SunLong Biotech Co.,LTD
Tel: 0086-571-56623320 Fax:0086-571-56623318
E-mail:sales@sunlongbiotech.com
www.sunlongbiotech.com

Blood Glucose Content Assay Kit

Note: Take two or three different samples for prediction before test.

Operation Equipment: Spectrophotometer

Catalog Number: AK0223

Size:50T/48S

Components:

Solution I: 10 mL×1, 1 mmol/mL glucose solution. Storage at 4℃.

Solution Ⅱ: Liquid 25 mL×1. Storage at 4℃.

Solution Ⅲ: Liquid 25 mL×1. Storage at 4℃.

Preparation of mixed reagent: mix Solution Ⅱ and Solution Ⅲ in equal proportion and prepare it fresh.

Product Description

Glucose in the blood of mammals is called blood sugar and is the main form of sugar transport in the body. Blood glucose concentration is regulated by the nervous system and hormones， so it remains relatively stable. While hyperglycemia and hypoglycemia occur when the regulation is out of balance. Hyperglycemia can be caused by diabetes, increased intracranial pressure and dehydration. After the meal, mental tension can also appear physiological high blood sugar. In contrast, hypoglycemia can occur in patients with such conditions as islet cell proliferation or cancer, hypophysis, adrenal cortex and hypothyroidism, and severe liver disease. In addition, hunger and strenuous exercise can cause temporary hypoglycemia.

Glucose oxidase can catalyze the oxidation of glucose to gluconic acid, and produce hydrogen peroxide. Peroxidase catalyzes the oxidation of 4-aminoantipyrine bisphenol by hydrogen peroxide to form colored compounds with characteristic absorption peaks at 505 nm.

Reagents and Equipment Required but Not Provided.

Water-bath, spectrophotometer, 1 mL glass cuvette, transferpettor and distilled water.

Sample list

1. Preheat the spectrophotometer for more than 30 min, adjust the wavelength to 505 nm, and adjust to zero with distilled water.

Sample table (add Reagent in the EP tube):

Reagent （μL）	Blank Tube (B)	Standard Tube (S)	Test Tube (T)
Sample			100
Solution I		100	
distilled water	100		
Mixed reagent	900	900	900

Mix thoroughly, 37℃ water bath, keep warm for 15 min, read the absorbance A of wavelength at 505 nm.

The absorbance is named A_B, A_S and A_T.

Calculation of blood glucose content:

Blood glucose content (mmol/L)= 1 mmol/L× $(A_T-A_B)\div(A_S-A_B)$.

Note:

If the absorbance value of the sample is greater than 1.3, it is recommended to dilute the sample with distilled water for determination.

Recent Product Citations:

[1] Wu J, Liu J, Ding Y, et al. MiR-455-3p suppresses renal fibrosis through repression of ROCK2 expression in diabetic nephropathy[J]. Biochemical and biophysical research communications, 2018, 503(2): 977-983.

References:

[1]Basagni U, Bonicolini F. Ready to use liquid reagent for determining the glucose content in blood: U.S. Patent 5,077,199[P]. 1991- 12-31.

[2] Kabasakalian P, Kalliney S, Westcott A. Enzymatic blood glucose determination by colorimetry of N, N-diethylaniline-4-aminoantipyrine[J]. Clinical chemistry, 1974, 20(5): 606-607.

Related Products:

AK0291/AK0290	Glucogen Content Assay Kit
AK0211/AK0210	Cellulase(CL) Activity Assay Kit
AK0295/AK0294	Trehalose Content Assay Kit
AK0221/AK0219	Glucose Content Assay Kit

Technical Specifications:

The detection limit: 0.0078 μmol/mL

Linear range: 0.0625-3 μmol/mL