data**			*DATE*	4/6/94	*TIME (MIN)*	188
Isotope	E. (Kev)	Channels	Back Chan.	Counts	Back Count	Net Count	**CPM**
210 Pb	45	89-94	86-88	1669	**1301**	*368*	1.96
			95-97	**2970**			
234 Th	63	122-127	119-121	3077	**1591**	*1486*	7.90
			128-130	**4668**			
234 Th	92	182-186	180-181	3892	**1503**	*2389*	12.71
			187-189	**5395**			
226Ra/235U	186	367-372	364-366	3951	**1061**	*2890*	15.37
			373-375	**5012**			
214 Pb	295	585-592	581-584	4650	**481**	*4169*	22.18
			593-596	**5131**			
228 Ac	338	671-678	667-670	526	**414**	*112*	0.60
			679-682	**940**			
214 Pb	352	698-705	694-697	7459	**470**	*6989*	37.18
			706-709	**7929**			
208 Tl	583	1160-1167	1156-1159	252	**206**	*46*	0.24
			1168-1171	**458**			
214 Bi	609	1213-1220	1209-1212	4887	**203**	*4684*	24.91
			1221-1224	**5090**			
228 Ac	911	1816-1823	1813-1815	191	**145**	*46*	0.24
			1824-1828	**336**			
228 Ac	964	1924-1941	1915-1923	294	**242**	*52*	0.28
228Ac	969		1942-1950	**536**			

Sample sheet	**NOPI-317*GAM1 data**			*DATE*	4/7/94	*TIME (MIN)*	277
Isotope	E. (Kev)	Channels	Back Chan.	Counts	Back Count	Net Count	**CPM**
210 Pb	45	89-94	86-88	2444	**1693**	*751*	2.71
			95-97	**4137**			
234 Th	63	122-127	119-121	3950	**2354**	*1596*	5.76
			128-130	**6304**			
234 Th	92	182-186	180-181	4732	**2062**	*2670*	9.64
			187-189	**6794**			
226Ra/235U	186	367-372	364-366	5402	**1652**	*3750*	13.54
			373-375	**7054**			
214 Pb	295	585-592	581-584	7476	**699**	*6777*	24.47
			593-596	**8175**			
228 Ac	338	671-678	667-670	797	**661**	*136*	0.49
			679-682	**1458**			
214 Pb	352	698-705	694-697	11688	**620**	*11068*	39.96
			706-709	**12308**			
208 Tl	583	1160-1167	1156-1159	387	**324**	*63*	0.23
			1168-1171	**711**			
214 Bi	609	1213-1220	1209-1212	7702	**350**	*7352*	26.54
			1221-1224	**8052**			
228 Ac	911	1816-1823	1813-1815	296	**167**	*129*	0.47
			1824-1828	**463**			
228 Ac	964	1924-1941	1915-1923	435	**386**	*49*	0.18
228Ac	969		1942-1950	**821**			

Sample sheet	**NOPI-318*GAM1 data**			*DATE*	4/8/94	*TIME (MIN)*	306
Isotope	E. (Kev)	Channels	Back Chan.	Counts	Back Count	Net Count	**CPM**
210 Pb	45	89-94	86-88	2717	**2127**	*590*	1.93
			95-97	**4844**			
234 Th	63	122-127	119-121	4791	**2840**	*1951*	6.38
			128-130	**7631**			
234 Th	92	182-186	180-181	5856	**2428**	*3428*	11.20
			187-189	**8284**			
226Ra/235U	186	367-372	364-366	6349	**1950**	*4399*	14.38
			373-375	**8299**			
214 Pb	295	585-592	581-584	8148	**971**	*7177*	23.45
			593-596	**9119**			
228 Ac	338	671-678	667-670	888	**809**	*79*	0.26
			679-682	**1697**			
214 Pb	352	698-705	694-697	12585	**805**	*11780*	38.50
			706-709	**13390**			
208 Tl	583	1160-1167	1156-1159	537	**380**	*157*	0.51
			1168-1171	**917**			
214 Bi	609	1213-1220	1209-1212	8376	**413**	*7963*	26.02
			1221-1224	**8789**			
228 Ac	911	1816-1823	1813-1815	336	**256**	*80*	0.26
			1824-1828	**592**			
228 Ac	964	1924-1941	1915-1923	541	**436**	*105*	0.34
228Ac	969		1942-1950	**977**			

Sample sheet	**NOPI-319*GAM1 data**			*DATE*	4/11/94	*TIME (MIN)*	291
Isotope	E. (Kev)	Channels	Back Chan.	Counts	Back Count	Net Count	**CPM**
210 Pb	45	89-94	86-88	1229	**946**	*283*	0.97
			95-97	**2175**			
234 Th	63	122-127	119-121	2094	**1169**	*925*	3.18
			128-130	**3263**			
234 Th	92	182-186	180-181	2796	**1139**	*1657*	5.69
			187-189	**3935**			
226Ra/235U	186	367-372	364-366	2665	**814**	*1851*	6.36
			373-375	**3479**			
214 Pb	295	585-592	581-584	2896	**452**	*2444*	8.40
			593-596	**3348**			
228 Ac	338	671-678	667-670	471	**374**	*97*	0.33
			679-682	**845**			
214 Pb	352	698-705	694-697	4326	**362**	*3964*	13.62
			706-709	**4688**			
208 Tl	583	1160-1167	1156-1159	326	**187**	*139*	0.48
			1168-1171	**513**			
214 Bi	609	1213-1220	1209-1212	2972	**210**	*2762*	9.49
			1221-1224	**3182**			
228 Ac	911	1816-1823	1813-1815	250	**129**	*121*	0.42
			1824-1828	**379**			
228 Ac	964	1924-1941	1915-1923	341	**242**	*99*	0.34
228Ac	969		1942-1950	**583**			

Sample sheet	**NOPI-320*GAM1 data**			*DATE*	4/13/94	*TIME (MIN)*	1481
Isotope	E. (Kev)	Channels	Back Chan.	Counts	Back Count	Net Count	**CPM**
210 Pb	45	89-94	86-88	5140	**4023**	*1117*	0.75
			95-97	**9163**			
234 Th	63	122-127	119-121	9258	**4951**	*4307*	2.91
			128-130	**14209**			
234 Th	92	182-186	180-181	12964	**4736**	*8228*	5.56
			187-189	**17700**			
226Ra/235U	186	367-372	364-366	11612	**3742**	*7870*	5.31
			373-375	**15354**			
214 Pb	295	585-592	581-584	10897	**2048**	*8849*	5.98
			593-596	**12945**			
228 Ac	338	671-678	667-670	2091	**1672**	*419*	0.28
			679-682	**3763**			
214 Pb	352	698-705	694-697	16420	**1693**	*14727*	9.94
			706-709	**18113**			
208 Tl	583	1160-1167	1156-1159	1452	**946**	*506*	0.34
			1168-1171	**2398**			
214 Bi	609	1213-1220	1209-1212	10814	**975**	*9839*	6.64
			1221-1224	**11789**			
228 Ac	911	1816-1823	1813-1815	1053	**578**	*475*	0.32
			1824-1828	**1631**			
228 Ac	964	1924-1941	1915-1923	1463	**1075**	*388*	0.26
228Ac	969		1942-1950	**2538**			

Sample sheet	**NOPI-321*GAM1 data**			*DATE*	4/12/94	*TIME (MIN)*	1111
Isotope	E. (Kev)	Channels	Back Chan.	Counts	Back Count	Net Count	**CPM**
210 Pb	45	89-94	86-88	3164	**2430**	*734*	0.66
			95-97	**5594**			
234 Th	63	122-127	119-121	4700	**2817**	*1883*	1.69
			128-130	**7517**			
234 Th	92	182-186	180-181	5857	**2745**	*3112*	2.80
			187-189	**8602**			
226Ra/235U	186	367-372	364-366	6286	**2382**	*3904*	3.51
			373-375	**8668**			
214 Pb	295	585-592	581-584	6499	**1404**	*5095*	4.59
			593-596	**7903**			
228 Ac	338	671-678	667-670	1589	**1231**	*358*	0.32
			679-682	**2820**			
214 Pb	352	698-705	694-697	9830	**1202**	*8628*	7.77
			706-709	**11032**			
208 Tl	583	1160-1167	1156-1159	1193	**684**	*509*	0.46
			1168-1171	**1877**			
214 Bi	609	1213-1220	1209-1212	6465	**639**	*5826*	5.24
			1221-1224	**7104**			
228 Ac	911	1816-1823	1813-1815	824	**436**	*388*	0.35
			1824-1828	**1260**			
228 Ac	964	1924-1941	1915-1923	1165	**724**	*441*	0.40
228Ac	969		1942-1950	**1889**			

Sample sheet	**NOPI-322*GAM1 data**			*DATE*	4/11/94	*TIME (MIN)*	2000
Isotope	E. (Kev)	Channels	Back Chan.	Counts	Back Count	Net Count	**CPM**
210 Pb	45	89-94	86-88	3504	**2806**	*698*	0.35
			95-97	**6310**			
234 Th	63	122-127	119-121	5230	**3149**	*2081*	1.04
			128-130	**8379**			
234 Th	92	182-186	180-181	6811	**3067**	*3744*	1.87
			187-189	**9878**			
226Ra/235U	186	367-372	364-366	6345	**3089**	*3256*	1.63
			373-375	**9434**			
214 Pb	295	585-592	581-584	4781	**1982**	*2799*	1.40
			593-596	**6763**			
228 Ac	338	671-678	667-670	2078	**1744**	*334*	0.17
			679-682	**3822**			
214 Pb	352	698-705	694-697	6472	**1657**	*4815*	2.41
			706-709	**8129**			
208 Tl	583	1160-1167	1156-1159	1554	**936**	*618*	0.31
			1168-1171	**2490**			
214 Bi	609	1213-1220	1209-1212	4373	**942**	*3431*	1.72
			1221-1224	**5315**			
228 Ac	911	1816-1823	1813-1815	1169	**578**	*591*	0.30
			1824-1828	**1747**			
228 Ac	964	1924-1941	1915-1923	1641	**1157**	*484*	0.24
228Ac	969		1942-1950	**2798**			

Sample sheet	**NOPI-323*GAM1 data**			*DATE*	4/8/94	*TIME (MIN)*	1168
Isotope	E. (Kev)	Channels	Back Chan.	Counts	Back Count	Net Count	**CPM**
210 Pb	45	89-94	86-88	5944	**4487**	*1457*	1.25
			95-97	**10431**			
234 Th	63	122-127	119-121	10882	**5685**	*5197*	4.45
			128-130	**16567**			
234 Th	92	182-186	180-181	14718	**5387**	*9331*	7.99
			187-189	**20105**			
226Ra/235U	186	367-372	364-366	13320	**4053**	*9267*	7.93
			373-375	**17373**			
214 Pb	295	585-592	581-584	14679	**2099**	*12580*	10.77
			593-596	**16778**			
228 Ac	338	671-678	667-670	2035	**1853**	*182*	0.16
			679-682	**3888**			
214 Pb	352	698-705	694-697	22555	**1714**	*20841*	17.84
			706-709	**24269**			
208 Tl	583	1160-1167	1156-1159	1269	**948**	*321*	0.27
			1168-1171	**2217**			
214 Bi	609	1213-1220	1209-1212	14737	**941**	*13796*	11.81
			1221-1224	**15678**			
228 Ac	911	1816-1823	1813-1815	980	**530**	*450*	0.39
			1824-1828	**1510**			
228 Ac	964	1924-1941	1915-1923	1345	**1061**	*284*	0.24
228Ac	969		1942-1950	**2406**			

Sample sheet	**NOPI-324*GAM1 data**			*DATE*	4/7/94	*TIME (MIN)*	1087
Isotope	E. (Kev)	Channels	Back Chan.	Counts	Back Count	Net Count	**CPM**
210 Pb	45	89-94	86-88	3988	**3133**	*855*	0.79
			95-97	**7121**			
234 Th	63	122-127	119-121	6575	**3848**	*2727*	2.51
			128-130	**10423**			
234 Th	92	182-186	180-181	7961	**3467**	*4494*	4.13
			187-189	**11428**			
226Ra/235U	186	367-372	364-366	8446	**2908**	*5538*	5.09
			373-375	**11354**			
214 Pb	295	585-592	581-584	9860	**1656**	*8204*	7.55
			593-596	**11516**			
228 Ac	338	671-678	667-670	1672	**1446**	*226*	0.21
			679-682	**3118**			
214 Pb	352	698-705	694-697	15273	**1339**	*13934*	12.82
			706-709	**16612**			
208 Tl	583	1160-1167	1156-1159	1021	**793**	*228*	0.21
			1168-1171	**1814**			
214 Bi	609	1213-1220	1209-1212	10106	**747**	*9359*	8.61
			1221-1224	**10853**			
228 Ac	911	1816-1823	1813-1815	738	**475**	*263*	0.24
			1824-1828	**1213**			
228 Ac	964	1924-1941	1915-1923	1161	**845**	*316*	0.29
228Ac	969		1942-1950	**2006**			

Sample sheet	**NOPI-325*GAM1 data**			*DATE*	4/6/94	*TIME (MIN)*	1189
Isotope	E. (Kev)	Channels	Back Chan.	Counts	Back Count	Net Count	**CPM**
210 Pb	45	89-94	86-88	2345	**1709**	*636*	0.53
			95-97	**4054**			
234 Th	63	122-127	119-121	3373	**2087**	*1286*	1.08
			128-130	**5460**			
234 Th	92	182-186	180-181	4450	**1970**	*2480*	2.09
			187-189	**6420**			
226Ra/235U	186	367-372	364-366	4331	**2052**	*2279*	1.92
			373-375	**6383**			
214 Pb	295	585-592	581-584	3628	**1252**	*2376*	2.00
			593-596	**4880**			
228 Ac	338	671-678	667-670	1180	**1096**	*84*	0.07
			679-682	**2276**			
214 Pb	352	698-705	694-697	5219	**1010**	*4209*	3.54
			706-709	**6229**			
208 Tl	583	1160-1167	1156-1159	881	**630**	*251*	0.21
			1168-1171	**1511**			
214 Bi	609	1213-1220	1209-1212	3427	**658**	*2769*	2.33
			1221-1224	**4085**			
228 Ac	911	1816-1823	1813-1815	670	**387**	*283*	0.24
			1824-1828	**1057**			
228 Ac	964	1924-1941	1915-1923	915	**701**	*214*	0.18
228Ac	969		1942-1950	**1616**			

Sample sheet	**NOPI-326*GAM1 data**			*DATE*	4/5/94	*TIME (MIN)*	1148
Isotope	E. (Kev)	Channels	Back Chan.	Counts	Back Count	Net Count	**CPM**
210 Pb	45	89-94	86-88	2484	**1894**	*590*	0.51
			95-97	**4378**			
234 Th	63	122-127	119-121	3732	**2305**	*1427*	1.24
			128-130	**6037**			
234 Th	92	182-186	180-181	4436	**2120**	*2316*	2.02
			187-189	**6556**			
226Ra/235U	186	367-372	364-366	4819	**2108**	*2711*	2.36
			373-375	**6927**			
214 Pb	295	585-592	581-584	4886	**1328**	*3558*	3.10
			593-596	**6214**			
228 Ac	338	671-678	667-670	1229	**1119**	*110*	0.10
			679-682	**2348**			
214 Pb	352	698-705	694-697	7095	**1048**	*6047*	5.27
			706-709	**8143**			
208 Tl	583	1160-1167	1156-1159	838	**602**	*236*	0.21
			1168-1171	**1440**			
214 Bi	609	1213-1220	1209-1212	4687	**606**	*4081*	3.55
			1221-1224	**5293**			
228 Ac	911	1816-1823	1813-1815	686	**376**	*310*	0.27
			1824-1828	**1062**			
228 Ac	964	1924-1941	1915-1923	928	**703**	*225*	0.20
228Ac	969		1942-1950	**1631**			

Sample sheet	**NOPI-327*GAM1 data**			*DATE*	4/4/94	*TIME (MIN)*	1000
Isotope	E. (Kev)	Channels	Back Chan.	Counts	Back Count	Net Count	**CPM**
210 Pb	45	89-94	86-88	2208	**1657**	*551*	0.55
			95-97	**3865**			
234 Th	63	122-127	119-121	3302	**1994**	*1308*	1.31
			128-130	**5296**			
234 Th	92	182-186	180-181	4149	**1872**	*2277*	2.28
			187-189	**6021**			
226Ra/235U	186	367-372	364-366	4208	**1722**	*2486*	2.49
			373-375	**5930**			
214 Pb	295	585-592	581-584	3755	**1092**	*2663*	2.66
			593-596	**4847**			
228 Ac	338	671-678	667-670	1118	**938**	*180*	0.18
			679-682	**2056**			
214 Pb	352	698-705	694-697	5457	**868**	*4589*	4.59
			706-709	**6325**			
208 Tl	583	1160-1167	1156-1159	822	**492**	*330*	0.33
			1168-1171	**1314**			
214 Bi	609	1213-1220	1209-1212	3605	**498**	*3107*	3.11
			1221-1224	**4103**			
228 Ac	911	1816-1823	1813-1815	620	**300**	*320*	0.32
			1824-1828	**920**			
228 Ac	964	1924-1941	1915-1923	827	**603**	*224*	0.22
228Ac	969		1942-1950	**1430**			

Sample sheet	**NOPI-328*GAM1 data**			*DATE*	4/1/94	*TIME (MIN)*	1000
Isotope	E. (Kev)	Channels	Back Chan.	Counts	Back Count	Net Count	**CPM**
210 Pb	45	89-94	86-88	3334	**2593**	*741*	0.74
			95-97	**5927**			
234 Th	63	122-127	119-121	5693	**3094**	*2599*	2.60
			128-130	**8787**			
234 Th	92	182-186	180-181	7626	**3039**	*4587*	4.59
			187-189	**10665**			
226Ra/235U	186	367-372	364-366	7230	**2431**	*4799*	4.80
			373-375	**9661**			
214 Pb	295	585-592	581-584	7403	**1360**	*6043*	6.04
			593-596	**8763**			
228 Ac	338	671-678	667-670	1298	**1115**	*183*	0.18
			679-682	**2413**			
214 Pb	352	698-705	694-697	11345	**1084**	*10261*	10.26
			706-709	**12429**			
208 Tl	583	1160-1167	1156-1159	829	**582**	*247*	0.25
			1168-1171	**1411**			
214 Bi	609	1213-1220	1209-1212	7372	**604**	*6768*	6.77
			1221-1224	**7976**			
228 Ac	911	1816-1823	1813-1815	600	**383**	*217*	0.22
			1824-1828	**983**			
228 Ac	964	1924-1941	1915-1923	943	**679**	*264*	0.26
228Ac	969		1942-1950	**1622**			

Sample sheet	**NOPI-329*GAM1 data**			*DATE*	3/31/94	*TIME (MIN)*	1176
Isotope	E. (Kev)	Channels	Back Chan.	Counts	Back Count	Net Count	**CPM**
210 Pb	45	89-94	86-88	2588	**2037**	*551*	0.47
			95-97	**4625**			
234 Th	63	122-127	119-121	3684	**2319**	*1365*	1.16
			128-130	**6003**			
234 Th	92	182-186	180-181	4680	**2207**	*2473*	2.10
			187-189	**6887**			
226Ra/235U	186	367-372	364-366	4939	**2208**	*2731*	2.32
			373-375	**7147**			
214 Pb	295	585-592	581-584	4696	**1277**	*3419*	2.91
			593-596	**5973**			
228 Ac	338	671-678	667-670	1314	**1120**	*194*	0.16
			679-682	**2434**			
214 Pb	352	698-705	694-697	6761	**1052**	*5709*	4.85
			706-709	**7813**			
208 Tl	583	1160-1167	1156-1159	901	**575**	*326*	0.28
			1168-1171	**1476**			
214 Bi	609	1213-1220	1209-1212	4520	**585**	*3935*	3.35
			1221-1224	**5105**			
228 Ac	911	1816-1823	1813-1815	695	**391**	*304*	0.26
			1824-1828	**1086**			
228 Ac	964	1924-1941	1915-1923	947	**691**	*256*	0.22
228Ac	969		1942-1950	**1638**			

Sample sheet	**NOPI-330*GAM1 data**			*DATE*	3/18/94	*TIME (MIN)*	1000
Isotope	E. (Kev)	Channels	Back Chan.	Counts	Back Count	Net Count	**CPM**
210 Pb	45	89-94	86-88	3550	**2811**	*739*	0.74
			95-97	**6361**			
234 Th	63	122-127	119-121	6931	**3682**	*3249*	3.25
			128-130	**10613**			
234 Th	92	182-186	180-181	9352	**3509**	*5843*	5.84
			187-189	**12861**			
226Ra/235U	186	367-372	364-366	9035	**2622**	*6413*	6.41
			373-375	**11657**			
214 Pb	295	585-592	581-584	7901	**1413**	*6488*	6.49
			593-596	**9314**			
228 Ac	338	671-678	667-670	1401	**1271**	*130*	0.13
			679-682	**2672**			
214 Pb	352	698-705	694-697	12079	**1175**	*10904*	10.90
			706-709	**13254**			
208 Tl	583	1160-1167	1156-1159	847	**622**	*225*	0.23
			1168-1171	**1469**			
214 Bi	609	1213-1220	1209-1212	7691	**652**	*7039*	7.04
			1221-1224	**8343**			
228 Ac	911	1816-1823	1813-1815	473	**495**	*-22*	-0.02
			1824-1828	**968**			
228 Ac	964	1924-1941	1915-1923	972	**713**	*259*	0.26
228Ac	969		1942-1950	**1685**			

Sample sheet	**NOPI-331*GAM1 data**			*DATE*	3/18/94	*TIME (MIN)*	347
Isotope	E. (Kev)	Channels	Back Chan.	Counts	Back Count	Net Count	**CPM**
210 Pb	45	89-94	86-88	2627	**2110**	*517*	1.49
			95-97	**4737**			
234 Th	63	122-127	119-121	4501	**2785**	*1716*	4.95
			128-130	**7286**			
234 Th	92	182-186	180-181	5147	**2376**	*2771*	7.99
			187-189	**7523**			
226Ra/235U	186	367-372	364-366	6679	**1986**	*4693*	13.52
			373-375	**8665**			
214 Pb	295	585-592	581-584	8339	**936**	*7403*	21.33
			593-596	**9275**			
228 Ac	338	671-678	667-670	899	**797**	*102*	0.29
			679-682	**1696**			
214 Pb	352	698-705	694-697	13290	**783**	*12507*	36.04
			706-709	**14073**			
208 Tl	583	1160-1167	1156-1159	434	**429**	*5*	0.01
			1168-1171	**863**			
214 Bi	609	1213-1220	1209-1212	8577	**434**	*8143*	23.47
			1221-1224	**9011**			
228 Ac	911	1816-1823	1813-1815	290	**239**	*51*	0.15
			1824-1828	**529**			
228 Ac	964	1924-1941	1915-1923	567	**432**	*135*	0.39
228Ac	969		1942-1950	**999**			

Sample sheet	**NOPI-332*GAM1 data**			*DATE*	3/22/94	*TIME (MIN)*	1057
Isotope	E. (Kev)	Channels	Back Chan.	Counts	Back Count	Net Count	**CPM**
210 Pb	45	89-94	86-88	2900	**2421**	*479*	0.45
			95-97	**5321**			
234 Th	63	122-127	119-121	5715	**2943**	*2772*	2.62
			128-130	**8658**			
234 Th	92	182-186	180-181	8056	**2826**	*5230*	4.95
			187-189	**10882**			
226Ra/235U	186	367-372	364-366	6600	**2331**	*4269*	4.04
			373-375	**8931**			
214 Pb	295	585-592	581-584	5126	**1414**	*3712*	3.51
			593-596	**6540**			
228 Ac	338	671-678	667-670	1267	**1188**	*79*	0.07
			679-682	**2455**			
214 Pb	352	698-705	694-697	7303	**1149**	*6154*	5.82
			706-709	**8452**			
208 Tl	583	1160-1167	1156-1159	911	**664**	*247*	0.23
			1168-1171	**1575**			
214 Bi	609	1213-1220	1209-1212	4824	**626**	*4198*	3.97
			1221-1224	**5450**			
228 Ac	911	1816-1823	1813-1815	612	**448**	*164*	0.16
			1824-1828	**1060**			
228 Ac	964	1924-1941	1915-1923	940	**779**	*161*	0.15
228Ac	969		1942-1950	**1719**			

Sample sheet	**NOPI-333*GAM1 data**			*DATE*	3/22/94	*TIME (MIN)*	403
Isotope	E. (Kev)	Channels	Back Chan.	Counts	Back Count	Net Count	**CPM**
210 Pb	45	89-94	86-88	1835	**1578**	*257*	0.64
			95-97	**3413**			
234 Th	63	122-127	119-121	5679	**1963**	*3716*	9.22
			128-130	**7642**			
234 Th	92	182-186	180-181	9132	**2281**	*6851*	17.00
			187-189	**11413**			
226Ra/235U	186	367-372	364-366	5799	**1156**	*4643*	11.52
			373-375	**6955**			
214 Pb	295	585-592	581-584	2859	**562**	*2297*	5.70
			593-596	**3421**			
228 Ac	338	671-678	667-670	600	**527**	*73*	0.18
			679-682	**1127**			
214 Pb	352	698-705	694-697	4321	**453**	*3868*	9.60
			706-709	**4774**			
208 Tl	583	1160-1167	1156-1159	348	**238**	*110*	0.27
			1168-1171	**586**			
214 Bi	609	1213-1220	1209-1212	2732	**273**	*2459*	6.10
			1221-1224	**3005**			
228 Ac	911	1816-1823	1813-1815	272	**174**	*98*	0.24
			1824-1828	**446**			
228 Ac	964	1924-1941	1915-1923	354	**289**	*65*	0.16
228Ac	969		1942-1950	**643**			

Sample sheet	**NOPI-334*GAM1 data**			*DATE*	3/23/94	*TIME (MIN)*	600
Isotope	E. (Kev)	Channels	Back Chan.	Counts	Back Count	Net Count	**CPM**
210 Pb	45	89-94	86-88	4386	**3531**	*855*	1.43
			95-97	**7917**			
234 Th	63	122-127	119-121	6981	**4739**	*2242*	3.74
			128-130	**11720**			
234 Th	92	182-186	180-181	7783	**3851**	*3932*	6.55
			187-189	**11634**			
226Ra/235U	186	367-372	364-366	10410	**3629**	*6781*	11.30
			373-375	**14039**			
214 Pb	295	585-592	581-584	13830	**2053**	*11777*	19.63
			593-596	**15883**			
228 Ac	338	671-678	667-670	1728	**1645**	*83*	0.14
			679-682	**3373**			
214 Pb	352	698-705	694-697	21258	**1647**	*19611*	32.69
			706-709	**22905**			
208 Tl	583	1160-1167	1156-1159	1007	**987**	*20*	0.03
			1168-1171	**1994**			
214 Bi	609	1213-1220	1209-1212	13803	**929**	*12874*	21.46
			1221-1224	**14732**			
228 Ac	911	1816-1823	1813-1815	668	**589**	*79*	0.13
			1824-1828	**1257**			
228 Ac	964	1924-1941	1915-1923	1069	**1006**	*63*	0.11
228Ac	969		1942-1950	**2075**			

Sample sheet	**NOPI-335*GAM1 data**			*DATE*	3/24/94	*TIME (MIN)*	1425
Isotope	E. (Kev)	Channels	Back Chan.	Counts	Back Count	Net Count	**CPM**
210 Pb	45	89-94	86-88	2274	**1868**	*406*	0.28
			95-97	**4142**			
234 Th	63	122-127	119-121	3440	**2101**	*1339*	0.94
			128-130	**5541**			
234 Th	92	182-186	180-181	4586	**2087**	*2499*	1.75
			187-189	**6673**			
226Ra/235U	186	367-372	364-366	4016	**2188**	*1828*	1.28
			373-375	**6204**			
214 Pb	295	585-592	581-584	2854	**1443**	*1411*	0.99
			593-596	**4297**			
228 Ac	338	671-678	667-670	1398	**1227**	*171*	0.12
			679-682	**2625**			
214 Pb	352	698-705	694-697	3555	**1176**	*2379*	1.67
			706-709	**4731**			
208 Tl	583	1160-1167	1156-1159	1084	**692**	*392*	0.28
			1168-1171	**1776**			
214 Bi	609	1213-1220	1209-1212	2433	**644**	*1789*	1.26
			1221-1224	**3077**			
228 Ac	911	1816-1823	1813-1815	819	**450**	*369*	0.26
			1824-1828	**1269**			
228 Ac	964	1924-1941	1915-1923	1091	**784**	*307*	0.22
228Ac	969		1942-1950	**1875**			

Sample sheet	**NOPI-336*GAM1 data**			*DATE*	3/25/94	*TIME (MIN)*	1461
Isotope	E. (Kev)	Channels	Back Chan.	Counts	Back Count	Net Count	**CPM**
210 Pb	45	89-94	86-88	2323	**1979**	*344*	0.24
			95-97	**4302**			
234 Th	63	122-127	119-121	3446	**2150**	*1296*	0.89
			128-130	**5596**			
234 Th	92	182-186	180-181	4638	**2048**	*2590*	1.77
			187-189	**6686**			
226Ra/235U	186	367-372	364-366	4222	**2186**	*2036*	1.39
			373-375	**6408**			
214 Pb	295	585-592	581-584	2687	**1326**	*1361*	0.93
			593-596	**4013**			
228 Ac	338	671-678	667-670	1425	**1215**	*210*	0.14
			679-682	**2640**			
214 Pb	352	698-705	694-697	3366	**1160**	*2206*	1.51
			706-709	**4526**			
208 Tl	583	1160-1167	1156-1159	1066	**668**	*398*	0.27
			1168-1171	**1734**			
214 Bi	609	1213-1220	1209-1212	2334	**745**	*1589*	1.09
			1221-1224	**3079**			
228 Ac	911	1816-1823	1813-1815	760	**441**	*319*	0.22
			1824-1828	**1201**			
228 Ac	964	1924-1941	1915-1923	1133	**810**	*323*	0.22
228Ac	969		1942-1950	**1943**			

Sample sheet	**NOPI-337*GAM1 data**			*DATE*	3/29/94	*TIME (MIN)*	1430
Isotope	E. (Kev)	Channels	Back Chan.	Counts	Back Count	Net Count	**CPM**
210 Pb	45	89-94	86-88	2139	**1755**	*384*	0.27
			95-97	**3894**			
234 Th	63	122-127	119-121	3242	**1863**	*1379*	0.96
			128-130	**5105**			
234 Th	92	182-186	180-181	4598	**1987**	*2611*	1.83
			187-189	**6585**			
226Ra/235U	186	367-372	364-366	3874	**1950**	*1924*	1.35
			373-375	**5824**			
214 Pb	295	585-592	581-584	2071	**1329**	*742*	0.52
			593-596	**3400**			
228 Ac	338	671-678	667-670	1344	**1186**	*158*	0.11
			679-682	**2530**			
214 Pb	352	698-705	694-697	2336	**1027**	*1309*	0.92
			706-709	**3363**			
208 Tl	583	1160-1167	1156-1159	1057	**644**	*413*	0.29
			1168-1171	**1701**			
214 Bi	609	1213-1220	1209-1212	1690	**613**	*1077*	0.75
			1221-1224	**2303**			
228 Ac	911	1816-1823	1813-1815	801	**411**	*390*	0.27
			1824-1828	**1212**			
228 Ac	964	1924-1941	1915-1923	1029	**704**	*325*	0.23
228Ac	969		1942-1950	**1733**			

Sample sheet	**NOPI-363*GAM1 data**			*DATE*	4/14/94	*TIME (MIN)*	1401
Isotope	E. (Kev)	Channels	Back Chan.	Counts	Back Count	Net Count	**CPM**
210 Pb	45	89-94	86-88	5947	**4824**	*1123*	0.80
			95-97	**10771**			
234 Th	63	122-127	119-121	8680	**5997**	*2683*	1.92
			128-130	**14677**			
234 Th	92	182-186	180-181	9781	**5072**	*4709*	3.36
			187-189	**14853**			
226Ra/235U	186	367-372	364-366	12534	**4916**	*7618*	5.44
			373-375	**17450**			
214 Pb	295	585-592	581-584	18344	**2520**	*15824*	11.29
			593-596	**20864**			
228 Ac	338	671-678	667-670	2423	**2136**	*287*	0.20
			679-682	**4559**			
214 Pb	352	698-705	694-697	28418	**2191**	*26227*	18.72
			706-709	**30609**			
208 Tl	583	1160-1167	1156-1159	1519	**1100**	*419*	0.30
			1168-1171	**2619**			
214 Bi	609	1213-1220	1209-1212	18661	**1097**	*17564*	12.54
			1221-1224	**19758**			
228 Ac	911	1816-1823	1813-1815	1110	**693**	*417*	0.30
			1824-1828	**1803**			
228 Ac	964	1924-1941	1915-1923	1714	**1271**	*443*	0.32
228Ac	969		1942-1950	**2985**			

Sample sheet	**NOPI-364*GAM1 data**			*DATE*	4/15/94	*TIME (MIN)*	1469
Isotope	E. (Kev)	Channels	Back Chan.	Counts	Back Count	Net Count	**CPM**
210 Pb	45	89-94	86-88	3546	**2701**	*845*	0.58
			95-97	**6247**			
234 Th	63	122-127	119-121	5889	**3110**	*2779*	1.89
			128-130	**8999**			
234 Th	92	182-186	180-181	8256	**3041**	*5215*	3.55
			187-189	**11297**			
226Ra/235U	186	367-372	364-366	7074	**2702**	*4372*	2.98
			373-375	**9776**			
214 Pb	295	585-592	581-584	5972	**1655**	*4317*	2.94
			593-596	**7627**			
228 Ac	338	671-678	667-670	1552	**1444**	*108*	0.07
			679-682	**2996**			
214 Pb	352	698-705	694-697	8528	**1316**	*7212*	4.91
			706-709	**9844**			
208 Tl	583	1160-1167	1156-1159	1108	**828**	*280*	0.19
			1168-1171	**1936**			
214 Bi	609	1213-1220	1209-1212	5624	**767**	*4857*	3.31
			1221-1224	**6391**			
228 Ac	911	1816-1823	1813-1815	800	**485**	*315*	0.21
			1824-1828	**1285**			
228 Ac	964	1924-1941	1915-1923	1132	**890**	*242*	0.16
228Ac	969		1942-1950	**2022**			

Sample sheet	**NOPI-365*GAM1 data**			*DATE*	4/18/94	*TIME (MIN)*	2000
Isotope	E. (Kev)	Channels	Back Chan.	Counts	Back Count	Net Count	**CPM**
210 Pb	45	89-94	86-88	3606	**2885**	*721*	0.36
			95-97	**6491**			
234 Th	63	122-127	119-121	6273	**3294**	*2979*	1.49
			128-130	**9567**			
234 Th	92	182-186	180-181	8866	**3349**	*5517*	2.76
			187-189	**12215**			
226Ra/235U	186	367-372	364-366	7258	**3002**	*4256*	2.13
			373-375	**10260**			
214 Pb	295	585-592	581-584	4241	**1937**	*2304*	1.15
			593-596	**6178**			
228 Ac	338	671-678	667-670	2055	**1700**	*355*	0.18
			679-682	**3755**			
214 Pb	352	698-705	694-697	5440	**1550**	*3890*	1.95
			706-709	**6990**			
208 Tl	583	1160-1167	1156-1159	1430	**929**	*501*	0.25
			1168-1171	**2359**			
214 Bi	609	1213-1220	1209-1212	3655	**925**	*2730*	1.37
			1221-1224	**4580**			
228 Ac	911	1816-1823	1813-1815	1097	**638**	*459*	0.23
			1824-1828	**1735**			
228 Ac	964	1924-1941	1915-1923	1566	**1166**	*400*	0.20
228Ac	969		1942-1950	**2732**			

Sample sheet	**NOPI-366*GAM1 data**			*DATE*	4/19/94	*TIME (MIN)*	1494
Isotope	E. (Kev)	Channels	Back Chan.	Counts	Back Count	Net Count	**CPM**
210 Pb	45	89-94	86-88	6053	**4502**	*1551*	1.04
			95-97	**10555**			
234 Th	63	122-127	119-121	9959	**5651**	*4308*	2.88
			128-130	**15610**			
234 Th	92	182-186	180-181	13398	**5145**	*8253*	5.52
			187-189	**18543**			
226Ra/235U	186	367-372	364-366	12986	**4284**	*8702*	5.82
			373-375	**17270**			
214 Pb	295	585-592	581-584	14599	**2247**	*12352*	8.27
			593-596	**16846**			
228 Ac	338	671-678	667-670	2131	**2036**	*95*	0.06
			679-682	**4167**			
214 Pb	352	698-705	694-697	22382	**1908**	*20474*	13.70
			706-709	**24290**			
208 Tl	583	1160-1167	1156-1159	1280	**1003**	*277*	0.19
			1168-1171	**2283**			
214 Bi	609	1213-1220	1209-1212	14631	**1008**	*13623*	9.12
			1221-1224	**15639**			
228 Ac	911	1816-1823	1813-1815	1000	**643**	*357*	0.24
			1824-1828	**1643**			
228 Ac	964	1924-1941	1915-1923	1446	**1165**	*281*	0.19
228Ac	969		1942-1950	**2611**			

Sample sheet	**NOPI-367*GAM1 data**			*DATE*	5/25/94	*TIME (MIN)*	500
Isotope	E. (Kev)	Channels	Back Chan.	Counts	Back Count	Net Count	**CPM**
210 Pb	45	89-94	86-88	6921	**5626**	*1295*	2.59
			95-97	**12547**			
234 Th	63	122-127	119-121	8292	**7099**	*1193*	2.39
			128-130	**15391**			
234 Th	92	182-186	180-181	6232	**5360**	*872*	1.74
			187-189	**11592**			
226Ra/235U	186	367-372	364-366	15011	**5635**	*9376*	18.75
			373-375	**20646**			
214 Pb	295	585-592	581-584	29399	**2521**	*26878*	53.76
			593-596	**31920**			
228 Ac	338	671-678	667-670	2137	**2187**	*-50*	-0.10
			679-682	**4324**			
214 Pb	352	698-705	694-697	46347	**2392**	*43955*	87.91
			706-709	**48739**			
208 Tl	583	1160-1167	1156-1159	1041	**1114**	*-73*	-0.15
			1168-1171	**2155**			
214 Bi	609	1213-1220	1209-1212	30675	**1083**	*29592*	59.18
			1221-1224	**31758**			
228 Ac	911	1816-1823	1813-1815	779	**674**	*105*	0.21
			1824-1828	**1453**			
228 Ac	964	1924-1941	1915-1923	1308	**1088**	*220*	0.44
228Ac	969		1942-1950	**2396**			

Sample sheet	**NOPI-368*GAM1 data**			*DATE*	5/26/94	*TIME (MIN)*	1000
Isotope	E. (Kev)	Channels	Back Chan.	Counts	Back Count	Net Count	**CPM**
210 Pb	45	89-94	86-88	2980	**2678**	*302*	0.30
			95-97	**5658**			
234 Th	63	122-127	119-121	7072	**3107**	*3965*	3.97
			128-130	**10179**			
234 Th	92	182-186	180-181	10304	**3091**	*7213*	7.21
			187-189	**13395**			
226Ra/235U	186	367-372	364-366	7152	**2305**	*4847*	4.85
			373-375	**9457**			
214 Pb	295	585-592	581-584	4589	**1338**	*3251*	3.25
			593-596	**5927**			
228 Ac	338	671-678	667-670	1240	**1048**	*192*	0.19
			679-682	**2288**			
214 Pb	352	698-705	694-697	6568	**1070**	*5498*	5.50
			706-709	**7638**			
208 Tl	583	1160-1167	1156-1159	812	**588**	*224*	0.22
			1168-1171	**1400**			
214 Bi	609	1213-1220	1209-1212	4361	**611**	*3750*	3.75
			1221-1224	**4972**			
228 Ac	911	1816-1823	1813-1815	638	**372**	*266*	0.27
			1824-1828	**1010**			
228 Ac	964	1924-1941	1915-1923	844	**642**	*202*	0.20
228Ac	969		1942-1950	**1486**			

Sample sheet	**NOPI-369*GAM1 data**			*DATE*	*5/27/94*	*TIME (MIN)*	1000
Isotope	E. (Kev)	Channels	Back Chan.	Counts	Back Count	Net Count	**CPM**
210 Pb	45	89-94	86-88	2292	**2002**	*290*	0.29
			95-97	**4294**			
234 Th	63	122-127	119-121	4473	**2206**	*2267*	2.27
			128-130	**6679**			
234 Th	92	182-186	180-181	6212	**2187**	*4025*	4.03
			187-189	**8399**			
226Ra/235U	186	367-372	364-366	5062	**1929**	*3133*	3.13
			373-375	**6991**			
214 Pb	295	585-592	581-584	3531	**1038**	*2493*	2.49
			593-596	**4569**			
228 Ac	338	671-678	667-670	1144	**951**	*193*	0.19
			679-682	**2095**			
214 Pb	352	698-705	694-697	4742	**880**	*3862*	3.86
			706-709	**5622**			
208 Tl	583	1160-1167	1156-1159	791	**498**	*293*	0.29
			1168-1171	**1289**			
214 Bi	609	1213-1220	1209-1212	3010	**544**	*2466*	2.47
			1221-1224	**3554**			
228 Ac	911	1816-1823	1813-1815	592	**318**	*274*	0.27
			1824-1828	**910**			
228 Ac	964	1924-1941	1915-1923	781	**611**	*170*	0.17
228Ac	969		1942-1950	**1392**			

Sample sheet	**NOPI-370*GAM1 data**			*DATE*	5/27/94	*TIME (MIN)*	272
Isotope	E. (Kev)	Channels	Back Chan.	Counts	Back Count	Net Count	**CPM**
210 Pb	45	89-94	86-88	2605	**1996**	*609*	2.24
			95-97	**4601**			
234 Th	63	122-127	119-121	4196	**2777**	*1419*	5.22
			128-130	**6973**			
234 Th	92	182-186	180-181	4566	**2233**	*2333*	8.58
			187-189	**6799**			
226Ra/235U	186	367-372	364-366	6066	**1870**	*4196*	15.43
			373-375	**7936**			
214 Pb	295	585-592	581-584	7943	**936**	*7007*	25.76
			593-596	**8879**			
228 Ac	338	671-678	667-670	802	**729**	*73*	0.27
			679-682	**1531**			
214 Pb	352	698-705	694-697	12406	**886**	*11520*	42.35
			706-709	**13292**			
208 Tl	583	1160-1167	1156-1159	402	**401**	*1*	0.00
			1168-1171	**803**			
214 Bi	609	1213-1220	1209-1212	7897	**431**	*7466*	27.45
			1221-1224	**8328**			
228 Ac	911	1816-1823	1813-1815	285	**215**	*70*	0.26
			1824-1828	**500**			
228 Ac	964	1924-1941	1915-1923	456	**403**	*53*	0.19
228Ac	969		1942-1950	**859**			

Sample sheet	**NOPI-371*GAM1 data**			*DATE*	5/30/94	*TIME (MIN)*	2000
Isotope	E. (Kev)	Channels	Back Chan.	Counts	Back Count	Net Count	**CPM**
210 Pb	45	89-94	86-88	3281	**2606**	*675*	0.34
			95-97	**5887**			
234 Th	63	122-127	119-121	3871	**2837**	*1034*	0.52
			128-130	**6708**			
234 Th	92	182-186	180-181	4921	**2641**	*2280*	1.14
			187-189	**7562**			
226Ra/235U	186	367-372	364-366	5043	**2930**	*2113*	1.06
			373-375	**7973**			
214 Pb	295	585-592	581-584	4360	**1928**	*2432*	1.22
			593-596	**6288**			
228 Ac	338	671-678	667-670	1981	**1740**	*241*	0.12
			679-682	**3721**			
214 Pb	352	698-705	694-697	5346	**1529**	*3817*	1.91
			706-709	**6875**			
208 Tl	583	1160-1167	1156-1159	1472	**911**	*561*	0.28
			1168-1171	**2383**			
214 Bi	609	1213-1220	1209-1212	3740	**964**	*2776*	1.39
			1221-1224	**4704**			
228 Ac	911	1816-1823	1813-1815	1150	**631**	*519*	0.26
			1824-1828	**1781**			
228 Ac	964	1924-1941	1915-1923	1611	**1184**	*427*	0.21
228Ac	969		1942-1950	**2795**			

Spectrum

MCA #1 - Canberra S100 - NOPI3081.MCA - NOPI-308-GAM1 7.0cm

Tag Number: 46
Report Group: 2/4
Group Size: 4096

Readout: Tue 29 Mar 1994 @ 13:59:03
Acquire Started: Tue 29 Mar 1994 @ 13:58:19

Elapsed Live Time: 311.00 min.
Elapsed True Time: 311.06 min.
Dead Time: 0.02 %

MCA Mode: PHA+
Preset Conditions: Live Time = 311.00 min.

