



Standard Guide for Quality Management in an Organization That Samples or Tests Coal and Coke¹

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1. Scope

1.1 This guide describes the essential activities that are required to establish and operate a quality management system in a laboratory or organization that provides services in sample collection, sample preparation, or testing of coal, coke, or combustion residues from coal and coke.

NOTE 1—The word “laboratory” is used throughout this guide when referring to an organization that provides services in coal sampling or testing, or both. It is recognized, however, that the word may not be appropriate to an organization that does not perform actual laboratory sample testing.

1.2 The principles of this guide are suggested as being the minimum acceptable requirements for the management of quality in a coal or coke sampling or testing organization, although some elements may not be necessary or appropriate for organizations that provide limited services.

1.3 Laboratories meeting the requirements of this guide may or may not meet the requirements of the ISO 9000 series of standards.

NOTE 2—An accrediting body may also impose other nontechnical requirements such as payment of fees or submittal of quality documentation for review.

1.4 This guide is based upon many of the issues presented in Guide E 548. The user may also consult Guide E 882 for other items that may be pertinent. ISO Guide 25 has also been extensively consulted.

1.5 *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 ASTM Standards:

D 346 Practice for Collection and Preparation of Coke Samples for Laboratory Analysis²

¹ This guide is under the jurisdiction of ASTM Committee D-5 on Coal and Coke and is the direct responsibility of Subcommittee D05.30 on Editorial Review and Quality Assurance.

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² Annual Book of ASTM Standards, Vol 05.06.

D 2013 Method for Preparing Coal Samples for Analysis²
D 2234 Practice for Collection of a Gross Sample of Coal²
D 3180 Practice for Calculating Coal and Coke Analyses from As-determined to Different Bases²
D 3302 Test Method for Total Moisture in Coal²
D 4182 Practice for Evaluation of Laboratories Using ASTM Procedures in the Sampling and Analysis of Coal and Coke²
E 177 Practice for Use of the Terms Precision and Bias in ASTM Methods³
E 456 Terminology Relating to Quality and Statistics³
E 548 Guide for General Criteria Used for Evaluating Laboratory Competence³
E 882 Guide for Accountability and Quality Control in the Chemical Analysis Laboratory⁴
E 1187 Terminology Relating to Laboratory Accreditation³
E 1323 Guide for Evaluating Laboratory Measurement Practices and Statistical Analysis of the Resulting Data³
E 1579 Guide for Ensuring Data Integrity in Highly Computerized Laboratory Operations³

2.2 Other ASTM Document:

Manual on Presentation of Data and Control Chart Analyses, ASTM Manual 7, 1996⁵

2.3 ISO Document:

Guide 25 General Requirements for the Competence of Calibration and Testing Laboratories⁶

3. Terminology

3.1 *control limits, n*—limits on a control chart which are used as criteria for signaling the need for action, or for judging whether a set of data does or does not indicate a state of statistical control

3.1.1 *Discussion*—Action may be in the form of investigation of the source(s) of an “assignable cause,” making a process adjustment, or terminating the use of a process. (E 456)

³ Annual Book of ASTM Standards, Vol 14.02.

⁴ Annual Book of ASTM Standards, Vol 03.06.

⁵ The procedure described herein was adapted from *Basic Statistics—Tools for Continuous Improvement*, M. J. Kiemlele and S. R. Schmidt, Air Academy Press, Colorado Springs, CO, 1991.

⁶ *Manual on Presentation of Data and Control Chart Analyses*, ASTM Manual 7, American Society for Testing and Materials, 1996.