Technical Data

o-Toluidine Reagent

R024

It is use for estimation of blood glucose.

Composition**

Ingredients	
Thiourea	1.50 gm
Glacial acetic acid	940.0 ml
O-Toluidine ,pure	60.0ml

**Formula adjusted, standardized to suit performance parameters

Directions

Prepare one Test, one Standard and one Blank for each assay series and dispense as follows :

	Test	Standard	Blank
1) O-toluidine reagent, (ml)	5.0	5.0	5.0
2) Glucose (test) of unknown concentration, (mg%)	0.05	-	-
3) Glucose std: 100 (mg %)	-	0.05	-
4) Distilled water, (ml)	0.05	0.05	0.05

Mix thoroughly, and place the tubes in boiling waterbath for exactly 10 minutes. By using tap water, cool the tubes to room temperature. Measure the optical densities of test and standard against blank at 640 nm (red filter 620 - 660 nm).

Principle And Interpretation

A solution of O-toluidine in glacial acetic acid when heated with glucose produces a green coloured complex with an absorption maximum at about 630 nm. The aldehyde group of the glucose apparently condenses with the reagent to form a glucosylamine and a Schiff base, which is probably the coloured product.

Quality Control

Appearance

Light yellow liquid becoming reddish brown on exposure to air and light.

Clarity

Clear without any precipitate

Test

Determination of unknown glucose concentration is carried out using O- toluidine reagent for test sample.The optical densities of test and standard is measured against blank at 640 nm (red filter 620 - 660 nm).

Calculation

Conc. of sample (test),mg% = Absorbance of test/Absorbance of standard * Conc. of standard

Storage and Shelf Life

Store below 30°C in tightly closed container and away from bright light. Use before expiry date on label.

Reference

1) Bauer J.D., Ackermann P.G. and Toro G. (Eds.) 1974, Clinical Laboratory Methods,8th ed. The C.V.Mosby Co.St.Louis.
2) Godkar P.B.,1994, Text book of Medical Laboratory Technology, Bhalani Publishing House ,Mumbai, India.

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