\* PEAK LOCATE REPORT

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

Detector Name: MIT1

Sample Title: Sample title.

Peak Locate Performed on: 2/15/2019 11:27:57 AM

Peak Locate From Channel: 1 Peak Locate To Channel: 8192
Peak Search Sensitivity: 3.00

Peak	Centroid	Centroid	Energy	Peak
No.	Channel	Uncertainty	(keV)	Significance
No 1 2 3 4 5 6 7 8 9 0 1 1 2 3 1 4 5 6 7 8 9 0 1 1 2 3 1 4 5 6 7 1 1 2 2 2 3 2 2 2 2 2 2 2 3 3 3 3 3 3 3	19.36 39.74 51.19 145.64 174.54 184.74 214.73 254.01 265.58 300.33 309.52 371.65 388.00 485.51 544.97 575.78 617.18 743.66 795.08 955.13 1059.38 1118.82 1181.62 1215.90 1408.21 1603.12 2044.38 2333.41 2383.98 2436.32 2520.32 2539.47 2910.85 3180.74 3337.21 3645.89 3860.23 3876.89	0.0566 0.0564 0.2754 0.4158 0.0608 0.0354 0.1468 0.2469 0.2272 0.2865 0.1129 0.1476 0.0730 0.0485 0.2833 0.3187 0.1393 0.2244 0.1405 0.0547 0.0748 0.2295 0.2272 0.1616 0.0959 0.0381 0.1255 0.0312 0.0996 0.1359 0.0452 0.2289 0.2354 0.0668 0.1118 0.2320 0.1379	4.57 9.66 12.53 36.15 43.38 45.93 53.425 66.84 77.13 96.76 121.67 96.76 121.02 143.73 154.02 143.73 154.68 2795.25 264.68 2795.82 269.01 5835.90 630.01 5835.90 630.01 5835.90 630.01 5835.90 630.01 634.83 969.01	103.04 61.52 94.29 4.27 3.11 79.47 226.98 13.63 5.14 6.63 3.92 20.76 13.75 50.74 116.94 3.81 3.05 13.61 5.48 14.44 83.49 46.27 4.81 4.79 9.52 28.29 105.13 14.85 223.78 19.99 12.11 105.84 4.59 3.38 46.47 16.82 4.19 10.43
39	4004.45	0.2474	1000.87	4.00
40	4311.20	0.1568	1077.47	7.59
41	4427.78	0.1466	1106.57	7.52

Peak	Centroid	Centroid	Energy	Peak
No.	Channel	Uncertainty	(keV)	Significance
42	4463.87	0.0550	1115.58	62.97
43	4482.91	0.1393	1120.34	10.32
44	4694.49	0.2084	1173.15	4.40
45	4818.57	0.1747	1204.11	6.11
46	4954.73	0.2250	1238.09	4.06
47	5177.13	0.2346	1293.57	3.61
48	5331.81	0.1988	1332.15	5.20
49	5513.22	0.1752	1377.39	6.38
50	5634.92	0.2353	1407.73	3.69
51	5846.68	0.0606	1460.52	47.89
52	5988.63	0.2512	1495.89	3.66
53	6356.44	0.1950	1587.52	4.83
54	6374.36	0.1632	1591.98	6.76
55	6924.20	0.2112	1728.85	4.13
56	7063.40	0.1116	1763.48	14.09
57	7396.20	0.2043	1846.24	4.09

## ? = Adjacent peak noted

Errors quoted at 1.000 sigma Peak Analysis Report

2/15/2019 11:28:03 AM

Page 1

Detector Name: MIT1

Sample Title: Sample title.

