
***** G A M M A S P E C T R U M A N A L Y S I S *****

Filename: C:\Data\Mike Short_22.01 Shorts_Nov2018\CMC_S2.u_1.CNF

Report Generated On : 11/14/2018 1:56:58 PM

Sample Title : Sample title.

Sample Description :

Sample Identification :

Sample Type :

Sample Geometry :

Peak Locate Threshold : 3.00

Peak Locate Range (in channels) : 1 - 65535

Peak Area Range (in channels) : 1 - 65535

Identification Energy Tolerance : 1.000 keV

Sample Size : 1.000E+000 Unit

Sample Taken On :

Acquisition Started : 11/8/2018 10:02:41 AM

Live Time : 1186.5 seconds

Real Time : 1200.0 seconds

Dead Time : 1.13 %

Energy Calibration Used Done On : 11/8/2018

Efficiency Calibration Used Done On : 12/28/2017

Efficiency ID :

 ***** P E A K A N A L Y S I S R E P O R T *****

Detector Name: MIT1

Sample Title: Sample title.

Peak Analysis Performed on: 11/14/2018 1:56:59 PM

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
1	21-	36	27.28	6.56	1.44	1.99E+003	99.35	2.45E+003
2	48-	62	58.18	14.28	0.60	-2.33E-001	138.56	6.65E+003
3	678-	693	684.36	170.70	1.24	2.49E+002	124.26	5.05E+003
4	835-	851	839.68	209.50	0.34	1.60E+002	138.26	6.05E+003
5	1246-	1262	1252.83	312.71	0.82	3.12E+002	109.01	3.69E+003
6	2033-	2058	2046.19	510.89	2.67	3.29E+003	149.58	4.49E+003
7	2843-	2861	2855.28	712.96	0.32	5.26E+001	72.64	1.55E+003
8	3149-	3172	3159.27	788.86	1.94	3.71E+002	66.75	1.02E+003
9	3378-	3405	3391.56	846.84	1.77	1.02E+005	348.06	4.40E+003
10	4049-	4075	4063.47	1014.52	1.79	1.56E+003	71.21	8.02E+002
11	4359-	4380	4370.41	1091.08	1.87	3.18E+002	52.30	6.44E+002
12	4579-	4602	4588.95	1145.58	1.28	1.95E+002	53.31	6.61E+002
M 13	5176-	5220	5182.80	1293.60	2.62	3.81E+002	32.29	7.98E+002
m 14	5176-	5220	5206.78	1299.58	2.62	4.93E+002	33.60	1.06E+003
15	5468-	5497	5483.18	1368.44	1.89	2.06E+003	78.80	8.74E+002
16	6094-	6124	6109.20	1524.30	2.06	5.70E+003	100.02	8.84E+002
17	6405-	6434	6419.36	1601.47	2.77	5.11E+002	62.68	7.17E+002
18	6570-	6596	6582.31	1641.99	2.05	1.41E+003	63.22	5.87E+002
19	6935-	6950	6941.63	1731.32	0.40	9.18E+001	26.90	2.10E+002
20	7240-	7271	7256.36	1809.51	2.25	1.40E+004	129.98	5.88E+002
21	7348-	7363	7356.04	1834.27	0.75	2.20E+001	28.32	2.56E+002

M = First peak in a multiplet region

m = Other peak in a multiplet region

F = Fitted singlet

Errors quoted at 1.000 sigma

 ***** N U C L I D E I D E N T I F I C A T I O N R E P O R T *****

Sample Title: Sample title.
 Nuclide Library Used: C:\GENIE2K\CAMFILES\STDLIB.NLB

IDENTIFIED NUCLIDES

Nuclide Name	Id Confidence	Energy (keV)	Yield (%)	Activity (uCi/Unit)	Activity Uncertainty
NA-24	0.999	1368.53*	100.00	1.32121E-001	5.47184E-003
		2754.09	99.86		
CL-38	0.971	1642.42*	32.50	3.95363E-001	2.50587E-002
AR-41	1.000	1293.64*	99.16	2.47829E-002	2.11720E-003
K-42	0.979	1524.67*	17.90	2.26746E+000	7.92245E-002
MN-56	0.757	846.75*	98.90	4.57133E+000	2.86185E-002
		1810.69	27.20		
		2113.05	14.30		
AC-228	0.633	89.95	2.10		
		93.35	3.50		
		129.08	2.80		
		209.28*	4.40	4.62696E-002	3.98647E-002
		270.23	3.60		
		327.64	3.20		
		338.32	11.40		
		409.51	2.13		
		463.00	4.40		
		794.70	4.60		
		911.60	27.70		
		964.60	5.20		
		969.11	16.60		
		1587.90	3.71		

* = Energy line found in the spectrum.

