Blood Glucose Content Assay Kit

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

Operation Equipment: Spectrophotometer/ Microplate reader

Catalog Number: NA0452

Size:100T/96S

Components:

Solution I: 10 mL×1, 2 μmol/mL glucose solution. Storage at 4℃.

Solution II: Liquid 10 mL×1. Storage at 4℃.

Solution III: Liquid 10 mL×1. Storage at 4℃.

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, transferpettor, spectrophotometer/microplate reader, micro quartz cuvette/96 well flat-bottom plate and distilled water.

Sample list

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

2. Preparation of mixed reagent: mix Solution II and Solution III with equal volume 1:1 before use, prepare it fresh.

3. Sample table (add Reagent in the EP tube/96 well flat-bottom plate):

Reagent（μL）	Blank Tube	Standard Tube	Test Tube
Sample			20
Solution I		20	

distilled water	20		
Mixed reagent	180	180	180

Mix thoroughly, keep it at 37℃ (mammals) or 25℃ (other species) for 15 min, read the absorbance of wavelength at 505 nm. Note the light absorption values of blank tube, standard tube and test tube as A1, A2 and A3 respectively.

Calculation of blood glucose content:

Blood glucose content（μmol/mL）= 2 μmol/mL ×（A3-A1）÷（A2-A1).

Note:

If the absorbance value of the sample is greater than 1.2, 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：

NA0840/NA0598 Glucogen Content Assay Kit

NA0688/NA0447 Cellulase(CL) Activity Assay Kit

NA0841/NA0599 Trehalose Content Assay Kit

NA0692/NA0451 Glucose Content Assay Kit

Technical Specifications:

The detection limit: 0.0188 μmol/mL

Linear range: 0.125-8 μmol/mL