Document Title: Test for Amylase (Phadebas)

Controlled By: Quality Manager

Prepared By: _____ Date: _____

Approved By: _____ Date: _____

A. PURPOSE:

To determine the presence of amylase in a Forensic sample, which indicates the presence of saliva.

B. RESPONSIBILITY:

Forensic Science Examiners from the Connecticut State Forensic Science Laboratory who have been trained in the discipline of testing for amylase according to SOP-FB-31 (Training Manual).

C. DEFINITION:

1. RSID: Rapid Stain Identification
2. sdH_2O: Sterile distilled water

D. PROCEDURE:

This test will be performed at the discretion of the examiner based on the submitting agency requests, case information and the condition of the evidence.

1. Materials:
   a. Phadebas® powder
   b. sdH_2O
   c. RSID™-Universal Buffer
   d. Controls: positive (known saliva stain) and negative (blank filter paper), include substrate control as needed
   e. Previously extracted samples
   f. Disposable pipets
   g. Test tubes
   h. Filter paper

2. Procedure:

   a. Test a positive and negative control with the following procedure (steps 2.b. – 2.i.).

      aa. The controls may be run concurrently with the questioned samples and are made with the same extraction solution used for the questioned samples.

      bb. If limited questioned sample is available, run the controls prior to testing the questioned sample. If controls yield the appropriate results then test the questioned sample.

D. 2. a. cc. If controls do not yield the appropriate results, review the procedure and retest the controls prior to the questioned samples.

b. For a liquid sample, prepare a stain on filter paper and air dry.

c. Place a portion of the questioned sample or stain in a labeled test tube.

d. To each tube add approximately 0.025g of Phadebas® powder.

e. Add approximately 4 drops (250µl) of sdH_2O to each tube.

f. For samples previously extracted in RSID™-Universal Buffer (as needed):

aa. To each tube add approximately 0.025g of Phadebas® powder.

bb. Add approximately 4 drops (250µl) of extract to each tube.

g. Gently shake each test tube to mix contents.

h. Incubate at 37°C for 15-20 minutes.

i. Shake each tube again and centrifuge for one (1) minute.

j. Observe the color of the supernatant of the samples.

3. Results

a. *Positive.* In positive samples the supernatant will be blue, indicating the presence of amylase activity.

b. *Negative.* In negative samples the supernatant will be clear, indicating the absence of amylase activity.

c. *Inconclusive.* No distinguishable blue color of supernatant.

d. It is important to compare results against the positive and negative controls.

e. Record the results of the controls and samples on the appropriate Quality Record Worksheet.

Note: The reason a result is determined to be inconclusive must also be recorded.

f. A 2nd examiner will observe and confirm results and initial the appropriate Quality Record Worksheet.

4. Record extraction solutions on the appropriate Quality Record Worksheet location and General Reagent Sheet (FBQR-09).

E. REFERENCES:

1. Willott, G.M. 1974. "An improved test for the detection of salivary amylase in stains". J. Forensic Sci. Soc., 14: 341-344.

2. Metropolitan Police Forensic Science Laboratory. Biology Methods Manual. 1978, pp. 3-10 to 3-11.