GS

A M Lab Report No 3790

QUALITATIVE ANALYSES FOR SOME ROMAN BROOCHES FROM COLLITON PARK, DORCHESTER

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The brooches were examined and analysed qualitatively by energy-dispersive x-ray fluorescence. All the brooches contained detectable amounts of tin, lead and zinc in addition to the copper but the relative proportions varied widely indicating different alloys had been used.

In the discussion below bronze is used as a label for alloys where tin is the major addition to the copper, brasses contain mainly zinc and copper while gunmetals contain significant amounts of both tin and zinc. Leaded alloys additionally contain more than a few per cent of lead.

The Nauheim derivative (no 4) is brass. Broadly similar brooches from both Richborough and Baldock have been analysed. Nearly half of those from Richborough but less than a quarter of the Baldock ones were brass so the sort of composition found here is not exceptional but is by no means univers al.

The Hod Hill brooches (nos 2, 5, 6 and 9) all carried traces of white metal plating on their front surfaces. In no case was silver detected; the white metal was, as expected, tinning. Their bulk metal composition was more variable, no 2 being brass, nos 5 and 6 brasses with more than a trace of tin and no 9 bronze. A similar range of compositions was found for the group of Hod Hill brooches from Richborough (Bayley and Butcher 1981, Fig. 4).

The T-shaped brooches (nos 1, 3, 7 and 8) were all leaded bronzes though No 8 also contained more than a trace of zinc. These compositions are what is usually found for south-west British brooch types.

The two brooch pins (nos 10 and 11) were bronze containing virtually no lead; leaded alloys are not springy enough to be used for making those one-piece pin-spring assembles so the results are what would be expected.

The penannular brooch (no 28) was bronze as was the strip bow (no 12).

Reference

Bayley J.and Butcher S. (1981) Variations in alloy composition of Roman brooches. Revue d' Archéométrie, Supplement, 29-36.