

Idaho State Police

Forensic Services

Approval for Quality System Controlled Documents



Discipline/Name of Document: Toxicology
5.7. Toxicology Competency and Proficiency Tests

Revision Number: 2

Issue Date: 5/07/2007

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5/7/07
Date Signed

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Section Five

Quality Assurance

5.7 Toxicology Competency and Proficiency Tests

5.7.1 BACKGROUND

As set forth in the Idaho State Police Forensic Services *Procedure and Quality Manual*, proficiency testing is an integral part of a quality program. In accordance with the *Toxicology Training Plan*, a trainee will complete a competency test consisting of \geq six (6) specimens which contain representative commonly encountered analytes.

5.7.2 SCOPE

This method describes the criteria to be applied to the evaluation of results obtained for both competency and proficiency testing for the toxicology discipline.

5.7.3 PROCEDURE

5.7.3.1 Ethanol and Other Volatiles Analysis

5.7.3.1.1 Competency Tests

5.7.3.1.1.1 The competency test can be ordered through a reliable vendor.

5.7.3.1.1.2 The acceptable alcohol concentration range is determined from the target value provided by the manufacturer of the competency test.

5.7.3.1.1.3 Reported values must fall within $\pm 10\%$ of the target value reported by manufacturer.

5.7.3.1.1.4 If all volatiles are not detected and/or the quantitative ethanol value(s) reported does not fall within the allowable range, analysis procedures will be reviewed and additional training may be required as deemed appropriate by the Toxicology Program Discipline Leader. The analyst will be required to perform an additional competency test.

5.7.3.1.2 Proficiency Tests

5.7.3.1.2.1 The blood alcohol proficiency test can be ordered through an ASCLD/LAB approved vendor and/or Department of Transportation (DOT).

5.7.3.1.2.2 To comply with ASCLD/LAB proficiency test requirements it is necessary for each laboratory to successfully complete one external test from an ASCLD/LAB approved provider.

5.7.3.1.2.3 As described in section 5.6 of this manual, in order to comply with IDAPA 11.03.01 (approval to perform alcohol determinations for legal purposes), a laboratory must take part in an Idaho State Police Forensic Services (ISP-FS) recognized proficiency testing program.

5.7.3.1.2.4 A single proficiency test can be used to comply with both IDAPA and ASCLD/LAB requirements as long as it is an ASCLD/LAB approved test.

5.7.3.1.2.5 The appropriate tests to be ordered will be evaluated yearly by the Quality Assurance Manager with input from the Toxicology Discipline Leader.

5.7.3.1.2.6 The acceptable alcohol concentration range is determined from the target value provided by the manufacturer of the competency test.

5.7.3.1.2.7 Reported values must fall within 2 standard deviations of the target value compiled by manufacturer after evaluation of all submitted results.

5.7.3.1.2.8 If the value reported does not fall within the allowable range, analysis procedures will be reviewed and additional training may be required as deemed appropriate by the Toxicology Program Discipline Leader. The analyst will be required to perform a competency test prior to resuming casework.

5.7.3.2 Urine and Blood Analysis

5.7.3.2.1 Competency Testing

5.7.3.2.1.1 The competency test will be designed to verify that an analyst has a through working knowledge of

appropriate analytical methods.

- 5.7.3.2.1.2 The competency test can be prepared by the Toxicology Program Discipline Leader, their designee, or ordered through a reliable vendor.
- 5.7.3.2.1.3 When required, quantitative values must agree with manufacturer or discipline leader determined values $\pm 20\%$ of target.
- 5.7.3.2.1.4 If the analyst does not correctly identify all target analytes and/or quantitative values do not fall within range, the analyst's training will be reviewed and additional training may be required as deemed appropriate by the Toxicology Program Discipline Leader. The analyst will be required to complete additional competency test samples. The number of samples will be determined by the nature of the discrepancy.

5.7.3.2.2 Proficiency Testing

- 5.7.3.2.2.1 Only analytes that are routinely tested for with current ISP-FS analytical methods will be evaluated.
- 5.7.3.2.2.2 When reported, quantitative values must agree with manufacturer determined values with in $\pm 20\%$.
- 5.7.3.2.2.3 If the analyst does not correctly identify all target analytes and/or quantitative values do not fall within range, the analyst's training will be reviewed and additional training may be required as deemed appropriate by the Toxicology Program Discipline Leader. The analyst will be required to complete a competency test prior to resuming casework. The number of samples

will be determined by the nature of the discrepancy.

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Revision History

Section Five

Quality Assurance

5.7 Review of Toxicology Proficiency and Competency Tests

Revision	Issue Date	History
0	04-25-2002	Original Issue
1	05-24-2006	Update, additional test providers added
2	05-07-2007	Updated format

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