



Barium Chloride Solution, 10% w/v

R001

Intended use

Barium chloride solution is used in bile pigment determination in routine urine analysis.

Composition**

Ingredients

Barium chloride	10.0 gm
Distilled water	100.0 ml
Final pH (at 25°C)	5.3±0.09

**Formula adjusted, standardized to suit performance parameters

Directions

1. Place 3-4 ml of urine in a centrifuge tube and add equal amount of 10% barium chloride (R001).
2. Mix well.
3. Centrifuge at 1,500 rpm for 10 minutes.
4. Decant supernatant in another test tube for some other tests (like Urobilinogen Test).
5. Add 1-2 drops of Fouchet's reagent to the sediment.

Principle And Interpretation

Barium chloride solution is used in bile pigment determination in routine urine analysis in the Harrison spot test. The main bile pigment is bilirubin which is formed in liver. When Barium chloride reagent is added to urine, it combines with sulphate radicals in urine and precipitate of barium sulphate is formed. If bile pigments are present in urine, they will adhere to these barium sulphate molecules. Ferric chloride present in Fouchet's reagent then oxidizes yellow bilirubin, in the presence of trichloroacetic acid to green or blue green colour. This procedure is very sensitive and detects 0.005 - 0.1mg/dL of bilirubin.

Type of specimen

Clinical samples: Urine

Specimen Collection and Handling

For clinical samples follow appropriate techniques for handling specimens as per established guidelines.

After use, contaminated materials must be sterilized by autoclaving before discarding.

Warning and Precautions

In Vitro diagnostic Use only. Read the label before opening the container. Wear protective gloves/protective clothing/eye protection/ face protection. Follow good microbiological lab practices while handling specimens and culture. Standard precautions as per established guidelines should be followed while handling clinical specimens. Safety guidelines may be referred in individual safety data sheets

Limitations

Bilirubin lesser than 0.005 mg/dL cannot be detected by this method , which may lead to false negative results.

Performance and Evaluation

Performance of the medium is expected when used as per the direction on the label within the expiry period when stored at recommended temperature

Quality Control

- **Appearance** : Colourless liquid.
- **Clarity** : Clear solution with no insoluble particles.
- **Concentration** : 100g/L w/v as Barium Chloride dihydrate : 9.8%-10.2%
- **pH**: 5.19-5.39
- **Test** : For detection of Bile pigment in urine, Place 3-4 ml of urine in a centrifuge tube and add equal amount of 10% barium chloride. Mix well. Centrifuge at 1,500 rpm for 10 minutes. Decant supernatant in another test tube. Add 1-2 drops of Fouchet's reagent to the sediment.
Results : No colour change in sediment: Bile pigment Absent
Colour change to green: Bile pigments present
Grade the positive results, as trace, +, ++, +++ and ++++ according to the intensity of the colour of the sediment.

Storage and Shelf Life

Store between 10-30°C in tightly closed container and away from bright light. Use before expiry date on label. On opening, product should be properly stored in dry ventilated area protected from extremes of temperature and sources of ignition. Seal the container tightly after use.

Disposal

User must ensure safe disposal by autoclaving and/or incineration of used or unusable preparations of this product. Follow established laboratory procedures in disposing of infectious materials and material that comes into contact with clinical sample must be decontaminated and disposed of in accordance with current laboratory techniques.

Reference

1. Godkar P.B.,1994, Text book of Medical Laboratory Technology, Bhalani Publishing House, Mumbai India.
2. Isenberg, H.D. Clinical Microbiology Procedures Handbook. 2nd Edition.
3. Jorgensen, J.H., Pfaller, M.A., Carroll, K.C., Funke, G., Landry, M.L., Richter, S.S and Warnock., D.W. (2015) Manual of Clinical Microbiology, 11th Edition. Vol. 1.



Storage temperature



Do not use if package is damaged



In vitro diagnostic medical device



CE Marking



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Revision : 02/2022

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