Purpose:

To provide guidance to Latent Print Examiners when collecting DNA samples via swabbing from evidence that is being processed for latent prints or when assisting the Forensic Biology Unit in FB Sample Prep requests.

Responsibility:

Forensic Science Examiners, however titled

Note:

This information is a general guideline for the collection of evidence for DNA testing. A trained analyst should always use their judgement and experience when examining evidence. The analyst should always take into account the type, condition, and quantity of the evidence being examined.

The following should be determined as the latent print analyst proceeds forward with the examination:

1. If there is a reasonable expectation that more sample remains on the item and could be collected in the future, then there is no consumption issue.
2. If blood is also present, the evidence should be sent first to the Forensic Biology Unit for processing.
3. Forward appropriate samples to DNA according to the case scenario and refer to LP SOP-34.1 (Evidence Sampling guidance) for suggested number of samples to collect and collection location.

Procedure:

Physical evidence will be examined and swabbing(s) will be performed based on the examiner's knowledge, training and experience according to the submitting agency requests, case information and the condition of the evidence.

A. Cleaning of Equipment and Laboratory Area

1. Clean utensils and bench top supplies during use as needed and between each case and case submission. Use appropriate disinfecting solution such as stabilized bleach. Utensils should

be followed by ethanol to ensure aseptic conditions; dH_2O may be used between the disinfecting solution and ethanol.

2. Containers used to clean/soak utensils in disinfecting solution, dH_2O and ethanol, are replaced weekly. The disinfecting solution, dH_2O and ethanol are replaced daily or more often, as necessary.

3. Clean with disinfecting solution the camera and other electronic equipment during use as needed and between each case to ensure aseptic conditions.

4. Clean bench top using the appropriate disinfecting solution and replace examination paper between each submission or more often as necessary, to ensure aseptic conditions.

B. Personal Protective Equipment

Examiners must wear lab coats, masks, gloves, disposable sleeves and hair nets while processing and handling evidence in the laboratory examination area.

C. Evidence Examination

1. When possible, leave the submitting agency seal intact when opening the package.

2. If the analyst is assisting the Forensic Biology Unit with the FB Sample Prep cases, the analyst should locate the FB/DNA case jacket prior to beginning their analysis.

3. Record information on the appropriate Quality Record Worksheet.

   a. If processing the evidence for latent prints, use QR-LP1a, QR-LP-12, QR-LP1c, or QR-LP-13.

   b. If assisting the Forensic Biology Unit with FB Sample Prep cases only, use FB QR-17 (Swab only worksheet) and FB-QR-18 (page 2 of swab only) or FB QR-23 (Swab only – multi submission worksheet) or FB-QR-19 (BLST Worksheet) and/or FB-QR-20.

   c. The recorded information (i.e. documentation) should include, but is not limited to: evidence description, sample description and sample disposition and evidence disposition.

4. All documentation will be dated. If completed on the same day, the date on each page of the worksheet is sufficient. If additional examinations and/or testing were conducted on a subsequent day, then it will be dated and initialed on the worksheet accordingly.

5. In general, pages with photographs are not dated. If needed, more information can be found in the metadata of the digital image of each photograph. – LP needs to know where the data is stored

6. If processing the evidence for latent prints first, proceed as indicated in LP SOP-02 (Processing guidelines).

D. Sample Collection for DNA

When the examiner is ready to proceed with the DNA sample collection, sample selection is conducted considering the substrate and the type/amount of sample present. Samples for touch/wearer DNA analysis may also be collected based on the submitting agency requests, case information and type of evidence.

1. Pour off a small amount of dH_2O into a sterile Eppendorf tube. The dH_2O that is used for collection of samples will be dH_2O previously quality control checked by the DNA Unit. The lot number present on the approved dH_2O will be entered on the worksheet used for sample collection.

2. When an area is swabbed with the intention of separating the swabs (i.e. retaining half and sending half for DNA analysis), the swabs must be collected simultaneously.

3. Remove the appropriate number of swabs from the swab package(s) and retain the package(s).

4. Moisten the swab(s) with dH_2O.

5. Using pressure, swab the area turning the swab(s) to ensure that all sides come in contact with the area. It is not necessary to mark the evidence for touch or wearer samples collected. This is indicated in the worksheet as location of collection.

a. If swabbing the area for touch or wearer, swab the entire location.

b. If only collecting DNA from a specific location to determine handler, refer to LP SOP-34.1 Appendix 1 for guidance.

c. If collecting a sample from an area with a latent print of value, collect a sample from the designated area, using one swab. If there is more than one designated area, it is the discretion of the examiner to collect each area separately using one swab or to collect multiple areas simultaneously using 1 or 2 swabs.

6. Place the swabs back into an appropriately labeled swab package with the moistened swab tip facing outward for drying. Itemize the samples collected using the

itemization guidance provided in GL-4 and LP SOP-34.2 for guidance on sub-item creation in Justice Trax and generation of transfer sheets.

7. If possible, air dry the swab(s) over-night in a designated area. During this time the sample(s) will remain in the custody of the examiner. Moist samples may be transferred directly for DNA analysis when necessary.

8. If trace material was noted on the evidence, the QR should indicate what type of trace material was observed. In the case of evidence from a homicide, if the trace material is hair-like fibers, these should be collected and placed into a druggist fold and returned with the evidence in the original packaging.

9. Once the swabs have air-dried, samples can be retained in a properly labeled sterile plastic tube which is then sealed into a properly labeled plastic bag.

a. Remove the swab cotton from the stick and place in a properly labeled plastic tube.

b. No more than three swabs are to be placed into one tube for DNA analysis. Place any additional swabs into a separate tube and notify DNA.

c. Heat seal the plastic bag, initial the heat seal and place in freezer storage (Freezer Storage - DNA sample).

10. Any samples not going forward to DNA should be packaged as noted in line 9 above and placed in a separate plastic bag. Heat seal the plastic bag, initial the heat seal and place in freezer storage (further analysis).

11. Each case will be evaluated to determine which of these samples, if necessary, should be forwarded for DNA analysis.

a. No Suspect/Suspect (no arrest): Send what was collected to DNA referring to the Submission Guidelines for the appropriate number of samples to forward.

b. Suspect (arrested): Send what was collected to DNA (consumption issue).

12. The number of swabs being forwarded for DNA and any swabs remaining should be indicated on the appropriate Quality Record Worksheets and in LIMS.

In the case of evidence that was previously processed for latent prints and subsequent samples were collected for DNA analysis, the analysis will document this sample collection on QR-LP-16.

Indicate on the Quality Record Worksheet, the disposition of the samples collected and the disposition of the original evidence.

13. Once the examination(s) is/are complete, place the evidence back in the original packaging, seal and initial the seal. If the original packaging is not suitable for re-packaging, do not discard. Place with evidence in new packaging, seal and initial the seal. Store the evidence in the designated storage area.

14. Create the samples collected from the evidence in the LIMS computer system according to GL-4 (LIMS/Justice Trax) using the designated itemization. For evidence submitted as swabs, include the location that the swabs were collected from, if available. Refer to LP SOP-34.2 (Appendix II) for sub-item creation instructions.

15. Store samples in designated, secure and temperature appropriate areas or transfer to other Units of the Laboratory using the LIMS computer system according to GL-4 (LIMS/Justice Trax). Print the LIMS transfer sheets as needed.

16. If forwarding sample(s) to DNA, create the appropriate DNA request(s) using the LIMS computer system according to GL-4 (LIMS/Justice Trax) and the guidance provided in LP SOP-34.2.