

### Analysis report

Pelt, 2020 Nov 9<sup>th</sup>

Commissioned by

Concerning: Ancient Phrygian Helmet



Measurement system control

**Verification analysis by EDXRF (Energy Dispersive X-Ray Fluorescence spectrometry):**  
 System: Innov X alpha 2000A-8248

Verification analyzes vs. References		Fe	Ni	Cu	Zn	Pb	Sn
Reference	Brass	0.14	12.31	58.68	27.50	1.37	
	Meas. Innov X 07.11.2020	0.15	12.32	58.65	27.54	1.37	
Reference	Bronze			93.80	0.40		5.80
	Meas. Innov X 07.11.2020			93.82	0.39		5.77

**Analysis by EDXRF (Energy Dispersive X-Ray Fluorescence spectrometry):**

Measurement point	Cu	Sn	Fe	Pb	Zn	Sb	Ni
	%	%	%	%	%	%	%
Front	60,4	9,54	0,28	27	0,83	1,79	0,2
Rear	62,1	8,68	0,35	26,4	0,89	1,29	0,34
Left side	59,7	10,1	0,33	26,4	0,87	2,34	0,28
averages	60,7	9,44	0,32	26,60	0,86	1,81	0,27

High leaded bronze used in Greece (first millennium BC)

Reference: Early Iron Age Greek copper-based technology – St. Orfanau - Inst. of Archaeology,UCL

**Statement**

**None of the analyses give rise to a suspicion of forgery or contemporary copy.  
This copper alloy with low tin and high lead content is used in Greek bronze around 300 BC.**

**This statement is an opinion and therefore gives no right to redress or liability of any kind.**

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RJM. Bové



*Only a sealed print with an original blind stamp is recognized as a valid and unchanged report.*