

## SER: Blood (Confirmatory) - Takayama

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**Principle** The Takayama (Hemochromogen) test is a confirmatory test for blood which is specific for hemoglobin. Insoluble, pink, needle-shaped crystals of hemochromogen form when hemoglobin is in the presence of pyridine.

Note: Prior to this confirmatory test, a presumptive test for blood must be performed.

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**Equipment and supplies** This procedure uses the following laboratory equipment and supplies:

- hot plate
  - compound microscope
  - microscope slides
  - cover slips
  - disposable pipettes
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**Reagents** This procedure uses the following reagents:

- saturated aqueous glucose solution
    - Using heat, dissolve 100 grams of glucose in enough water to make 100 mL.
  - 10% aqueous sodium hydroxide
    - Dissolve 10 grams of sodium hydroxide in enough water to make 100 mL.
  - Takayama Reagent
    - 10 mL Saturated Aqueous Glucose Solution
    - 10 mL 10% Aqueous Sodium Hydroxide
    - 10 mL pyridine
    - 20 mL deionized water
      - Combine and store refrigerated in a dark bottle.
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**Quality control** The Takayama reagent must be quality control tested against a positive control (bloodstain) each day before use in casework. The results are recorded in the examination documentation.

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## SER: Blood (Confirmatory) - Takayama, Continued

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**Records** Records documenting the preparation and initial quality control testing of each new lot will be kept in the *Biology Quality Control Log Book*.

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**Procedure** The following procedure is used to perform the Takayama test.

Step	Action
1	Place a small portion of suspected blood on a microscope slide.
2	Add a drop of <i>Takayama Reagent</i> and cover with a cover slip.
3	OPTIONAL: Warm the slide on a hotplate.
4	Examine the slide using a microscope.

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**Interpretation** The formation of pink needle or rhomboid-shaped crystals is a positive (+) result and confirms the presence of blood.

The failure to obtain crystals is a negative (-) result. However, a negative result does not necessarily indicate the absence of blood.

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