
Bile-Ictotest

SOP# CH.UA.MT.PR.031.1.r0

Principle

Urine containing bilirubin combines with 2, 4-dichlorobenzendiazonium tetra chlorozincate in an acid environment to form a blue or purple color. The sodium bicarbonate and a portion of the sulfosalicylic acid provide effervescence, which endures solution of part of the tablet in the drops of water.

Clinical Significance

The presence of bilirubin is an important finding in the evaluation of liver function.

Specimen Collection and Handling

Fresh urine sample—minimum 10 drops required
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 Reagent Tablets be used with a fresh specimen. If this is not possible, the urine should be refrigerated immediately and tested as soon as possible.

Reagents

1. Ictotest Reagent Tablets – 100 tablets per bottle (contains 2, 4-dichlorobenzendiazonium tetrachlorozincate & sulfosalicylic acid)
2. Absorbent Asbestos – cellulose Mats
3. Dropper/ plastic pipette
4. DiH₂O

Calibration

Not Applicable

Quality Control

A commercial urine control, normal and abnormal are tested per the procedure. Results are documented in the LIS computer.
Frequency: DAILY and/or whenever a new lot of Ictotest Tablets are opened.

Special Safety Precautions

ICTOTEST Regent tablets are for in vitro diagnostic use. NOT FOR INTERNAL USE.
Avoid contact of reagent tablet with skin. Causes serious eye irritation, skin irritation, may cause respiratory irritation. Follow PPE precautions.

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Procedure

1. Place a square of the absorbent test mat supplied onto a paper towel. Using either side of the test mat, place 10 drops urine.
2. Shake one Ictotest Reagent Tablet into the bottle cap and transfer the tablet to the center of the moistened mat. Do not handle the tablet with your fingers. Recap the bottle immediately.
3. Place one drop of water onto the tablet. Wait 5 seconds, then place a second drop of water onto the tablet so that the water runs off the tablet onto the mat.
4. At 60 seconds, observe the area of mat around the tablet for presence of blue or purple color.
5. Enter the results into the LIS as Negative or Positive.

Interpretations

NEGATIVE: No blue or purple color on mat around tablet. A slight pink or red color should be ignored.



POSITIVE: Mat around tablet turns blue or purple. Speed and intensity of color reaction are proportional to the amount of bilirubin present.



Expected Values

Bilirubin is not normally found in the urine in concentrations sufficient to give a positive result with the Ictotest Reagent Tablets.

Reportable Range

Ictotest Reagent Tablets will detect as little as 0.05 – 0.1 mg bilirubin/dL in urine (0.9 – 1.7 $\mu\text{mol/L}$)

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Bile-Ictotest

Limitations and Interfering Substances

1. Protect against exposure to light, heat and ambient moisture to guard against altered reagent reactivity.
2. Metabolites of Pyridium 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 in large amounts may give a false positive result, and metabolites of Iodine (etadolac) may cause false positive or atypical results.

References

Clinical Diagnosis and Management by Laboratory Methods, Todd, Sanford, Davidson & Henry. 19th Ed., 1996 pp. 431-432.

Ictotest Package Insert

Authorized Reviewers

Section Medical Director or PhD Technical Director

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Document History

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