



Barium Chloride Solution, 10% w/v

R001

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

Composition**

Ingredients

Barium chloride	10.000 gm
Distilled water	100.000 ml
Final pH (at 25°C)	5.3±0.09

**Formula adjusted, standardized to suit performance parameters

Directions

Place 3 - 4 ml of urine in a centrifuge tube and add equal amount of 10% barium chloride (R001), mix well. Centrifuge at 1,500 rpm for 10 minutes. Decant supernatant in another test tube for some other tests (like Urobilinogen Test). 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 by the Harrison spot test (1). 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 large molecules. Ferric chloride present in Fouchet's reagent then oxidizes yellow bilirubin, in the presence of trichloroacetic acid to green biliverdin.

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

Detection of Bile pigment in urine :Procedure : 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 at 10-30°C in tightly closed container. Use before expiry period on the label.

Reference

1. Godkar P.B.,1994, Text book of Medical Laboratory Technology, Bhalani Publishing House, Mumbai India.

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