Calibration: 0.0000*Ch^2 + 0.4996*Ch + 1.083 keV

Area Statistics: Background Channels = 4
% Error Sigma = 1.65

Peak Statistics: Sensitivity Factor = 4.0
Expected FWHM (ch) = 2.7 - 6.0

Iso. Id. Criteria: Energy Window = +-1.300 keV
Iso. Library: C:\WINDOWS\S100\SPECTRAN.ISO

JP
3/29/94
ΔT=311 min
mass = 4.340 g

REGION OF INTEREST REPORT

ROI #	From(keV) To (keV)	Integral CPS	Area %Error	Peak(keV) FWHM(keV)
1	43.6	3099	366	46.8
	49.0	0.17	18.76	1.13
2	60.5	4284	896	63.3
	66.0	0.23	9.38	1.33
	Isotope: TH-234 @ 63.3			
3	90.5	4554	1025	92.8
	95.0	0.24	7.03	1.24
4	181.9	5016	2560	186.0
	189.4	0.27	4.56	1.56
	Isotope: U-235 @ 185.7			
5	291.4	5342	4154	295.2
	298.9	0.29	2.90	1.51
	Isotope: PB-214 @ 295.2			
6	334.3	1064	112	337.9
	341.8	0.06	48.05	1.45
	Isotope: AC-228 @ 338.3			
7	347.8	7967	6959	351.8
	355.3	0.43	2.12	1.53
	Isotope: PB-214 @ 351.9			
8	579.2	649	139	583.1
	586.7	0.03	30.24	2.24
	Isotope: TL-208 @ 583.2			
9	605.1	5124	4652	608.9
	612.6	0.27	2.54	1.69
	Isotope: XE-135 @ 608.1			
	BI-214 @ 609.3			
10	906.9	417	145	910.7
	914.4	0.02	23.24	3.30
	Isotope: AC-228 @ 911.2			
11	958.9	681	161	967.9
	974.4	0.04	42.52	1.59

REGION OF INTEREST DATA

ROI # 1
Channel # **** Data ****

85	227	231	209	243	229
90	295	390	363	244	220
95	217	231			

ROI # 2
Channel # **** Data ****

119					270
120	273	312	287	411	554

REGION OF INTEREST DATA

ROI # 2
Channel # **** Data ****

125	621	439	342	248	263
130	264				

ROI # 3
Channel # **** Data ****

179					352
180	298	318	531	881	850
185	521	300	261	242	

ROI # 4
Channel # **** Data ****

362			152	167	160
365	178	144	188	323	688
370	943	828	439	235	146
375	132	140	153		

ROI # 5
Channel # **** Data ****

581		82	82	70	75
585	92	262	680	1301	1330
590	731	270	82	62	71
595	71	81			

ROI # 6
Channel # **** Data ****

667			68	71	68
670	41	67	58	79	77
675	99	74	76	58	52
680	53	72	51		

ROI # 7
Channel # **** Data ****

694					70
695	80	64	70	95	224
700	782	1783	2247	1585	587
705	160	67	51	55	47

ROI # 8
Channel # **** Data ****

1157			41	42	25
1160	29	38	39	55	65
1165	63	51	47	36	34
1170	29	29	26		

ROI # 9
Channel # **** Data ****

1209					30
1210	30	33	46	105	321
1215	809	1326	1250	732	262
1220	83	29	16	30	22

REGION OF INTEREST DATA

ROI # 10

Channel #	**** Data ****				
1813				15	13
1815	13	20	26	39	35
1820	40	42	36	34	29
1825	20	20	18	17	

ROI # 11

Channel #	**** Data ****				
1917			13	7	17
1920	20	24	21	23	14
1925	22	32	26	31	32
1930	18	17	23	25	29
1935	30	38	27	18	18
1940	22	14	24	9	14
1945	18	16	21	18	

MCA #1 - Canberra S100 - NOPI3081.MCA - NOPI-308-GAM1 7.0cm

Tag Number: 46
Report Group: 1/4
Group Size: 4096

Readout: Tue 29 Mar 1994 @ 13:59:40
Acquire Started: Tue 29 Mar 1994 @ 13:58:19

Elapsed Live Time: 311.00 min.
Elapsed True Time: 311.06 min.
Dead Time: 0.02 %

MCA Mode: PHA+
Preset Conditions: Live Time = 6000.00 min.

Calibration: 0.0000*Ch^2 + 0.4996*Ch + 1.083 keV

Area Statistics: Background Channels = 4
% Error Sigma = 1.65

Peak Statistics: Sensitivity Factor = 4.0
Expected FWHM (ch) = 2.7 - 6.0

Iso. Id. Criteria: Energy Window = +-1.300 keV
Iso. Library: C:\WINDOWS\S100\SPECTRAN.ISO

REGION OF INTEREST REPORT

ROI #	From(keV) To (keV)	Integral CPS	Area %Error	Peak(keV) FWHM(keV)	
1	43.6	667	0	214.2	1335
	44.6	0.04	0.00	10.89	
2	48.0	668	0	218.7	
	49.0	0.04	0.00	10.89	
3	60.5	855	0	231.1	1630
	61.5	0.05	0.00	10.89	
4	65.0	775	0	235.6	
	66.0	0.04	0.00	10.89	
	Isotope: I-134 @ 235.5				
5	90.5	968	0	261.1	1471
	91.5	0.05	0.00	10.89	
6	94.5	503	0	265.1	
	95.0	0.03	0.00	10.89	
	Isotope: GE-75 @ 264.7				
	SE-75 @ 264.7				
7	181.9	657	0	182.5	1228
	183.4	0.04	0.00	21458958.00	
8	187.9	571	0	188.4	
	189.4	0.03	0.00	21458958.00	
9	291.4	309	0	291.8	594
	292.9	0.02	0.00	21458958.00	
10	297.4	285	0	298.4	
	298.9	0.02	0.00	21458958.00	
	Isotope: GA-73 @ 297.4				
11	334.3	248	0	335.0	476
	335.8	0.01	0.00	21458958.00	
	Isotope: NP-239 @ 334.3				
12	340.3	228	0	341.3	
	341.8	0.01	0.00	21458958.00	
	Isotope: CS-136 @ 340.6				
13	347.8	284	0	348.3	504
	349.3	0.02	0.00	21458958.00	
14	353.8	220	0	354.8	
	355.3	0.01	0.00	21458958.00	
	Isotope: BA-133 @ 356.0				
15	579.2	137	0	579.6	255
	580.7	0.01	0.00	21458958.00	
16	585.2	118	0	586.1	
	586.7	0.01	0.00	21458958.00	

REGION OF INTEREST REPORT

ROI #	From(keV) To (keV)	Integral CPS	Area %Error	Peak(keV) FWHM(keV)	
17	605.1	139	0	606.2	
	606.6	0.01	0.00	21458958.00	236
	Isotope: SB-125 @ 606.7				
18	611.1	97	0	612.2	
	612.6	0.01	0.00	21458958.00	
19	906.9	61	0	908.0	
	908.4	0.00	0.00	21458958.00	136
20	912.9	75	0	913.4	
	914.4	0.00	0.00	21458958.00	
21	958.9	139	0	960.9	
	962.4	0.01	0.00	0.62	273
22	970.9	134	0	971.3	
	974.4	0.01	0.00	21458958.00	
	Isotope: I-135 @ 972.3				
23M	1100.8	1972	730	1119.4	
	1134.7	0.11	22.83	1.96	
	Isotope: BI-214 @ 1120.3				
	SC-46 @ 1120.5				

MCA #1 - Canberra S100 - NOPI3091.MCA - NOPI-309-GAM1 7.0cm

Tag Number: 48
Report Group: 2/4
Group Size: 4096

Readout: Wed 30 Mar 1994 @ 09:07:55
Acquire Started: Tue 29 Mar 1994 @ 14:02:48

Elapsed Live Time: 300.00 min.
Elapsed True Time: 300.09 min.
Dead Time: 0.03 %

MCA Mode: PHA+
Preset Conditions: Live Time = 300.00 min.

Calibration: 0.0000*Ch^2 + 0.4996*Ch + 1.083 keV

Area Statistics: Background Channels = 4
% Error Sigma = 1.65

Peak Statistics: Sensitivity Factor = 4.0
Expected FWHM (ch) = 2.7 - 6.0

Iso. Id. Criteria: Energy Window = +-1.300 keV
Iso. Library: C:\WINDOWS\S100\SPECTRAN.ISO

JP
3/30/94
ΔT = 300 min
mass = 4.202g

REGION OF INTEREST REPORT

ROI #	From(keV) To (keV)	Integral CPS	Area %Error	Peak(keV) FWHM(keV)
1	43.6	6089	718	46.8
	49.0	0.34	13.42	1.22
2	60.5	9185	2251	63.5
	66.0	0.51	5.54	1.28
	Isotope: TH-234 @ 63.3			
3	90.5	9988	2538	92.8
	95.0	0.55	4.31	1.28
4	181.9	10244	5870	186.0
	189.4	0.57	2.84	1.43
	Isotope: U-235 @ 185.7			
5	291.4	11463	9477	295.2
	298.9	0.64	1.86	1.51
	Isotope: PB-214 @ 295.2			
6	334.3	1793	125	338.3
	341.8	0.10	55.89	1.14
	Isotope: AC-228 @ 338.3			
7	347.8	17347	15699	351.8
	355.3	0.96	1.38	1.51
	Isotope: PB-214 @ 351.9			
8	579.2	931	37	582.6
	586.7	0.05	136.07	1.53
	Isotope: TL-208 @ 583.2			
9	605.1	11089	10325	608.9
	612.6	0.62	1.68	1.74
	Isotope: XE-135 @ 608.1			
	BI-214 @ 609.3			
10	906.9	626	138	910.6
	914.4	0.03	29.92	2.02
	Isotope: AC-228 @ 911.2			
11	958.9	993	49	963.2
	974.4	0.06	180.74	2.06

REGION OF INTEREST DATA

ROI # 1
Channel # **** Data ****

85	437	450	447	453	507
90	571	726	704	491	406
95	461	436			

ROI # 2
Channel # **** Data ****

119					599
120	599	592	645	774	1224

REGION OF INTEREST DATA

ROI # 2
Channel # **** Data ****

125	1496	1068	622	514	509
130	543				

ROI # 3
Channel # **** Data ****

179					681
180	541	585	1253	1997	2031
185	1152	688	545	515	

ROI # 4
Channel # **** Data ****

362			286	241	262
365	301	286	358	652	1387
370	2200	1822	934	418	281
375	300	239	277		

ROI # 5
Channel # **** Data ****

581		122	128	123	151
585	167	492	1474	2828	3057
590	1701	575	176	122	113
595	112	122			

ROI # 6
Channel # **** Data ****

667			113	100	94
670	87	97	122	108	147
675	141	129	110	105	115
680	98	103	124		

ROI # 7
Channel # **** Data ****

694					100
695	102	124	115	207	535
700	1691	3868	5037	3548	1289
705	348	121	96	69	97

ROI # 8
Channel # **** Data ****

1157			56	52	70
1160	69	40	62	77	81
1165	75	55	46	48	56
1170	43	56	45		

ROI # 9
Channel # **** Data ****

1209					50
1210	42	39	63	217	673
1215	1784	2847	2755	1625	623
1220	182	62	47	29	49

REGION OF INTEREST DATA

ROI # 10

Channel #	**** Data ****				
1813				24	33
1815	35	38	33	39	68
1820	50	57	59	37	39
1825	33	21	17	43	

ROI # 11

Channel #	**** Data ****				
1917			30	32	31
1920	26	26	25	30	46
1925	40	42	39	41	26
1930	23	33	24	42	45
1935	30	42	30	25	28
1940	22	21	20	30	27
1945	23	31	31	32	

MCA #1 - Canberra S100 - NOPI3091.MCA - NOPI-309-GAM1 7.0cm

Tag Number: 48
Report Group: 1/4
Group Size: 4096

Readout: Wed 30 Mar 1994 @ 09:08:29
Acquire Started: Tue 29 Mar 1994 @ 14:02:48

Elapsed Live Time: 300.00 min.
Elapsed True Time: 300.09 min.
Dead Time: 0.03 %

MCA Mode: PHA+
Preset Conditions: Live Time = 6000.00 min.

Calibration: 0.0000*Ch^2 + 0.4996*Ch + 1.083 keV

Area Statistics: Background Channels = 4
% Error Sigma = 1.65

Peak Statistics: Sensitivity Factor = 4.0
Expected FWHM (ch) = 2.7 - 6.0

Iso. Id. Criteria: Energy Window = +-1.300 keV
Iso. Library: C:\WINDOWS\S100\SPECTRAN.ISO

REGION OF INTEREST REPORT

ROI #	From(keV) To (keV)	Integral CPS	Area %Error	Peak(keV) FWHM(keV)	
1	43.6	1334	0	214.2	2637
	44.6	0.07	0.00	3.09	
2	48.0	1303	0	218.7	
	49.0	0.07	0.00	3.09	
3	60.5	1790	0	231.1	3356
	61.5	0.10	0.00	3.09	
4	65.0	1566	0	235.6	
	66.0	0.09	0.00	3.09	
	Isotope: I-134 @ 235.5				
5	90.5	1807	0	261.1	2867
	91.5	0.10	0.00	3.09	
6	94.5	1060	0	265.1	
	95.0	0.06	0.00	3.09	
	Isotope: GE-75 @ 264.7				
	SE-75 @ 264.7				
7	181.9	1090	0	352.6	2187
	183.4	0.06	0.00	3.09	
	Isotope: PB-214 @ 351.9				
8	187.9	1097	0	188.4	
	189.4	0.06	0.00	21458956.00	
9	291.4	524	0	291.9	993
	292.9	0.03	0.00	21458956.00	
10	297.4	469	0	297.8	
	298.9	0.03	0.00	21458956.00	
	Isotope: GA-73 @ 297.4				
11	334.3	394	0	334.8	834
	335.8	0.02	0.00	21458956.00	
	Isotope: NP-239 @ 334.3				
12	340.3	440	0	340.8	
	341.8	0.02	0.00	21458956.00	
	Isotope: CS-136 @ 340.6				
13	347.8	441	0	348.8	824
	349.3	0.02	0.00	21458956.00	
14	353.8	383	0	354.2	
	355.3	0.02	0.00	21458956.00	
15	579.2	247	0	580.2	447
	580.7	0.01	0.00	21458956.00	
16	585.2	200	0	586.2	
	586.7	0.01	0.00	21458956.00	

REGION OF INTEREST REPORT

ROI #	From(keV) To (keV)	Integral CPS	Area %Error	Peak(keV) FWHM(keV)	
17	605.1	194	0	606.2	382
	606.6	0.01	0.00	21458956.00	
	Isotope: SB-125 @ 606.7				
18	611.1	188	0	611.5	
	612.6	0.01	0.00	21458956.00	
19	906.9	130	0	907.9	244
	908.4	0.01	0.00	21458956.00	
20	912.9	114	0	914.0	
	914.4	0.01	0.00	21458956.00	
21	958.9	246	0	959.4	~~705~~461
	962.4	0.01	0.00	21458956.00	
22	970.9	215	0	971.9	
	974.4	0.01	0.00	0.32	
	Isotope: I-135 @ 972.3				
23M	1100.8	3576	1955	1119.4	
	1134.7	0.20	10.10	2.08	
	Isotope: BI-214 @ 1120.3				
	SC-46 @ 1120.5				

MCA #1 - Canberra S100 - NOPI3101.MCA - NOPI-310-GAM1 7.0cm

Tag Number: 51
Report Group: 2/4
Group Size: 4096

Readout: Wed 30 Mar 1994 @ 13:51:31
Acquire Started: Wed 30 Mar 1994 @ 13:50:55

Elapsed Live Time: 280.00 min.
Elapsed True Time: 280.07 min.
Dead Time: 0.03 %

MCA Mode: PHA+
Preset Conditions: Live Time = 280.00 min.

Calibration: 0.0000*Ch^2 + 0.4996*Ch + 1.083 keV

Area Statistics: Background Channels = 4
% Error Sigma = 1.65

Peak Statistics: Sensitivity Factor = 4.0
Expected FWHM (ch) = 2.7 - 6.0

Iso. Id. Criteria: Energy Window = +-1.300 keV
Iso. Library: C:\WINDOWS\S100\SPECTRAN.ISO

JP
3/30/94
LT = 280 min
mass = 4.086 g

REGION OF INTEREST REPORT

ROI #	From(keV) To (keV)	Integral CPS	Area %Error	Peak(keV) FWHM(keV)
1	43.6	4490	524	46.8
	49.0	0.27	15.77	0.87
2	60.5	6912	1817	63.5
	66.0	0.41	6.00	1.25
	Isotope: TH-234 @ 63.3			
3	90.5	7636	1974	92.8
	95.0	0.45	4.87	1.28
4	181.9	7665	4379	186.0
	189.4	0.46	3.30	1.54
	Isotope: U-235 @ 185.7			
5	291.4	8420	6906	295.1
	298.9	0.50	2.19	1.46
	Isotope: PB-214 @ 295.2			
6	334.3	1411	85	337.6
	341.8	0.08	72.92	0.89
	Isotope: AC-228 @ 338.3			
7	347.8	12657	11385	351.8
	355.3	0.75	1.63	1.54
	Isotope: PB-214 @ 351.9			
8	579.2	725	97	582.8
	586.7	0.04	45.80	1.90
	Isotope: TL-208 @ 583.2			
9	605.1	8182	7490	608.7
	612.6	0.49	1.99	1.63
	Isotope: XE-135 @ 608.1			
	BI-214 @ 609.3			
10	906.9	463	91	910.4
	914.4	0.03	39.02	2.24
	Isotope: AC-228 @ 911.2			
11	958.9	756	24	967.7
	974.4	0.05	323.93	0.89

REGION OF INTEREST DATA

ROI # 1
Channel # **** Data ****

85	317	298	350	306	374
90	392	575	505	383	337
95	328	325			

ROI # 2
Channel # **** Data ****

119					439
120	415	440	435	627	921

REGION OF INTEREST DATA

ROI # 2
Channel # **** Data ****

125	1160	807	460	421	412
130	375				

ROI # 3
Channel # **** Data ****

179					500
180	387	469	964	1573	1533
185	897	485	409	419	

ROI # 4
Channel # **** Data ****

362			240	204	240
365	202	234	295	492	1134
370	1562	1341	659	305	207
375	178	194	178		

ROI # 5
Channel # **** Data ****

581		105	94	104	104
585	131	357	1103	2252	2187
590	1155	351	127	83	90
595	70	107			

ROI # 6
Channel # **** Data ****

667			88	84	77
670	79	80	86	108	127
675	92	94	86	75	85
680	79	81	90		

ROI # 7
Channel # **** Data ****

694					81
695	87	83	105	128	408
700	1320	3050	3602	2470	839
705	204	91	71	64	54

ROI # 8
Channel # **** Data ****

1157			54	60	41
1160	39	46	47	63	66
1165	66	46	40	37	35
1170	25	32	28		

ROI # 9
Channel # **** Data ****

1209					38
1210	41	45	67	197	586
1215	1427	2209	1912	1056	352
1220	97	42	42	33	27

REGION OF INTEREST DATA

ROI # 10

Channel #	**** Data ****				
1813				26	18
1815	18	33	26	33	42
1820	38	41	38	20	39
1825	27	24	24	16	

ROI # 11

Channel #	**** Data ****				
1917			19	27	17
1920	33	18	20	29	24
1925	35	27	37	35	20
1930	16	18	13	21	40
1935	27	34	20	21	21
1940	15	17	16	22	27
1945	25	19	22	21	

MCA #1 - Canberra S100 - NOPI3101.MCA - NOPI-310-GAM1 7.0cm

Tag Number: 51
Report Group: 1/4
Group Size: 4096

Readout: Wed 30 Mar 1994 @ 13:52:07
Acquire Started: Wed 30 Mar 1994 @ 13:50:55

Elapsed Live Time: 280.00 min.
Elapsed True Time: 280.07 min.
Dead Time: 0.03 %

MCA Mode: PHA+
Preset Conditions: Live Time = 6000.00 min.

Calibration: 0.0000*Ch^2 + 0.4996*Ch + 1.083 keV

Area Statistics: Background Channels = 4
% Error Sigma = 1.65

Peak Statistics: Sensitivity Factor = 4.0
Expected FWHM (ch) = 2.7 - 6.0

Iso. Id. Criteria: Energy Window = +-1.300 keV
Iso. Library: C:\WINDOWS\S100\SPECTRAN.ISO

REGION OF INTEREST REPORT

ROI #	From(keV) To (keV)	Integral CPS	Area %Error	Peak(keV) FWHM(keV)	
1	43.6	965	0	220.4	1955
	44.6	0.06	0.00	1.80	
	Isotope: I-135 @ 220.5				
2	48.0	990	0	224.9	
	49.0	0.06	0.00	1.80	
3	60.5	1294	0	237.4	2502
	61.5	0.08	0.00	1.80	
	Isotope: PB-212 @ 238.6				
4	65.0	1208	0	241.9	
	66.0	0.07	0.00	1.80	
5	90.5	1356	0	267.4	2184
	91.5	0.08	0.00	1.80	
	Isotope: Y-93 @ 266.9				
6	94.5	828	0	271.4	
	95.0	0.05	0.00	1.80	
7	181.9	886	0	182.9	1643
	183.4	0.05	0.00	1.80	
8	187.9	757	0	188.9	
	189.4	0.05	0.00	1.80	
9	291.4	407	0	292.4	757
	292.9	0.02	0.00	1.80	
10	297.4	350	0	297.8	
	298.9	0.02	0.00	21458950.00	
	Isotope: GA-73 @ 297.4				
11	334.3	328	0	334.8	663
	335.8	0.02	0.00	21458950.00	
	Isotope: NP-239 @ 334.3				
12	340.3	335	0	340.8	
	341.8	0.02	0.00	21458952.00	
	Isotope: CS-136 @ 340.6				
13	347.8	356	0	348.3	636
	349.3	0.02	0.00	21458952.00	
14	353.8	280	0	354.3	
	355.3	0.02	0.00	21458950.00	
15	579.2	194	0	579.6	314
	580.7	0.01	0.00	21458952.00	
16	585.2	120	0	586.2	
	586.7	0.01	0.00	21458952.00	

REGION OF INTEREST REPORT

ROI #	From(keV) To (keV)	Integral CPS	Area %Error	Peak(keV) FWHM(keV)
17	605.1	191	0	606.2
	606.6	0.01	0.00	21458952.00
	Isotope: SB-125 @ 606.7			
18	611.1	155	0	611.6
	612.6	0.01	0.00	21458952.00
19	906.9	95	0	907.3
	908.4	0.01	0.00	21458952.00
20	912.9	91	0	913.8
	914.4	0.01	0.00	21458952.00
21	958.9	187	0	960.4
	962.4	0.01	0.00	0.37
22	970.9	169	0	972.6
	974.4	0.01	0.00	0.85
	Isotope: I-135 @ 972.3			
23M	1100.8	2747	1462	1119.1
	1134.7	0.16	11.98	1.92
	Isotope: BI-214 @ 1120.3			

MCA #1 - Canberra S100 - NOPI3111.MCA - NOPI-311-GAM1 7.0cm

Tag Number: 56
Report Group: 2/4
Group Size: 4096

Readout: Thu 31 Mar 1994 @ 13:15:54
Acquire Started: Thu 31 Mar 1994 @ 13:15:25

Elapsed Live Time: 222.00 min.
Elapsed True Time: 222.06 min.
Dead Time: 0.03 %

MCA Mode: PHA+
Preset Conditions: Live Time = 222.00 min.

Calibration: 0.0000*Ch^2 + 0.4996*Ch + 1.083 keV

Area Statistics: Background Channels = 4
% Error Sigma = 1.65

Peak Statistics: Sensitivity Factor = 4.0
Expected FWHM (ch) = 2.7 - 6.0

Iso. Id. Criteria: Energy Window = +-1.300 keV
Iso. Library: C:\WINDOWS\S100\SPECTRAN.ISO

JP
3/31/94
ΔT = 222 min
Mean = 4.2680

REGION OF INTEREST REPORT

ROI #	From(keV) To (keV)	Integral CPS	Area %Error	Peak(keV) FWHM(keV)
1	43.6	3458	460	46.5
	49.0	0.26	15.89	1.02
2	60.5	5024	1159	63.5
	66.0	0.38	7.92	1.36
	Isotope: TH-234 @ 63.3			
3	90.5	5594	1375	92.8
	95.0	0.42	5.91	1.20
4	181.9	5878	3176	186.0
	189.4	0.44	3.98	1.58
	Isotope: U-235 @ 185.7			
5	291.4	6426	5236	295.2
	298.9	0.48	2.53	1.51
	Isotope: PB-214 @ 295.2			
6	334.3	1055	93	338.3
	341.8	0.08	57.63	0.78
	Isotope: AC-228 @ 338.3			
7	347.8	9709	8707	351.8
	355.3	0.73	1.87	1.51
	Isotope: PB-214 @ 351.9			
8	579.2	569	61	582.4
	586.7	0.04	64.52	1.23
	Isotope: TL-208 @ 583.2			
9	605.1	6379	5877	608.8
	612.6	0.48	2.24	1.74
	Isotope: XE-135 @ 608.1			
	BI-214 @ 609.3			
10	906.9	365	95	910.4
	914.4	0.03	33.18	2.25
	Isotope: AC-228 @ 911.2			
11	958.9	628	144	964.1
	974.4	0.05	45.78	2.13

REGION OF INTEREST DATA

ROI # 1
Channel # **** Data ****

85	245	246	237	221	291
90	353	450	365	274	257
95	272	247			

ROI # 2
Channel # **** Data ****

119					337
120	320	324	338	428	650

REGION OF INTEREST DATA

ROI # 2
Channel # **** Data ****

125	772	597	374	310	277
130	297				

ROI # 3
Channel # **** Data ****

179					409
180	303	331	669	1152	1067
185	651	379	321	312	

ROI # 4
Channel # **** Data ****

362			177	165	172
365	199	151	216	365	848
370	1158	1004	568	217	173
375	141	150	174		

ROI # 5
Channel # **** Data ****

581		87	68	72	92
585	104	291	799	1636	1666
590	936	313	86	65	70
595	76	65			

ROI # 6
Channel # **** Data ****

667			56	53	66
670	47	65	68	86	72
675	87	76	65	55	63
680	64	72	60		

ROI # 7
Channel # **** Data ****

694					68
695	67	70	94	97	262
700	923	2267	2828	1936	729
705	166	66	43	47	46

ROI # 8
Channel # **** Data ****

1157			33	44	39
1160	31	37	35	58	53
1165	43	35	29	25	25
1170	23	26	33		

ROI # 9
Channel # **** Data ****

1209					28
1210	34	28	48	113	433
1215	1045	1634	1585	916	323
1220	70	35	26	29	23

REGION OF INTEREST DATA

ROI # 10

Channel #	**** Data ****				
1813				26	19
1815	12	17	23	29	34
1820	36	39	29	22	18
1825	16	12	18	15	

ROI # 11

Channel #	**** Data ****				
1917			17	18	19
1920	14	21	21	20	15
1925	25	25	33	25	31
1930	19	23	16	19	24
1935	31	23	22	23	14
1940	18	4	14	23	18
1945	10	10	19	14	

MCA #1 - Canberra S100 - NOPI3111.MCA - NOPI-311-GAM1 7.0cm

Tag Number: 56
Report Group: 1/4
Group Size: 4096

Readout: Thu 31 Mar 1994 @ 13:16:23
Acquire Started: Thu 31 Mar 1994 @ 13:15:25

Elapsed Live Time: 222.00 min.
Elapsed True Time: 222.06 min.
Dead Time: 0.03 %

MCA Mode: PHA+
Preset Conditions: Live Time = 6000.00 min.

Calibration: 0.0000*Ch^2 + 0.4996*Ch + 1.083 keV

Area Statistics: Background Channels = 4
% Error Sigma = 1.65

Peak Statistics: Sensitivity Factor = 4.0
Expected FWHM (ch) = 2.7 - 6.0

Iso. Id. Criteria: Energy Window = +-1.300 keV
Iso. Library: C:\WINDOWS\S100\SPECTRAN.ISO

REGION OF INTEREST REPORT

ROI #	From(keV) To (keV)	Integral CPS	Area %Error	Peak(keV) FWHM(keV)	
1	43.6	728	0	214.2	1504
	44.6	0.05	0.00	9.37	
2	48.0	776	0	218.7	
	49.0	0.06	0.00	9.37	
3	60.5	981	0	231.1	1865
	61.5	0.07	0.00	9.37	
4	65.0	884	0	235.6	
	66.0	0.07	0.00	9.37	
	Isotope: I-134 @ 235.5				
5	90.5	1043	0	261.1	1676
	91.5	0.08	0.00	9.37	
6	94.5	633	0	265.1	
	95.0	0.05	0.00	9.37	
	Isotope: GE-75 @ 264.7				
	SE-75 @ 264.7				
7	181.9	713	0	352.6	1351
	183.4	0.05	0.00	9.37	
	Isotope: PB-214 @ 351.9				
8	187.9	638	0	358.5	
	189.4	0.05	0.00	9.37	
	Isotope: TC-104 @ 357.9				
9	291.4	319	0	462.0	595
	292.9	0.02	0.00	9.37	
	Isotope: CS-138 @ 462.7				
10	297.4	276	0	298.4	
	298.9	0.02	0.00	9.37	
	Isotope: GA-73 @ 297.4				
11	334.3	222	0	335.3	481
	335.8	0.02	0.00	9.37	
	Isotope: NP-239 @ 334.3				
12	340.3	259	0	341.3	
	341.8	0.02	0.00	9.37	
	Isotope: CS-136 @ 340.6				
13	347.8	299	0	348.9	501
	349.3	0.02	0.00	9.37	
14	353.8	202	0	354.8	
	355.3	0.02	0.00	9.37	
	Isotope: BA-133 @ 356.0				
15	579.2	147	0	579.7	254
	580.7	0.01	0.00	21458958.00	

REGION OF INTEREST REPORT

ROI #	From(keV) To (keV)	Integral CPS	Area %Error	Peak(keV) FWHM(keV)
16	585.2	107	0	586.2
	586.7	0.01	0.00	21458958.00
17	605.1	138	0	605.6
	606.6	0.01	0.00	21458958.00
	Isotope:	CS-134 @	604.7	
		SB-125 @	606.7	
18	611.1	113	0	612.1
	612.6	0.01	0.00	21458958.00
19	906.9	74	0	907.3
	908.4	0.01	0.00	21458958.00
20	912.9	61	0	913.9
	914.4	0.00	0.00	21458958.00
21	958.9	145	0	961.6
	962.4	0.01	0.00	21458958.00
22	970.9	112	0	972.0
	974.4	0.01	0.00	0.65
	Isotope:	I-135 @	972.3	
23M	1100.8	2141	1115	1119.4
	1134.7	0.16	14.00	2.07
	Isotope:	BI-214 @	1120.3	
		SC-46 @	1120.5	

251

135

257

MCA #1 - Canberra S100 - NOPI3121.MCA - NOPI-312-GAM1 7.0cm

Tag Number:	60	Readout:	Fri 01 Apr 1994 @ 13:21:48
Report Group:	2/4	Acquire Started:	Fri 01 Apr 1994 @ 13:20:24
Group Size:	4096		

Elapsed Live Time:	278.00 min.
Elapsed True Time:	278.08 min.
Dead Time:	0.03 %

MCA Mode:	PHA+
Preset Conditions:	Live Time = 278.00 min.

Calibration: 0.0000*Ch^2 + 0.4996*Ch + 1.083 keV

Area Statistics: Background Channels = 4
% Error Sigma = 1.65

Peak Statistics: Sensitivity Factor = 4.0
Expected FWHM (ch) = 2.7 - 6.0

Iso. Id. Criteria: Energy Window = +-1.300 keV
Iso. Library: C:\WINDOWS\S100\SPECTRAN.ISO

4/1/94
ΔT = 278 min
mass = 3.965 g

REGION OF INTEREST REPORT

ROI #	From(keV) To (keV)	Integral CPS	Area %Error	Peak(keV) FWHM(keV)
1	43.6	3364	429	46.8
	49.0	0.20	16.77	1.27
2	60.5	4970	1132	63.5
	66.0	0.30	8.05	1.47
	Isotope:	TH-234	@ 63.3	
3	90.5	5500	1368	92.8
	95.0	0.33	5.91	1.27
4	181.9	5596	3002	186.1
	189.4	0.34	4.11	1.48
	Isotope:	U-235	@ 185.7	
5	291.4	6095	4785	295.3
	298.9	0.37	2.69	1.49
	Isotope:	PB-214	@ 295.2	
6	334.3	1153	69	338.3
	341.8	0.07	81.20	1.42
	Isotope:	AC-228	@ 338.3	
7	347.8	8992	7766	351.9
	355.3	0.54	2.01	1.55
	Isotope:	PB-214	@ 351.9	
8	579.2	621	67	583.1
	586.7	0.04	61.37	1.72
	Isotope:	TL-208	@ 583.2	
9	605.1	5951	5399	608.9
	612.6	0.36	2.36	1.68
	Isotope:	XE-135	@ 608.1	
		BI-214	@ 609.3	
10	906.9	501	95	911.3
	914.4	0.03	38.88	1.33
	Isotope:	AC-228	@ 911.2	
11	958.9	638	62	968.3
	974.4	0.04	112.59	2.25
	Isotope:	RU-105	@ 969.4	

REGION OF INTEREST DATA

ROI # 1

Channel # **** Data ****

85	254	247	256	247	278
90	315	408	406	277	223
95	229	224			

ROI # 2

Channel # **** Data ****

REGION OF INTEREST DATA

ROI # 2
Channel # **** Data ****

120	319	311	343	384	661
125	727	639	392	327	303
130	278				

ROI # 3
Channel # **** Data ****

179					381
180	326	335	614	1069	1125
185	720	340	321	269	

ROI # 4
Channel # **** Data ****

362			168	181	156
365	183	177	205	319	668
370	1090	1011	546	283	158
375	133	164	154		

ROI # 5
Channel # **** Data ****

581		61	89	77	110
585	96	196	639	1368	1623
590	1042	359	117	80	79
595	79	80			

ROI # 6
Channel # **** Data ****

667			86	60	59
670	75	67	87	71	84
675	90	87	63	62	72
680	64	58	68		

ROI # 7
Channel # **** Data ****

694					84
695	82	71	81	88	205
700	710	1805	2495	2007	864
705	205	90	76	59	70

ROI # 8
Channel # **** Data ****

1157			41	38	46
1160	41	37	39	39	53
1165	50	55	37	34	23
1170	28	41	19		

ROI # 9
Channel # **** Data ****

1209					24
1210	35	30	47	107	291
1215	708	1422	1527	994	419

1220	117	52	33	30	25

REGION OF INTEREST DATA

ROI # 10

Channel #	**** Data ****				
1813				33	23
1815	24	28	27	32	52
1820	35	51	37	41	23
1825	24	19	25	27	

ROI # 11

Channel #	**** Data ****				
1917			20	20	19
1920	22	19	21	20	21
1925	28	22	28	27	26
1930	19	14	12	20	25
1935	23	26	26	19	18
1940	20	23	18	7	12
1945	9	17	20	17	

MCA #1 - Canberra S100 - NOPI3121.MCA - NOPI-312-GAM1 7.0cm

Tag Number: 60
Report Group: 1/4
Group Size: 4096

Readout: Fri 01 Apr 1994 @ 13:22:32
Acquire Started: Fri 01 Apr 1994 @ 13:20:24

Elapsed Live Time: 278.00 min.
Elapsed True Time: 278.08 min.
Dead Time: 0.03 %

MCA Mode: PHA+
Preset Conditions: Live Time = 6000.00 min.

Calibration: 0.0000*Ch^2 + 0.4996*Ch + 1.083 keV

Area Statistics: Background Channels = 4
% Error Sigma = 1.65

Peak Statistics: Sensitivity Factor = 4.0
Expected FWHM (ch) = 2.7 - 6.0

Iso. Id. Criteria: Energy Window = +-1.300 keV
Iso. Library: C:\WINDOWS\S100\SPECTRAN.ISO

REGION OF INTEREST REPORT

ROI #	From(keV) To (keV)	Integral CPS	Area %Error	Peak(keV) FWHM(keV)	
1	43.6	757	0	221.4	
	44.6	0.05	0.00	4.50	1433
	Isotope:	I-135 @	220.5		
		TA-182 @	222.1		
2	48.0	676	0	225.9	
	49.0	0.04	0.00	4.50	
3	60.5	916	0	238.4	
	61.5	0.05	0.00	4.50	1824
	Isotope:	PB-212 @	238.6		
4	65.0	908	0	242.9	
	66.0	0.05	0.00	4.50	
5	90.5	1042	0	268.4	
	91.5	0.06	0.00	4.50	1632
6	94.5	590	0	272.4	
	95.0	0.04	0.00	4.50	
7	181.9	688	0	182.4	
	183.4	0.04	0.00	21458952.00	1297
8	187.9	609	0	189.0	
	189.4	0.04	0.00	21458952.00	
9	291.4	337	0	291.9	
	292.9	0.02	0.00	21458952.00	655
10	297.4	318	0	298.4	
	298.9	0.02	0.00	21458952.00	
	Isotope:	GA-73 @	297.4		
11	334.3	280	0	335.4	
	335.8	0.02	0.00	21458952.00	542
	Isotope:	NP-239 @	334.3		
12	340.3	262	0	341.3	
	341.8	0.02	0.00	21458952.00	
	Isotope:	CS-136 @	340.6		
13	347.8	318	0	348.3	
	349.3	0.02	0.00	21458952.00	613
14	353.8	295	0	354.3	
	355.3	0.02	0.00	21458952.00	
15	579.2	166	0	580.2	
	580.7	0.01	0.00	21458952.00	277
16	585.2	111	0	586.1	
	586.7	0.01	0.00	21458952.00	

REGION OF INTEREST REPORT

ROI #	From(keV) To (keV)	Integral CPS	Area %Error	Peak(keV) FWHM(keV)	
17	605.1	136	0	605.7	
	606.6	0.01	0.00	21458952.00	276
	Isotope:	CS-134 @	604.7		
		SB-125 @	606.7		
18	611.1	140	0	611.5	
	612.6	0.01	0.00	21458952.00	
19	906.9	108	0	907.4	
	908.4	0.01	0.00	21458952.00	203
20	912.9	95	0	914.0	
	914.4	0.01	0.00	21458952.00	
21	958.9	162	0	960.4	
	962.4	0.01	0.00	0.33	285
22	970.9	123	0	973.9	
	974.4	0.01	0.00	0.66	
	Isotope:	I-134 @	974.7		
23M	1100.8	2114	907	1119.5	
	1134.7	0.13	18.31	2.04	
	Isotope:	BI-214 @	1120.3		
		SC-46 @	1120.5		

MCA #1 - Canberra S100 - NOPI3131.MCA - NOPI-313-GAM1 7.0cm

Tag Number: 64
Report Group: 2/4
Group Size: 4096

Readout: Mon 04 Apr 1994 @ 12:21:11
Acquire Started: Mon 04 Apr 1994 @ 12:20:18

Elapsed Live Time: 267.00 min.
Elapsed True Time: 267.08 min.
Dead Time: 0.03 %

MCA Mode: PHA+
Preset Conditions: Live Time = 267.00 min.

Calibration: 0.0000*Ch^2 + 0.4996*Ch + 1.083 keV

Area Statistics: Background Channels = 4
% Error Sigma = 1.65

Peak Statistics: Sensitivity Factor = 4.0
Expected FWHM (ch) = 2.7 - 6.0

Iso. Id. Criteria: Energy Window = +-1.300 keV
Iso. Library: C:\WINDOWS\S100\SPECTRAN.ISO

gp
4/4/94
$\Delta T = 267$ min
mass = 4.1816

REGION OF INTEREST REPORT

ROI #	From(keV) To (keV)	Integral CPS	Area %Error	Peak(keV) FWHM(keV)
1	43.6	4971	534	46.6
	49.0	0.31	16.21	1.53
2	60.5	7477	1824	63.5
	66.0	0.47	6.17	1.22
	Isotope:	TH-234	@ 63.3	
3	90.5	8276	1997	92.8
	95.0	0.52	4.93	1.27
4	181.9	8431	4823	186.1
	189.4	0.53	3.14	1.58
	Isotope:	U-235	@ 185.7	
5	291.4	9409	7779	295.3
	298.9	0.59	2.06	1.53
	Isotope:	PB-214	@ 295.2	
6	334.3	1485	19	338.3
	341.8	0.09	334.65	1.59
	Isotope:	AC-228	@ 338.3	
7	347.8	14419	12883	351.8
	355.3	0.90	1.54	1.48
	Isotope:	PB-214	@ 351.9	
8	579.2	797	73	582.8
	586.7	0.05	63.81	1.18
	Isotope:	TL-208	@ 583.2	
9	605.1	9369	8681	609.0
	612.6	0.58	1.84	1.74
	Isotope:	XE-135	@ 608.1	
		BI-214	@ 609.3	
10	906.9	496	104	910.4
	914.4	0.03	35.33	1.50
	Isotope:	AC-228	@ 911.2	
11	958.9	821	141	964.1
	974.4	0.05	54.65	1.98

REGION OF INTEREST DATA

ROI # 1
Channel # **** Data ****

85	383	350	364	349	408
90	509	560	536	428	377
95	362	345			

ROI # 2
Channel # **** Data ****

119					465
120	461	503	456	612	941

REGION OF INTEREST DATA

ROI # 2

Channel #		**** Data ****			
125	1238	917	578	433	438
130	435				

ROI # 3

Channel #		**** Data ****			
179					580
180	471	484	910	1618	1635
185	1059	595	478	446	

ROI # 4

Channel #		**** Data ****			
362			221	229	236
365	241	235	288	502	1110
370	1665	1549	873	405	239
375	218	200	220		

ROI # 5

Channel #		**** Data ****			
581		126	88	116	93
585	134	354	1049	2232	2511
590	1597	552	165	109	93
595	94	96			

ROI # 6

Channel #		**** Data ****			
667			110	100	98
670	79	93	77	96	108
675	110	108	88	72	75
680	86	81	104		

ROI # 7

Channel #		**** Data ****			
694					91
695	109	105	127	129	321
700	1178	2910	4273	3178	1335
705	327	96	84	81	75

ROI # 8

Channel #		**** Data ****			
1157			48	60	52
1160	47	48	60	58	75
1165	69	42	44	39	38
1170	50	36	31		

ROI # 9

Channel #		**** Data ****			
1209					37
1210	50	31	57	121	471
1215	1253	2276	2408	1667	666
1220	162	72	22	20	24

REGION OF INTEREST DATA

ROI # 10

Channel #	**** Data ****				
1813				31	25
1815	23	29	37	29	43
1820	49	42	31	33	36
1825	21	32	20	15	

ROI # 11

Channel #	**** Data ****				
1917			21	24	22
1920	16	28	23	23	19
1925	34	30	42	32	39
1930	26	16	21	24	30
1935	39	41	34	33	22
1940	11	21	25	19	19
1945	19	25	17	26	

MCA #1 - Canberra S100 - NOPI3131.MCA - NOPI-313-GAM1 7.0cm

Tag Number: 64
Report Group: 1/4
Group Size: 4096

Readout: Mon 04 Apr 1994 @ 12:21:44
Acquire Started: Mon 04 Apr 1994 @ 12:20:18

Elapsed Live Time: 267.00 min.
Elapsed True Time: 267.08 min.
Dead Time: 0.03 %

MCA Mode: PHA+
Preset Conditions: Live Time = 6000.00 min.

