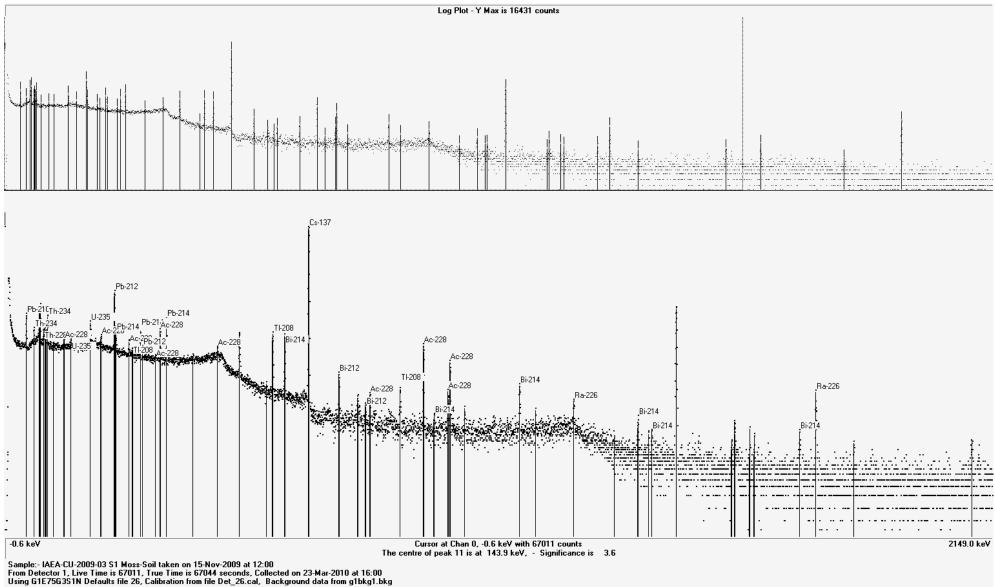


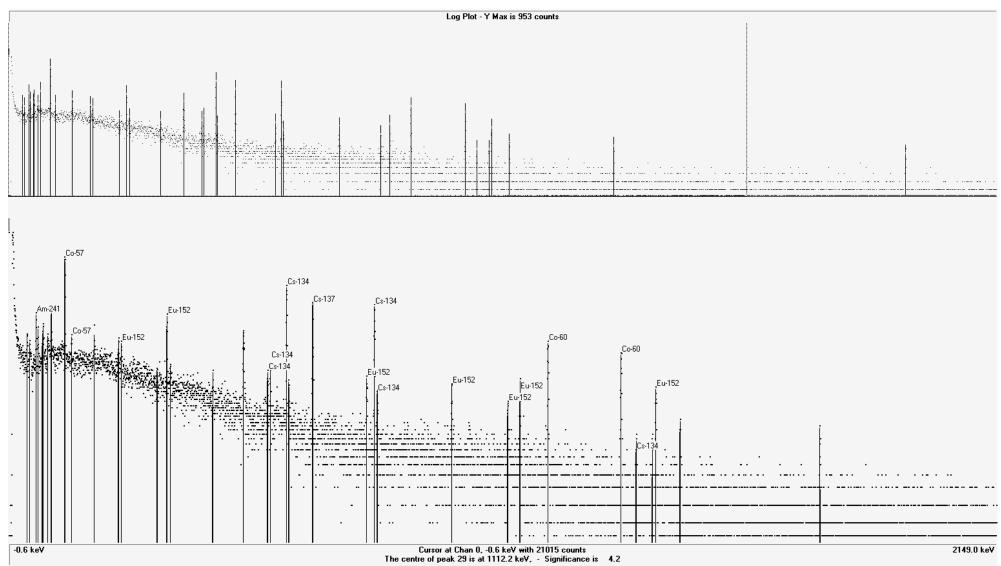
The IAEA-CU-2009-03 world wide open proficiency test on the determination of natural and artificial radionuclides in moss-soil and spiked water

