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The desired end of DNA analysis is to determine whether a particular person is or is not the source of an item of biological evidence. First, DNA profiles must be generated for the person and for the evidentiary item. Then the profiles must be compared to determine if they are different or matching or if it isn't possible to know if they match. Finally, if the profiles match, it is important to understand the significance of the match.

The notes and other documentation **generated through the analysis process must be maintained either in hard copy or electronically. The conclusions of the examiner must be supported by those notes and other documentation.** The laboratory report must communicate both the analytical results and the conclusions of the examiner, conveying the essence of what he or she would say if asked for an expert opinion in court. The report informs the opposing counsel during discovery what physical evidence was examined and what its significance may be. Decisions may be made by police officers, attorneys and the courts based on the report alone without examiner clarification, so the report should be able to stand alone. Case information, analysis results, and reports will only be released to authorized individuals according to Laboratory Quality and Operations Manual requirements.

The report must contain the information required in the quality manual. The requirements in this manual cover several items also required by the QAS (case identifier, description of evidence **examined**, results and/or conclusions, a qualitative or quantitative interpretive statement, date issued, and signature and title of the responsible person). The following are also required in each DNA report:

1. Description of DNA **technology**
2. Loci analyzed, if DNA analyzed
3. Disposition of evidence

When statistics are provided, they will be reported to two significant digits. If not all loci are used in the statistical calculation, the loci used should be noted in the report.

All samples received by the analyst will be listed in the report. For each sample, report the results obtained, or indicate that no analysis was performed. The general types of results are:

1. Whether or not results (or interpretable results) were obtained.
2. Whether the profile obtained is from a single source or mixture of DNA, and whether a full or partial profile was obtained.
3. Whether or not tested/known individuals can be excluded. (Note that sometimes the results are inconclusive as to whether an individual can be excluded.)
4. The statistical significance of a "not excluded" or "inclusionary" result. This will be reported, at a minimum, for Caucasians, Blacks, Southeast Hispanics, and Southwest Hispanics.
 - a. This may include source attribution when this criterion is met.
 - b. For parentage cases, both the CPI and Probability of Paternity will be reported.

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- c. For Y-STR cases, all races searched should be reported statistically, along with the database used for analysis. At this time, Y-STR results will not include both Southeast Hispanics and Southwest Hispanics, but only for Hispanic individuals.
5. Per QM, 100/7.01, the reason for inconclusive results must be clearly stated.
6. Assumptions must be stated, e.g., mutations in paternity analysis or presumed biological relationships.

The analyst will include the DNA profile(s) in the report in the form of a table. If a locus is inconclusive or not responsive to testing, the profile at that locus will not be reported and will not be included in calculations of statistical significance estimations. Statistical calculations for samples not known to be probative need not be performed or reported, however the analyst may be required to perform these calculations at a later time.

The wording of the conclusions in reports will depend on the specific nature of the results.