



GLUCOSE KIT

(GOD / POD Method)

(For veterinary invitro diagnostic use only)

INTENDED USE

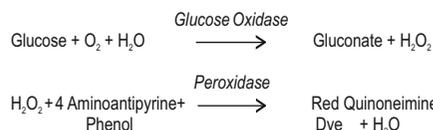
QUADRAPED™ Glucose kit is used for the determination of Glucose in serum or plasma.

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, hyperparathyroidism, pancreatitis, renal failure. Decreased levels are found in Insulinoma, hypothyroidism, hypopituitarism 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.



EXPECTED VALUES

Species	Glucose (mg/dl)
Dog	76 - 119
Cat	60 - 120
Cow	40 - 100
Horse	62 - 134
Pig	85 - 150
Sheep	50 - 80
Goat	50 - 75
Rabbit	75 - 155
Buffalo	40-100

It is recommended that each laboratory establish its own range as reference ranges may vary between laboratories.

PRESENTATION

REF	1126100050
Pack Size	50 ml
L1 Glucose Reagent	50 ml
L2 Glucose Standard (100 mg/dl)	5 ml

COMPOSITION

Phosphate Buffer 100mM; pH 7.0; GOD 15KU; POD 1000U; 4-AAP 0.3 mM; Phenol 5 mM; Non Reactive Stabilizers, Detergents and Preservatives.

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.

SAMPLE WASTE AND DISPOSAL

Do not reuse the reagent containers, bottles, caps or plugs due to the risks of contamination and the potential to compromise reagent performance.

Appropriate biosafety practices should be used for materials that contain or are suspected of containing infectious agents.

Handle specimens, solid and liquid waste and test components in accordance with local regulations and NCCLS guidelines M29, or other published biohazard safety guidelines.

MATERIALS REQUIRED BUT NOT PROVIDED

Photometer analyzer with standard thermostatic cuvette holder, micropipette and appropriate laboratory equipment.

PROCEDURE

Wavelength / filter : 505 nm (Hg 546 nm) / Green
 Temperature : 37°C / R.T.
 Light path : 1 cm

Pipette into clean dry test tubes labelled as Blank (B), Standard (S) and Test (T):

Addition Sequence	B (ml)	S (ml)	T (ml)
Glucose Reagent (L1)	1.0	1.0	1.0
Distilled Water	0.01	-	-
Glucose Standard (S)	-	0.01	-
Sample	-	-	0.01

Mix well and incubate at 37°C for 10 mins. or at R.T. (25°C) for 30 mins. Measure absorbance of the Standard (Abs.S) and Test Sample (Abs.T) against the Blank within 60 mins.

CALCULATIONS

$$\text{Total Glucose in mg/dl} = \frac{\text{Abs. T}}{\text{Abs. S}} \times 100$$

QUALITY CONTROL

The following process is recommended for QC during the assay of Glucose. *Define and establish acceptable range for your laboratory.

- Two levels of control (Normal and Abnormal) are to be run on a daily basis.
- If QC results fall outside acceptance criteria, recalibration may be necessary.

- Review QC results and run acceptance criteria following a change of reagent lot.

SPECIFIC PERFORMANCE CHARACTERISTICS

LOB : 1.42 mg/dl at 505 nm

LOD : 1.90 mg/dl at 505 nm

LOQ : 3.13 mg/dl at 505 nm

Lower Limit : 1.90 mg/dl

Higher Limit : 500 mg/dl

If values exceed this limit, dilute the serum with normal saline (NaCl 0.9%) and repeat the assay. Calculate the value using the proper dilution factor.

Interferences:

Sample when spiked with interferent such as upto 20 mg/dl Bilirubin and 500 mg/dl haemoglobin does not affect the ability of the kit to determine the Glucose concentration.

Precision:

Within run

Within run	n	Mean	SD	% CV
Sample 1	10	100.6	0.86	0.86
Sample 2	10	250.8	1.54	0.61
Sample 3	10	96.7	1.74	1.8

Between run

Between run	n	Mean	SD	% CV
Sample 1	10	100.6	0.73	0.72
Sample 2	10	255.6	1.73	0.68
Sample 3	10	101.2	1.70	1.68

Method comparison:

Comparative studies were done to compare our reagent with another commercial Glucose Assay. No significant differences were observed. Details of the comparative studies are available on request.

NOTE

In vitro diagnostic reagent for laboratory and professional use only Not for medicinal use. The reagent contain sodium azide 0.1% as preservative. Avoid contact with skin and mucosa. On disposal flush with large quantities of water. Only clean and dry glassware must be used. 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 (0.5 mg + 1 mg per ml of blood). Do not use turbid, deteriorated or leaking reagents

REFERENCES

- Trinder P., (1969) Ann. Clin. Biochem. 6:24.
- Clinical Chemistry, Principles, Procedures, Correlations, Michael L. Bishop, et.al., 5th Edition.
- Duncan and Prasse's Veterinary Laboratory Medicine: Clinical Pathology, Kenneth S. Latimer, ISBN Jane Wardrop , 6th Edition - 2010.
- Clinical Biochemistry of Domestic Animals, Sixth Edition, 2008 by Kaneko J.J., Harvey J.W. & Bruss M.L.
- Data on file: Coral Clinical Systems.

System Parameters

Reaction : End Point	Interval : —
Wavelength : 505 nm	Sample Vol. : 0.01 ml
Zero Setting : Reagent Blank	Reagent Vol. : 1.00 ml
Incub. Temp. : 37°C / R. T.	Standard : 100 mg/dl
Incub. Time : 10 min. / 30 min.	Factor : —
Delay Time : —	React. Slope : Increasing
Read Time : —	Linearity : 500 mg/dl
No. of read. : —	Units : mg/dl

SYMBOL KEYS

Store at 2-8°C	Manufacturer	In vitro Diagnostic Medical Device	Glucose Reagent	GOD / POD Method
Use by (Last day of stated month)	Consult Instructions for use	Batch Number	Glucose Standard (100 mg/dl)	This way up
Date of Manufacture	Catalogue Number			



Manufactured by:

Coral Clinical Systems

A Division of Tulip Diagnostics (P) Ltd.

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