Peak Analysis Performed on: 2/15/2019 11:28:03 AM

Peak Analysis From Channel: 1
Peak Analysis To Channel: 8192

	Peak No.	ROI start	ROI end	Peak centroid	Energy (keV)	FWHM (keV)	Net Peak Area	Net Area Uncert.	Continuum Counts
M	1	13-	60	28.40	6.83	1.44	3.64E+004	176.14	7.54E+003
m	2	13-	60	39.13	9.51	1.46	6.41E+004	227.00	1.67E+004
m	3	13-	60	50.76	12.42	1.47	5.07E+004	211.83	2.91E+004
	4	140-	150	145.64	36.15	0.92	2.74E+002	169.61	1.19E+004
M	5	164-	191	175.06	43.51	0.86	4.55E+002	82.99	1.56E+004
m	6	164-	191	184.70	45.92	0.86	1.56E+004	150.79	1.69E+004
	7	204-	223	214.73	53.43	0.88	8.67E+004	412.53	2.37E+004
M	8	248-	270	253.98	63.25	0.90	1.47E+003	90.46	1.25E+004
m	9	248-	270	265.41	66.10	0.91	3.47E+002	80.73	1.38E+004
M	10	296-	318	300.33	74.84	0.74	5.91E+002	83.95	9.86E+003
m	11	296-	318	309.61	77.16	0.74	4.18E+002	79.28	1.21E+004
M	12	366-	398	371.73	92.69	1.04	3.20E+003	107.75	1.49E+004
m	13	366-	398	388.01	96.76	1.04	1.91E+003	100.05	2.00E+004
	14	477-	493	485.51	121.15	0.99	8.41E+003	279.55	2.23E+004
	15	537-	555	544.97	136.02	0.96	2.81E+004	328.61	2.35E+004
	16	571-	582	575.78	143.73	0.42	1.67E+002	192.25	1.47E+004
	17	612-	622	617.18	154.08	0.35	2.85E+001	176.46	1.30E+004
	18	732-	754	743.66	185.71	1.13	2.18E+003	328.50	2.72E+004
	19	788-	803	795.08	198.57	1.19	3.06E+002	229.87	1.75E+004
	20	947-	960	955.13	238.60	1.06	1.35E+003	194.99	1.33E+004

21 22 23 24 25 26 27 28 29 30 M 31	1052- 1065 1110- 1126 1173- 1189 1209- 1224 1401- 1420 1590- 1615 2031- 2056 2320- 2341 2371- 2396 2425- 2446 2513- 2552	1059.38 1118.82 1181.62 1215.90 1408.21 1603.12 2044.38 2333.41 2383.98 2436.32 2520.31	264.68 279.54 295.25 303.82 351.92 400.66 511.01 583.28 595.92 609.00 630.00	1.04 1.06 0.78 0.99 0.95 1.11 2.53 1.22 1.29 1.62 1.32	1.60E+004 6.71E+003 6.47E+002 2.18E+002 1.12E+003 3.32E+003 1.50E+005 9.55E+002 1.04E+005 1.99E+003 7.28E+002	221.04 223.69 206.03 196.19 206.49 245.53 444.84 119.61 347.99 122.12 46.18	1.19E+004 1.39E+004 1.33E+004 1.27E+004 1.18E+004 1.34E+004 3.56E+003 4.11E+003 3.45E+003 2.21E+003
m 32 33 34 35 36	2513 - 2552 2900 - 2917 3173 - 3194 3326 - 3349 3636 - 3659	2539.49 2910.85 3180.74 3337.21 3645.89	634.80 727.63 795.08 834.18 911.31	1.32 0.48 1.45 1.43	2.53E+004 2.03E+002 2.04E+002 5.77E+003 1.15E+003	163.09 78.36 87.11 120.39 90.99	2.34E+003 1.82E+003 1.96E+003 2.18E+003 1.78E+003
M 37 m 38 39 40 41 M 42	3846- 3889 3846- 3889 3997- 4012 4300- 4321 4417- 4441 4449- 4492	3860.22 3877.04 4004.45 4311.20 4427.78 4463.87	964.85 969.05 1000.87 1077.47 1106.57 1115.58	1.60 1.60 0.40 1.38 1.47	2.18E+002 5.99E+002 7.92E+001 4.60E+002 7.70E+002 1.13E+004	31.58 40.19 54.66 64.93 77.38 110.16	1.29E+003 1.36E+003 9.67E+002 1.00E+003 1.26E+003 1.04E+003

