

**FBI Approved Standards for Scientific Testimony and Report Language for the Forensic  
Toxicology Discipline**

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# FBI Approved Standards for Scientific Testimony and Report Language for the Forensic Toxicology Discipline

## 1 PURPOSE

This document provides examples of the scientifically-supported conclusions and opinions approved for reporting examination conclusions and offering expert opinion statements during testimony within the toxicology discipline of the Chemistry Unit. It is noted that these examples are not intended to be all inclusive and may be dependent upon the precedent set by the judge or locality in which a testimony is provided. Further, these examples are not intended to serve as precedent for other forensic laboratories and do not imply that statements by other forensic laboratories are incorrect, indefensible, or erroneous.

## 2 SCOPE

This document applies to authorized individuals who prepare a *Laboratory Report (7-1 or 7-1 LIMS)* and/or provide expert testimony in the forensic toxicology discipline. This document does not apply to individuals who provide fact witness testimony.

## 3 RESPONSIBILITIES

- A. The authorized individual will ensure that a *Laboratory Report* uses the approved language contained within this document.
- B. The authorized individual will ensure that their toxicology testimony is consistent with the standards contained within this document.
- C. The Technical and Administrative Reviewers will ensure compliance of toxicology *Laboratory Reports* with the statements contained within this document.
- D. The authorized evaluator will assess if provided toxicology testimony complies with the statements contained within this document.

## 4 STATEMENTS APPROVED FOR FBI TOXICOLOGY TESTIMONY AND/OR LABORATORY REPORTS

For more detailed guidance on report writing in the Toxicology discipline, see *Toxicology Operations Manual (TOX-100)*. The authorized individual may report and/or state:

- A. Analytical findings of the presence or absence of a drug, drug metabolite, or poison, as well as quantitative results.
- B. The estimated measurement uncertainty associated with the quantitative findings of a drug, drug metabolite, or poison.
- C. The pharmacokinetic and pharmacodynamic effects of drugs and poisons based on data published in peer reviewed literature or other authoritative sources.
- D. Their opinion as to the effects of drugs or poisons on the average human. This opinion should be based on the facts of the case, medical information about the individual that the specimens were collected from (e.g., weight, height, disease state, and age), current published studies, and/or the authorized individual's training in the fields of pharmacology, physiology, pathology, clinical chemistry, and/or toxicology.
- E. The limitations of their examination(s) and opinion(s).

- F. That a reported blood concentration is within the therapeutic range, toxic range, or consistent with reported fatal concentrations, provided the statement is based on data published in peer reviewed literature or other authoritative sources.
- G. That a drug or poison found in a hair specimen is consistent with exposure (either ingestion or environmental) to the drug or poison.
- H. The results of segmental analyses of hair samples and interpret those findings based on an average growth rate of 1 cm/month provided they acknowledge variation in inter-individual growth rates and assumes proper specimen collection.
- I. An extrapolated ethanol concentration in a blood sample collected from a living person.
- J. That hair findings indicate the ingestion of a drug or poison if validated wash procedures have been performed that can differentiate between exposure and ingestion and/or if a metabolite that is uniquely associated with ingestion has been identified in the sample.

**5 STATEMENTS NOT APPROVED FOR FBI TOXICOLOGY TESTIMONY AND/OR LABORATORY REPORTS**

An authorized individual may not report or state:

- A. The dose of a drug or poison given based on analytical findings in post-mortem samples.
- B. An opinion that suggests their interpretation of the effects of a drug or poison can be specified to the individual whose sample was tested.
- C. An opinion that a drug or poison finding in hair is proof of ingestion of the drug or poison unless:
  - 1. A metabolite that is unique to ingestion is also identified, and/or
  - 2. A validated wash procedure has been performed that can differentiate between exposure and ingestion.
- D. An opinion that an individual was impaired based on a drug concentration in a urine or hair sample.
- E. The phrase “reasonable degree of scientific certainty,” “scientific certainty,” or similar assertions, unless required to do so by a judge or applicable law.
- F. The absolute cause of death of an individual, behavioral intent based solely on a drug concentration, an individual's impairment based solely on a quantitative result, or the absolute cause of an accident.
- G. The dose of a drug (other than ethanol) through body burden calculations.

**6 LABORATORY REPORT REVIEWS**

The content of a Toxicology *Laboratory Report* will be reviewed per the requirements within LAB-200, CHEM-100, and TOX-100 to ensure compliance with the statements in this document.

**7 TESTIMONY REVIEWS**

Toxicology testimonies will be reviewed following LAB-100. The review will ensure compliance with the statements in this document.

## 8 REFERENCES

TOX-100, Toxicology Operations Manual, latest revision

CHEM-100, Chemistry Unit Quality Assurance and Operations Manual, latest revision

LAB-100, FBI Laboratory Quality Assurance Manual, latest revision

LAB-200, FBI Laboratory Operations Manual, latest revision

ANSI/ASB Standard 037, 1<sup>st</sup> ed., Guidelines for Opinions and Testimony in Forensic Toxicology

## 9 REVISION HISTORY

Revision	Issued	Changes
01	02/11/2022	Updated document format; update to previous doc ID TOX-108-00. Updated terminology throughout for individuals and document titles. Section 1 and 2 – updated descriptions to allow for non-FE expert testimony. Sections 4 and 5 – updated text for clarity and readability. Sections 6 and 7 – updated text to be more explicit on requirement references. Section 8- updated reference titles and locations.
02	08/15/2023	Removed references to specific sections of references in 3.D, 4, 6 and 7. Clarified wording in 4E. Added 5 E, F and G. Added reference to ASB 037.