# Procedure for Documentation and Review

**1.0 Purpose** - This procedure documents the requirements and guidelines for electronic note-taking, case file review requirements, and completion of Case Records using the Forensic Advantage (FA) system within the Forensic Biology Section.

**2.0 Scope** – This procedure applies to those Forensic Scientists in the Forensic Biology Section who perform analysis in body fluid identification and/or DNA analysis.

## 3.0 Definitions

- **Administrative documentation** - Materials associated with Case Records which do not include technical records but may include scanned copies of additional Request for Physical Examination of Evidence Forms, internal chain of custody documents, Forensic Scientist statement of qualifications (CV), notes and communication logs of case-related conversations, subpoenas and records of discovery, Sexual Assault Evidence Collection Kit papers, Subject Evidence Collection Kit papers, and other pertinent information which relates to the Case Record, but does not necessarily support the conclusions drawn.
- **Case Record** - Unit of work within a discipline performed by a Forensic Scientist resulting in a single Laboratory Report or memorandum.
- **CODIS** – Combined DNA Index System.
- **Combined Probability of Inclusion (CPI)** – Refer to Section Procedure for Statistical Calculations.
- **Combined technical and administrative review** – An evaluation of reports, notes, data, and supporting documentation to ensure that there is an appropriate and sufficient basis for the scientific conclusions as well as consistency with Laboratory policies and editorial correctness.
- **Electronic Record** - A data file that has information recorded in a form that only a computer can process.
- **Examination documentation** – Records of tests conducted, standards and controls used, diagrams, printouts, photographs, spectra, chromatograms, hand-written notes and other material used by the Forensic Scientist to reach a conclusion.
- **Forensic Advantage (FA)** - The lab wide computer software system used for documenting and storing data and reports generated for each case.
- **Form** - A document with a fixed arrangement of captioned spaces designed for entering and extracting information. Forms become a record once completed.
- **PopStats** – Refer to the Section Procedure for Statistical Calculations.
- **Portable Document Format (PDF)** – A file format that preserves most attributes of a source document no matter which application, platform, and hardware type was originally used to create it.
- **Records** - Materials created or received by the Laboratory that are preserved as documentation of the activities of the Laboratory or for the value of the information. Records include, but are not limited to, reports, correspondence, telephone logs, quality records and technical records.
- **Technical records** - Accumulations of data and information which result from performing tests as specified in technical procedures. Technical records include, but are not limited to, forms, worksheets, photographs, and test reports.
- **Technical review** – An evaluation of reports, notes, data, and other documents to ensure there is an appropriate and sufficient basis for the scientific conclusions.

## 4.0 Equipment, Materials and Reagents

- Computer with FA software



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## 5.0 Procedure

### 5.1 Case Notes

**5.1.1** All casework files shall be generated in such a manner that another trained Forensic Scientist can follow and understand all the steps taken during the analysis (including decision making steps)**.**

**5.1.2** Before a Forensic Scientist begins a procedure (e.g., rubbing for Kastle-Meyer, making a cutting for extraction, semen or saliva testing or transferring a portion of a DNA extract for quantitation, amplification, or an electrophoretic run), a worksheet shall be created in FA. Analysis shall be documented in the Forensic Scientist's worksheets as it is conducted. In the event of extenuating circumstances (e.g., court, FA/instrument issues, sick leave), Forensic Scientists shall complete the worksheets at the earliest opportunity.

**5.1.3** If samples are to be reanalyzed at any step, that step of the process officially begins when the instrument is started. At that point, documentation shall be maintained in the Forensic Scientists' worksheet.

**5.1.4 Case Record Object Repository -** For each Case Record, the FA Case Record Object Repository shall include electronic versions of all notes or data generated during analysis of the case, including but not limited to the following information: the Forensic Scientist's most recent curriculum vitae, case notes generated during analysis (to include any amendments to case notes, as well as the original electronic copy), GeneMapper Projects, raw data from instrumentation, photographs generated during examination, the expected results and statistical reference sheet, SDIS Specimen Detail Report, Employee searches, and kit forms contained in the sexual assault examination kit or subject evidence collection kit.

**5.1.5 Forensic Advantage Forensic Biology Worksheet**

**5.1.5.1** In instances where the Forensic Scientist consumes the entire piece of raw material during analysis (e.g., swabs, cutting, etc.), a note shall be made in the comment section for the item on the sexual assault worksheet, unknown sample worksheet, or the DNA extraction page. If an item is consumed and no packaging remains, this shall also be documented in the chain of custody. If an item is not entirely consumed in DNA analysis, the amount of evidence consumed shall be documented.

**5.1.5.2** Results statements shall be generated in the FA worksheets upon completion of analysis. The automatically generated results statements may be modified so as to reflect results more accurately.

**5.1.5.3** The following statement shall be entered into the Results area when cuttings/swabbings are taken and no chemical analysis for body fluid identification was performed: "No chemical analysis for body fluid identification was performed on ___ (Item __); however, a swabbing (or cutting) (sub-item, if applicable) was taken for DNA (further) analysis."

**5.1.5.4 Main Page**

**5.1.5.4.1** Type of Analysis Requested – Each type of analysis performed as part of the Case Record shall be listed by choosing the appropriate option(s) from the drop down menu.



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**5.1.5.4.2** A sample description, including packaging, shall be included for each item assigned to the Case Record, including any items or sub-items created during analysis.

**5.1.5.4.2.1** For each item, the item description, type of container, and condition of seal (sealed or unsealed) shall be listed.

