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

Filename: C:\GENIE2K\CAMFILES_Madu\ALMERA_2019\Sample_#1-A-(15k)_2019_

Report Generated On : 27/09/2019 14:36:18

Sample Title : Almera
Sample Description : Sample #4 Shrimp as is
Sample Identification : Almera
Sample Type :
Sample Geometry :

Peak Locate Threshold : 3.00
Peak Locate Range (in channels) : 1 - 65535
Peak Area Range (in channels) : 1 - 8192
Identification Energy Tolerance : 1.500 keV

Sample Size : 1.000E+000 g

Sample Taken On :
Acquisition Started : 10/07/2019 11:59:56

Live Time : 14421.1 seconds
Real Time : 14434.3 seconds

Dead Time : 0.09 %

Energy Calibration Used Done On : 04/03/2013
Efficiency Calibration Used Done On : 08/11/2010
Efficiency ID : F100AI3

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

Detector Name: DET01

Sample Title: Almera

Peak Analysis Performed on: 27/09/2019 14:36:19

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	105-	112	108.51	21.31	0.56	6.98E+001	15.43	6.72E+001
M	2	374-	399	379.37	74.81	0.70	9.04E+001	14.30	1.62E+002
m	3	374-	399	391.18	77.14	0.71	1.16E+002	15.85	1.89E+002
M	4	451-	479	455.93	89.93	1.14	6.69E+001	15.30	2.15E+002
m	5	451-	479	470.40	92.79	1.15	2.43E+002	21.86	2.77E+002
	6	650-	661	653.25	128.91	0.20	3.74E+001	21.13	1.63E+002
	7	933-	947	941.46	185.83	0.73	9.14E+001	24.71	1.79E+002
	8	1053-	1067	1059.52	209.15	0.52	8.95E+001	21.74	1.32E+002
	9	1202-	1214	1208.06	238.49	0.37	1.24E+002	21.45	1.26E+002
	10	1489-	1501	1494.47	295.06	0.33	5.94E+001	16.99	8.46E+001
	11	1655-	1666	1660.20	327.79	0.47	2.17E+001	14.77	7.73E+001
	12	1703-	1721	1712.35	338.09	0.85	1.69E+002	22.50	9.98E+001
	13	1774-	1789	1781.63	351.78	0.61	1.23E+002	20.37	9.73E+001
	14	2335-	2351	2344.04	462.86	1.20	3.71E+001	16.57	7.59E+001
	15	2875-	2889	2881.08	568.93	0.46	3.49E+001	13.86	5.41E+001
	16	2946-	2958	2952.07	582.95	0.59	1.53E+001	12.01	4.77E+001
M	17	3053-	3094	3061.87	604.64	1.09	2.69E+002	17.93	6.00E+001
m	18	3053-	3094	3085.13	609.24	1.09	8.22E+001	11.28	6.89E+001
	19	3341-	3361	3349.75	661.50	1.09	1.99E+002	18.79	4.29E+001
	20	4019-	4039	4029.34	795.73	1.37	1.77E+002	19.19	5.26E+001
	21	4602-	4626	4614.71	911.35	1.01	1.45E+002	17.05	3.47E+001
	22	4896-	4917	4907.11	969.10	0.72	1.02E+002	12.00	1.11E+001

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: Almera

Nuclide Library Used: C:\GENIE2K\CAMFILES\ALM18.NLB

..... IDENTIFIED NUCLIDES

Nuclide Name	Id Confidence	Energy (keV)	Yield (%)	Activity (Bq /g)	Activity Uncertainty
CS-134	0.830	475.35	1.46		
		563.23	8.38		
		569.32*	15.43	1.07563E+000	4.27816E-001
		604.70*	97.60	1.37422E+000	9.57090E-002
		795.84*	85.40	1.29322E+000	1.42437E-001
		801.93	8.73		
		1038.57	1.00		
		1167.94	1.80		
		1365.15	3.04		
CS-137	0.998	661.66*	85.21	1.25165E+000	1.20865E-001

* = Energy line found in the spectrum.

