

National Bureau of Standards

Certificate of Analysis

Standard Reference Material 337a

Basic Open Hearth Steel, 1% Carbon

(In cooperation with the American Society for Testing and Materials)

This Standard Reference Material (SRM) is in chip form sized between 0.5 mm and 1.0 mm sieve openings (35 and 18 mesh). It is intended for use primarily in checking and/or calibrating rapid carbon/sulfur analyzers.

Element	Carbon Sulfur	
	Percent by Weight	
Certified Value ¹	0.969	0.024
Estimated Uncertainty ²	.007	.001
Labs / Method	Combustion- Infrared	Combustion- Infrared
1	0.971	0.024
2	.971	.024
3	.970	.024
4	.965 .958 ^a	.025
5	.970	.026

¹The certified value listed for an element is the present best estimate of the "true" value based on results of the cooperative program for certification.

²Estimated uncertainty includes method imprecision, bias among methods, and material variability. The standard deviation for repeated measurements at NBS is 0.004% for carbon (n = 59) and 0.0004% for sulfur (n = 91).

^aCombustion-gravimetric method.

The overall coordination of the technical measurements leading to certification were performed under the direction of J.I. Shultz, Research Associate, ASTM-NBS Research Associate Program.

The technical and support aspects involved in the preparation, certification, and issuance of this Standard Reference Material were coordinated through the Office of Standard Reference Materials by W. P. Reed.

PLANNING, PREPARATION, TESTING, ANALYSIS: The material for this standard was provided by the United States Steel Corporation, Gary Works, Gary, Indiana.

Homogeneity testing was performed at NBS by T.W. Vetter and J.A. Norris.

April 8, 1985
Gaithersburg, MD 20899

Stanley D. Rasberry, Chief
Office of Standard Reference Materials

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List of Analysts

Cooperative analyses for certification were performed in the following laboratories.

American Cast Iron Pipe Co., Birmingham, Ala., R.N. Smith, C.E. Meads, and J.B. Hobby.

Leco Corporation, St. Joseph, Mich., R.B. Fricioni and S. Aleman.

Lukens Steel Company, Coatesville, Pa., J.H. Morris, S. Forese, and E. Yates.

National Bureau of Standards, Inorganic Analytical Research Division, Gaithersburg, Md., B.I. Diamondstone and T.W. Vetter.

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