

Last weekend my friend antiquary agreed once more to let me examine a small antique ceramic piece coming from China and to share the result with the group.

It represents a small bowl with some fruits disposed in a peculiar way, characteristic of the burial offerings of the Ming period.

The custom of burying grave goods with dead bodies lasted a long time in China, so the artefacts that remain range from Neolithic times (about 5000 BC) to the end of the Ming dynasty (1644).

Often pottery figures representing the attendants, servants and entertainers of the deceased were buried with the corpse. Some of them represent tables with ceramic foods and cakes.

I found this image in the web site of “Ming Gallery”, Louisville, KY.



In the back two corners you will see two of the mentioned ceramic bowls, with five white fruits each.

My friend has only one similar bowl. with green fruits.

We were both curious to see what element/s were used for the green glazing.



This is the small ceramic bowl with five green fruits.

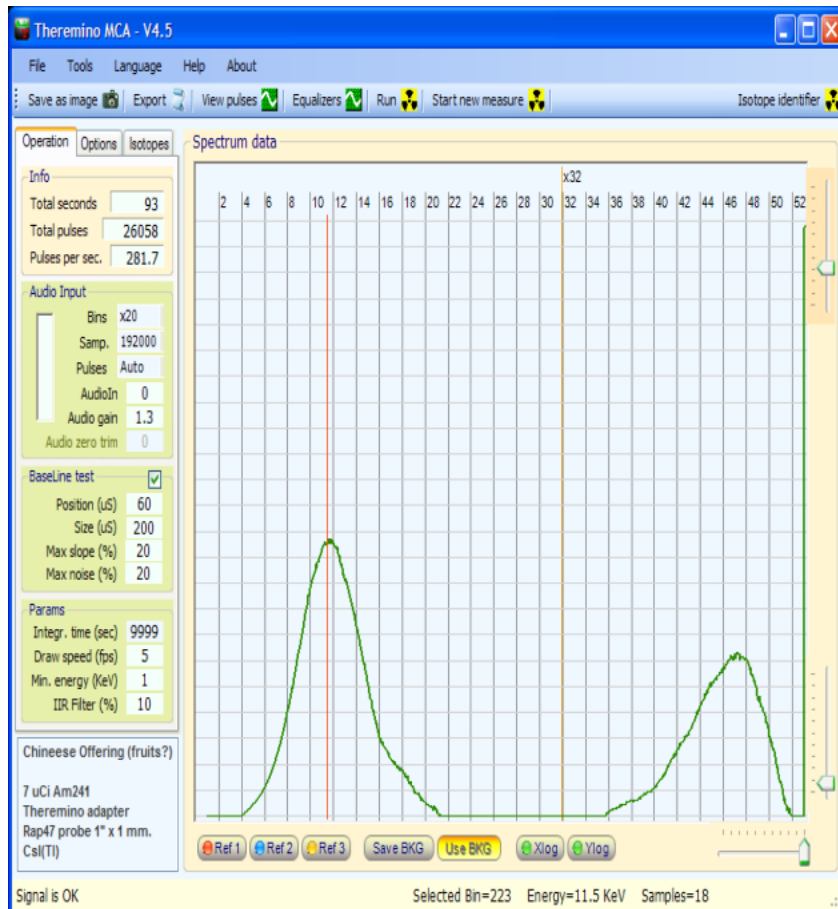
Excitation source: ^{70}Cu Am241

Probe: RAP47 1"x 1 mm. CsI(Tl)

Theremino adapter

Theremino x.xx software.

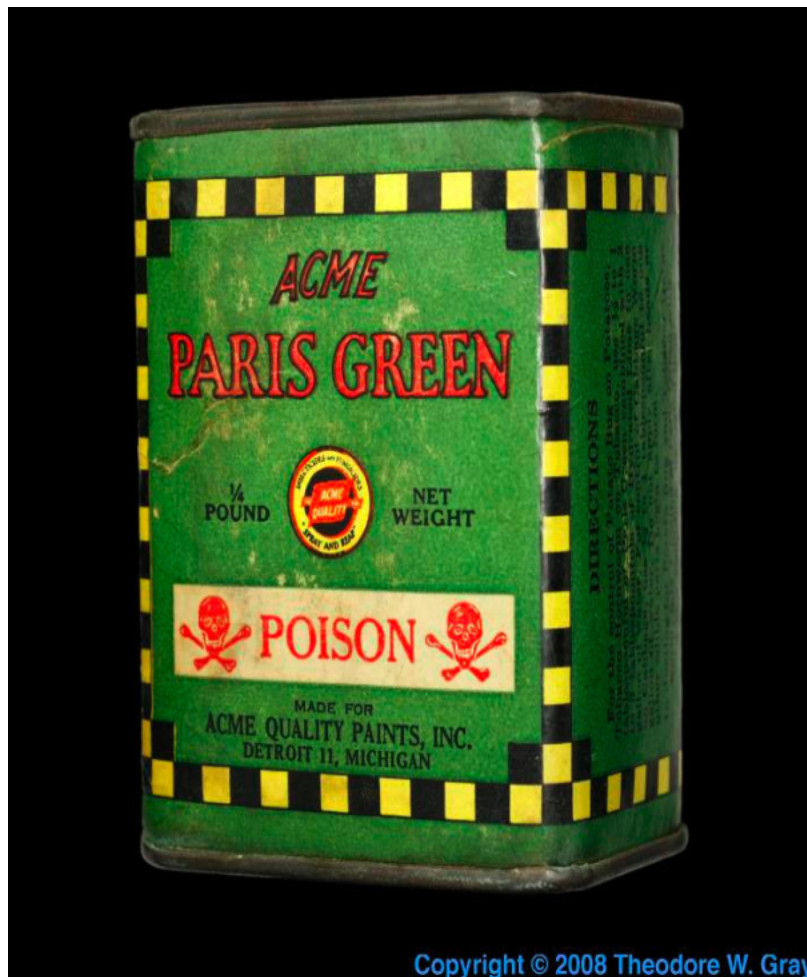
Calibration: Am241 (59 keV) and x rays from copper and silver (8 keV and 22 keV)



I found what seems to be the K shell of Arsenic.

Arsenic has been used for centuries in pigments, often in union with Copper, for the production of shiny greens, so this discovery seems to make sense.

Paris Green (copper acetate triarsenite) was once a popular pigment,



Scheele's Green (copper arsenite) was used as green pigment for wallpaper and paintings.



This analysis has however to be deepened, because the graph shows the presence of other tiny peaks around 17 keV., not resolved by this probe.

Next time I will try the “resolution compensation” of the Thermo program to see if it will be possible to get a better understanding of the other elements in the ceramic.

I will post the result/s, if any.