**5.1.5.4.2.2** For sub-items generated and consumed during analysis where no evidence container exists, the item description shall be placed on the main page of the worksheet.

**5.1.5.4.2.3** The item description on the main page may be changed to reflect the actual items of evidence within the container.

**5.1.5.4.2.4** For multiple items contained within one convenience package (i.e., an outer box for mailing), the convenience container need be listed only for one of the items with a note stating which items were contained within the container.

**5.1.5.4.2.5** Hair packets received with a SAEK shall be given a sub-item number and a note shall be made if the packet was attached to the outside of the kit box.

**5.1.5.4.3 Not Analyzed -** Items not analyzed as part of the Case Record shall be designated by checking the Not Analyzed box next to Item Description.

**5.1.5.4.3.1** Items not analyzed shall be listed together in the results section of the Report. This shall be listed as a standalone paragraph in the Report.

**5.1.5.4.4 All standards not available** – If all the DNA standards necessary to work the case are not available after following the Lab Procedure for Obtaining Evidentiary Standards, place a check mark in the box "all standards not available" and fill in the appropriate information in the automatically-generated statement to indicate which items are to be resubmitted when the DNA standards become available.

**5.1.5.4.5 CODIS Hit Notification** – For Case Records involving CODIS Hit notifications only, place a check mark in the box "Notification of CODIS Hit" and fill in the appropriate information in the automatically-generated statement. See the Procedure for Casework Report Writing and Procedure for CODIS.

**5.1.5.5 Serology Tab**

**5.1.5.5.1 General Overview**

**5.1.5.5.1.1** Quality Control (QC) information (reagents, lot numbers, and QC results of testing) shall be listed at least once per worksheet for each instance that it is performed.

**5.1.5.5.1.1.1** Results for QC testing shall be denoted to identify that testing worked appropriately.



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**5.1.5.5.1.2 Test Choice -** Choose the appropriate test choice from the drop-down menu for each item and test performed.

**5.1.5.5.1.2.1** For each test performed, indicate the results obtained for that test for each sample and any overall results.

**5.1.5.5.1.2.2** For sub-tests, indicate on which samples the sub-tests was performed.

**5.1.5.5.1.3 Overall results**

**5.1.5.5.1.3.1** If all test samples give the same results (i.e., Positive, Negative, or Inconclusive) then the overall results shall reflect that result.

**5.1.5.5.1.3.2** The overall results shall be left blank if all of the test samples do not have the same result.

**5.1.5.5.1.4** Bloodstain Prepared – If a bloodstain is prepared, mark yes. The bloodstain shall be given a sub-item and listed under the parent item. .

**5.1.5.5.1.5** Comments – If a swabbing/cutting is taken from the item for DNA analysis, indicate that a swabbing/cutting was taken, from which area, and the sub-item number assigned to the swabbing/cutting.

**5.1.5.5.2 Sexual Assault Worksheet**

**5.1.5.5.2.1** If a sexual assault evidence collection kit (SAEK) is analyzed, the contents of the kit shall be inventoried and each item shall be given a unique sub-item number. For SAEKs that are not analyzed, the kit need not be opened or inventoried.

**5.1.5.5.2.2** Only the sub-items contained within the kit that will be analyzed need to be listed on the sexual assault kit worksheet, the sexual assault kit itself does not need to be listed.

**5.1.5.5.3 Subject Kit Worksheet**

**5.1.5.5.3.1** If any contents of the subject kit are analyzed by the Forensic Scientist, the kit shall be inventoried and each item in the kit shall be given a unique sub-item number.

**5.1.5.5.3.2** If a liquid blood sample is submitted, the creation of bloodstain shall be documented on the subject kit worksheet.

**5.1.5.5.4 Unknown Sample Worksheet**

**5.1.5.5.4.1** Items submitted for analysis to the Forensic Biology Section as unknown or questioned items shall be listed on the Unknown Sample worksheet under the following conditions:



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- The item requires body fluid identification (to include alternate standards).
- For body fluid identification only cases, a swabbing or cutting is collected from the item.

**5.1.5.5.4.2** For containers which contain multiple items that are not listed in the overall item description, the contents of the container shall be listed.

**5.1.5.6 DNA Tab**

**5.1.5.6.1 General**

**5.1.5.6.1.1 Quality Control Information –** For each step of analysis, the Forensic Scientist shall choose the appropriate lot number of all reagents and instrument name used from the drop down list. The dates that the analysis is performed shall be denoted for each step (to include any re-processing dates.) Notations (check boxes) shall be made in FA for any steps requiring decontamination.

**5.1.5.6.1.1.1** If the same lot(s) is/are used for subsequent processing, a note may be added stating that the same reagents are used below (above).

**5.1.5.6.1.1.2** If the reagent/instrument used is not available within the drop-down list, note the reagent and lot number or instrument name in the notes/comments.

**5.1.5.6.1.2** The type of setup performed (i.e. robot or manual) shall be noted for each step of analysis.

**5.1.5.6.1.3** Case Record OR – Refer to the review form for the contents and naming conventions. Any and all raw data produced during analysis shall be present.

**5.1.5.6.1.4** Batching - If a Forensic Scientist chooses to batch analysis of multiple cases, then that Forensic Scientist shall list the case file numbers of the cases being batched on the respective analysis worksheet (extraction, quantitation, amplification, and/or electrophoresis). If the same set of cases is batched throughout, notation only needs to be made at the first step. It is the responsibility of the Forensic Scientist and reviewers to verify that there was no transfer of samples between cases (both question and known profiles).

