

**DEPARTMENT OF JUSTICE  
UNIFORM LANGUAGE FOR TESTIMONY AND REPORTS  
FOR FORENSIC Y-STR DNA EXAMINATIONS**

**I. Application**

This document applies to Department of Justice examiners who are authorized to prepare reports and provide expert witness testimony regarding forensic Y-STR DNA examinations. This document applies to reports and to testimony based on reports that are finalized after its effective date. Section III is limited to conclusions that result from forensic Y-STR DNA examinations. Section IV is applicable to all forensic Y-STR DNA examinations unless otherwise limited by the express terms of an individual qualification or limitation.

**II. Purpose and Scope<sup>1</sup>**

The Uniform Language for Testimony and Reports is a quality assurance measure designed to standardize the expression of appropriate consensus language for use by Department examiners in their reports and testimony. This document is intended to describe and explain terminology that may be provided by Department examiners. It shall be attached to, or incorporated by reference in, laboratory reports or included in the case file.

Department examiners are expected to prepare reports and provide testimony consistent with the directives of this document. However, examiners are not required to provide a complete or verbatim recitation of the definitions or bases set forth in this document. This is supplemental information that is intended to clarify the meaning of, and foundation for, the approved conclusions.

This document should not be construed to imply that terminology, definitions, or testimony provided by Department examiners prior to its effective date that may differ from that set forth below was erroneous, incorrect, or indefensible. It should also not be construed to imply that the use of different terminology or definitions by non-Departmental forensic laboratories or individuals is erroneous, incorrect, or indefensible.

This document does not, and cannot, address every contingency that may occur. For example, an examiner may not have an opportunity to fully comply with its directives during a testimonial presentation due to circumstances beyond his or her control. In addition, this document does not prohibit the provision of conclusions in reports and testimony that fall outside of its stated scope. Finally, the substantive content of expert testimony may be dependent upon legal rules imposed by the court or jurisdiction in which it is offered.

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<sup>1</sup> This document is not intended to, does not, and may not be relied upon to create any rights, substantive or procedural, enforceable by law by any party in any matter, civil or criminal; nor does it place any limitation on otherwise lawful investigative or legal prerogatives of the Department.

### **III. Conclusions Regarding Forensic Y-STR DNA Examinations**

An examiner may offer any of the following conclusions regarding forensic Y-STR DNA examinations:

1. Inclusion (i.e., included, or cannot be excluded)
2. Exclusion (i.e., excluded)
3. Inconclusive

#### **Inclusion**

‘Inclusion’ is an examiner’s conclusion that 1) a known male is included as a possible contributor to the Y-STR typing results obtained from an evidentiary sample; or 2) two known males, or a known male and the source of an evidentiary sample, may share the same paternal lineage.

The basis for an ‘inclusion’ conclusion is an examiner’s interpretation that the Y-STR haplotype<sup>2</sup> of a known male is consistent with<sup>3</sup> 1) the Y-STR typing results obtained from a single-source evidentiary sample; or 2) the Y-STR typing results obtained from a contributor to a distinguishable mixed evidentiary sample; or 3) the Y-STR haplotype of a putative male relative from the same paternal lineage.

All male relatives from the same paternal lineage are expected to have the same Y-STR haplotype and would also be included as potential contributors. In addition, unrelated males may also exhibit the same Y-STR haplotype.<sup>4</sup>

#### **Exclusion**

‘Exclusion’ is an examiner’s conclusion that 1) a known male is eliminated as a possible contributor to the Y-STR typing results obtained from an evidentiary sample; or 2) two known males, or a known male and the source of an evidentiary sample, do not share the same paternal lineage.

The basis for an ‘exclusion’ conclusion is an examiner’s interpretation that the Y-STR haplotype of a known male is not consistent with 1) the Y-STR typing results obtained from a single source or mixed evidentiary sample at one or more loci; or 2) the Y-STR haplotype of a putative male relative from the same paternal lineage at two or more loci.<sup>5</sup>

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<sup>2</sup> A ‘haplotype’ is a set of linked DNA variations or polymorphisms that are inherited together from a single parent.

<sup>3</sup> As used in this document, the term ‘consistent with’ indicates that two haplotypes are identical or that differences between them can be explained by allelic dropout.

<sup>4</sup> The expectation of a shared Y-STR haplotype should not be misunderstood to mean that all males with that same haplotype had the same opportunity to potentially contribute to the evidentiary sample.

<sup>5</sup> The interpretation of potential haplotypes in a sample includes considering the possibility of allelic dropout.

All male relatives from the same paternal lineage are expected to have the same Y-STR haplotype and would also be excluded as potential contributors.

### **Inconclusive**

‘Inconclusive’ is an examiner’s conclusion that no determination can be made whether 1) a known male can be included or excluded as a possible contributor to the Y-STR typing results obtained from an evidentiary sample; or 2) two known males, or a known male and the source of an evidentiary sample, share the same paternal lineage.

The basis for an ‘inconclusive’ conclusion is an examiner’s interpretation that 1) an evidentiary sample contains an indistinguishable mixture and the Y-STR haplotype of a known male cannot be excluded; or 2) the Y-STR haplotype of a known male is not consistent with the haplotype of a putative male relative from the same paternal lineage at a single locus, or differences at two or more loci are interpreted to be the result of a single mutational event.

## **IV. Qualifications and Limitations of Forensic Y-STR DNA Examinations**

- An examiner shall not assert that forensic Y-STR examinations are infallible or have a zero error rate.
- An examiner shall not offer a forensic Y-STR ‘inclusion’ conclusion unless he or she also explains that 1) all male relatives from the same paternal lineage are expected to have the same Y-STR haplotype and would also be included as potential contributors; and 2) unrelated males may also exhibit the same Y-STR haplotype.<sup>6</sup>
- An examiner shall not assert that a Y-STR haplotype is unique to a particular male or is the basis for personal identification.
- An examiner shall provide a quantitative statement describing the weight of the evidence for all comparisons in which a known male is included as a possible contributor to the Y-STR typing results obtained from a probative evidentiary sample. This statement shall be provided regardless of the number of alleles detected or the magnitude of the resulting quantitative value. The designation of a Y-STR haplotype as having originated from an assumed contributor must be limited to those situations in which the presence of a known male’s DNA in a tested sample is reasonably expected. The provenance of the sample must be established in the case file.
- An examiner shall not assert that a Y-STR DNA haplotype can be used to predict the specific population, racial, or ethnic group to which a person belongs.

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<sup>6</sup> The expectation of a shared Y-STR haplotype should not be misunderstood to mean that all males with that same haplotype had the same opportunity to potentially contribute to the evidentiary sample.

- An examiner shall not cite the number of forensic Y-STR DNA 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 forensic Y-STR DNA examinations performed in his or her career for the purpose of establishing, defending, or describing his or her qualifications or experience.
- An examiner shall not use the expressions ‘reasonable degree of scientific certainty,’ ‘reasonable scientific certainty,’ or similar assertions of reasonable certainty in either reports or testimony unless required to do so by a judge or applicable law.<sup>7</sup>

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<sup>7</sup> See *Memorandum from the Attorney General to Heads of Department Components* (Sept. 9, 2016), <https://www.justice.gov/opa/file/891366/download>.