Fouchet's Reagent

R018

Fouchet's reagent is used to detect bilirubin (bile) in urine.

Composition**

Ingredients

Trichloroacetic acid	25.00 gm
Ferric chloride,10% aqueous	10.00 ml
Distilled water	100.00 ml

**Formula adjusted, standardized to suit performance parameters

Directions

To about 10 ml urine, add 1 gm barium chloride, mix and filter. Spread out on a filter paper. When it is partly dry, drop a little Fouchet's reagent or yellow nitric acid on the precipitate.

Principle And Interpretation

For testing bilirubin in urine, two types of tests are available namely ,

1) oxidation test-where bilirubin is oxidised to green biliverdin and

2) diazotization test-where bilirubin is diazotised to a highly coloured compound.

Fouchet's reagent used in Fouchet's test comes under oxidizing reagent or test. Barium chloride precipitates the sulphate radicals present in urine to form precipitate of barium sulphate. If bile pigments are present in urine, they adhere to these molecules. Ferric chloride present in Fouchets reagent then oxidises yellow bilirubin, in the presence of trichloroacetic acid to green biliverdin. Therefore the development of green colour due to the formation of biliverdin indicates the presence of bilirubin (bile) in urine.

Quality Control

Appearance

Yellow coloured solution

Clarity

Clear without precipitate

Test

To about 10 ml urine, add 1 gm barium chloride, mix and filter, spread out the filter paper.When it is partly dry, drop a little fouchet's reagent or yellow nitric acid on the precipitate

Results

Development of green colour due to formation of biliverdin indicates the presence of bile (bilirubin) in the urine.

Storage and Shelf Life

Store at 10-30°C in tightly closed container. Use before expiry period on the label.

Reference

Textbook of Medical laboratory Technology; Praful B. Godkar

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