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**


**Disclaimer**

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