

Blood Glucose Content Assay Kit (Microplate Reader)

Catlog Number: BBITK-HMM-0020

• Description

The glucose in the blood of mammals is called blood sugar, which is the main form of sugar transport in their bodies. Most of the energy required for the activities of various tissues and cells comes from this. Blood sugar needs to be maintained at a certain level to meet the needs of various organs and tissues in the body. Blood sugar concentration is maintained at a relatively stable level by the regulation of the nervous system and hormones. When the regulation is out of balance, adverse symptoms such as hyperglycemia and hypoglycemia may occur.

• Basic Information

Testing Equipment: Microplate Reader
Matching: 96-well plate
Number of Testable Samples: 100 Samples
Estimated Measurement Time: 3 h (100 Samples)
Self-contained Reagents: /
Detection Methods: GOPOD Format
Detection Wavelength: 505 nm
Signal Response: Incremental
Standard: Glucose
Reference Standards: $y=1.842x-0.0027$ ($R^2=0.9997$)
Standard Linear Range: 0.1-0.6 mg/mL
Detection Limit: 0.003 mg/mL

• Detection Principle

Glucose oxidase (GOD) can oxidize glucose to gluconic acid and release H₂O₂. Peroxidase (POD) catalyzes the oxidation of 4-aminoantipyrine coupled with phenol by H₂O₂ to generate red quinone compounds. The product has a characteristic absorption peak at 505 nm, and the content of blood glucose can be quantitatively detected by the change in absorbance value.



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• Note

Reagent 1 and Reagent 2 should be kept away from skin. If they accidentally spill, rinse the contact area with plenty of water. If the measured absorbance value exceeds the linear range of the standard absorbance value: if it is higher than the maximum value, it is recommended to appropriately dilute the sample to be tested with distilled water before measurement; if it is lower than the minimum value, it is recommended to appropriately increase the sample size before measurement, and make corresponding modifications during calculation. The test sample should be an unhemolyzed sample to prevent glucose-6-phosphate in red blood cells from entering the serum during hemolysis. When using serum as the test sample, the extraction of serum should be completed within 30 minutes to prevent further glycolysis from causing lower results. Blood (plasma) samples can refer to the use of potassium oxalate-sodium fluoride as an anticoagulant, which can also inhibit sugar decomposition at the same time.



• Specification

120T/100S

• Storage & Transportation

Store at 4°C