

## DNA Analyst Training Laboratory Training Manual

### Protocol 2.17 Hemastix Presumptive Test for Blood



This laboratory protocol (or part thereof) has been provided as an example of a laboratory SOP, courtesy of the National Forensic Science Technology Center. It has been included for training and example purposes only.

PRESIDENT'S  
**DNA**  
INITIATIVE



## **INTRODUCTION**

Hemastix are reagent strips originally designed for use in testing for blood in urine. This quick and easy test has been found to be applicable as a presumptive test for the presence of blood. The test strips contain diisopropylbenzene dihydroperoxide and 3,3',5,5'-tetramethylbenzidine. The test is based on the peroxidase-like activity of hemoglobin which has the ability to cleave oxygen molecules from H<sub>2</sub>O<sub>2</sub> and catalyzes the reaction from the reduced colorless form of 3,3',5,5'-tetramethylbenzidine to the oxidized colored form. The resulting color ranges from orange to green. Very high concentrations of blood may cause the color development to continue to blue.

## **SAFETY CONSIDERATIONS**

Refer to the Laboratory Safety Manual(s)

## **PREPARATIONS**

Deionized Water  
Hemastix

## **INSTRUMENTATION**

- Timer

## **MINIMUM STANDARDS & CONTROLS**

- Positive control (known blood stain)
- Negative control

## **PROCEDURE OR ANALYSIS**

1. Apply 1 drop of deionized water to the pad end of the test strip
2. Rub the damp pad onto the stain in question
3. Note color change within 60 seconds.
4. A color change to orange through green or blue indicates a positive result. No color change indicates a negative result. A negative result means there is no blood present or is below the limit of detection of the test.

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