**5.1.5.6.1.5** When extraction tubes containing knowns, unknowns, and controls are being transferred back to the investigating agency, the set of tubes shall be assigned a new item number in FA. If this collection of tubes is resubmitted to the lab for re-analysis or there is an internal transfer after the generation of this new number, refer to the Section Procedure for Evidence Handling.



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**5.1.5.6.2 DNA Extraction Worksheet**

**5.1.5.6.2.1** **Question and Known Samples** – Record the item number(s), the negative control, type of extraction, date of the extraction, time the extraction was started, and the final volume of the extract (in µL).

**5.1.5.6.2.2** **Notes** - If additional post-extraction processing is performed (e.g., the phenol-chloroform step is performed again or a sample is re-concentrated) record the item number, date of the additional analysis, type of additional analysis performed, and the final extract volume.

**5.1.5.6.2.2.1** If a sample is diluted prior to the quantitation, note which samples are being diluted, what dilution is being made (e.g., 1:5, 1:10), and why the dilution was made.

**5.1.5.6.2.2.2** If a swabbing or cutting is taken from an item for DNA analysis, indicate that a swabbing/cutting was taken.

**5.1.5.6.3 DNA Quant Data Worksheet**

**5.1.5.6.3.1 Notes**

**5.1.5.6.3.1.1** Make a note of any samples that exhibited possible inhibition according to the Quantitation Procedure.

**5.1.5.6.3.1.2** If a quantitation is not being used for analysis (e.g., the instrument failed during the run or the standard curve did not meet the requirements according to the Quantitation Procedure), a note shall be made as to why the run is not being used. If any points were dropped during analysis from the standard curve(s), the specific point(s) dropped shall be documented.

**5.1.5.6.3.2** Quantitation data shall be saved in the Case Record Object Repository.

**5.1.5.6.3.2.1** The quantitation PDF (7500 and QIAgility post run report) files shall be named as listed in the DNA Casework Review Checklist.

**5.1.5.6.3.3 Raw Data in the Case Record Object Repository**

**5.1.5.6.3.3.1** All quantitation raw data (7500 and QIAgility) shall be placed in the Object Repository.

**5.1.5.6.3.3.2** The raw data files shall be named as listed in the DNA Casework Review Checklist.



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**5.1.5.6.3.3.3** The raw data file, if generated, shall be placed in the Object Repository even if the run/experiment is not being used for further analysis and no data is being printed (i.e., the run/experiment is being repeated due to instrument failure or unacceptable standard curve).

**5.1.5.6.4 DNA Amplification Worksheet**

**5.1.5.6.4.1** Choose the appropriate amplification type: Identifiler or Y-filer.

**5.1.5.6.4.2** For manual setup, add all sample names to be amplified into the appropriate amplification table under the Sample heading.

**5.1.5.6.4.3** For manual setup, in the DNA amount column for each sample, enter the appropriate amount of DNA to be added to the amplification based on the Dilution Calculation worksheet. The TE amount field is automatically populated after the DNA amount has been entered.

**Note:** The amount of 9947A to be added will be determined based upon the QC results of each kit and will be provided by the Section Quality Control Officer.

**5.1.5.6.4.4** For robotic setup, leave the amplification table at the defaulted values.

**5.1.5.6.4.5 Note** – If a sample is diluted prior to the amplification, note which samples are being diluted and what dilution is being made (e.g., 1:5, 1:10, 1 ng/µl).

**5.1.5.6.5 DNA 3100 Data Worksheet**

**5.1.5.6.5.1** See the Forensic Biology Procedure for Genemapper ID for Casework for information that shall be added to the Object Repository for samples and/or runs that are not used for analysis.

**5.1.5.6.5.2** To add the 3130XL raw data to the Case Record Object Repository through the instrument network:

**5.1.5.6.5.2.1** In order to put the 3130XL raw data into the Object Repository, the folder shall be compressed. Each 3130XL computer has a folder labeled Run Data (there should be a shortcut to this folder on the desktop).

**5.1.5.6.5.2.2** Open the Run Data folder and select the appropriate run and right click. Go to Send To and choose the Compressed Folder option. A new, zipped folder appears at the bottom of the list. When there are multiple runs for the same case, each of the run folders can be highlighted and compressed into one zip file.



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**5.1.5.6.5.2.3** Rename the zip folder that has just been created with an appropriate file name (e.g., 1_case number_Case Record number_run number(s)).

**5.1.5.6.5.2.4** Place the renamed zip folder into the Monitor folder (usually found on the desktop) so the data can be imported into the appropriate FA Case Record Object Repository through the instrument data network.

**5.1.5.6.5.2.5** For runs that contain samples from multiple cases, the original run folder on the 3130XL shall be copied so that each run folder in the FA Case Record Object Repository contains samples from that case only and controls.

**5.1.5.6.5.3** Make a copy of the run folder by right clicking on the appropriate run folder and choose copy, then right click and choose paste.

**5.1.5.6.5.3.1** Open the copied folder and delete the samples that are not associated with the case, leaving only one case in the copied run folder.

**5.1.5.6.5.3.2** The copied run folder can then be compressed, renamed, and transferred to the Monitor folder as described above.