@ = Energy line not used for Weighted Mean Activity

Energy Tolerance : 1.000 keV

Nuclide confidence index threshold = 0.30

Errors quoted at 1.000 sigma

***** I N T E R F E R E N C E C O R R E C T E D R E P O R T *****

Nuclide Name	Nuclide Id Confidence	Wt mean Activity (uCi/Unit)	Wt mean Activity Uncertainty
NA-24	0.999	1.321214E-001	5.471837E-003
CL-38	0.971	3.953625E-001	2.505873E-002
AR-41	1.000	2.478285E-002	2.117199E-003
K-42	0.979	2.267457E+000	7.922448E-002
MN-56	0.757	4.571332E+000	2.861848E-002
AC-228	0.633	4.626964E-002	3.986472E-002

? = nuclide is part of an undetermined solution

X = nuclide rejected by the interference analysis

@ = nuclide contains energy lines not used in Weighted Mean Activity

Errors quoted at 1.000 sigma

***** U N I D E N T I F I E D P E A K S *****

Peak Locate Performed on: 11/14/2018 1:56:59 PM
Peak Locate From Channel: 1
Peak Locate To Channel: 8192

Peak No.	Energy (keV)	Peak Size in Counts per Second	Peak CPS % Uncertainty	Peak Type	Tol. Nuclide
1	6.56	1.6743E+000	5.00		
2	14.28	-1.9630E-004	-59490.		
3	170.70	2.0979E-001	49.92		
5	312.71	2.6324E-001	34.90		
6	510.89	2.7757E+000	4.54		
7	712.96	4.4365E-002	137.99	Tol.	SB-124
8	788.86	3.1254E-001	18.00		
10	1014.52	1.3173E+000	4.56		
11	1091.08	2.6808E-001	16.44	Tol.	NB-96
12	1145.58	1.6404E-001	27.39		
m 14	1299.58	4.1528E-001	6.82		
17	1601.47	4.3035E-001	12.27		
19	1731.32	7.7360E-002	29.31		
20	1809.51	1.1762E+001	0.93		
21	1834.27	1.8514E-002	128.92		

M = First peak in a multiplet region

m = Other peak in a multiplet region

F = Fitted singlet

Errors quoted at 1.000 sigma

 ***** N U C L I D E M D A R E P O R T *****

Detector Name: MIT1
 Sample Geometry:
 Sample Title: Sample title.
 Nuclide Library Used: C:\GENIE2K\CAMFILES\STDLIB.NLB

Nuclide Name	Energy (keV)	Yield (%)	Line MDA (uCi/Unit)	Nuclide MDA (uCi/Unit)	Activity (uCi/Unit)
K-40	1460.81	10.67	1.1833E-001	1.18E-001	-1.0042E-001
SC-46	889.25	99.98	7.7533E-003	7.75E-003	3.0582E-003
	1120.51	99.99	1.0051E-002		1.6950E-003
CO-57	122.06	85.51	6.2794E-003	6.28E-003	-5.5583E-003
	136.48	10.60	5.2402E-002		-3.0767E-002
CO-60	1173.22	100.00	1.0163E-002	1.02E-002	2.7648E-003
	1332.49	100.00	1.1785E-002		2.2127E-003
SE-75	96.73	3.41	1.5140E-001	9.40E-003	-2.6544E-002
	121.11	16.70	3.2024E-002		2.5479E-003
	136.00	59.20	9.3981E-003		2.7310E-003
	198.60	1.45	4.7306E-001		1.1518E-001
	264.65	59.80	1.2326E-002		9.7627E-004
	279.53	25.20	2.9328E-002		-6.1100E-003
	303.91	1.32	5.7685E-001		-2.5408E-001
	400.65	11.40	7.9088E-002		-3.6919E-003
KR-85	513.99	0.43	3.1010E+000	3.10E+000	-1.6307E-001
KR-85M	151.18	75.30	7.6454E-003	7.65E-003	-3.7009E-003
	304.87	14.00	5.5920E-002		-5.3949E-003
SR-85	513.99	99.27	1.3433E-002	1.34E-002	-7.0643E-004
Y-88	898.02	93.40	8.3460E-003	8.35E-003	-5.9020E-004
	1836.01	99.38	1.2388E-002		7.8612E-003
CD-109	88.03	3.72	1.3741E-001	1.37E-001	1.0971E-001
SN-113	255.12	1.93	3.8777E-001	1.39E-002	6.7029E-002
	391.69	64.90	1.3950E-002		5.5378E-004
CS-134	475.35	1.46	6.9073E-001	1.01E-002	9.9481E-002
	563.23	8.38	1.4917E-001		-6.9858E-002
	569.32	15.43	8.3343E-002		7.1190E-002
	604.70	97.60	1.5386E-002		1.4478E-002
	795.84	85.40	1.0057E-002		-2.2740E-003
	801.93	8.73	1.0081E-001		-8.2487E-003
	1038.57	1.00	9.3639E-001		4.6160E-001
	1167.94	1.80	5.6245E-001		-3.6961E-001
	1365.15	3.04	5.7174E-001		-2.1054E-001
CS-136	66.91	12.50	4.3382E-002	8.85E-003	-1.1089E-002
	86.29	6.30	8.1267E-002		-1.3332E-002
	153.22	7.46	7.5638E-002		4.5187E-002
	163.89	4.61	1.2718E-001		1.5526E-001
	176.55	13.56	4.3324E-002		-2.9767E-003
	273.65	12.66	5.8356E-002		3.7582E-002
	340.57	48.50	1.6433E-002		-2.0268E-003
	818.50	99.70	8.8521E-003		-9.8394E-004
	1048.07	79.60	1.1234E-002		-6.8300E-003

