National Institute of Standards & Technology

Certificate of Analysis

Standard Reference Material 2431

Titanium-Base Alloy 6Al - 2Sn - 4Zr - 6Mo

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

This Standard Reference Material (SRM) is in the form of chips sized between 0.50 and 1.18 mm sieve openings (35 and 16 mesh). It is intended for use primarily in chemical methods of analysis.

Element	Certified Value[1] Wt %*	Estimated[2] Uncertainty
Aluminum[a,b,c]	5.73	0.06
Tin[a,b,c]	1.98	0.05
Zirconium[a,b,c]	4.06	0.05
Molybdenum[a,b,c]	6.01	0.07
Iron[a,b,c]	0.056	0.004
Carbon[d]	0.006	0.002
Silicon[a,b,c]	0.088	0.005

[1]The certified value listed for a constituent is the present best estimate of the "true" value based on the results of the cooperative program for certification.

[2]The estimated uncertainty listed for a constituent is based on judgment and represents an evaluation of the combined effects of method imprecision, possible systematic errors among methods, and material variability for samples of 0.5 g or more. No attempt was made to derive exact statistical measures of imprecision because several methods were involved in the determination of most constituents.

[a] Atomic Absorption Spectrometry
[b] ICP Emission Spectrometry
[c] DCP Emission Spectrometry
[d] Combustion-infrared Detection

*Wt % = mg/kg x 10^{-4}

The overall coordination of the technical measurements leading to certification was performed under the direction of J.I. Shultz, Research Associate, ASTM/NIST Research Associate Program.

The technical and support aspects involved in the preparation, certification, and issuance of this SRM were coordinated through the Standard Reference Materials Program by P.A. Lundberg.

Gaithersburg, MD 20899
August 16, 1993

Thomas E. Gills, Acting Chief
Standard Reference Materials Program

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PLANNING, PREPARATION, TESTING, ANALYSIS:

The material for this SRM was provided by Timet, Henderson, NV, courtesy of G.F. Boesenecker.

Homogeneity testing by X-ray fluorescence spectrometry was performed by P.A. Pella and A.F. Marlow of the NIST Inorganic Analytical Research Division.

Cooperative analyses for certification were performed in the following laboratories:

Howmet Corp., Operhall Research Center, Whitehall, MI; K. Worst and R. Kunish.

Oremet Titanium, Oregon Metallurgical Corp., Albany, OR; S. Wichman, D. Legg, E. Giedd, and L. Dougherty.

Sherry Laboratories, Inc., Muncie, IN; J. Merrell.

Teledyne Allvac, Monroe, NC; M.A. Sainz and P. Cole.

Teledyne, Wah Chang Albany, Albany, OR; G.L. Beck.

Timet, Titanium Metals Corp. of America, Henderson Technical Laboratory, Henderson, NV; G. F. Boesenecker.

Timet, Titanium Metals Corp. of America, Process Control Laboratory, Henderson, NV; K.W. Weiss.

Wyman-Gordon Co., Eastern Division, North Grafton, MA; K. Norlin.

Elements other than those certified may be present in this material as indicated below. These are not certified, but are given as additional information on the composition.

Element	Concentration Wt %
Boron	(<0.001)
Chromium	(<0.01)
Copper	(<0.01)
Manganese	(<0.01)
Nickel	(<0.01)
Vanadium	(<0.01)
Yttrium	(<0.001)
Tungsten	(<0.001)