Measured Gamma Spectrums and Calibration Plots Laboratory Code: 124 (CuNo: 13949)



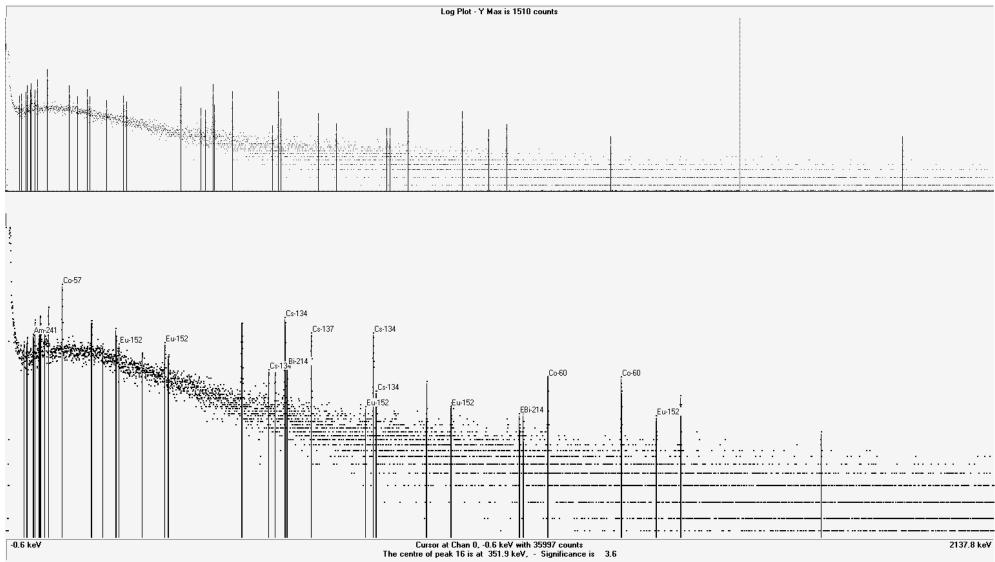
#### PT: IAEA-CU-2009-03 S1. MOSS-SOIL GAMMA SPECTRUM (EXPANDED)





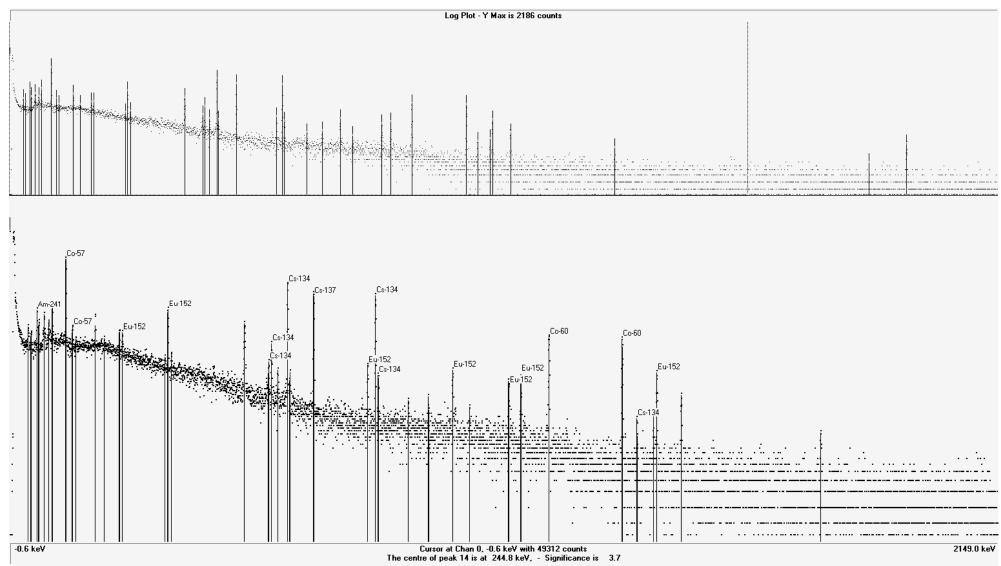
#### PT: IAEA-CU-2009-03 S2. SPIKED WATER GAMMA SPECTRUM (EXPANDED)

