



GLUCOSE GOD - PAP

Enzymatic Colorimetric Method

Cat.No. 101-0238

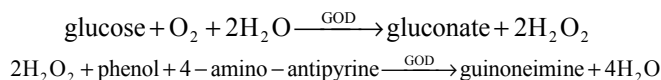
Size 3 x 100 ml

Cat.No. 101-0014

Size 4 x 250 ml

PRINCIPLE:

Glucose is determined after enzymatic oxidation in the presence of glucose oxidase (GOD). The formed H_2O_2 reacts under catalysis of peroxidase (POD) with phenol and 4-amino-antipyrine to form quinoneimine. The intensity of the color is proportional to the glucose concentration in the sample.



SAMPLE:

Serum, plasma (Heparine or EDTA).
Glucose is stable for 24 hours at +2 °C to +8 °C, if serum or plasma is prepared within 30 min. after collection.

REAGENTS:

- Buffer
Phosphate buffer, pH 7.5 150 mmol/L
Phenol 7.5 mmol/L
- GOD/PAP Reagent
GOD 12000 U/L
POD 660 U/L
4-amino-antipyrine 0.40 mmol/L
- Standard
Glucose Standard concentration see on the vial label

PREPARATION OF REAGENTS

(Working reagent):

- Buffer
Contents is ready for use. Stable up to the expiry date when stored at +2 °C to +8 °C.
- GOD/PAP Reagent
Reconstitute the contents of one vial of Reagent 2 (GOD/PAP) with the corresponding volume of Buffer.
The working reagent is stable for 2 months at +2 °C to +8 °C or 2 weeks at +15 °C to +25 °C. Store in a dark bottle.
- Glucose standard is ready for use. Stable up to the expiry date at +2 °C to +8 °C.

PROCEDURE:

Wavelength:	505 nm (490 - 550 nm)
Cuvette:	1 cm light path
Temperature:	25 °C, 37 °C
Color stability:	30 min
Zero:	reagent blank

Pipette into test tubes	Reagent blank	Standard	Sample
Standard	-	10 µl	-
Sample	-	-	10 µl
Working reagent	1000 µl	1000 µl	1000 µl

Mix and incubate for 30 min. at room temperature or 10 min. at 37°C. Avoid exposure to direct sunlight. Measure the absorbance of the standard and the sample against the reagent blank within 30 minutes.

NOTE:

Volumes can be proportionally changed.

CALCULATION:

$$\frac{A_{\text{sample}}}{A_{\text{standard}}} \times \text{stand.conc.} = \text{mmol/L glucose}$$

EXPECTED VALUES:

Serum, plasma (fasting)	4.2 - 6.1 mmol/L
	76 - 110 mg/dL

LINEARITY:

up to 22.2 mmol/L (400 mg/dl)

QUALITY CONTROL:

CONTRO-N	20 x 5 ml	Cat. No. 101-0083
CONTRO-P	20 x 5 ml	Cat. No. 101-0084

NOTE:

- When incubating at +37 °C, absorbances can be read after 20 - 40 min.
- Reagent contains sodium azide as stabilizer. Do not swallow. Avoid contact with the skin and mucous membranes.
- Reagent 1 contains phenol, which is poisonous and caustic. Do not swallow, and avoid contact with skin. If solution comes into contact with skin, flush immediately with polyethylene glycol 400 or, lacking this, with large quantities of water.

REFERENCES:

- Trinder P.A.; An. Clin. Biochem. 6, 24 (1969).
- Pileggi R. et al. Klin. Wschr. 40, 585-589 (1962).