



Designation: E 1831 – 96

Standard Guide for Preparing Certificates for Reference Materials Relating to Chemical Composition of Metals, Ores, and Related Materials¹

This standard is issued under the fixed designation E 1831; the number immediately following the designation indicates the year of original adoption or, in the case of revision, the year of last revision. A number in parentheses indicates the year of last reapproval. A superscript epsilon (ϵ) indicates an editorial change since the last revision or reapproval.

1. Scope

1.1 This guide describes the minimum information that should be included or referenced in a certificate for a reference material relating to the chemical compositions of metals, ores, and related materials. The order of headings and the wording may be changed to suit the reference materials or their intended applications. It should not be used to disallow the use of reference materials produced prior to the publication of this guide.

1.2 *This standard does not purport to address all of the safety concerns, if any, associated with its use. It is the responsibility of the user of this standard to establish appropriate safety and health practices and determine the applicability of regulatory limitations prior to use.*

2. Referenced Documents

2.1 ISO Documents:

ISO Guide 31—Contents of Certificates of Reference Materials²

ISO 3207, Statistical Interpretation of Data—Determination of Statistical Tolerance Interval²

3. Significance and Use

3.1 This guide describes the essential contents of a certificate prepared to accompany a reference material to be used for the standardization or control of an analytical test method, or both, or the calibration of an instrument used in carrying out analytical testing of metals, ores, and related materials. It is intended for use by suppliers or certified reference materials for the metals industry.

3.2 This guide is based on criteria described in ISO Guide 31.

¹ This guide is under the jurisdiction of ASTM Committee E01 on Analytical Chemistry for Metals, Ores, and Related Materials and is the direct responsibility of Subcommittee E01.22 on Statistics and Quality Control.

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² Available from American National Standards Institute, 11 West 42nd Street, 13th Floor, New York, NY 10036.

4. Certificate Headings

4.1 The order of headings and their wording may be changed to suit the reference materials or their intended application.

4.1.1 *Name and Address of the Certifying Organization*—Print the name and address of the body or organization that accepts responsibility for the information on the certificate.

4.1.2 *Title of the Document*—Use a distinct title, such as “Certified Reference Material,” “Certificate of Analysis,” or “Certificate of a Reference Material.”

4.1.3 *Status of the Certificate*—Clearly state the status of the certificate, such as “Provisional” or “Revised.”

4.1.4 *Name of Material*—Name the reference material to identify its type. For example, “Carbon Steel, 0.14 %” is preferable to “Steel” and “Labrador Iron Ore” is preferable to “Iron Ore.”

4.1.5 *Sample Number (and Batch Number)*—Assign a unique number to each reference material, preferably accompanied by the initials of the certifying organization, for example “BCS No. 24A.” Identify renewals by following the number with a letter. Increment the letter upward through the alphabet with each renewal.

4.1.6 *Date of Certification*—Provide the date of issue of the certificate and the dates of all revisions.

4.1.7 *Other Forms or Sizes of Reference Material*—List other forms or sizes of the material named on the certificate. For example, indicate if one or more packaged units are supplied, such as both chips and disks.

4.1.8 *Origin of Reference Material*—Provide the origin of the reference material that may be helpful to the user in interpreting its characteristic, that is, a BOF Heat continuously cast into 4 in. by 4 in. billets.

4.1.9 *Supplier of Reference Material*—If the certifying organization is not the supplier, list the name and address of the organization from whom the reference material can be obtained.

4.1.10 *Preparer of Reference Material*—If the material was prepared by an organization other than that which undertook the testing and certification, identify that organization.