

Complex Mixtures / Close Relative DNA Reports

On November 25, 2013 the Alaska Scientific Crime Detection Laboratory (ASCDL) instituted a change to the manner in which results of DNA analysis involving complex mixtures and mixtures involving close relatives are reflected in its reports.

“Complex mixtures” are biological samples which contain three or more sources, which are present in varying proportions. There is no appropriate and readily available method to assess the statistical weight to be afforded a match to most complex mixtures. All probative matches are required to include an assessment of the statistical weight of the match. In the absence of an appropriate and readily available method for statistical analysis, complex mixtures are therefore generally not suitable for probative comparisons. Accordingly, DNA reports issued after November 25, 2013 will not include probative comparisons on most complex mixtures.

“Close relatives” for the purposes of forensic population statistics are either biological parents/children or full siblings. The ASCDL is not able to perform population statistical analysis specific to close relatives, only statistical analysis that assumes the absence of biological parent/child or full sibling relationship. In cases where two close relatives are included in a non-complex mixture, statistical calculations specific to close relatives may be of probative value, depending on the specific facts of any given case. Accordingly, DNA reports issued after November 25, 2013 will include a statement advising that population statistics specific to close relatives may be of additional probative value and that the DNA Technical Manager can be consulted regarding how such additional information might be obtained from another laboratory.

Dated this 10th day of December, 2013 at Anchorage Alaska



Cheryl Duda
DNA Technical Manager



Orin Dym
Laboratory Manager