Calibration: 0.0000*Ch^2 + 0.4996*Ch + 1.083 keV

Area Statistics: Background Channels = 4
% Error Sigma = 1.65

Peak Statistics: Sensitivity Factor = 4.0
Expected FWHM (ch) = 2.7 - 6.0

Iso. Id. Criteria: Energy Window = +-1.300 keV
Iso. Library: C:\WINDOWS\S100\SPECTRAN.ISO

REGION OF INTEREST REPORT

ROI #	From(keV) To (keV)	Integral CPS	Area %Error	Peak(keV) FWHM(keV)	
1	43.6	1097	0	214.2	2181
	44.6	0.07	0.00	4.95	
2	48.0	1084	0	218.7	
	49.0	0.07	0.00	4.95	
3	60.5	1429	0	231.1	2735
	61.5	0.09	0.00	4.95	
4	65.0	1306	0	235.6	
	66.0	0.08	0.00	4.95	
	Isotope: I-134 @ 235.5				
5	90.5	1535	0	261.1	2459
	91.5	0.10	0.00	4.95	
6	94.5	924	0	265.1	
	95.0	0.06	0.00	4.95	
	Isotope: GE-75 @ 264.7				
	SE-75 @ 264.7				
7	181.9	927	0	183.0	1804
	183.4	0.06	0.00	4.95	
8	187.9	877	0	188.9	
	189.4	0.05	0.00	4.95	
9	291.4	423	0	292.4	815
	292.9	0.03	0.00	4.95	
10	297.4	392	0	298.4	
	298.9	0.02	0.00	4.95	
	Isotope: GA-73 @ 297.4				
11	334.3	387	0	335.0	733
	335.8	0.02	0.00	4.95	
	Isotope: NP-239 @ 334.3				
12	340.3	346	0	340.8	
	341.8	0.02	0.00	21458958.00	
	Isotope: CS-136 @ 340.6				
13	347.8	432	0	348.3	768
	349.3	0.03	0.00	21458958.00	
14	353.8	336	0	354.3	
	355.3	0.02	0.00	21458958.00	
15	579.2	207	0	579.7	362
	580.7	0.01	0.00	21458958.00	
16	585.2	155	0	585.6	
	586.7	0.01	0.00	21458958.00	

REGION OF INTEREST REPORT

ROI #	From(keV) To (keV)	Integral CPS	Area %Error	Peak(keV) FWHM(keV)	
17	605.1	175	0	605.6	
	606.6	0.01	0.00	21458958.00	344
	Isotope:	CS-134 @	604.7		
		SB-125 @	606.7		
18	611.1	169	0	611.5	
	612.6	0.01	0.00	21458958.00	
19	906.9	108	0	907.4	
	908.4	0.01	0.00	21458958.00	196
20	912.9	88	0	913.4	
	914.4	0.01	0.00	21458958.00	
21	958.9	176	0	960.9	
	962.4	0.01	0.00	0.43	347
22	970.9	171	0	973.3	
	974.4	0.01	0.00	0.29	
	Isotope:	I-135 @	972.3		
23M	1100.8	3134	1547	1119.5	
	1134.7	0.20	12.46	2.01	
	Isotope:	BI-214 @	1120.3		
		SC-46 @	1120.5		

MCA #1 - Canberra S100 - NOPI3141.MCA - NOPI-314-GAM1 7.0cm

Tag Number: 69
Report Group: 2/4
Group Size: 4096

Readout: Tue 05 Apr 1994 @ 12:46:20
Acquire Started: Tue 05 Apr 1994 @ 12:45:25

Elapsed Live Time: 251.00 min.
Elapsed True Time: 251.07 min.
Dead Time: 0.03 %

MCA Mode: PHA+
Preset Conditions: Live Time = 251.00 min.

Calibration: 0.0000*Ch^2 + 0.4996*Ch + 1.083 keV

Area Statistics: Background Channels = 4
% Error Sigma = 1.65

Peak Statistics: Sensitivity Factor = 4.0
Expected FWHM (ch) = 2.7 - 6.0

Iso. Id. Criteria: Energy Window = +-1.300 keV
Iso. Library: C:\WINDOWS\S100\SPECTRAN.ISO

gp
4/5/94
ΔT = 251 min
mmm = 4.324g

REGION OF INTEREST REPORT

ROI #	From(keV) To (keV)	Integral CPS	Area %Error	Peak(keV) FWHM(keV)
1	43.6	4514	541	46.8
	49.0	0.30	15.35	1.30
2	60.5	7026	1778	63.5
	66.0	0.47	6.16	1.19
	Isotope:	TH-234	@ 63.3	
3	90.5	7951	1922	92.8
	95.0	0.53	5.03	1.26
4	181.9	7834	4274	186.1
	189.4	0.52	3.42	1.51
	Isotope:	U-235	@ 185.7	
5	291.4	8490	7032	295.3
	298.9	0.56	2.16	1.47
	Isotope:	PB-214	@ 295.2	
6	334.3	1402	94	338.6
	341.8	0.09	65.72	1.22
	Isotope:	AC-228	@ 338.3	
7	347.8	12951	11523	351.8
	355.3	0.86	1.63	1.49
	Isotope:	PB-214	@ 351.9	
8	579.2	710	12	582.9
	586.7	0.05	366.38	1.18
	Isotope:	TL-208	@ 583.2	
9	605.1	8411	7733	608.9
	612.6	0.56	1.96	1.74
	Isotope:	XE-135	@ 608.1	
		BI-214	@ 609.3	
10	906.9	504	76	910.7
	914.4	0.03	48.74	1.26
	Isotope:	AC-228	@ 911.2	
11	958.9	781	73	963.9
	974.4	0.05	105.94	0.79

REGION OF INTEREST DATA

ROI # 1
Channel # **** Data ****

85	316	304	315	354	386
90	419	532	528	402	358
95	271	329			

ROI # 2
Channel # **** Data ****

119					415
120	428	472	463	545	896

REGION OF INTEREST DATA

ROI # 2
Channel # **** Data ****

125	1209	877	544	395	425
130	357				

ROI # 3
Channel # **** Data ****

179					579
180	426	417	858	1499	1629
185	1114	510	443	476	

ROI # 4
Channel # **** Data ****

362			208	231	214
365	214	206	225	457	988
370	1579	1403	818	378	246
375	233	223	211		

ROI # 5
Channel # **** Data ****

581		84	93	76	104
585	127	287	925	1977	2353
590	1436	501	155	95	82
595	104	91			

ROI # 6
Channel # **** Data ****

667			109	85	76
670	77	86	91	101	92
675	113	107	88	70	84
680	76	76	71		

ROI # 7
Channel # **** Data ****

694					92
695	106	102	88	152	324
700	1097	2627	3786	2822	1142
705	287	97	79	65	85

ROI # 8
Channel # **** Data ****

1157			42	52	60
1160	54	37	38	52	67
1165	54	48	32	33	25
1170	39	42	35		

ROI # 9
Channel # **** Data ****

1209					45
1210	41	44	66	121	431
1215	1167	1975	2165	1448	595
1220	170	48	36	32	27

REGION OF INTEREST DATA

ROI # 10

Channel #	**** Data ****				
1813				29	28
1815	25	32	32	39	36
1820	54	49	37	27	16
1825	20	34	20	26	

ROI # 11

Channel #	**** Data ****				
1917			20	21	22
1920	21	25	28	20	21
1925	36	26	39	29	15
1930	20	23	25	25	25
1935	31	28	33	33	20
1940	26	19	22	12	23
1945	19	24	26	24	

MCA #1 - Canberra S100 - NOPI3141.MCA - NOPI-314-GAM1 7.0cm

Tag Number: 69
Report Group: 1/4
Group Size: 4096

Readout: Tue 05 Apr 1994 @ 12:46:55
Acquire Started: Tue 05 Apr 1994 @ 12:45:25

Elapsed Live Time: 251.00 min.
Elapsed True Time: 251.07 min.
Dead Time: 0.03 %

MCA Mode: PHA+
Preset Conditions: Live Time = 6000.00 min.

Calibration: 0.0000*Ch^2 + 0.4996*Ch + 1.083 keV

Area Statistics: Background Channels = 4
% Error Sigma = 1.65

Peak Statistics: Sensitivity Factor = 4.0
Expected FWHM (ch) = 2.7 - 6.0

Iso. Id. Criteria: Energy Window = +-1.300 keV
Iso. Library: C:\WINDOWS\S100\SPECTRAN.ISO

REGION OF INTEREST REPORT

ROI #	From(keV) To (keV)	Integral CPS	Area %Error	Peak(keV) FWHM(keV)	
1	43.6	935	0	214.2	1893
	44.6	0.06	0.00	4.28	
2	48.0	958	0	218.7	
	49.0	0.06	0.00	4.28	
3	60.5	1315	0	231.1	2492
	61.5	0.09	0.00	4.28	
4	65.0	1177	0	235.6	
	66.0	0.08	0.00	4.28	
	Isotope: I-134 @ 235.5				
5	90.5	1422	0	261.1	2341
	91.5	0.09	0.00	4.28	
6	94.5	919	0	265.1	
	95.0	0.06	0.00	4.28	
	Isotope: GE-75 @ 264.7				
	SE-75 @ 264.7				
7	181.9	867	0	182.5	1780
	183.4	0.06	0.00	21458958.00	
8	187.9	913	0	188.4	
	189.4	0.06	0.00	21458958.00	
9	291.4	357	0	291.9	729
	292.9	0.02	0.00	21458958.00	
10	297.4	372	0	298.4	
	298.9	0.02	0.00	21458958.00	
	Isotope: GA-73 @ 297.4				
11	334.3	347	0	335.3	654
	335.8	0.02	0.00	21458958.00	
	Isotope: NP-239 @ 334.3				
12	340.3	307	0	341.3	
	341.8	0.02	0.00	21458958.00	
	Isotope: CS-136 @ 340.6				
13	347.8	388	0	348.6	714
	349.3	0.03	0.00	21458958.00	
14	353.8	326	0	354.5	
	355.3	0.02	0.00	21458958.00	
15	579.2	208	0	580.2	349
	580.7	0.01	0.00	21458958.00	
16	585.2	141	0	586.1	
	586.7	0.01	0.00	21458958.00	

REGION OF INTEREST REPORT

ROI #	From(keV) To (keV)	Integral CPS	Area %Error	Peak(keV) FWHM(keV)	
17	605.1	196	0	606.2	
	606.6	0.01	0.00	21458958.00	339
	Isotope: SB-125 @ 606.7				
18	611.1	143	0	611.6	
	612.6	0.01	0.00	21458958.00	
19	906.9	114	0	907.4	
	908.4	0.01	0.00	21458958.00	214
20	912.9	100	0	913.4	
	914.4	0.01	0.00	21458958.00	
21	958.9	178	0	961.3	
	962.4	0.01	0.00	0.54	345
22	970.9	169	0	973.9	
	974.4	0.01	0.00	1.16	
	Isotope: I-134 @ 974.7				
23M	1100.8	2735	1674	1119.5	
	1134.7	0.18	9.74	1.96	
	Isotope: BI-214 @ 1120.3				
	SC-46 @ 1120.5				

MCA #1 - Canberra S100 - NOPI3151.MCA - NOPI-315-GAM1 7.0cm

Tag Number: 73
Report Group: 2/4
Group Size: 4096

Readout: Wed 06 Apr 1994 @ 11:12:50
Acquire Started: Wed 06 Apr 1994 @ 11:12:10

Elapsed Live Time: 151.00 min.
Elapsed True Time: 151.04 min.
Dead Time: 0.02 %

MCA Mode: PHA+
Preset Conditions: Live Time = 151.00 min.

Calibration: 0.0000*Ch^2 + 0.4996*Ch + 1.083 keV

Area Statistics: Background Channels = 4
% Error Sigma = 1.65

Peak Statistics: Sensitivity Factor = 4.0
Expected FWHM (ch) = 2.7 - 6.0

Iso. Id. Criteria: Energy Window = +-1.300 keV
Iso. Library: C:\WINDOWS\S100\SPECTRAN.ISO

JP
4/6/94
$\Delta T = 151$ min
$\mu_m = 4.258$

REGION OF INTEREST REPORT

ROI #	From(keV) To (keV)	Integral CPS	Area %Error	Peak(keV) FWHM(keV)
1	43.6	2045	268	46.6
	49.0	0.23	20.97	1.48
2	60.5	3069	731	63.3
	66.0	0.34	9.84	1.22
	Isotope:	TH-234 @	63.3	
3	90.5	3340	780	92.7
	95.0	0.37	7.97	1.34
4	181.9	3372	1892	186.0
	189.4	0.37	5.06	1.55
	Isotope:	U-235 @	185.7	
5	291.4	3788	3066	295.0
	298.9	0.42	3.31	1.56
	Isotope:	PB-214 @	295.2	
6	334.3	658	66	338.1
	341.8	0.07	64.13	0.50
	Isotope:	AC-228 @	338.3	
7	347.8	5891	5211	351.7
	355.3	0.65	2.43	1.55
	Isotope:	PB-214 @	351.9	
8	579.2	346	44	583.3
	586.7	0.04	69.75	0.81
	Isotope:	TL-208 @	583.2	
9	605.1	3645	3327	608.7
	612.6	0.40	2.99	1.74
	Isotope:	XE-135 @	608.1	
		BI-214 @	609.3	
10	906.9	236	22	910.4
	914.4	0.03	115.22	1.36
	Isotope:	AC-228 @	911.2	
11	958.9	406	82	967.9
	974.4	0.04	65.33	1.37

REGION OF INTEREST DATA

ROI # 1

Channel # **** Data ****

85	154	136	139	176	179
90	203	243	235	172	138
95	141	129			

ROI # 2

Channel # **** Data ****

119					199
120	190	205	207	262	414

REGION OF INTEREST DATA

ROI # 2
Channel # **** Data ****

125	497	337	224	161	187
130	186				

ROI # 3
Channel # **** Data ****

179					220
180	167	211	448	662	630
185	390	228	206	178	

ROI # 4
Channel # **** Data ****

362			88	83	115
365	102	99	115	226	478
370	677	589	307	141	97
375	87	90	78		

ROI # 5
Channel # **** Data ****

581		44	52	49	43
585	69	157	577	951	981
590	503	144	45	36	45
595	45	47			

ROI # 6
Channel # **** Data ****

667			37	29	37
670	42	40	37	48	64
675	51	43	44	35	49
680	44	35	23		

ROI # 7
Channel # **** Data ****

694					30
695	48	45	66	96	211
700	664	1468	1622	1046	358
705	86	41	32	44	34

ROI # 8
Channel # **** Data ****

1157			24	23	23
1160	24	18	23	23	27
1165	41	27	16	20	15
1170	14	11	17		

ROI # 9
Channel # **** Data ****

1209					21
1210	16	23	30	99	272
1215	709	924	819	448	161
1220	54	25	17	11	16

REGION OF INTEREST DATA

ROI # 10

Channel #	**** Data ****				
1813				12	13
1815	21	11	12	13	21
1820	20	25	14	13	11
1825	8	10	19	13	

ROI # 11

Channel #	**** Data ****				
1917			10	17	10
1920	8	13	10	15	21
1925	14	15	16	9	15
1930	8	14	11	11	22
1935	28	20	18	12	8
1940	5	5	8	17	10
1945	14	9	6	7	

MCA #1 - Canberra S100 - NOPI3151.MCA - NOPI-315-GAM1 7.0cm

Tag Number: 73
Report Group: 1/4
Group Size: 4096

Readout: Wed 06 Apr 1994 @ 11:13:23
Acquire Started: Wed 06 Apr 1994 @ 11:12:10

Elapsed Live Time: 151.00 min.
Elapsed True Time: 151.04 min.
Dead Time: 0.02 %

MCA Mode: PHA+
Preset Conditions: Live Time = 6000.00 min.

Calibration: 0.0000*Ch^2 + 0.4996*Ch + 1.083 keV

Area Statistics: Background Channels = 4
% Error Sigma = 1.65

Peak Statistics: Sensitivity Factor = 4.0
Expected FWHM (ch) = 2.7 - 6.0

Iso. Id. Criteria: Energy Window = +-1.300 keV
Iso. Library: C:\WINDOWS\S100\SPECTRAN.ISO

REGION OF INTEREST REPORT

ROI #	From(keV) To (keV)	Integral CPS	Area %Error	Peak(keV) FWHM(keV)	
1	43.6	429	0	220.4	837
	44.6	0.05	0.00	3.12	
	Isotope: I-135	@ 220.5			
2	48.0	408	0	224.9	
	49.0	0.05	0.00	3.12	
3	60.5	594	0	237.4	1128
	61.5	0.07	0.00	3.12	
	Isotope: PB-212	@ 238.6			
4	65.0	534	0	241.9	
	66.0	0.06	0.00	3.12	
5	90.5	598	0	267.4	982
	91.5	0.07	0.00	3.12	
	Isotope: Y-93	@ 266.9			
6	94.5	384	0	271.4	
	95.0	0.04	0.00	3.12	
7	181.9	388	0	183.0	740
	183.4	0.04	0.00	3.12	
8	187.9	352	0	188.9	
	189.4	0.04	0.00	3.12	
9	291.4	188	0	292.1	361
	292.9	0.02	0.00	3.12	
10	297.4	173	0	298.4	
	298.9	0.02	0.00	3.12	
	Isotope: GA-73	@ 297.4			
11	334.3	145	0	335.4	296
	335.8	0.02	0.00	3.12	
	Isotope: NP-239	@ 334.3			
12	340.3	151	0	340.8	
	341.8	0.02	0.00	21458952.00	
	Isotope: CS-136	@ 340.6			
13	347.8	189	0	348.4	340
	349.3	0.02	0.00	21458952.00	
14	353.8	151	0	354.8	
	355.3	0.02	0.00	21458952.00	
	Isotope: BA-133	@ 356.0			
15	579.2	94	0	580.2	151
	580.7	0.01	0.00	21458952.00	
16	585.2	57	0	585.6	
	586.7	0.01	0.00	21458952.00	

REGION OF INTEREST REPORT

ROI #	From(keV) To (keV)	Integral CPS	Area %Error	Peak(keV) FWHM(keV)	
17	605.1	90	0	606.2	159
	606.6	0.01	0.00	21458952.00	
	Isotope: SB-125 @ 606.7				
18	611.1	69	0	611.5	
	612.6	0.01	0.00	21458952.00	
19	906.9	57	0	907.9	107
	908.4	0.01	0.00	21458952.00	
20	912.9	50	0	913.9	
	914.4	0.01	0.00	21458952.00	
21	958.9	104	0	959.4	180
	962.4	0.01	0.00	21458952.00	
22	970.9	76	0	971.9	
	974.4	0.01	0.00	0.58	
	Isotope: I-135 @ 972.3				
23M	1100.8	1310	810	1119.1	
	1134.7	0.14	13.86	1.85	
	Isotope: BI-214 @ 1120.3				

MCA #1 - Canberra S100 - NOPI3161.MCA - NOPI-316-GAM1 7.0cm

Tag Number: 75
Report Group: 2/4
Group Size: 4096

Readout: Wed 06 Apr 1994 @ 14:23:41
Acquire Started: Wed 06 Apr 1994 @ 14:23:05

Elapsed Live Time: 188.00 min.
Elapsed True Time: 188.05 min.
Dead Time: 0.03 %

MCA Mode: PHA+
Preset Conditions: Live Time = 188.00 min.

Calibration: 0.0000*Ch^2 + 0.4996*Ch + 1.083 keV

Area Statistics: Background Channels = 4
% Error Sigma = 1.65

Peak Statistics: Sensitivity Factor = 4.0
Expected FWHM (ch) = 2.7 - 6.0

Iso. Id. Criteria: Energy Window = +-1.300 keV
Iso. Library: C:\WINDOWS\S100\SPECTRAN.ISO

JP
4/6/94
ΔT = 188 min
mean = 4.239 g

REGION OF INTEREST REPORT

ROI #	From(keV) To (keV)	Integral CPS	Area %Error	Peak(keV) FWHM(keV)
1	43.6	2970	314	46.6
	49.0	0.26	21.33	1.50
2	60.5	4668	1362	63.5
	66.0	0.41	6.65	1.36
	Isotope: TH-234 @ 63.3			
3	90.5	5395	1460	92.7
	95.0	0.48	5.59	1.26
4	181.9	5012	2890	186.0
	189.4	0.44	4.04	1.51
	Isotope: U-235 @ 185.7			
5	291.4	5131	4169	295.0
	298.9	0.45	2.84	1.51
	Isotope: PB-214 @ 295.2			
6	334.3	940	112	338.3
	341.8	0.08	45.17	0.88
	Isotope: AC-228 @ 338.3			
7	347.8	7929	6989	351.7
	355.3	0.70	2.10	1.54
	Isotope: PB-214 @ 351.9			
8	579.2	458	46	582.7
	586.7	0.04	76.76	1.43
	Isotope: TL-208 @ 583.2			
9	605.1	5090	4684	608.7
	612.6	0.45	2.51	1.63
	Isotope: XE-135 @ 608.1			
	BI-214 @ 609.3			
10	906.9	336	46	910.7
	914.4	0.03	65.75	0.85
	Isotope: AC-228 @ 911.2			
11	958.9	536	60	968.4
	974.4	0.05	106.08	1.16
	Isotope: RU-105 @ 969.4			

REGION OF INTEREST DATA

ROI # 1

Channel # **** Data ****

85	218	213	253	215	239
90	303	338	319	255	244
95	177	196			

ROI # 2

Channel # **** Data ****

REGION OF INTEREST DATA

ROI # 2
Channel # **** Data ****

120	289	268	299	416	677
125	796	575	314	261	267
130	235				

ROI # 3
Channel # **** Data ****

179					332
180	270	349	691	1144	1103
185	613	341	297	255	

ROI # 4
Channel # **** Data ****

362			125	137	122
365	158	155	156	376	788
370	1058	834	403	181	143
375	130	134	112		

ROI # 5
Channel # **** Data ****

581		70	74	65	63
585	94	216	718	1345	1266
590	700	220	91	57	47
595	54	51			

ROI # 6
Channel # **** Data ****

667			51	51	59
670	50	45	63	74	64
675	87	67	62	64	50
680	49	53	51		

ROI # 7
Channel # **** Data ****

694					67
695	64	55	80	91	276
700	867	1924	2221	1451	509
705	120	65	33	59	47

ROI # 8
Channel # **** Data ****

1157			31	36	41
1160	27	17	34	38	50
1165	41	32	27	13	15
1170	12	30	14		

ROI # 9
Channel # **** Data ****

1209					27
1210	27	35	40	134	403
1215	806	1376	1184	632	208

1220	53	17	19	20	18

REGION OF INTEREST DATA

ROI # 10

Channel #	**** Data ****				
1813				22	18
1815	17	17	17	22	24
1820	39	28	27	15	19
1825	22	15	16	18	

ROI # 11

Channel #	**** Data ****				
1917			9	20	6
1920	17	20	9	16	16
1925	22	19	22	17	14
1930	11	12	21	21	19
1935	19	28	23	22	11
1940	13	16	17	18	11
1945	17	18	17	15	

MCA #1 - Canberra S100 - NOPI3161.MCA - NOPI-316-GAM1 7.0cm

Tag Number: 75
Report Group: 1/4
Group Size: 4096

Readout: Wed 06 Apr 1994 @ 14:24:19
Acquire Started: Wed 06 Apr 1994 @ 14:23:05

Elapsed Live Time: 188.00 min.
Elapsed True Time: 188.05 min.
Dead Time: 0.03 %

MCA Mode: PHA+
Preset Conditions: Live Time = 6000.00 min.

Calibration: 0.0000*Ch^2 + 0.4996*Ch + 1.083 keV

Area Statistics: Background Channels = 4
% Error Sigma = 1.65

Peak Statistics: Sensitivity Factor = 4.0
Expected FWHM (ch) = 2.7 - 6.0

Iso. Id. Criteria: Energy Window = +-1.300 keV
Iso. Library: C:\WINDOWS\S100\SPECTRAN.ISO

REGION OF INTEREST REPORT

ROI #	From(keV) To (keV)	Integral CPS	Area %Error	Peak(keV) FWHM(keV)	
1	43.6	684	0	220.5	1301
	44.6	0.06	0.00	3.70	
	Isotope: I-135 @ 220.5				
2	48.0	617	0	225.0	
	49.0	0.05	0.00	3.70	
3	60.5	828	0	237.4	1591
	61.5	0.07	0.00	3.70	
	Isotope: PB-212 @ 238.6				
4	65.0	763	0	241.9	
	66.0	0.07	0.00	3.70	
5	90.5	951	0	267.4	1503
	91.5	0.08	0.00	3.70	
	Isotope: Y-93 @ 266.9				
6	94.5	552	0	271.4	
	95.0	0.05	0.00	3.70	
7	181.9	542	0	182.4	1061
	183.4	0.05	0.00	21458952.00	
8	187.9	519	0	188.9	
	189.4	0.05	0.00	21458952.00	
9	291.4	272	0	291.9	481
	292.9	0.02	0.00	21458952.00	
10	297.4	209	0	298.4	
	298.9	0.02	0.00	21458952.00	
	Isotope: GA-73 @ 297.4				
11	334.3	211	0	335.3	414
	335.8	0.02	0.00	21458952.00	
	Isotope: NP-239 @ 334.3				
12	340.3	203	0	341.3	
	341.8	0.02	0.00	21458952.00	
	Isotope: CS-136 @ 340.6				
13	347.8	266	0	348.9	470
	349.3	0.02	0.00	21458952.00	
14	353.8	204	0	354.9	
	355.3	0.02	0.00	21458952.00	
	Isotope: BA-133 @ 356.0				
15	579.2	135	0	580.1	206
	580.7	0.01	0.00	21458952.00	
16	585.2	71	0	586.2	
	586.7	0.01	0.00	21458952.00	

REGION OF INTEREST REPORT

ROI #	From(keV) To (keV)	Integral CPS	Area %Error	Peak(keV) FWHM(keV)
17	605.1	129	0	606.2
	606.6	0.01	0.00	21458952.00
	Isotope: SB-125 @ 606.7			
18	611.1	74	0	612.1
	612.6	0.01	0.00	21458952.00
19	906.9	74	0	907.4
	908.4	0.01	0.00	21458952.00
20	912.9	71	0	913.4
	914.4	0.01	0.00	21458952.00
21	958.9	113	0	959.3
	962.4	0.01	0.00	21458952.00
22	970.9	129	0	973.6
	974.4	0.01	0.00	21458952.00
	Isotope: I-135 @ 972.3			
	I-134 @ 974.7			
23M	1100.8	1812	1036	1119.1
	1134.7	0.16	13.29	2.23
	Isotope: BI-214 @ 1120.3			

MCA #1 - Canberra S100 - NOPI3171.MCA - NOPI-317-GAM1 7.0cm

Tag Number: 79
Report Group: 2/4
Group Size: 4096

Readout: Thu 07 Apr 1994 @ 13:14:56
Acquire Started: Thu 07 Apr 1994 @ 13:14:18

Elapsed Live Time: 277.00 min.
Elapsed True Time: 277.07 min.
Dead Time: 0.03 %

MCA Mode: PHA+
Preset Conditions: Live Time = 277.00 min.

Calibration: 0.0000*Ch^2 + 0.4996*Ch + 1.083 keV

Area Statistics: Background Channels = 4
% Error Sigma = 1.65

Peak Statistics: Sensitivity Factor = 4.0
Expected FWHM (ch) = 2.7 - 6.0

Iso. Id. Criteria: Energy Window = +-1.300 keV
Iso. Library: C:\WINDOWS\S100\SPECTRAN.ISO

JP
4/7/94
ΔT = 277 min
mass = 4.214 g

REGION OF INTEREST REPORT

ROI #	From(keV) To (keV)	Integral CPS	Area %Error	Peak(keV) FWHM(keV)
1	43.6	4137	563	46.6
	49.0	0.25	14.22	1.62
2	60.5	6304	1533	63.5
	66.0	0.38	6.74	1.35
	Isotope:	TH-234 @	63.3	
3	90.5	6794	1628	92.8
	95.0	0.41	5.48	1.26
4	181.9	7054	3750	186.0
	189.4	0.42	3.70	1.52
	Isotope:	U-235 @	185.7	
5	291.4	8175	6777	295.1
	298.9	0.49	2.20	1.44
	Isotope:	PB-214 @	295.2	
6	334.3	1458	136	337.8
	341.8	0.09	46.33	1.49
	Isotope:	AC-228 @	338.3	
7	347.8	12308	11068	351.7
	355.3	0.74	1.65	1.51
	Isotope:	PB-214 @	351.9	
8	579.2	711	63	582.7
	586.7	0.04	69.84	1.32
	Isotope:	TL-208 @	583.2	
9	605.1	8052	7352	608.7
	612.6	0.48	2.01	1.68
	Isotope:	XE-135 @	608.1	
		BI-214 @	609.3	
10	906.9	463	129	910.0
	914.4	0.03	27.52	2.42
	Isotope:	AC-228 @	911.2	
11	958.9	821	93	968.4
	974.4	0.05	84.66	1.50
	Isotope:	RU-105 @	969.4	

REGION OF INTEREST DATA

ROI # 1

Channel # **** Data ****

85	276	289	286	331	364
90	421	486	483	359	273
95	282	287			

ROI # 2

Channel # **** Data ****

REGION OF INTEREST DATA

ROI # 2
Channel # **** Data ****

120	432	404	409	570	863
125	983	707	418	410	354
130	357				

ROI # 3
Channel # **** Data ****

179					475
180	387	437	787	1318	1343
185	813	471	369	394	

ROI # 4
Channel # **** Data ****

362			206	215	244
365	198	207	283	503	955
370	1389	1135	633	297	221
375	177	195	196		

ROI # 5
Channel # **** Data ****

581		85	99	88	81
585	154	376	1103	2065	2215
590	1092	358	113	90	79
595	89	88			

ROI # 6
Channel # **** Data ****

667			88	72	75
670	77	78	97	129	120
675	116	94	84	79	90
680	98	80	81		

ROI # 7
Channel # **** Data ****

694					80
695	82	88	75	126	411
700	1349	2889	3560	2323	822
705	208	90	70	69	66

ROI # 8
Channel # **** Data ****

1157			53	52	42
1160	42	37	45	57	71
1165	55	48	41	33	46
1170	27	28	34		

ROI # 9
Channel # **** Data ****

1209					47
1210	39	43	68	175	643
1215	1426	2128	1000	1016	224

1220	82	46	42	40	25

REGION OF INTEREST DATA

ROI # 10

Channel #	**** Data ****				
1813				26	17
1815	15	24	36	36	50
1820	36	38	34	36	30
1825	22	23	23	17	

ROI # 11

Channel #	**** Data ****				
1917			24	27	28
1920	24	27	23	30	34
1925	29	33	36	30	23
1930	23	18	23	26	27
1935	38	37	30	31	14
1940	17	26	18	24	22
1945	15	23	23	18	

MCA #1 - Canberra S100 - NOPI3171.MCA - NOPI-317-GAM1 7.0cm

Tag Number: 79
Report Group: 1/4
Group Size: 4096

Readout: Thu 07 Apr 1994 @ 13:15:34
Acquire Started: Thu 07 Apr 1994 @ 13:14:18

Elapsed Live Time: 277.00 min.
Elapsed True Time: 277.07 min.
Dead Time: 0.03 %

MCA Mode: PHA+
Preset Conditions: Live Time = 6000.00 min.

Calibration: 0.0000*Ch^2 + 0.4996*Ch + 1.083 keV

Area Statistics: Background Channels = 4
% Error Sigma = 1.65

Peak Statistics: Sensitivity Factor = 4.0
Expected FWHM (ch) = 2.7 - 6.0

Iso. Id. Criteria: Energy Window = +-1.300 keV
Iso. Library: C:\WINDOWS\S100\SPECTRAN.ISO

REGION OF INTEREST REPORT

ROI #	From(keV) To (keV)	Integral CPS	Area %Error	Peak(keV) FWHM(keV)	
1	43.6	851	0	220.6	
	44.6	0.05	0.00	3.08	1693
	Isotope: I-135 @ 220.5				
2	48.0	842	0	225.1	
	49.0	0.05	0.00	3.08	
3	60.5	1233	0	237.6	
	61.5	0.07	0.00	3.08	2354
	Isotope: PB-212 @ 238.6				
4	65.0	1121	0	242.1	
	66.0	0.07	0.00	3.08	
5	90.5	1299	0	267.6	
	91.5	0.08	0.00	3.08	2062
	Isotope: Y-93 @ 266.9				
6	94.5	763	0	271.6	
	95.0	0.05	0.00	3.08	
7	181.9	863	0	182.9	
	183.4	0.05	0.00	3.08	~~1652~~ 1652
8	187.9	789	0	189.0	
	189.4	0.05	0.00	3.08	
9	291.4	353	0	291.9	
	292.9	0.02	0.00	21458952.00	699
10	297.4	346	0	298.4	
	298.9	0.02	0.00	21458952.00	
	Isotope: GA-73 @ 297.4				
11	334.3	312	0	335.3	
	335.8	0.02	0.00	21458952.00	661
	Isotope: NP-239 @ 334.3				
12	340.3	349	0	340.8	
	341.8	0.02	0.00	21458952.00	
	Isotope: CS-136 @ 340.6				
13	347.8	325	0	348.8	
	349.3	0.02	0.00	21458952.00	620
14	353.8	295	0	354.8	
	355.3	0.02	0.00	21458952.00	
	Isotope: BA-133 @ 356.0				
15	579.2	189	0	579.6	
	580.7	0.01	0.00	21458952.00	324
16	585.2	135	0	585.6	
	586.7	0.01	0.00	21458952.00	

REGION OF INTEREST REPORT

ROI #	From(keV) To (keV)	Integral CPS	Area %Error	Peak(keV) FWHM(keV)	
17	605.1	197	0	605.6	350
	606.6	0.01	0.00	21458952.00	
	Isotope:	CS-134 @	604.7		
		SB-125 @	606.7		
18	611.1	153	0	611.8	
	612.6	0.01	0.00	21458952.00	
19	906.9	82	0	907.6	167
	908.4	0.00	0.00	21458952.00	
20	912.9	85	0	913.9	
	914.4	0.01	0.00	21458952.00	
21	958.9	217	0	961.9	386
	962.4	0.01	0.00	21458952.00	
22	970.9	169	0	973.8	
	974.4	0.01	0.00	21458952.00	
	Isotope:	I-134 @	974.7		
23M	1100.8	2704	1410	1119.1	
	1134.7	0.16	12.42	2.18	
	Isotope:	BI-214 @	1120.3		

MCA #1 - Canberra S100 - NOPI3181.MCA - NOPI-318-GAM1 7.0cm

Tag Number:	83	Readout:	Fri 08 Apr 1994 @ 13:54:54
Report Group:	2/4	Acquire Started:	Fri 08 Apr 1994 @ 13:54:00
Group Size:	4096		

Elapsed Live Time:	306.00 min.
Elapsed True Time:	306.15 min.
Dead Time:	0.05 %

MCA Mode:	PHA+
Preset Conditions:	Live Time = 306.00 min.

Calibration:	0.0000*Ch^2 + 0.4996*Ch + 1.083 keV
Area Statistics:	Background Channels = 4 % Error Sigma = 1.65
Peak Statistics:	Sensitivity Factor = 4.0 Expected FWHM (ch) = 2.7 - 6.0
Iso. Id. Criteria:	Energy Window = +-1.300 keV
Iso. Library:	C:\WINDOWS\S100\SPECTRAN.ISO

gp
4/8/94
$\Delta T = 306$ min
mass = 4.263 g

REGION OF INTEREST REPORT

ROI #	From(keV) To (keV)	Integral CPS	Area %Error	Peak(keV) FWHM(keV)
1	43.6	4844	430	46.8
	49.0	0.26	19.73	1.23
2	60.5	7631	1678	63.5
	66.0	0.42	6.71	1.21
	Isotope: TH-234 @ 63.3			
3	90.5	8284	1884	92.8
	95.0	0.45	5.17	1.36
4	181.9	8299	4399	186.0
	189.4	0.45	3.42	1.44
	Isotope: U-235 @ 185.7			
5	291.4	9119	7177	295.2
	298.9	0.50	2.20	1.50
	Isotope: PB-214 @ 295.2			
6	334.3	1697	79	338.3
	341.8	0.09	86.04	1.17
	Isotope: AC-228 @ 338.3			
7	347.8	13390	11780	351.8
	355.3	0.73	1.62	1.51
	Isotope: PB-214 @ 351.9			
8	579.2	917	157	583.1
	586.7	0.05	31.83	1.73
	Isotope: TL-208 @ 583.2			
9	605.1	8789	7963	608.9
	612.6	0.48	1.94	1.74
	Isotope: XE-135 @ 608.1			
	BI-214 @ 609.3			
10	906.9	592	80	910.6
	914.4	0.03	50.18	0.50
	Isotope: AC-228 @ 911.2			
11	958.9	977	165	963.1
	974.4	0.05	51.00	1.09

REGION OF INTEREST DATA

ROI # 1

Channel # **** Data ****

85	399	350	318	363	373
90	428	537	563	453	330
95	354	376			

ROI # 2

Channel #			**** Data ****		
119					502
120	492	480	538	592	1006

REGION OF INTEREST DATA

ROI # 2

Channel #			**** Data ****		
125	1206	858	591	437	459
130	470				

ROI # 3

Channel #			**** Data ****		
179					582
180	469	477	1019	1605	1559
185	1082	591	427	473	

ROI # 4

Channel #			**** Data ****		
362			256	243	264
365	250	249	258	481	1038
370	1684	1462	784	393	273
375	218	232	214		

ROI # 5

Channel #			**** Data ****		
581		123	114	106	150
585	156	339	1057	2227	2350
590	1382	471	166	120	130
595	100	128			

ROI # 6

Channel #			**** Data ****		
667			98	98	117
670	96	110	100	101	125
675	139	123	97	93	99
680	88	102	111		

ROI # 7

Channel #			**** Data ****		
694					87
695	130	107	120	153	390
700	1165	2800	3816	2839	1108
705	314	116	68	87	90

ROI # 8

Channel #			**** Data ****		
1157			49	60	57
1160	46	53	60	63	87
1165	82	87	52	53	46
1170	41	43	38		

ROI # 9

Channel #			**** Data ****		
1209					59
1210	60	55	69	173	536

1215	1323	2086	2256	1364	526
1220	110	54	42	37	37

REGION OF INTEREST DATA

ROI # 10

Channel #		**** Data ****			
1813				34	29
1815	41	32	33	51	46
1820	63	45	43	31	24
1825	33	21	35	31	

ROI # 11

Channel #		**** Data ****			
1917			27	28	34
1920	19	37	18	33	33
1925	53	43	26	27	36
1930	27	27	30	31	42
1935	43	32	34	28	34
1940	28	38	18	24	32
1945	28	24	21	22	

MCA #1 - Canberra S100 - NOPI3181.MCA - NOPI-318-GAM1 7.0cm

Tag Number: 83
Report Group: 1/4
Group Size: 4096

Readout: Fri 08 Apr 1994 @ 13:55:37
Acquire Started: Fri 08 Apr 1994 @ 13:54:00

Elapsed Live Time: 306.00 min.
Elapsed True Time: 306.15 min.
Dead Time: 0.05 %

MCA Mode: PHA+
Preset Conditions: Live Time = 6000.00 min.

Calibration: 0.0000*Ch^2 + 0.4996*Ch + 1.083 keV

Area Statistics: Background Channels = 4
% Error Sigma = 1.65

Peak Statistics: Sensitivity Factor = 4.0
Expected FWHM (ch) = 2.7 - 6.0

Iso. Id. Criteria: Energy Window = +-1.300 keV
Iso. Library: C:\WINDOWS\S100\SPECTRAN.ISO

REGION OF INTEREST REPORT

ROI #	From(keV) To (keV)	Integral CPS	Area %Error	Peak(keV) FWHM(keV)	
1	43.6	1067	0	214.2	2127
	44.6	0.06	0.00	3.75	
2	48.0	1060	0	218.7	
	49.0	0.06	0.00	3.75	
3	60.5	1474	0	231.1	2840
	61.5	0.08	0.00	3.75	
4	65.0	1366	0	235.6	
	66.0	0.07	0.00	3.75	
	Isotope: I-134 @ 235.5				
5	90.5	1528	0	261.1	2428
	91.5	0.08	0.00	3.75	
6	94.5	900	0	265.1	
	95.0	0.05	0.00	3.75	
	Isotope: GE-75 @ 264.7				
	SE-75 @ 264.7				
7	181.9	1013	0	183.0	1950
	183.4	0.06	0.00	3.75	
8	187.9	937	0	188.9	
	189.4	0.05	0.00	3.75	
9	291.4	493	0	292.4	971
	292.9	0.03	0.00	3.75	
10	297.4	478	0	297.8	
	298.9	0.03	0.00	21458956.00	
	Isotope: GA-73 @ 297.4				
11	334.3	409	0	335.3	809
	335.8	0.02	0.00	21458956.00	
	Isotope: NP-239 @ 334.3				
12	340.3	400	0	341.4	
	341.8	0.02	0.00	21458956.00	
	Isotope: CS-136 @ 340.6				
13	347.8	444	0	348.4	805
	349.3	0.02	0.00	21458956.00	
14	353.8	361	0	354.3	
	355.3	0.02	0.00	21458956.00	
15	579.2	212	0	579.9	380
	580.7	0.01	0.00	21458956.00	
16	585.2	168	0	586.1	
	586.7	0.01	0.00	21458956.00	

REGION OF INTEREST REPORT

ROI #	From(keV) To (keV)	Integral CPS	Area %Error	Peak(keV) FWHM(keV)	
17	605.1	243	0	605.6	
	606.6	0.01	0.00	21458956.00	413
	Isotope:	CS-134 @	604.7		
		SB-125 @	606.7		
18	611.1	170	0	611.6	
	612.6	0.01	0.00	21458956.00	
19	906.9	136	0	907.9	
	908.4	0.01	0.00	21458956.00	256
20	912.9	120	0	914.0	
	914.4	0.01	0.00	21458956.00	
21	958.9	229	0	960.9	
	962.4	0.01	0.00	0.24	436
22	970.9	207	0	972.6	
	974.4	0.01	0.00	0.78	
	Isotope:	I-135 @	972.3		
23M	1100.8	3036	1492	1119.3	
	1134.7	0.17	12.74	2.25	
	Isotope:	BI-214 @	1120.3		
		SC-46 @	1120.5		

MCA #1 - Canberra S100 - NOPI3191.MCA - NOPI-319-GAM1 7.0cm

Tag Number: 87
Report Group: 2/4
Group Size: 4096

Readout: Mon 11 Apr 1994 @ 13:59:19
Acquire Started: Mon 11 Apr 1994 @ 13:58:38

Elapsed Live Time: 291.00 min.
Elapsed True Time: 291.04 min.
Dead Time: 0.01 %

MCA Mode: PHA+
Preset Conditions: Live Time = 291.00 min.