Sample:- IAEA-CU-2009-03 S2 Spiked Water taken on 15-Nov-2009 at 12:00 From Detector 1, Live Time is 21015, True Time is 21023 seconds, Collected on 24-Mar-2010 at 16:00 Using G1E75G20S1N Defaults file 26, Calibration from file Det\_26.cal, Background data from g1bkg1.bkg



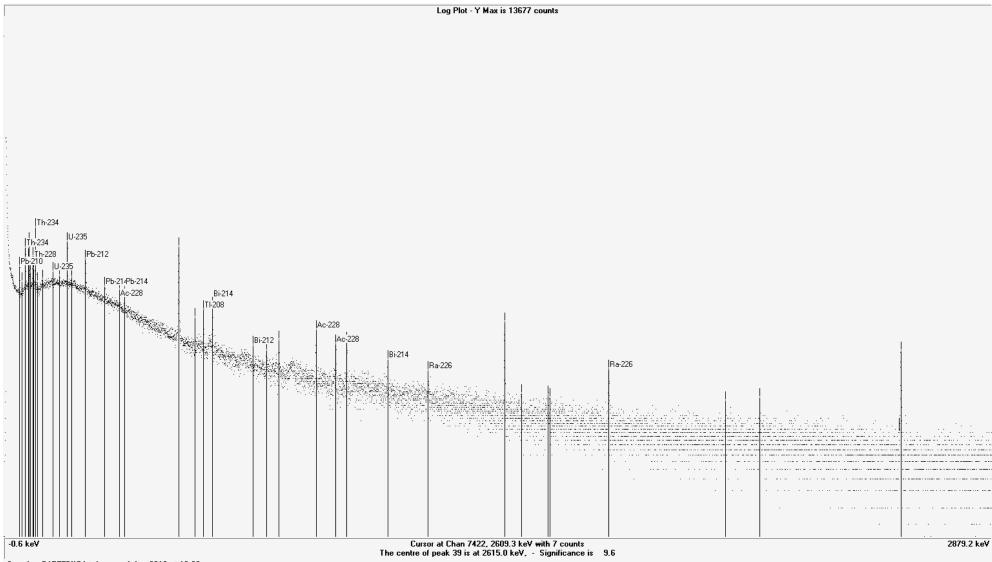
### PT: IAEA-CU-2009-03 S3. SPIKED WATER GAMMA SPECTRUM (EXPANDED)

Sample:- IAEA-CU-2009-03 S3 Spiked Water taken on 15-Nov-2009 at 12:00 From Detector 1, Live Time is 35997, True Time is 36013 seconds, Collected on 31-Mar-2010 at 16:00 Using G1E75G20S1N Defaults file 26, Calibration from file Det\_26.cal, Background data from g1bkg1.bkg



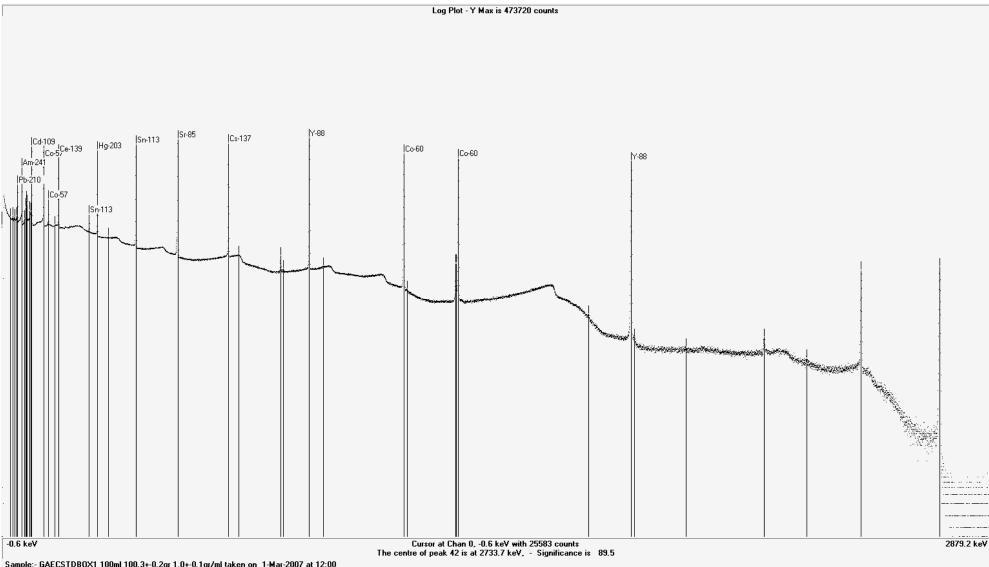
#### PT: IAEA-CU-2009-03 S4. SPIKED WATER GAMMA SPECTRUM (EXPANDED)

