URINE BILIRUBIN CONFIRMATION: ICTOTEST

Materials and Equipment:

Ictotest Reagent Tablets (Bayer Corporation)
Ictotest Test Mats
Quantify Control (Bio-Rad Laboratory eff 7-05)

Specimen:

Fresh urine; bilirubin is rapidly decomposed once excreted, particularly in the presence of light or heat. Urine preservatives do not prevent this decomposition. Consequently, it is important that the Ictotest be used with a fresh specimen, one that has been refrigerated immediately and tested as soon as possible.

Principle:

Ictotest is a reagent tablet composed of several ingredients used to test for the relative amount of bilirubin in urine. The presence of bilirubin is an important finding in the evaluation of liver function. The test is based on the diazotization reaction.

Procedure:

MUST BE FOLLOWED EXACTLY

1. Place 10 drops of urine onto one square of the absorbent test mat supplied with the Ictotest kit.
2. Remove one Ictotest Reagent tablet, re-cap the bottle promptly and place the tablet in the center of the moistened area.
   CAUTION: Ictotest Reagent tablets contain corrosive chemicals (5-Sulfoisalicylic and Boric Acids) which when wet or dissolved can cause burns. Avoid contact with skin or eyes. Avoid ingestion. In case of contact, flush with water for at least 15 minutes. Seek immediate medical attention.
3. Drop one drop of deionized water on top of the tablet only. Wait 5 seconds, then add a second drop so that the water runs off the tablet onto the mat.
4. Observe the color of the mat around the tablet at the end of 60 seconds.

Interpretation of Results

1. Results are negative if no blue or purple color develops in the mat within 60 seconds.
2. If a blue or purple color develops on the mat within 60 seconds, the result is positive and the intensity of the color is proportional to the amount of bilirubin present. Any pink or red color should be ignored.

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Expected Values

Bilirubin is not normally found in the urine in concentrations sufficient to give a positive result with ICTotest. ICTotest will detect as little as 0.05 to 0.1 mg bilirubin/dL and is specific for bilirubin in urine.

Quality Control:

Quality Control is performed each month of use and each time a new bottle is opened:
- Positive control = quantify Level II
- Negative control = quantify Level I

Deterioration may be noted by a tan to brown discoloration of the reagent tablet. If this is evident, or if test results are questionable or inconsistent with expected findings:
1. Confirm that the product is within expiration date shown on the label.
2. Check performance against known positive and negative control material (see QC above).
3. If proper result is not obtained, discard and retest with fresh product.

Limitations:

Pyridium and its metabolites give bright red-orange colors which may mask the reaction of small amounts of bilirubin. Elevated concentrations of urobilinogen do not mask the reaction of small amounts of bilirubin, but atypical orange colors are produced. Chlorpromazine (thorazine) in large amounts may give a false positive reaction. Metabolites of Lodine (etodolac) may cause false positive or atypical results.

References:


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