



## Standard Terminology Relating to Forensic Science<sup>1</sup>

This standard is issued under the fixed designation E 1732; 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 is a compilation of terms and corresponding definitions used in the forensic sciences. Legal or scientific terms that are generally understood or defined adequately in other readily available sources may not be included.

1.2 A definition is a single sentence with additional information included in notes. It is reviewed every five years, and the year of last review or revision is appended.

1.3 Definitions identical to those published by another standards organization or ASTM committee are identified with the abbreviation of the name of the organization or the identifying document and ASTM committee; for example, ASME is the American Society of Mechanical Engineering.<sup>2</sup>

1.4 Definitions of terms specific to a particular field are identified with an abbreviation.<sup>3</sup>

### 2. Referenced Documents

#### 2.1 ASTM Standards:

E 1387 Test Method for Flammable or Combustible Liquid Residues in Extracts from Samples of Fire Debris By Gas Chromatography<sup>4</sup>

E 1422 Guide for Test Methods for Forensic Writing Ink Comparison<sup>4</sup>

E 1610 Guide for Forensic Paint Analysis and Comparison<sup>5</sup>

### 3. Significance and Use

3.1 These terms have particular application to the forensic sciences. In addition, a hierarchy of sources of definitions were used in the development of this terminology. The hierarchy is as follows: *Websters New Collegiate 7th Dictionary*; technical dictionaries; and the *Compilation of ASTM Standard Definitions*.<sup>5</sup> The subcommittee developed a suitable definition after all of the sources in the hierarchy were found wanting.

### 4. Terminology

#### 4.1 Definitions:

**accelerant**, *n*—any material used to initiate or promote the spread of a fire. The most common accelerants are flammable or combustible liquids. Whether a substance is an accelerant depends not on its chemical structure but on its use (source: IAAI Forensic Science Committee, *Glossary of Terms Related to Chemical and Instrumental Analysis of Fire Debris*<sup>6</sup>) (use: Test Method E 1387) CRIM.

**associative evidence**, *n*—that evidence which tends to link a person, place, or thing with another person, place, or thing.

**class**, *n*—a group, set, or kind marked by common attributes or a common attribute (source: *Webster's Unabridged Dictionary*, 1967) (use: Test Method E 1387) CRIM.

**class characteristic(s)**, *n*—the attribute(s) that establish membership in a class.

**classification**, *n*—the systematic arrangement of persons or objects into categories (groups or classes) based on shared traits or characteristics (source: Osterburg and Ward, *Criminal Investigation*, 1992, p. 835) (use: Test Method E 1387).

**comparison sample**, *n*—(fire debris) 1) a sample of material collected from a fire scene which is, to the best of the investigator's knowledge, identical in every respect to a sample suspected of containing ignitable substance, but which does not contain ignitable substance. 2) a sample of suspected ignitable substance submitted for the purpose of comparing with any ignitable substance separated from a debris sample. (see **control sample**)

**control**, *n*—material of established origin that is used to evaluate the performance of a test or comparison.

**criminalistics**, *n*—a branch of forensic science concerned with the examination and interpretation of physical evidence, for the purpose of aiding forensic investigation.

**known**, *n*—of established origin associated with the matter under investigation.

**questioned**, *n*—associated with the matter under investigation about which there is some question, including, but not limited to, whether the questioned and known items have a common origin.

**standard**, *n*—material of established origin with certified properties.

**exemplar**, *n*—a specimen of physical evidence of known

<sup>1</sup> This terminology is under the jurisdiction of ASTM Committee E-30 on Forensic Sciences and is the direct responsibility of Subcommittee E30.92 on Terminology.

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<sup>2</sup> Any definition that is unsourced has been developed by ASTM Subcommittee E30.92.

<sup>3</sup> Abbreviations are as follows: CRIM = criminalistics, QD = questioned documents, ENGR = engineering, TOX = toxicology, PB = pathology/biology, ANTH = anthropology, and ODEN = odontology.

<sup>4</sup> *Annual Book of ASTM Standards*, Vol 14.02.

<sup>5</sup> *Compilation of ASTM Standard Definitions*, 7th Ed., ASTM, Philadelphia, PA, 1990.

<sup>6</sup> Available from International Association of Arson Investigators, 5428 Del Maria Way, 201, P. O. Box 91119, Louisville, KY 40291.