Calibration: 0.0000*Ch^2 + 0.4996*Ch + 1.083 keV

Area Statistics: Background Channels = 4
% Error Sigma = 1.65

Peak Statistics: Sensitivity Factor = 4.0
Expected FWHM (ch) = 2.7 - 6.0

Iso. Id. Criteria: Energy Window = +-1.300 keV
Iso. Library: C:\WINDOWS\S100\SPECTRAN.ISO

JP
4/11/94
$\Delta T = 291$ min
Mass = 3.867 g

REGION OF INTEREST REPORT

ROI #	From(keV) To (keV)	Integral CPS	Area %Error	Peak(keV) FWHM(keV)
1	43.6	2175	230	46.8
	49.0	0.12	24.93	0.89
2	60.5	3263	830	63.5
	66.0	0.19	8.99	1.28
	Isotope: TH-234 @ 63.3			
3	90.5	3935	998	92.8
	95.0	0.23	6.88	1.23
4	181.9	3479	1851	186.0
	189.4	0.20	5.26	1.51
	Isotope: U-235 @ 185.7			
5	291.4	3348	2444	295.3
	298.9	0.19	3.91	1.37
	Isotope: PB-214 @ 295.2			
6	334.3	845	97	338.3
	341.8	0.05	49.45	1.59
	Isotope: AC-228 @ 338.3			
7	347.8	4688	3964	351.8
	355.3	0.27	2.85	1.56
	Isotope: PB-214 @ 351.9			
8	579.2	513	139	582.9
	586.7	0.03	26.89	1.61
	Isotope: TL-208 @ 583.2			
9	605.1	3182	2762	608.9
	612.6	0.18	3.37	1.70
	Isotope: XE-135 @ 608.1			
	BI-214 @ 609.3			
10	906.9	379	121	910.2
	914.4	0.02	26.55	1.17
	Isotope: AC-228 @ 911.2			
11	958.9	583	103	968.1
	974.4	0.03	62.93	2.62

REGION OF INTEREST DATA

ROI # 1

Channel # **** Data ****

85	143	155	130	165	176
90	193	265	244	186	181
95	175	162			

ROI # 2

Channel # **** Data ****

119					201
120	207	198	202	289	401

REGION OF INTEREST DATA

ROI # 2
Channel # **** Data ****

125	536	415	251	182	181
130	200				

ROI # 3
Channel # **** Data ****

179					269
180	213	231	423	776	809
185	506	282	214	212	

ROI # 4
Channel # **** Data ****

362			117	120	116
365	98	106	110	224	467
370	693	600	313	152	95
375	88	90	90		

ROI # 5
Channel # **** Data ****

581		46	64	57	61
585	60	114	369	702	899
590	495	197	60	57	53
595	55	59			

ROI # 6
Channel # **** Data ****

667			52	41	48
670	41	44	54	57	72
675	74	76	44	50	35
680	51	54	52		

ROI # 7
Channel # **** Data ****

694					43
695	51	44	44	62	104
700	400	914	1269	1029	431
705	117	49	38	40	53

ROI # 8
Channel # **** Data ****

1157			20	36	27
1160	30	18	37	46	71
1165	58	49	26	21	15
1170	23	18	18		

ROI # 9
Channel # **** Data ****

1209					25
1210	33	26	32	51	160

1215	430	747	797	513	202
1220	72	37	19	14	24

REGION OF INTEREST DATA

ROI # 10

Channel #	**** Data ****				
1813				15	19
1815	12	19	23	25	41
1820	51	30	42	19	19
1825	23	10	15	16	

ROI # 11

Channel #	**** Data ****				
1917			21	24	18
1920	11	20	16	12	14
1925	18	30	18	22	14
1930	10	13	25	22	25
1935	30	28	25	26	17
1940	18	12	23	17	8
1945	11	14	14	7	

MCA #1 - Canberra S100 - NOPI3191.MCA - NOPI-319-GAM1 7.0cm

Tag Number:	87	Readout:	Mon 11 Apr 1994 @ 13:59:54
Report Group:	1/4	Acquire Started:	Mon 11 Apr 1994 @ 13:58:38
Group Size:	4096		

Elapsed Live Time:	291.00 min.
Elapsed True Time:	291.04 min.
Dead Time:	0.01 %

MCA Mode:	PHA+
Preset Conditions:	Live Time = 6000.00 min.

Calibration: 0.0000*Ch^2 + 0.4996*Ch + 1.083 keV

Area Statistics:	Background Channels = 4
	% Error Sigma = 1.65
Peak Statistics:	Sensitivity Factor = 4.0
	Expected FWHM (ch) = 2.7 - 6.0

Iso. Id. Criteria:	Energy Window = +-1.300 keV
Iso. Library:	C:\WINDOWS\S100\SPECTRAN.ISO

REGION OF INTEREST REPORT

ROI #	From(keV) To (keV)	Integral CPS	Area %Error	Peak(keV) FWHM(keV)	
1	43.6	428	0	221.4	
	44.6	0.02	0.00	6.12	
	Isotope: I-135 @ 220.5				946
	TA-182 @ 222.1				
2	48.0	518	0	225.9	
	49.0	0.03	0.00	6.12	
3	60.5	606	0	238.4	
	61.5	0.03	0.00	6.12	
	Isotope: PB-212 @ 238.6				1169
4	65.0	563	0	242.9	
	66.0	0.03	0.00	6.12	
5	90.5	713	0	268.4	
	91.5	0.04	0.00	6.12	1139
6	94.5	426	0	272.3	
	95.0	0.02	0.00	6.12	
7	181.9	451	0	182.7	
	183.4	0.03	0.00	6.12	814
8	187.9	363	0	188.9	
	189.4	0.02	0.00	6.12	
9	291.4	228	0	291.9	
	292.9	0.01	0.00	21458952.00	452
10	297.4	224	0	298.1	
	298.9	0.01	0.00	21458952.00	
	Isotope: GA-73 @ 297.4				
11	334.3	182	0	335.3	
	335.8	0.01	0.00	21458952.00	374
	Isotope: NP-239 @ 334.3				
12	340.3	192	0	341.3	
	341.8	0.01	0.00	21458952.00	
	Isotope: CS-136 @ 340.6				
13	347.8	182	0	348.3	
	349.3	0.01	0.00	21458952.00	362
14	353.8	180	0	354.3	
	355.3	0.01	0.00	21458952.00	
15	579.2	113	0	579.7	
	580.7	0.01	0.00	21458952.00	187
16	585.2	74	0	585.7	
	586.7	0.00	0.00	21458952.00	

REGION OF INTEREST REPORT

ROI #	From(keV) To (keV)	Integral CPS	Area %Error	Peak(keV) FWHM(keV)	
17	605.1	116	0	605.6	210
	606.6	0.01	0.00	21458952.00	
	Isotope:	CS-134 @	604.7		
		SB-125 @	606.7		
18	611.1	94	0	611.5	
	612.6	0.01	0.00	21458952.00	
19	906.9	65	0	907.4	129
	908.4	0.00	0.00	21458952.00	
20	912.9	64	0	913.3	
	914.4	0.00	0.00	21458952.00	
21	958.9	136	0	959.5	242
	962.4	0.01	0.00	21458952.00	
22	970.9	106	0	971.5	
	974.4	0.01	0.00	21458952.00	
	Isotope:	I-135 @	972.3		
23M	1100.8	1391	572	1119.5	
	1134.7	0.08	23.84	1.96	
	Isotope:	BI-214 @	1120.3		
		SC-46 @	1120.5		

MCA #1 - Canberra S100 - NOPI3201.MCA - NOPI-320-GAM1 7.0cm

Tag Number: 92
Report Group: 2/4
Group Size: 4096

Readout: Wed 13 Apr 1994 @ 09:18:20
Acquire Started: Wed 13 Apr 1994 @ 09:17:09

Elapsed Live Time: 1481.00 min.
Elapsed True Time: 1481.22 min.
Dead Time: 0.01 %

MCA Mode: PHA+
Preset Conditions: Live Time = 1481.00 min.

Calibration: 0.0000*Ch^2 + 0.4996*Ch + 1.083 keV

Area Statistics: Background Channels = 4
% Error Sigma = 1.65

Peak Statistics: Sensitivity Factor = 4.0
Expected FWHM (ch) = 2.7 - 6.0

Iso. Id. Criteria: Energy Window = +-1.300 keV
Iso. Library: C:\WINDOWS\S100\SPECTRAN.ISO

4/13/94
ΔT = 1481 min
mass = 3.783 g

REGION OF INTEREST REPORT

ROI #	From(keV) To (keV)	Integral CPS	Area %Error	Peak(keV) FWHM(keV)
1	43.6	9163	948	46.8
	49.0	0.10	12.38	1.28
2	60.5	14209	3819	63.5
	66.0	0.16	4.10	1.37
	Isotope: TH-234 @ 63.3			
3	90.5	17700	4731	92.8
	95.0	0.20	3.11	1.27
4	181.9	15354	7870	186.0
	189.4	0.17	2.60	1.51
	Isotope: U-235 @ 185.7			
5	291.4	12945	8849	295.3
	298.9	0.15	2.12	1.47
	Isotope: PB-214 @ 295.2			
6	334.3	3763	419	338.5
	341.8	0.04	24.16	1.76
	Isotope: AC-228 @ 338.3			
7	347.8	18113	14727	351.8
	355.3	0.20	1.51	1.53
	Isotope: PB-214 @ 351.9			
8	579.2	2398	506	582.8
	586.7	0.03	15.97	1.90
	Isotope: TL-208 @ 583.2			
9	605.1	11789	9839	608.9
	612.6	0.13	1.82	1.70
	Isotope: XE-135 @ 608.1			
	BI-214 @ 609.3			
10	906.9	1631	475	910.4
	914.4	0.02	14.03	1.69
	Isotope: AC-228 @ 911.2			
11	958.9	2538	410	968.2
	974.4	0.03	33.17	1.76
	Isotope: RU-105 @ 969.4			

REGION OF INTEREST DATA

ROI # 1

Channel # **** Data ****

85	712	619	701	649	710
90	878	1078	1020	805	645
95	634	712			

ROI # 2
Channel # **** Data ****

119 827

REGION OF INTEREST DATA

ROI # 2
Channel # **** Data ****

120	857	875	893	1131	1984
125	2345	1822	1083	785	808
130	799				

ROI # 3
Channel # **** Data ****

179					1031
180	885	955	1960	3599	3726
185	2438	1241	945	920	

ROI # 4
Channel # **** Data ****

362			487	447	512
365	468	487	546	1007	2090
370	2955	2569	1307	651	474
375	488	442	424		

ROI # 5
Channel # **** Data ****

581		251	241	270	275
585	278	472	1345	2644	3154
590	1972	728	304	270	253
595	251	237			

ROI # 6
Channel # **** Data ****

667			229	213	212
670	195	201	209	263	324
675	307	306	267	214	210
680	222	185	206		

ROI # 7
Channel # **** Data ****

694					198
695	231	239	214	273	504
700	1551	3501	4815	3723	1571
705	482	230	197	180	204

ROI # 8
Channel # **** Data ****

1157			119	123	133
1160	120	108	169	230	246
1165	261	191	137	110	110
1170	114	106	121		

ROI # 9
Channel # **** Data ****

1209 114

1215	1527	2711	2850	1898	745
1220	279	130	130	119	100

REGION OF INTEREST DATA

ROI # 10

Channel #		**** Data ****			
1813				75	72
1815	60	80	80	106	171
1820	191	192	114	110	89
1825	74	73	75	69	

ROI # 11

Channel #		**** Data ****			
1917			60	66	68
1920	54	59	69	61	88
1925	96	86	95	86	88
1930	69	59	69	90	93
1935	136	139	109	99	81
1940	68	66	70	61	69
1945	67	65	84	68	

MCA #1 - Canberra S100 - NOPI3201.MCA - NOPI-320-GAM1 7.0cm

Tag Number: 92
Report Group: 1/4
Group Size: 4096

Readout: Wed 13 Apr 1994 @ 09:18:56
Acquire Started: Wed 13 Apr 1994 @ 09:17:09

Elapsed Live Time: 1481.00 min.
Elapsed True Time: 1481.22 min.
Dead Time: 0.01 %

MCA Mode: PHA+
Preset Conditions: Live Time = 6000.00 min.

Calibration: 0.0000*Ch^2 + 0.4996*Ch + 1.083 keV

Area Statistics: Background Channels = 4
% Error Sigma = 1.65

Peak Statistics: Sensitivity Factor = 4.0
Expected FWHM (ch) = 2.7 - 6.0

Iso. Id. Criteria: Energy Window = +-1.300 keV
Iso. Library: C:\WINDOWS\S100\SPECTRAN.ISO

REGION OF INTEREST REPORT

ROI #	From(keV) To (keV)	Integral CPS	Area %Error	Peak(keV) FWHM(keV)	
1	43.6	2032	0	220.9	
	44.6	0.02	0.00	3.72	
	Isotope:	I-135 @	220.5		4023
		TA-182 @	222.1		
2	48.0	1991	0	225.4	
	49.0	0.02	0.00	3.72	
3	60.5	2559	0	237.9	
	61.5	0.03	0.00	3.72	4951
	Isotope:	PB-212 @	238.6		
4	65.0	2392	0	242.4	
	66.0	0.03	0.00	3.72	
5	90.5	2871	0	267.9	
	91.5	0.03	0.00	3.72	4736
	Isotope:	Y-93 @	266.9		
6	94.5	1865	0	271.9	
	95.0	0.02	0.00	3.72	
7	181.9	1914	0	183.0	
	183.4	0.02	0.00	3.72	3742
8	187.9	1828	0	188.4	
	189.4	0.02	0.00	21458952.00	
9	291.4	1037	0	292.4	
	292.9	0.01	0.00	21458952.00	2048
10	297.4	1011	0	297.9	
	298.9	0.01	0.00	21458952.00	
	Isotope:	GA-73 @	297.4		
11	334.3	849	0	335.1	
	335.8	0.01	0.00	21458952.00	1672
	Isotope:	NP-239 @	334.3		
12	340.3	823	0	340.8	
	341.8	0.01	0.00	21458952.00	
	Isotope:	CS-136 @	340.6		
13	347.8	882	0	348.8	
	349.3	0.01	0.00	21458952.00	1693
14	353.8	811	0	354.8	
	355.3	0.01	0.00	21458952.00	
	Isotope:	BA-133 @	356.0		
15	579.2	495	0	580.2	
	580.7	0.01	0.00	21458952.00	946
16	585.2	451	0	585.6	

REGION OF INTEREST REPORT

ROI #	From(keV) To (keV)	Integral CPS	Area %Error	Peak(keV) FWHM(keV)	
17	605.1	496	0	605.6	
	606.6	0.01	0.00	21458952.00	975
	Isotope:	CS-134 @	604.7		
		SB-125 @	606.7		
18	611.1	479	0	611.6	
	612.6	0.01	0.00	21458952.00	
19	906.9	287	0	907.4	
	908.4	0.00	0.00	21458952.00	578
20	912.9	291	0	913.9	
	914.4	0.00	0.00	21458952.00	
21	958.9	525	0	959.8	
	962.4	0.01	0.00	0.19	1075
22	970.9	550	0	973.9	
	974.4	0.01	0.00	0.39	
	Isotope:	I-134 @	974.7		
23M	1100.8	5793	1713	1119.4	
	1134.7	0.07	17.45	1.85	
	Isotope:	BI-214 @	1120.3		
		SC-46 @	1120.5		

MCA #1 - Canberra S100 - NOPI3211.MCA - NOPI-321-GAM1 7.0cm

Tag Number: 89
Report Group: 2/4
Group Size: 4096

Readout: Tue 12 Apr 1994 @ 08:33:14
Acquire Started: Tue 12 Apr 1994 @ 08:32:47

Elapsed Live Time: 1111.00 min.
Elapsed True Time: 1111.14 min.
Dead Time: 0.01 %

MCA Mode: PHA+
Preset Conditions: Live Time = 1111.00 min.

Calibration: 0.0000*Ch^2 + 0.4996*Ch + 1.083 keV

Area Statistics: Background Channels = 4
% Error Sigma = 1.65

Peak Statistics: Sensitivity Factor = 4.0
Expected FWHM (ch) = 2.7 - 6.0

Iso. Id. Criteria: Energy Window = +-1.300 keV
Iso. Library: C:\WINDOWS\S100\SPECTRAN.ISO

4/12/94
$\Delta T = 1111$ min
mass = 3.816 g

REGION OF INTEREST REPORT

ROI #	From(keV) To (keV)	Integral CPS	Area %Error	Peak(keV) FWHM(keV)
1	43.6	5594	514	46.6
	49.0	0.08	17.76	1.54
2	60.5	7517	1655	63.5
	66.0	0.11	6.75	1.28
	Isotope: TH-234 @ 63.3			
3	90.5	8602	1806	92.8
	95.0	0.13	5.41	1.27
4	181.9	8668	3904	186.0
	189.4	0.13	3.93	1.63
	Isotope: U-235 @ 185.7			
5	291.4	7903	5095	295.3
	298.9	0.12	2.88	1.48
	Isotope: PB-214 @ 295.2			
6	334.3	2820	358	338.3
	341.8	0.04	24.48	1.41
	Isotope: AC-228 @ 338.3			
7	347.8	11032	8628	351.8
	355.3	0.17	2.01	1.54
	Isotope: PB-214 @ 351.9			
8	579.2	1877	509	583.1
	586.7	0.03	14.04	1.39
	Isotope: TL-208 @ 583.2			
9	605.1	7104	5826	609.0
	612.6	0.11	2.39	1.68
	Isotope: XE-135 @ 608.1			
	BI-214 @ 609.3			
10	906.9	1260	388	910.7
	914.4	0.02	15.10	1.81
	Isotope: AC-228 @ 911.2			
11	958.9	1889	473	968.4
	974.4	0.03	23.97	1.85
	Isotope: RU-105 @ 969.4			

REGION OF INTEREST DATA

ROI # 1

Channel # **** Data ****

85	410	463	380	437	416
90	547	632	612	520	415
95	354	408			

ROI # 2
Channel # **** Data ****

119 483

REGION OF INTEREST DATA

ROI # 2
Channel # **** Data ****

120	470	493	523	590	950
125	1170	899	568	469	462
130	440				

ROI # 3
Channel # **** Data ****

179					675
180	516	523	916	1563	1602
185	1115	661	518	513	

ROI # 4
Channel # **** Data ****

362			309	319	312
365	280	311	356	523	1042
370	1445	1347	832	430	286
375	318	259	299		

ROI # 5
Channel # **** Data ****

581		166	186	187	189
585	220	319	773	1528	1788
590	1136	480	255	175	155
595	166	180			

ROI # 6
Channel # **** Data ****

667			161	172	151
670	142	162	183	187	237
675	274	236	165	145	175
680	142	141	147		

ROI # 7
Channel # **** Data ****

694					155
695	150	163	168	178	298
700	868	2078	2842	2271	986
705	309	180	135	116	135

ROI # 8
Channel # **** Data ****

1157			103	92	96
1160	77	83	111	147	237
1165	257	167	112	79	77
1170	77	82	80		

ROI # 9
Channel # **** Data ****

1209 79

1210	78	74	101	149	344
1215	880	1574	1701	1134	492
1220	191	93	70	73	71

REGION OF INTEREST DATA

ROI # 10

Channel #	**** Data ****				
1813				47	55
1815	56	62	48	75	122
1820	171	129	134	85	60
1825	64	53	39	60	

ROI # 11

Channel #	**** Data ****				
1917			53	49	43
1920	37	47	41	45	56
1925	72	70	74	76	68
1930	53	49	53	70	75
1935	106	125	101	86	49
1940	38	47	47	42	45
1945	49	41	38	44	

MCA #1 - Canberra S100 - NOPI3211.MCA - NOPI-321-GAM1 7.0cm

Tag Number: 89
Report Group: 1/4
Group Size: 4096

Readout: Tue 12 Apr 1994 @ 08:34:09
Acquire Started: Tue 12 Apr 1994 @ 08:32:47

Elapsed Live Time: 1111.00 min.
Elapsed True Time: 1111.14 min.
Dead Time: 0.01 %

MCA Mode: PHA+
Preset Conditions: Live Time = 6000.00 min.

Calibration: 0.0000*Ch^2 + 0.4996*Ch + 1.083 keV

Area Statistics: Background Channels = 4
% Error Sigma = 1.65

Peak Statistics: Sensitivity Factor = 4.0
Expected FWHM (ch) = 2.7 - 6.0

Iso. Id. Criteria: Energy Window = +-1.300 keV
Iso. Library: C:\WINDOWS\S100\SPECTRAN.ISO

REGION OF INTEREST REPORT

ROI #	From(keV) To (keV)	Integral CPS	Area %Error	Peak(keV) FWHM(keV)	
1	43.6	1253	0	220.7	
	44.6	0.02	0.00	3.96	2430
	Isotope: I-135 @ 220.5				
2	48.0	1177	0	225.2	
	49.0	0.02	0.00	3.96	
3	60.5	1446	0	237.7	
	61.5	0.02	0.00	3.96	2817
	Isotope: PB-212 @ 238.6				
4	65.0	1371	0	242.2	
	66.0	0.02	0.00	3.96	
5	90.5	1714	0	267.7	
	91.5	0.03	0.00	3.96	2745
	Isotope: Y-93 @ 266.9				
6	94.5	1031	0	271.6	
	95.0	0.02	0.00	3.96	
7	181.9	1220	0	182.7	
	183.4	0.02	0.00	3.96	2382
8	187.9	1162	0	188.4	
	189.4	0.02	0.00	21458952.00	
9	291.4	728	0	292.4	
	292.9	0.01	0.00	21458952.00	1404
10	297.4	676	0	298.4	
	298.9	0.01	0.00	21458952.00	
	Isotope: GA-73 @ 297.4				
11	334.3	626	0	334.8	
	335.8	0.01	0.00	21458952.00	1231
	Isotope: NP-239 @ 334.3				
12	340.3	605	0	340.8	
	341.8	0.01	0.00	21458952.00	
	Isotope: CS-136 @ 340.6				
13	347.8	636	0	348.8	
	349.3	0.01	0.00	21458952.00	1202
14	353.8	566	0	354.8	
	355.3	0.01	0.00	21458952.00	
	Isotope: BA-133 @ 356.0				
15	579.2	368	0	580.1	
	580.7	0.01	0.00	21458952.00	684
16	585.2	316	0	586.2	
	586.7	0.00	0.00	21458952.00	

REGION OF INTEREST REPORT

ROI #	From(keV) To (keV)	Integral CPS	Area %Error	Peak(keV) FWHM(keV)	
17	605.1	332	0	606.2	639
	606.6	0.00	0.00	21458952.00	
	Isotope: SB-125 @ 606.7				
18	611.1	307	0	612.1	
	612.6	0.00	0.00	21458952.00	
19	906.9	220	0	907.9	436
	908.4	0.00	0.00	21458952.00	
20	912.9	216	0	913.9	
	914.4	0.00	0.00	21458952.00	
21	958.9	371	0	959.3	724
	962.4	0.01	0.00	21458952.00	
22	970.9	353	0	972.6	
	974.4	0.01	0.00	0.71	
	Isotope: I-135 @ 972.3				
23M	1100.8	4147	1189	1119.5	
	1134.7	0.06	21.39	2.08	
	Isotope: BI-214 @ 1120.3				
	SC-46 @ 1120.5				

MCA #1 - Canberra S100 - NOPI3221.MCA - NOPI-322-GAM1 7.0cm

Tag Number: 84
Report Group: 2/4
Group Size: 4096

Readout: Mon 11 Apr 1994 @ 08:31:37
Acquire Started: Fri 08 Apr 1994 @ 13:57:07

Elapsed Live Time: 2000.00 min.
Elapsed True Time: 2000.19 min.
Dead Time: 0.01 %

MCA Mode: PHA+
Preset Conditions: Live Time = 2000.00 min.

Calibration: 0.0000*Ch^2 + 0.4996*Ch + 1.083 keV

Area Statistics: Background Channels = 4
% Error Sigma = 1.65

Peak Statistics: Sensitivity Factor = 4.0
Expected FWHM (ch) = 2.7 - 6.0

Iso. Id. Criteria: Energy Window = +-1.300 keV
Iso. Library: C:\WINDOWS\S100\SPECTRAN.ISO

gp
4/11/94
AT=2000 min
mass = 3.600 g

REGION OF INTEREST REPORT

ROI #	From(keV) To (keV)	Integral CPS	Area %Error	Peak(keV) FWHM(keV)
1	43.6	6310	595	46.6
	49.0	0.05	16.29	1.37
2	60.5	8379	1785	63.5
	66.0	0.07	6.59	1.32
	Isotope: TH-234 @ 63.3			
3	90.5	9878	2168	92.8
	95.0	0.08	4.87	1.25
4	181.9	9434	3256	186.0
	189.4	0.08	4.92	1.54
	Isotope: U-235 @ 185.7			
5	291.4	6763	2799	295.3
	298.9	0.06	4.85	1.39
	Isotope: PB-214 @ 295.2			
6	334.3	3822	334	338.3
	341.8	0.03	30.54	1.51
	Isotope: AC-228 @ 338.3			
7	347.8	8129	4815	351.8
	355.3	0.07	3.09	1.46
	Isotope: PB-214 @ 351.9			
8	579.2	2490	618	582.9
	586.7	0.02	13.32	1.83
	Isotope: TL-208 @ 583.2			
9	605.1	5315	3431	609.0
	612.6	0.04	3.51	1.73
	Isotope: XE-135 @ 608.1			
	BI-214 @ 609.3			
10	906.9	1747	591	910.6
	914.4	0.01	11.67	1.99
	Isotope: AC-228 @ 911.2			
11	958.9	2798	482	968.1
	974.4	0.02	29.51	1.68
	Isotope: RU-105 @ 969.4			

REGION OF INTEREST DATA

ROI # 1

Channel # **** Data ****

85	461	470	455	485	488
90	616	707	689	519	461
95	497	462			

ROI # 2
Channel # **** Data ****

119 547

REGION OF INTEREST DATA

ROI # 2
Channel # **** Data ****

120	553	556	596	684	1036
125	1270	993	651	519	479
130	495				

ROI # 3
Channel # **** Data ****

179					665
180	583	645	1109	1811	1899
185	1234	758	584	590	

ROI # 4
Channel # **** Data ****

362			417	383	371
365	393	358	462	637	1113
370	1408	1175	727	465	381
375	376	367	401		

ROI # 5
Channel # **** Data ****

581		264	243	248	236
585	268	321	567	1017	1179
590	756	393	280	258	257
595	232	244			

ROI # 6
Channel # **** Data ****

667			252	199	220
670	216	222	222	250	307
675	322	291	227	237	210
680	204	219	224		

ROI # 7
Channel # **** Data ****

694					215
695	204	221	221	211	274
700	626	1212	1786	1387	682
705	294	210	192	215	179

ROI # 8
Channel # **** Data ****

1157			125	128	125
1160	111	127	151	221	285
1165	262	227	154	127	116
1170	111	112	108		

ROI # 9
Channel # **** Data ****

1209 118

1210	111	117	132	163	249
1215	598	1015	1057	747	375
1220	169	128	107	108	121

REGION OF INTEREST DATA

ROI # 10

Channel #	**** Data ****				
1813				59	70
1815	76	74	110	122	196
1820	212	201	159	88	81
1825	64	69	74	92	

ROI # 11

Channel #	**** Data ****				
1917			76	66	72
1920	69	57	85	78	89
1925	97	88	111	106	86
1930	93	69	91	88	123
1935	166	159	121	91	80
1940	72	72	67	58	72
1945	68	75	77	76	

MCA #1 - Canberra S100 - NOPI3221.MCA - NOPI-322-GAM1 7.0cm

Tag Number: 84
Report Group: 1/4
Group Size: 4096

Readout: Mon 11 Apr 1994 @ 08:32:10
Acquire Started: Fri 08 Apr 1994 @ 13:57:07

Elapsed Live Time: 2000.00 min.
Elapsed True Time: 2000.19 min.
Dead Time: 0.01 %

MCA Mode: PHA+
Preset Conditions: Live Time = 6000.00 min.

Calibration: 0.0000*Ch^2 + 0.4996*Ch + 1.083 keV

Area Statistics: Background Channels = 4
% Error Sigma = 1.65

Peak Statistics: Sensitivity Factor = 4.0
Expected FWHM (ch) = 2.7 - 6.0

Iso. Id. Criteria: Energy Window = +-1.300 keV
Iso. Library: C:\WINDOWS\S100\SPECTRAN.ISO

REGION OF INTEREST REPORT

ROI #	From(keV) To (keV)	Integral CPS	Area %Error	Peak(keV) FWHM(keV)	
1	43.6	1386	0	214.2	2806
	44.6	0.01	0.00	8.21	
2	48.0	1420	0	218.7	
	49.0	0.01	0.00	8.21	
3	60.5	1656	0	231.1	3149
	61.5	0.01	0.00	8.21	
4	65.0	1493	0	235.6	
	66.0	0.01	0.00	8.21	
	Isotope: I-134 @ 235.5				
5	90.5	1893	0	261.1	3067
	91.5	0.02	0.00	8.21	
6	94.5	1174	0	265.1	
	95.0	0.01	0.00	8.21	
	Isotope: GE-75 @ 264.7				
	SE-75 @ 264.7				
7	181.9	1564	0	352.6	3089
	183.4	0.01	0.00	8.21	
	Isotope: PB-214 @ 351.9				
8	187.9	1525	0	358.5	
	189.4	0.01	0.00	8.21	
	Isotope: TC-104 @ 357.9				
9	291.4	991	0	292.4	1982
	292.9	0.01	0.00	8.21	
10	297.4	991	0	297.8	
	298.9	0.01	0.00	21458956.00	
	Isotope: GA-73 @ 297.4				
11	334.3	887	0	334.8	1744
	335.8	0.01	0.00	21458956.00	
	Isotope: NP-239 @ 334.3				
12	340.3	857	0	341.3	
	341.8	0.01	0.00	21458956.00	
	Isotope: CS-136 @ 340.6				
13	347.8	861	0	348.8	1657
	349.3	0.01	0.00	21458956.00	
14	353.8	796	0	354.8	
	355.3	0.01	0.00	21458956.00	
	Isotope: BA-133 @ 356.0				
15	579.2	489	0	579.9	936
	580.7	0.00	0.00	21458956.00	

REGION OF INTEREST REPORT

ROI #	From(keV) To (keV)	Integral CPS	Area %Error	Peak(keV) FWHM(keV)
16	585.2	447	0	586.1
	586.7	0.00	0.00	21458956.00
17	605.1	478	0	606.2
	606.6	0.00	0.00	21458956.00
	Isotope: SB-125 @ 606.7			
18	611.1	464	0	612.2
	612.6	0.00	0.00	21458956.00
19	906.9	279	0	907.9
	908.4	0.00	0.00	21458956.00
20	912.9	299	0	914.0
	914.4	0.00	0.00	21458956.00
21	958.9	592	0	961.4
	962.4	0.00	0.00	0.36
22	970.9	565	0	973.9
	974.4	0.00	0.00	0.36
	Isotope: I-134 @ 974.7			
23M	1100.8	5168	864	1119.5
	1134.7	0.04	35.04	2.10
	Isotope: BI-214 @ 1120.3			
	SC-46 @ 1120.5			

942

578

1157

MCA #1 - Canberra S100 - NOPI3231.MCA - NOPI-323-GAM1 7.0cm

Tag Number: 81
Report Group: 2/4
Group Size: 4096

Readout: Fri 08 Apr 1994 @ 08:46:06
Acquire Started: Fri 08 Apr 1994 @ 08:44:59

Elapsed Live Time: 1168.00 min.
Elapsed True Time: 1168.24 min.
Dead Time: 0.02 %

MCA Mode: PHA+
Preset Conditions: Live Time = 1168.00 min.

Calibration: 0.0000*Ch^2 + 0.4996*Ch + 1.083 keV

Area Statistics: Background Channels = 4
% Error Sigma = 1.65

Peak Statistics: Sensitivity Factor = 4.0
Expected FWHM (ch) = 2.7 - 6.0

Iso. Id. Criteria: Energy Window = +-1.300 keV
Iso. Library: C:\WINDOWS\S100\SPECTRAN.ISO

4/8/94
ΔT = 1168 min
Mass = 3.776 g

REGION OF INTEREST REPORT

ROI #	From(keV) To (keV)	Integral CPS	Area %Error	Peak(keV) FWHM(keV)
1	43.6	10431	1199	46.6
	49.0	0.15	10.50	1.23
2	60.5	16567	4662	63.5
	66.0	0.24	3.65	1.30
	Isotope: TH-234 @ 63.3			
3	90.5	20105	5520	92.8
	95.0	0.29	2.86	1.26
4	181.9	17373	9267	186.0
	189.4	0.25	2.35	1.56
	Isotope: U-235 @ 185.7			
5	291.4	16778	12580	295.2
	298.9	0.24	1.70	1.53
	Isotope: PB-214 @ 295.2			
6	334.3	3888	182	338.3
	341.8	0.06	56.53	1.04
	Isotope: AC-228 @ 338.3			
7	347.8	24269	20841	351.8
	355.3	0.35	1.23	1.49
	Isotope: PB-214 @ 351.9			
8	579.2	2217	321	582.7
	586.7	0.03	24.20	1.41
	Isotope: TL-208 @ 583.2			
9	605.1	15678	13796	608.9
	612.6	0.22	1.50	1.77
	Isotope: XE-135 @ 608.1			
	BI-214 @ 609.3			
10	906.9	1510	310	910.4
	914.4	0.02	20.68	2.09
	Isotope: AC-228 @ 911.2			
11	958.9	2406	290	968.1
	974.4	0.03	46.36	1.61
	Isotope: RU-105 @ 969.4			

REGION OF INTEREST DATA

ROI # 1

Channel # **** Data ****

85	759	763	724	774	817
90	1037	1283	1139	894	744
95	750	747			

ROI # 2

Channel # **** Data ****

REGION OF INTEREST DATA

ROI # 2
Channel # **** Data ****

120	973	1015	1076	1319	2331
125	2871	2109	1176	944	865
130	909				

ROI # 3
Channel # **** Data ****

179					1207
180	979	1153	2344	4244	4193
185	2562	1375	1008	1040	

ROI # 4
Channel # **** Data ****

362			538	509	555
365	523	500	653	1234	2505
370	3382	2831	1499	716	498
375	490	478	462		

ROI # 5
Channel # **** Data ****

581		276	260	243	278
585	310	714	1920	3917	4101
590	2478	917	322	291	248
595	239	264			

ROI # 6
Channel # **** Data ****

667			249	249	234
670	228	220	225	228	323
675	314	278	235	212	215
680	209	245	224		

ROI # 7
Channel # **** Data ****

694					226
695	228	233	248	310	735
700	2229	4951	6899	4774	2104
705	553	211	178	196	194

ROI # 8
Channel # **** Data ****

1157			130	119	149
1160	127	127	137	172	218
1165	212	141	141	121	102
1170	96	115	110		

ROI # 9
Channel # **** Data ****

1209					112
1210	127	127	137	277	996
1215	2216	3822	3760	2378	931

1220	256	134	98	104	102

REGION OF INTEREST DATA

ROI # 10

Channel #	**** Data ****				
1813				74	72
1815	81	74	95	115	128
1820	156	133	122	86	75
1825	79	83	65	72	

ROI # 11

Channel #	**** Data ****				
1917			66	65	74
1920	56	78	65	68	61
1925	87	96	81	84	68
1930	62	55	68	82	100
1935	112	128	101	77	69
1940	75	83	64	56	57
1945	67	52	79	70	

MCA #1 - Canberra S100 - NOPI3231.MCA - NOPI-323-GAM1 7.0cm

Tag Number: 81
Report Group: 1/4
Group Size: 4096

Readout: Fri 08 Apr 1994 @ 08:46:42
Acquire Started: Fri 08 Apr 1994 @ 08:44:59

Elapsed Live Time: 1168.00 min.
Elapsed True Time: 1168.24 min.
Dead Time: 0.02 %

MCA Mode: PHA+
Preset Conditions: Live Time = 6000.00 min.

Calibration: 0.0000*Ch^2 + 0.4996*Ch + 1.083 keV

Area Statistics: Background Channels = 4
% Error Sigma = 1.65

Peak Statistics: Sensitivity Factor = 4.0
Expected FWHM (ch) = 2.7 - 6.0

Iso. Id. Criteria: Energy Window = +-1.300 keV
Iso. Library: C:\WINDOWS\S100\SPECTRAN.ISO

REGION OF INTEREST REPORT

ROI #	From(keV) To (keV)	Integral CPS	Area %Error	Peak(keV) FWHM(keV)	
1	43.6	2246	0	221.3	4487
	44.6	0.03	0.00	4.57	
	Isotope: I-135 @ 220.5				
	TA-182 @ 222.1				
2	48.0	2241	0	225.8	
	49.0	0.03	0.00	4.57	
3	60.5	2967	0	238.3	5685
	61.5	0.04	0.00	4.57	
	Isotope: PB-212 @ 238.6				
4	65.0	2718	0	242.8	
	66.0	0.04	0.00	4.57	
5	90.5	3339	0	268.3	5387
	91.5	0.05	0.00	4.57	
6	94.5	2048	0	272.3	
	95.0	0.03	0.00	4.57	
7	181.9	2125	0	183.0	4053
	183.4	0.03	0.00	4.57	
8	187.9	1928	0	188.4	
	189.4	0.03	0.00	21458952.00	
9	291.4	1057	0	291.8	2099
	292.9	0.02	0.00	21458952.00	
10	297.4	1042	0	297.8	
	298.9	0.01	0.00	21458952.00	
	Isotope: GA-73 @ 297.4				
11	334.3	960	0	334.8	1853
	335.8	0.01	0.00	21458952.00	
	Isotope: NP-239 @ 334.3				
12	340.3	893	0	341.3	
	341.8	0.01	0.00	21458952.00	
	Isotope: CS-136 @ 340.6				
13	347.8	935	0	348.8	1714
	349.3	0.01	0.00	21458952.00	
14	353.8	779	0	354.8	
	355.3	0.01	0.00	21458952.00	
	Isotope: BA-133 @ 356.0				
15	579.2	525	0	580.2	948
	580.7	0.01	0.00	21458952.00	
16	585.2	423	0	586.2	
	586.7	0.01	0.00	21458952.00	

REGION OF INTEREST REPORT

ROI #	From(keV) To (keV)	Integral CPS	Area %Error	Peak(keV) FWHM(keV)	
17	605.1	503	0	606.1	941
	606.6	0.01	0.00	21458952.00	
	Isotope: SB-125 @ 606.7				
18	611.1	438	0	612.1	
	612.6	0.01	0.00	21458952.00	
19	906.9	301	0	907.9	530
	908.4	0.00	0.00	21458952.00	
20	912.9	299	0	913.4	
	914.4	0.00	0.00	21458952.00	
21	958.9	533	0	960.9	1061
	962.4	0.01	0.00	0.32	
22	970.9	528	0	973.9	
	974.4	0.01	0.00	0.59	
	Isotope: I-134 @ 974.7				
23M	1100.8	6470	2873	1119.4	
	1134.7	0.09	10.00	2.10	
	Isotope: BI-214 @ 1120.3				
	SC-46 @ 1120.5				

MCA #1 - Canberra S100 - NOPI3241.MCA - NOPI-324-GAM1 7.0cm

Tag Number: 77
Report Group: 2/4
Group Size: 4096

Readout: Thu 07 Apr 1994 @ 08:35:15
Acquire Started: Thu 07 Apr 1994 @ 08:34:01

Elapsed Live Time: 1087.00 min.
Elapsed True Time: 1087.17 min.
Dead Time: 0.02 %

MCA Mode: PHA+
Preset Conditions: Live Time = 1087.00 min.

Calibration: 0.0000*Ch^2 + 0.4996*Ch + 1.083 keV

Area Statistics: Background Channels = 4
% Error Sigma = 1.65

Peak Statistics: Sensitivity Factor = 4.0
Expected FWHM (ch) = 2.7 - 6.0

Iso. Id. Criteria: Energy Window = +-1.300 keV
Iso. Library: C:\WINDOWS\S100\SPECTRAN.ISO

4/7/94
$\Delta T = 1087$ min
$m_{NaI} = 3.950$ g

REGION OF INTEREST REPORT

ROI #	From(keV) To (keV)	Integral CPS	Area %Error	Peak(keV) FWHM(keV)
1	43.6	7121	737	46.6
	49.0	0.11	14.03	1.28
2	60.5	10423	2395	63.5
	66.0	0.16	5.52	1.24
	Isotope: TH-234 @ 63.3			
3	90.5	11428	2544	92.8
	95.0	0.18	4.48	1.26
4	181.9	11354	5538	186.0
	189.4	0.17	3.17	1.57
	Isotope: U-235 @ 185.7			
5	291.4	11516	8204	295.2
	298.9	0.18	2.16	1.49
	Isotope: PB-214 @ 295.2			
6	334.3	3118	226	338.3
	341.8	0.05	40.77	1.08
	Isotope: AC-228 @ 338.3			
7	347.8	16612	13934	351.8
	355.3	0.25	1.53	1.56
	Isotope: PB-214 @ 351.9			
8	579.2	1814	228	582.7
	586.7	0.03	30.82	1.56
	Isotope: TL-208 @ 583.2			
9	605.1	10853	9359	608.9
	612.6	0.17	1.84	1.72
	Isotope: XE-135 @ 608.1			
	BI-214 @ 609.3			
10	906.9	1213	263	910.4
	914.4	0.02	21.85	1.54
	Isotope: AC-228 @ 911.2			
11	958.9	2006	382	968.1
	974.4	0.03	31.31	1.68
	Isotope: RU-105 @ 969.4			

REGION OF INTEREST DATA

ROI # 1

Channel # **** Data ****

85	572	489	514	556	572
90	672	808	813	567	505
95	498	555			

ROI # 2

Channel # **** Data ****

REGION OF INTEREST DATA

ROI # 2
Channel # **** Data ****

120	661	610	722	879	1347
125	1648	1197	782	649	634
130	634				

ROI # 3
Channel # **** Data ****

179					815
180	654	690	1343	2061	2260
185	1462	835	658	650	

ROI # 4
Channel # **** Data ****

362			361	354	368
365	375	382	454	764	1462
370	2055	1792	1049	488	379
375	349	364	358		

ROI # 5
Channel # **** Data ****

581		205	203	227	209
585	230	454	1348	2588	2778
590	1586	574	302	201	215
595	191	205			

ROI # 6
Channel # **** Data ****

667			215	172	187
670	180	171	195	211	258
675	249	219	179	190	178
680	163	185	166		

ROI # 7
Channel # **** Data ****

694					155
695	160	205	192	216	484
700	1599	3460	4457	3311	1329
705	417	174	146	154	153

ROI # 8
Channel # **** Data ****

1157			105	115	93
1160	117	82	110	154	181
1165	174	126	98	96	84
1170	89	99	91		

ROI # 9
Channel # **** Data ****

1209					91
1210	88	89	110	239	685
1215	1666	2602	2606	1427	682

1220	188	90	104	88	87

REGION OF INTEREST DATA

ROI # 10

Channel #		**** Data ****			
1813				57	66
1815	51	67	71	100	105
1820	145	112	84	60	61
1825	61	59	71	43	

ROI # 11

Channel #		**** Data ****			
1917			60	55	46
1920	52	66	50	50	56
1925	73	78	90	75	66
1930	46	67	53	72	71
1935	114	103	89	66	58
1940	40	78	39	42	58
1945	38	50	53	52	

MCA #1 - Canberra S100 - NOPI3241.MCA - NOPI-324-GAM1 7.0cm

Tag Number: 77
Report Group: 1/4
Group Size: 4096

Readout: Thu 07 Apr 1994 @ 08:35:51
Acquire Started: Thu 07 Apr 1994 @ 08:34:01

Elapsed Live Time: 1087.00 min.
Elapsed True Time: 1087.17 min.
Dead Time: 0.02 %

MCA Mode: PHA+
Preset Conditions: Live Time = 6000.00 min.