Page 1

	Peak No.	_	Peak centroid	Energy (keV)	FWHM (keV)	Net Peak Area	Net Area Uncert.	Continuum Counts
m	43 44 45	4449- 4492 4684- 4705 4808- 4828	4482.83 4694.49 4818.57	1120.32 1173.15 1204.11	1.65 0.63 0.44	4.75E+002 2.86E+002 2.50E+002	33.73 62.16 60.81	1.02E+003 9.53E+002 9.49E+002
	46 47	4942- 4966 5167- 5191	4954.73 5177.13	1238.09 1293.57	1.22 0.78	2.42E+002 1.73E+002	66.09 57.39	9.98E+002 7.56E+002
	48 49	5318- 5341 5504- 5521	5331.81 5513.22	1332.15 1377.39	0.52 1.37	1.24E+002 1.92E+002	52.67 38.69	6.61E+002 4.01E+002
	50 51	5625- 5640 5833- 5861	5634.92 5846.68	1407.73 1460.52	0.38	6.22E+001 7.42E+003	33.79 100.45	3.59E+002 5.78E+002
ъ.	52	5982- 5996	5988.63	1495.89	0.52	2.09E+001	27.29	2.49E+002
M m	53 54	6347 - 6384 6347 - 6384	6356.70 6374.27	1587.58 1591.96	1.85	1.41E+002 2.38E+002	19.05 22.14	3.01E+002 3.07E+002
	55 56	6914- 6931 7050- 7075	6924.20 7063.40	1728.85 1763.48	$1.41 \\ 1.43$	7.31E+001 7.05E+002	27.56 42.38	2.10E+002 2.57E+002
	57	7386- 7404	7396.20	1846.24	0.35	1.35E+002	26.65	1.70E+002

M = First peak in a multiplet region

m = Other peak in a multiplet region

F = Fitted singlet

Errors quoted at 1.000 sigma Peak Locate Analysis Report

2/15/2019 11:29:10 AM

Detector Name: MIT1

Sample Title: Sample title.

Peak Locate Performed on: 2/15/2019 11:29:10 AM

Peak Locate From Channel: 1
Peak Locate To Channel: 8192
Peak Search Sensitivity: 3.00

Peak	Centroid	Centroid	Energy	Peak
No.	Channel	Uncertainty	(keV)	Significance
NO.  1 2 3 4 5 6 7 8 9 10 11 12 13 14	19.36	0.0566	4.57	103.04
	39.74	0.0677	9.66	61.52
	51.19	0.0564	12.53	94.29
	145.64	0.2754	36.15	4.27
	174.54	0.4158	43.38	3.11
	184.74	0.0608	45.93	79.47
	214.73	0.0354	53.43	226.98
	254.01	0.1468	63.25	13.63
	265.58	0.2469	66.14	5.14
	300.33	0.2272	74.84	6.63
	309.52	0.2865	77.13	3.92
	371.65	0.1129	92.67	20.76
	388.00	0.1476	96.76	13.75
	485.51	0.0730	121.15	50.74
14 15 16	544.97 575.78	0.0730 0.0485 0.2833	136.02 143.73	116.94 3.81
17	617.18	0.3187	154.08	3.05
18	743.66	0.1393	185.71	13.61
19	795.08	0.2244	198.57	5.48

20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38	955.13 1059.38 1118.82 1181.62 1215.90 1408.21 1603.12 2044.38 2333.41 2383.98 2436.32 2520.32 2520.32 2539.47 2910.85 3180.74 3337.21 3645.89 3860.23 3876.89 4004.45	0.1405 0.0547 0.0748 0.2295 0.2272 0.1616 0.0959 0.0381 0.1255 0.0312 0.0996 0.1359 0.0452 0.2289 0.2354 0.0668 0.1118 0.2320 0.1379 0.2474	238.60 264.68 279.54 295.25 303.82 351.92 400.66 511.01 583.28 595.92 609.00 630.01 634.79 727.63 795.08 834.18 911.31 964.85 969.01 1000.87	14.44 83.49 46.27 4.81 4.79 9.52 28.29 105.13 14.85 223.78 19.99 12.11 105.84 4.59 3.38 46.47 16.82 4.19 10.43 4.00

