

SER: Blood (Presumptive) - Hemastix

Principle Hemastix is a commercial product sold to medical laboratories for the detection of occult blood in urine.

Each plastic strip contains a reagent pad at one end. The reagent is 3,3',5,5',tetramethylbenzidine (TMB) and di-isopropylbenzene dihydroperoxide. This reagent turns green in the presence of blood.

Safety The reagent pad contains a substituted benzidine and should be handled with gloves.

Supplies This procedure uses the following laboratory supplies:

- dropper bottle with deionized or purified water
 - sterile swabs
 - Hemastix reagent stick
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Quality control The Hemastix reagent stick must be quality control tested each day before use in casework and when a new reagent bottle is opened using

- a positive control (known blood), and
- a negative control (water)

The results of these tests are recorded in the examination documentation.

Procedure The following procedures can be used to test stains using Hemastix strips.

- Add a small aliquot of the stain extract directly to the dry reagent pad.
 - Rub the stain with a swab moistened with deionized water, then touch the reagent pad to the swab.
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Interpretation The rapid appearance of a green color is a positive (+) result and an indication of the presence of blood.

The absence of the green color reaction is a negative (-) result for the presence of blood.

This test is very sensitive but not specific. False positives can be caused by the following:

- substances other than heme which possess a similar peroxidase activity
 - chemical oxidants
 - materials containing peroxidase itself
 - some metals
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