

# Reporting Serological Testing Results

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# Reporting Serological Testing Results

## 1 INTRODUCTION

The DNA discipline has level 2 technical procedures for the various testing methods used in the serological examination of evidence, also known as body fluid identification. This document describes the combination of the results from those procedures that must be taken into account for the examiner to develop a conclusion.

## 2 SCOPE

These procedures apply to DNA personnel authorized to prepare *Laboratory Reports* (7-1 and 7-1 LIMS) containing serological testing results.

## 3 REPORTING GUIDELINES

To report the results of serology examinations, the examiner must consider all tests conducted. Combinations of negative, positive, and inconclusive test results not described below may be encountered, or one of the tests may not have been conducted (e.g., for the purposes of sample conservation). In such cases, the statements below should be used for guidance as to how to report the specific combination of results encountered. The limitations of each test are described in the applicable technical procedure and limitations of the reported conclusions are described in the Approved Standards for Scientific Testimony and Reporting (ASSTR) for Serology (i.e., BIO-901).

Requirements for the formatting and administrative content of *Laboratory Reports* are contained in the FBI Laboratory level 1 documents (i.e., LAB-200) and DNA level 2 documents (i.e., BIO-500). Results of serology and DNA testing may be combined into a single *Laboratory Report*.

### 3.1 Reporting Visual Examinations

When an item is visually examined with or without an alternate light source and no areas of serological value were observed and/or further tested, one of the following statements should generally be included in the report:

*A visual examination was conducted on item 1; however, no areas of serological value were observed.*

*A visual examination was conducted on item 1; however, no further serological testing was conducted.*

It is noted that if the any other tests are conducted for the presence of blood or semen, the results of the visual examinations are not reported.

## 3.2 Reporting Blood Examination Results

The determination of whether blood is indicated on an item is dependent on the results of the phenolphthalein test. The report should generally use the following language based on the test results.<sup>1</sup>

### 3.2.1 Negative Blood Results

When the phenolphthalein test is negative for an item, the following statement should generally be included in the report:

*Blood was not detected on item 2.\**

with the following explanatory endnote:

*\* This conclusion is based on a negative presumptive test. Insufficient quality and/or quantity of biological material may affect the ability to detect blood.*

### 3.2.2 Presumptively Positive Blood Results

When the phenolphthalein test is positive for an item, the following statement should generally be included in the report:

*Blood was indicated on item 3.\**

with the following explanatory endnote:

*\*This conclusion is based on a positive presumptive test. This result provides an indication that blood may be present on an item, but does not constitute an identification of blood.*

### 3.2.3 Inconclusive Blood Results

When the phenolphthalein test is inconclusive for an item, the following statement should generally be included in the report:

*No determination can be made regarding the presence or absence of blood on item 5.\**

with the following explanatory endnote:

*\*This conclusion is based on an inconclusive presumptive test, which may occur when an unknown substance(s) prevented the interpretation of the presumptive test.*

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<sup>1</sup> For a given item of evidence, only the results for the stain on that specimen that yielded the most information with respect to the blood examinations conducted are reported.

### 3.3 Reporting Semen Examination Results

The determination of whether semen is present on an item is dependent on the results of a visual examination with an alternate light source, the acid phosphatase (AP) test, and/or the microscopic search for a sperm cell. The report should generally use the following language based on the combination of these test results.<sup>2</sup>

#### 3.3.1 Negative Semen Results

No semen is detected on an item if the results of every test conducted are negative. The following statement should generally be included in the report:

*Semen was not detected on item 7.\**

with one of the following explanatory endnotes, as appropriate:

*\*This conclusion is based on a negative presumptive test. Insufficient quality and/or quantity of biological material may affect the ability to detect semen.*

*\*This conclusion is based on a negative microscopic examination for a sperm cell. Microscopic examinations may not detect semen from azoospermic (e.g., vasectomized) males. Insufficient quality and/or quantity of biological material may affect the ability to detect semen.*

*\*This conclusion is based on a negative presumptive test and a negative microscopic examination for a sperm cell. Microscopic examinations may not detect semen from azoospermic (e.g., vasectomized) males. Insufficient quality and/or quantity of biological material may affect the ability to detect semen.*

#### 3.3.2 Presumptively Positive Semen Results

When the AP test is positive and a sperm search is either not conducted or is negative, the following statement should generally be included in the report:

*Semen was indicated on item 8.\**

with one of the following explanatory endnotes, as appropriate:

*\*This conclusion is based on a positive presumptive test result. Further confirmatory testing was not conducted. This result provides an indication that semen may be present on an item, but does not constitute an identification of semen.*

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<sup>2</sup> For a given item of evidence, only the results for the stain on that specimen that yielded the most information with respect to the semen examinations conducted are reported.

*\*This conclusion is based on a positive presumptive test result and a negative microscopic examination for a sperm cell. These results provide an indication that semen may be present on an item, but do not constitute an identification of semen. Microscopic examinations may not detect semen from azoospermic (e.g., vasectomized) males. Insufficient quality and/or quantity of biological material may affect the ability to detect semen.*

### 3.3.3 Confirmatory Semen Results

Semen is confirmed on an item when the microscopic sperm search is positive, regardless of the results of the other examinations. The following statement should generally be included in the report:

*Semen was identified on item 9.\**

with one of the following explanatory endnotes, as appropriate:

*\*This conclusion is based on the microscopic observation of a sperm cell.*

*\*This conclusion is based on a positive presumptive test and the microscopic observation of a sperm cell.*

*\*This conclusion is based on the microscopic observation of a sperm cell. The presumptive test was negative.*

*\*This conclusion is based on the microscopic observation of a sperm cell. The presumptive test was inconclusive, which may occur when an unknown substance(s) prevented the interpretation of the presumptive test.*

### 3.3.4 Inconclusive Semen Results

If the AP result for an item is inconclusive, and a sperm search is either not conducted or is negative, the following statement should generally be included in the report:

*No determination can be made regarding the presence or absence of semen on item 10.\**

with one of the following explanatory endnotes, as appropriate:

*\*This conclusion is based on an inconclusive presumptive test, which may occur when an unknown substance(s) prevented the interpretation of the presumptive test.*

*\*This conclusion is based on an inconclusive presumptive test, which may occur when an unknown substance(s) prevented the interpretation of the presumptive test. The confirmatory test was negative.*

#### 4 REFERENCES

United States. Department of Justice. Office of Legal Policy. Forensic Science. *Department of Justice Uniform Language for Testimony and Reports for the Forensic Serological Examinations*. Retrieved from the Department of Justice Web site: <https://www.justice.gov/olp/uniform-language-testimony-and-reports>.

#### 5 REVISION HISTORY

Revision	Issue Date	Changes
00	09/30/2022	Reformatted DNA 100-6 into new template and assigned new Doc ID. Removed confirmatory blood testing (Takayama). Added a visual exam section and confirmatory semen footnote option.