

DNA Analyst Training Laboratory Training Manual

Protocol 2.07
Vaginal Secretion Indication:
Lugol's Stain



This laboratory protocol (or part thereof) has been provided as an example of a laboratory SOP, courtesy of the Illinois State Police. It has been included for training and example purposes only.

PRESIDENT'S
DNA
INITIATIVE



INTRODUCTION

This procedure is designed as a preliminary screening test to aid in the identification of vaginal secretions.

SAFETY CONSIDERATIONS

Iodine: Caution! Moderately Toxic!
Caution! Irritant!

Potassium Iodide: Caution! Irritant

PREPARATIONS

Iodine	(0.02m)	1 g.
Potassium iodide	(0.06m)	2 g.
Distilled water	200 ml.	

Dissolve the potassium iodide in the water, then add iodine.

INSTRUMENTATION

Compound microscope capable of 200x magnification.

MINIMUM STANDARDS & CONTROLS

Known vaginal cells should be tested as a positive control.

Known buccal cells should be tested as a negative control.

PROCEDURE OR ANALYSIS

1. Make a thin smear of the questioned material on a glass microscope slide.
2. Fix the smear by gentle heating.
3. Cover the smear with Lugol's iodine solution. Add an equal volume of water to the smear.
4. Place a coverslip on the stain area.
5. Allow to stand 3-5 minutes at room temperature.
6. Observe microscopically at 200-400x.

7. Squamous epithelial cells with high glycogen content (notably vaginal and penile rethral epithelial cells) will exhibit a chocolate-brown or tan color. Other epithelial cells will exhibit a yellow or gold color. A majority of epithelial cells stained chocolate brown is a positive result.

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