



National Institute of Standards & Technology

Certificate of Analysis

Standard Reference Material 1132

Lead-Base Bearing Metal (84Pb-10Sb-6Sn)

This Standard Reference Material (SRM) is in disk form, 32 mm (1 1/4 in) in diameter and 19 mm (3/4 in) thick. It is intended primarily for use in optical emission and X-ray spectrometric methods of analysis.

Element	Certified Value ¹ Wt %	Estimated Uncertainty
Antimony	10.26	0.04
Tin	5.84	0.01
Copper	0.054	0.001
Bismuth	0.052	0.001
Arsenic	0.057	0.001
Nickel	0.003	0.001
Iron	<0.001	---

¹The certified value listed for a constituent is the best estimate of the "true" value based on the results of the cooperative program for certification of SRM 53e

PLANNING, PREPARATION, TESTING, ANALYSIS: Material for this standard was prepared by Alcan Metal Powders, Inc., Elizabeth, NJ, to specifications for lead-base bearing alloy SAE 13. Approximately 681 kg (1500 lbs) was atomized to powder of minus -140 mesh size. At NIST the material was sized between 170 and 325 mesh sieves and thoroughly blended. Approximately 454 kg (1000 lbs) were reserved as SRM 53e. Approximately 227 kg (500 lbs) of the powder material was converted to 100% dense rods for this standard at Whitaker Metals Corp., West Concord, MA, first by cold compaction at 13 tons psi to billets, then followed by cold extrusion to size without use of a lubricant.

Homogeneity testing of this material and analysis for certification was performed at NIST by R.K. Bell, S.D. Rasberry, and E.J. Maienthal.

This Certificate of Analysis has undergone editorial revision to reflect program and organizational changes at NIST and at the Department of Commerce. No attempt was made to reevaluate the certificate values or any other technical data presented on this certificate.

The technical and support aspects involved in the original preparation, certification, and issuance of this SRM were coordinated through the Standard Reference Materials Program by R.E. Michaelis. Revision of this certificate was coordinated through the Standard Reference Materials Program by P.A. Lundberg.