

Forensic Biology Report Glossary of Terms and Concepts

The following supplemental information is to provide our clients with a more comprehensive description of the methods used by our laboratory for the examination/testing of items submitted for forensic testing.

Definitions:

Examined: Examined items are those that have been documented and evaluated to determine their potential for containing body fluid(s) and/or biological material. This evaluation may include visual examination with or without lighting/microscopic aids. Once determined, potential body fluid stain(s)/biological material may be tested and/or collected for further analysis.

Tested: Tested items are those that are subjected to serological testing and/or evaluation for further analysis. Not all items examined, tested and/or collected are necessarily forwarded for further analysis.

Examination Techniques for Detecting Possible Body Fluid Stains:

Visual Examination without using an Alternate Light Source (ALS): Some body fluid stains may be visible under ambient light making it possible to locate them without the use of an ALS.

Visual Examination using an Alternate Light Source: Some body fluid stains are not visible under ambient light but may fluoresce under an ALS. The ALS may aid in locating potential body fluid stains that would not otherwise be visible.

The visual detection of an area of discoloration and/or fluorescence may indicate the presence of a body fluid stain. This area may be subjected to serological testing for specific body fluids and/or forwarded for further analysis.

The absence of areas of discoloration and/or fluorescence may indicate either the absence of body fluid stains or the presence of body fluid stains below the threshold of visual detectability. Since it is not possible to differentiate between these two alternatives, areas void of visible/fluorescent stains may also be subjected to serological testing for specific body fluids and/or forwarded for further analysis.

Serological Tests and Interpretation of Results:

The following serological tests are utilized for the indication of biological materials/fluids:

Blood: Kastle-Meyer (KM); o-Tolidine (OT); RSID™-Blood; HemaTrace®
Spermatozoa: Sperm Hy-Liter and Christmas Tree staining/microscopy
Seminal Fluid: Acid Phosphatase (AP); ABACard® p30 Tests
Saliva: Phadebas (amylase) Test
Urine: RSID™-Urine Test
Fecal Material: Urobilinogen Test

Serological test results for the above-listed biological materials/fluids are interpreted as follows:

Positive Result: A positive result from a substance/stain/area tested for the presence of a specific biological component indicates, detects, and/or identifies the presence of the targeted biological component.

Negative Result: A negative result from a substance/stain/area tested for the presence of a specific biological component indicates that either the targeted biological component is not present or is present in a quantity that is below the test's detectability threshold. Based on the testing performed, it is not possible to distinguish between these two alternatives.

Inconclusive Result: A result that cannot be clearly visualized will be considered indeterminate and therefore no conclusion can be drawn. This may be due to the presence of a masking substance or substrate interference.

Failed/Invalid Result: The test failed to perform according to the manufacturer-specified and/or laboratory-validated parameters. No conclusion can be drawn from a failed/invalid test result. Failed/invalid tests should be repeated after the cause of the test failure has been determined and resolved, or an alternate validated method may be employed, if sufficient evidentiary material is available.

Unsuitable for Testing: When it is determined that the condition of an item/sample may have a deleterious effect on a test result and/or may inhibit an analyst from employing proper protocol, an item/sample may be determined to be unsuitable for examination/testing.