

DEPARTMENT OF COMMERCE

Bureau of Standards

Certificate of Analysis

OF

STANDARD SAMPLE No. 37a

SHEET BRASS

FURNISHED BY BRIDGEPORT BRASS CO., BRIDGEPORT, CONN.

Analyst.	Tin.	Lead as PbSO ₄ .	Lead as PbO ₂ .	Copper.	Zinc.	Iron.	Nickel.
1	0.97	0.97	0.99	70.38	27.01	0.27	0.38
2	.96 ^a	.98 ^a	1.01 ^a	70.33 ^a	27.09 ^b	.26 ^a	.40 ^c
3	.97	.97	.99	70.44	26.89	+ .30	.37
4	.96 ^d		.99	70.29	27.09 ^e		.41
5	.94	1.00	.99	70.26	27.08	.27	.40 ^f
6	.96 ^g		1.01	70.30	27.06	.25	.41
7	.95 ^h	.96		70.36	27.16	.29	.38
8	1.03 ⁱ	.96	.99	70.39	27.13 ^j	.29	.38
9		1.02 ^k	1.02	70.29	27.22	.28	.38
10		.94			26.97	.27	.40
11	.96	1.01	1.00	70.33	27.08	.26 ^l	.39
12	1.00 ^m		.98	70.38	27.02 ⁿ	— .25	.40
Average	0.97	0.98	1.00	70.34	27.07	0.27	0.39
General average	0.97	0.99		70.34	27.07	0.27	0.39

NOTE.—Where not otherwise indicated, the above results were obtained by using the methods suggested by the Bureau of Standards (see back of this sheet) or with only slight modifications.

^a Analyst used "Tentative Methods for the Chemical Analysis of Manganese Bronze," Proceedings American Society for Testing Materials 18, 510 (1918).

^b Titrated with potassium ferrocyanide using the end point described in "Analysis of Copper," by G. L. Heath, pp. 248-250.

^c Precipitated twice with glyoxime after removal of the copper, and then dissolved and deposited by electrolysis.

^d Method described in "Technical Analysis of Brass," by Price & Meade, 2d ed., pp. 216-217.

^e Method described in "Technical Analysis of Brass," by Price & Meade, 2d ed., pp. 189-190.

^f Double precipitation of the Ni as glyoxime.

^g The impure tin oxide was fused, the fusion taken up in water, and the insoluble residue dissolved in nitric acid, precipitated by ammonium sulphide, ignited, weighed and the weight subtracted.

^h Dissolved the sample in concentrated nitric acid.

ⁱ Did not purify the stannic oxide.

^j Determined as pyrophosphate, Treadwell-Hall, 4th ed., Vol. II, 140.

^k Lead finally weighed as chromate.

^l Ferric oxide fused with pyrosulphate, reduced in Jones reductor and titrated with permanganate.

^m Metastannic acid washed thoroughly with 2% nitric acid, but not otherwise purified.

ⁿ By difference.

INDEX TO ANALYSTS

1. J. A. Scherrer, Bureau of Standards.
2. Alden Merrill, American Brass Co., Waterbury, Conn.
3. W. J. Brown, National Lead Co., Brooklyn, N. Y.
4. W. E. Baulieu, Bridgeport Brass Co., Bridgeport, Conn.
5. F. M. Barry, Scovill Manufacturing Co., Waterbury, Conn.
6. J. W. Boeck, Lumen Bearing Co., Buffalo, N. Y.
7. S. A. Weigand, Lunkenheimer Co., Cincinnati, Ohio.

8. Mr. Staib and Mr. Virchow, Chicago, Burlington & Quincy Railroad Co., Aurora, Ill.
9. C. L. Petty and J. P. Andrew, Research Division, The Dayton Metal Products Co., Dayton, Ohio.
10. J. D. Sutton, Naval Gun Factory, U. S. Navy Yard, Washington, D. C.
11. G. H. Corey, and N. L. Peterson, Ledoux & Co., New York.
12. H. C. Parish, Arthur D. Little, Inc., Cambridge, Mass.

S. W. STRATTON,
Director.

Washington, D. C.

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