



Standard Specification for High Purity p-Xylene¹

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1. Scope

1.1 This specification covers high purity p-Xylene.

1.2 The following applies to all specified limits in this specification: for purposes of determining conformance with this specification, 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 of Practice E 29.

1.3 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:

D 850 Test Method for Distillation of Industrial Aromatic Hydrocarbons and Related Materials²

D 1209 Test Method for Color of Clear Liquids (Platinum-Cobalt Scale)²

D 3437 Practice for Sampling and Handling Liquid Cyclic Products²

D 3798 Test Method for Analysis of p-Xylene by Gas Chromatography²

D 4045 Test Method for Sulfur in Petroleum Products by Hydrogenolysis and Rateometric Colorimetry³

D 5386 Test Method for Color of Liquids Using Tristimulus Colorimetry²

D 5917 Test Method for Trace Impurities in Monocyclic Aromatic Hydrocarbons by Gas Chromatography and

External Calibration²

E 29 Practice for Using Significant Digits in Test Data to Determine Conformance with Specifications⁴

2.2 Other Document:

OSHA Regulations, 29 CFR, paragraphs 1910.1000 and 1910.1200⁵

3. Properties

3.1 High purity p-Xylene shall conform to the following requirements:

Property	Specification	ASTM Test Method
Purity, min, weight %	99.7	D 3798 + D 5917
m-Xylene, max, weight %	0.20	D 3798 + D 5917
o-Xylene, max, weight %	0.10	D 3798 + D 5917
Sulfur, max, mg/kg	1.0	D 4045
Toluene, max, weight %	0.10	D 3798 + D 5917
Ethylbenzene, max, weight %	0.20	D 3798 + D 5917
Nonaromatic hydrocarbons, max, weight %	0.20	D 3798 + D 5917
Appearance	^A	...
Color, max, Pt/Co scale	10	D 1209 or D 5386
Distillation range, including the temperature 138.3°C at 101.3 kPa (760 mm Hg) pressure, max, °C	1.0	D 850

^A Clear liquid free of sediment and haze when observed at 18.3 to 25.6°C (65 to 78°F).

NOTE 1—Purity, molar %, minimum, will be specified when the freeze point procedure under development is completed.

NOTE 2—Test Method D 3798 will be the referee method to resolve analytical differences.

4. Sampling

4.1 The material shall be sampled in accordance with Practice D 3437.

5. Keywords

5.1 p-Xylene

⁴ Annual Book of ASTM Standards, Vol 14.02.

⁵ Available from Superintendent of Documents, U.S. Government Printing Office, Washington, DC 20402.

¹ These specifications are 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 Annual Book of ASTM Standards, Vol 06.04.

³ Annual Book of ASTM Standards, Vol 05.02.

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