



Standard Test Methods for Analysis of Methanol¹

This standard is issued under the fixed designation E346; 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.

This standard has been approved for use by agencies of the U.S. Department of Defense.

^{ε1} NOTE—Section 2.1 Referenced Documents was editorially corrected in June 2014.

1. Scope*

1.1 These test methods cover chemical and physical tests for measuring the quality of methanol and appear in the following order:

	Sections
Purity of Reagents	4
Safety Precautions	5
Sampling	6
Acidity	7 to 9
Carbonizables	10 to 18
Color	19 to 21
Distillation Range	22 to 24
Permanganate Time	25 to 27
Specific Gravity	28 to 30
Water	31 to 33
Water Miscibility	34 to 37
Ethanol	37 to 47
Acetone	48 to 55
Trimethylamine	56 to 65

1.2 The values stated in SI units are to be regarded as standard. No other units of measurement are included in this standard.

1.3 Review the current Material Safety Data Sheets (MSDS) for detailed information concerning toxicity, first aid procedures and safety precautions for the chemicals used in this standard.

1.4 *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.* Specific hazards statements are given in Sections 5 and 15 and in 16.1, 16.4, and 52.2.2.

¹ These test methods are under the jurisdiction of ASTM Committee E15 on Industrial and Specialty Chemicals and are the direct responsibility of Subcommittee E15.02 on Product Standards.

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2. Referenced Documents

2.1 ASTM Standards:²

- D891 Test Methods for Specific Gravity, Apparent, of Liquid Industrial Chemicals
- D1078 Test Method for Distillation Range of Volatile Organic Liquids
- D1193 Specification for Reagent Water
- D1209 Test Method for Color of Clear Liquids (Platinum-Cobalt Scale)
- D1363 Test Method for Permanganate Time of Acetone and Methanol
- D1613 Test Method for Acidity in Volatile Solvents and Chemical Intermediates Used in Paint, Varnish, Lacquer, and Related Products
- D1722 Test Method for Water Miscibility of Water-Soluble Solvents
- E180 Practice for Determining the Precision of ASTM Methods for Analysis and Testing of Industrial and Specialty Chemicals (Withdrawn 2009)³
- E203 Test Method for Water Using Volumetric Karl Fischer Titration
- E300 Practice for Sampling Industrial Chemicals
- E1140 Practice for Testing Nitrogen/Phosphorus Thermionic Ionization Detectors for Use In Gas Chromatography

3. Significance and Use

3.1 These test methods are suitable for manufacturing control and for determining compliance with specification limits for the properties designated by the test methods. For those test methods that use the procedure given in other ASTM methods,

² For referenced ASTM standards, visit the ASTM website, www.astm.org, or contact ASTM Customer Service at service@astm.org. For *Annual Book of ASTM Standards* volume information, refer to the standard's Document Summary page on the ASTM website.

³ The last approved version of this historical standard is referenced on www.astm.org.

*A Summary of Changes section appears at the end of this standard