

# GLUCOSE TEST KIT

GOD-POD Trinder Method (Colorimetric End Point)



<b>Product Code:</b> 10028 / 11028	<b>Reaction Type:</b> End Point with Standard
<b>Pack Size:</b> 5 x 100 ml / 2 x 500 ml	<b>Matrix Target:</b> Serum, Plasma & Cerebrospinal Fluid (CSF)
<b>Storage Temp:</b> 2-8°C (Reagent & Standard)	<b>Wavelength:</b> 505 nm (Green Filter)

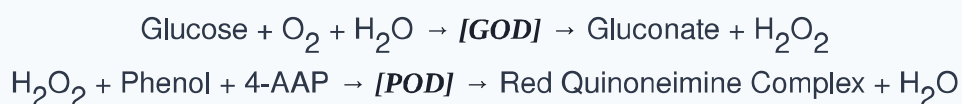
## INTENDED USE & CLINICAL SIGNIFICANCE

**Intended Use:** This stabilized diagnostic system is engineered for the quantitative in vitro colorimetric determination of Glucose concentrations in human serum, plasma, and CSF specimens.

**Clinical Significance:** Glucose serves as the primary carbohydrate engine and cellular energy source for the human body. Routine blood glucose monitoring is critical for the diagnosis and therapeutic follow-up of diabetes mellitus. Hyperglycemic states are also secondary to hyperthyroidism, hyperadrenalism, and specialized hepatic diseases. Hypoglycemia is typically manifested in cases of insulinoma, advanced hypothyroidism, or hypopituitarism.

## METHOD PRINCIPLE

Glucose Oxidase (GOD) specifically catalyzes the oxidation of glucose into gluconate and hydrogen peroxide (H<sub>2</sub>O<sub>2</sub>). The formed hydrogen peroxide is subsequently processed by Peroxidase (POD) in the presence of phenol and 4-Aminoantipyrine (4-AAP) to build a stable red quinoneimine dye complex:



The operational color density of this complex, recorded at 505 nm, scales linearly with the absolute concentration of glucose in the clinical specimen.

## STEP 1: REAGENT CONFIGURATION & PIPETTING BASELINE

Reagent / Component Line	Blank	Standard	Test Vector
<b>R1 - Enzyme Reagent Mixture</b>	1000 µl	1000 µl	1000 µl
<b>Glucose Standard (100 mg%)</b>	—	10 µl	—
<b>Distilled Water Baseline</b>	10 µl	—	—

Reagent / Component Line	Blank	Standard	Test Vector
Serum / Plasma / Clean CSF Specimen	—	—	10 µl

**Operational Directive:** Mix well and incubate at 37°C for exactly 10 minutes (or at Room Temperature for 20 minutes). Read the static absorbance of the Test (T) and Standard (S) against the Reagent Blank (B) on a colorimeter or photometer equipment at 505 nm.

## STEP 2: CALCULATIONS & DATA TRACKING

$$\text{Glucose in mg\%} = (\text{Abs. of Test} / \text{Abs. of Std.}) \times 100 (\text{Standard Concentration})$$

## TECHNICAL PARAMETERS & CLINICAL SUPPORT MATRIX

<b>Universal Safeguards</b>	Professional in vitro use. <b>PRE-ANALYTICAL RULE:</b> Serum/plasma must be physically separated from cell packs within 60 minutes of collection to block glycolysis. Sodium Fluoride is heavily preferred as an anticoagulant due to its active antiglycolytic mechanism. Contains sodium azide. Separate pipette tips are mandatory.
<b>Expected Range</b>	<b>Fasting Glucose:</b> 70 – 110 mg%   <b>Random Glucose:</b> 70 – 170 mg% <b>Post Lunch Glucose:</b> Up to 170 mg%   <b>CSF Glucose:</b> 50 – 80 mg%
<b>Analytical Linearity</b>	Linear up to 500 mg%. If parameters cross this limit, dilute with standard saline, process the assay again, and multiply by the active dilution factor.

**Manufactured by: M/s. SAWIN BIOMEDICALS PVT. LTD.**

Plot No: M82/2, Medical Devices Park, Sultanpur, Ameenpur Mandal, Sangareddy Dist-502 319, Hyderabad, Telangana, INDIA.

Phone: +91 8455-240822 / +91 7816 075705 | E-mail: info@sawinbio.com | Web: www.sawinbio.com

An ISO 13485 Certified Company | Mfg. Lic. No.: MFG/IVD/2024/000109 | Rev.A