Nuclide Name	Energy (keV)	Yield (%)	Line MDA (uCi/Unit)	Nuclide MDA (uCi/Unit)	Activity (uCi/Unit)
CS-136	1235.34	19.70	5.6481E-002	8.85E-003	-4.9643E-003
CS-137	661.65	85.12	1.5890E-002	1.59E-002	-8.1991E-003
CS-138	138.10	1.49	4.5932E-001	1.97E-002	5.3699E-002
	227.76	1.51	6.1373E-001		2.0083E-001
	408.98	4.66	2.4048E-001		2.2609E-002
	462.79	30.70	3.9854E-002		-1.1024E-002
	546.94	10.80	1.3400E-001		-3.0161E-003
	871.80	5.11	1.8303E-001		2.2456E-002
	1009.78	29.80	4.9970E-002		-1.3327E-002
	1147.22	1.24	1.0415E+000		6.0352E-001
	1343.59	1.14	1.2858E+000		5.2462E-001
	1435.86	76.30	1.9701E-002		-6.3855E-003
CE-139	165.85	80.35	7.3613E-003	7.36E-003	9.8854E-003
HG-203	279.19	77.30	9.5676E-003	9.57E-003	6.1392E-004
BI-214	609.31	46.30	3.2775E-002	3.28E-002	6.4775E-003
	768.36	5.04	1.6983E-001		5.7467E-002
	806.17	1.23	7.2853E-001		1.2614E-001
	934.06	3.21	2.5349E-001		-7.8108E-002
	1120.29	15.10	6.6539E-002		1.1221E-002
	1155.19	1.69	6.1803E-001		1.9664E-001
	1238.11	5.94	1.8756E-001		-6.1095E-002
	1280.96	1.47	8.0659E-001		2.6742E-003
	1377.67	4.11	3.5432E-001		9.8566E-003
	1385.31	0.78	1.5446E+000		-6.0770E-001
	1401.50	1.39	8.6332E-001		1.8226E-001
	1407.98	2.48	4.9389E-001		1.3096E-001
	1509.19	2.19	6.3455E-001		-4.2508E-001
	1661.28	1.15	1.1242E+000		1.4625E+000
	1729.60	3.05	3.6701E-001		-1.2249E-001
	1764.49	15.80	7.3535E-002		1.0780E-001
	1847.44	2.12	5.7541E-001		3.7788E-002
>	2118.54	1.21	0.0000E+000		0.0000E+000
PB-214	74.81	6.33	8.3264E-002	2.20E-002	2.0429E-002
	77.11	10.70	4.8971E-002		2.1082E-002
	87.20	3.70	1.3810E-001		5.4789E-003
	89.80	1.03	4.9164E-001		-2.8241E-001
	241.98	7.49	1.0198E-001		1.0971E-001
	295.21	19.20	3.9445E-002		5.8555E-002
	351.92	37.20	2.1952E-002		6.1746E-003
	785.91	1.10	8.4220E-001		-1.6714E-001

+ = Nuclide identified during the nuclide identification

* = Energy line found in the spectrum

> = Calculated MDA is zero due to zero counts in the region, or the region is outside the spectrum, or has not been calculated

@ = Half-life too short to be able to perform the decay correction