



Designation: D7065 – 17

Standard Test Method for Determination of Nonylphenol, Bisphenol A, *p*-tert- Octylphenol, Nonylphenol Monoethoxylate and Nonylphenol Diethoxylate in Environmental Waters by Gas Chromatography Mass Spectrometry¹

This standard is issued under the fixed designation D7065; 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 determination of nonylphenol (NP), nonylphenol ethoxylate (NP1EO), nonylphenol diethoxylate (NP2EO), octylphenol (OP), and bisphenol A (BPA) that are partitioned into organic solvent, separated using gas chromatography and detected with mass selective detection. These compounds or isomer mixtures are qualitatively and quantitatively determined by this test method. This test method adheres to selected ion monitoring mass spectrometry but full scan mass spectrometry has also been shown to work well under these conditions. Either analysis may be used.

1.2 The method detection limit (MDL) and reporting limit (RL) for NP, NP1EO, NP2EO, OP, and BPA are listed in [Table 1](#).

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 *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, health, and environmental practices and determine the applicability of regulatory limitations prior to use.*

1.5 *This international standard was developed in accordance with internationally recognized principles on standardization established in the Decision on Principles for the Development of International Standards, Guides and Recommendations issued by the World Trade Organization Technical Barriers to Trade (TBT) Committee.*

¹ This test method is under the jurisdiction of ASTM Committee D19 on Water and is the direct responsibility of Subcommittee D19.06 on Methods for Analysis for Organic Substances in Water.

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2. Referenced Documents

2.1 ASTM Standards:²

- D1129 Terminology Relating to Water
- D1193 Specification for Reagent Water
- D3694 Practices for Preparation of Sample Containers and for Preservation of Organic Constituents
- D3856 Guide for Management Systems in Laboratories Engaged in Analysis of Water
- D5847 Practice for Writing Quality Control Specifications for Standard Test Methods for Water Analysis
- D5905 Practice for the Preparation of Substitute Wastewater
- E691 Practice for Conducting an Interlaboratory Study to Determine the Precision of a Test Method

2.2 Other Publications:³

- 40 CFR Part 136, Appendix B Definition and Procedure for the Determination of the Method Detection Limit

3. Terminology

3.1 Definitions:

3.1.1 For definitions of terms used in this standard, refer to Terminology [D1129](#).

3.2 Definitions of Terms Specific to This Standard:

3.2.1 *bisphenol A, BPA, n*—represents 4,4'-dihydroxy-2,2-diphenylpropane.

3.2.1.1 *Discussion*—Commercial bisphenol A is produced by the condensation reaction of phenol and acetone to produce predominantly the 4,4'-dihydroxy-2,2-diphenylpropane.

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, Washington, DC 20401-0001, <http://www.access.gpo.gov>.