**5.1.5.6.6 DNA CODIS Worksheet**

**5.1.5.6.6.1** If a keyboard search has been performed according to the Procedure for CODIS (with the exception of Employee Database searches), choose the appropriate box for either no investigative leads were obtained or investigative leads were obtained Choose the appropriate item number from the drop-down list. See the Procedure for Casework Report Writing.

**5.1.5.6.6.2** Place a check mark in the box for samples being entered into CODIS. Choose the appropriate item number from the drop-down list. In the comment box, indicate Source ID (yes or no), partial (yes or no), and if the profile originated from a differential extraction (sp or ns fraction). Select the appropriate Database the profile qualifies for (State only or State and National), as well as the specimen category from the drop-down menu (e.g., forensic unknown, suspect) according to the Forensic Biology Section Procedure for CODIS.

**5.1.5.6.6.3** Upon comparison of a suspect standard to a forensic unknown specimen, and a match is confirmed, the Forensic Scientist shall update the Source ID of the specimen according to the Forensic Biology Procedure for CODIS (e.g., "source id changed to yes”).



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**5.1.5.6.6.4** Once the profile has been entered into CODIS, the Forensic Scientist shall export the SDIS Specimen Detail Report and add it to the Case Record Object Repository.

**5.1.5.6.7 DNA Results Worksheet**

**5.1.5.6.7.1 Results**

**5.1.5.6.7.1.1** All unknown items on which DNA analysis was performed shall be accounted for on the DNA results worksheet with the appropriate result (e.g., Single Source Profile, Mixture Profile, etc.) and conclusion, including comparison to all known samples and unknown samples, according to the Casework DNA Interpretation Guidelines.

**5.1.5.6.7.1.2** If the item number is associated with a differential extraction, indicate which fraction (sperm fraction or non-sperm fraction) the result and comparison applies to in the comment section for that item.

**5.1.5.6.7.1.3** For DNA profiles that result in a match, choose either Full or Partial to indicate the appropriate result.

**5.1.5.6.7.1.4** For DNA profiles with partial matches, the individual loci boxes need not to be checked.

**5.1.5.6.7.1.5** DNA profiles that have the same result (e.g., Item 1 and Item 2 are both single source profiles with a match to Item 3) can be grouped together.

**5.1.5.6.7.2** Statistical values that have been generated according to the Casework DNA Interpretation Guidelines shall be entered into the statistics portion of the worksheet.

**5.1.5.6.7.2.1** Choose either Popstats or CPI from the drop down menu based on the type of statistical analysis performed.

**5.1.5.6.7.2.2** For Popstats or CPI, the item number, name of the individual and item number to which the unknown DNA profile matched, and the statistical values that were generated shall be entered.

**5.1.5.6.7.2.3** For statistical values, the numerical values shall be listed to three significant figures. If the numerical value is between 1,000 and 9,999, the entire numerical value shall be listed (e.g., 1,111 would be written as 1,110).

**5.1.5.6.7.3** Once all required information has been entered into the worksheet, click the button to Generate Result Statement(s).



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**5.1.5.6.7.3.1** In the DNA extraction paragraph, fill in the appropriate information for which question samples (only the item number needs to be filled in) had DNA extractions and which known samples were extracted (both the name of the individual and the item number need to be filled in).

**5.1.5.6.7.3.2** In the results section, add the item number(s) that apply(s) to each grouping above the appropriate results statements.

**5.1.5.6.7.3.3** To the CODIS statement, add the item number(s) for any samples that are being entered into CODIS. If no samples are being entered into CODIS, indicate that no samples are being queried. If the sample being entered into CODIS is from a differential extraction, the fraction being entered shall be noted (e.g., sperm fraction or non-sperm fraction). If generating a subsequent report, the statement shall be changed as applicable, adding no "new" items.

**5.1.5.6.7.3.4** If no statistical analysis was performed, the population database statement shall be deleted.

### 5.1.5.7 Disposition/Result Worksheet Tab

#### 5.1.5.7.1 Disposition

**5.1.5.7.1.1** Disposition – Enter the appropriate disposition for each item contained in the worksheet from the drop-down menu.

For items being transferred directly to another Forensic Scientist, the name of the Forensic Scientist to whom the item is being transferred and the date of the transfer does not need to be noted.

**5.1.5.7.1.2** If any of the items being returned include human remains, check the Human Remains box so that the human remains disposition statement is generated.

**5.1.5.7.1.3** Once all appropriate information has been entered, click the Generate Disposition button to generate the correct disposition statement for the report.

**5.1.5.7.1.3.1** For any disposition statement not populated automatically on the report preview, the appropriate disposition statement shall be added for it to appear on the report. Add note regarding return of DNA extracts in liquid form as stated in the Section Evidence Handling Procedure.

#### 5.1.5.7.2 Review Report

**5.1.5.7.2.1** A preview of the final report appears showing any statements generated in the individual worksheets which generate results.



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**5.1.5.7.2.2** If hairs are present as part of the Case Record and those hairs are not being sent to the Trace Unit for further analysis, the following statement shall be used: "This lab report details only the results of the serological/DNA examination of the case. The hair samples are being returned unanalyzed. All questions and inquiries concerning hair examination of this evidence should be directed to the Physical Evidence Section Forensic Scientist Manager."

**5.1.5.7.2.3** The results and/or conclusions statements shown in the preview area shall be consistent with the statements shown on the Laboratory Report itself and in the individual worksheets; however, minor typographical errors or administrative errors (such as spacing or incorrect capitalization) may be corrected in the Report and need not be corrected within the worksheet itself.

