U. S. Department of Commerce
Maurice H. Stans
Secretary

...al Bureau of Standards
... M. Branscomb, Director

Certificate of Analysis

Standard Reference Material 340

Ferroniobium

ANALYST	Nb[a]	Ta[b]	Ti[c]	C	Mn	P	Si	Sn
1	57.51	3.67	0.87	----	----	----	----	----
2	57.55	3.78	.87	0.059	----	0.037	4.42	----
3	57.56	3.66	.90	.055	1.72	.035	4.36	0.063
4	57.50	3.76	.90	.063	1.69	.030	----	----
5	57.53	3.79	.90	.066	1.79	----	4.45	.066
6	57.42	3.78	.89	.057	1.71	.039	4.37	.057
7	57.57	3.70	.87	----	1.64	.035	4.36	.065
8	57.47	3.76	.89	----	----	----	----	----
9	57.47	3.66	.84	.066	1.66	.040	----	----
Average	57.51	3.73	0.89	0.061	1.70	0.036	4.39	0.063

[a]Sample dissolved in HCl-HF mixture and transferred to ion-exchange column. After removal, by elution, of titanium, iron, etc., the niobium is removed from the column by eluting with NH_4Cl-HF solution, treated with boric acid, precipitated with cupferron, ignited and weighed as Nb_2O_5.

[b]Sample solution and removal of titanium as in (a), tantalum removed from the column by eluting with NH_4Cl-NH_4F solution adjusted to pH 5-6, treated with boric acid, precipitated with cupferron, ignited and weighed as Ta_2O_5.

[c]Sample solution as in (a), titanium eluted with NH_4Cl-HCl-HF solution, treated with boric acid, precipitated with cupferron, ignited, fused with $KHSO_4$ and leached in dilute H_2SO_4. Titanium determined spectrophotometrically with H_2O_2.

List of Analysts

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The material for this standard was furnished by the Electro-metallurgical Corporation, Division of Union Carbide Corporation, Niagara Falls, New York.

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J. Paul Cali, Acting Chief
Office of Standard Reference Materials