



# National Institute of Standards & Technology

## Certificate of Analysis

### Standard Reference Material 631

#### Spectrographic Zinc Spelter (Modified)

This Standard Reference Material (SRM) is intended primarily for use in optical emission and x-ray spectrometric methods of analysis. It is supplied in a unit with dimensions of 45 mm (1 3/4 in) square and 19 mm (3/4 in) thick.

Element	Certified value <sup>1</sup> Wt %	Element	Certified value <sup>1</sup> Wt %
Aluminum	0.50	Cadmium	0.0002
Manganese	0.00015	Iron	0.005
Indium	0.0023	Chromium	0.0001
Copper	0.0013	Tin	0.0001

<sup>1</sup> The value listed for an element is the *present best estimate* of the "true" value based on the results of the analytical program. The value listed is not expected to deviate from the true value by more than  $\pm 1$  in the last significant figure reported. Based on the results of homogeneity testing, maximum variations within samples are estimated to be less than the accuracy values given above.

The certified portion of each sample is that portion included between 3/16 in and 11/16 in from each side of the square sample.

Note: The center core, 3/8 in square, and the skin at the periphery, 3/16 in thick, are portions that may differ in composition from the certified portion for some elements.

The metallurgical condition of the samples is that resulting from a continuous chill-casting process. The standard was prepared under a cooperative program between the General Motors Corp. and NIST. Melting and casting was done at the Chicago Branch of the National Lead Co.

Analyses were made on millings cut from the certified portion of the bars. Chemical analyses were made by NIST, and General Motors Corp. (Research Division), Apex Smelting Co., and Metal and Thermit Corp.

Homogeneity of the standard was examined spectrochemically at NIST. The results showed that the standard exhibited satisfactory homogeneity for the specified portion certified for each sample.

*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 technical data presented on this certificate.*

Gaithersburg, MD 20899  
February 6, 1995  
(Revision of certificate dated 11-9-81)

(over)

Thomas E. Gills, Chief  
Standard Reference Materials Program

## SUPPLEMENTARY INFORMATION

**Elements not certified:** In addition to the certified elements, the following are present at the approximate concentrations listed:

Element	Wt %	Element	Wt%
Gallium	(0.002)	Calcium	(<0.001)
Silicon	(<0.002)	Nickel	(<0.0005)
Lead	(0.001)	Silver	(<0.0005)
Magnesium	(<0.001)	Germanium	(0.0002)