

Document Title: Test for Amylase (Phadebas)

Controlled: Yes, with red stamp present

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. 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. Distilled water (dH₂O)
- c. Controls: known saliva stain and blank filter paper (include substrate control when needed)
- d. Disposable pipets
- e. Test tubes
- f. 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 question samples.
 - bb. If limited question sample is available, run the controls prior to testing the question sample. If controls yield the appropriate results then test the questioned sample.
 - cc. If controls do not yield the appropriate results, review the procedure and retest the controls prior to the question samples.
- b. Extract a portion of the questioned sample or stain in a labeled test tube.
- c. For a liquid sample, prepare a stain on filter paper and air dry.
- d. To each tube add approximately 0.025g of Phadebas[®] powder.
- e. Add approximately 4 drops (250µl) of dH₂O to each tube.

- C. 2. f. Gently shake each test tube to mix contents.
- g. Incubate at 37°C for 15-20 minutes.
- h. Shake each tube again and centrifuge for one (1) minute.
- i. 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 no amylase activity.
- c. *Inconclusive*. No discernible 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.
- f. A 2nd examiner will observe and confirm results and initial the appropriate Quality Record Worksheet.

D. 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.