

FRUCTOSE IN SEMEN

Colorimetric Method 25 Tests

PRINCIPLE :

Fructose forms a pink color when heated with resorcinol in the presence of hydrochloric acid, which can be directly measured photometrically .

SAMPLES :

Proceed immediately with the sample since the fructose decomposes. If the determination is to be performed a few days later , freeze the sample . (stability : several days) or add sodium fluoride (stability at room temperature : 24 hours)

REAGENTS :

1.	Standard Fructose	300 mg / dL (16.6 mmol/L)
2.	Trichloroacetic acid (TCA)	1 mol / L
3.	Resorcinol	9.0 mmol / L
4.	Hydrochloric acid	9.0 mol / L

-Reagent 3 causes severe burns. Keep container tightly closed. Keep away from sources of ignition Avoid contact with skin and eyes.
-Use safety pipettes or pipette aids when pipetting hydrochloric acid and resorcinol solution

STABILITY :

Store in dark place. The reagents are stable at + 15°C to + 25°C until the expiry date stated on the kit .

PROCEDURE :

Deproteinization

Pipette into centrifuge tubes :

	Standard ml	Sample ml
Standard (R1)	0.05	-
Sample	-	0.05
TCA (R2)	0.5	0.5

Mix well. Let stand for 10 min. at room temp . Centrifuge tubes at 3000 r . p. m for 10 min. Take an aliquotes from each as follow :

	Blank ml	Standard ml	Sample ml
Standard mixture	-	0.05	-
Sample supernatant	-	-	0.05
Resorcinol (R3)	0.1	0.1	0.1
Hydrochloric (R4)	1.0	1.0	1.0

Mix well, place into a boiling water bath for exactly 5 min. Allow to cool in cold water. Measure the absorbances of the standard (A_{Standard}) and the sample (A_{Sample}) against the blank. at 495 nm (490 – 500 nm). Color stable for 2 hours . Linearity up to 1000 mg / dl .

CALCULATION :

Fructose Concentration

$$= \frac{A_{\text{Sample}}}{A_{\text{Standard}}} \times \text{Standard Conc.}$$

Conversion in mmol / L : mg / dL x 0.055 = mmol/L

NORMAL RANGES :

200 – 400 mg / dl (11.1 – 22.2 mmol / L)

REFERENCE :

Foreman, D. et al., Analytical Chem.1973. 56, 584-590

FRUCTOSE

Colorimetric Method
+ 15 to +25°C 25 Tests
In vitro diagnostic use

CAT. No. FR 23 10

REAGENTS

R1 Standard	2 ml
R2 TCA	15 ml
R3 Resorcinol	2.5 ml
R4 HCL	25 ml

CONTACTS

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