**5.1.5.7.2.4** For applicable cases involving DNA analysis, the population database statement and CODIS statement shall be moved to the end of the results section.

**5.1.5.8 Completed Tasks Tab -** this tab is used to document casework related training activities.

## 5.2 Generating a Report for Casework

**5.2.1** Once analysis has been completed on the case and all required information has been entered into the worksheet, a Laboratory Report is generated.

**5.2.2** Laboratory Reports shall be issued on all cases that are analyzed and shall be prepared in accordance with the State Crime Laboratory Procedure for Reporting Results. All Laboratory Reports, except CODIS Hit Notifications and Notification of CODIS Entry reports, shall include:

**5.2.2.1** Unique case identifier.

**5.2.2.2** Description of the evidence examined (including the date the items were received and by whom).

**5.2.2.3** Type of examination requested.

**5.2.2.4** A description of the methodology (DNA).

**5.2.2.5** The loci tested (DNA).

**5.2.2.6** The results and/or conclusions.

**5.2.2.7** An interpretative statement (DNA, either quantitative or qualitative).

**5.2.2.8** Date report is released. The date listed on the Laboratory Report reflects the date the Laboratory Report was generated. Once all reviews are complete and approved, Forensic Advantage (FA) assigns the Report a pending release status. Once the Forensic Scientist releases the Report, this date is posted in FA as the release or issue date.

**5.2.2.9** Disposition of evidence.

**5.2.2.10** The electronic signature and title of the Forensic Scientist issuing the report.



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**5.2.3** In instances where a sub-item has been analyzed and the parent container is not a part of the Case Record, an additional statement shall be added to the item description under the "Item Submitted" header to reflect from which submitting agency item number the sub-item was created.

**5.2.4** The Laboratory Report shall be checked out to add additional information:

**5.2.4.1** The results header information is to be changed to state: Results of Examination and Conclusions.

**5.2.4.2** The item number header information in the results section shall be formatted so that the header for each result grouping is both bold and underlined.

## 5.3 Review Guidelines

### 5.3.1 Casework Review Guidelines

**5.3.1.1** Technical Issues: If during the course of a review, the reviewer and case Forensic Scientist are unable to resolve a technical issue, the appropriate (Body Fluid and/or DNA) technical leader shall be notified of the issue by the case Forensic Scientist. The technical leader shall then determine and/or approve the appropriate course of action to be taken.

**5.3.1.2** Discrepant Conclusions: If a situation arises where the conclusions of a profile are not a consensus of the case Forensic Scientist, the technical reviewer, and the combined technical/administrative reviewer, then the more conservative approach shall be taken and the comparison deemed no conclusion and/or the profile deemed un-interpretable.

**5.3.1.2.1** During a case review, the case Forensic Scientist, technical and combined reviewers and the DNA Technical Leader shall reach a consensus of the profile being un-interpretable.

**5.3.1.3** Technical Reviews

**5.3.1.3.1** All data, test results, and reports shall undergo a technical review by a second qualified Forensic Scientist. All profiles shall undergo a technical review prior to search/entry into CODIS. The Forensic Scientist conducting the technical review shall ensure the data, testing methods and results, the interpretation, and reports meet State Crime Laboratory policy.

**5.3.1.3.2** The technical review shall be scheduled in FA for review.

**5.3.1.3.3** If a question arises concerning a result/conclusion, the technical reviewer shall have contact only with the Forensic Scientist of record and/or the Forensic Scientist's supervisor, the Section Manager, the Technical Leader and the combined reviewer.

**5.3.1.3.4** The technical reviewer shall document approval of the notes and Report when the standards are met. Both Forensic Scientists shall agree on the interpretation of the data to be reported.

**5.3.1.3.5** The technical review requirements for Body Fluid cases shall be addressed as listed in the Body Fluid Review Checklist.



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**5.3.1.3.6** The technical review for DNA cases shall address the following:

**5.3.1.3.6.1** Read the Request for Physical Examination of Evidence Form and communication log.

**5.3.1.3.6.2** Compare the Request for Physical Examination of Evidence Form request to the main page and extraction page of FA to determine proper analysis.

**5.3.1.3.6.3** To ensure completeness, perform a thorough review and comparison of the Object Repository and hard copy notes to include: allele call table, $R^2$ values, slope, allelic dropout, artifacts, presence of proper photographs, call tables from referenced samples, electronic files, population form from U.S. Census Bureau World Population Clock, etc.

**5.3.1.3.6.4** A thorough review of all hard copy notes, worksheets, projects, and electronic data (or printed electropherograms/images) to include lot numbers, batching, dates, instruments, etc.

**5.3.1.3.6.4.1** Review shall include verification that all appropriate time frames specified in the applicable DNA Casework procedures are satisfied.

**5.3.1.3.6.4.2** Review shall include verification of the comparison between unknown profiles and appropriate samples to include employee profile(s) and batched cases (both questioned and known profiles).

**5.3.1.3.6.5** A review of all DNA types to verify that they are supported by the raw or analyzed data (electropherograms or images).

**5.3.1.3.6.6** A review of all profiles to verify the correct conclusions and exclusions (if applicable) as well as a review of any un-interpretable results in accordance with the STR Interpretation Guidelines.

**5.3.1.3.6.7** A review of all controls, internal lane standards, and allelic ladders to verify that the expected results were obtained.

