

Gold enrichment in Staffordshire Hoard K674: results of SEM-EDX analysis

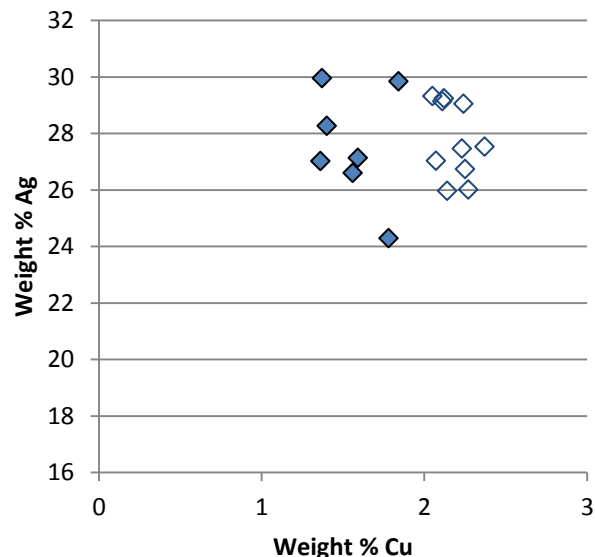
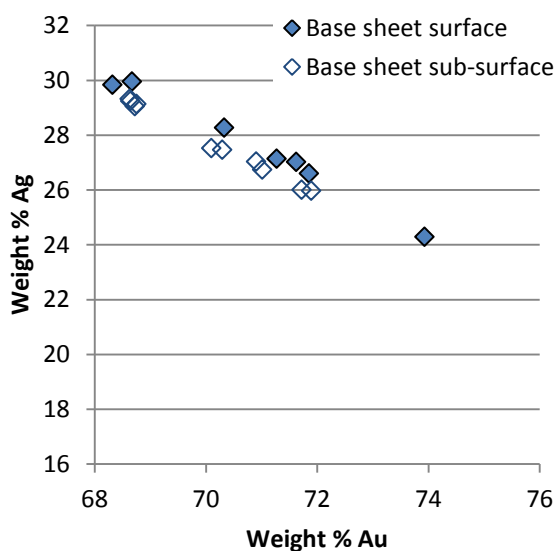
Object Type Pommel
 Date 610-630
 Decoration Filigree Glass
 Garnet Other



SEM-EDX analysis was undertaken on the gold sheet at the base of the pommel.

Area analysed	No of analyses		Wt% Au	Wt% Ag	Wt% Cu
Surface	10	Average	70.8	27.6	1.6
		Standard Deviation	1.94	1.98	0.20
Sub-surface	18	Average	70.0	27.8	2.2
		Standard Deviation	1.31	1.34	0.10

SEM-EDX surface and sub-surface compositions (the results are normalised). This analysis was carried out as part of the gold enrichment study. For full details of methodology and associated results see report PR07444-10 and PR07444-15



Plots of gold vs silver and copper vs silver contents, based on SEM-EDX analysis, showing the differences between the sub-surface and surface analyses.

SEM-EDX analysis of the sub-surface indicated a composition of approximately 69-71 wt% gold, 26-29 wt% silver, the rest being copper. The analysis revealed a loss of copper and only a small loss of silver from the surface, most likely indicative of corrosion that can occur during burial which results in natural surface enrichment.

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 Analysed August 2013

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