



Designation: ~~E1388-05~~ Designation: E1388 - 12

## Standard Practice for Sampling of Headspace Vapors from Fire Debris Samples<sup>1</sup>

This standard is issued under the fixed designation E1388; 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 ( $\epsilon$ ) indicates an editorial change since the last revision or reapproval.

### 1. Scope

1.1 This practice ~~covers~~ describes the procedure for removing small quantities of ignitable liquid vapor from samples of fire debris by sampling the headspace of the debris container.

1.2 Separation and concentration procedures are listed in the referenced documents. (See Practices ~~E1385~~, E1386, E1412, and E1413, and E2154.)

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

### 2. Referenced Documents

#### 2.1 ~~ASTM Standards:~~

~~E1385 Practice for Separation and Concentration of Ignitable Liquid Residues from Fire Debris Samples by Steam Distillation~~  
ASTM Standards:<sup>2</sup>

E1386 Practice for Separation of Ignitable Liquid Residues from Fire Debris Samples by Solvent Extraction ~~E1387 Test Method for Ignitable Liquid Residues in Extracts from Fire Debris Samples by Gas Chromatography~~

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)

### 3. Summary of Practice

3.1 The sample, preferably in its original container, is heated in order to volatilize any ~~petroleum products-ignitable liquid residues~~ present in the debris. After heating, the headspace is sampled and analyzed by ~~gas chromatography, GC/MS, or GC/IR-~~ chromatography-mass spectrometry.

### 4. Significance and Use

4.1 This procedure is particularly useful for screening fire debris samples to determine relative ignitable liquid concentrations

<sup>1</sup> This practice is under the jurisdiction of ASTM Committee E30 on Forensic Sciences and is the direct responsibility of Subcommittee E30.01 on Criminalistics. Current edition approved Sept. 1, 2005-2012. Published October 2005-March 2012. Originally approved in 1990. Last previous edition approved in 2005 as E1388-00(2005)-E1388 - 05. DOI: 10.1520/E1388-05.10.1520/E1388-12.

<sup>2</sup> 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.