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

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Spectrum file Analysed: fukushima\_03.dat : 0  
 Sample Title : Fukushim 03  
 Analysed by : basama  
 Sample ID : Sample type:  
 Location :

Measured on Detector: 1 Geometry: 1 MCA: 0 ADC: 0  
 Live Time: 3172 Secs. True Time: 3600 Secs. Dead Time: 11.90 %

Spectrum saved on 9-Apr-2012 at 14:53 Collected on 8-Apr-2012 at 11:10  
 Sample Taken on 10-Jul-2011 at 11:10 Decayed 273 Days, 0 mins.  
 Sample Size is 0.4893 kg  
 Sampling Uncertainty 5.0 % Calibration Uncertainty 10.0 %

Geometry Description: ZipLock  
 Calibration stored in the Spectral data file was used  
 Energy Calibration Performed on 9-Apr-2012 at 14:59  
 Peak Shape Calibration Performed on 7-Apr-2012 at 17:23  
 Efficiency Calibration Performed on 7-Apr-2012 at 17:26

## Analysis Parameters

Energy Tolerance: 25.00 Kev. Confidence Discriminator: 0.700  
 Peak Area Error Sigma value: 1.645 Activity Error Sigma value: 2.000  
 LOD Calculation Sigma value: 2.000

Library driven Peak Search included using Library File: NaI\_basama.lib

Background Subtraction performed using data from: air.bkg

Created from Spectrum Filename: air.dat

Spectrum Title:

Data saved on: 7-Apr-2012 at 11:48 Count-Time was 6427 Seconds

DENS Density Correction was performed  
 Calibration Uncertainty was not included  
 Reported Activity values were rounded

NOPK No Pulser Peak was found

The Pulser Correction of Count Rate was PCOR %

The Pulser Peak has drifted up by PCHU channels

The Pulser Peak has drifted down by PCHD channels

The Pulser Peak FWHM was PFWH keV, the calibration value was PCFW keV.

The Pulser Peak was calibrated on DATP at TIMP

Analysis Library Used: NaI\_basama.lib

LOD Library Used: NaI\_basama.lib

FitzPeaks Version: 3.50 18th May 2011

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The following Radionuclides were found :-

| Nuclide | Confidence Value | Activity - Bq/kg |                 |
|---------|------------------|------------------|-----------------|
|         |                  | Measured         | Decay Corrected |

Cs-134 ! 0.99 4.25e+03 +/- 5.50 % 5.46e+03 +/- 3.00e+02  
 Activation product: Cs-133(n,g)

Cs-137 1.00 6.25e+03 +/- 5.80 % 6.36e+03 +/- 3.70e+02  
 Calibration Source; Fission Product

K-40 1.00 3.07e+03 +/- 13.00 % 3.07e+03 +/- 3.80e+02  
 Natural source

! represents:- All Peak Activity values were inconsistant.

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

Spectrum file Analysed: fukushima\_03.dat : Fukushima 03

| Nuclide  | Peak Energy | Library Energy | Region  | Yield | FWHM  | Goodness of Fit | Peak Signif | Activity Bq / kg |
|----------|-------------|----------------|---------|-------|-------|-----------------|-------------|------------------|
| Cs-134   | 556.30      | 567.14         | 299 420 | 23.75 | 45.08 | 1.8             | 10.0        | 7.33e+03         |
| 7.26e+02 | 597.19      | 604.71         | 299 420 | 97.63 | 46.66 | 1.8             | 45.3        | 6.45e+03         |
| 1.91e+02 | 796.25      | 796.47         | 425 499 | 94.01 | 52.66 | 1.3             | 72.4        | 4.51e+03         |
| 1.38e+02 | 657.16      | 661.66         | 299 420 | 85.10 | 49.01 | 1.8             | 10.0        | 6.36e+03         |
| Cs-137   | 657.16      | 661.66         | 299 420 | 85.10 | 49.01 | 1.8             | 10.0        | 6.36e+03         |
| 1.81e+02 | 1461.59     | 1460.80        | 734 881 | 10.70 | 74.04 | 1.0             | 21.1        | 3.07e+03         |
| K-40     | 1461.59     | 1460.80        | 734 881 | 10.70 | 74.04 | 1.0             | 21.1        | 3.07e+03         |
| 3.35e+02 |             |                |         |       |       |                 |             |                  |

9-Apr-2012 15:27

L I M I T O F D E T E C T I O N R E P O R T

Sample: Fukushima 03  
 Sample Taken on 10-Jul-2011 at 11:10

Nuclide Limit of Determination - Bq/kg  
 Measured Decay Corrected

The Sample age is > 20 times the Halflife of I-131

9-Apr-2012 15:27

S U M M A R Y R E P O R T

Sample: Fukushim 03  
Sample Taken on 10-Jul-2011 at 11:10

| Nuclide  | Activity - Bq/kg |                       |
|----------|------------------|-----------------------|
|          | Measured         | Decay Corrected       |
| Cs-134 : | 4.25e+03         | 5.46e+03 +/- 3.00e+02 |
| Cs-137 : | 6.25e+03         | 6.36e+03 +/- 3.70e+02 |
| I-131 :  | 0.00e+00         | 0.00e+00              |
| K-40 :   | 3.07e+03         | 3.07e+03 +/- 3.80e+02 |

End of Report