



Designation: D4734 – 12

Standard Specification for Refined Benzene-545¹

This standard is issued under the fixed designation D4734; 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 specification covers benzene-545.

1.2 The following applies to all specified limits in this standard: for purposes of determining conformance with this standard, an observed value or a calculated value shall be rounded off “to the nearest unit” in the last right-hand digit used in expressing the specification limit in accordance with the rounding-off method in Practice E29.

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

1.4 Consult current OSHA regulations, supplier’s Material Safety Data Sheets, and local regulations for all materials used in this specification.

2. Referenced Documents

2.1 *ASTM Standards*:²

D848 Test Method for Acid Wash Color of Industrial Aromatic Hydrocarbons

D852 Test Method for Solidification Point of Benzene

D1209 Test Method for Color of Clear Liquids (Platinum-Cobalt Scale)

D1492 Test Method for Bromine Index of Aromatic Hydrocarbons by Coulometric Titration

D1685 Test Method for Traces of Thiophene in Benzene by Spectrophotometry (Withdrawn 2009)³

D3437 Practice for Sampling and Handling Liquid Cyclic Products

D4492 Test Method for Analysis of Benzene by Gas Chromatography

D4735 Test Method for Determination of Trace Thiophene in Refined Benzene by Gas Chromatography

D5386 Test Method for Color of Liquids Using Tristimulus Colorimetry

D5776 Test Method for Bromine Index of Aromatic Hydrocarbons by Electrometric Titration

D6069 Test Method for Trace Nitrogen in Aromatic Hydrocarbons by Oxidative Combustion and Reduced Pressure Chemiluminescence Detection

D6304 Test Method for Determination of Water in Petroleum Products, Lubricating Oils, and Additives by Coulometric Karl Fischer Titration

D6875 Test Method for Solidification Point of Industrial Organic Chemicals by Thermistor

D7011 Test Method for Determination of Trace Thiophene in Refined Benzene by Gas Chromatography and Sulfur Selective Detection

D7183 Test Method for Determination of Total Sulfur in Aromatic Hydrocarbons and Related Chemicals by Ultraviolet Fluorescence

D7184 Test Method for Ultra Low Nitrogen in Aromatic Hydrocarbons by Oxidative Combustion and Reduced Pressure Chemiluminescence Detection

D7360 Test Method for Analysis of Benzene by Gas Chromatography with External Calibration

D7375 Test Method for Trace Quantities of Water in Aromatic Hydrocarbons and Their Mixtures by Coulometric Karl Fischer Titration

D7504 Test Method for Trace Impurities in Monocyclic Aromatic Hydrocarbons by Gas Chromatography and Effective Carbon Number

E29 Practice for Using Significant Digits in Test Data to Determine Conformance with Specifications

E1064 Test Method for Water in Organic Liquids by Coulometric Karl Fischer Titration

2.2 *Other Document*:

OSHA Regulations, 29 CFR paragraphs 1910.1000 and 1910.1200⁴

¹ This specification is under the jurisdiction of ASTM Committee D16 on Aromatic Hydrocarbons and Related Chemicals and is the direct responsibility of Subcommittee D16.01 on Benzene, Toluene, Xylenes, Cyclohexane and Their Derivatives.

Current edition approved Nov. 1, 2012. Published December 2012. Originally approved in 1987. Last previous edition approved in 2008 as D4734 – 08. DOI: 10.1520/D4734-12.

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.

⁴ Available from U.S. Government Printing Office Superintendent of Documents, 732 N. Capitol St., NW, Mail Stop: SDE, Washington, DC 20401, <http://www.access.gpo.gov>.

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