@ = Energy line not used for Weighted Mean Activity

Energy Tolerance : 1.500 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 (Bq /g)	Wt mean Activity Uncertainty
CS-134	0.830	1.340266E+000	7.861858E-002
CS-137	0.998	1.251650E+000	1.208645E-001

? = 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: 27/09/2019 14:36:18
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	21.31	9.5710E-004	115.28		
M 2	74.81	6.2702E-003	15.81		
m 3	77.14	6.9960E-003	16.13		
M 4	89.93	4.6362E-003	22.89		
m 5	92.79	8.6752E-003	18.16		
6	128.91	2.5930E-003	56.51		
7	185.83	1.5904E-003	110.54		
8	209.15	6.2069E-003	24.29		
9	238.49	6.6021E-003	22.97		
10	295.06	4.1198E-003	28.60		
11	327.79	1.5051E-003	68.06		
12	338.09	1.1731E-002	13.30		
13	351.78	7.8712E-003	18.11		
14	462.86	2.5706E-003	44.71		
16	582.95	4.0532E-004	209.88		
m 18	609.24	5.0413E-003	15.96		
21	911.35	9.7661E-003	12.21		
22	969.10	6.8532E-003	12.27		

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: DET01
 Sample Geometry:
 Sample Title: Almera
 Nuclide Library Used: C:\GENIE2K\CAMFILES\ALM18.NLB

	Nuclide Name	Energy (keV)	Yield (%)	Line MDA (Bq /g)	Nuclide MDA (Bq /g)	Activity (Bq /g)
	NA-22	511.00	179.79	2.2952E-001	2.30E-001	4.3099E-00
		1274.54	99.94	3.0618E-001		7.7870E-00
	K-40	1460.75	10.67	4.7165E+000	4.72E+000	4.2509E+00
	CO-58	810.78	99.45	2.9485E-001	2.95E-001	1.4363E-00
>		1674.73	0.52	0.0000E+000		0.0000E+00
	CO-60	1173.23	99.85	3.4867E-001	3.45E-001	-7.1991E-00
		1332.50	99.98	3.4505E-001		-9.6810E-00
	I-131	80.18	2.62	5.8275E+000	3.00E-001	3.8741E-00
		284.30	6.06	3.8945E+000		-1.2038E+00
		364.48	81.20	3.0043E-001		-5.1096E-00
		636.97	7.27	3.6778E+000		-2.8662E-00
		722.89	1.80	1.6441E+001		-1.1553E+00
	BA-133	53.16	2.20	5.1171E+000	4.23E-001	2.1637E+00
		79.62	2.62	5.9365E+000		4.0924E-00
		81.00	34.10	4.2284E-001		3.2912E-00
		160.61	0.64	3.0681E+001		2.6574E+00
		223.23	0.45	5.1699E+001		1.9048E+00
		276.40	7.16	3.2557E+000		-1.9843E+00
		302.85	18.33	1.2239E+000		-1.7923E-00
		356.02	62.05	4.6396E-001		-5.7795E-00
		383.85	8.94	2.9472E+000		2.7620E+00
+	CS-134	475.35	1.46	1.7684E+001	1.98E-001	6.2945E+00
		563.23	8.38	3.7170E+000		8.6858E-00
		569.32*	15.43	1.3550E+000		1.0756E+00
		604.70*	97.60	1.9806E-001		1.3742E+00
		795.84*	85.40	3.5092E-001		1.2932E+00
		801.93	8.73	4.7349E+000		6.2315E-00
		1038.57	1.00	3.0173E+001		1.5860E+00
		1167.94	1.80	1.8270E+001		-2.6429E+00
		1365.15	3.04	1.2120E+001		9.0797E+00
	CS-136	66.88	4.79	2.5347E+000	2.78E-001	-3.8087E+00
		86.36	5.18	2.9564E+000		7.5321E-00
		153.25	5.75	3.4565E+000		3.0952E+00
		163.92	3.39	5.9963E+000		9.8025E-00
		176.60	10.00	2.2198E+000		-8.1453E-00
		273.65	11.10	2.1986E+000		-3.0350E-00
		340.55	42.20	7.4859E-001		1.3959E+00
		818.51	99.70	2.7769E-001		-1.5243E-00
		1048.07	80.00	4.0474E-001		5.1299E-00
		1235.36	20.00	1.5271E+000		1.4863E-00
+	CS-137	661.66*	85.21	2.7386E-001	2.74E-001	1.2516E+00
	PB-210	46.54	4.06	2.8000E+000	2.80E+000	1.2348E+00

Nuclide Name	Energy (keV)	Yield (%)	Line MDA (Bq /g)	Nuclide MDA (Bq /g)	Activity (Bq /g)
AM-241	26.34	2.31	8.8431E+000	3.09E-001	-6.5186E+00
	59.54	35.92	3.0877E-001		-3.1103E-00

+ = Nuclide identified during the nuclide identification

* = Energy line found in the spectrum

> = MDA value not calculated

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