

DEPARTMENT OF COMMERCE

Bureau of Standards

Certificate of Analysis

OF

STANDARD SAMPLE No. 9a.

BESSEMER STEEL, 0.2% CARBON

ANALYST.	CARBON.			SILICON.		PHOSPHORUS.				SULPHUR.			MANGANESE.				
	DIRECT COMBUSTION.	SOLUTION AND COMBUSTION.	COLORIMETRY.	DROWN METHOD.	OTHER METHODS.	ALKALI MOLYBDATE.	MOLYBDATE REDUCTION.	WEIGHING PHOSPHO-MOLYBDATE.	AS $Mg_2P_2O_7$ FROM PHOSPHO-MOLYBDATE.	OXIDATION.	EVOLUTION (CdS-Iodine).	OTHER METHODS.	FORD (Weighing as $Mn_2P_2O_7$).	FORD-WILLIAMS.	VOLHARD.	BISMUTHATE.	COLOR (Persulphate).
1	.252				.024	.111				.062		.060 ^a		.92			
2	.251				.030		.110			.063		.060 ^a				.90	
3	.252	.254		.030	.028		.109		.111	.064	.063					.91	
4	.258	.254		.030	.026		.109			.063		.043 ^b				.91	
5	.246			.016		.114	.114			.064						.94	.95
6	.259	.258				.117				.065	.064			.92			
7		.257	.26	.029		.112		.113		.062	.063						
8		.260	.26	.030	.030	.113		.113		.064	.060		.91				
9		.255			.032			.109		.061	.059		.92				.94
10	.256	.263	.23	.020		.109		.111		.061	.060						.92
AVERAGE GENERAL	.253	.257	.25	.026	.028	.113	.111	.112	.111	.063 ^d	.062	.060	.915	.92	.89	.915	.928
AVERAGE	.254			.027		.112				.062			.918				

^a Evolution— H_2O_2 - $BaSO_4$. ^b Evolution— PbS - $BaSO_4$, omitted from averages. ^c Evolution— ZnS -iodine.
^d The upper number of each pair above was obtained by the method as used at the Bureau of Standards.

INDEX TO ANALYSTS

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|--|---|
| <ol style="list-style-type: none"> 1. John R. Cain, Bureau of Standards. 2. L. F. Witmer, Bureau of Standards. 3. Porter W. Shimer, Easton, Pa. 4. Booth, Garrett & Blair, Philadelphia, Pa. 5. Jones & Laughlin Steel Co., South Side Department Laboratory, Pittsburgh, Pa. | <ol style="list-style-type: none"> 6. George P. Vanier, Pennsylvania Steel Co., Steelton, Pa. 7. W. D. Brown, Carnegie Steel Co., Duquesne Works. 8. C. H. Rich, Carnegie Steel Co., Clairton Works. 9. J. L. Harvey, Carnegie Steel Co., Homestead Works. 10. Carnegie Steel Co., Edgar Thompson Works. |
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This standard is not recommended for colorimetric carbon determinations, because of uncertainty as to the condition of the carbon.

S. W. STRATTON,
Director.

Washington, D. C.

May 5, 1911.