Calibration: 0.0000*Ch^2 + 0.4996*Ch + 1.083 keV

Area Statistics: Background Channels = 4
% Error Sigma = 1.65

Peak Statistics: Sensitivity Factor = 4.0
Expected FWHM (ch) = 2.7 - 6.0

Iso. Id. Criteria: Energy Window = +-1.300 keV
Iso. Library: C:\WINDOWS\S100\SPECTRAN.ISO

REGION OF INTEREST REPORT

ROI #	From(keV) To (keV)	Integral CPS	Area %Error	Peak(keV) FWHM(keV)	
1	43.6	1575	0	220.3	
	44.6	0.02	0.00	4.21	3133
	Isotope: I-135 @ 220.5				
2	48.0	1558	0	224.8	
	49.0	0.02	0.00	4.21	
3	60.5	1931	0	237.3	
	61.5	0.03	0.00	4.21	3848
4	65.0	1917	0	241.8	
	66.0	0.03	0.00	4.21	
5	90.5	2159	0	267.3	
	91.5	0.03	0.00	4.21	3467
	Isotope: Y-93 @ 266.9				
6	94.5	1308	0	271.3	
	95.0	0.02	0.00	4.21	
7	181.9	1458	0	183.0	
	183.4	0.02	0.00	4.21	2908
8	187.9	1450	0	188.9	
	189.4	0.02	0.00	4.21	
9	291.4	844	0	292.4	
	292.9	0.01	0.00	4.21	1656
10	297.4	812	0	297.9	
	298.9	0.01	0.00	21458952.00	
	Isotope: GA-73 @ 297.4				
11	334.3	754	0	334.8	
	335.8	0.01	0.00	21458952.00	1446
	Isotope: NP-239 @ 334.3				
12	340.3	692	0	341.3	
	341.8	0.01	0.00	21458952.00	
	Isotope: CS-136 @ 340.6				
13	347.8	712	0	348.9	
	349.3	0.01	0.00	21458952.00	1339
14	353.8	627	0	354.8	
	355.3	0.01	0.00	21458952.00	
	Isotope: BA-133 @ 356.0				
15	579.2	430	0	579.6	
	580.7	0.01	0.00	21458952.00	793
16	585.2	363	0	586.2	
	586.7	0.01	0.00	21458952.00	

REGION OF INTEREST REPORT

ROI #	From(keV) To (keV)	Integral CPS	Area %Error	Peak(keV) FWHM(keV)	
17	605.1	378	0	606.2	747
	606.6	0.01	0.00	21458952.00	
	Isotope: SB-125 @ 606.7				
18	611.1	369	0	611.6	
	612.6	0.01	0.00	21458952.00	
19	906.9	241	0	907.4	475
	908.4	0.00	0.00	21458952.00	
20	912.9	234	0	913.9	
	914.4	0.00	0.00	21458952.00	
21	958.9	435	0	960.9	845
	962.4	0.01	0.00	0.37	
22	970.9	410	0	972.4	
	974.4	0.01	0.00	0.21	
	Isotope: I-135 @ 972.3				
23M	1100.8	4985	1949	1119.4	
	1134.7	0.08	13.41	1.98	
	Isotope: BI-214 @ 1120.3				
	SC-46 @ 1120.5				

MCA #1 - Canberra S100 - NOPI3251.MCA - NOPI-325-GAM1 7.0cm

Tag Number: 71
Report Group: 2/4
Group Size: 4096

Readout: Wed 06 Apr 1994 @ 08:38:44
Acquire Started: Wed 06 Apr 1994 @ 08:37:38

Elapsed Live Time: 1189.00 min.
Elapsed True Time: 1189.12 min.
Dead Time: 0.01 %

MCA Mode: PHA+
Preset Conditions: Live Time = 1189.00 min.

Calibration: 0.0000*Ch^2 + 0.4996*Ch + 1.083 keV

Area Statistics: Background Channels = 4
% Error Sigma = 1.65

Peak Statistics: Sensitivity Factor = 4.0
Expected FWHM (ch) = 2.7 - 6.0

Iso. Id. Criteria: Energy Window = +-1.300 keV
Iso. Library: C:\WINDOWS\S100\SPECTRAN.ISO

JP
4/6/94
$\Delta T = 1189$ min
mass = 4.138 g

REGION OF INTEREST REPORT

ROI #	From(keV) To (keV)	Integral CPS	Area %Error	Peak(keV) FWHM(keV)
1	43.6	4054	460	46.8
	49.0	0.06	17.04	1.25
2	60.5	5460	1196	63.5
	66.0	0.08	7.96	1.26
	Isotope: TH-234 @ 63.3			
3	90.5	6420	1435	92.8
	95.0	0.09	5.95	1.26
4	181.9	6383	2279	186.0
	189.4	0.09	5.78	1.43
	Isotope: U-235 @ 185.7			
5	291.4	4880	2376	295.2
	298.9	0.07	4.85	1.55
	Isotope: PB-214 @ 295.2			
6	334.3	2276	104	338.1
	341.8	0.03	75.69	2.00
	Isotope: AC-228 @ 338.3			
7	347.8	6229	4209	351.8
	355.3	0.09	3.09	1.58
	Isotope: PB-214 @ 351.9			
8	579.2	1511	251	582.8
	586.7	0.02	25.55	1.81
	Isotope: TL-208 @ 583.2			
9	605.1	4085	2769	608.9
	612.6	0.06	3.81	1.88
	Isotope: XE-135 @ 608.1			
	BI-214 @ 609.3			
10	906.9	1057	283	910.4
	914.4	0.01	18.96	1.53
	Isotope: AC-228 @ 911.2			
11	958.9	1616	220	968.1
	974.4	0.02	49.79	1.84
	Isotope: RU-105 @ 969.4			

REGION OF INTEREST DATA

ROI # 1

Channel # **** Data ****

85	282	299	302	332	334
90	376	486	462	355	280
95	274	272			

ROI # 2

Channel # **** Data ****

REGION OF INTEREST DATA

ROI # 2
Channel # **** Data ****

120	348	349	353	450	640
125	839	688	403	358	342
130	346				

ROI # 3
Channel # **** Data ****

179					429
180	383	396	711	1187	1245
185	835	472	392	370	

ROI # 4
Channel # **** Data ****

362			234	284	254
365	290	255	282	448	733
370	1025	811	487	290	263
375	261	240	226		

ROI # 5
Channel # **** Data ****

581		156	142	157	161
585	169	197	515	818	907
590	587	266	169	160	150
595	161	165			

ROI # 6
Channel # **** Data ****

667			142	146	133
670	135	130	111	168	167
675	163	178	148	125	132
680	111	124	163		

ROI # 7
Channel # **** Data ****

694					120
695	139	123	141	148	214
700	501	1111	1392	1076	526
705	251	130	131	111	115

ROI # 8
Channel # **** Data ****

1157			74	90	97
1160	92	80	97	139	153
1165	132	116	82	82	71
1170	71	69	66		

ROI # 9
Channel # **** Data ****

1209					76
1210	104	88	98	117	237
1215	552	804	766	574	256

1220	120	79	88	59	66

REGION OF INTEREST DATA

ROI # 10

Channel #	**** Data ****				
1813				45	52
1815	56	39	77	72	97
1820	125	114	69	62	54
1825	50	53	58	34	

ROI # 11

Channel #	**** Data ****				
1917			43	37	53
1920	46	57	45	47	47
1925	44	72	64	62	45
1930	42	38	43	47	76
1935	83	86	64	55	51
1940	43	35	37	38	46
1945	31	42	46	51	

MCA #1 - Canberra S100 - NOPI3251.MCA - NOPI-325-GAM1 7.0cm

Tag Number: 71
Report Group: 1/4
Group Size: 4096

Readout: Wed 06 Apr 1994 @ 08:39:28
Acquire Started: Wed 06 Apr 1994 @ 08:37:38

Elapsed Live Time: 1189.00 min.
Elapsed True Time: 1189.12 min.
Dead Time: 0.01 %

MCA Mode: PHA+
Preset Conditions: Live Time = 6000.00 min.

Calibration: 0.0000*Ch^2 + 0.4996*Ch + 1.083 keV

Area Statistics: Background Channels = 4
% Error Sigma = 1.65

Peak Statistics: Sensitivity Factor = 4.0
Expected FWHM (ch) = 2.7 - 6.0

Iso. Id. Criteria: Energy Window = +-1.300 keV
Iso. Library: C:\WINDOWS\S100\SPECTRAN.ISO

REGION OF INTEREST REPORT

ROI #	From(keV) To (keV)	Integral CPS	Area %Error	Peak(keV) FWHM(keV)	
1	43.6	883	0	220.9	
	44.6	0.01	0.00	3.48	1709
	Isotope: I-135 @ 220.5				
	TA-182 @ 222.1				
2	48.0	826	0	225.4	
	49.0	0.01	0.00	3.48	
3	60.5	1041	0	237.9	
	61.5	0.01	0.00	3.48	2087
	Isotope: PB-212 @ 238.6				
4	65.0	1046	0	242.4	
	66.0	0.01	0.00	3.48	
5	90.5	1208	0	267.8	
	91.5	0.02	0.00	3.48	1970
	Isotope: Y-93 @ 266.9				
6	94.5	762	0	271.8	
	95.0	0.01	0.00	3.48	
7	181.9	1062	0	182.5	
	183.4	0.01	0.00	21458952.00	2052
8	187.9	990	0	188.4	
	189.4	0.01	0.00	21458952.00	
9	291.4	616	0	292.4	
	292.9	0.01	0.00	21458952.00	1252
10	297.4	636	0	298.4	
	298.9	0.01	0.00	21458952.00	
	Isotope: GA-73 @ 297.4				
11	334.3	556	0	334.8	
	335.8	0.01	0.00	21458952.00	1096
	Isotope: NP-239 @ 334.3				
12	340.3	530	0	340.8	
	341.8	0.01	0.00	21458952.00	
	Isotope: CS-136 @ 340.6				
13	347.8	523	0	348.3	
	349.3	0.01	0.00	21458952.00	1010
14	353.8	487	0	354.3	
	355.3	0.01	0.00	21458952.00	
15	579.2	353	0	580.2	
	580.7	0.00	0.00	21458952.00	630
16	585.2	277	0	585.6	
	586.7	0.00	0.00	21458952.00	

REGION OF INTEREST REPORT

ROI #	From(keV) To (keV)	Integral CPS	Area %Error	Peak(keV) FWHM(keV)
17	605.1	366	0	605.7
	606.6	0.01	0.00	21458952.00
	Isotope:	CS-134 @	604.7	
		SB-125 @	606.7	
18	611.1	292	0	611.6
	612.6	0.00	0.00	21458952.00
19	906.9	192	0	907.9
	908.4	0.00	0.00	21458952.00
20	912.9	195	0	913.8
	914.4	0.00	0.00	21458952.00
21	958.9	375	0	960.9
	962.4	0.01	0.00	0.41
22	970.9	326	0	972.3
	974.4	0.00	0.00	0.23
	Isotope:	I-135 @	972.3	
23M	1100.8	3330	837	1119.3
	1134.7	0.05	27.76	1.67
	Isotope:	BI-214 @	1120.3	
		SC-46 @	1120.5	

658

387

701

MCA #1 - Canberra S100 - NOPI3261.MCA - NOPI-326-GAM1 7.0cm

Tag Number:	67	Readout:	Tue 05 Apr 1994 @ 08:32:38
Report Group:	2/4	Acquire Started:	Tue 05 Apr 1994 @ 08:31:30
Group Size:	4096		

Elapsed Live Time:	1148.00 min.
Elapsed True Time:	1148.12 min.
Dead Time:	0.01 %

MCA Mode:	PHA+
Preset Conditions:	Live Time = 1148.00 min.

Calibration: 0.0000*Ch^2 + 0.4996*Ch + 1.083 keV

Area Statistics: Background Channels = 4
% Error Sigma = 1.65

Peak Statistics: Sensitivity Factor = 4.0
Expected FWHM (ch) = 2.7 - 6.0

Iso. Id. Criteria: Energy Window = +-1.300 keV
Iso. Library: C:\WINDOWS\S100\SPECTRAN.ISO

4/5/94
ΔT = 1148 min
mm = 4.254 g

REGION OF INTEREST REPORT

ROI #	From(keV) To (keV)	Integral CPS	Area %Error	Peak(keV) FWHM(keV)
1	43.6	4378	469	46.6
	49.0	0.06	17.32	1.55
2	60.5	6037	1251	63.5
	66.0	0.09	7.96	1.17
	Isotope: TH-234 @ 63.3			
3	90.5	6556	1397	92.8
	95.0	0.10	6.12	1.25
4	181.9	6927	2711	186.0
	189.4	0.10	5.07	1.44
	Isotope: U-235 @ 185.7			
5	291.4	6214	3558	295.3
	298.9	0.09	3.66	1.41
	Isotope: PB-214 @ 295.2			
6	334.3	2348	110	338.8
	341.8	0.03	72.68	0.65
	Isotope: AC-228 @ 338.3			
7	347.8	8143	6047	351.9
	355.3	0.12	2.46	1.53
	Isotope: PB-214 @ 351.9			
8	579.2	1440	236	582.7
	586.7	0.02	26.53	2.10
	Isotope: TL-208 @ 583.2			
9	605.1	5293	4081	609.0
	612.6	0.08	2.94	1.68
	Isotope: XE-135 @ 608.1			
	BI-214 @ 609.3			
10	906.9	1062	310	910.7
	914.4	0.02	17.35	2.07
	Isotope: AC-228 @ 911.2			
11	958.9	1631	275	968.1
	974.4	0.02	39.54	1.91
	Isotope: RU-105 @ 969.4			

REGION OF INTEREST DATA

ROI # 1

Channel # **** Data ****

85	299	338	310	333	367
90	440	490	475	379	316
95	308	323			

ROI # 2

Channel # **** Data ****

REGION OF INTEREST DATA

ROI # 2
Channel # **** Data ****

120	364	405	426	486	728
125	936	696	460	391	394
130	382				

ROI # 3
Channel # **** Data ****

179					477
180	396	448	721	1179	1250
185	829	457	417	382	

ROI # 4
Channel # **** Data ****

362			236	264	276
365	269	250	313	444	748
370	1130	1018	567	349	275
375	224	261	303		

ROI # 5
Channel # **** Data ****

581		144	177	193	174
585	180	240	544	1120	1367
590	861	396	178	162	173
595	162	143			

ROI # 6
Channel # **** Data ****

667			139	143	124
670	143	147	140	160	155
675	152	174	148	153	137
680	138	141	154		

ROI # 7
Channel # **** Data ****

694					128
695	127	132	148	158	214
700	614	1467	2031	1619	735
705	257	151	112	125	125

ROI # 8
Channel # **** Data ****

1157			64	80	83
1160	74	69	109	115	127
1165	144	114	89	71	72
1170	77	76	76		

ROI # 9
Channel # **** Data ****

1209					83
1210	88	72	84	131	250
1215	656	1077	1238	820	377

1220	138	77	69	65	68

REGION OF INTEREST DATA

ROI # 10

Channel #	**** Data ****				
1813				49	38
1815	38	57	54	56	111
1820	116	118	102	71	58
1825	55	46	49	44	

ROI # 11

Channel #	**** Data ****				
1917			50	35	54
1920	36	44	53	50	42
1925	57	45	56	62	48
1930	56	52	48	56	62
1935	79	85	84	52	41
1940	45	43	42	49	41
1945	38	37	48	41	

MCA #1 - Canberra S100 - NOPI3261.MCA - NOPI-326-GAM1 7.0cm

Tag Number: 67
Report Group: 1/4
Group Size: 4096

Readout: Tue 05 Apr 1994 @ 08:33:10
Acquire Started: Tue 05 Apr 1994 @ 08:31:30

Elapsed Live Time: 1148.00 min.
Elapsed True Time: 1148.12 min.
Dead Time: 0.01 %

MCA Mode: PHA+
Preset Conditions: Live Time = 6000.00 min.

Calibration: 0.0000*Ch^2 + 0.4996*Ch + 1.083 keV

Area Statistics: Background Channels = 4
% Error Sigma = 1.65

Peak Statistics: Sensitivity Factor = 4.0
Expected FWHM (ch) = 2.7 - 6.0

Iso. Id. Criteria: Energy Window = +-1.300 keV
Iso. Library: C:\WINDOWS\S100\SPECTRAN.ISO

REGION OF INTEREST REPORT

ROI #	From(keV) To (keV)	Integral CPS	Area %Error	Peak(keV) FWHM(keV)	
1	43.6	947	0	214.2	1894
	44.6	0.01	0.00	8.66	
2	48.0	947	0	218.7	
	49.0	0.01	0.00	8.66	
3	60.5	1138	0	231.1	2305
	61.5	0.02	0.00	8.66	
4	65.0	1167	0	235.6	
	66.0	0.02	0.00	8.66	
	Isotope: I-134 @ 235.5				
5	90.5	1321	0	261.1	2120
	91.5	0.02	0.00	8.66	
6	94.5	799	0	265.1	
	95.0	0.01	0.00	8.66	
	Isotope: GE-75 @ 264.7				
	SE-75 @ 264.7				
7	181.9	1045	0	183.0	2108
	183.4	0.02	0.00	8.66	
8	187.9	1063	0	189.0	
	189.4	0.02	0.00	8.66	
9	291.4	688	0	292.4	1328
	292.9	0.01	0.00	8.66	
10	297.4	640	0	297.9	
	298.9	0.01	0.00	21458958.00	
	Isotope: GA-73 @ 297.4				
11	334.3	549	0	334.8	1119
	335.8	0.01	0.00	21458956.00	
	Isotope: NP-239 @ 334.3				
12	340.3	570	0	340.8	
	341.8	0.01	0.00	21458956.00	
	Isotope: CS-136 @ 340.6				
13	347.8	535	0	348.3	1048
	349.3	0.01	0.00	21458956.00	
14	353.8	513	0	354.3	
	355.3	0.01	0.00	21458956.00	
15	579.2	301	0	580.1	602
	580.7	0.00	0.00	21458956.00	
16	585.2	301	0	585.9	
	586.7	0.00	0.00	21458956.00	

REGION OF INTEREST REPORT

ROI #	From(keV) To (keV)	Integral CPS	Area %Error	Peak(keV) FWHM(keV)	
17	605.1	327	0	605.6	606
	606.6	0.00	0.00	21458956.00	
	Isotope:	CS-134 @	604.7		
		SB-125 @	606.7		
18	611.1	279	0	611.6	
	612.6	0.00	0.00	21458956.00	
19	906.9	182	0	907.4	376
	908.4	0.00	0.00	21458956.00	
20	912.9	194	0	913.9	
	914.4	0.00	0.00	21458956.00	
21	958.9	364	0	959.9	703
	962.4	0.01	0.00	0.23	
22	970.9	339	0	973.9	
	974.4	0.00	0.00	0.41	
	Isotope:	I-134 @	974.7		
23M	1100.8	3442	855	1119.5	
	1134.7	0.05	27.70	2.07	
	Isotope:	BI-214 @	1120.3		
		SC-46 @	1120.5		

MCA #1 - Canberra S100 - NOPI3271.MCA - NOPI-327-GAM1 7.0cm

Tag Number: 61
Report Group: 2/4
Group Size: 4096

Readout: Mon 04 Apr 1994 @ 07:51:03
Acquire Started: Fri 01 Apr 1994 @ 13:24:38

Elapsed Live Time: 1000.00 min.
Elapsed True Time: 1000.10 min.
Dead Time: 0.01 %

MCA Mode: PHA+
Preset Conditions: Live Time = 1000.00 min.

Calibration: 0.0000*Ch^2 + 0.4996*Ch + 1.083 keV

Area Statistics: Background Channels = 4
% Error Sigma = 1.65

Peak Statistics: Sensitivity Factor = 4.0
Expected FWHM (ch) = 2.7 - 6.0

Iso. Id. Criteria: Energy Window = +-1.300 keV
Iso. Library: C:\WINDOWS\S100\SPECTRAN.ISO

JP 4/4/94
ΔT = 1000 min
mass = 3.966 g

REGION OF INTEREST REPORT

ROI #	From(keV) To (keV)	Integral CPS	Area %Error	Peak(keV) FWHM(keV)
1	43.6	3865	411	46.8
	49.0	0.06	18.58	1.17
2	60.5	5296	1150	63.5
	66.0	0.09	8.15	1.37
	Isotope: TH-234 @ 63.3			
3	90.5	6021	1267	92.8
	95.0	0.10	6.45	1.23
4	181.9	5930	2486	186.0
	189.4	0.10	5.11	1.54
	Isotope: U-235 @ 185.7			
5	291.4	4847	2663	295.3
	298.9	0.08	4.31	1.49
	Isotope: PB-214 @ 295.2			
6	334.3	2056	180	338.1
	341.8	0.03	41.56	1.06
	Isotope: AC-228 @ 338.3			
7	347.8	6325	4589	351.9
	355.3	0.11	2.86	1.54
	Isotope: PB-214 @ 351.9			
8	579.2	1314	330	582.7
	586.7	0.02	18.12	1.68
	Isotope: TL-208 @ 583.2			
9	605.1	4103	3107	609.0
	612.6	0.07	3.40	1.59
	Isotope: XE-135 @ 608.1			
	BI-214 @ 609.3			
10	906.9	920	320	910.6
	914.4	0.02	15.64	2.31
	Isotope: AC-228 @ 911.2			
11	958.9	1430	278	968.1
	974.4	0.02	36.27	2.22
	Isotope: RU-105 @ 969.4			

REGION OF INTEREST DATA

ROI # 1

Channel # **** Data ****

85	285	320	274	293	329
90	340	465	428	353	249
95	259	270			

ROI # 2

Channel # **** Data ****

REGION OF INTEREST DATA

ROI # 2
Channel # **** Data ****

120	335	346	356	427	687
125	786	632	414	333	328
130	328				

ROI # 3
Channel # **** Data ****

179					391
180	353	389	727	1032	1186
185	762	442	381	358	

ROI # 4
Channel # **** Data ****

362			220	219	240
365	208	227	276	386	705
370	974	861	493	286	206
375	202	226	201		

ROI # 5
Channel # **** Data ****

581		134	135	127	139
585	134	193	438	858	990
590	667	300	175	130	142
595	136	149			

ROI # 6
Channel # **** Data ****

667			116	124	125
670	119	129	124	122	170
675	199	145	117	112	116
680	116	110	112		

ROI # 7
Channel # **** Data ****

694					95
695	93	115	126	147	206
700	485	1095	1533	1217	583
705	191	113	122	113	91

ROI # 8
Channel # **** Data ****

1157			57	68	60
1160	62	72	77	128	134
1165	155	107	87	62	65
1170	56	58	66		

ROI # 9
Channel # **** Data ****

1209					63
1210	67	53	72	106	217
1215	150	955	971	624	276

1220	88	73	56	64	50

REGION OF INTEREST DATA

ROI # 10
Channel # **** Data ****

1813				40	44
1815	33	39	61	69	91
1820	106	86	97	64	46
1825	43	30	41	30	

ROI # 11
Channel # **** Data ****

1917			38	40	33
1920	40	43	37	41	43
1925	46	38	48	48	54
1930	40	41	40	53	70
1935	70	80	67	60	35
1940	37	38	40	28	45
1945	46	34	28	29	

MCA #1 - Canberra S100 - NOPI3271.MCA - NOPI-327-GAM1 7.0cm

Tag Number: 61
Report Group: 1/4
Group Size: 4096

Readout: Mon 04 Apr 1994 @ 07:51:37
Acquire Started: Fri 01 Apr 1994 @ 13:24:38

Elapsed Live Time: 1000.00 min.
Elapsed True Time: 1000.10 min.
Dead Time: 0.01 %

MCA Mode: PHA+
Preset Conditions: Live Time = 6000.00 min.

Calibration: 0.0000*Ch^2 + 0.4996*Ch + 1.083 keV

Area Statistics: Background Channels = 4
% Error Sigma = 1.65

Peak Statistics: Sensitivity Factor = 4.0
Expected FWHM (ch) = 2.7 - 6.0

Iso. Id. Criteria: Energy Window = +-1.300 keV
Iso. Library: C:\WINDOWS\S100\SPECTRAN.ISO

REGION OF INTEREST REPORT

ROI #	From(keV) To (keV)	Integral CPS	Area %Error	Peak(keV) FWHM(keV)	
1	43.6	879	0	214.4	1657
	44.6	0.01	0.00	8.03	
2	48.0	778	0	218.9	
	49.0	0.01	0.00	8.03	
3	60.5	1005	0	231.4	1994
	61.5	0.02	0.00	8.03	
4	65.0	989	0	235.9	
	66.0	0.02	0.00	8.03	
	Isotope: I-134 @ 235.5				
5	90.5	1133	0	261.4	1872
	91.5	0.02	0.00	8.03	
6	94.5	739	0	265.4	
	95.0	0.01	0.00	8.03	
	Isotope: GE-75 @ 264.7				
	SE-75 @ 264.7				
7	181.9	887	0	182.9	1722
	183.4	0.01	0.00	8.03	
8	187.9	835	0	188.9	
	189.4	0.01	0.00	8.03	
9	291.4	535	0	291.9	1092
	292.9	0.01	0.00	21458956.00	
10	297.4	557	0	297.9	
	298.9	0.01	0.00	21458956.00	
	Isotope: GA-73 @ 297.4				
11	334.3	484	0	335.3	938
	335.8	0.01	0.00	21458956.00	
	Isotope: NP-239 @ 334.3				
12	340.3	454	0	340.8	
	341.8	0.01	0.00	21458956.00	
	Isotope: CS-136 @ 340.6				
13	347.8	429	0	348.9	868
	349.3	0.01	0.00	21458956.00	
14	353.8	439	0	354.3	
	355.3	0.01	0.00	21458956.00	
15	579.2	247	0	579.7	492
	580.7	0.00	0.00	21458956.00	
16	585.2	245	0	585.6	
	586.7	0.00	0.00	21458956.00	

REGION OF INTEREST REPORT

ROI #	From(keV) To (keV)	Integral CPS	Area %Error	Peak(keV) FWHM(keV)	
17	605.1	255	0	605.6	498
	606.6	0.00	0.00	21458956.00	
	Isotope:	CS-134 @	604.7		
		SB-125 @	606.7		
18	611.1	243	0	612.1	
	612.6	0.00	0.00	21458956.00	
19	906.9	156	0	907.4	300
	908.4	0.00	0.00	21458956.00	
20	912.9	144	0	913.9	
	914.4	0.00	0.00	21458956.00	
21	958.9	315	0	960.9	603
	962.4	0.01	0.00	0.32	
22	970.9	288	0	972.6	
	974.4	0.00	0.00	0.91	
	Isotope:	I-135 @	972.3		
23M	1100.8	3009	663	1119.5	
	1134.7	0.05	33.90	1.89	
	Isotope:	BI-214 @	1120.3		
		SC-46 @	1120.5		

MCA #1 - Canberra S100 - NOPI3281.MCA - NOPI-328-GAM1 7.0cm

Tag Number: 58
Report Group: 2/4
Group Size: 4096

Readout: Fri 01 Apr 1994 @ 08:40:41
Acquire Started: Thu 31 Mar 1994 @ 13:19:51

Elapsed Live Time: 1000.00 min.
Elapsed True Time: 1000.13 min.
Dead Time: 0.01 %

MCA Mode: PHA+
Preset Conditions: Live Time = 1000.00 min.

Calibration: 0.0000*Ch^2 + 0.4996*Ch + 1.083 keV

Area Statistics: Background Channels = 4
% Error Sigma = 1.65

Peak Statistics: Sensitivity Factor = 4.0
Expected FWHM (ch) = 2.7 - 6.0

Iso. Id. Criteria: Energy Window = +-1.300 keV
Iso. Library: C:\WINDOWS\S100\SPECTRAN.ISO

GP
4/1/94
ΔT = 1000 min
mass = 3.894 g

REGION OF INTEREST REPORT

ROI #	From(keV) To (keV)	Integral CPS	Area %Error	Peak(keV) FWHM(keV)
1	43.6	5927	659	46.6
	49.0	0.10	14.37	1.31
2	60.5	8787	2400	63.5
	66.0	0.15	5.14	1.47
	Isotope: TH-234 @ 63.3			
3	90.5	10665	2716	92.8
	95.0	0.18	4.17	1.31
4	181.9	9661	4799	186.0
	189.4	0.16	3.38	1.51
	Isotope: U-235 @ 185.7			
5	291.4	8763	6043	295.2
	298.9	0.15	2.56	1.52
	Isotope: PB-214 @ 295.2			
6	334.3	2413	183	338.1
	341.8	0.04	44.29	1.14
	Isotope: AC-228 @ 338.3			
7	347.8	12429	10261	351.8
	355.3	0.21	1.79	1.52
	Isotope: PB-214 @ 351.9			
8	579.2	1411	247	582.7
	586.7	0.02	25.09	1.45
	Isotope: TL-208 @ 583.2			
9	605.1	7976	6768	608.9
	612.6	0.13	2.18	1.79
	Isotope: XE-135 @ 608.1			
	BI-214 @ 609.3			
10	906.9	983	217	910.5
	914.4	0.02	23.84	2.39
	Isotope: AC-228 @ 911.2			
11	958.9	1622	366	968.1
	974.4	0.03	28.99	2.15
	Isotope: RU-105 @ 969.4			

REGION OF INTEREST DATA

ROI # 1

Channel # **** Data ****

85	452	453	450	430	456
90	594	715	650	489	389
95	411	438			

ROI # 2

Channel # **** Data ****

REGION OF INTEREST DATA

ROI # 2
Channel # **** Data ****

120	531	511	556	759	1271
125	1374	1125	608	538	500
130	494				

ROI # 3
Channel # **** Data ****

179					693
180	539	651	1327	2168	2138
185	1319	674	602	554	

ROI # 4
Channel # **** Data ****

362			322	303	324
365	307	345	344	679	1341
370	1842	1481	818	380	313
375	276	302	284		

ROI # 5
Channel # **** Data ****

581		163	185	166	167
585	198	395	1017	1953	2031
590	1196	415	198	153	157
595	177	192			

ROI # 6
Channel # **** Data ****

667			153	126	128
670	144	122	143	163	214
675	190	175	152	139	146
680	135	135	148		

ROI # 7
Channel # **** Data ****

694					134
695	145	155	144	205	385
700	1117	2609	3362	2426	979
705	262	147	108	114	137

ROI # 8
Channel # **** Data ****

1157			65	69	90
1160	78	86	92	119	157
1165	124	111	72	68	68
1170	68	73	71		

ROI # 9
Channel # **** Data ****

1209					70
1210	61	74	108	152	527
1215	1222	1844	1896	1150	427

1220	144	75	79	68	69

REGION OF INTEREST DATA

ROI # 10

Channel #	**** Data ****				
1813				50	42
1815	45	53	56	80	81
1820	103	93	82	70	35
1825	49	53	46	45	

ROI # 11

Channel #	**** Data ****				
1917			49	43	31
1920	33	39	46	51	51
1925	63	66	43	57	55
1930	50	46	47	65	63
1935	75	70	89	54	55
1940	45	42	44	51	41
1945	51	36	35	36	

MCA #1 - Canberra S100 - NOPI3281.MCA - NOPI-328-GAM1 7.0cm

Tag Number: 58
Report Group: 1/4
Group Size: 4096

Readout: Fri 01 Apr 1994 @ 08:41:18
Acquire Started: Thu 31 Mar 1994 @ 13:19:51

Elapsed Live Time: 1000.00 min.
Elapsed True Time: 1000.13 min.
Dead Time: 0.01 %

MCA Mode: PHA+
Preset Conditions: Live Time = 6000.00 min.

Calibration: 0.0000*Ch^2 + 0.4996*Ch + 1.083 keV

Area Statistics: Background Channels = 4
% Error Sigma = 1.65

Peak Statistics: Sensitivity Factor = 4.0
Expected FWHM (ch) = 2.7 - 6.0

Iso. Id. Criteria: Energy Window = +-1.300 keV
Iso. Library: C:\WINDOWS\S100\SPECTRAN.ISO

REGION OF INTEREST REPORT

ROI #	From(keV) To (keV)	Integral CPS	Area %Error	Peak(keV) FWHM(keV)	
1	43.6	1355	0	214.2	2593
	44.6	0.02	0.00	9.41	
2	48.0	1238	0	218.7	
	49.0	0.02	0.00	9.41	
3	60.5	1562	0	231.1	3094
	61.5	0.03	0.00	9.41	
4	65.0	1532	0	235.6	
	66.0	0.03	0.00	9.41	
	Isotope: I-134 @ 235.5				
5	90.5	1883	0	261.1	3039
	91.5	0.03	0.00	9.41	
6	94.5	1156	0	265.1	
	95.0	0.02	0.00	9.41	
	Isotope: GE-75 @ 264.7				
	SE-75 @ 264.7				
7	181.9	1256	0	183.0	2431
	183.4	0.02	0.00	9.41	
8	187.9	1175	0	188.9	
	189.4	0.02	0.00	9.41	
9	291.4	681	0	291.9	1360
	292.9	0.01	0.00	21458956.00	
10	297.4	679	0	298.4	
	298.9	0.01	0.00	21458956.00	
	Isotope: GA-73 @ 297.4				
11	334.3	551	0	335.4	1115
	335.8	0.01	0.00	21458956.00	
	Isotope: NP-239 @ 334.3				
12	340.3	564	0	341.3	
	341.8	0.01	0.00	21458956.00	
	Isotope: CS-136 @ 340.6				
13	347.8	578	0	348.8	1084
	349.3	0.01	0.00	21458956.00	
14	353.8	506	0	354.9	
	355.3	0.01	0.00	21458956.00	
	Isotope: BA-133 @ 356.0				
15	579.2	302	0	580.2	582
	580.7	0.01	0.00	21458956.00	
16	585.2	280	0	586.2	
	586.7	0.00	0.00	21458956.00	

REGION OF INTEREST REPORT

ROI #	From(keV) To (keV)	Integral CPS	Area %Error	Peak(keV) FWHM(keV)	
17	605.1	313	0	606.2	604
	606.6	0.01	0.00	21458956.00	
	Isotope: SB-125 @ 606.7				
18	611.1	291	0	611.6	
	612.6	0.00	0.00	21458956.00	
19	906.9	190	0	907.4	383
	908.4	0.00	0.00	21458956.00	
20	912.9	193	0	913.4	
	914.4	0.00	0.00	21458956.00	
21	958.9	343	0	961.9	679
	962.4	0.01	0.00	21458956.00	
22	970.9	336	0	972.8	
	974.4	0.01	0.00	0.56	
	Isotope: I-135 @ 972.3				
23M	1100.8	3942	1242	1119.4	
	1134.7	0.07	19.62	2.10	
	Isotope: BI-214 @ 1120.3				
	SC-46 @ 1120.5				

MCA #1 - Canberra S100 - NOPI3291.MCA - NOPI-329-GAM1 7.0cm

Tag Number: 53
Report Group: 2/4
Group Size: 4096

Readout: Thu 31 Mar 1994 @ 09:30:52
Acquire Started: Thu 31 Mar 1994 @ 09:29:19

Elapsed Live Time: 1176.00 min.
Elapsed True Time: 1176.12 min.
Dead Time: 0.01 %

MCA Mode: PHA+
Preset Conditions: Live Time = 1176.00 min.

Calibration: 0.0000*Ch^2 + 0.4996*Ch + 1.083 keV

Area Statistics: Background Channels = 4
% Error Sigma = 1.65

Peak Statistics: Sensitivity Factor = 4.0
Expected FWHM (ch) = 2.7 - 6.0

Iso. Id. Criteria: Energy Window = +-1.300 keV
Iso. Library: C:\WINDOWS\S100\SPECTRAN.ISO

JP
3/31/94
$\Delta T = 1176$ min
mass = 4.109 g

REGION OF INTEREST REPORT

ROI #	From(keV) To (keV)	Integral CPS	Area %Error	Peak(keV) FWHM(keV)
1	43.6	4625	440	46.6
	49.0	0.07	18.87	1.43
2	60.5	6003	1244	63.3
	66.0	0.09	7.99	1.22
	Isotope: TH-234 @ 63.3			
3	90.5	6887	1432	92.8
	95.0	0.10	6.09	1.26
4	181.9	7147	2731	186.0
	189.4	0.10	5.11	1.50
	Isotope: U-235 @ 185.7			
5	291.4	5973	3419	295.2
	298.9	0.08	3.73	1.50
	Isotope: PB-214 @ 295.2			
6	334.3	2434	194	338.1
	341.8	0.03	41.96	1.91
	Isotope: AC-228 @ 338.3			
7	347.8	7813	5709	351.8
	355.3	0.11	2.55	1.43
	Isotope: PB-214 @ 351.9			
8	579.2	1476	326	582.9
	586.7	0.02	19.45	1.66
	Isotope: TL-208 @ 583.2			
9	605.1	5105	3935	608.9
	612.6	0.07	3.00	1.79
	Isotope: XE-135 @ 608.1			
	BI-214 @ 609.3			
10	906.9	1086	304	910.6
	914.4	0.02	17.89	1.89
	Isotope: AC-228 @ 911.2			
11	958.9	1638	286	968.2
	974.4	0.02	38.02	1.84
	Isotope: RU-105 @ 969.4			

REGION OF INTEREST DATA

ROI # 1

Channel # **** Data ****

85	342	367	353	371	373
90	459	519	484	382	332
95	308	335			

ROI # 2

Channel # **** Data ****

REGION OF INTEREST DATA

ROI # 2
Channel # **** Data ****

120	362	379	423	505	781
125	898	646	431	376	401
130	416				

ROI # 3
Channel # **** Data ****

179					476
180	404	456	852	1302	1221
185	813	492	432	439	

ROI # 4
Channel # **** Data ****

362			263	292	294
365	279	313	291	480	878
370	1154	979	538	306	266
375	285	258	271		

ROI # 5
Channel # **** Data ****

581		164	160	171	163
585	179	277	665	1163	1225
590	715	295	177	156	158
595	139	166			

ROI # 6
Channel # **** Data ****

667			148	138	132
670	142	146	154	193	177
675	186	177	146	135	138
680	145	150	127		

ROI # 7
Channel # **** Data ****

694					143
695	138	119	146	165	296
700	747	1528	2014	1263	560
705	188	141	121	116	128

ROI # 8
Channel # **** Data ****

1157			55	79	95
1160	75	89	85	127	161
1165	153	117	97	72	60
1170	68	69	74		

ROI # 9
Channel # **** Data ****

1209					78
1210	74	72	71	114	315
1215	788	1139	1088	680	301

1220	95	66	79	70	75

REGION OF INTEREST DATA

ROI # 10
Channel # **** Data ****

1813				50	50
1815	45	53	66	76	120
1820	125	111	88	64	45
1825	52	40	41	60	

ROI # 11
Channel # **** Data ****

1917			48	47	44
1920	41	39	47	45	51
1925	57	67	67	73	65
1930	44	36	41	38	73
1935	86	78	77	52	54
1940	39	38	39	41	53
1945	42	42	43	31	

MCA #1 - Canberra S100 - NOPI3291.MCA - NOPI-329-GAM1 7.0cm

Tag Number: 53
Report Group: 1/4
Group Size: 4096

Readout: Thu 31 Mar 1994 @ 09:31:30
Acquire Started: Thu 31 Mar 1994 @ 09:29:19

Elapsed Live Time: 1176.00 min.
Elapsed True Time: 1176.12 min.
Dead Time: 0.01 %

MCA Mode: PHA+
Preset Conditions: Live Time = 6000.00 min.

Calibration: 0.0000*Ch^2 + 0.4996*Ch + 1.083 keV

Area Statistics: Background Channels = 4
% Error Sigma = 1.65

Peak Statistics: Sensitivity Factor = 4.0
Expected FWHM (ch) = 2.7 - 6.0

Iso. Id. Criteria: Energy Window = +-1.300 keV
Iso. Library: C:\WINDOWS\S100\SPECTRAN.ISO

REGION OF INTEREST REPORT

ROI #	From(keV) To (keV)	Integral CPS	Area %Error	Peak(keV) FWHM(keV)	
1	43.6	1062	0	220.9	2037
	44.6	0.02	0.00	3.35	
	Isotope: I-135 @ 220.5				
	TA-182 @ 222.1				
2	48.0	975	0	225.4	
	49.0	0.01	0.00	3.35	
3	60.5	1126	0	237.9	2319
	61.5	0.02	0.00	3.35	
	Isotope: PB-212 @ 238.6				
4	65.0	1193	0	242.4	
	66.0	0.02	0.00	3.35	
5	90.5	1336	0	267.9	2207
	91.5	0.02	0.00	3.35	
	Isotope: Y-93 @ 266.9				
6	94.5	871	0	271.9	
	95.0	0.01	0.00	3.35	
7	181.9	1128	0	182.9	2208
	183.4	0.02	0.00	3.35	
8	187.9	1080	0	188.4	
	189.4	0.02	0.00	21458952.00	
9	291.4	658	0	292.4	1277
	292.9	0.01	0.00	21458952.00	
10	297.4	619	0	297.8	
	298.9	0.01	0.00	21458952.00	
	Isotope: GA-73 @ 297.4				
11	334.3	560	0	334.8	1120
	335.8	0.01	0.00	21458952.00	
	Isotope: NP-239 @ 334.3				
12	340.3	560	0	341.3	
	341.8	0.01	0.00	21458952.00	
	Isotope: CS-136 @ 340.6				
13	347.8	546	0	348.3	1052
	349.3	0.01	0.00	21458952.00	
14	353.8	506	0	354.3	
	355.3	0.01	0.00	21458952.00	
15	579.2	304	0	580.1	575
	580.7	0.00	0.00	21458952.00	
16	585.2	271	0	586.2	
	586.7	0.00	0.00	21458952.00	

REGION OF INTEREST REPORT

ROI #	From(keV) To (keV)	Integral CPS	Area %Error	Peak(keV) FWHM(keV)	
17	605.1	295	0	605.6	
	606.6	0.00	0.00	21458952.00	585
	Isotope:	CS-134 @	604.7		
		SB-125 @	606.7		
18	611.1	290	0	611.6	
	612.6	0.00	0.00	21458952.00	
19	906.9	198	0	907.4	
	908.4	0.00	0.00	21458952.00	391
20	912.9	193	0	913.4	
	914.4	0.00	0.00	21458952.00	
21	958.9	362	0	961.4	
	962.4	0.01	0.00	0.31	691
22	970.9	329	0	972.4	
	974.4	0.00	0.00	0.63	
	Isotope:	I-135 @	972.3		
23M	1100.8	3515	755	1119.3	
	1134.7	0.05	32.27	1.92	
	Isotope:	BI-214 @	1120.3		
		SC-46 @	1120.5		

MCA #1 - Canberra S100 - NOPI3301.MCA - NOPI-330-GAM1 7.0 cm

Tag Number:	51	Readout:	Fri 18 Mar 1994 @ 08:55:32
Report Group:	2/4	Acquire Started:	Thu 17 Mar 1994 @ 08:59:55
Group Size:	4096		

Elapsed Live Time:	1000.00 min.
Elapsed True Time:	1000.15 min.
Dead Time:	0.01 %

MCA Mode:	PHA+
Preset Conditions:	Live Time = 1000.00 min.

