Supplement requirements for forensic science laboratory compliance with ISO/IEC 17025:2005

1. Purpose

This supplement requirements are guideline for lead and technical assessor accredited forensic science laboratory that additional from ISO/IEC 17025:2017.

2. Application

These supplement requirements are specified that forensic science laboratory comply with ISO/IEC 17025:2017.

3. References

3.1 ILAC G 19 : 08/2014 Modules in a Forensic Science Process.

4. Definitions and Abbreviation

Forensic laboratories

Forensic laboratories mean laboratory testing from human specimens, toxic substances, chemical materials that can cause hazard to human. These data shall support the consideration for court case.

Competence

Competence is the demonstrated ability to apply knowledge and skills and, where relevant, demonstrated personal attributes.

Contamination

Contamination is the undesirable introduction of substances or trace materials to exhibits at any point within the forensic science process.

5. Associated Documents

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6. Procedures

6.1 Policy

6.1.1 Supplement requirements shall establish the policy and procedure to ensure that the forensic science laboratory comply with this supplement and ISO/IEC 17025: 2017 Scope of the accreditation are as follow:

6.1.1.1 Toxicology : General toxicology, narcotics, narcotic in urine, Blood and urine alcohol.

6.1.1.2 Biology : DNA, Body Fluid Identification.

6.1.1.3 Physics : Gunshot Primer Residue

6.1.1.4 Chemistry : Pre-Blast Explosive Composition C4

6.1.2 Forensic laboratory shall have been specific requirement process, thus

6.1.2.1 Evidence Management

6.1.2.2 Management System

6.1.2.3 Personnel

6.1.2.4 Accommodation and Environmental Conditions

6.1.2.5 Health and Safety

6.1.2.6 Proficiency Testing

6.2 Requirement

6.2.1 Evidence Management

The laboratory shall have a documented evidence control system that it is not lost, rotated and confused identify of the evidence.

The laboratory shall have recorded which have all data evidence. The records shall be sufficient to provide an auditable trail.

The identification should be retained throughout the life of item in the laboratory. All items shall be stored and retained in such a way they are readily retrievable to the responsible person who is responsible for all evidence with out broken any chain of sample custody.

'Chain of custody' records that detail each person or organization that takes possession of an item/exhibit shall be maintained from the receipt of the items/exhibits through processing to storage and where applicable to return to submitting client, or disposal. The acceptable definition and procedure for 'chain of custody' needs to be adapted to the

legal provisions of each country. Any transfer of material shall be recorded. Records relating to the chain of custody shall be retained in accordance with the requirements for other case records.

Evidence is sealed. To prevent deterioration and contamination shall be stored in a safe in the short and long term.

6.2.2 Management System

The laboratory shall be kept records, photographs, chromatograms, diagrams, print-outs, test report, worksheet, etc. In general, the records shall be reported accurately, clearly, unambiguously conclusions that in case of absence of the analyst/examiner, another analyst/examiner shall evaluate that result, what has been performed and interpret the data.

For DNA analysis shall do generic markers for comparison and must be operating to ensure that DNA analysis has not derived from cross contamination in the laboratory. If it is necessary to remove part of a blood pattern for DNA analysis. In such a situation, the potential evidence shall be documented and/or measured using suitable recording techniques prior to its removal.

6.2.3 Personnel

The laboratory shall have a policy that ensures all staff working in the laboratory are competent to perform the work required. Having clear statements of the qualifications, competencies required for all jobs and records shall be maintained to demonstrate that all staff is competent for their job description.

In assessing the competence of an individual the laboratory shall ensure that where appropriate staff have relevant understanding of the technology used to investigate the crime e.g. fingerprints, DNA profiling, blood pattern analysis. They shall also have sufficient competence and experience to recognize the significance of anything unusual. The performance evaluation and acceptance criteria shall be conducted by observation an experienced analyst or supervisor. The laboratory shall participate in PT (if available), satisfactory performance in proficiency testing by external recognition organizations shall maintain and keep up-to-date record of the training.

6.2.4 Accommodation and Environmental Conditions

The laboratory shall have adequate space for documentations and records throughout the duration of storage and shall have the system to safeguard or prevent loss or damage and rotate.

Special care is needed in forensic units involved in the determination of trace levels of materials, for example DNA and gunshot residue analysis. Physical separation of high level and low-level work, for example, bulk and trace drugs, is required as is a high awareness of contamination issues by all the personnel in the forensic unit. Appropriate personal protective equipment shall be worn to ensure exhibits and personnel are protected. Access to laboratory facilities with special requirements concerning contamination issues shall be restricted and controlled. Environmental monitoring could be necessary for equipment, work areas, clothing and consumables.

6.2.5 Health and Safety

The laboratory should provide all personnel with a safe environment, including the adoption and use of a documented health and safety program. The health and safety program should consider and cover work carried out in the forensic unit's permanent facilities, at sites away from its permanent facilities, or in associated temporary or mobile facilities.

Access to the operational area of the laboratory shall be controlled and limited. Visitors shall not have unrestricted access to the operational areas of the laboratory because of security restricted area.

The laboratory shall be effective closed system, warning signal and fire protection system.

The laboratory shall have adequate equipment,instrument,chemical and toxic/ carcinogens protection equipment, where necessary and appropriate.

6.2.6 Proficiency Testing

The laboratory shall participate the proficiency testing with PT provider which has been accredited by accreditation body.

Staff shall be evaluated their performance by comparison the re-examination and blind specimen with the other staffs from internal and external laboratory.

For analysts in the area of DNA shall participate the proficiency testing at least 1 person per 1 examination by accreditation body.

7. Data record and used document

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8. History of change

Revision No.	Documentation Changes	Prepare /Revised by	Date Issued
00	Initial Document	Chomchailai Sinthusarn	
01	- Edited the reference to current	Saovanee Aromsook	
02	- Edited the reference to current - Added the definition and abbreviation - Added to No.6.1.2.5, 6.2.1-6.2.5 - Edited history of change	Saovanee Aromsook	12 SEP 2014
03	Edited controlled copy list	Saovanee Aromsook	24 OCT 2017
04	- Deleted the QM-VA 090051 Version 01,QM-VA 090057 Version 00	Saovanee Aromsook	

Controlled Copy List

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2. Head of Laboratory Accreditation Section 1 No. 07 03
3. Head of Laboratory Accreditation Section 2 No. 07 04
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