Sample:- IAEA-CU-2009-03 S4 Spiked Water taken on 15-Nov-2009 at 12:00 From Detector 1, Live Time is 49312, True Time is 49333 seconds, Collected on 1-Apr-2010 at 16:00 Using G1E75G20S1N Defaults file 26, Calibration from file Det\_26.cal, Background data from g1bkg1.bkg



### PT: IAEA-CU-2009-03. ENVIRONMENTAL BACKGROUND GAMMA SPECTRUM

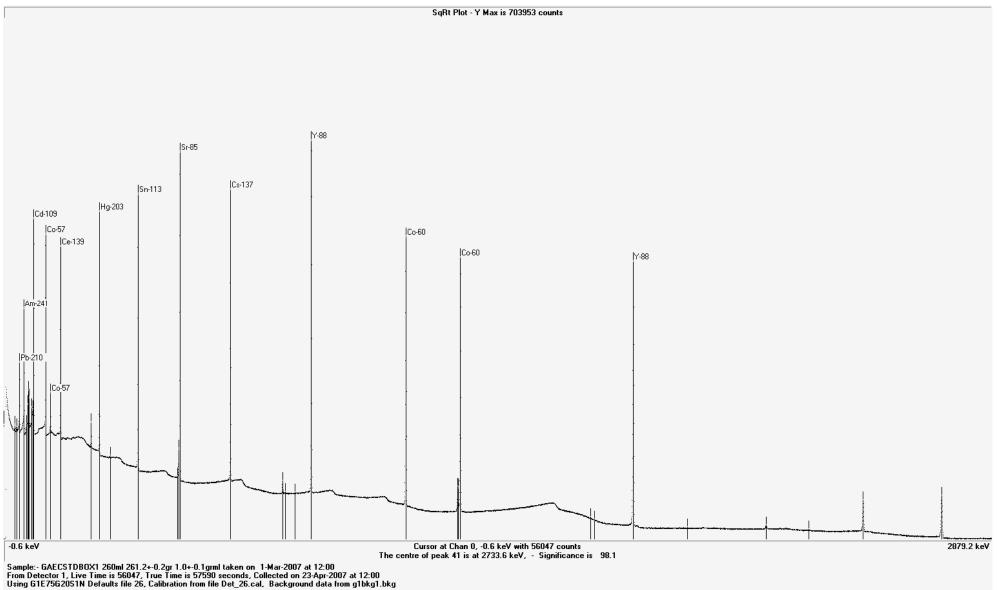
Sample:- G1E75BKG1 taken on 1-Jan-2010 at 12:00 From Detector 1, Live Time is 242517, True Time is 242597 seconds, Collected on 1-Jan-2010 at 12:00 Using G1E75G20S1N Defaults file 26, Calibration from file Det\_26.cal



