BT System Pack
Glucose Kit
(GOD / POD Method)

For the determination of Glucose in serum or plasma.
(For Invitro Diagnostic Use Only)

Summary

Glucose is the major carbohydrate present in blood. Its oxidation in the cells is the source of energy for the body. Increased levels of glucose are found in diabetes mellitus, hyperparathryroidism, pancreatitis, renal failure. Decreased levels are found in Insulinoma, hypothyroidism, hypo-pituitarism and extensive liver disease.

Principle

Glucose is oxidised to gluconic acid and hydrogen peroxide in the presence of glucose oxidase. Hydrogen peroxide further reacts with phenol and 4 - aminoantipyrine by the catalytic action of peroxidase to form a red coloured quinoneimine dye complex. Intensity of the colour formed is directly proportional to the amount of glucose present in the sample.

$$\text{Glucose} + O_2 + H_2O \xrightarrow{\textit{Glucose Oxidase}} \text{Gluconate} + H_2O_2$$

$$H_2O_2 + \text{4 Aminoantipyrine} + \text{Phenol} \xrightarrow{\textit{Peroxidase}} \text{Red Quinoneimine dye} + H_2O$$

Normal reference values

Serum / Plasma	Fasting	:	70-110 mg/dl
	2 hrs. P.P.	:	upto 150 mg/dl

It is recommended that each laboratory establish its own normal range representing its patient population.

Contents	**4 x 50 ml**	**8 x 50ml**
L1 : Glucose Reagent	4 x 50 ml	8 x 50ml

Storage / stability

Contents are stable at 2 - 8°C till the expiry mentioned on the labels.
Upon storage the Glucose reagent may develop a slight pink colour. This does not affect the performance of the test.

Reagent preparation

Reagents are ready to use.

Sample material

Serum or plasma. Glucose is reported to be stable in the sample for 7 days when stored at 2 - 8°C.

Linearity

This procedure is linear upto 500 mg/dl.

Note

To avoid glycolysis the serum should be separated from the clot as soon as possible, and plasma should be collected in an EDTA + fluoride bulb (0.5mg + 1mg per ml of blood).

References

Trinder, P., (1969) Ann. Clin. Biochem. 6 : 24

Mfd. by : Coral Clinical Systems
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GLU1(BT)/0417/VER- 01

BT SYSTEM PACK
PROGRAMMING PARAMETERS FOR GLUCOSE

Single reagent application		SERUM PARAMETERS		URINE PARAMETERS	
Code for BAR_CODE	User Defined	Name	Glucose	Name	
Test Methodology	GOD/POD	Sample	2	Sample	3
Method	End Point	Pre-Dilution	1	Pre-Dilution	5
Kind of Process	Linear	**Dilution**		**Dilution**	
Filters	510 / 700	Factor	2	Factor	2
Reaction Direction	Increasing	Limit Test (Conc.)	500	Limit Test (Conc.)	400
Reagent #1(µl)	200	Initial ABS (mABS)	0	Initial ABS (mABS)	0
Reagent #2 (µl)	0	Final ABS (mABS)	0	Final ABS (mABS)	0
Sample Starter	Inactive	Max ABS Delta (mABS)	1000	Max ABS Delta (mABS)	1000
Delay Time (sec)	0	Check Prozona (mABS)	Inactive	Check Prozona (mABS)	Inactive
Incubation Time (sec)	600	Instrumental Factor	1	Instrumental Factor	1
Reading Time (sec)	10	Shift	0	Shift	0
Unit Serum	mg/dl	Re-run Hyperactive	Active	Re-run Hyperactive	Active
Unit Urine		Re-run Pathological	Inactive	Re-run Pathological	Inactive
Number of Needle Washes	2	Re-run out of curve "Above"	Inactive	Re-run out of curve "Above"	Inactive
Number of Cuvette Washes	2	Re-run out of curve "Below"	Inactive	Re-run out of curve "Below"	Inactive
Dynamic Blank	Inactive	**Normal Range**		**Normal Range**	
Reagent Blank	Every run	Men	70 – 110	Men	
Reagent Limit (mABS)	200	Women	70 – 110	Women	
Curves Acceptance (%)	100	Children		Children	