

UNITED STATES DEPARTMENT OF COMMERCE
WASHINGTON

National Bureau of Standards
Certificate of Analysis

Standard Sample 166
Low-Carbon Stainless Steel

Analyst	Method ^a	Carbon
		Percent
1	Combustion-gravimetric ^a	0.027 ₆
2	Combustion-gravimetric ^b.....	.026 ₁
3	Combustion-gravimetric ^c.....	.027 ₅
4	Combustion-gravimetric ^d.....	.027 ₆
5	Combustion-gravimetric ^b.....	.027 ₇
6	Combustion-gravimetric ^d.....	.027 ₇
7	Combustion-gravimetric ^e.....	.027 ₈
8	Combustion-gravimetric ^f.....	.028
9	Combustion-gravimetric ^g.....	.028 ₀
10	Low-pressure combustion ^h.....	.026 ₂
11	Low-pressure combustion ⁱ.....	.027 ₉
10	Combustion-titrimetric ^j.....	.028 ₃
10	Combustion-gasometric ^k.....	.027 ₂
12	Combustion-conductimetric ^l.....	.026 ₄
13	Copper potassium chloride solution-combustion-gravimetric ^m.....	.027 ₀
	Average.....	0.027 ₄

^a Four 2.5-g samples (10 g) burned, and total CO₂ from 4 samples absorbed before weighing.

^b As in (a), except five 2.73-g samples (13.64 g) burned.

^c 5-g sample.

^d Factor weight (2.73 g) sample.

^e Double factor weight (5.45 g) sample.

^f As in (a), except three 4.09-g samples (12.27 g) burned.

^g 4.09-g sample.

^h See Ind. Eng. Chem., Anal. Ed. 16, 694 (1944). 0.5-g sample.

ⁱ See Ind. Eng. Chem., Anal. Ed. 14, 835 (1942). 0.5-g sample.

^j Absorbed in Ba(OH)₂ solution, and excess Ba(OH)₂ titrated with standard acid. 4.0-g sample.

^k 2-g sample.

^l 1-g sample.

^m 27.5-g sample.

List of Analysts

1. Ferrous Laboratory, National Bureau of Standards, John L. Hague in charge. Analysis by C. Litsey.
2. Arceo Research Chemical Laboratory, Arba Thomas in charge. Analysis by F. E. Havens, O. H. Fritzsche, and LoRene Chenault.
3. E. G. Snyder, Carnegie-Illinois Steel Corp., Homestead Works, Munhall, Pa.
4. Frank W. Dillon and A. A. Stamm, The Carpenter Steel Co., Reading, Pa.
5. W. J. Boyer, Arceo Steel Corp., Rustless Division, Baltimore, Md.
6. O. L. Van Valkenburgh, Crucible Steel Co. of America, Syracuse, N. Y.
7. E. J. Dunn, Carnegie-Illinois Steel Corp., Duquesne Works, Duquesne, Pa.
8. J. B. Austin and G. W. Momeyer, U. S. Steel Corp., Research Laboratory, Kearny, N. J.
9. L. P. Chase, Carnegie-Illinois Steel Corp., South Works, Chicago, Ill.
10. D. P. Bartell, Allegheny Ludlum Steel Corp., Brackenridge, Pa.
11. L. A. Wooten and A. L. Beach, Bell Telephone Laboratories, New York, N. Y.
12. R. M. Fowler, Union Carbide & Carbon Research Labs., Inc., Niagara Falls, N. Y.
13. H. G. Short, National Physical Laboratory, Teddington, Middlesex, England.

The steel for the preparation of this standard was furnished by the Rustless Division of the Arceo Steel Corporation.

WASHINGTON, D. C., March 16, 1950.

E. U. CONDON, *Director*.