



Designation: D5830 – 22

Standard Test Method for Solvents Analysis in Hazardous Waste Using Gas Chromatography¹

This standard is issued under the fixed designation D5830; 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 reappraisal. A superscript epsilon (ε) indicates an editorial change since the last revision or reappraisal.

1. Scope

1.1 This test method is used to determine qualitatively and quantitatively the presence of the following compounds in waste samples using gas chromatography. This test method is intended for use as a screening method with a typical reporting level of 0.1 %.

Dichodifluoromethane	Tetrahydrofuran
Trichlorofluoromethane	Acetone
1,1,2-Trichloro-1,2,2-trifluoroethane	Methyl Ethyl Ketone
Methanol	MIBK
Ethanol	Cyclohexanone
Isopropanol	Ethyl Acetate
<i>n</i> -Propanol	Propyl Acetate
Isobutanol	Butyl Acetate
<i>n</i> -Butanol	Benzene
<i>tert</i> -Butanol	Toluene
Methylene Chloride	Ethylbenzene
Chloroform	Xylenes
Carbon Tetrachloride	Styrene
1,1-Dichloroethane	Chlorobenzene
1,2-Dichloroethane	Dichlorobenzenes
1,2-Dichloropropane	Nitrobenzene
1,1-Dichloroethylene	Fluorobenzene
1,2-Dichloroethene	<i>n</i> -Propyl Benzene
1,1,1-Trichloroethane	Isopropyl Benzene
Tetrachloroethylene	Isobutyl Benzene
Trichloroethylene	<i>n</i> -Butyl Benzene
Tetrachloroethane	2-Ethoxyethanol
Cyclopentane	2-Butoxyethanol
Pentane	2-Ethoxyethanol Acetate
Hexane	2-Methoxyethanol
Heptane	Bromoform
Cyclohexane	Carbitol
<i>Is</i> ooctane	Ethyl Ether
Nitropropane	1,4-Dioxane
Ethanolamine	Diacetone Alcohol
Nitromethane	Acetonitrile
Ethylene Chloride	Pyridine
Benzyl Chloride	Toluidine
	Ethylene Glycol
	Propylene Glycol

1.1.1 This compound list is a compilation of hazardous solvents and other constituents that are commonly seen in hazardous waste samples.

¹ This test method is under the jurisdiction of ASTM Committee D34 on Waste Management and is the direct responsibility of Subcommittee D34.01.06 on Analytical Methods.

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1.2 The scope of this test method may be expanded to include other volatile and semivolatile organic constituents such as but not limited to those described below, provided the intended use data quality objectives including sampling, recovery, and analytic data quality are demonstrated as satisfied by the user.

1.2.1 Hydrocarbon mixtures such as kerosene and mineral spirits.

1.2.2 High-boiling organics, defined here as compounds which boil above *n*-Hexadecane.

1.2.3 Other organics that the analyst is able to identify, either through retention time data or gas chromatography/mass spectrometric (GC/MS) analysis.

1.3 *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.*

1.4 *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.*

2. Referenced Documents

2.1 ASTM Standards:²

- D1193 Specification for Reagent Water
- D4547 Guide for Sampling Waste and Soils for Volatile Organic Compounds
- D4687 Guide for General Planning of Waste Sampling
- D5013 Practices for Sampling Wastes from Pipes and Other Point Discharges
- D5681 Terminology for Waste and Waste Management
- D5743 Practice for Sampling Single or Multilayered Liquids, with or Without Solids, in Drums or Similar Containers

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.