

ANALYTICAL RESULTS FOR THE BROOCHES FROM CATSGORE

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Most of the brooches were sampled for Atomic Absorption Spectroscopy (AAS) using a no. 60 drill to remove uncorroded metal from the core of the object. The more heavily corroded brooches could not be sampled in this way as insufficient metal survived. Some of these were analysed using an X-ray fluorescence (XRF) spectrometer which gave qualitative results rather than the quantitative ones obtained from AAS. The quantitative results presented in the table all have errors of about 5% (e.g. $\pm 0.5\%$ on a 10% figure). Even allowing for this it can be seen that brooches of the same basic alloy type show some variation in composition, but within fairly close limits.

It is interesting to note that virtually all the S.W. British types are heavily leaded bronzes, most with compositions in the range 7-10% tin, 13-20% lead and under 2% zinc. This agrees well with the results obtained for the brooches from Nornour where most of the bow brooches were leaded bronzes.

The few brooches which can be paralleled in the group from Richborough are of comparable composition to their parallels e.g. Nos. 1 and 2) are brass.

I would like to thank Miss A. Martin-Hoogewerf for carrying out the AAS analyses and allowing me to quote from her unpublished results from Nornour. The Richborough results are as yet unpublished.

Table of analytical results

Report no.	Excavators no.	AAS Results:			Alloy type	XRF Analysis
		Zn%	Sn%	Pb%		
1	158				Brass	yes
2	691	11.3	5.6	0.5	'Gunmetal'	
3	850					
4	492	1.4	8.7	19.2	Leaded bronze	
5	1046	1.8	12.4	16.3	"	
6	156	0.5	7.5	23.0	"	
7	322	0.3	7.1	19.2	"	
8	929	0	10.4	16.0	"	
9	24					
10	186	1.9	8.4	14.0	"	
11	153	3.0	8.4	16.3	"	
12	154	1.4	9.7	22.2	"	
13	718	0.3	7.5	19.8	"	
14	926	0.2	9.1	13.3	"	
15	70	0.5	7.8	17.4	"	
16	668	1.0	8.6	8.1	"	
17	264					
18	363	2.1	8.5	13.7	"	
19	913	0	10.2	0	Bronze	
20	692				"	yes
21	877	1.2	13.3	13.8	Leaded bronze	
22	696					
23	716	15.5	2.0	2.7	Brass	
24	669	18.3	0	0	"	
25	719					
26	339					
27	141					
28	344					
29	566				Bronze	yes
30	579	1.5	12.0	15.8	Leaded bronze	
31	500	0	9.8	19.0	"	
32	155	13.6	0	0	Brass	
33	401				"	yes
34	91	0	5.4	0	Bronze	
35	455				"	yes
36	55					