

Chemistry Unit (CU)

FBI Approved Standards for Scientific Testimony and Report Language for General Chemistry

1 Purpose

This document provides examples of the statements approved for reporting examination conclusions and offering expert opinion statements during testimony by General Chemistry examiners. 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 Chemistry Unit (CU) employees who prepare *Laboratory Reports* and/or provide expert testimony in the General Chemistry group. This document does not apply to CU employees who provide fact witness testimony.

3 Responsibilities

3.1 The examiner will ensure that a *Laboratory Report* complies with the approved statements contained within this document and the *Department of Justice Uniform Language for Testimony and Reports for General Forensic Chemistry and Seized Drug Examinations* document (GenChem ULTR).

3.2 The examiner will ensure that his or her testimony is consistent with the standards contained within this document and the GenChem ULTR.

3.3 The Technical and Administrative Reviewers will ensure compliance of General Chemistry *Laboratory Reports* with the statements contained within this document and the GenChem ULTR.

3.4 An authorized testimony evaluator will assess if General Chemistry testimony complies with the statements contained within this document and the GenChem ULTR.

4 Statements Approved for FBI General Chemistry Testimony and/or Laboratory Reports

For more detailed guidance on report writing in the General Chemistry group, see the *General Approach to Report Writing* standard operating procedure.

- Identification (i.e., identified)- ‘Identification’ is an examiner’s conclusion that the scientific data supports the presence of an analyte or class of analytes in a questioned sample.
- Consistent with- ‘Consistent with’ is an examiner’s conclusion that the scientific data supports the presence of a questioned sample within a class of materials. The limitation(s) that prevented the assertion of an ‘identification’ conclusion will be communicated.
- Not identified- ‘Not identified’ is an examiner’s conclusion that the scientific data supports the determination that an analyte or class of analytes is not present in a questioned sample or at a detectable level.
- Cannot be differentiated- ‘Cannot be differentiated’ is an examiner’s conclusion that the scientific data does not demonstrate any significant differences between two or more questioned samples that are compared.
- Excluded- ‘Excluded’ is an examiner’s conclusion that the scientific data supports the elimination of a questioned sample as a source of another questioned sample, or that two or more questioned samples do not share a common source.
- Inconclusive- ‘Inconclusive’ is an examiner’s conclusion that the scientific data supports the decision that no determination can be made regarding the questioned sample or the comparisons.
- An examiner may also report and/or state the following supplemental information:
 - a. The weight or volume of a substance which was examined. The weight or volume reported will include an associated estimated measurement uncertainty.
 - b. The potential uses of a substance or class of substances.
 - c. The limitations of his or her examinations and/or opinions.
 - d. The general effects and/or properties of a drug or chemical.

5 Statements Not Approved For FBI General Chemistry Testimony and/or Laboratory Reports

- If an analyte or class of analytes is identified in a questioned sample, an examiner will not assert how that analyte or class of analytes was transferred to the questioned sample or how long that analyte or class of analytes has been present in the questioned sample.
- When analyzing a portion of a population, an examiner will not assert that his or her conclusion applies to the entirety of the population (or a percentage of the population),

unless a statistically based sampling plan is used. When such a conclusion is offered, the examiner will clearly explain the assertion being made, the results of the sampling unit(s) tested, and the confidence level.

- Except in justified circumstances (e.g., chemical ‘tags’ were incorporated in the questioned sample(s), or the entire population of potential sources was tested) an examiner will not assert the exact source of an analyte or class of analytes. When such an assertion is made, an examiner will explain the circumstances that permit it.
- An examiner will not assert that General Chemistry examinations are infallible or have a zero error rate.
- An examiner will not provide a conclusion that includes a statistic or numerical degree of probability except when based on relevant and appropriate data.
- An examiner will not cite the number of General Chemistry examinations performed in his or her career as a direct measure for the accuracy of a proffered conclusion. (An examiner may cite the number of General Chemistry examinations performed in his or her career for the purpose of establishing, defending, or describing his or her qualifications or experience.)
- An examiner will not use the expressions ‘reasonable degree of scientific certainty,’ ‘reasonable scientific certainty,’ or similar assertions of reasonable certainty in either *Laboratory Reports* or testimony unless required to do so by a judge or applicable law.
- An examiner may not report the purity of a chemical, but can state his or her opinion about an estimated concentration of a chemical as long as it is clearly stated that the estimate is not the result of a validated quantitative measurement.

6 Laboratory Report Reviews

The content of a General Chemistry *Laboratory Report* will be reviewed per the *FBI Laboratory Quality Assurance Manual*, *FBI Laboratory Operations Manual*, and *Chemistry Unit Case Record and Review Procedures* ensuring compliance with the approved statements in this document and the GenChem ULTR.

7 Testimony Reviews

General Chemistry testimonies will be reviewed following the *FBI Laboratory Practices for Testimony Related Activities*. The review will ensure compliance with the statements in this document and the GenChem ULTR.

8 References

General Approach to Report Writing in the General Chemistry Subunit

Department of Justice Uniform Language for Testimony and Reports for General Forensic Chemistry and Seized Drug Examinations (GenChem ULTR)

Chemistry Unit Case Record and Review Procedures

FBI Laboratory Quality Assurance Manual

FBI Laboratory Operations Manual

Rev. #	Issue Date:	History:
0	05/23/2014	New document.
1	09/12/2019	Changed title to remove “discipline”. Removed “subunit” throughout (except section 8). “ <i>Report of Examination</i> ” changed to “ <i>Laboratory Report</i> ” throughout. Changed “his/her” to “his or her” throughout (consistency with ULTR). Minor formatting edits made in section 2. Integrated GenChem ULTR into section 4 and 5. Updated LOM reference in section 7. Changed format of references in section 8 and removed ASCLD/LAB Supplemental reference.

Approval

Redacted - Signatures on File

General Chemistry
Technical Leader:

Date: 09/11/2019

Chemistry Unit Chief:

Date: 09/11/2019

QA Approval

Quality Manager:

Date: 09/11/2019