Peak	Centroid	Centroid	Energy	Peak
No.	Channel	Uncertainty	(keV)	Significance
42 43 44 45 46 47 48 49 51 52 53	4463.87 4482.91 4694.49 4818.57 4954.73 5177.13 5331.81 5513.22 5634.92 5846.68 5988.63 6356.44 6374.36	0.0550 0.1393 0.2084 0.1747 0.2250 0.2346 0.1988 0.1752 0.2353 0.0606 0.2512 0.1950 0.1632	1115.58 1120.34 1173.15 1204.11 1238.09 1293.57 1332.15 1377.39 1407.73 1460.52 1495.89 1587.52 1591.98	62.97 10.32 4.40 6.11 4.06 3.61 5.20 6.38 3.69 47.89 3.66 4.83 6.76
55	6924.20	0.2112	1728.85	4.13
56	7063.40	0.1116	1763.48	14.09
57	7396.20	0.2043	1846.24	4.09

## ? = Adjacent peak noted

Errors quoted at 1.000 sigma Peak Analysis Report

2/15/2019 11:29:19 AM

Page 1

Detector Name: MIT1

Sample Title: Sample title.

Peak Analysis Performed on: 2/15/2019 11:29:19 AM

Peak Analysis From Channel: 1
Peak Analysis To Channel: 8192

	Peak No.	ROI start	ROI end	Peak centroid	Energy (keV)	FWHM (keV)	Net Peak Area	Net Area Uncert.	Continuum Counts
M	1	13-	60	28.40	6.83	1.44	3.64E+004	176.14	7.54E+003
m	2	13-	60	39.13	9.51	1.46	6.41E+004	227.00	1.67E+004
m	3	13-	60	50.76	12.42	1.47	5.07E+004	211.83	2.91E+004
	4	140-	150	145.64	36.15	0.92	2.74E+002	169.61	1.19E+004
M	5	164-	191	175.06	43.51	0.86	4.55E+002	82.99	1.56E+004
m	6	164-	191	184.70	45.92	0.86	1.56E+004	150.79	1.69E+004
	7	204-	223	214.73	53.43	0.88	8.67E+004	412.53	2.37E+004
M	8	248-	270	253.98	63.25	0.90	1.47E+003	90.46	1.25E+004
m	9	248-	270	265.41	66.10	0.91	3.47E+002	80.73	1.38E+004
M	10	296-	318	300.33	74.84	0.74	5.91E+002	83.95	9.86E+003
m	11	296-	318	309.61	77.16	0.74	4.18E+002	79.28	1.21E+004
M	12	366-	398	371.73	92.69	1.04	3.20E+003	107.75	1.49E+004
m	13	366-	398	388.01	96.76	1.04	1.91E+003	100.05	2.00E+004
	14	477-	493	485.51	121.15	0.99	8.41E+003	279.55	2.23E+004
	15	537-	555	544.97	136.02	0.96	2.81E+004	328.61	2.35E+004
	16	571-	582	575.78	143.73	0.42	1.67E+002	192.25	1.47E+004
	17	612-	622	617.18	154.08	0.35	2.85E+001	176.46	1.30E+004
	18	732-	754	743.66	185.71	1.13	2.18E+003	328.50	2.72E+004
	19	788-	803	795.08	198.57	1.19	3.06E+002	229.87	1.75E+004
	20	947-	960	955.13	238.60	1.06	1.35E+003	194.99	1.33E+004

