

Punic nail (CHIDO THT)



Alloy nature: bronze.
 Locus of finding: Tharros (Italy).
 Burial area: marine-coastal environment.
 Corroding agent: chloride.
 Nature of the artefact and historical context: Punic nail.
 Archaeological context: the locus of finding was first a Punic settlement and then a Roman city.
 Manufacturing technique: casting and mechanical shaping.
 Degradation state: the artefact degradation state is severe and active bronze disease is occurring.
 Cleaning and conservation condition: the artefact was not subjected to mechanical cleaning and conservation treatments, soil traces were removed by washing (distilled water at rt).

Chemical composition of the patina* (%)

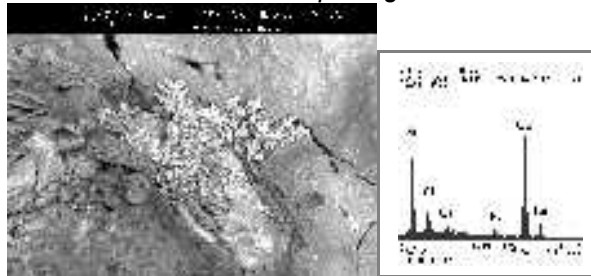
CuO	PbO ₂	ZnO	Al ₂ O ₃	SiO ₂	CaO	FeO	MgO	TiO ₂
44.68	6.32	0.49	2.53	30.45	11.0	4.02	0.33	0.19

*Sulphur was not detected, chlorine was not calculated

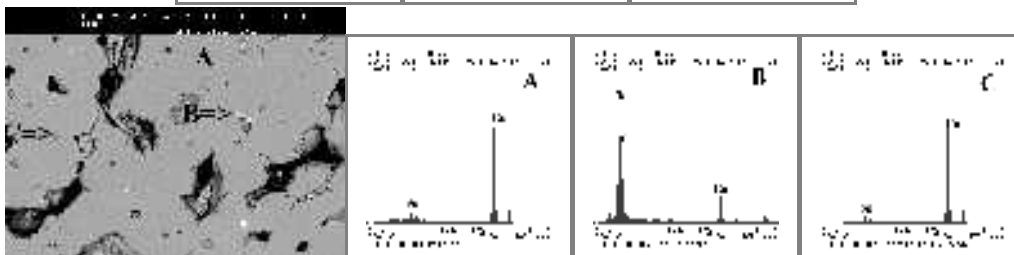
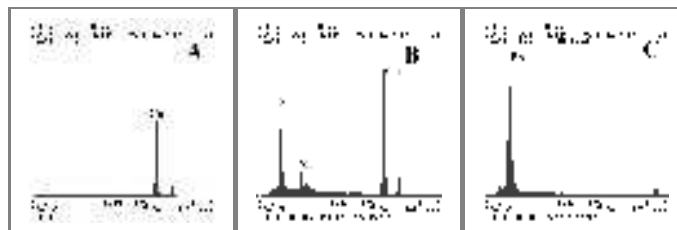
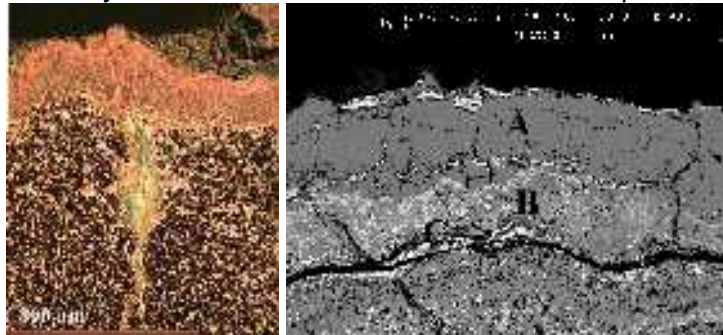
Chemical composition of the alloy (wt %)

Cu	Sn	Zn	Pb
92.44	4.79	1.08	1.68

Surface micro-chemical and morphological nature of the patina



Micro-chemistry and microstructure of the cross-sectioned patina and alloy



Small lead islands are present scattered in the matrix characterised by large interdendritic spaces.