24.1 **Purpose**: To determine which evidentiary samples have sufficient amounts of DNA for standard STR analysis. This is to be used as a screening tool.

24.2 **Responsibility**: Laboratory personnel processing biological evidence.

Procedure: The screening of evidence from property crimes and other non-Part A offenses.

24.3 Sample Collection and Preparation

24.3.1 Remove the screening kit reaction plates from the freezer and record the lot number (DNA QR-291). Allow plates to thaw for at least 15 minutes. Do not re-freeze any thawed reaction plates. Once thawed, plates should be used within 12 hrs.

24.3.2 Open the packaging of the sample collector at the opposite end from the four nibs. Remove the collector ensuring that the four nibs do not contact anything.

24.3.3 Push the collar on the sample collector towards the four nibs, until there is an audible click. The nibs will now be together forming a single collection area (tip).

24.3.4 Use the combined tip to collect sample from a swab or directly from the evidence.

24.3.4.1 Typically, the sample is collected for approximately one minute (times may vary depending on the condition of the evidence).

24.3.4.2 Moderately rub and rotate the collector against the evidence. Use all available surfaces of the collection area including the tips and sides of the four nibs and the adjacent flat windows at the base of the nibs. Avoid shredding the swab.

Note: Typically swabs with wooden handles produce the best results because the stiffer handles (as opposed to plastic) allow for more consistent pressure to be applied.

24.3.5 When collection is completed, use the handle of the sample collector to pull the collar back towards yourself. The collector's four nibs should separate. Do not allow the nibs to come into contact with anything (hands, surfaces, etc.)

24.3.6 Snap-flick reaction plate to ensure that reagents are at the bottom of the wells. Appropriately label reaction plate on its side.

24.3.7 Place the reaction plate on a hard surface. Remove the seal from the reaction plate.

24.3.8 Insert the nibs into the reaction plate making sure all the wells in the plate are sealed.

24.3.9 Snap off the collector's handle. The wells should remain sealed.

24.4 ParaDNA Screening

24.4.1 Turn on the ParaDNA instrument and the computer.

24.4.2 Open the ParaDNA –Screening program. Allow the software and device to scan and connect.

24.4.3 Log in to the ParaDNA user account.

24.4.4 Select the instrument head(s) to be used for processing sample(s) and click the padlock to unlock.

24.4.5 To open the instrument head, push down on the lid.

24.4.6 Enter the appropriate case number and item number in the program.

24.4.7 The reaction plate is loaded into the instrument head. Place up to four plates into the ParaDNA instrument for testing independently or in parallel.

24.4.8 Close each head's lid and press the green start button.

24.4.9 The program will run approximately 75 minutes.

24.4.10 When the run is completed, the head window will turn blue.

24.5 Screening Analysis

24.5.1 The quality score (%) and gender information (Male or Female DNA detected or undetermined) are displayed in the results windows.

24.5.1.1 Record this information on the ParaDNA worksheet (DNA QR-291) along with the instrument/head used for each sample tested.

24.5.1.2 If the quality score is <5%, the test result is considered negative. ~~colored **red**, (e.g., **0%**) no human DNA was detected by ParaDNA.~~ Typically, no DNA testing will be perfomed on ParaDNA negative samples.

24.5.1.3 If the quality score is 5% or greater, the test result is considered positive.~~colored **green**, human DNA was detected.~~

Notes for ParaDNA worksheet/quality records:

This procedure is for screening purposes only.

There are no IPC (internal positive control) and supplied positive control associated with this screening kit.

Each new lot will be quality control tested using a positive and a negative control. The lot must pass a quality control test prior to use on casework. (Document on DNA QR-293)

One positive control will be run on the ParaDNA instrument each day that it is in use. The specific head that is tested will rotate so each head is tested once for every 4 days that the instrument is in use. This positive control may be run in parallel with casework samples.

Para DNA Reagent Log (DNA QR-292) is used to record kit information when reagents arrive at the laboratory.

Para DNA Maintenance Log (DNA QR-294) is used to record maintenance on each instrument.