

Fiona Macalister
Ancient Monuments Lab

These were analysed semi quantitatively using X-ray fluorescence, and were found to form four major groups, according to the elements present and the relative peak heights of these elements. Most of the samples may be described as gun metals and brasses.

1) a. Cu, Fe, Zn, Pb, Sn, Ca.

Nos. 354 (A.M. 7816166), 354 (A.M. 7816163) - high tin content.

b. Cu, Fe, Zn, Pb, Ca, Sn.

No. 354 (A.M. 7816160)

c. Cu, Fe, Zn, Pb, Ca.

No. 321

2) Cu, Zn, Fe, Pb, Ca.

Nos. 354 (A.M. 7816169), 354 (A.M. 7816168) - trace of tin, 354 (A.M. 7816167) - trace of tin.

3) Cu, Pb, Fe, Ca.

Nos. 452, 160 - trace of tin.

4) Others.

Nos. 842 - Cu, Fe, Ca, trace of Pb, 820 - Cu, Ca, Fe, Pb, 576 - Ca, Fe, fuel ash slag.

NOTE : Many of the samples are in the form of 'dribbles' and may have been produced from spilt molten metal or may even be the result of building debris which had fallen into a fire.

The iron and calcium detected in the analyses are from the soil and corrosion products and are not fundamental constituents of the copper alloy.