Calibration: 0.0000*Ch^2 + 0.4996*Ch + 1.083 keV

Area Statistics:	Background Channels = 4
	% Error Sigma = 1.65
Peak Statistics:	Sensitivity Factor = 4.0
	Expected FWHM (ch) = 2.7 - 6.0

Iso. Id. Criteria:	Energy Window = +-1.300 keV
Iso. Library:	C:\WINDOWS\S100\SPECTRAN.ISO

3/18/94
ΔT = 1000 min
Int = cts + bkg
mass = 4.268 g

REGION OF INTEREST REPORT

ROI #	From(keV) To (keV)	Integral CPS	Area %Error	Peak(keV) FWHM(keV)
1	43.6	6361	588	46.8
	49.0	0.11	16.55	0.97
2	60.5	10613	2899	63.5
	66.0	0.18	4.68	1.38
	Isotope: TH-234 @ 63.3			
3	90.5	12861	3477	92.8
	95.0	0.21	3.62	1.28
4	181.9	11657	6413	186.0
	189.4	0.19	2.78	1.54
	Isotope: U-235 @ 185.7			
5	291.4	9314	6488	295.2
	298.9	0.16	2.45	1.55
	Isotope: PB-214 @ 295.2			
6	334.3	2672	130	338.1
	341.8	0.04	65.61	1.07
	Isotope: AC-228 @ 338.3			
7	347.8	13254	10904	351.8
	355.3	0.22	1.74	1.55
	Isotope: PB-214 @ 351.9			
8	579.2	1469	225	582.6
	586.7	0.02	28.11	1.75
	Isotope: TL-208 @ 583.2			
9	605.1	8343	7039	608.8
	612.6	0.14	2.14	1.72
	Isotope: XE-135 @ 608.1			
	BI-214 @ 609.3			
10	906.9	968	178	910.2
	914.4	0.02	28.84	1.91
	Isotope: AC-228 @ 911.2			
11	958.9	1685	289	967.9
	974.4	0.03	38.20	1.72

REGION OF INTEREST DATA

ROI # 1
Channel # **** Data ****

85	457	436	465	498	547
90	583	726	656	540	496
95	492	465			

ROI # 2
Channel # **** Data ****

119					623
120	648	669	705	860	1534

REGION OF INTEREST DATA

ROI # 2
Channel # **** Data ****

125	1743	1333	756	623	566
130	553				

ROI # 3
Channel # **** Data ****

179					774
180	601	817	1580	2673	2681
185	1550	868	638	679	

ROI # 4
Channel # **** Data ****

362			318	331	329
365	354	338	457	816	1678
370	2329	1894	1048	475	338
375	318	324	310		

ROI # 5
Channel # **** Data ****

581		186	182	172	178
585	227	403	1109	2081	2136
590	1269	477	199	202	190
595	131	172			

ROI # 6
Channel # **** Data ****

667			177	177	163
670	144	143	179	171	217
675	210	159	172	150	142
680	150	161	157		

ROI # 7
Channel # **** Data ****

694					156
695	171	166	143	218	436
700	1320	2847	3497	2413	1038
705	310	155	125	128	131

ROI # 8
Channel # **** Data ****

1157			90	89	75
1160	77	86	105	132	139
1165	144	93	75	73	69
1170	74	72	76		

ROI # 9
Channel # **** Data ****

1209					83
1210	78	91	103	205	546
1215	1308	2004	1950	1112	418

REGION OF INTEREST DATA

ROI # 10
Channel # **** Data ****

1813				50	50
1815	52	49	58	75	88
1820	97	78	69	57	51
1825	42	55	51	46	

ROI # 11
Channel # **** Data ****

1917			56	44	38
1920	42	51	49	52	47
1925	62	69	65	68	47
1930	51	44	48	56	81
1935	92	73	78	41	50
1940	47	52	35	40	38
1945	38	42	40	49	

MCA #1 - Canberra S100 - NOPI3301.MCA - NOPI-330-GAM1 7.0 cm

Tag Number: 51
Report Group: 1/4
Group Size: 4096

Readout: Fri 18 Mar 1994 @ 08:56:25
Acquire Started: Thu 17 Mar 1994 @ 08:59:55

Elapsed Live Time: 1000.00 min.
Elapsed True Time: 1000.15 min.
Dead Time: 0.01 %

MCA Mode: PHA+
Preset Conditions: Live Time = 6000.00 min.

Calibration: 0.0000*Ch^2 + 0.4996*Ch + 1.083 keV

Area Statistics: Background Channels = 4
% Error Sigma = 1.65

Peak Statistics: Sensitivity Factor = 4.0
Expected FWHM (ch) = 2.7 - 6.0

Iso. Id. Criteria: Energy Window = +-1.300 keV
Iso. Library: C:\WINDOWS\S100\SPECTRAN.ISO

REGION OF INTEREST REPORT

ROI #	From(keV) To (keV)	Integral CPS	Area %Error	Peak(keV) FWHM(keV)	
1	43.6	1358	0	220.9	2811
	44.6	0.02	0.00	4.50	
	Isotope: I-135 @ 220.5				
	TA-182 @ 222.1				
2	48.0	1453	0	225.4	
	49.0	0.02	0.00	4.50	
3	60.5	1940	0	237.9	3682
	61.5	0.03	0.00	4.50	
	Isotope: PB-212 @ 238.6				
4	65.0	1742	0	242.3	
	66.0	0.03	0.00	4.50	
5	90.5	2192	0	267.8	3509
	91.5	0.04	0.00	4.50	
	Isotope: Y-93 @ 266.9				
6	94.5	1317	0	271.8	
	95.0	0.02	0.00	4.50	
7	181.9	1332	0	359.3	2622
	183.4	0.02	0.00	4.50	
8	187.9	1290	0	188.9	
	189.4	0.02	0.00	4.50	
9	291.4	718	0	291.9	1413
	292.9	0.01	0.00	21458952.00	
10	297.4	695	0	297.8	
	298.9	0.01	0.00	21458952.00	
	Isotope: GA-73 @ 297.4				
11	334.3	661	0	334.8	1271
	335.8	0.01	0.00	21458952.00	
	Isotope: NP-239 @ 334.3				
12	340.3	610	0	341.3	
	341.8	0.01	0.00	21458952.00	
	Isotope: CS-136 @ 340.6				
13	347.8	636	0	348.6	1175
	349.3	0.01	0.00	21458952.00	
14	353.8	539	0	354.5	
	355.3	0.01	0.00	21458952.00	
15	579.2	331	0	579.6	622
	580.7	0.01	0.00	21458952.00	
16	585.2	291	0	585.7	
	586.7	0.00	0.00	21458952.00	

REGION OF INTEREST REPORT

ROI #	From(keV) To (keV)	Integral CPS	Area %Error	Peak(keV) FWHM(keV)
17	605.1	355	0	606.2
	606.6	0.01	0.00	21458952.00
	Isotope: SB-125 @ 606.7			
18	611.1	297	0	612.1
	612.6	0.00	0.00	21458952.00
19	906.9	201	0	907.9
	908.4	0.00	0.00	21458952.00
20	912.9	194	0	913.7
	914.4	0.00	0.00	21458952.00
21	958.9	379	0	961.9
	962.4	0.01	0.00	21458952.00
22	970.9	334	0	973.4
	974.4	0.01	0.00	0.26
	Isotope: I-135 @ 972.3			
	I-134 @ 974.7			
23M	1100.8	4109	1487	1119.4
	1134.7	0.07	16.26	2.06
	Isotope: BI-214 @ 1120.3			
	SC-46 @ 1120.5			

MCA #1 - Canberra S100 - NOPI3311.MCA - NOPI-331-GAM1 7.0 cm

Tag Number: 53
Report Group: 2/4
Group Size: 4096

Readout: Fri 18 Mar 1994 @ 14:45:45
Acquire Started: Fri 18 Mar 1994 @ 14:44:21

Elapsed Live Time: 347.00 min.
Elapsed True Time: 347.09 min.
Dead Time: 0.03 %

MCA Mode: PHA+
Preset Conditions: Live Time = 347.00 min.

Calibration: 0.0000*Ch^2 + 0.4996*Ch + 1.083 keV

Area Statistics: Background Channels = 4
% Error Sigma = 1.65

Peak Statistics: Sensitivity Factor = 4.0
Expected FWHM (ch) = 2.7 - 6.0

Iso. Id. Criteria: Energy Window = +-1.300 keV
Iso. Library: C:\WINDOWS\S100\SPECTRAN.ISO

JP
3/18/94
ΔT = 347 min
Int = cts + bkg
mass = 4.242 g

REGION OF INTEREST REPORT

ROI #	From(keV) To (keV)	Integral CPS	Area %Error	Peak(keV) FWHM(keV)
1	43.6	4737	425	46.6
	49.0	0.23	19.75	1.10
2	60.5	7286	1517	63.5
	66.0	0.35	7.22	1.38
	Isotope: TH-234 @ 63.3			
3	90.5	7523	1618	92.8
	95.0	0.36	5.67	1.32
4	181.9	8665	4693	186.0
	189.4	0.42	3.27	1.52
	Isotope: U-235 @ 185.7			
5	291.4	9275	7403	295.2
	298.9	0.45	2.15	1.49
	Isotope: PB-214 @ 295.2			
6	334.3	1696	102	339.8
	341.8	0.08	66.62	0.70
	Isotope: CS-136 @ 340.6			
7	347.8	14073	12507	351.8
	355.3	0.68	1.57	1.52
	Isotope: PB-214 @ 351.9			
8	579.2	863	5	582.7
	586.7	0.04	969.44	1.22
	Isotope: TL-208 @ 583.2			
9	605.1	9011	8143	608.8
	612.6	0.43	1.92	1.77
	Isotope: XE-135 @ 608.1			
	BI-214 @ 609.3			
10	906.9	529	51	910.2
	914.4	0.03	74.41	1.66
	Isotope: AC-228 @ 911.2			
11	958.9	999	195	967.6
	974.4	0.05	43.20	1.83

REGION OF INTEREST DATA

ROI # 1
Channel # **** Data ****

85	349	349	341	352	371
90	477	549	465	413	354
95	346	371			

ROI # 2
Channel # **** Data ****

119					467
120	481	497	511	633	935

REGION OF INTEREST DATA

ROI # 2
Channel # **** Data ****

125	1056	816	550	428	475
130	437				

ROI # 3
Channel # **** Data ****

179					559
180	428	501	911	1393	1406
185	895	542	461	427	

ROI # 4
Channel # **** Data ****

362			264	254	227
365	256	278	314	541	1157
370	1717	1482	815	375	259
375	242	226	258		

ROI # 5
Channel # **** Data ****

581		120	135	121	121
585	145	403	1142	2339	2381
590	1299	471	159	121	96
595	110	112			

ROI # 6
Channel # **** Data ****

667			108	115	95
670	101	108	95	103	110
675	130	115	106	132	100
680	98	94	86		

ROI # 7
Channel # **** Data ****

694					94
695	99	122	121	183	469
700	1435	3202	3975	2642	1103
705	281	113	91	70	73

ROI # 8
Channel # **** Data ****

1157			63	63	64
1160	49	46	39	62	71
1165	70	44	55	47	47
1170	45	47	51		

ROI # 9
Channel # **** Data ****

1209					50
1210	61	54	74	174	631
1215	1495	2225	2208	1246	475

REGION OF INTEREST DATA

ROI # 10

Channel #	**** Data ****				
1813				32	28
1815	34	32	28	44	47
1820	48	37	37	23	26
1825	30	26	31	26	

ROI # 11

Channel #	**** Data ****				
1917			33	21	25
1920	30	31	25	26	41
1925	42	47	36	32	32
1930	27	34	27	48	34
1935	40	40	31	36	30
1940	31	28	30	23	27
1945	26	21	29	16	

MCA #1 - Canberra S100 - NOPI3311.MCA - NOPI-331-GAM1 7.0 cm

Tag Number: 53
Report Group: 1/4
Group Size: 4096

Readout: Fri 18 Mar 1994 @ 14:46:32
Acquire Started: Fri 18 Mar 1994 @ 14:44:21

Elapsed Live Time: 347.00 min.
Elapsed True Time: 347.09 min.
Dead Time: 0.03 %

MCA Mode: PHA+
Preset Conditions: Live Time = 6000.00 min.

Calibration: 0.0000*Ch^2 + 0.4996*Ch + 1.083 keV

Area Statistics: Background Channels = 4
% Error Sigma = 1.65

Peak Statistics: Sensitivity Factor = 4.0
Expected FWHM (ch) = 2.7 - 6.0

Iso. Id. Criteria: Energy Window = +-1.300 keV
Iso. Library: C:\WINDOWS\S100\SPECTRAN.ISO

REGION OF INTEREST REPORT

ROI #	From(keV) To (keV)	Integral CPS	Area %Error	Peak(keV) FWHM(keV)	
1	43.6	1039	0	214.2	2110
	44.6	0.05	0.00	9.74	
2	48.0	1071	0	218.7	
	49.0	0.05	0.00	9.74	
3	60.5	1445	0	231.1	2785
	61.5	0.07	0.00	9.74	
4	65.0	1340	0	235.6	
	66.0	0.06	0.00	9.74	
	Isotope: I-134 @ 235.5				
5	90.5	1488	0	261.1	2376
	91.5	0.07	0.00	9.74	
6	94.5	888	0	265.1	
	95.0	0.04	0.00	9.74	
	Isotope: GE-75 @ 264.7				
	SE-75 @ 264.7				
7	181.9	1001	0	182.4	1986
	183.4	0.05	0.00	21458956.00	
8	187.9	985	0	188.4	
	189.4	0.05	0.00	21458956.00	
9	291.4	497	0	291.9	936
	292.9	0.02	0.00	21458956.00	
10	297.4	439	0	298.4	
	298.9	0.02	0.00	21458956.00	
	Isotope: GA-73 @ 297.4				
11	334.3	419	0	334.8	797
	335.8	0.02	0.00	21458956.00	
	Isotope: NP-239 @ 334.3				
12	340.3	378	0	340.8	
	341.8	0.02	0.00	21458956.00	
	Isotope: CS-136 @ 340.6				
13	347.8	436	0	348.9	783
	349.3	0.02	0.00	21458956.00	
14	353.8	347	0	354.2	
	355.3	0.02	0.00	21458956.00	
15	579.2	239	0	580.1	429
	580.7	0.01	0.00	21458956.00	
16	585.2	190	0	586.2	
	586.7	0.01	0.00	21458956.00	

REGION OF INTEREST REPORT

ROI #	From(keV) To (keV)	Integral CPS	Area %Error	Peak(keV) FWHM(keV)	
17	605.1	239	0	605.6	
	606.6	0.01	0.00	21458956.00	434
	Isotope:	CS-134 @	604.7		
		SB-125 @	606.7		
18	611.1	195	0	612.1	
	612.6	0.01	0.00	21458956.00	
19	906.9	126	0	907.9	
	908.4	0.01	0.00	21458956.00	239
20	912.9	113	0	913.9	
	914.4	0.01	0.00	21458956.00	
21	958.9	232	0	960.8	
	962.4	0.01	0.00	0.46	432
22	970.9	200	0	973.8	
	974.4	0.01	0.00	0.68	
	Isotope:	I-134 @	974.7		
23M	1100.8	3166	1795	1119.3	
	1134.7	0.15	10.18	2.09	
	Isotope:	BI-214 @	1120.3		
		SC-46 @	1120.5		

MCA #1 - Canberra S100 - NOPI3321.MCA - NOPI-332-GAM1 7.0 cm

Tag Number: 59
Report Group: 2/4
Group Size: 4096

Readout: Tue 22 Mar 1994 @ 08:40:08
Acquire Started: Tue 22 Mar 1994 @ 08:39:34

Elapsed Live Time: 1057.00 min.
Elapsed True Time: 1057.34 min.
Dead Time: 0.03 %

MCA Mode: PHA+
Preset Conditions: Live Time = 1057.00 min.

Calibration: 0.0000*Ch^2 + 0.4996*Ch + 1.083 keV

Area Statistics: Background Channels = 4
% Error Sigma = 1.65

Peak Statistics: Sensitivity Factor = 4.0
Expected FWHM (ch) = 2.7 - 6.0

Iso. Id. Criteria: Energy Window = +-1.300 keV
Iso. Library: C:\WINDOWS\S100\SPECTRAN.ISO

3/22/94
ΔT = 1057 min
Int = cts + bkg
mass = 4.109 g

REGION OF INTEREST REPORT

ROI #	From(keV) To (keV)	Integral CPS	Area %Error	Peak(keV) FWHM(keV)
1	43.6	5321	364	46.8
	49.0	0.08	24.20	0.96
2	60.5	8658	2505	63.5
	66.0	0.14	4.92	1.42
	Isotope: TH-234 @ 63.3			
3	90.5	10882	2876	92.8
	95.0	0.17	4.01	1.34
4	181.9	8931	4269	185.9
	189.4	0.14	3.65	1.47
	Isotope: U-235 @ 185.7			
5	291.4	6540	3712	295.2
	298.9	0.10	3.59	1.54
	Isotope: PB-214 @ 295.2			
6	334.3	2455	79	338.3
	341.8	0.04	103.49	1.24
	Isotope: AC-228 @ 338.3			
7	347.8	8452	6154	351.8
	355.3	0.13	2.46	1.50
	Isotope: PB-214 @ 351.9			
8	579.2	1575	247	582.9
	586.7	0.02	26.51	1.92
	Isotope: TL-208 @ 583.2			
9	605.1	5450	4198	608.9
	612.6	0.09	2.90	1.85
	Isotope: XE-135 @ 608.1			
	BI-214 @ 609.3			
10	906.9	1060	164	910.4
	914.4	0.02	32.76	1.56
	Isotope: AC-228 @ 911.2			
11	958.9	1719	147	963.6
	974.4	0.03	78.27	1.30

REGION OF INTEREST DATA

ROI # 1

Channel #	**** Data ****				
85	383	403	368	445	384
90	494	596	542	439	440
95	425	402			

ROI # 2

Channel # **** Data ****

119					517
120	506	526	529	742	1228

REGION OF INTEREST DATA

ROI # 2
Channel # **** Data ****

125	1440	1146	630	496	467
130	431				

ROI # 3
Channel # **** Data ****

179					566
180	508	658	1380	2227	2250
185	1431	768	576	518	

ROI # 4
Channel # **** Data ****

362			286	291	267
365	312	321	375	684	1256
370	1664	1239	681	380	302
375	297	284	292		

ROI # 5
Channel # **** Data ****

581		191	183	163	181
585	195	296	660	1285	1299
590	845	324	222	195	156
595	173	172			

ROI # 6
Channel # **** Data ****

667			164	161	135
670	147	149	144	160	200
675	172	180	133	129	141
680	133	156	151		

ROI # 7
Channel # **** Data ****

694					146
695	130	163	151	160	319
700	751	1554	2089	1504	661
705	265	163	148	136	112

ROI # 8
Channel # **** Data ****

1157			86	79	89
1160	85	92	110	122	146
1165	144	119	92	86	76
1170	97	82	70		

ROI # 9
Channel # **** Data ****

1209					85
1210	65	78	90	134	373
1215	762	1163	1142	755	361
1220	124	91	62	88	76

REGION OF INTEREST DATA

ROI # 10

Channel #	**** Data ****				
1813				55	63
1815	59	42	69	61	96
1820	99	99	63	75	50
1825	59	58	62	50	

ROI # 11

Channel #	**** Data ****				
1917			56	47	43
1920	55	50	48	57	51
1925	57	79	67	67	53
1930	46	54	55	54	67
1935	71	65	56	64	38
1940	47	37	53	46	44
1945	54	44	46	48	

MCA #1 - Canberra S100 - NOPI3321.MCA - NOPI-332-GAM1 7.0 cm

Tag Number: 59
Report Group: 1/4
Group Size: 4096

Readout: Tue 22 Mar 1994 @ 08:40:48
Acquire Started: Tue 22 Mar 1994 @ 08:39:34

Elapsed Live Time: 1057.00 min.
Elapsed True Time: 1057.34 min.
Dead Time: 0.03 %

MCA Mode: PHA+
Preset Conditions: Live Time = 6000.00 min.

Calibration: 0.0000*Ch^2 + 0.4996*Ch + 1.083 keV

Area Statistics: Background Channels = 4
% Error Sigma = 1.65

Peak Statistics: Sensitivity Factor = 4.0
Expected FWHM (ch) = 2.7 - 6.0

Iso. Id. Criteria: Energy Window = +-1.300 keV
Iso. Library: C:\WINDOWS\S100\SPECTRAN.ISO

REGION OF INTEREST REPORT

ROI #	From(keV) To (keV)	Integral CPS	Area %Error	Peak(keV) FWHM(keV)	
1	43.6	1154	0	214.2	2421
	44.6	0.02	0.00	3.37	
2	48.0	1267	0	218.7	
	49.0	0.02	0.00	3.37	
3	60.5	1549	0	231.1	2943
	61.5	0.02	0.00	3.37	
4	65.0	1394	0	235.6	
	66.0	0.02	0.00	3.37	
	Isotope: I-134 @ 235.5				
5	90.5	1732	0	261.1	2826
	91.5	0.03	0.00	3.37	
6	94.5	1094	0	265.1	
	95.0	0.02	0.00	3.37	
	Isotope: GE-75 @ 264.7				
	SE-75 @ 264.7				
7	181.9	1156	0	182.4	2331
	183.4	0.02	0.00	21458956.00	
8	187.9	1175	0	188.4	
	189.4	0.02	0.00	21458956.00	
9	291.4	718	0	291.8	1414
	292.9	0.01	0.00	21458956.00	
10	297.4	696	0	297.8	
	298.9	0.01	0.00	21458956.00	
	Isotope: GA-73 @ 297.4				
11	334.3	607	0	334.8	1188
	335.8	0.01	0.00	21458956.00	
	Isotope: NP-239 @ 334.3				
12	340.3	581	0	341.4	
	341.8	0.01	0.00	21458956.00	
	Isotope: CS-136 @ 340.6				
13	347.8	590	0	348.8	1149
	349.3	0.01	0.00	21458956.00	
14	353.8	559	0	354.3	
	355.3	0.01	0.00	21458956.00	
15	579.2	339	0	580.2	664
	580.7	0.01	0.00	21458956.00	
16	585.2	325	0	585.7	
	586.7	0.01	0.00	21458956.00	

REGION OF INTEREST REPORT

ROI #	From(keV) To (keV)	Integral CPS	Area %Error	Peak(keV) FWHM(keV)
17	605.1	318	0	605.9
	606.6	0.01	0.00	21458956.00
	Isotope:	CS-134	@ 604.7	
		SB-125	@ 606.7	
18	611.1	308	0	612.2
	612.6	0.00	0.00	21458956.00
19	906.9	219	0	907.6
	908.4	0.00	0.00	21458956.00
20	912.9	229	0	913.9
	914.4	0.00	0.00	21458956.00
21	958.9	407	0	961.9
	962.4	0.01	0.00	21458956.00
22	970.9	372	0	972.9
	974.4	0.01	0.00	0.33
	Isotope:	I-135	@ 972.3	
23M	1100.8	3584	893	1119.3
	1134.7	0.06	27.04	2.27
	Isotope:	BI-214	@ 1120.3	
		SC-46	@ 1120.5	

MCA #1 - Canberra S100 - NOPI3331.MCA - NOPI-333-GAM1 7.0 cm

Tag Number: 61
Report Group: 2/4
Group Size: 4096

Readout: Tue 22 Mar 1994 @ 15:26:13
Acquire Started: Tue 22 Mar 1994 @ 15:25:25

Elapsed Live Time: 403.00 min.
Elapsed True Time: 403.06 min.
Dead Time: 0.01 %

MCA Mode: PHA+
Preset Conditions: Live Time = 403.00 min.

Calibration: 0.0000*Ch^2 + 0.4996*Ch + 1.083 keV

Area Statistics: Background Channels = 4
% Error Sigma = 1.65

Peak Statistics: Sensitivity Factor = 4.0
Expected FWHM (ch) = 2.7 - 6.0

Iso. Id. Criteria: Energy Window = +-1.300 keV
Iso. Library: C:\WINDOWS\S100\SPECTRAN.ISO

3/22/94
Δ T = 403 min
Int- cts + bkg
mass = 3.6088

REGION OF INTEREST REPORT

ROI #	From(keV) To (keV)	Integral CPS	Area %Error	Peak(keV) FWHM(keV)
1	43.6	3413	266	46.8
	49.0	0.14	26.60	1.02
2	60.5	7642	3343	63.5
	66.0	0.32	3.66	1.24
	Isotope: TH-234 @ 63.3			
3	90.5	11413	4044	92.8
	95.0	0.47	3.13	1.27
4	181.9	6955	4643	185.9
	189.4	0.29	2.96	1.36
	Isotope: U-235 @ 185.7			
5	291.4	3421	2297	295.2
	298.9	0.14	4.20	1.57
	Isotope: PB-214 @ 295.2			
6	334.3	1127	73	338.1
	341.8	0.05	75.88	1.06
	Isotope: AC-228 @ 338.3			
7	347.8	4774	3868	351.8
	355.3	0.20	2.95	1.54
	Isotope: PB-214 @ 351.9			
8	579.2	586	110	582.7
	586.7	0.02	36.31	2.17
	Isotope: TL-208 @ 583.2			
9	605.1	3005	2459	608.9
	612.6	0.12	3.68	1.74
	Isotope: XE-135 @ 608.1			
	BI-214 @ 609.3			
10	906.9	446	98	910.7
	914.4	0.02	35.56	1.15
	Isotope: AC-228 @ 911.2			
11	958.9	643	95	968.1
	974.4	0.03	72.43	0.96
	Isotope: RU-105 @ 969.4			

REGION OF INTEREST DATA

ROI # 1

Channel # **** Data ****

85	279	270	264	241	274
90	301	384	356	279	262
95	237	266			

ROI # 2

Channel # **** Data ****

REGION OF INTEREST DATA

ROI # 2
Channel # **** Data ****

120	337	362	413	647	1343
125	1724	1062	490	282	311
130	307				

ROI # 3
Channel # **** Data ****

179					422
180	407	588	1532	2792	2726
185	1413	669	472	392	

ROI # 4
Channel # **** Data ****

362			156	170	137
365	153	150	245	626	1411
370	1751	1009	440	167	141
375	137	139	123		

ROI # 5
Channel # **** Data ****

581		70	60	78	65
585	81	151	410	732	756
590	457	186	86	71	75
595	59	84			

ROI # 6
Channel # **** Data ****

667			73	67	58
670	65	68	66	70	90
675	98	75	66	67	63
680	53	70	78		

ROI # 7
Channel # **** Data ****

694					61
695	57	60	69	94	197
700	508	1034	1240	804	350
705	94	64	50	48	44

ROI # 8
Channel # **** Data ****

1157			26	27	32
1160	28	31	45	48	60
1165	56	51	25	32	30
1170	29	37	29		

ROI # 9
Channel # **** Data ****

1209					48
1210	33	29	47	54	187
1215	459	689	703	398	175

1220	68	39	25	23	29

REGION OF INTEREST DATA

ROI # 10

Channel #	**** Data ****				
1813				21	19
1815	20	23	24	25	33
1820	59	54	33	22	22
1825	24	23	21	23	

ROI # 11

Channel #	**** Data ****				
1917			14	13	14
1920	18	15	26	25	29
1925	32	24	22	15	24
1930	15	16	19	14	23
1935	41	35	27	16	18
1940	13	16	9	17	15
1945	17	19	17	25	

MCA #1 - Canberra S100 - NOPI3331.MCA - NOPI-333-GAM1 7.0 cm

Tag Number: 61
Report Group: 1/4
Group Size: 4096

Readout: Tue 22 Mar 1994 @ 15:26:51
Acquire Started: Tue 22 Mar 1994 @ 15:25:25

Elapsed Live Time: 403.00 min.
Elapsed True Time: 403.06 min.
Dead Time: 0.01 %

MCA Mode: PHA+
Preset Conditions: Live Time = 6000.00 min.

Calibration: 0.0000*Ch^2 + 0.4996*Ch + 1.083 keV

Area Statistics: Background Channels = 4
% Error Sigma = 1.65

Peak Statistics: Sensitivity Factor = 4.0
Expected FWHM (ch) = 2.7 - 6.0

Iso. Id. Criteria: Energy Window = +-1.300 keV
Iso. Library: C:\WINDOWS\S100\SPECTRAN.ISO

REGION OF INTEREST REPORT

ROI #	From(keV) To (keV)	Integral CPS	Area %Error	Peak(keV) FWHM(keV)	
1	43.6	813	0	220.9	
	44.6	0.03	0.00	2.43	1578
	Isotope: I-135 @ 220.5				
	TA-182 @ 222.1				
2	48.0	765	0	225.4	
	49.0	0.03	0.00	2.43	
3	60.5	1063	0	237.9	
	61.5	0.04	0.00	2.43	1963
	Isotope: PB-212 @ 238.6				
4	65.0	900	0	242.4	
	66.0	0.04	0.00	2.43	
5	90.5	1417	0	267.8	
	91.5	0.06	0.00	2.43	2281
	Isotope: Y-93 @ 266.9				
6	94.5	864	0	271.8	
	95.0	0.04	0.00	2.43	
7	181.9	616	0	182.4	
	183.4	0.03	0.00	21458952.00	1156
8	187.9	540	0	188.9	
	189.4	0.02	0.00	21458952.00	
9	291.4	273	0	292.4	
	292.9	0.01	0.00	21458952.00	562
10	297.4	289	0	297.8	
	298.9	0.01	0.00	21458950.00	
	Isotope: GA-73 @ 297.4				
11	334.3	263	0	334.8	
	335.8	0.01	0.00	21458950.00	527
	Isotope: NP-239 @ 334.3				
12	340.3	264	0	341.4	
	341.8	0.01	0.00	21458952.00	
	Isotope: CS-136 @ 340.6				
13	347.8	247	0	348.9	
	349.3	0.01	0.00	21458952.00	453
14	353.8	206	0	354.8	
	355.3	0.01	0.00	21458952.00	
	Isotope: BA-133 @ 356.0				
15	579.2	113	0	580.2	
	580.7	0.00	0.00	21458952.00	238
16	585.2	125	0	586.2	
	586.7	0.01	0.00	21458952.00	

REGION OF INTEREST REPORT

ROI #	From(keV) To (keV)	Integral CPS	Area %Error	Peak(keV) FWHM(keV)
17	605.1	157	0	606.2
	606.6	0.01	0.00	21458952.00
	Isotope: SB-125 @ 606.7			
18	611.1	116	0	612.2
	612.6	0.00	0.00	21458952.00
19	906.9	83	0	907.9
	908.4	0.00	0.00	21458952.00
20	912.9	91	0	913.4
	914.4	0.00	0.00	21458952.00
21	958.9	154	0	961.4
	962.4	0.01	0.00	0.48
22	970.9	135	0	973.4
	974.4	0.01	0.00	0.25
	Isotope: I-135 @ 972.3			
23M	1100.8	1608	616	1119.3
	1134.7	0.07	24.22	1.87
	Isotope: BI-214 @ 1120.3			
	SC-46 @ 1120.5			

273

174

289

MCA #1 - Canberra S100 - NOPI3341.MCA - NOPI-334-GAM1 7.0 cm

Tag Number:	63	Readout:	Wed 23 Mar 1994 @ 09:04:29
Report Group:	2/4	Acquire Started:	Tue 22 Mar 1994 @ 15:29:49
Group Size:	4096		

Elapsed Live Time:	600.00 min.
Elapsed True Time:	600.59 min.
Dead Time:	0.10 %

MCA Mode:	PHA+
Preset Conditions:	Live Time = 600.00 min.

Calibration: 0.0000*Ch^2 + 0.4996*Ch + 1.083 keV

Area Statistics: Background Channels = 4
% Error Sigma = 1.65

Peak Statistics: Sensitivity Factor = 4.0
Expected FWHM (ch) = 2.7 - 6.0

Iso. Id. Criteria: Energy Window = +-1.300 keV
Iso. Library: C:\WINDOWS\S100\SPECTRAN.ISO

JP
3/23/94
ΔT = 600 min
Int = cts + bkg
mean = 4.2888

REGION OF INTEREST REPORT

ROI #	From(keV) To (keV)	Integral CPS	Area %Error	Peak(keV) FWHM(keV)
1	43.6	7917	687	46.6
	49.0	0.22	15.75	1.60
2	60.5	11720	2068	63.5
	66.0	0.33	6.63	1.36
	Isotope:	TH-234	@ 63.3	
3	90.5	11634	2387	92.8
	95.0	0.32	4.74	1.30
4	181.9	14039	6781	186.1
	189.4	0.39	2.88	1.62
	Isotope:	U-235	@ 185.7	
5	291.4	15883	11777	295.2
	298.9	0.44	1.77	1.52
	Isotope:	PB-214	@ 295.2	
6	334.3	3373	83	338.3
	341.8	0.09	115.46	1.51
	Isotope:	AC-228	@ 338.3	
7	347.8	22905	19611	351.8
	355.3	0.64	1.27	1.50
	Isotope:	PB-214	@ 351.9	
8	579.2	1994	20	582.4
	586.7	0.06	368.40	1.07
	Isotope:	TL-208	@ 583.2	
9	605.1	14732	12874	608.9
	612.6	0.41	1.56	1.75
	Isotope:	XE-135	@ 608.1	
		BI-214	@ 609.3	
10	906.9	1257	79	910.4
	914.4	0.03	74.05	1.51
	Isotope:	AC-228	@ 911.2	
11	958.9	2075	43	963.6
	974.4	0.06	300.65	1.78

REGION OF INTEREST DATA

ROI # 1

Channel #	**** Data ****				
85	583	560	592	536	640
90	754	848	855	753	621
95	600	575			

ROI # 2

Channel #	**** Data ****				

119					774
120	876	833	857	955	1488

REGION OF INTEREST DATA

ROI # 2
Channel # **** Data ****

125	1594	1248	839	727	741
130	788				

ROI # 3
Channel # **** Data ****

179					939
180	745	786	1319	2093	2143
185	1424	804	672	709	

ROI # 4
Channel # **** Data ****

362			421	441	477
365	438	476	516	837	1661
370	2425	2367	1415	713	494
375	453	451	454		

ROI # 5
Channel # **** Data ****

581		275	276	254	283
585	334	688	1894	3741	3804
590	2180	828	361	237	242
595	236	250			

ROI # 6
Channel # **** Data ****

667			208	199	229
670	199	206	186	212	240
675	233	233	211	207	220
680	189	229	172		

ROI # 7
Channel # **** Data ****

694					187
695	210	211	219	276	711
700	2033	4896	6433	4448	1903
705	558	272	169	196	183

ROI # 8
Channel # **** Data ****

1157			134	131	135
1160	126	119	120	149	144
1165	126	132	98	119	104
1170	118	117	122		

ROI # 9
Channel # **** Data ****

1209					130
1210	85	111	134	281	909
1215	2291	3623	3445	2113	875
1220	266	154	102	124	89

REGION OF INTEREST DATA

ROI # 10
Channel # **** Data ****

1813				73	59
1815	80	73	67	80	104
1820	98	97	79	77	66
1825	86	63	71	84	

ROI # 11
Channel # **** Data ****

1917			78	83	72
1920	59	69	71	67	74
1925	85	82	90	65	64
1930	62	53	67	55	63
1935	81	64	59	67	53
1940	59	52	56	48	61
1945	53	52	59	52	

MCA #1 - Canberra S100 - NOPI3341.MCA - NOPI-334-GAM1 7.0 cm

Tag Number: 63
Report Group: 1/4
Group Size: 4096

Readout: Wed 23 Mar 1994 @ 09:05:07
Acquire Started: Tue 22 Mar 1994 @ 15:29:49

Elapsed Live Time: 600.00 min.
Elapsed True Time: 600.59 min.
Dead Time: 0.10 %

MCA Mode: PHA+
Preset Conditions: Live Time = 6000.00 min.

Calibration: 0.0000*Ch^2 + 0.4996*Ch + 1.083 keV

Area Statistics: Background Channels = 4
% Error Sigma = 1.65

Peak Statistics: Sensitivity Factor = 4.0
Expected FWHM (ch) = 2.7 - 6.0

Iso. Id. Criteria: Energy Window = +-1.300 keV
Iso. Library: C:\WINDOWS\S100\SPECTRAN.ISO

REGION OF INTEREST REPORT

ROI #	From(keV) To (keV)	Integral CPS	Area %Error	Peak(keV) FWHM(keV)	
1	43.6	1735	0	214.4	3531
	44.6	0.05	0.00	2.69	
2	48.0	1796	0	218.9	
	49.0	0.05	0.00	2.69	
3	60.5	2483	0	231.4	4739
	61.5	0.07	0.00	2.69	
4	65.0	2256	0	235.9	
	66.0	0.06	0.00	2.69	
	Isotope: I-134 @ 235.5				
5	90.5	2470	0	261.4	3851
	91.5	0.07	0.00	2.69	
6	94.5	1381	0	265.4	
	95.0	0.04	0.00	2.69	
	Isotope: GE-75 @ 264.7				
	SE-75 @ 264.7				
7	181.9	1777	0	182.9	3629
	183.4	0.05	0.00	2.69	
8	187.9	1852	0	188.9	
	189.4	0.05	0.00	2.69	
9	291.4	1088	0	291.9	2053
	292.9	0.03	0.00	21458956.00	
10	297.4	965	0	297.9	
	298.9	0.03	0.00	21458956.00	
	Isotope: GA-73 @ 297.4				
11	334.3	835	0	335.3	1645
	335.8	0.02	0.00	21458956.00	
	Isotope: NP-239 @ 334.3				
12	340.3	810	0	341.3	
	341.8	0.02	0.00	21458956.00	
	Isotope: CS-136 @ 340.6				
13	347.8	827	0	348.8	1647
	349.3	0.02	0.00	21458956.00	
14	353.8	820	0	354.8	
	355.3	0.02	0.00	21458956.00	
	Isotope: BA-133 @ 356.0				
15	579.2	526	0	580.1	987
	580.7	0.01	0.00	21458956.00	
16	585.2	461	0	585.9	
	586.7	0.01	0.00	21458956.00	

REGION OF INTEREST REPORT

ROI #	From(keV) To (keV)	Integral CPS	Area %Error	Peak(keV) FWHM(keV)	
17	605.1	460	0	605.9	
	606.6	0.01	0.00	21458956.00	
	Isotope:	CS-134 @	604.7		
		SB-125 @	606.7		
					929
18	611.1	469	0	612.1	
	612.6	0.01	0.00	21458956.00	
19	906.9	285	0	907.9	
	908.4	0.01	0.00	21458956.00	589
20	912.9	304	0	914.0	
	914.4	0.01	0.00	21458956.00	
21	958.9	573	0	959.4	
	962.4	0.02	0.00	21458956.00	
					1006
22	970.9	433	0	972.4	
	974.4	0.01	0.00	0.40	
	Isotope:	I-135 @	972.3		
23M	1100.8	5928	1995	1119.4	
	1134.7	0.16	14.79	1.99	
	Isotope:	BI-214 @	1120.3		
		SC-46 @	1120.5		

MCA #1 - Canberra S100 - NOPI3351.MCA - NOPI-335-GAM1 7.0 cm

Tag Number:	66	Readout:	Thu 24 Mar 1994 @ 08:52:41
Report Group:	2/4	Acquire Started:	Thu 24 Mar 1994 @ 08:52:03
Group Size:	4096		

Elapsed Live Time:	1425.00 min.
Elapsed True Time:	1425.18 min.
Dead Time:	0.01 %

MCA Mode:	PHA+
Preset Conditions:	Live Time = 1425.00 min.

Calibration: 0.0000*Ch^2 + 0.4996*Ch + 1.083 keV

Area Statistics: Background Channels = 4
% Error Sigma = 1.65

Peak Statistics: Sensitivity Factor = 4.0
Expected FWHM (ch) = 2.7 - 6.0

Iso. Id. Criteria: Energy Window = +-1.300 keV
Iso. Library: C:\WINDOWS\S100\SPECTRAN.ISO

JP
3/24/94
ΔT = 1425 min
mass = 4.053 g

REGION OF INTEREST REPORT

ROI #	From(keV) To (keV)	Integral CPS	Area %Error	Peak(keV) FWHM(keV)
1	43.6	4142	320	46.8
	49.0	0.05	24.35	1.13
2	60.5	5541	1175	63.5
	66.0	0.06	8.14	1.20
	Isotope: TH-234 @ 63.3			
3	90.5	6673	1404	92.8
	95.0	0.08	6.13	1.32
4	181.9	6204	1828	185.9
	189.4	0.07	7.11	1.36
	Isotope: U-235 @ 185.7			
5	291.4	4297	1411	295.3
	298.9	0.05	7.67	1.51
	Isotope: PB-214 @ 295.2			
6	334.3	2625	171	338.1
	341.8	0.03	49.44	1.93
	Isotope: AC-228 @ 338.3			
7	347.8	4731	2379	351.8
	355.3	0.06	4.77	1.48
	Isotope: PB-214 @ 351.9			
8	579.2	1776	392	582.7
	586.7	0.02	17.74	1.48
	Isotope: TL-208 @ 583.2			
9	605.1	3077	1789	608.9
	612.6	0.04	5.12	1.70
	Isotope: XE-135 @ 608.1			
	BI-214 @ 609.3			
10	906.9	1269	369	910.6
	914.4	0.01	15.93	2.00
	Isotope: AC-228 @ 911.2			
11	958.9	1875	395	968.3
	974.4	0.02	29.05	2.27
	Isotope: RU-105 @ 969.4			

REGION OF INTEREST DATA

ROI # 1

Channel #	**** Data ****				
85	332	347	323	342	325
90	367	468	434	338	278
95	295	293			

ROI # 2

Channel # **** Data ****

REGION OF INTEREST DATA

ROI # 2
Channel # **** Data ****

120	346	341	389	462	700
125	854	614	421	328	329
130	392				

ROI # 3
Channel # **** Data ****

179					453
180	376	426	742	1219	1239
185	892	494	432	400	

ROI # 4
Channel # **** Data ****

362			296	273	312
365	268	263	319	421	728
370	931	685	393	276	261
375	258	244	276		

ROI # 5
Channel # **** Data ****

581		168	177	179	203
585	182	223	382	594	623
590	428	212	210	177	162
595	183	194			

ROI # 6
Channel # **** Data ****

667			166	167	142
670	168	171	139	179	199
675	195	198	164	153	152
680	146	136	150		

ROI # 7
Channel # **** Data ****

694					154
695	172	143	134	117	197
700	375	679	925	708	356
705	198	157	144	125	147

ROI # 8
Channel # **** Data ****

1157			98	87	86
1160	75	88	113	149	200
1165	192	131	109	102	71
1170	98	74	103		

ROI # 9
Channel # **** Data ****

1209					91
1210	84	73	94	100	170

1220	114	85	74	64	79

REGION OF INTEREST DATA

ROI # 10

Channel #		**** Data ****			
1813				60	53
1815	54	64	71	96	115
1820	143	134	104	74	82
1825	48	54	49	68	

ROI # 11

Channel #		**** Data ****			
1917			48	43	62
1920	52	57	52	50	56
1925	46	66	74	64	52
1930	53	57	49	55	98
1935	110	82	104	74	60
1940	47	54	45	57	43
1945	44	38	42	41	

MCA #1 - Canberra S100 - NOPI3351.MCA - NOPI-335-GAM1 7.0 cm

Tag Number: 66
Report Group: 1/4
Group Size: 4096

Readout: Thu 24 Mar 1994 @ 08:53:17
Acquire Started: Thu 24 Mar 1994 @ 08:52:03

Elapsed Live Time: 1425.00 min.
Elapsed True Time: 1425.18 min.
Dead Time: 0.01 %

MCA Mode: PHA+
Preset Conditions: Live Time = 6000.00 min.

