



Designation: D2121 – 07

Standard Test Methods for Polymer Content of Styrene Monomer and AMS (α -Methylstyrene)¹

This standard is issued under the fixed designation D2121; 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 These test methods cover the determination of the polymer content of styrene monomer and AMS (α -Methylstyrene). It should be noted, however, that dimers and trimers are not measured by these test methods.

1.2 *Test Method A*, which is based on the use of a spectrophotometer or photometer, is intended for the quantitative determination of the polymer content of styrene monomer or AMS in concentrations up to 15 mg/kg. Samples containing more than 15 mg/kg of polymer must be suitably diluted before measurement.

1.3 *Test Method B* is a rapid visual procedure that is intended for the approximate evaluation of polymer to a maximum concentration of 1.0 weight %. Samples having a polymer content of 1.0 weight % or greater should be suitably diluted prior to measurement.

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 specific hazard statements, see Section 8.

¹ These test methods are under the jurisdiction of ASTM Committee D16 on Aromatic Hydrocarbons and Related Chemicals and are the direct responsibility of Subcommittee D16.07 on Styrene, Ethylbenzene and C9 and C10 Aromatic Hydrocarbons.

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2. Referenced Documents

2.1 *ASTM Standards*:²

D2827 Specification for Styrene Monomer

D3437 Practice for Sampling and Handling Liquid Cyclic Products

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

2.2 *Other Document*:

OSHA Regulations, 29CFR paragraphs 1910.1000 and 1910.1200³

TEST METHOD A—DETERMINATION OF POLYMER IN STYRENE MONOMER OR α -METHYLSTYRENE PHOTOMETER METHOD

3. Summary of Test Method

3.1 This test method utilizes the fact that polymers present in the monomers are insoluble in methanol. The polymer content of styrene monomer or AMS is determined by measurement of the degree of turbidity produced by the addition of dry methanol to the styrene or AMS sample.

4. Significance and Use

4.1 This test method can be used for determining polymer concentrations in styrene monomer or AMS.

4.2 This test method will not detect dimers and trimers.

4.3 This test method can be used for plant control and for specification analysis.

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 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