**5.3.1.3.6.7.1** Negative controls.

**5.3.1.3.6.7.2** Positive controls.

**5.3.1.3.6.7.3** Ladders.

**5.3.1.3.6.7.4** Internal lane standard (LIZ) printout including the 250 base pair peaks.

**5.3.1.3.6.8** A review of statistical analysis, if applicable.

**5.3.1.3.6.9** Perform a secondary interpretation.



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**5.3.1.3.6.10** A review of the final Report:

**5.3.1.3.6.10.1** Verify that the results and/or conclusions are supported by the data.

**5.3.1.3.6.10.2** Confirm the Report, disposition page, and results page are all in agreement.

**5.3.1.3.6.10.3** Review the disposition for accuracy.

**5.3.1.3.6.11** For profiles marked for CODIS search/entry: verification of eligibility, DNA types, specimen category, source ID, partial profile (yes/no), and database (SDIS/NDIS).

**5.3.1.3.7** The technical reviewer has two options based on the review:

- Approve the review, or
- Return the review with comments. These shall be placed in the dialogue box in FA. Document changes required by policy. Also document suggestions, but list as optional.

**5.3.1.3.8** If the review is returned, all issues shall be resolved prior to approval in FA.

**5.3.1.3.9** If a second technical review is scheduled due to changes requested in the combined review, confirm any changes that occurred based on the combined review.

**5.3.1.3.10** The technical review is considered to be complete when the technical reviewer has approved the review and all applicable technical review questions have been answered affirmatively.

**5.3.1.3.11** Once the technical review has been approved, schedule the combined review in FA.

**5.3.1.4 Combined 2nd Technical and Administrative Review for Body Fluid and DNA Casework Units**

**5.3.1.4.1** A combined review of the case file shall be completed by a qualified Forensic Scientist and the review shall be documented in FA. The combined review shall not be conducted by the technical reviewer.

**5.3.1.4.1.1** Note: CODIS Hit Notification, Notification of CODIS Entry, and preservation of evidence cases shall have a combined technical/administrative review completed by a qualified Forensic Scientist.

**5.3.1.4.2** The combined review shall be scheduled in FA for review.

**5.3.1.4.3** The combined reviewer shall ensure the following, as applicable:

**5.3.1.4.3.1** The DNA profiles searched and/or entered into CODIS have been entered and/or searched accurately.



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**5.3.1.4.3.2** Check all photographs for case number, initials, item number, date, focus, clarity, and absence of background clutter.

**5.3.1.4.3.3** Check all case notes in repository for page number, case number, Forensic Scientist initials, and date (exception: print2pdf documents).

**5.3.1.4.3.4** FA Worksheets – compare dates with items in the Object Repository, general review of pages to see that they are filled in properly, and confirm interpretations.

**5.3.1.4.3.5** Read report for grammar: names and items in the body of the report match the submission information, etc.

**5.3.1.4.3.6** Compare the Case Record chain of custody to the Report for completeness and accuracy.

**5.3.1.4.3.7** Comparison of Request for Physical Examination of Evidence Form to header: the information on the Request for Physical Examination of Evidence Form shall match if present, unless other documentation exists. Check for additional analysis requests (e.g., firearm, latent, etc.).

**5.3.1.4.3.8** The SDIS Specimen Detail Report shall be compared to the allele call table and Match Estimation Report (if applicable) for accuracy. The Specimen ID number, specimen category, source ID, partial profile (yes/no), and database (SDIS/NDIS) shall be verified.

**5.3.1.4.4** The combined reviewer has two options based on the review:

- Approve the review (no comments allowed, since the case is finalized once the administrative review is complete).
- Return the review with comments. These shall be placed in the dialogue box in FA. Document changes required by policy. Also document suggestions, but list as optional.

**5.3.1.4.5** If the review is returned for reasons that result in changes to results/conclusions, interpretation, or results in additional work being performed, the case file shall be returned to the technical reviewer for approval of changes with subsequent approval by the combined reviewer.

**5.3.1.4.6** If a question arises concerning a result/conclusion, the combined reviewer shall only have contact with the Forensic Scientist of record and/or the Forensic Scientist's supervisor, the Section Manager, the Technical Leader and the technical reviewer.

**5.3.1.5 Verification Reviews**: Verification reviews shall be completed under the following circumstances and the verification review shall be completed prior to approval by the administrative reviewer:



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**5.3.1.5.1** If an item of evidence within a container varies significantly from the evidence description listed on the Request for Physical Examination of Evidence Form, (to include evidence not contained and additional evidence).

**5.3.1.5.2** If DNA extracts are to be analyzed and created as sub items in FA.

**5.3.1.5.3** If only one sperm is observed on a slide according to the Forensic Biology Procedure for Sperm Identification, that spermatozoon shall be verified by another Forensic Scientist and a verification review shall be scheduled in FA.

**5.3.1.5.4** A verification review shall be performed by the CODIS Administrator for any search warrant affidavit based on a CODIS Hit.

**5.3.1.6 CODIS Hit Notifications**

**5.3.1.6.1** CODIS Hit Notifications – For In-State Offenders

**5.3.1.6.1.1** Technical/Administrative Review

**5.3.1.6.1.1.1** Review the match detail report.

**5.3.1.6.1.1.2** Verify the presence of a DNA Database Section CODIS hit confirmation report and a Latent Evidence Section verification memo in FA.

