



Designation: ~~E1386-00 (Reapproved 2005)~~ Designation: E1386 – 09

Standard Practice for Separation and Concentration of Ignitable Liquid Residues from Fire Debris Samples by Solvent Extraction¹

This standard is issued under the fixed designation E1386; 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 practice covers the procedure for removing small quantities of ~~flammable or combustible~~ ignitable liquid residue from samples of fire debris using solvent to extract the residue.

1.2 This practice is suitable for successfully extracting ~~flammable or combustible~~ ignitable liquid residues over the entire range of concentrations.

1.3 Alternate separation and concentration procedures are listed in ~~Test Method~~ the referenced documents (Practices E1388, E1412, ~~E1387~~E1413, and E2154).

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 and health practices and determine the applicability of regulatory limitations prior to use.* For a specific hazard statement, see Note 1.

2. Referenced Documents

2.1 ASTM Standards:²

E752 [Practice for Safety and Health Requirements Relating to Occupational Exposure to Carbon Disulfide](#)³

~~E1387 Test Method for Ignitable Liquid Residues in Extracts from Fire Debris Samples by Gas Chromatography~~ [1388 Practice for Sampling of Headspace Vapors from Fire Debris Samples](#)

E1412 [Practice for Separation of Ignitable Liquid Residues from Fire Debris Samples by Passive Headspace Concentration With Activated Charcoal](#)

E1413 [Practice for Separation and Concentration of Ignitable Liquid Residues from Fire Debris Samples by Dynamic Headspace Concentration](#)

E1459 [Guide for Physical Evidence Labeling and Related Documentation](#)

E1492 [Practice for Receiving, Documenting, Storing, and Retrieving Evidence in a Forensic Science Laboratory](#)

~~E1618 Test Method for Ignitable Liquid Residues in Extracts from Fire Debris Samples by Gas Chromatography-Mass Spectrometry~~ [Test Method for Ignitable Liquid Residues in Extracts from Fire Debris Samples by Gas Chromatography-Mass Spectrometry](#)

E2154 [Practice for Separation and Concentration of Ignitable Liquid Residues from Fire Debris Samples by Passive Headspace Concentration with Solid Phase Microextraction \(SPME\)](#)

E2451 [Practice for Preserving Ignitable Liquids and Ignitable Liquid Residue Extracts from Fire Debris Samples](#)

3. Summary of Practice

3.1 A sample of fire debris is extracted with an organic solvent. The extract is filtered and concentrated using dry nitrogen, filtered air, or inert gas.

4. Significance and Use

4.1 This practice is useful for preparing extracts from fire debris for later analysis by gas ~~chromatography, GC/MS, or GC/IR~~ chromatography-mass spectrometry (GC/MS).

¹ This practice is under the jurisdiction of ASTM Committee E30 on Forensic Sciences and is the direct responsibility of E30.01 on Criminalistics. Current edition approved April 1, 2005. Published June 2005. Originally approved in 1990. Last previous edition approved in 2000 as E1386-00. DOI: 10.1520/E1386-00R05. ~~on Criminalistics~~
Current edition approved Nov. 1, 2009. Published February 2010. Originally approved in 1990. Last previous edition approved in 2005 as E1386-00(2005). DOI: 10.1520/E1386-09.

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 Withdrawn