

# Certificate of Analysis

GILDING METAL STANDARDS  
FOR  
OPTICAL EMISSION AND X-RAY SPECTROSCOPIC ANALYSIS

NBS No. <sup>1</sup>	1112 C1112	1113 C1113	1114 C1114
Element <sup>2</sup>	Percent		
Cu	93.38	95.03	96.45
Zn	6.30	4.80	3.47
Sn	0.12	0.064	0.027
Ni	.10 <sub>0</sub>	.057	.021
Fe	.07 <sub>0</sub>	.04 <sub>3</sub>	.017
Pb	.057	.026	.012
P	.009	.008	.009

<sup>1</sup> Size and metallurgical condition: 1100 series are wrought samples 1 1/4 in. in diameter, 3/4 in. thick. C1100 series are chill-cast samples 1 1/4 in. square, 3/4 in. thick.

<sup>2</sup> Al, Mn, Ag, and Si also are present in small quantities in the standards, but these elements have not been certified.

The material for each standard was melted and cast at the Naval Research Laboratory, Washington, D. C. High-purity metals were used either directly or in the preparation of master alloys. Approximately 650-pound heats were melted under a charcoal cover in a high-frequency induction furnace and the molten metal cast on a massive water-cooled plate to provide rapid unidirectional solidification. The casting for each standard was about 27 in. in diameter and 3 1/2 in. thick.