**5.3.1.6.1.1.3** Verify the presence of the Subject Information Assessment (SIA) in FA.

**5.3.1.6.1.1.4** Review the notification report for accuracy.

**5.3.1.6.2** CODIS Hit Notifications – For Out-of-State Offenders or Forensic Hits

**5.3.1.6.2.1** Technical/Administrative Review

**5.3.1.6.2.1.1** Review the match detail report.

**5.3.1.6.2.1.2** Look for the presence of the confirmation letter from the out of state agency in the Case Record Object Repository.

**5.3.1.6.2.1.3** Review the notification report for accuracy.

**5.3.1.6.3** CODIS Hit Notifications – For In-State Forensic Hits

**5.3.1.6.3.1** Technical/Administrative Review

**5.3.1.6.3.1.1** Review the match detail report.

**5.3.1.6.3.1.2** Review the notification report for accuracy.

**6.0 Limitations –** N/A



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**7.0 Safety –** N/A

**8.0 References**

Procedures for CODIS

Forensic Biology Section Procedure for Evidence Handling

Forensic Biology Section Procedure for Photographing Evidence

Forensic Biology Section Procedure for Casework DNA Interpretation

Forensic Biology Section Procedure for Casework Report Writing

Forensic Biology Section Procedure for Blood Analysis

Forensic Biology Section Procedure for Saliva Analysis

Forensic Biology Section Procedure for Semen and Sperm Analysis

Forensic Biology Section Procedure for Quantitation with Quantifiler Duo

Forensic Biology Section GMID Procedure for Casework

Forensic Biology Section Procedure for DNA Extraction using the EZ1 Advanced XL

State Crime Laboratory Quality Manual

State Crime Laboratory Procedure for Record and Data Management

State Crime Laboratory Procedure for Reporting Results

State Crime Laboratory Procedure for Reviewing Laboratory Reports

State Crime Laboratory Procedure for Evidence Management

State Crime Laboratory Procedure for Use of FA

**9.0 Records**

- Abbreviation List
- Signature Log
- Body Fluid Review Form
- DNA Casework Review Form

**10.0 Attachments** – N/A



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**Revision History**

| Effective Date | Version Number | Reason |
|---|---|---|
| 09/17/2012 | 1 | Original Document |
| 10/26/2012 | 2 | 5.3.5.5.7.1 - added reporting requirements for manual CODIS search |
| 12/07/2012 | 3 | 5.6.1 - added guidelines for review of subcontractor data |
| 01/03/2013 | 4 | Definitions – added "unrelated" to CPI definition and "CPE/CPI" to Popstats definition; 5.3.5.5.4.3.3 – removed requirement to add additional information to OR (moved to quant procedure); 5.3.5.5.4.4 – reworded sentence; Removed 5.3.5.5.4.4.3 thru 5.3.5.5.4.4.7; 5.3.5.5.4.5.1 – removed references to 7000; 5.3.5.5.4.5.3 – added unacceptable standard curve as reason; Removed 5.3.5.5.4.5.5 (and subsections) and 5.3.5.5.4.5.6; 5.3.5.5.5.4 – Added requirement to get 9947A amount for amplification from QCO for each lot; 5.3.5.5.5.6 – added Taq to N/A list; 5.3.5.5.5.7 – removed Taq; 5.3.5.5.5.10 – added "1 ng/ul" as example; Removed note from 5.3.5.5.6.1, replaced with note previously listed as 5.3.5.5.6.1.1; 5.3.5.5.8.1.1, 5.3.5.5.8.1.6, 5.3.5.5.8.2 – updated name of STR Guidelines; 5.3.5.5.8.2.2 – added "CPI"; 5.3.6.3.5 – reorganized parenthetical, corrected 9947"A" ; 5.6.2.4.6 – changed wording from "any change" to "technical changes"; Removed 5.6.2.5.3; References – updated procedure names |
| 03/08/2013 | 5 | 5.3.5.5.8.1.6 and 5.6.2.3.7.4.2 – clarified requirement to check unknown profiles against batched case samples (both questioned and known samples) |
| 03/22/2013 | 6 | 5.2.1 through 5.2.3, 5.2.6 through 5.2.7, 5.3, 5.3.4.1 through 5.3.4.3 – removed (language included in lab wide procedures); 5.3.5.5.4.3.3. – added requirement to note points dropped; 5.3.5.5.4.4, 5.3.5.5.7.6, – removed Print to PDF; 5.6.2.2, 5.6.2.2.1, 5.6.2.2.3, 5.6.2.3.11, 5.6.2.3.12, 5.6.2.4, 5.6.2.4.4, 5.6.2.4.5, 5.6.2.4.6 - changed administrative review to combined technical/administrative review; removed 5.6.2.3.5; 5.6.2.4.1.1 – added CODIS notification and preservation of evidence to note; 5.6.2.4.3.1 - added review for search; 5.6.2.4.3.9 – removed verification review for un-interpretable profiles; 5.6.2.4.5 - clarified reasons for required additional technical review; 5.6.2.5.5 – clarified requirement for mixture verification review; 5.6.2.6 – combined technical and administrative reviews; 5.6.2.7 – removed, added Lab procedure for Use of FA to references |