Calibration: 0.0000*Ch^2 + 0.4996*Ch + 1.083 keV

Area Statistics: Background Channels = 4
% Error Sigma = 1.65

Peak Statistics: Sensitivity Factor = 4.0
Expected FWHM (ch) = 2.7 - 6.0

Iso. Id. Criteria: Energy Window = +-1.300 keV
Iso. Library: C:\WINDOWS\S100\SPECTRAN.ISO

REGION OF INTEREST REPORT

ROI #	From(keV) To (keV)	Integral CPS	Area %Error	Peak(keV) FWHM(keV)	
1	43.6	1002	0	220.1	
	44.6	0.01	0.00	9.03	1868
	Isotope: I-135 @ 220.5				
2	48.0	866	0	224.6	
	49.0	0.01	0.00	9.03	
3	60.5	1052	0	237.1	2101
	61.5	0.01	0.00	9.03	
4	65.0	1049	0	241.6	
	66.0	0.01	0.00	9.03	
5	90.5	1255	0	267.1	2087
	91.5	0.01	0.00	9.03	
	Isotope: Y-93 @ 266.9				
6	94.5	832	0	271.1	
	95.0	0.01	0.00	9.03	
7	181.9	1149	0	182.9	2188
	183.4	0.01	0.00	9.03	
8	187.9	1039	0	189.0	
	189.4	0.01	0.00	9.03	
9	291.4	727	0	292.4	1443
	292.9	0.01	0.00	9.03	
10	297.4	716	0	298.4	
	298.9	0.01	0.00	9.03	
	Isotope: GA-73 @ 297.4				
11	334.3	643	0	334.8	1227
	335.8	0.01	0.00	21458954.00	
	Isotope: NP-239 @ 334.3				
12	340.3	584	0	340.8	
	341.8	0.01	0.00	21458954.00	
	Isotope: CS-136 @ 340.6				
13	347.8	603	0	348.3	1176
	349.3	0.01	0.00	21458956.00	
14	353.8	573	0	354.3	
	355.3	0.01	0.00	21458954.00	
15	579.2	346	0	579.9	692
	580.7	0.00	0.00	21458954.00	
16	585.2	346	0	585.7	
	586.7	0.00	0.00	21458956.00	
17	605.1	342	0	605.6	
	606.6	0.00	0.00	21458956.00	
	Isotope: CS-134 @ 604.7				

REGION OF INTEREST REPORT

ROI #	From(keV) To (keV)	Integral CPS	Area %Error	Peak(keV) FWHM(keV)
18	611.1	302	0	611.6
	612.6	0.00	0.00	21458956.00
19	906.9	231	0	907.4
	908.4	0.00	0.00	21458956.00
20	912.9	219	0	913.4
	914.4	0.00	0.00	21458954.00
21	958.9	420	0	959.9
	962.4	0.00	0.00	0.39
22	970.9	364	0	971.9
	974.4	0.00	0.00	0.73
	Isotope: I-135 @ 972.3			
23M	1100.8	3336	585	1119.5
	1134.7	0.04	41.44	2.16
	Isotope: BI-214 @ 1120.3			
	SC-46 @ 1120.5			

644

450

784

MCA #1 - Canberra S100 - NOPI3361.MCA - NOPI-336-GAM1 7.0 cm

Tag Number: 68
Report Group: 2/4
Group Size: 4096

Readout: Fri 25 Mar 1994 @ 09:17:06
Acquire Started: Fri 25 Mar 1994 @ 09:16:26

Elapsed Live Time: 1461.00 min.
Elapsed True Time: 1461.16 min.
Dead Time: 0.01 %

MCA Mode: PHA+
Preset Conditions: Live Time = 1461.00 min.

Calibration: 0.0000*Ch^2 + 0.4996*Ch + 1.083 keV

Area Statistics: Background Channels = 4
% Error Sigma = 1.65

Peak Statistics: Sensitivity Factor = 4.0
Expected FWHM (ch) = 2.7 - 6.0

Iso. Id. Criteria: Energy Window = +-1.300 keV
Iso. Library: C:\WINDOWS\S100\SPECTRAN.ISO

3/25/94
LT = 1461 min
mass = 4.008 g

REGION OF INTEREST REPORT

ROI #	From(keV) To (keV)	Integral CPS	Area %Error	Peak(keV) FWHM(keV)
1	43.6	4302	272	46.8
	49.0	0.05	29.06	1.30
2	60.5	5596	1135	63.5
	66.0	0.06	8.43	1.47
	Isotope: TH-234 @ 63.3			
3	90.5	6686	1417	92.8
	95.0	0.08	6.09	1.35
4	181.9	6408	2036	185.9
	189.4	0.07	6.49	1.52
	Isotope: U-235 @ 185.7			
5	291.4	4013	1361	295.3
	298.9	0.05	7.68	1.42
	Isotope: PB-214 @ 295.2			
6	334.3	2640	210	338.3
	341.8	0.03	40.37	1.69
	Isotope: AC-228 @ 338.3			
7	347.8	4526	2206	351.8
	355.3	0.05	5.03	1.45
	Isotope: PB-214 @ 351.9			
8	579.2	1734	398	582.7
	586.7	0.02	17.26	1.55
	Isotope: TL-208 @ 583.2			
9	605.1	3079	1589	608.9
	612.6	0.04	5.76	1.75
	Isotope: XE-135 @ 608.1			
	BI-214 @ 609.3			
10	906.9	1201	319	910.4
	914.4	0.01	17.93	1.69
	Isotope: AC-228 @ 911.2			
11	958.9	1943	351	968.4
	974.4	0.02	33.66	2.15
	Isotope: RU-105 @ 969.4			

REGION OF INTEREST DATA

ROI # 1

Channel #	**** Data ****				
85	329	360	341	332	322
90	392	460	441	376	313
95	316	320			

ROI # 2

Channel # **** Data ****

REGION OF INTEREST DATA

ROI # 2
Channel # **** Data ****

120	291	404	372	470	711
125	779	662	452	353	357
130	377				

ROI # 3
Channel # **** Data ****

179					405
180	382	486	785	1234	1237
185	860	522	411	364	

ROI # 4
Channel # **** Data ****

362			275	264	293
365	283	269	361	458	756
370	903	705	449	321	258
375	263	268	282		

ROI # 5
Channel # **** Data ****

581		171	166	180	190
585	195	223	327	564	581
590	366	255	176	140	150
595	150	179			

ROI # 6
Channel # **** Data ****

667			169	146	148
670	150	151	156	181	204
675	217	201	167	148	154
680	158	139	151		

ROI # 7
Channel # **** Data ****

694					132
695	133	148	162	157	214
700	383	702	853	568	311
705	178	142	160	128	155

ROI # 8
Channel # **** Data ****

1157			80	75	76
1160	86	75	127	167	206
1165	166	131	114	80	96
1170	87	80	88		

ROI # 9
Channel # **** Data ****

1209					95
1210	103	97	94	100	198
1215	260	531	496	340	189

1220	120	82	79	96	99

REGION OF INTEREST DATA

ROI # 10

Channel #	**** Data ****				
1813				61	53
1815	48	55	58	90	131
1820	152	136	91	52	50
1825	69	56	52	47	

ROI # 11

Channel #	**** Data ****				
1917			57	56	49
1920	51	52	56	56	57
1925	68	89	77	73	72
1930	57	38	60	66	74
1935	93	85	101	73	59
1940	48	47	35	54	55
1945	48	45	42	50	

MCA #1 - Canberra S100 - NOPI3361.MCA - NOPI-336-GAM1 7.0 cm

Tag Number: 68
Report Group: 1/4
Group Size: 4096

Readout: Fri 25 Mar 1994 @ 09:17:46
Acquire Started: Fri 25 Mar 1994 @ 09:16:26

Elapsed Live Time: 1461.00 min.
Elapsed True Time: 1461.16 min.
Dead Time: 0.01 %

MCA Mode: PHA+
Preset Conditions: Live Time = 6000.00 min.

Calibration: 0.0000*Ch^2 + 0.4996*Ch + 1.083 keV

Area Statistics: Background Channels = 4
% Error Sigma = 1.65

Peak Statistics: Sensitivity Factor = 4.0
Expected FWHM (ch) = 2.7 - 6.0

Iso. Id. Criteria: Energy Window = +-1.300 keV
Iso. Library: C:\WINDOWS\S100\SPECTRAN.ISO

REGION OF INTEREST REPORT

ROI #	From(keV) To (keV)	Integral CPS	Area %Error	Peak(keV) FWHM(keV)	
1	43.6	1030	0	220.7	1979
	44.6	0.01	0.00	3.84	
	Isotope: I-135 @ 220.5				
2	48.0	949	0	225.2	
	49.0	0.01	0.00	3.84	
3	60.5	1063	0	237.7	2150
	61.5	0.01	0.00	3.84	
	Isotope: PB-212 @ 238.6				
4	65.0	1087	0	242.2	
	66.0	0.01	0.00	3.84	
5	90.5	1273	0	267.7	2048
	91.5	0.01	0.00	3.84	
	Isotope: Y-93 @ 266.9				
6	94.5	775	0	271.7	
	95.0	0.01	0.00	3.84	
7	181.9	1115	0	183.0	2186
	183.4	0.01	0.00	3.84	
8	187.9	1071	0	189.0	
	189.4	0.01	0.00	3.84	
9	291.4	707	0	292.4	1326
	292.9	0.01	0.00	3.84	
10	297.4	619	0	298.4	
	298.9	0.01	0.00	3.84	
	Isotope: GA-73 @ 297.4				
11	334.3	613	0	335.3	1215
	335.8	0.01	0.00	3.84	
	Isotope: NP-239 @ 334.3				
12	340.3	602	0	340.8	
	341.8	0.01	0.00	21458952.00	
	Isotope: CS-136 @ 340.6				
13	347.8	575	0	348.9	1160
	349.3	0.01	0.00	21458952.00	
14	353.8	585	0	354.3	
	355.3	0.01	0.00	21458952.00	
15	579.2	317	0	579.6	668
	580.7	0.00	0.00	21458952.00	
16	585.2	351	0	585.6	
	586.7	0.00	0.00	21458952.00	

REGION OF INTEREST REPORT

ROI #	From(keV) To (keV)	Integral CPS	Area %Error	Peak(keV) FWHM(keV)
17	605.1	389	0	605.6
	606.6	0.00	0.00	21458952.00
	Isotope:	CS-134	@ 604.7	
		SB-125	@ 606.7	
18	611.1	356	0	612.2
	612.6	0.00	0.00	21458952.00
19	906.9	217	0	907.9
	908.4	0.00	0.00	21458952.00
20	912.9	224	0	913.4
	914.4	0.00	0.00	21458952.00
21	958.9	434	0	959.3
	962.4	0.00	0.00	21458952.00
22	970.9	376	0	972.2
	974.4	0.00	0.00	0.93
	Isotope:	I-135	@ 972.3	
23M	1100.8	3285	378	1119.4
	1134.7	0.04	65.47	1.87
	Isotope:	BI-214	@ 1120.3	
		SC-46	@ 1120.5	

MCA #1 - Canberra S100 - NOPI3371.MCA - NOPI-337-GAM1 7.0cm

Tag Number: 44
Report Group: 2/4
Group Size: 4096

Readout: Tue 29 Mar 1994 @ 08:44:36
Acquire Started: Tue 29 Mar 1994 @ 08:43:21

Elapsed Live Time: 1430.00 min.
Elapsed True Time: 1430.13 min.
Dead Time: 0.01 %

MCA Mode: PHA+
Preset Conditions: Live Time = 1430.00 min.

Calibration: 0.0000*Ch^2 + 0.4996*Ch + 1.083 keV

Area Statistics: Background Channels = 4
% Error Sigma = 1.65

Peak Statistics: Sensitivity Factor = 4.0
Expected FWHM (ch) = 2.7 - 6.0

Iso. Id. Criteria: Energy Window = +-1.300 keV
Iso. Library: C:\WINDOWS\S100\SPECTRAN.ISO

JP
3/29/94
ΔT = 1430 min
mass = 4.059 g

REGION OF INTEREST REPORT

ROI #	From(keV) To (keV)	Integral CPS	Area %Error	Peak(keV) FWHM(keV)
1	43.6	3894	354	46.6
	49.0	0.05	21.48	1.27
2	60.5	5105	1223	63.3
	66.0	0.06	7.59	1.23
	Isotope: TH-234 @ 63.3			
3	90.5	6585	1476	92.8
	95.0	0.08	5.86	1.30
4	181.9	5824	1924	185.9
	189.4	0.07	6.54	1.39
	Isotope: U-235 @ 185.7			
5	291.4	3400	742	295.1
	298.9	0.04	12.97	1.56
	Isotope: PB-214 @ 295.2			
6	334.3	2530	158	338.3
	341.8	0.03	52.53	1.00
	Isotope: AC-228 @ 338.3			
7	347.8	3363	1309	351.8
	355.3	0.04	7.31	1.49
	Isotope: PB-214 @ 351.9			
8	579.2	1701	413	582.7
	586.7	0.02	16.48	1.74
	Isotope: TL-208 @ 583.2			
9	605.1	2303	1077	608.8
	612.6	0.03	7.35	1.82
	Isotope: XE-135 @ 608.1			
	BI-214 @ 609.3			
10	906.9	1212	390	910.6
	914.4	0.01	14.73	1.87
	Isotope: AC-228 @ 911.2			
11	958.9	1733	353	968.3
	974.4	0.02	31.33	1.51
	Isotope: RU-105 @ 969.4			

REGION OF INTEREST DATA

ROI # 1

Channel # **** Data ****

85	279	298	290	300	316
90	378	437	403	305	301
95	280	307			

ROI # 2

Channel # **** Data ****

REGION OF INTEREST DATA

ROI # 2
Channel # **** Data ****

120	305	322	342	450	689
125	810	568	383	331	327
130	287				

ROI # 3
Channel # **** Data ****

179					448
180	354	466	821	1210	1288
185	788	491	349	370	

ROI # 4
Channel # **** Data ****

362			273	235	237
365	255	246	294	455	755
370	918	632	346	228	273
375	218	215	244		

ROI # 5
Channel # **** Data ****

581		173	160	150	151
585	174	208	281	384	390
590	291	185	158	173	172
595	169	181			

ROI # 6
Channel # **** Data ****

667			171	153	166
670	133	151	146	172	205
675	200	175	161	134	142
680	150	144	127		

ROI # 7
Channel # **** Data ****

694					122
695	135	141	122	124	150
700	235	448	549	436	228
705	166	129	126	120	132

ROI # 8
Channel # **** Data ****

1157			72	106	70
1160	81	85	110	159	185
1165	176	130	119	93	75
1170	75	75	90		

ROI # 9
Channel # **** Data ****

1209					67
1210	84	87	88	95	149
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

1220	86	73	79	64	71

REGION OF INTEREST DATA

ROI # 10

Channel #		**** Data ****			
1813				40	53
1815	61	53	58	83	136
1820	148	138	100	83	55
1825	43	58	59	44	

ROI # 11

Channel #		**** Data ****			
1917			44	44	45
1920	33	44	41	49	51
1925	45	68	69	45	50
1930	56	47	61	67	69
1935	100	118	79	68	51
1940	36	41	42	39	52
1945	39	48	51	41	

MCA #1 - Canberra S100 - NOPI3371.MCA - NOPI-337-GAM1 7.0cm

Tag Number: 44
Report Group: 1/4
Group Size: 4096

Readout: Tue 29 Mar 1994 @ 08:45:18
Acquire Started: Tue 29 Mar 1994 @ 08:43:21

Elapsed Live Time: 1430.00 min.
Elapsed True Time: 1430.13 min.
Dead Time: 0.01 %

MCA Mode: PHA+
Preset Conditions: Live Time = 6000.00 min.

Calibration: 0.0000*Ch^2 + 0.4996*Ch + 1.083 keV

Area Statistics: Background Channels = 4
% Error Sigma = 1.65

Peak Statistics: Sensitivity Factor = 4.0
Expected FWHM (ch) = 2.7 - 6.0

Iso. Id. Criteria: Energy Window = +-1.300 keV
Iso. Library: C:\WINDOWS\S100\SPECTRAN.ISO

REGION OF INTEREST REPORT

ROI #	From(keV) To (keV)	Integral CPS	Area %Error	Peak(keV) FWHM(keV)	
1	43.6	867	0	214.4	1755
	44.6	0.01	0.00	7.79	
2	48.0	888	0	218.9	
	49.0	0.01	0.00	7.79	
3	60.5	918	0	231.4	1863
	61.5	0.01	0.00	7.79	
4	65.0	945	0	235.9	
	66.0	0.01	0.00	7.79	
	Isotope: I-134 @ 235.5				
5	90.5	1268	0	261.4	1987
	91.5	0.01	0.00	7.79	
6	94.5	719	0	265.4	
	95.0	0.01	0.00	7.79	
	Isotope: GE-75 @ 264.7				
	SE-75 @ 264.7				
7	181.9	1000	0	352.8	1950
	183.4	0.01	0.00	7.79	
	Isotope: PB-214 @ 351.9				
8	187.9	950	0	358.8	
	189.4	0.01	0.00	7.79	
	Isotope: TC-104 @ 357.9				
9	291.4	634	0	291.8	1329
	292.9	0.01	0.00	21458956.00	
10	297.4	695	0	297.9	
	298.9	0.01	0.00	21458956.00	
	Isotope: GA-73 @ 297.4				
11	334.3	623	0	335.3	1186
	335.8	0.01	0.00	21458956.00	
	Isotope: NP-239 @ 334.3				
12	340.3	563	0	340.8	
	341.8	0.01	0.00	21458956.00	
	Isotope: CS-136 @ 340.6				
13	347.8	520	0	348.8	1027
	349.3	0.01	0.00	21458956.00	
14	353.8	507	0	354.3	
	355.3	0.01	0.00	21458956.00	
15	579.2	329	0	579.7	644
	580.7	0.00	0.00	21458956.00	
16	585.2	315	0	585.7	
	586.7	0.00	0.00	21458956.00	

REGION OF INTEREST REPORT

ROI #	From(keV) To (keV)	Integral CPS	Area %Error	Peak(keV) FWHM(keV)	
17	605.1	326	0	606.1	613
	606.6	0.00	0.00	21458956.00	
	Isotope: SB-125 @ 606.7				
18	611.1	287	0	611.6	
	612.6	0.00	0.00	21458956.00	
19	906.9	207	0	907.9	411
	908.4	0.00	0.00	21458956.00	
20	912.9	204	0	913.9	
	914.4	0.00	0.00	21458956.00	
21	958.9	351	0	961.9	704
	962.4	0.00	0.00	21458956.00	
22	970.9	353	0	972.4	
	974.4	0.00	0.00	0.35	
	Isotope: I-135 @ 972.3				
23M	1100.8	3094	420	1119.3	
	1134.7	0.04	56.64	2.12	
	Isotope: BI-214 @ 1120.3				
	SC-46 @ 1120.5				

MCA #1 - Canberra S100 - NOPI3631.MCA - NOPI-363-GAM1 7.0cm

Tag Number:	95	Readout:	Thu 14 Apr 1994 @ 08:42:31
Report Group:	2/4	Acquire Started:	Thu 14 Apr 1994 @ 08:41:24
Group Size:	4096		

Elapsed Live Time:	1401.00 min.
Elapsed True Time:	1401.32 min.
Dead Time:	0.02 %

MCA Mode:	PHA+
Preset Conditions:	Live Time = 1401.00 min.

Calibration: 0.0000*Ch^2 + 0.4996*Ch + 1.083 keV

Area Statistics: Background Channels = 4
% Error Sigma = 1.65

Peak Statistics: Sensitivity Factor = 4.0
Expected FWHM (ch) = 2.7 - 6.0

Iso. Id. Criteria: Energy Window = +-1.300 keV
Iso. Library: C:\WINDOWS\S100\SPECTRAN.ISO

4/14/94
ΔT = 1401 min
mass = 3.976 g

REGION OF INTEREST REPORT

ROI #	From(keV) To (keV)	Integral CPS	Area %Error	Peak(keV) FWHM(keV)
1	43.6	10771	870	46.8
	49.0	0.13	14.48	1.25
2	60.5	14677	2394	63.5
	66.0	0.17	6.37	1.39
	Isotope: TH-234 @ 63.3			
3	90.5	14853	2896	92.8
	95.0	0.18	4.37	1.19
4	181.9	17450	7618	186.1
	189.4	0.21	2.86	1.59
	Isotope: U-235 @ 185.7			
5	291.4	20864	15824	295.3
	298.9	0.25	1.51	1.46
	Isotope: PB-214 @ 295.2			
6	334.3	4559	287	338.3
	341.8	0.05	38.82	1.39
	Isotope: AC-228 @ 338.3			
7	347.8	30609	26227	351.9
	355.3	0.36	1.10	1.51
	Isotope: PB-214 @ 351.9			
8	579.2	2619	419	582.9
	586.7	0.03	20.15	1.76
	Isotope: TL-208 @ 583.2			
9	605.1	19758	17564	609.0
	612.6	0.24	1.32	1.66
	Isotope: XE-135 @ 608.1			
	BI-214 @ 609.3			
10	906.9	1803	417	910.4
	914.4	0.02	16.80	1.84
	Isotope: AC-228 @ 911.2			
11	958.9	2985	733	968.1
	974.4	0.04	19.48	2.18
	Isotope: RU-105 @ 969.4			

REGION OF INTEREST DATA

ROI # 1

Channel # **** Data ****

85	834	822	804	852	810
90	977	1199	1184	925	823
95	780	761			

Channel # **** Data ****

119 1027

REGION OF INTEREST DATA

ROI # 2
Channel # **** Data ****

120	1023	1056	1069	1208	1657
125	1941	1682	1123	990	938
130	963				

ROI # 3
Channel # **** Data ****

179					1303
180	992	957	1524	2562	2725
185	1793	1177	937	883	

ROI # 4
Channel # **** Data ****

362			591	639	616
365	637	615	668	1025	1959
370	2873	2835	1673	886	645
375	602	583	603		

ROI # 5
Channel # **** Data ****

581		337	344	343	310
585	417	728	2223	4516	5478
590	3326	1209	447	313	302
595	280	291			

ROI # 6
Channel # **** Data ****

667			294	263	246
670	265	282	275	287	349
675	354	313	295	268	250
680	276	261	281		

ROI # 7
Channel # **** Data ****

694					288
695	274	284	301	365	676
700	2437	5972	8565	6726	2868
705	809	333	239	243	229

ROI # 8
Channel # **** Data ****

1157			145	173	164
1160	145	151	159	211	257
1165	258	199	154	130	130
1170	108	128	107		

ROI # 9
Channel # **** Data ****

1209 120

1215	2538	4634	5086	3259	1415
1220	439	173	120	121	107

REGION OF INTEREST DATA

ROI # 10

Channel #		**** Data ****			
1813				85	78
1815	97	98	90	124	178
1820	187	180	132	124	95
1825	88	81	90	76	

ROI # 11

Channel #		**** Data ****			
1917			77	74	70
1920	70	94	97	87	112
1925	125	122	118	97	99
1930	86	72	94	109	113
1935	148	131	114	107	90
1940	89	70	86	82	80
1945	65	54	75	78	

MCA #1 - Canberra S100 - NOPI3631.MCA - NOPI-363-GAM1 7.0cm

Tag Number:	95	Readout:	Thu 14 Apr 1994 @ 08:43:08
Report Group:	1/4	Acquire Started:	Thu 14 Apr 1994 @ 08:41:24
Group Size:	4096		

Elapsed Live Time:	1401.00 min.
Elapsed True Time:	1401.32 min.
Dead Time:	0.02 %

MCA Mode:	PHA+
Preset Conditions:	Live Time = 6000.00 min.

Calibration: 0.0000*Ch^2 + 0.4996*Ch + 1.083 keV

Area Statistics:	Background Channels = 4
	% Error Sigma = 1.65
Peak Statistics:	Sensitivity Factor = 4.0
	Expected FWHM (ch) = 2.7 - 6.0
Iso. Id. Criteria:	Energy Window = +-1.300 keV
Iso. Library:	C:\WINDOWS\S100\SPECTRAN.ISO

REGION OF INTEREST REPORT

ROI #	From(keV) To (keV)	Integral CPS	Area %Error	Peak(keV) FWHM(keV)	
1	43.6	2460	0	214.2	4824
	44.6	0.03	0.00	11.87	
2	48.0	2364	0	218.7	
	49.0	0.03	0.00	11.87	
3	60.5	3106	0	231.1	5997
	61.5	0.04	0.00	11.87	
4	65.0	2891	0	235.6	
	66.0	0.03	0.00	11.87	
	Isotope: I-134 @ 235.5				
5	90.5	3252	0	261.1	5072
	91.5	0.04	0.00	11.87	
6	94.5	1820	0	265.1	
	95.0	0.02	0.00	11.87	
	Isotope: GE-75 @ 264.7				
	SE-75 @ 264.7				
7	181.9	2483	0	182.5	4916
	183.4	0.03	0.00	21458958.00	
8	187.9	2433	0	188.4	
	189.4	0.03	0.00	21458958.00	
9	291.4	1334	0	292.1	2520
	292.9	0.02	0.00	21458958.00	
10	297.4	1186	0	297.8	
	298.9	0.01	0.00	21458958.00	
	Isotope: GA-73 @ 297.4				
11	334.3	1068	0	334.8	2136
	335.8	0.01	0.00	21458958.00	
	Isotope: NP-239 @ 334.3				
12	340.3	1068	0	340.8	
	341.8	0.01	0.00	21458958.00	
	Isotope: CS-136 @ 340.6				
13	347.8	1147	0	348.3	2191
	349.3	0.01	0.00	21458958.00	
14	353.8	1044	0	354.3	
	355.3	0.01	0.00	21458958.00	
15	579.2	627	0	579.9	~~1200~~ 1100
	580.7	0.01	0.00	21458958.00	
16	585.2	473	0	586.1	
	586.7	0.01	0.00	21458958.00	

REGION OF INTEREST REPORT

ROI #	From(keV) To (keV)	Integral CPS	Area %Error	Peak(keV) FWHM(keV)	
17	605.1	576	0	606.2	1097
	606.6	0.01	0.00	21458958.00	
	Isotope: SB-125 @ 606.7				
18	611.1	521	0	612.1	
	612.6	0.01	0.00	21458958.00	
19	906.9	358	0	907.9	693
	908.4	0.00	0.00	21458958.00	
20	912.9	335	0	913.9	
	914.4	0.00	0.00	21458958.00	
21	958.9	681	0	961.4	1271
	962.4	0.01	0.00	0.29	
22	970.9	590	0	971.8	
	974.4	0.01	0.00	21458958.00	
	Isotope: I-135 @ 972.3				
23M	1100.8	8058	3012	1119.5	
	1134.7	0.10	11.16	2.01	
	Isotope: BI-214 @ 1120.3				
	SC-46 @ 1120.5				

MCA #1 - Canberra S100 - NOPI3641.MCA - NOPI-364-GAM1 7.0cm

Tag Number: 99
Report Group: 2/4
Group Size: 4096

Readout: Fri 15 Apr 1994 @ 09:14:39
Acquire Started: Fri 15 Apr 1994 @ 09:13:57

Elapsed Live Time: 1469.00 min.
Elapsed True Time: 1469.16 min.
Dead Time: 0.01 %

MCA Mode: PHA+
Preset Conditions: Live Time = 1469.00 min.

Calibration: 0.0000*Ch^2 + 0.4996*Ch + 1.083 keV

Area Statistics: Background Channels = 4
% Error Sigma = 1.65

Peak Statistics: Sensitivity Factor = 4.0
Expected FWHM (ch) = 2.7 - 6.0

Iso. Id. Criteria: Energy Window = +-1.300 keV
Iso. Library: C:\WINDOWS\S100\SPECTRAN.ISO

4/15/94
ΔT = 1469 min
mass = 4.128 g

REGION OF INTEREST REPORT

ROI #	From(keV) To (keV)	Integral CPS	Area %Error	Peak(keV) FWHM(keV)
1	43.6	6247	652	46.8
	49.0	0.07	14.86	1.11
2	60.5	8999	2416	63.5
	66.0	0.10	5.16	1.28
	Isotope: TH-234 @ 63.3			
3	90.5	11297	2832	92.8
	95.0	0.13	4.10	1.19
4	181.9	9776	4372	186.0
	189.4	0.11	3.73	1.63
	Isotope: U-235 @ 185.7			
5	291.4	7627	4317	295.4
	298.9	0.09	3.34	1.42
	Isotope: PB-214 @ 295.2			
6	334.3	2996	108	338.6
	341.8	0.03	83.62	1.19
	Isotope: AC-228 @ 338.3			
7	347.8	9844	7212	351.9
	355.3	0.11	2.27	1.54
	Isotope: PB-214 @ 351.9			
8	579.2	1936	280	583.1
	586.7	0.02	25.93	1.30
	Isotope: TL-208 @ 583.2			
9	605.1	6391	4857	609.1
	612.6	0.07	2.72	1.67
	Isotope: XE-135 @ 608.1			
	BI-214 @ 609.3			
10	906.9	1285	315	910.8
	914.4	0.01	18.78	1.94
	Isotope: AC-228 @ 911.2			
11	958.9	2022	210	968.6
	974.4	0.02	59.04	1.70
	Isotope: RU-105 @ 969.4			

REGION OF INTEREST DATA

ROI # 1

Channel # **** Data ****

85	445	445	440	480	526
90	574	737	680	549	466
95	447	458			

ROI # 2
Channel # **** Data ****

119 499

REGION OF INTEREST DATA

ROI # 2
Channel # **** Data ****

120	550	595	586	726	1116
125	1536	1232	693	495	473
130	498				

ROI # 3
Channel # **** Data ****

179					665
180	555	613	1224	2064	2461
185	1681	826	606	602	

ROI # 4
Channel # **** Data ****

362			357	318	350
365	368	348	394	622	1188
370	1632	1488	922	480	337
375	339	333	300		

ROI # 5
Channel # **** Data ****

581		202	201	219	200
585	212	270	619	1208	1675
590	1196	544	248	189	203
595	236	205			

ROI # 6
Channel # **** Data ****

667			186	185	203
670	161	157	182	202	204
675	233	222	185	167	181
680	146	195	187		

ROI # 7
Channel # **** Data ****

694					162
695	154	185	172	176	265
700	673	1558	2398	2081	1036
705	341	192	153	154	144

ROI # 8
Channel # **** Data ****

1157			102	112	91
1160	95	99	118	131	167
1165	201	164	124	104	117
1170	108	105	98		

ROI # 9
Channel # **** Data ****

1209 74

1215	648	1173	1478	1139	552
1220	235	97	103	79	105

REGION OF INTEREST DATA

ROI # 10

Channel #		**** Data ****			
1813				62	59
1815	69	51	73	63	110
1820	115	150	113	103	73
1825	63	58	68	55	

ROI # 11

Channel #		**** Data ****			
1917			65	47	57
1920	64	68	54	48	51
1925	64	70	89	77	57
1930	58	53	57	67	75
1935	87	77	103	86	56
1940	56	56	58	54	48
1945	59	60	62	39	

MCA #1 - Canberra S100 - NOPI3641.MCA - NOPI-364-GAM1 7.0cm

Tag Number: 99
Report Group: 1/4
Group Size: 4096

Readout: Fri 15 Apr 1994 @ 09:15:12
Acquire Started: Fri 15 Apr 1994 @ 09:13:57

Elapsed Live Time: 1469.00 min.
Elapsed True Time: 1469.16 min.
Dead Time: 0.01 %

MCA Mode: PHA+
Preset Conditions: Live Time = 6000.00 min.

Calibration: 0.0000*Ch^2 + 0.4996*Ch + 1.083 keV

Area Statistics: Background Channels = 4
% Error Sigma = 1.65

Peak Statistics: Sensitivity Factor = 4.0
Expected FWHM (ch) = 2.7 - 6.0

Iso. Id. Criteria: Energy Window = +-1.300 keV
Iso. Library: C:\WINDOWS\S100\SPECTRAN.ISO

REGION OF INTEREST REPORT

ROI #	From(keV) To (keV)	Integral CPS	Area %Error	Peak(keV) FWHM(keV)	
1	43.6	1330	0	220.9	
	44.6	0.02	0.00	3.52	2701
	Isotope:	I-135 @ 220.5			
		TA-182 @ 222.1			
2	48.0	1371	0	225.4	
	49.0	0.02	0.00	3.52	
3	60.5	1644	0	237.9	
	61.5	0.02	0.00	3.52	3110
	Isotope:	PB-212 @ 238.6			
4	65.0	1466	0	242.4	
	66.0	0.02	0.00	3.52	
5	90.5	1833	0	267.9	
	91.5	0.02	0.00	3.52	3041
	Isotope:	Y-93 @ 266.9			
6	94.5	1208	0	271.9	
	95.0	0.01	0.00	3.52	
7	181.9	1393	0	183.0	
	183.4	0.02	0.00	3.52	2702
8	187.9	1309	0	188.7	
	189.4	0.01	0.00	3.52	
9	291.4	822	0	292.4	
	292.9	0.01	0.00	3.52	1655
10	297.4	833	0	298.4	
	298.9	0.01	0.00	3.52	
	Isotope:	GA-73 @ 297.4			
11	334.3	735	0	335.3	
	335.8	0.01	0.00	3.52	1444
	Isotope:	NP-239 @ 334.3			
12	340.3	709	0	341.4	
	341.8	0.01	0.00	3.52	
	Isotope:	CS-136 @ 340.6			
13	347.8	673	0	348.8	
	349.3	0.01	0.00	3.52	1316
14	353.8	643	0	354.8	
	355.3	0.01	0.00	3.52	
	Isotope:	BA-133 @ 356.0			
15	579.2	400	0	579.6	
	580.7	0.00	0.00	21458952.00	828
16	585.2	428	0	585.6	

REGION OF INTEREST REPORT

ROI #	From(keV) To (keV)	Integral CPS	Area %Error	Peak(keV) FWHM(keV)
17	605.1	383	0	606.2
	606.6	0.00	0.00	21458952.00
	Isotope: SB-125 @ 606.7			
18	611.1	384	0	611.6
	612.6	0.00	0.00	21458952.00
19	906.9	241	0	907.9
	908.4	0.00	0.00	21458952.00
20	912.9	244	0	913.9
	914.4	0.00	0.00	21458952.00
21	958.9	454	0	960.6
	962.4	0.01	0.00	0.97
22	970.9	436	0	973.8
	974.4	0.00	0.00	1.36
	Isotope: I-134 @ 974.7			
23M	1100.8	4352	919	1119.6
	1134.7	0.05	29.55	2.00
	Isotope: BI-214 @ 1120.3			
	SC-46 @ 1120.5			

767

485

890

MCA #1 - Canberra S100 - NOPI3651.MCA - NOPI-365-GAM1 7.0cm

Tag Number: 100
Report Group: 2/4
Group Size: 4096

Readout: Mon 18 Apr 1994 @ 08:45:29
Acquire Started: Fri 15 Apr 1994 @ 09:16:45

Elapsed Live Time: 2000.00 min.
Elapsed True Time: 2000.19 min.
Dead Time: 0.01 %

MCA Mode: PHA+
Preset Conditions: Live Time = 2000.00 min.

Calibration: 0.0000*Ch^2 + 0.4996*Ch + 1.083 keV

Area Statistics: Background Channels = 4
% Error Sigma = 1.65

Peak Statistics: Sensitivity Factor = 4.0
Expected FWHM (ch) = 2.7 - 6.0

Iso. Id. Criteria: Energy Window = +-1.300 keV
Iso. Library: C:\WINDOWS\S100\SPECTRAN.ISO

JP
4/18/94
ΔT = 2000 min
m_{sample} = 4.119 g

REGION OF INTEREST REPORT

ROI #	From(keV) To (keV)	Integral CPS	Area %Error	Peak(keV) FWHM(keV)
1	43.6	6491	584	46.8
	49.0	0.05	16.80	1.30
2	60.5	9567	2639	63.5
	66.0	0.08	4.89	1.27
	Isotope:	TH-234 @	63.3	
3	90.5	12215	3201	92.8
	95.0	0.10	3.81	1.15
4	181.9	10260	4256	186.0
	189.4	0.09	3.93	1.57
	Isotope:	U-235 @	185.7	
5	291.4	6178	2304	295.3
	298.9	0.05	5.63	1.62
	Isotope:	PB-214 @	295.2	
6	334.3	3755	355	338.4
	341.8	0.03	28.48	1.47
	Isotope:	AC-228 @	338.3	
7	347.8	6990	3890	351.9
	355.3	0.06	3.55	1.54
	Isotope:	PB-214 @	351.9	
8	579.2	2359	501	583.1
	586.7	0.02	16.00	1.36
	Isotope:	TL-208 @	583.2	
9	605.1	4580	2730	609.1
	612.6	0.04	4.09	1.71
	Isotope:	XE-135 @	608.1	
		BI-214 @	609.3	
10	906.9	1735	459	910.9
	914.4	0.01	14.97	1.75
	Isotope:	AC-228 @	911.2	
11	958.9	2732	436	968.6
	974.4	0.02	32.39	1.72
	Isotope:	RU-105 @	969.4	

REGION OF INTEREST DATA

ROI # 1

Channel # **** Data ****

85	485	493	499	482	525
90	587	722	719	571	459
95	475	474			

Channel # **** Data ****

119 532

REGION OF INTEREST DATA

ROI # 2
Channel # **** Data ****

120	569	584	623	774	1222
125	1653	1299	702	585	491
130	533				

ROI # 3
Channel # **** Data ****

179					704
180	639	696	1164	2320	2684
185	1768	930	690	620	

ROI # 4
Channel # **** Data ****

362			370	389	417
365	386	410	444	672	1309
370	1674	1469	831	449	377
375	346	371	346		

ROI # 5
Channel # **** Data ****

581		268	228	226	267
585	247	254	460	862	941
590	800	422	255	230	265
595	235	218			

ROI # 6
Channel # **** Data ****

667			211	214	208
670	220	248	205	221	282
675	321	313	245	220	209
680	204	213	221		

ROI # 7
Channel # **** Data ****

694					192
695	198	213	209	197	273
700	464	920	1389	1212	676
705	309	196	167	201	174

ROI # 8
Channel # **** Data ****

1157			105	129	113
1160	121	128	119	177	250
1165	283	200	156	117	109
1170	124	95	133		

ROI # 9
Channel # **** Data ****

1209 118

1215	452	714	885	705	373
1220	189	124	118	104	117

REGION OF INTEREST DATA

ROI # 10

Channel #	**** Data ****				
1813				80	82
1815	70	89	83	114	141
1820	193	204	166	118	78
1825	72	90	81	74	

ROI # 11

Channel #	**** Data ****				
1917			81	75	61
1920	67	71	86	68	91
1925	83	87	87	120	110
1930	67	69	56	72	91
1935	144	139	167	124	84
1940	66	73	64	58	81
1945	50	78	74	88	

MCA #1 - Canberra S100 - NOPI3651.MCA - NOPI-365-GAM1 7.0cm

Tag Number: 100
Report Group: 1/4
Group Size: 4096

Readout: Mon 18 Apr 1994 @ 08:46:00
Acquire Started: Fri 15 Apr 1994 @ 09:16:45

Elapsed Live Time: 2000.00 min.
Elapsed True Time: 2000.19 min.
Dead Time: 0.01 %

MCA Mode: PHA+
Preset Conditions: Live Time = 6000.00 min.

Calibration: 0.0000*Ch^2 + 0.4996*Ch + 1.083 keV

Area Statistics: Background Channels = 4
% Error Sigma = 1.65

Peak Statistics: Sensitivity Factor = 4.0
Expected FWHM (ch) = 2.7 - 6.0

Iso. Id. Criteria: Energy Window = +-1.300 keV
Iso. Library: C:\WINDOWS\S100\SPECTRAN.ISO

REGION OF INTEREST REPORT

ROI #	From(keV) To (keV)	Integral CPS	Area %Error	Peak(keV) FWHM(keV)	
1	43.6	1477	0	221.1	
	44.6	0.01	0.00	3.11	
	Isotope:	I-135 @	220.5		
		TA-182 @	222.1		2885
2	48.0	1408	0	225.6	
	49.0	0.01	0.00	3.11	
3	60.5	1685	0	238.1	
	61.5	0.01	0.00	3.11	
	Isotope:	PB-212 @	238.6		3294
4	65.0	1609	0	242.6	
	66.0	0.01	0.00	3.11	
5	90.5	2039	0	268.1	
	91.5	0.02	0.00	3.11	
	Isotope:	Y-93 @	266.9		3349
6	94.5	1310	0	272.1	
	95.0	0.01	0.00	3.11	
7	181.9	1562	0	182.9	
	183.4	0.01	0.00	3.11	3002
8	187.9	1440	0	188.9	
	189.4	0.01	0.00	3.11	
9	291.4	989	0	292.4	
	292.9	0.01	0.00	3.11	1937
10	297.4	948	0	297.9	
	298.9	0.01	0.00	21458952.00	
	Isotope:	GA-73 @	297.4		
11	334.3	853	0	334.8	
	335.8	0.01	0.00	21458950.00	
	Isotope:	NP-239 @	334.3		1700
12	340.3	847	0	341.3	
	341.8	0.01	0.00	21458950.00	
	Isotope:	CS-136 @	340.6		
13	347.8	812	0	348.8	
	349.3	0.01	0.00	21458950.00	1550
14	353.8	738	0	354.8	
	355.3	0.01	0.00	21458950.00	
	Isotope:	BA-133 @	356.0		
15	579.2	468	0	579.7	
	580.7	0.00	0.00	21458952.00	929
16	585.2	461	0	585.6	

REGION OF INTEREST REPORT

ROI #	From(keV) To (keV)	Integral CPS	Area %Error	Peak(keV) FWHM(keV)	
17	605.1	462	0	606.1	925
	606.6	0.00	0.00	21458950.00	
	Isotope: SB-125 @ 606.7				
18	611.1	463	0	611.6	
	612.6	0.00	0.00	21458950.00	
19	906.9	321	0	907.4	638
	908.4	0.00	0.00	21458950.00	
20	912.9	317	0	913.4	
	914.4	0.00	0.00	21458952.00	
21	958.9	600	0	961.4	1166
	962.4	0.00	0.00	0.25	
22	970.9	566	0	972.3	
	974.4	0.00	0.00	0.21	
	Isotope: I-135 @ 972.3				
23M	1100.8	4812	594	1119.8	
	1134.7	0.04	50.24	1.93	
	Isotope: BI-214 @ 1120.3				
	SC-46 @ 1120.5				

MCA #1 - Canberra S100 - NOPI3661.MCA - NOPI-366-GAM1 7.0cm

Tag Number:	102	Readout:	Tue 19 Apr 1994 @ 09:42:45
Report Group:	2/4	Acquire Started:	Tue 19 Apr 1994 @ 09:41:58
Group Size:	4096		

Elapsed Live Time:	1494.00 min.
Elapsed True Time:	1494.22 min.
Dead Time:	0.01 %

MCA Mode:	PHA+
Preset Conditions:	Live Time = 1494.00 min.

