

## DNA Discovery Checklist

The purpose of this checklist is to help you identify whether you have all of the lab reports associated with this type of evidence. This list should be viewed as a starting point. Additional items may be needed in a particular case, but these are the reports you will want to collect before you or your expert attempt to review the evidence in your case. The discovery checklist is for current lab work. Different reporting methods may have been used for older casework.

Report	Description
Laboratory Report	Provides a summary that includes the type of examination requested, the results of the examination, and a calculation of statistical likelihood data. This report will not explain how or why the conclusions were reached.
SBI-5 Form (Request for Examination of Physical Evidence)	Lists what forensic tests law enforcement requested that the lab perform. Note which version of the form is used. In 2011, the form was updated to use more neutral language and to exclude extraneous information that could potentially be biasing.
Forensic Biology Worksheet	Tracks what analysis was performed on each piece of evidence. May contain notes made during the analysis.
Case Report	Tracks the submission and testing of each piece of evidence. It is important for attorneys to read the "Review History" section of the case report to determine what problems with analysis were detected by the case reviewer.
DNA Sample Submission Data Form	Lists the evidence submitted and states whether the evidence sample or the suspect standard has been uploaded in CODIS.
DNA Extraction Worksheet	Lists the amount of DNA that was extracted from the evidence sample. This information will help an expert determine whether such a small amount of DNA was present that trace DNA concerns would apply.
ABI Quantifiler Setup Sheet	This table shows what samples were submitted placed in each well of the test kit. It is important here to note whether samples from different cases were tested in the same batch.
Standard Curve	This graph will demonstrate whether the quantitation standards are producing expected or unexpected results.
Dilution Calculation Worksheet	This chart shows the amount of DNA present in each sample and whether it was necessary to dilute the sample because of high DNA concentration.
Electropherograms: <ul style="list-style-type: none"> <li>• Ladder</li> <li>• 9947A</li> <li>• Negative blank</li> <li>• MJB sample</li> <li>• Case samples</li> <li>• DNA profile for each analyst involved in the testing</li> </ul>	Electropherogram – displays the results of the separation of DNA by electrophoresis process. Will look like a graph with peaks. <ul style="list-style-type: none"> <li>• Ladder - electropherogram of known DNA sizes used to determine the size of an unknown DNA sample</li> <li>• 9947A – a known DNA profile that is run in order to check that the expected results are achieved</li> <li>• Negative blank – a sample that contains only the</li> </ul>

	<p>chemicals used to extract DNA is run. No DNA profile should be seen here. If a profile is observed, it indicates a contamination problem.</p> <ul style="list-style-type: none"> <li>• MJB sample – the State Crime Lab runs a sample of analyst Mike Budynzski’s DNA to test whether the expected results are achieved.</li> <li>• An electropherogram for each case sample run will be included.</li> <li>• Attorneys should consider requesting the electropherograms for the DNA profile of each analyst involved to compare and evaluate whether contamination has caused unexpected results. A table of allele calls for each lab employee involved in the analysis will be provided upon request.</li> </ul>
Table of allele calls (for each case sample)	After the computer program determines which peaks to call (meaning which peaks are labeled as true peaks), the results are placed in table form.
Statistics report	Explains what techniques were used in the statistical analysis of the sample.
Corrective Action log for the analyst and for the DNA section of the lab	The Corrective Action Records for the entire lab from 1999-present will be listed by year. Attorneys can review these records to discover contamination or other problems that have been reported. The Corrective Action Tracking chart is a separate document which provides additional information about reported incidents. It may only be provided for the year of analysis, unless additional years are requested.
Complete record of chain of custody	Will be provided as part of a standard discovery packet.
For each individual involved in analysis: resume, job description, education and training, proficiency testing results, and testimony reviews.	Analyst CV will contain education and training information and is provided as part of the standard discovery package. Proficiency testing results and testimony evaluations are available upon request.
Raw quant data	This file contains raw data that can only be analyzed by an expert who has the required software.

## DNA Analysis Checklist

This checklist is designed to help spot potential problems with the evidence in your case. If the issues identified below are present in your case, an expert's assistance may be needed to help interpret the DNA evidence in your case.

<b>Issue:</b>	<b>Explanation:</b>
Does the evidence sample contain a DNA mixture?	Interpretation of DNA mixtures is much more complex than interpretation of a single source sample. Interpreting a mixture often involves subjectivity. Additionally, determining whether a sample is a mixture or not may involve subjectivity.
Does the evidence sample contain a partial profile?	If a full profile with one or two alleles at each of the 16 loci was not developed from the evidence sample, this is an indication to look further at the analysis. Interpretation of a partial profile is more complex than interpretation of a full profile. Determination of whether a mixture contains a partial profile may involve subjectivity.
Is your case based on a CODIS cold hit?	If the DNA match was found by searching the CODIS database, you should consider consulting an expert to determine the statistical significance of the match and help you identify other issues with "cold hit" cases such as whether the sample was entered into the database legitimately and to determine where the sample came from.
Is there a finding of "inconclusive" results in the Laboratory Report?	SBI policy for when "inconclusive" results may be reported have changed several times in recent years. A report containing the term "inconclusive results" needs to be evaluated further.
Is there a finding of "additional alleles" or "non-probative alleles that cannot be accounted for"?	A report containing these terms needs to be evaluated further.
Did analysts Barker, Bissette, Deaver, Elwell, Holley, Milks, Spittle, or Taub perform testing or review casework?	Each of these analysts were cited in the Swecker report for problems with their casework. Brenda Bissette was the analyst in two cases where DNA samples were mixed up. David Freeman was the Forensic Biology Section supervisor at the time the testing examined in the Swecker Report was performed.
Was confirmatory testing performed to determine if the substance tested was blood, semen, saliva, etc. or something else?	Frequently where DNA testing is done, only a presumptive test for blood, semen, or saliva will be done.
Are the peaks on the electropherogram lower than 150 RFUs?	If there are peaks that are below 150 RFUs, further analysis should be done to determine if the analyst correctly called those peaks.
Are the complaining witness and the defendant related, or are there related co-defendants or suspects?	Calculation of the match probability may differ if the samples come from family members. The SBI lab doesn't factor in the fact that relatives may have similar

	DNA.
Does the case contain “touch DNA,” “trace DNA” or very small amounts of DNA?	Interpretation of trace amounts of DNA is complex and may involve more subjectivity than traditional DNA analysis. Additionally, there may be challenges you can make to the techniques used to amplify and analyze this DNA.
<b>Additional considerations in post-conviction cases:</b>	
Was testing done prior to 2004?	After 2004, the lab began using capillary electrophoresis which could provide a more accurate profile.
Did the analyst testify or the prosecutor or defense attorney state that the substance was blood?	DNA analysis is not a confirmatory test for blood. If only a presumptive test for blood was done (such as the phenolphthalein test aka Kastle-Meyer test) and no confirmatory tests was done (such as the Takayama test), then the analyst cannot testify that the substance was blood, even if DNA testing was done. The same problem should be considered with purported samples of saliva or semen where no confirmatory testing was done.
Did statistical testimony involve the prosecutor’s fallacy?	If the DNA analyst or the prosecutor confused the meaning of the statistics and instead of saying the probability of this allele existing is 1 in (whatever number) said that the probability of anyone other than the defendant committing the crime was 1 in (whatever number), the prosecutor’s fallacy occurred.