21 22 23 24 25 26 27 28 29 30 M 31	1052- 1065 1110- 1126 1173- 1189 1209- 1224 1401- 1420 1590- 1615 2031- 2056 2320- 2341 2371- 2396 2425- 2446 2513- 2552	1059.38 1118.82 1181.62 1215.90 1408.21 1603.12 2044.38 2333.41 2383.98 2436.32 2520.31	264.68 279.54 295.25 303.82 351.92 400.66 511.01 583.28 595.92 609.00 630.00	1.04 1.06 0.78 0.99 0.95 1.11 2.53 1.22 1.29 1.62 1.32	1.60E+004 6.71E+003 6.47E+002 2.18E+002 1.12E+003 3.32E+003 1.50E+005 9.55E+002 1.04E+005 1.99E+003 7.28E+002	221.04 223.69 206.03 196.19 206.49 245.53 444.84 119.61 347.99 122.12 46.18	1.19E+004 1.39E+004 1.33E+004 1.27E+004 1.18E+004 1.34E+004 3.56E+003 4.11E+003 3.45E+003 2.21E+003
m 32 33 34 35 36	2513 - 2552 2900 - 2917 3173 - 3194 3326 - 3349 3636 - 3659	2539.49 2910.85 3180.74 3337.21 3645.89	634.80 727.63 795.08 834.18 911.31	1.32 0.48 1.45 1.43	2.53E+004 2.03E+002 2.04E+002 5.77E+003 1.15E+003	163.09 78.36 87.11 120.39 90.99	2.34E+003 1.82E+003 1.96E+003 2.18E+003 1.78E+003
M 37 m 38 39 40 41 M 42	3846- 3889 3846- 3889 3997- 4012 4300- 4321 4417- 4441 4449- 4492	3860.22 3877.04 4004.45 4311.20 4427.78 4463.87	964.85 969.05 1000.87 1077.47 1106.57 1115.58	1.60 1.60 0.40 1.38 1.47	2.18E+002 5.99E+002 7.92E+001 4.60E+002 7.70E+002 1.13E+004	31.58 40.19 54.66 64.93 77.38 110.16	1.29E+003 1.36E+003 9.67E+002 1.00E+003 1.26E+003 1.04E+003

	Peak No.		ROI end	Peak centroid	Energy (keV)	FWHM (keV)	Net Peak Area	Net Area Uncert.	Continuum Counts
m	44 45 46 47 48 49 50 51 52	4449- 4684- 4808- 4942- 5167- 5318- 5504- 5625- 5833- 5982- 6347-	4492 4705 4828 4966 5191 5341 5521 5640 5861 5996 6384	4482.83 4694.49 4818.57 4954.73 5177.13 5331.81 5513.22 5634.92 5846.68 5988.63 6356.70	1120.32 1173.15 1204.11 1238.09 1293.57 1332.15 1377.39 1407.73 1460.52 1495.89 1587.58	1.65 0.63 0.44 1.22 0.78 0.52 1.37 0.38 1.84 0.52 1.85	4.75E+002 2.86E+002 2.50E+002 2.42E+002 1.73E+002 1.24E+002 1.92E+002 6.22E+001 7.42E+003 2.09E+001 1.41E+002	33.73 62.16 60.81 66.09 57.39 52.67 38.69 33.79 100.45 27.29 19.05	1.02E+003 9.53E+002 9.49E+002 9.98E+002 7.56E+002 6.61E+002 4.01E+002 3.59E+002 5.78E+002 2.49E+002 3.01E+002
m	54 55 56 57	6347- 6914- 7050- 7386-	6384 6931 7075	6374.27 6924.20 7063.40 7396.20	1591.96 1728.85 1763.48 1846.24	1.85 1.41 1.43 0.35	2.38E+002 7.31E+001 7.05E+002 1.35E+002	22.14 27.56 42.38 26.65	3.07E+002 2.10E+002 2.57E+002 1.70E+002

M = First peak in a multiplet region
m = Other peak in a multiplet region
F = Fitted singlet

Errors quoted at 1.000 sigma