A. PURPOSE:

To identify Tamm-Horsfall Protein (RSID™-Urine) in Forensic samples, which indicates indicates the presence of urine.

B. RESPONSIBILITY:

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

C. DEFINITIONS:

1. RSID™: Rapid Stain Identification
2. THP: Tamm-Horsfall Protein

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. RSID™-Urine Buffer
   b. RSID™-Urine test cassettes
   c. Microcentrifuge tubes and spin baskets
   d. Micropipet and tips
   e. Wooden sticks
   f. Ultrasonic bath
   g. Shaker
   h. Centrifuge

2. Procedure:
   a. Do not use this test with samples containing fecal material, refer to SOP-FB-17 (Test for Urobilinogen).

      Undiluted urine should not be used with this test, a stain of the sample should be made instead and dried overnight.

   b. Extract a portion of the questioned sample or stain in a microcentrifuge tube with 150µl of RSID™-Urine Buffer and mix with a wooden stick.

D. 2. c. Place the sample in an ultrasonic bath for fifteen (15) minutes and then place on the shaker for one (1) hour and forty-five (45) minutes at room temperature (total extraction time of two (2) hours).

d. If necessary, the sample may be extracted overnight at 4°C after the sonication step.

e. If the sample was refrigerated, bring to room temperature for approximately ten (10) minutes before testing.

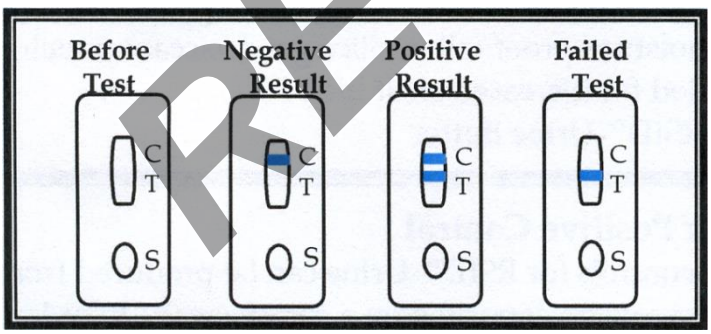
f. Place the sample in a spin basket and centrifuge for approximately ten (10) minutes within the range of 10,000 – 14,000rpm (13,000 rpm is recommended).

g. Label the RSID™ cassettes with case and item numbers.

h. Using a micropipet, add 100µl of extract to well 'S' of the cassette. Note the time immediately after adding the sample.

i. Monitor progress of test results for a fifteen (15) minute period. Record final result at fifteen (15) minutes. DO NOT record any changes that occur after fifteen (15) minutes. Any change in the test results after fifteen (15) minutes is invalid.

3. Results:



a. *Negative.* A visible blue line at the Control 'C' position only, indicates a *negative* result. *No Tamm-Horsfall Protein detected.*

aa. "High Dose Hook Effect" refers to weak positive or false negative results due to the presence of a high concentration of THP in the sample.

bb. Under standard laboratory testing and relevant urine concentration ranges, the "High

Dose Hook Effect" is not observed with the RSID™-Urine Test.

b. *Positive.* Visible blue lines at both the Control 'C' and Test 'T' positions indicate a positive result. *Tamm-Horsfall Protein detected.*

D. 3. c. *Inconclusive/Failed (Invalid).*

aa. No visible blue line at the Control 'C' position indicates a failed test. *No conclusion possible.* Review the test procedure carefully and repeat the test with a new plate.

bb. No distinguishable blue line at the Test 'T' position.

4. Record the results on the appropriate Quality Record Worksheet. Note: The reason a result is determined to be inconclusive must also be recorded.

5. Record test(s) used on the General Reagent Sheet (FBQR-09).

E. REFERENCES:

1. Independent Forensics, Rapid Stain Identification of Urine (RSID™ - Urine) Technical Information and Protocol sheet.

2. Old, Dr. Jennifer, Reich, Dr. Karl, Developmental Validation of RSID™ - Urine, p1-19.

3. Connecticut State Forensic Science Laboratory, RSID™ - Urine Internal Validation, 2012.