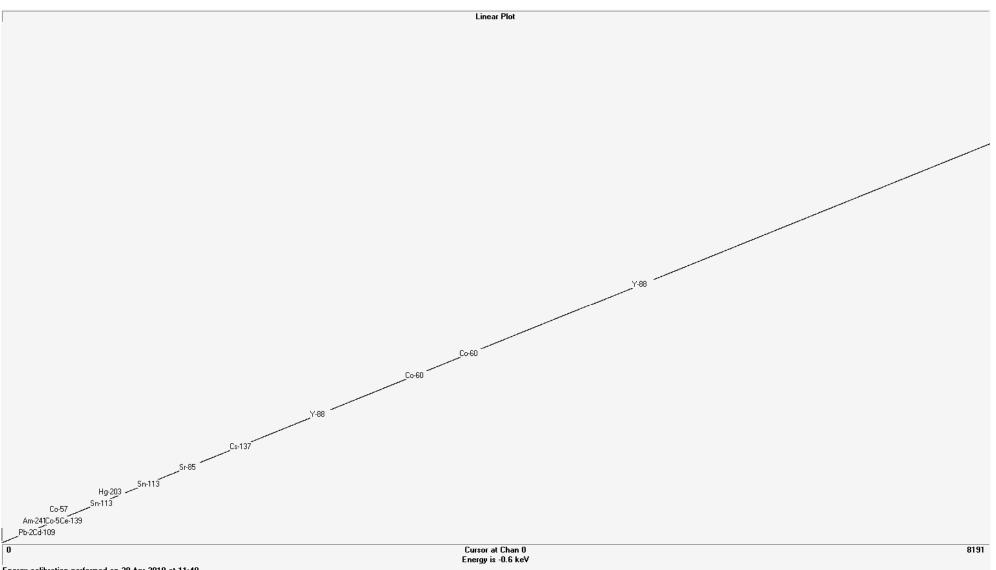
#### TYPICAL MULTINUCLIDE CALIBRATION STANDARD SOURCE USED IN OUR LABORATORY FOR SOIL'S GEOMETRY

Sample:- GAECSTDBOX1 100ml 100.3+-0.2gr 1.0+-0.1gr/ml taken on 1-Mar-2007 at 12:00 From Detector 1, Live Time is 25583, True Time is 26554 seconds, Collected on 4-May-2007 at 12:00 Using G1E75G3S1N Defaults file 26, Calibration from file Det\_26.cal, Background data from g1bkg1.bkg

