



## Standard Practice for Education and Training of Seized-Drug Analysts<sup>1</sup>

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### 1. Scope

1.1 This practice describes prerequisite formal education, training, and continuing professional development for those performing seized-drug analysis. It also describes the kinds of professional documents (for example, texts, manuals, or journals) that should be present in laboratories where analysis of seized drugs is conducted.

### 2. Referenced Documents

#### 2.1 *ASTM Standards*:<sup>2</sup>

**E 2329 Practice for Identification of Seized Drugs**

#### 2.2 *Other Document*:

Scientific Working Group for the Analysis of Seized Drugs  
Recommendations for: Education and Training, Quality  
Assurance, Methods of Analysis<sup>3</sup>

### 3. Significance and Use

3.1 These are minimum standards applicable to those performing seized-drug analyses.

3.2 These standards are intended to apply to any laboratory analyst who:

3.2.1 examines and analyzes seized drugs or related materials, or directs such examinations to be done,

3.2.2 independently has access to unsealed evidence in order to remove samples from evidence for examination and

3.2.3 As a consequence of such examinations, signs reports for court or investigative purposes.

### 4. Education/Experience Qualifications

4.1 All newly recruited analysts shall have at least a bachelor's degree (or equivalent, generally a three to four year post-secondary or tertiary degree) in a natural science or in other sciences relevant to the analysis of seized drugs. The degree program shall include lecture and associated laboratory classes in general, organic and analytical chemistry.

<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.

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<sup>2</sup> For referenced ASTM standards, visit the ASTM website, [www.astm.org](http://www.astm.org), or contact ASTM Customer Service at [service@astm.org](mailto:service@astm.org). For *Annual Book of ASTM Standards* volume information, refer to the standard's Document Summary page on the ASTM website.

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### 5. Continuing Professional Development

5.1 All forensic scientists have an ongoing responsibility to remain current in their field. In addition, laboratories should provide support and opportunities for continuing professional development. Seized-drug analysts are expected to undergo:

5.1.1 Twenty hours of training every year. Training can be either face-to-face interaction with an instructor, distance learning or computer based.

5.1.1.1 Training must be relevant to the laboratory's analytical mission.

5.1.1.2 Training completed must be documented.

5.1.1.3 Training can be provided from a variety of sources, including, but not limited to the following:

(1) chemistry or instrumental courses taught at the post-secondary educational level,

(2) instrument operation or maintenance courses taught by vendors,

(3) in-service classes conducted by employers,

(4) in-service training taught by external providers, and

(5) participation in relevant scientific meetings or conferences (for example, presenting papers or attending workshops).

### 6. Training For New Analysts

6.1 These minimum requirements allow individual laboratories to structure their training programs to meet their needs as they relate to the type of casework encountered, the analytical techniques and instrumentation available, and the level of preparedness of trainees.

6.2 A documented training program, approved by laboratory management, should focus on development of the theoretical and practical knowledge, skills and abilities necessary to examine seized-drug samples and related materials. This must include:

6.2.1 a training syllabus providing descriptions of the knowledge and skills in which analysts are to be trained for specific topic areas, milestones of achievement, and methods of testing or evaluating competency,

6.2.2 documented standards of performance and a plan for assessing theoretical and practical competency against these standards, for example, written and oral examinations, critical reviews, analysis of unknown samples, mock casework, etc. per specific topic area,

6.2.3 a period of supervised casework representative of the type they will be required to perform, and

6.2.4 a verification document demonstrating that trainees have achieved the required competence level per specific topic area.

6.3 Topic areas in the training program will include, as a minimum, the following:

6.3.1 relevant background information on drugs of abuse, for example, status of control and chemical and physical characteristics,

6.3.2 techniques, methodologies, and instrumentation utilized in the examination of seized-drug samples, and related materials,

6.3.3 quality assurance,

6.3.4 expert/Court testimony and legal requirements, and

6.3.5 laboratory policy and procedures (such as sampling, uncertainty, evidence handling, safety and security) as they relate to the examination of seized-drug samples and related materials.

6.4 An individual qualified to provide instruction must have demonstrated competence in the subject area and in the delivery of training.

## 7. Reference Literature

7.1 The following references must be available and accessible in hard copy or electronic form in laboratories where seized-drug analysis is performed:

7.1.1 college/University level textbooks for reference to theory and practice in key subject areas, for example, general chemistry, organic chemistry, and analytical chemistry,

7.1.2 relevant jurisdictional legislation (for example, statutes and case law relating to controlled substances, and health and safety legislation),

7.1.3 operation and maintenance manuals for each analytical instrument,

7.1.4 relevant periodicals, for example, *Journal of Forensic Sciences*, *Analog*, *Microgram*, and *Analytical Chemistry*,

7.1.5 laboratory quality manual, standard operating procedures, and method validation documents, and

7.1.6 reference literature containing physical, chemical and analytical data. Such references may include *The Merck Index*, *Clarke's Isolation and Identification of Drugs*, laboratory manuals of the United Nations Drug Control Program, and published standard spectra (for example, Mills and Roberson's *Instrumental Data For Drug Analysis*, or compendiums from Pfleger or Wiley).

7.2 See Practice E 2329 for additional information.

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