EXTRACTION OF SAMPLES

13.1 PURPOSE

13.1.1: To remove the sample from the substrate and prepare the sample for subsequent testing.
13.1.2: To quality control new RSID™-Universal Buffer.

13.2 RESPONSIBILITY

13.2.1: Forensic Science Examiners from the Division of Scientific Services who have been trained in the discipline of semen screening and in the discipline of extracting samples for semen according to FB SOP-26 (Training Manual and Checklist).
13.2.2: Forensic Science Examiners in the Forensic Biology Section. Ordering information is maintained in a log book in the Forensic Biology Section. New chemicals and reagents are purchased according to GL-6 (Purchasing). For additional information, refer to the Biological Inventory in Appendix 2.

13.3 SAFETY

Use appropriate measures for the proper handling of biohazardous material according to GL-2 (Safety Manual) and the Safety Data Sheets.

13.4 DEFINITIONS

A. AP: Acid Phosphatase
B. RSID™: Rapid Stain Identification

13.5 PROCEDURE

Samples will be extracted at the discretion of the examiner, with input from the Unit Lead(s), based on the submitting agency requests, case information and the condition of the evidence.

13.5.1: Materials

A. RSID™-Universal Buffer
B. Centrifuge tubes and spin baskets
C. Shaker
D. Ultrasonic Bath
E. Centrifuge

13.5.2: Procedure

A. Record the buffer lot number used on the General Reagent Sheet (FBQR-09).

B. If the sample to be tested is in a liquid form (ie. suspected semen, urine or vomit suspected to contain semen), then make a stain, air dry and proceed to the step below.

C. Add 350 µl of RSID™-Universal Buffer to a portion of the questioned sample in a centrifuge tube. For very limited sized stains, add a volume of 230µl.

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D. Extract for two (2) hours on a shaker at room temperature. A 30 minute ultrasonic bath step may be included during the extraction process.

E. Place the sample in a spin basket, return to tube and centrifuge for approximately ten (10) minutes. The centrifuge will be set at approximately 13,000 rpm.

F. Subsequent testing will be conducted on the extract as necessary:
   a. Test the pellet portion of the extract for the presence of spermatozoa according to FB SOP-14 (Identification of Spermatozoa).

   b. Test the supernatant portion of the extract for the presence of p30 according to FB SOP-15 (Rapid Immunoassay for Semen).

   c. Test the supernatant portion of the extract for the presence of amylase according to FB SOP-16 (Test for Amylase).

13.6 QC PROCEDURE

Manufacturer's expiration dates with only month and year indicated (i.e. 04/2014) expire the last day of the month noted.

13.6.1: RSID™-Universal Buffer

A. Test the new lot before use according to FB SOP-15 (Rapid Immunoassay Test for Semen), FB SOP-16 (Test for Amylase) and the RSID™ - Universal Buffer Reagent Log Sheet. Record the required information.

B. If the appropriate results are not obtained, review the procedure and repeat the test. If the reagent still does not yield the appropriate results, then inform the Unit Lead, determine the root cause and correct.

C. If the lot is suitable for use, record the date received, date opened and examiner's initials on each bottle. Store according to manufacturer's instructions.

E. Discard according to the manufacturer's expiration date.

13.6.2: Weekly Buffer QC

A. Buffer will be tested prior to use with questioned samples on a weekly basis by adding 6-7 drops with the provided dropper or ~200µl with a pipet directly to the ABAcard® devise (see steps D and E in section 15.5.2 of FB SOP-15: Rapid Immunoassay Test for Semen).

B. Record the results on the Buffer Log Sheet (see section 15.5.3 of FB SOP-15).

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C. Notify the Unit Lead if the expected results are not obtained, remove from service and replace.

D. If used less frequently, test buffer prior to being used with case samples.

13.7 REFERENCES

A. Independent Forensics, RSID™ - Universal Buffer Technical Information and Protocol sheet.
B. Connecticut State Forensic Science Laboratory, RSID™ - Universal Buffer Internal Validation, 2011.
C. GL-2 (Safety Manual)
D. GL-6 (Purchasing)
E. Safety Data Sheets

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