#### TYPICAL MULTINUCLIDE CALIBRATION STANDARD SOURCE USED IN OUR LABORATORY FOR SOLUTION/WATER'S GEOMETRY

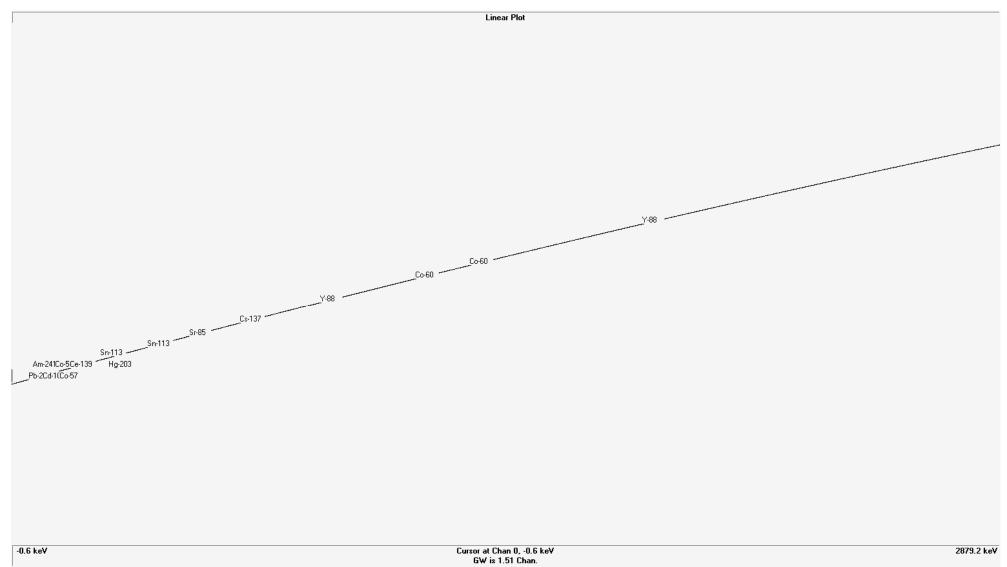


### TYPICAL ENERGY'S CALIBRATION CURVE



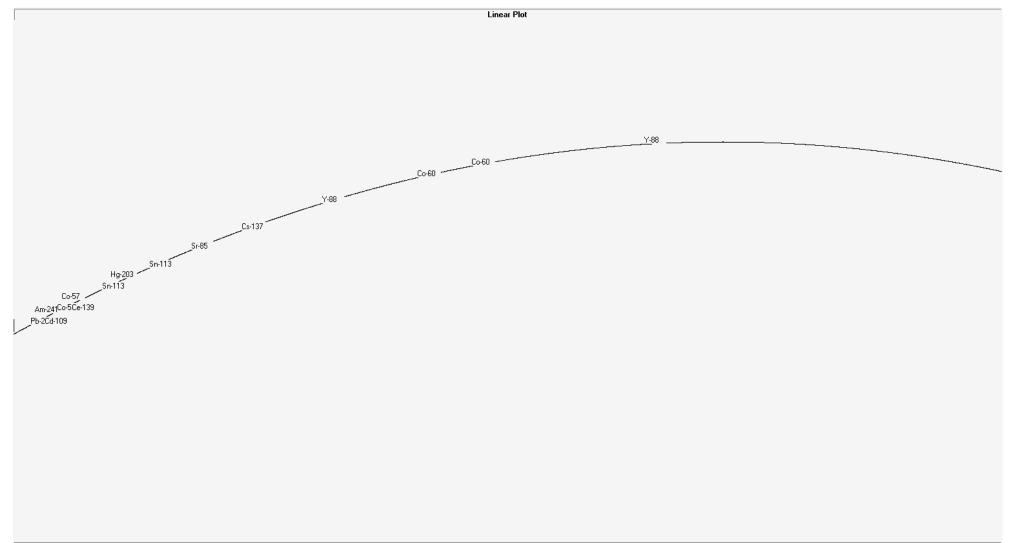
Energy calibration performed on 28-Apr-2010 at 11:40 Calibration coefficients :- -5.7838e-001 + 3.5230e-001 \* Ch + -8.7908e-008 \* Ch^2

## TYPICAL (GAUSSIAN) WIDTH'S CALIBRATION CURVE



Shape calibration performed on 28-Apr-2010 at 14:30 Calibration coefficients :- 1.5087e+000 + 8.9312e-004 \* Ch + -3.6813e-008 \* Ch^2