Calibration: 0.0000*Ch^2 + 0.4996*Ch + 1.083 keV

Area Statistics: Background Channels = 4
% Error Sigma = 1.65

Peak Statistics: Sensitivity Factor = 4.0
Expected FWHM (ch) = 2.7 - 6.0

Iso. Id. Criteria: Energy Window = +-1.300 keV
Iso. Library: C:\WINDOWS\S100\SPECTRAN.ISO

pp
4/19/94
ΔT=1424 min
mass = 4.893 g

REGION OF INTEREST REPORT

ROI #	From(keV) To (keV)	Integral CPS	Area %Error	Peak(keV) FWHM(keV)
1	43.6	10555	1206	46.6
	49.0	0.12	10.50	1.34
2	60.5	15610	3910	63.5
	66.0	0.17	4.17	1.28
	Isotope:	TH-234	@ 63.3	
3	90.5	18543	4898	92.8
	95.0	0.21	3.07	1.27
4	181.9	17270	8702	186.0
	189.4	0.19	2.49	1.60
	Isotope:	U-235	@ 185.7	
5	291.4	16846	12352	295.3
	298.9	0.19	1.73	1.50
	Isotope:	PB-214	@ 295.2	
6	334.3	4167	95	338.3
	341.8	0.05	112.12	1.39
	Isotope:	AC-228	@ 338.3	
7	347.8	24290	20474	351.9
	355.3	0.27	1.26	1.51
	Isotope:	PB-214	@ 351.9	
8	579.2	2283	277	582.9
	586.7	0.03	28.46	1.77
	Isotope:	TL-208	@ 583.2	
9	605.1	15639	13623	609.0
	612.6	0.17	1.51	1.71
	Isotope:	XE-135	@ 608.1	
		BI-214	@ 609.3	
10	906.9	1643	357	910.6
	914.4	0.02	18.73	1.91
	Isotope:	AC-228	@ 911.2	
11	958.9	2611	267	968.1
	974.4	0.03	52.80	1.40
	Isotope:	RU-105	@ 969.4	

REGION OF INTEREST DATA

ROI # 1

Channel #	**** Data ****				
85	727	747	767	824	894
90	999	1215	1214	907	773
95	731	757			

ROI # 2

REGION OF INTEREST DATA

ROI # 2

Channel #	**** Data ****				
120	1007	987	958	1243	2043
125	2575	1949	1191	871	932
130	919				

ROI # 3

Channel #	**** Data ****				
179					1216
180	978	1045	2081	3747	3880
185	2451	1239	997	909	

ROI # 4

Channel #	**** Data ****				
362			543	582	552
365	585	566	622	1153	2271
370	3176	2812	1656	730	531
375	499	489	503		

ROI # 5

Channel #	**** Data ****				
581		284	296	294	273
585	338	625	1780	3509	4228
590	2720	1007	392	302	272
595	271	255			

ROI # 6

Channel #	**** Data ****				
667			225	243	263
670	278	268	249	258	283
675	283	299	254	237	274
680	291	247	215		

ROI # 7

Channel #	**** Data ****				
694					272
695	232	248	251	312	598
700	1886	4604	6731	5364	2282
705	605	277	208	209	211

ROI # 8

Channel #	**** Data ****				
1157			147	158	140
1160	116	116	138	181	205
1165	211	168	127	134	110
1170	111	116	105		

ROI # 9

Channel #	**** Data ****				
1209					131
1210	130	122	147	251	728

1215	1986	3535	3909	2730	1136
1220	356	140	110	115	113

REGION OF INTEREST DATA

ROI # 10

Channel #		**** Data ****			
1813				87	87
1815	90	83	85	108	171
1820	153	154	136	103	90
1825	83	60	75	78	

ROI # 11

Channel #		**** Data ****			
1917			74	64	69
1920	80	86	65	66	77
1925	86	104	96	89	59
1930	72	89	95	77	97
1935	126	131	96	77	86
1940	66	66	75	68	76
1945	60	87	79	73	

MCA #1 - Canberra S100 - NOPI3661.MCA - NOPI-366-GAM1 7.0cm

Tag Number: 102
Report Group: 1/4
Group Size: 4096

Readout: Tue 19 Apr 1994 @ 09:43:18
Acquire Started: Tue 19 Apr 1994 @ 09:41:58

Elapsed Live Time: 1494.00 min.
Elapsed True Time: 1494.22 min.
Dead Time: 0.01 %

MCA Mode: PHA+
Preset Conditions: Live Time = 6000.00 min.

Calibration: 0.0000*Ch^2 + 0.4996*Ch + 1.083 keV

Area Statistics: Background Channels = 4
% Error Sigma = 1.65

Peak Statistics: Sensitivity Factor = 4.0
Expected FWHM (ch) = 2.7 - 6.0

Iso. Id. Criteria: Energy Window = +-1.300 keV
Iso. Library: C:\WINDOWS\S100\SPECTRAN.ISO

REGION OF INTEREST REPORT

ROI #	From(keV) To (keV)	Integral CPS	Area %Error	Peak(keV) FWHM(keV)	
1	43.6	2241	0	220.4	4502
	44.6	0.03	0.00	4.35	
	Isotope: I-135 @ 220.5				
2	48.0	2261	0	224.9	
	49.0	0.03	0.00	4.35	
3	60.5	2929	0	237.4	5651
	61.5	0.03	0.00	4.35	
	Isotope: PB-212 @ 238.6				
4	65.0	2722	0	241.9	
	66.0	0.03	0.00	4.35	
5	90.5	3239	0	267.4	5145
	91.5	0.04	0.00	4.35	
	Isotope: Y-93 @ 266.9				
6	94.5	1906	0	271.4	
	95.0	0.02	0.00	4.35	
7	181.9	2262	0	182.5	4284
	183.4	0.03	0.00	21458952.00	
8	187.9	2022	0	188.4	
	189.4	0.02	0.00	21458952.00	
9	291.4	1147	0	292.1	2247
	292.9	0.01	0.00	21458952.00	
10	297.4	1100	0	298.1	
	298.9	0.01	0.00	21458952.00	
	Isotope: GA-73 @ 297.4				
11	334.3	1009	0	335.4	2036
	335.8	0.01	0.00	21458952.00	
	Isotope: NP-239 @ 334.3				
12	340.3	1027	0	340.8	
	341.8	0.01	0.00	21458952.00	
	Isotope: CS-136 @ 340.6				
13	347.8	1003	0	348.3	1908
	349.3	0.01	0.00	21458952.00	
14	353.8	905	0	354.3	
	355.3	0.01	0.00	21458952.00	
15	579.2	561	0	579.6	1003
	580.7	0.01	0.00	21458952.00	
16	585.2	442	0	586.1	
	586.7	0.00	0.00	21458952.00	

REGION OF INTEREST REPORT

ROI #	From(keV) To (keV)	Integral CPS	Area %Error	Peak(keV) FWHM(keV)
17	605.1	530	0	606.2
	606.6	0.01	0.00	21458952.00
	Isotope: SB-125 @ 606.7			
18	611.1	478	0	612.1
	612.6	0.01	0.00	21458952.00
19	906.9	347	0	907.9
	908.4	0.00	0.00	21458952.00
20	912.9	296	0	914.0
	914.4	0.00	0.00	21458952.00
21	958.9	581	0	960.6
	962.4	0.01	0.00	0.65
22	970.9	584	0	973.4
	974.4	0.01	0.00	0.51
	Isotope: I-135 @ 972.3			
	I-134 @ 974.7			
23M	1100.8	7034	2601	1119.5
	1134.7	0.08	12.10	2.10
	Isotope: BI-214 @ 1120.3			
	SC-46 @ 1120.5			

1008

643

1165

MCA #1 - Canberra S100 - NOPI3671.MCA - NOPI-367-GAM1 7.0cm

Tag Number: 145
Report Group: 2/4
Group Size: 4096

Readout: Wed 25 May 1994 @ 08:34:24
Acquire Started: Tue 24 May 1994 @ 08:38:53

Elapsed Live Time: 500.00 min.
Elapsed True Time: 500.23 min.
Dead Time: 0.05 %

MCA Mode: PHA+
Preset Conditions: Live Time = 500.00 min.

Calibration: 0.0000*Ch^2 + 0.4996*Ch + 1.083 keV

Area Statistics: Background Channels = 4
% Error Sigma = 1.65

Peak Statistics: Sensitivity Factor = 4.0
Expected FWHM (ch) = 2.7 - 6.0

Iso. Id. Criteria: Energy Window = +-1.300 keV
Iso. Library: C:\WINDOWS\S100\SPECTRAN.ISO

5/25/94
ΔT = 500 min
mass = 4.651 g

REGION OF INTEREST REPORT

ROI #	From(keV) To (keV)	Integral CPS	Area %Error	Peak(keV) FWHM(keV)
1	43.6	12547	1222	46.6
	49.0	0.42	11.20	1.26
2	60.5	15391	1077	63.5
	66.0	0.51	13.91	1.39
	Isotope: TH-234 @ 63.3			
3	90.5	11592	993	92.8
	95.0	0.39	10.03	1.19
4	181.9	20464	9194	186.3
	189.4	0.68	2.57	1.55
	Isotope: U-235 @ 185.7			
5	291.4	31920	26878	295.2
	298.9	1.06	1.10	1.50
	Isotope: PB-214 @ 295.2			
6	334.3	4324	-50	338.6
	341.8	0.14	217.00	0.66
	Isotope: AC-228 @ 338.3			
7	347.8	48739	43955	351.8
	355.3	1.62	0.83	1.51
	Isotope: PB-214 @ 351.9			
8	579.2	2155	-73	579.9
	586.7	0.07	104.93	21458958.00
9	605.1	31758	29592	608.9
	612.6	1.06	0.99	1.75
	Isotope: XE-135 @ 608.1			
	BI-214 @ 609.3			
10	906.9	1453	105	910.4
	914.4	0.05	59.90	1.34
	Isotope: AC-228 @ 911.2			
11	958.9	2396	304	963.1
	974.4	0.08	44.03	1.88

REGION OF INTEREST DATA

ROI # 1

Channel # **** Data ****

85	964	965	977	898	955
90	1215	1463	1364	1026	937
95	880	903			

ROI # 2

Channel # **** Data ****

119					1172
120	1178	1248	1225	1275	1534
125	1597	1442	1219	1197	1188

REGION OF INTEREST DATA

ROI # 2
Channel # **** Data ****

130	1116				

ROI # 3
Channel # **** Data ****

179					1616
180	1034	896	1095	1537	1576
185	1164	860	877	937	

ROI # 4
Channel # **** Data ****

362			717	735	701
365	709	699	756	1075	2022
370	3293	3547	2381	1056	734
375	677	659	703		

ROI # 5
Channel # **** Data ****

581		337	334	290	349
585	427	1274	3833	7764	8745
590	5124	1730	502	316	294
595	318	283			

ROI # 6
Channel # **** Data ****

667			306	273	267
670	250	253	271	271	278
675	280	290	262	232	258
680	265	277	291		

ROI # 7
Channel # **** Data ****

694					306
695	319	344	355	421	1111
700	4289	10629	14350	10270	4280
705	997	351	221	254	242

ROI # 8
Channel # **** Data ****

1157			156	181	155
1160	146	122	120	151	129
1165	154	118	125	122	127
1170	122	119	108		

ROI # 9
Channel # **** Data ****

1209					151
1210	123	140	191	549	1788
1215	4795	7898	8144	4973	2007

REGION OF INTEREST DATA

ROI # 10

Channel #		**** Data ****			
1813				83	87
1815	103	75	66	97	108
1820	125	128	88	86	81
1825	78	81	82	85	

ROI # 11

Channel #		**** Data ****			
1917			52	62	66
1920	84	56	65	82	93
1925	112	116	103	77	68
1930	72	56	70	74	68
1935	88	72	83	90	70
1940	89	59	66	80	64
1945	64	69	53	73	

MCA #1 - Canberra S100 - NOPI3671.MCA - NOPI-367-GAM1 7.0cm

Tag Number:	145	Readout:	Wed 25 May 1994 @ 08:37:42
Report Group:	1/4	Acquire Started:	Tue 24 May 1994 @ 08:38:53
Group Size:	4096		

Elapsed Live Time:	500.00 min.
Elapsed True Time:	500.23 min.
Dead Time:	0.05 %

MCA Mode:	PHA+
Preset Conditions:	Live Time = 6000.00 min.

Calibration: 0.0000*Ch^2 + 0.4996*Ch + 1.083 keV

Area Statistics: Background Channels = 4
% Error Sigma = 1.65

Peak Statistics: Sensitivity Factor = 4.0
Expected FWHM (ch) = 2.7 - 6.0

Iso. Id. Criteria:	Energy Window = +-1.300 keV
Iso. Library:	C:\WINDOWS\S100\SPECTRAN.ISO

REGION OF INTEREST REPORT

ROI #	From(keV) To (keV)	Integral CPS	Area %Error	Peak(keV) FWHM(keV)	
1	43.6	2906	0	214.2	5626
	44.6	0.10	0.00	3.35	
2	48.0	2720	0	218.7	
	49.0	0.09	0.00	3.35	
3	60.5	3598	0	231.1	7099
	61.5	0.12	0.00	3.35	
4	65.0	3501	0	235.6	
	66.0	0.12	0.00	3.35	
	Isotope: I-134 @ 235.5				
5	90.5	3546	0	261.1	5360
	91.5	0.12	0.00	3.35	
6	94.5	1814	0	265.1	
	95.0	0.06	0.00	3.35	
	Isotope: GE-75 @ 264.7				
	SE-75 @ 264.7				
7	181.9	2862	0	182.4	5635
	183.4	0.10	0.00	21458956.00	
8	187.9	2773	0	188.4	
	189.4	0.09	0.00	21458956.00	
9	291.4	1310	0	291.8	2521
	292.9	0.04	0.00	21458956.00	
10	297.4	1211	0	298.4	
	298.9	0.04	0.00	21458956.00	
	Isotope: GA-73 @ 297.4				
11	334.3	1096	0	335.3	2187
	335.8	0.04	0.00	21458956.00	
	Isotope: NP-239 @ 334.3				
12	340.3	1091	0	341.3	
	341.8	0.04	0.00	21458956.00	
	Isotope: CS-136 @ 340.6				
13	347.8	1324	0	348.8	2392
	349.3	0.04	0.00	21458956.00	
14	353.8	1068	0	354.8	
	355.3	0.04	0.00	21458956.00	
	Isotope: BA-133 @ 356.0				
15	579.2	638	0	579.7	1114
	580.7	0.02	0.00	21458956.00	
16	585.2	476	0	585.6	
	586.7	0.02	0.00	21458956.00	

REGION OF INTEREST REPORT

ROI #	From(keV) To (keV)	Integral CPS	Area %Error	Peak(keV) FWHM(keV)	
17	605.1	605	0	605.9	1083
	606.6	0.02	0.00	21458956.00	
	Isotope:	CS-134 @	604.7		
		SB-125 @	606.7		
18	611.1	478	0	611.8	
	612.6	0.02	0.00	21458956.00	
19	906.9	348	0	907.9	674
	908.4	0.01	0.00	21458956.00	
20	912.9	326	0	913.9	
	914.4	0.01	0.00	21458956.00	
21	958.9	560	0	960.3	1088
	962.4	0.02	0.00	0.29	
22	970.9	528	0	971.9	
	974.4	0.02	0.00	0.58	
	Isotope:	I-135 @	972.3		
23M	1100.8	9784	5584	1119.4	
	1134.7	0.33	5.73	2.00	
	Isotope:	BI-214 @	1120.3		
		SC-46 @	1120.5		

MCA #1 - Canberra S100 - (Untitled) - NOPI-368-GAM1 7.0cm

Tag Number: 147
Report Group: 2/4
Group Size: 4096

Readout: Thu 26 May 1994 @ 09:10:02
Acquire Started: Wed 25 May 1994 @ 08:43:42

Elapsed Live Time: 1000.00 min.
Elapsed True Time: 1000.21 min.
Dead Time: 0.02 %

MCA Mode: PHA+
Preset Conditions: Live Time = 1000.00 min.

Area Statistics: Background Channels = 4
% Error Sigma = 1.65

Peak Statistics: Sensitivity Factor = 4.0
Expected FWHM (ch) = 2.7 - 6.0

5/26/94
ΔT = 1000 min
mean = 4.4155

REGION OF INTEREST REPORT

ROI #	From(Ch) To (Ch)	Integral CPS	Area %Error	Peak(Ch) FWHM(Ch)
1	85	5658	273	91.51
	96	0.09	32.91	2.01
2	119	10179	3456	124.98
	130	0.17	3.94	2.76
3	179	13395	3973	183.56
	188	0.22	3.30	2.55
4	362	9457	4847	369.99
	377	0.16	3.31	3.11
5	581	5927	3251	588.81
	596	0.10	3.91	3.06
6	667	2288	192	674.96
	682	0.04	41.11	3.18
7	694	7638	5498	701.99
	709	0.13	2.62	3.11
8	1157	1400	224	1163.98
	1172	0.02	27.56	4.61
9	1209	4972	3750	1216.55
	1224	0.08	3.10	3.44
10	1813	1010	266	1820.52
	1828	0.02	19.71	4.21
11	1917	1486	182	1935.95
	1948	0.02	58.01	3.05

REGION OF INTEREST DATA

ROI # 1
Channel # **** Data ****

85	450	443	429	428	400
90	483	574	611	484	420
95	418	518			

ROI # 2
Channel # **** Data ****

119					518
120	563	536	585	844	1486
125	1893	1474	790	536	453
130	501				

ROI # 3
Channel # **** Data ****

179					607
180	560	739	1624	2789	3068
185	1922	901	609	576	

ROI # 4
Channel # **** Data ****

362			322	279	297
365	273	278	368	765	1438
370	1808	1340	777	378	302
375	305	257	270		

ROI # 5
Channel # **** Data ****

581		162	170	179	180
585	177	322	581	1038	1164
590	764	346	197	180	174
595	151	142			

ROI # 6
Channel # **** Data ****

667			148	148	126
670	120	129	127	147	194
675	170	192	130	151	134
680	147	122	103		

ROI # 7
Channel # **** Data ****

694					140
695	144	144	142	156	253
700	661	1412	1829	1343	658
705	256	141	141	108	110

ROI # 8
Channel # **** Data ****

1157			80	89	60
1160	70	92	101	113	124
1165	124	110	77	71	60
1170	76	74	79		

ROI # 9
Channel # **** Data ****

1209					77
1210	79	60	80	120	274
1215	643	1095	1078	682	344
1220	125	88	76	79	72

ROI # 10
Channel # **** Data ****

1813				49	41
1815	49	57	67	63	91
1820	105	98	97	64	53
1825	47	39	43	47	

ROI # 11
Channel # **** Data ****

1917			37	51	52

1920	43	52	41	19	18
1925	49	47	46	65	45
1930	47	47	28	46	61
1935	64	87	70	49	52

REGION OF INTEREST DATA

ROI # 11

Channel #	**** Data ****				
1940	41	43	25	40	34
1945	27	44	38	34	

MCA #1 - Canberra S100 - NOPI3681.MCA - NOPI-368-GAM1 7.0cm

Tag Number: 147
Report Group: 1/4
Group Size: 4096

Readout: Thu 26 May 1994 @ 09:12:46
Acquire Started: Wed 25 May 1994 @ 08:43:42

Elapsed Live Time: 1000.00 min.
Elapsed True Time: 1000.21 min.
Dead Time: 0.02 %

MCA Mode: PHA+
Preset Conditions: Live Time = 6000.00 min.

Area Statistics: Background Channels = 4
% Error Sigma = 1.65

Peak Statistics: Sensitivity Factor = 4.0
Expected FWHM (ch) = 2.7 - 6.0

REGION OF INTEREST REPORT

ROI #	From(Ch) To (Ch)	Integral CPS	Area %Error	Peak(Ch) FWHM(Ch)	
1	85	1322	0	440.49	2678
	87	0.02	0.00	7.46	
2	94	1356	0	449.49	
	96	0.02	0.00	7.46	
3	119	1617	0	474.49	3107
	121	0.03	0.00	7.46	
4	128	1490	0	483.49	
	130	0.02	0.00	7.46	
5	179	1906	0	534.49	3091
	181	0.03	0.00	7.46	
6	187	1185	0	542.49	
	188	0.02	0.00	7.46	
7	362	1171	0	363.99	2305
	365	0.02	0.00	7.46	
8	374	1134	0	374.95	
	377	0.02	0.00	42949660.00	
9	581	691	0	583.02	1338
	584	0.01	0.00	42949660.00	
10	593	647	0	593.94	
	596	0.01	0.00	42949660.00	
11	667	542	0	667.95	1048
	670	0.01	0.00	42949660.00	
12	679	506	0	679.97	
	682	0.01	0.00	42949660.00	
13	694	570	0	696.00	1070
	697	0.01	0.00	42949660.00	
14	706	500	0	706.92	
	709	0.01	0.00	42949660.00	
15	1157	299	0	1157.91	588
	1160	0.00	0.00	42949660.00	
16	1169	289	0	1170.60	
	1172	0.00	0.00	42949660.00	
17	1209	296	0	1209.92	611
	1212	0.00	0.00	42949660.00	
18	1221	315	0	1222.98	
	1224	0.01	0.00	42949660.00	

REGION OF INTEREST REPORT

ROI #	From(Ch) To (Ch)	Integral CPS	Area %Error	Peak(Ch) FWHM(Ch)	
19	1813	196	0	1815.11	372
	1816	0.00	0.00	42949660.00	
20	1825	176	0	1827.06	
	1828	0.00	0.00	42949660.00	
21	1917	357	0	1918.55	642
	1924	0.01	0.00	42949660.00	
22	1941	285	0	1946.10	
	1948	0.00	0.00	1.13	
23M	2201	3214	497	2238.38	
	2269	0.05	48.34	4.06	

MCA #1 - Canberra S100 - NOPI3691.MCA - NOPI-369-GAM1 7.0cm

Tag Number:	148	Readout:	Fri 27 May 1994 @ 09:38:25
Report Group:	2/4	Acquire Started:	Thu 26 May 1994 @ 09:14:22
Group Size:	4096		

Elapsed Live Time:	1000.00 min.
Elapsed True Time:	1000.16 min.
Dead Time:	0.02 %

MCA Mode:	PHA+
Preset Conditions:	Live Time = 1000.00 min.
Calibration:	0.0000*Ch^2 + 0.4996*Ch + 1.083 keV
Area Statistics:	Background Channels = 4 % Error Sigma = 1.65
Peak Statistics:	Sensitivity Factor = 4.0 Expected FWHM (ch) = 2.7 - 6.0
Iso. Id. Criteria:	Energy Window = +-1.300 keV
Iso. Library:	C:\WINDOWS\S100\SPECTRAN.ISO

5/27/94
JP
ΔT=1000 min
mass = 4.248g

REGION OF INTEREST REPORT

ROI #	From(keV) To (keV)	Integral CPS	Area %Error	Peak(keV) FWHM(keV)
1	43.6	4294	259	46.6
	49.0	0.07	30.40	1.33
2	60.5	6679	1956	63.5
	66.0	0.11	5.54	1.33
	Isotope: TH-234 @ 63.3			
3	90.5	8399	2235	92.8
	95.0	0.14	4.54	1.25
4	181.9	6991	3133	186.0
	189.4	0.12	4.40	1.46
	Isotope: U-235 @ 185.7			
5	291.4	4569	2493	295.2
	298.9	0.08	4.47	1.53
	Isotope: PB-214 @ 295.2			
6	334.3	2095	193	338.3
	341.8	0.03	39.13	1.00
	Isotope: AC-228 @ 338.3			
7	347.8	5622	3862	351.8
	355.3	0.09	3.20	1.55
	Isotope: PB-214 @ 351.9			
8	579.2	1289	293	582.6
	586.7	0.02	20.22	1.43
	Isotope: TL-208 @ 583.2			
9	605.1	3554	2466	608.9
	612.6	0.06	3.99	1.81
	Isotope: XE-135 @ 608.1			
	BI-214 @ 609.3			
10	906.9	910	274	910.6
	914.4	0.02	18.17	2.80
	Isotope: AC-228 @ 911.2			
11	958.9	1392	256	967.9
	974.4	0.02	39.01	1.52

REGION OF INTEREST DATA

ROI # 1
Channel # **** Data ****

85	304	331	354	318	309
90	395	445	455	370	325
95	357	331			

ROI # 2

Channel # **** Data ****

119					336
120	385	383	430	533	925

REGION OF INTEREST DATA

ROI # 2
Channel # **** Data ****

125	1167	905	513	350	375
130	377				

ROI # 3
Channel # **** Data ****

179					492
180	404	499	984	1653	1815
185	1142	618	397	395	

ROI # 4
Channel # **** Data ****

362			256	245	246
365	247	232	303	479	926
370	1277	995	564	286	246
375	224	230	235		

ROI # 5
Channel # **** Data ****

581		136	125	116	132
585	141	223	470	857	821
590	584	259	176	146	115
595	129	139			

ROI # 6
Channel # **** Data ****

667			132	125	114
670	127	96	138	139	199
675	166	159	138	109	124
680	112	108	109		

ROI # 7
Channel # **** Data ****

694					97
695	108	134	126	135	221
700	491	1003	1290	946	457
705	199	120	109	100	86

ROI # 8
Channel # **** Data ****

1157			63	73	54
1160	66	64	97	119	158
1165	123	87	78	65	71
1170	65	58	48		

ROI # 9
Channel # **** Data ****

1209					64
1210	62	69	76	101	212

1215	457	719	719	491	318
1220	93	73	79	68	53

REGION OF INTEREST DATA

ROI # 10

Channel #	**** Data ****				
1813				37	45
1815	37	47	50	74	92
1820	91	92	74	73	46
1825	46	29	36	41	

ROI # 11

Channel #	**** Data ****				
1917			33	45	38
1920	29	41	39	41	40
1925	38	51	50	51	35
1930	41	30	29	53	64
1935	87	62	58	56	35
1940	41	53	36	31	46
1945	32	44	33	30	

MCA #1 - Canberra S100 - NOPI3691.MCA - NOPI-369-GAM1 7.0cm

Tag Number: 148
Report Group: 1/4
Group Size: 4096

Readout: Fri 27 May 1994 @ 09:39:07
Acquire Started: Thu 26 May 1994 @ 09:14:22

Elapsed Live Time: 1000.00 min.
Elapsed True Time: 1000.16 min.
Dead Time: 0.02 %

MCA Mode: PHA+
Preset Conditions: Live Time = 6000.00 min.

Calibration: 0.0000*Ch^2 + 0.4996*Ch + 1.083 keV

Area Statistics: Background Channels = 4
% Error Sigma = 1.65

Peak Statistics: Sensitivity Factor = 4.0
Expected FWHM (ch) = 2.7 - 6.0

Iso. Id. Criteria: Energy Window = +-1.300 keV
Iso. Library: C:\WINDOWS\S100\SPECTRAN.ISO

REGION OF INTEREST REPORT

ROI #	From(keV) To (keV)	Integral CPS	Area %Error	Peak(keV) FWHM(keV)	
1	43.6	989	0	221.3	
	44.6	0.02	0.00	4.74	2002
	Isotope:	I-135 @ 220.5			
		TA-182 @ 222.1			
2	48.0	1013	0	225.8	
	49.0	0.02	0.00	4.74	
3	60.5	1104	0	238.3	
	61.5	0.02	0.00	4.74	2206
	Isotope:	PB-212 @ 238.6			
4	65.0	1102	0	242.8	
	66.0	0.02	0.00	4.74	
5	90.5	1395	0	268.3	
	91.5	0.02	0.00	4.74	2187
6	94.5	792	0	272.3	
	95.0	0.01	0.00	4.74	
7	181.9	994	0	359.7	
	183.4	0.02	0.00	4.74	1929
8	187.9	935	0	365.7	
	189.4	0.02	0.00	4.74	
	Isotope:	I-131 @ 364.5			
9	291.4	509	0	469.1	
	292.9	0.01	0.00	4.74	1038
	Isotope:	GE-75 @ 468.9			
10	297.4	529	0	475.1	
	298.9	0.01	0.00	4.74	
11	334.3	498	0	334.8	
	335.8	0.01	0.00	21458952.00	951
	Isotope:	NP-239 @ 334.3			
12	340.3	453	0	340.8	
	341.8	0.01	0.00	21458952.00	
	Isotope:	CS-136 @ 340.6			
13	347.8	465	0	348.9	
	349.3	0.01	0.00	21458952.00	880
14	353.8	415	0	354.3	
	355.3	0.01	0.00	21458952.00	
15	579.2	256	0	579.6	
	580.7	0.00	0.00	21458952.00	498
16	585.2	242	0	585.6	
	586.7	0.00	0.00	21458952.00	

REGION OF INTEREST REPORT

ROI #	From(keV) To (keV)	Integral CPS	Area %Error	Peak(keV) FWHM(keV)	
17	605.1	271	0	606.2	544
	606.6	0.00	0.00	21458952.00	
	Isotope: SB-125 @ 606.7				
18	611.1	273	0	611.6	
	612.6	0.00	0.00	21458952.00	
19	906.9	166	0	907.4	318
	908.4	0.00	0.00	21458952.00	
20	912.9	152	0	913.4	
	914.4	0.00	0.00	21458952.00	
21	958.9	306	0	959.4	611
	962.4	0.01	0.00	21458952.00	
22	970.9	305	0	973.4	
	974.4	0.01	0.00	0.42	
	Isotope: I-135 @ 972.3				
23M	1100.8	2740	385	1119.3	
	1134.7	0.05	57.98	1.86	
	Isotope: BI-214 @ 1120.3				
	SC-46 @ 1120.5				

MCA #1 - Canberra S100 - NOPI3701.MCA - NOPI-370-GAM1 7.0cm

Tag Number:	151	Readout:	Fri 27 May 1994 @ 14:13:53
Report Group:	2/4	Acquire Started:	Fri 27 May 1994 @ 14:12:57
Group Size:	4096		

Elapsed Live Time:	272.00 min.
Elapsed True Time:	272.08 min.
Dead Time:	0.03 %

MCA Mode:	PHA+
Preset Conditions:	Live Time = 272.00 min.

Calibration: 0.0000*Ch^2 + 0.4996*Ch + 1.083 keV

Area Statistics:	Background Channels = 4
	% Error Sigma = 1.65
Peak Statistics:	Sensitivity Factor = 4.0
	Expected FWHM (ch) = 2.7 - 6.0
Iso. Id. Criteria:	Energy Window = +-1.300 keV
Iso. Library:	C:\WINDOWS\S100\SPECTRAN.ISO

gp
5/27/94
ΔT = 272 min
mass = 4.653 g

REGION OF INTEREST REPORT

ROI #	From(keV) To (keV)	Integral CPS	Area %Error	Peak(keV) FWHM(keV)
1	43.6	4601	466	46.8
	49.0	0.28	17.84	1.20
2	60.5	6973	1237	63.5
	66.0	0.43	8.55	1.41
	Isotope: TH-234 @ 63.3			
3	90.5	6799	1370	92.8
	95.0	0.42	6.29	1.25
4	181.9	7936	4196	186.2
	189.4	0.49	3.50	1.58
	Isotope: U-235 @ 185.7			
5	291.4	8879	7007	295.3
	298.9	0.54	2.22	1.55
	Isotope: PB-214 @ 295.2			
6	334.3	1531	73	338.5
	341.8	0.09	88.44	1.50
	Isotope: AC-228 @ 338.3			
7	347.8	13292	11520	351.8
	355.3	0.81	1.65	1.50
	Isotope: PB-214 @ 351.9			
8	579.2	803	1	583.3
	586.7	0.05	4675.65	1.72
	Isotope: TL-208 @ 583.2			
9	605.1	8328	7466	608.9
	612.6	0.51	2.02	1.77
	Isotope: XE-135 @ 608.1			
	BI-214 @ 609.3			
10	906.9	500	70	911.1
	914.4	0.03	52.71	1.72
	Isotope: AC-228 @ 911.2			
11	958.9	859	47	968.1
	974.4	0.05	174.93	0.98
	Isotope: RU-105 @ 969.4			

REGION OF INTEREST DATA

ROI # 1

Channel # **** Data ****

85	319	348	279	363	336
90	445	549	514	398	350
95	325	375			

ROI # 2
Channel # **** Data ****

119 453

REGION OF INTEREST DATA

ROI # 2
Channel # **** Data ****

120	496	474	487	568	811
125	949	821	560	472	460
130	422				

ROI # 3
Channel # **** Data ****

179					544
180	405	477	729	1192	1264
185	856	525	405	402	

ROI # 4
Channel # **** Data ****

362			248	245	232
365	248	232	298	477	879
370	1486	1367	912	415	269
375	214	198	216		

ROI # 5
Channel # **** Data ****

581		125	119	129	137
585	143	354	918	2040	2228
590	1450	575	235	114	111
595	90	111			

ROI # 6
Channel # **** Data ****

667			100	109	93
670	90	96	93	97	102
675	117	115	103	79	71
680	94	82	90		

ROI # 7
Channel # **** Data ****

694					109
695	118	125	126	147	336
700	1099	2645	3769	2756	1243
705	411	176	73	78	81

ROI # 8
Channel # **** Data ****

1157			56	62	62
1160	55	34	49	47	66
1165	55	56	58	37	44
1170	35	46	41		

ROI # 9
Channel # **** Data ****

1209 55

1210	55	56	79	101	48
1215	1175	1974	2049	1329	597
1220	167	68	38	37	43

REGION OF INTEREST DATA

ROI # 10

Channel #	**** Data ****				
1813				28	24
1815	24	33	31	39	32
1820	44	36	36	36	31
1825	26	23	20	37	

ROI # 11

Channel #	**** Data ****				
1917			22	25	27
1920	31	24	30	20	33
1925	31	33	41	29	25
1930	24	17	31	30	31
1935	30	41	28	21	22
1940	22	22	32	21	18
1945	25	26	21	26	

MCA #1 - Canberra S100 - NOPI3701.MCA - NOPI-370-GAM1 7.0cm

Tag Number:	151	Readout:	Fri 27 May 1994 @ 14:14:36
Report Group:	1/4	Acquire Started:	Fri 27 May 1994 @ 14:12:57
Group Size:	4096		

Elapsed Live Time:	272.00 min.
Elapsed True Time:	272.08 min.
Dead Time:	0.03 %

MCA Mode:	PHA+
Preset Conditions:	Live Time = 6000.00 min.

Calibration: 0.0000*Ch^2 + 0.4996*Ch + 1.083 keV

Area Statistics:	Background Channels = 4
	% Error Sigma = 1.65
Peak Statistics:	Sensitivity Factor = 4.0
	Expected FWHM (ch) = 2.7 - 6.0
Iso. Id. Criteria:	Energy Window = +-1.300 keV
Iso. Library:	C:\WINDOWS\S100\SPECTRAN.ISO

REGION OF INTEREST REPORT

ROI #	From(keV) To (keV)	Integral CPS	Area %Error	Peak(keV) FWHM(keV)	
1	43.6	946	0	220.2	1996
	44.6	0.06	0.00	2.87	
	Isotope: I-135 @ 220.5				
2	48.0	1050	0	224.7	
	49.0	0.06	0.00	2.87	
3	60.5	1423	0	237.2	2777
	61.5	0.09	0.00	2.87	
4	65.0	1354	0	241.7	
	66.0	0.08	0.00	2.87	
5	90.5	1426	0	267.2	2233
	91.5	0.09	0.00	2.87	
	Isotope: Y-93 @ 266.9				
6	94.5	807	0	271.2	
	95.0	0.05	0.00	2.87	
7	181.9	973	0	182.4	1870
	183.4	0.06	0.00	21458952.00	
8	187.9	897	0	188.4	
	189.4	0.05	0.00	21458952.00	
9	291.4	510	0	292.4	936
	292.9	0.03	0.00	21458952.00	
10	297.4	426	0	297.8	
	298.9	0.03	0.00	21458952.00	
	Isotope: GA-73 @ 297.4				
11	334.3	392	0	334.8	729
	335.8	0.02	0.00	21458952.00	
	Isotope: NP-239 @ 334.3				
12	340.3	337	0	340.9	
	341.8	0.02	0.00	21458952.00	
	Isotope: CS-136 @ 340.6				
13	347.8	478	0	348.8	886
	349.3	0.03	0.00	21458952.00	
14	353.8	408	0	354.8	
	355.3	0.03	0.00	21458952.00	
	Isotope: BA-133 @ 356.0				
15	579.2	235	0	580.1	401
	580.7	0.01	0.00	21458952.00	
16	585.2	166	0	586.2	
	586.7	0.01	0.00	21458952.00	

REGION OF INTEREST REPORT

ROI #	From(keV) To (keV)	Integral CPS	Area %Error	Peak(keV) FWHM(keV)
17	605.1	245	0	606.2
	606.6	0.02	0.00	21458952.00
	Isotope: SB-125 @ 606.7			
18	611.1	186	0	612.2
	612.6	0.01	0.00	21458952.00
19	906.9	109	0	908.0
	908.4	0.01	0.00	21458952.00
20	912.9	106	0	914.0
	914.4	0.01	0.00	21458952.00
21	958.9	212	0	960.4
	962.4	0.01	0.00	0.58
22	970.9	191	0	971.4
	974.4	0.01	0.00	21458958.00
	Isotope: I-135 @ 972.3			
23M	1100.8	2974	1516	1119.4
	1134.7	0.18	12.23	2.11
	Isotope: BI-214 @ 1120.3			
	SC-46 @ 1120.5			

MCA #1 - Canberra S100 - NOPI3711.MCA - NOPI-371-GAM1 7.0cm

Tag Number: 153
Report Group: 2/4
Group Size: 4096

Readout: Mon 30 May 1994 @ 09:37:19
Acquire Started: Fri 27 May 1994 @ 14:16:48

Elapsed Live Time: 2000.00 min.
Elapsed True Time: 2000.27 min.
Dead Time: 0.01 %

MCA Mode: PHA+
Preset Conditions: Live Time = 2000.00 min.

Calibration: 0.0000*Ch^2 + 0.4996*Ch + 1.083 keV

Area Statistics: Background Channels = 4
% Error Sigma = 1.65

Peak Statistics: Sensitivity Factor = 4.0
Expected FWHM (ch) = 2.7 - 6.0

Iso. Id. Criteria: Energy Window = +-1.300 keV
Iso. Library: C:\WINDOWS\S100\SPECTRAN.ISO

5/30/94
ΔT = 2000 min
mass = 3.884 g

REGION OF INTEREST REPORT

ROI #	From(keV) To (keV)	Integral CPS	Area %Error	Peak(keV) FWHM(keV)
1	43.6	5887	570	46.6
	49.0	0.05	16.46	1.27
2	60.5	6708	915	63.3
	66.0	0.06	11.13	1.18
	Isotope: TH-234 @ 63.3			
3	90.5	7562	1273	92.8
	95.0	0.06	6.91	1.28
4	181.9	7973	2113	186.0
	189.4	0.07	6.97	1.46
	Isotope: U-235 @ 185.7			
5	291.4	6288	2432	295.3
	298.9	0.05	5.38	1.47
	Isotope: PB-214 @ 295.2			
6	334.3	3721	241	337.8
	341.8	0.03	41.76	0.91
	Isotope: AC-228 @ 338.3			
7	347.8	6875	3817	351.8
	355.3	0.06	3.58	1.58
	Isotope: PB-214 @ 351.9			
8	579.2	2383	561	582.9
	586.7	0.02	14.36	1.93
	Isotope: TL-208 @ 583.2			
9	605.1	4704	2776	609.0
	612.6	0.04	4.08	1.79
	Isotope: XE-135 @ 608.1			
	BI-214 @ 609.3			
10	906.9	1781	519	910.4
	914.4	0.01	13.42	1.54
	Isotope: AC-228 @ 911.2			
11	958.9	2795	491	968.2
	974.4	0.02	28.91	1.86
	Isotope: RU-105 @ 969.4			

REGION OF INTEREST DATA

ROI # 1

Channel # **** Data ****

85	409	483	418	463	448
90	578	685	631	476	429
95	422	445			

Channel # **** Data ****

119					431

REGION OF INTEREST DATA

ROI # 2

Channel # **** Data ****

120	517	462	494	563	760
125	860	663	531	498	484
130	445				

ROI # 3

Channel # **** Data ****

179					589
180	509	566	827	1237	1294
185	929	634	498	479	

ROI # 4

Channel # **** Data ****

362			341	401	393
365	390	390	383	524	790
370	1057	904	589	406	342
375	349	377	337		

ROI # 5

Channel # **** Data ****

581		241	230	249	278
585	252	322	534	921	1009
590	666	386	270	264	222
595	202	242			

ROI # 6

Channel # **** Data ****

667			233	215	217
670	206	215	198	262	319
675	264	251	224	248	222
680	230	201	216		

ROI # 7

Channel # **** Data ****

694					166
695	195	202	207	207	269
700	548	1018	1352	1110	571
705	271	207	194	179	179

ROI # 8

Channel # **** Data ****

1157			101	128	115
1160	143	122	157	200	226
1165	258	207	160	142	107
1170	106	101	110		

ROI # 9

Channel # **** Data ****

1210	117	104	139	100	102
1215	502	776	863	625	376
1220	171	134	108	134	119

REGION OF INTEREST DATA

ROI # 10

Channel #	**** Data ****				
1813				85	83
1815	88	81	102	119	171
1820	230	177	145	118	88
1825	70	86	72	66	

ROI # 11

Channel #	**** Data ****				
1917			72	77	61
1920	91	79	87	85	80
1925	99	94	102	99	112
1930	82	77	66	81	127
1935	130	158	122	114	71
1940	77	60	80	76	61
1945	49	90	68	68	

MCA #1 - Canberra S100 - NOPI3711.MCA - NOPI-371-GAM1 7.0cm

Tag Number: 153
Report Group: 1/4
Group Size: 4096

Readout: Mon 30 May 1994 @ 09:37:53
Acquire Started: Fri 27 May 1994 @ 14:16:48

Elapsed Live Time: 2000.00 min.
Elapsed True Time: 2000.27 min.
Dead Time: 0.01 %

MCA Mode: PHA+
Preset Conditions: Live Time = 6000.00 min.

Calibration: 0.0000*Ch^2 + 0.4996*Ch + 1.083 keV

Area Statistics: Background Channels = 4
% Error Sigma = 1.65

Peak Statistics: Sensitivity Factor = 4.0
Expected FWHM (ch) = 2.7 - 6.0

Iso. Id. Criteria: Energy Window = +-1.300 keV
Iso. Library: C:\WINDOWS\S100\SPECTRAN.ISO

REGION OF INTEREST REPORT

ROI #	From(keV) To (keV)	Integral CPS	Area %Error	Peak(keV) FWHM(keV)	
1	43.6	1310	0	220.9	
	44.6	0.01	0.00	3.41	2606
	Isotope:	I-135 @	220.5		
		TA-182 @	222.1		
2	48.0	1296	0	225.4	
	49.0	0.01	0.00	3.41	
3	60.5	1410	0	237.9	
	61.5	0.01	0.00	3.41	2837
	Isotope:	PB-212 @	238.6		
4	65.0	1427	0	242.4	
	66.0	0.01	0.00	3.41	
5	90.5	1664	0	267.9	
	91.5	0.01	0.00	3.41	2641
	Isotope:	Y-93 @	266.9		
6	94.5	977	0	271.9	
	95.0	0.01	0.00	3.41	
7	181.9	1525	0	182.7	
	183.4	0.01	0.00	3.41	2930
8	187.9	1405	0	188.9	
	189.4	0.01	0.00	3.41	
9	291.4	998	0	292.4	
	292.9	0.01	0.00	3.41	1928
10	297.4	930	0	298.4	
	298.9	0.01	0.00	3.41	
	Isotope:	GA-73 @	297.4		
11	334.3	871	0	335.3	
	335.8	0.01	0.00	3.41	1740
	Isotope:	NP-239 @	334.3		
12	340.3	869	0	340.8	
	341.8	0.01	0.00	21458952.00	
	Isotope:	CS-136 @	340.6		
13	347.8	770	0	348.8	
	349.3	0.01	0.00	21458952.00	1529
14	353.8	759	0	354.3	
	355.3	0.01	0.00	21458952.00	
15	579.2	487	0	579.7	
	580.7	0.00	0.00	21458952.00	911
16	585.2	424	0	585.6	
	586.7	0.00	0.00	21458952.00	

REGION OF INTEREST REPORT

ROI #	From(keV) To (keV)	Integral CPS	Area %Error	Peak(keV) FWHM(keV)	
17	605.1	469	0	605.6	
	606.6	0.00	0.00	21458952.00	964
	Isotope:	CS-134 @	604.7		
		SB-125 @	606.7		
18	611.1	495	0	612.1	
	612.6	0.00	0.00	21458952.00	
19	906.9	337	0	907.9	
	908.4	0.00	0.00	21458952.00	631
20	912.9	294	0	913.4	
	914.4	0.00	0.00	21458952.00	
21	958.9	632	0	960.4	
	962.4	0.01	0.00	0.32	1184
22	970.9	552	0	973.4	
	974.4	0.00	0.00	0.40	
	Isotope:	I-135 @	972.3		
		I-134 @	974.7		
23M	1100.8	5122	240	1119.5	
	1134.7	0.04	132.93	1.89	
	Isotope:	BI-214 @	1120.3		
		SC-46 @	1120.5		