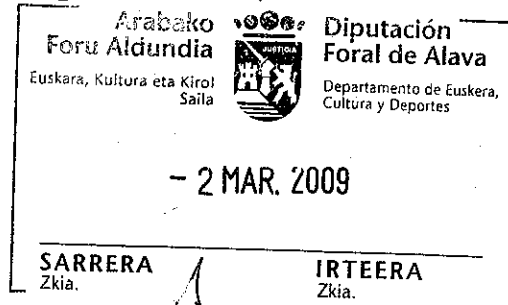




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27.02.2009

Dear Mrs López de Lacalle Arizti,


On your request I studied the last 6 pages of the report by Rubén Cerdán "Análisis de pátina de deposición superficial de contaminantes en muestras arqueológicas de cerámica común, T.S.H. y óseas" march- april 2006 as published in your alava.net on the first item : Informes Iruña-Veleia.

I confirm that the figures shown on pages 62-67 of this report all show the same spectra that we distribute since about 1992 as a sample file named "example.spe" with the software GANAAS, a gamma evaluation software by the IAEA that can be obtained free from us.

The high energy part of the spectra shown has a rather low statistics, there are only a few counts per channel. The nature behaves very randomly when acquiring only a few counts from a radioactive source. So it is completely impossible to get a second spectra with exactly the same shape as shown in this spectra. Moreover, if you use a bit different acquisition time or have a sample of radioactivity with a bit different components or even if it is a few days older, you will get a different spectra. I am absolutely sure that the spectra shown in this pdf file is a copy of the spectra in our datasheet.

GANAAS is a DOS software for analysis of Gamma spectra that was developed at IAEA about 1990. You see on page 67 of the report beside the figure the date of the acquisition, Oct.31, 1990. Start time of the measurement is 10:16. The realtime of the acquisition is 50469 seconds, live time is 50400 sec. We show the same spectra with exactly the same numbers in a datasheet of the GANAAS software that can be found in our website [www.fastcomtec.com](http://www.fastcomtec.com). It is a spectra obtained using a Germanium detector and a mix of some radioactive sources. I can see some common radioactive isotopes like Ba 133, Cs 137 and Co 57. The most right peak is at 1836 keV, it is from Y 88 (halflife 106 d). At the low energy side is a cutoff at 15.5 keV, there are no data below that energy. So there are no K and L X-rays from Ca, Ti and Ba in that spectra at 4.5...4.8 keV as mentioned on page 67. of Rubén Cerdán's report.

With best regards,

  
Dr. Wolfgang Wilhelm  
FAST ComTec GmbH