## TYPICAL LOW ENERGY'S TAILING CALIBRATION CURVE

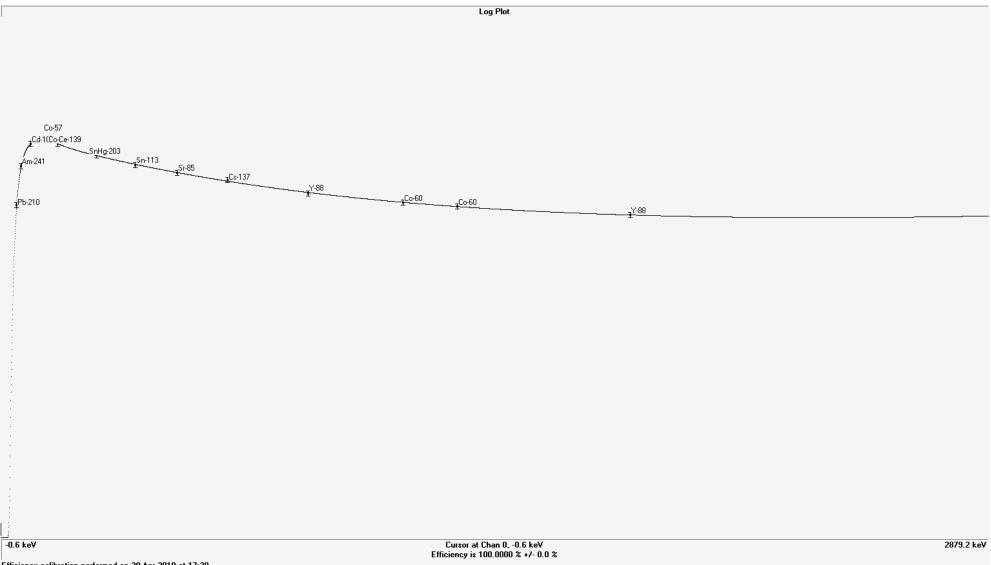


-0.6 keV

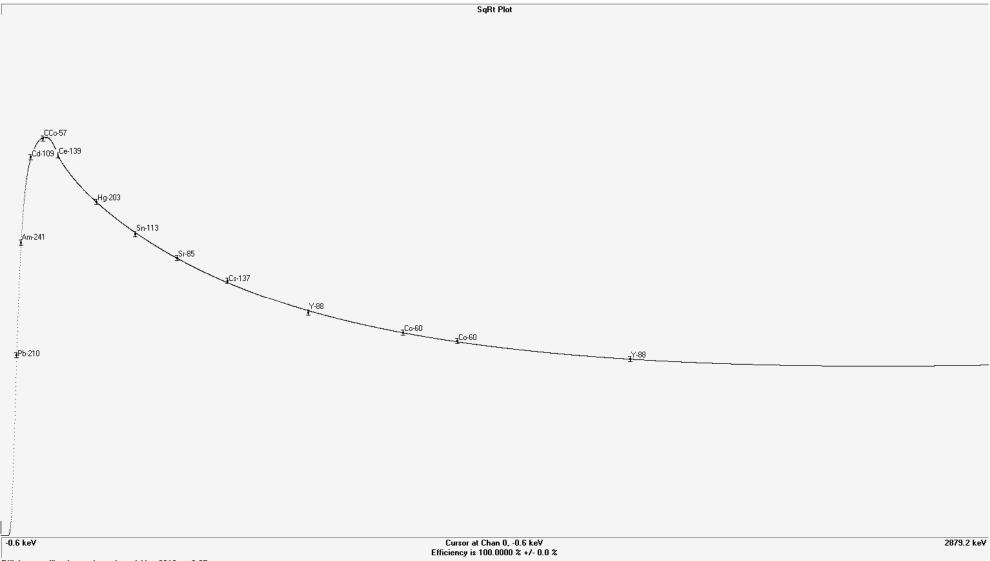
Cursor at Chan 0, -0.6 ke¥ Tailing is 2.42 Chan. 2879.2 keV

Shape calibration performed on 28-Apr-2010 at 14:30 Calibration coefficients :- 2.4218e+000 + 2.1826e-003 \* Ch + -5.2766e-007 \* Ch^2

## TYPICAL EFFICIENCY'S CALIBRATION CURVE FOR SOIL'S GEOMETRY



Efficiency calibration performed on 30-Apr-2010 at 17:38 Crossover Energy is 164.8 keV, Low Energy order is 5, High Energy order is 5, Geometry 3 Description:- BOX1 100ml 100.3+-0.2gr 1.0+-0.1gr/ml, Default Bkg file :- g1bkg1.bkg Calibration source uncertainty : 3.00 %



# TYPICAL EFFICIENCY'S CALIBRATION CURVE FOR SOLUTION/WATER'S GEOMETRY

Efficiency calibration performed on 1-May-2010 at 3:25 Crossover Energy is 164.8 keV, Low Energy order is 5, High Energy order is 5, Geometry 20 Description:- BOX1 260ml 261.2+-0.2gr 1.0+-0.1gr/ml, Default Bkg file :- g1bkg1.bkg Calibration source uncertainty: 2.00 %