

PART II EDUCATION AND TRAINING

SECTION 1: INTRODUCTION

Part II recommends minimum education, training and experience for analysts practicing in laboratories that conduct seized drug analyses. It describes the types of activities necessary to continue professional development and reference literature required in laboratories where they practice.

- 1.1 Recommendations listed in Part II are intended to apply to any analyst who
 - 1.1.1 independently has access to unsealed evidential material in order to remove samples for examination,
 - 1.1.2 examines and analyzes seized drugs or related materials, or directs such examinations to be done, and
 - 1.1.3 as a consequence of such examinations, signs reports for court or investigative purposes.

SECTION 2: EDUCATION AND EXPERIENCE FOR ANALYSTS

- 2.1 The aim of this recommendation is that all analysts recruited in the future should have at least a bachelor's degree, while allowing existing analysts without degrees to be retained as analysts. The minimum educational requirements for analysts are either
 - 2.1.1 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
 - or
 - 2.1.2 By January 1, 2005, a minimum of five (5) years practical experience in the area of seized drug analysis, and demonstrated competency following the completion of a formal, documented training program and post training competency assessment.

SECTION 3: CONTINUING PROFESSIONAL DEVELOPMENT

3.1 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. Minimum continuing professional development requirements for a laboratory analyst are

3.1.1 Twenty contact hours of training every year. Contact is defined as face-to-face interaction with an instructor or trainer in a classroom or laboratory setting. It does not include self-paced learning or distance education where the instructor has no active interaction with the student.

3.1.1.1 Training must be relevant to the laboratory's mission.

This statement is purposely broad to embrace the laboratory's broader needs such as ancillary duty assignments and supervision/management.

3.1.1.2 Training completed must be documented.

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

3.1.1.3.1 Chemistry or instrumental courses taught at the post-secondary educational level

3.1.1.3.2 Instrument operation or maintenance courses taught by vendors

3.1.1.3.3 In-service classes conducted by the employer

3.1.1.3.4 In-service training taught by external providers

3.1.1.3.5 Participation in relevant scientific meetings or conferences (e.g. presenting a paper, attending a workshop, providing reports on conferences).

SECTION 4: Initial Training Requirements

4.1 These minimum requirements allow individual laboratories to structure their training program to meet their needs as it relates to type of casework encountered, analytical techniques, available instrumentation and level of preparedness of trainees.

4.2 There must be a documented training program, approved by laboratory management, that focuses on the development of theoretical and practical

knowledge, skills and abilities necessary to examine seized drug samples and related materials. The training program must include the following:

- 4.2.1 documented standards of performance and a plan for assessing theoretical and practical competency against these standards (e.g. written and oral examinations, critical reviews, analysis of unknown samples and mock casework per topic area)
- 4.2.2 a training syllabus providing descriptions of the required knowledge and skills in specific topic areas in which the analyst is to be trained, milestones of achievement, and methods of testing or evaluating competency
- 4.2.3 a period of supervised casework representative of the type the analyst will be required to perform
- 4.2.4 a verification document demonstrating that the analyst has achieved the required competence.
- 4.3 Topic areas in the training program will include, as a minimum, the following:
 - 4.3.1 Relevant background information on drugs of abuse (e.g. status of control and chemical and physical characteristics).
 - 4.3.2 Techniques, methodologies and instrumentation utilized in the examination of seized drug samples and related materials
 - 4.3.3 Quality assurance
 - 4.3.4 Expert /Court testimony and legal requirements
 - 4.3.5 Laboratory policy and procedures (such as sampling, evidence handling, safety and security) as they relate to the examination of seized drug samples and related materials.
- 4.4 An individual qualified to provide instruction must have demonstrated competence in the subject area and in the delivery of training.

SECTION 5: REFERENCES AND DOCUMENTS

- 5.1 The following references and documents must be available and accessible to analysts
 - 5.1.1 college/university level textbooks for reference to theory and practice in key subject areas, e.g. general chemistry, organic chemistry and analytical chemistry

- 5.1.2 reference literature containing physical, chemical and analytical data. Such references include the Merck Index, Clarke's Analysis of Drugs and Poisons, laboratory manuals of the United Nations Drug Control Program, in-house produced spectra and published standard spectra, (e.g. Mills And Roberson's Instrumental Data For Drug Analysis, or compendiums from Pflieger or Wiley)
- 5.1.3 operation and maintenance manuals for each analytical instrument
- 5.1.4 relevant periodicals (e.g. Journal of Forensic Sciences, Forensic Science International, Microgram, Journal of Canadian Society of Forensic Science, Journal of Japanese Association of Science and Technology of Identification and Analytical Chemistry)
- 5.1.5 laboratory quality manual, standard operating procedures, and method validation and verification documents
- 5.1.6 relevant jurisdictional legislation (e.g. statutes and case law relating to controlled substances, and health and safety legislation).

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