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|---|---|---|
| 09/25/2013 | 7 | Header – added issuing authority; 5.1.5.3.2 – updated procedure name; 5.1.5.5.1 – added extraction to list; 5.1.5.5.3.1 – added notes for knowns extraction; 5.1.5.5.3.2 – added notes required to add instrument/reagent; 5.1.5.5.4.3.4 – added note for manual quant setup; 5.1.5.5.4.4.1 – added post run report; 5.1.5.5.4.5 – added QIAgility; 5.1.5.5.5.3, 5.1.5.5.5.4, 5.1.5.5.6.9 – added manual setup, 5.1.5.5.5.11, 5.1.5.5.5.12 and 5.1.5.5.6.10 – added robotic setup; 5.4.1 – updated procedure for review of outsourced data; 5.4.2.6.1.1.4 – updated name of intelligence report to SIA; 5.4.2.6.1.1.5 and 5.4.2.6.2.1.4 – removed phone log |
| 12/18/2013 | 8 | 5.1.5.3.5, 8.0 – removed FB Section reference; 5.1.5.4.4.2 – removed "-" as option; 5.1.5.4.5.6.1, 5.1.5.4.8.1.2 – removed phadebas; 5.1.5.4.5.8 – removed requirement for creating sub-item for slides; 5.1.5.5.2 and 5.1.5.5.3 – removed (referenced in Section Evidence Handling); 5.1.6, 5.1.7 , 5.3, 5.4.3– removed section (Database use only); removed references to SBI-5 |
| 04/18/2014 | 9 | Replaced 3130 with 3130XL for clarification throughout; 3.0 – updated definitions; 5.1.2 – changed procedure naming; 5.1.4 – updated requirements because generated automatically by FA; 5.1.5.3 – added general statement for cuttings/swabbings taken; 5.1.5.4.2.2. – removed note; 5.1.5.4.2.5 – updated hair packet requirement; 5.1.5.4.3 – updated not analyzed requirements; 5.1.5.4.4 – updated procedure name; 5.1.5.5.1 – added section for general overview, combined from throughout document; 5.1.5.5.2, 5.1.5.5.3, 5.1.5.5.4, 5.1.5.5.5- removed subsections that were combined into general overview; 5.1.5.6.1 – added section for general overview, combined from throughout document; 5.1.5.5.2.2, 5.1.5.5.2.3, 5.1.5.5.3.1, 5.1.5.5.3.3.3, 5.1.5.5.4, 5.1.5.6.5 – removed subsections that were combined in overview; 5.1.5.5.3 – remove known sample worksheet (not currently used by BF analysts); 5.1.5.6.3.3.1, 5.1.5.6.3.3.2, 5.1.5.6.3.4.2, 5.1.5.6.3.4.4 -added checklist; 5.1.5.6.7.1.6 – updated wording; 5.1.5.5.7.3.5 – removed (in general); 5.1.5.7.1.3.1 – added section reference; 5.1.5.7.2.2 – added DNA case reference; 5.1.5.8 – added training reference; 5.3.2.3.5 – removed, added reference to BF review checklist; 5.3.2.3.9 – clarified wording; 5.3.2.4.1.1 – removed stop work; 5.3.2.4.3.9 – added if required; 5.1.5.5.9.1.6 – removed, stated in another procedure; 5.2.2 – added exception to CODIS; 5.3.1.1.1 – reworded for clarification; 5.3.2.3.2, 5.3.2.4.2 – reworded; 5.3.2.3.6.3 – reworded to add Database record; 5.3.2.5.1 – clarified wording; 5.3.2.5.4 – updated; 8.0 – updated section procedure names |



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| | | |
|---|---|---|
| 08/29/2014 | 10 | 5.1.5.4.5 – updated reference to Report Writing; 5.1.5.5.1.4 – removed requirement if no bloodstain made; 5.1.5.6.2.2.2 – removed notation requirement (already noted in photography procedure); 5.1.5.6.6.1 – added reference to Report Writing; 5.1.5.6.6.2 – removed reference to single source samples & added note for differentials; 5.1.5.6.6.3 – added comparison requirement; 5.1.5.6.6.4 & 5.1.5.6.6.5 – removed; 5.2.2 – renamed Outsourcing to Notification of CODIS Entry; 5.3.1 – removed entire section (will be a standalone Procedure) (remainder of document renumbered); 5.3.2.3.6.3 – removed intelligence report and database confirmation case record; 5.3.2.3.6.11 – reformatted and added database requirement; 5.3.2.6.12 – removed (duplicate); 5.3.2.4.1.1 – added Notification of CODIS entry cases; 5.3.2.4.3.8 – added database requirement and reference to match estimation report; 5.3.2.5.5 – removed; 5.3.2.6 – updated documentation requirements based on type of CODIS notification report. |
| 02/27/2015 | 11 | 5.1.5.2 – clarified wording; 5.1.5.4.3.1 – clarified wording to make consistent throughout section; 5.1.5.4.5 – added CODIS procedure reference; 5.1.5.5.1.1 – removed redundant QC recording; 5.1.5.5.1.1.1 – updated wording; 5.1.5.5.1.6 – combined in 5.1.5.2; 5.1.5.5.2.3 – removed; 5.1.5.5.3.2 – combined with 5.1.5.5.4.1 and added bloodstain preparation; 5.1.5.5.4.1 – clarified wording; 5.1.5.5.4.3 – combined in 5.1.5.2; 5.1.5.6.1.4 – added notation about batched cases; 5.1.5.6.2.1 – removed redundant note; 5.1.5.6.2.2.2 – made consistent for all cases; 5.1.5.6.3.3.1 – removed requirement for eds file editing; 5.1.5.7.2.1 – removed requirement to combine statements; 5.1.5.7.2.2 - updated for Trace Unit and Physical Evidence Section; 5.2.4, 5.2.5 – made statement consistent throughout section |



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