



Standard Test Method for Benzene, Toluene, Xylene (BTX) Concentrates Analysis by Gas Chromatography¹

This standard is issued under the fixed designation D6563; 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 test method covers the determination of the total nonaromatic hydrocarbons, benzene, toluene, ethylbenzene, xylenes, and total C_9 + aromatic hydrocarbons in BTX concentrates by capillary column gas chromatography. This test method is applicable to materials with a final boiling point below 215°C.

1.2 This test method may also be used to determine the relative distribution of the individual C_8 aromatic hydrocarbon isomers in mixed xylenes.

1.3 Individual components can be determined from 0.01 to 90 %.

1.4 In determining the conformance of the test results using this method to applicable specifications, results shall be rounded off in accordance with the rounding-off method of Practice E29.

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

1.6 *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.* For a specific precautionary statement, see Section 9.

2. Referenced Documents

2.1 ASTM Standards:²

D3437 Practice for Sampling and Handling Liquid Cyclic Products

¹ This test method 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.

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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.

D6809 Guide for Quality Control and Quality Assurance Procedures for Aromatic Hydrocarbons and Related Materials

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

E355 Practice for Gas Chromatography Terms and Relationships

E691 Practice for Conducting an Interlaboratory Study to Determine the Precision of a Test Method

E1510 Practice for Installing Fused Silica Open Tubular Capillary Columns in Gas Chromatographs

2.2 Other Documents:

OSHA Regulations, 29 CFR paragraphs 1910.1000 and 1910.1200³

3. Terminology

3.1 Definitions of Terms Specific to This Standard:

3.1.1 *extracted reformat*, *n*—an aromatic concentrate obtained by solvent extraction of reformat.

3.1.2 *reformat*, *n*—the product of a catalytic process that increases the concentration of aromatic hydrocarbons.

3.1.3 *pyrolysis gasoline*, *n*—depentanized by-product recovered from ethylene manufacture.

3.1.4 *synthetic blend*, *n*—blend of reagent hydrocarbons that simulate a process product.

3.1.5 *hydrogenated pyrolysis gasoline*, *n*—pyrolysis gasoline that has been treated with hydrogen to reduce the olefins content.

3.1.6 *crude ethylbenzene*, *n*—product produced from the reaction of impure fluid cat cracking, (FCC) ethylene and benzene.

3.1.6.1 *Discussion*—It typically contains greater than 40 % of ethylbenzene and benzene.

3.1.7 *light blending aromatics feedstock*, *n*—light aromatics fraction (with high amounts of benzene and toluene) typically recovered from the isomerization of a *p*-xylene or *m*-xylene depleted C_8 aromatics stream.

³ 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