

UNITED STATES DEPARTMENT OF COMMERCE  
NATIONAL BUREAU OF STANDARDS  
WASHINGTON 25, D.C.

National Bureau of Standards  
Certificate of Analyses

Standard Sample 353

Unalloyed Titanium  
for  
Hydrogen  
(0.01% H<sub>2</sub>)

Laboratory	Method <sup>a</sup>	Value <i>weight percent</i>
1	Hot extraction <sup>b</sup>	0.00938
2	Hot extraction <sup>c</sup>	.00950
3	Hot extraction <sup>d</sup>	.00964
4	Hot extraction <sup>e</sup>	.00997
5	Hot extraction <sup>f</sup>	.01003
6	Vacuum fusion <sup>g</sup>	.01030
Best value		0.0098 ± 0.0005

<sup>a</sup> Samples should be washed in C.P. ether, acetone, or other suitable solvent; no other treatment is necessary.

<sup>b</sup> 1400 °C, 10 min extraction time.

<sup>c</sup> 1400 °C, 10 min extraction time.

<sup>d</sup> 1350–1400 °C, 20 min extraction time.

<sup>e</sup> 1400 °C, 3 min extraction time.

<sup>f</sup> 1350 °C, 2½ min extraction time.

<sup>g</sup> 1900 °C, 5 min extraction time.

A list of the cooperating laboratories is given on the back of this certificate.

WASHINGTON, D.C., August 7, 1961.

A. V. ASTIN, *Director.*

## Cooperating Laboratories

Allegheny-Ludlum Steel Corp., Research and Development Laboratories, Brackenridge, Pa.—  
W. A. Peifer.

Battelle Memorial Institute, Columbus 1, Ohio—M. W. Mallett.

E. I. du Pont de Nemours and Co., Pigments Department, Experimental Station, Wilmington 98,  
Del.—T. D. McKinley.

National Bureau of Standards, Washington 25, D.C., Metallurgy Division—J. T. Sterling.

National Research Corp., Cambridge 42, Mass.—J. P. Martin.

Watertown Arsenal, Watertown 72, Mass.—S. Vigo.

The material for these samples was obtained through the cooperation of Republic Steel Corp.,  
South Division, Canton, Ohio, and Watertown Arsenal, Watertown 72, Mass.

The method of preparation and analysis of this material is described in the following reference:  
NBS J. Research 66A (Phys. and Chem.), 483 (1962).