



# Certificate of Analysis

## Standard Reference Material 27e Sibley Iron Ore

ANALYST	TOTAL IRON <sup>a</sup>	PHOSPHORUS <sup>b</sup>	SILICA <sup>c</sup>
	<i>Percent</i>	<i>Percent</i>	<i>Percent</i>
1.....	66.55	0.043	3.66
2.....	66.56	{ <sup>d</sup> .041}	*3.66
3.....	66.56	{.044}	*3.65
4.....	66.56	<sup>d</sup> .041	*3.65
5.....	66.55	<sup>a</sup> .041	3.65
6.....	66.56	.045	*3.66
7.....	66.57	<sup>a</sup> .041	3.64
8.....	66.56	<sup>d</sup> .041	*3.67
9.....	66.53	<sup>d</sup> .041	3.67
10.....	66.59	<sup>d</sup> .041	*3.64
11.....	66.70	<sup>d</sup> .043	3.69
12.....	{ <sup>b</sup> 66.61}	<sup>d</sup> .041	*3.63
13.....	{66.58}	<sup>d</sup> .042	*3.66
14.....	66.52	<sup>d</sup> .045	*3.68
15.....	66.63	.042	3.64
Average.....	66.58	0.042	3.66

<sup>a</sup> SnCl<sub>2</sub> reduction-K<sub>2</sub>Cr<sub>2</sub>O<sub>7</sub> titration.  
<sup>b</sup> Molybdenum-blue photometric method.  
<sup>c</sup> Sample dissolved in HCl, silica removed by double dehydration with HCl. Ignited silica treated with H<sub>2</sub>SO<sub>4</sub> and HF.  
<sup>d</sup> Alkali-molybdate method.

\* Perchloric acid dehydration.  
<sup>e</sup> SnCl<sub>2</sub> reduction-KMnO<sub>4</sub> titration.  
<sup>f</sup> Phosphorus precipitated as ammonium phosphomolybdate, molybdenum reduced with zinc and titrated with KMnO<sub>4</sub>.  
<sup>h</sup> SnCl<sub>2</sub> reduction-Ce(SO<sub>4</sub>)<sub>2</sub> titration.

### List of Analysts

- B. B. Bendigo and J. I. Shultz, Division of Analytical Chemistry, Institute for Materials Research, National Bureau of Standards.
- W. A. Melchreit and E. A. Tessmer, Republic Steel Corp., Cleveland, Ohio.
- B. D. Kreckler, Andrew S. McCreath and Son, Inc., Harrisburg, Pa.
- E. W. Polley, The Youngstown Sheet & Tube Co., Youngstown, Ohio.
- S. G. Lawrence and L. O. Mandsager, Lerch Brothers, Inc., Hibbing, Minn.
- C. R. Vinyard, Jones and Laughlin Steel Corp., Cleveland Works Division, Cleveland, Ohio.
- G. A. Filertson, Jones and Laughlin Steel Corp., Minnesota Ore Division, Virginia, Minn.
- M. K. Weiss and D. R. Davis, Republic Steel Corp., Research Center, Cleveland, Ohio.
- D. J. Charette and J. C. Holc, Mineral Sciences Division, Department of Mines and Technical Surveys, Ottawa, Ontario, Canada.
- R. H. Rouse, Bethlehem Steel Corp., Sparrows Point Plant, Sparrows Point, Md.
- D. G. Wilson, United States Steel Corp., Applied Research Laboratory, Western Raw Materials Division, Provo, Utah.
- L. M. Melnick and J. D. Selvaggio, United States Steel Corp., Applied Research Laboratory, Monroeville, Pa.
- T. A. Johnson, United States Steel Corp., Lake Superior Raw Materials Division, Coleraine, Minn.
- H. A. Patterson, United States Steel Corp., South Works, Chicago, Ill.
- C. R. Reger, Van Waters and Rogers, Inc., San Francisco, Calif.

The material for the preparation of this Standard was furnished by the Oliver Iron Mining Division of the United States Steel Corp., Coleraine, Minn.

WASHINGTON, D. C. 20234  
 June 21, 1966

W. Wayne Meinke, Chief  
 Office of Standard Reference Materials.