CREATIVE BIOMART®
Assay Kit

D-Glucose HK Assay Kit

Product Information

Cat.No. Kit-2059

Product Overview

Enzymatic method for the determination of D-Glucose. Based on the spectrophotometric measurement of NADPH produced though the reactions, after addition of hexokinase (HK) and glucose-6-phosphate dehydrogenase (G6PDH).

Size

110 tests

Description

D-Glucose occurs widely in plants and animals. It is an essential component of carbohydrate metabolism and occurs frequently in the free form along with D-fructose and sucrose. However, the more important forms are those of di- (lactose, maltose, sucrose), tri-, oligo- and polysaccharides (dextrins, starch, cellulose). It is present in significant quantities in honey, wine and beer, and a range of solid foodstuffs such as bread and pastries, chocolate and candies. Measurement of D-glucose is extremely important in biochemistry and clinical analysis, as well as in food analysis; it is mostly determined along with other carbohydrates.

Applications

This rapid and simple specific enzymatic method is used for the determination of D-glucose in foodstuffs such as baking agents, diet beer and dietetic foods, as well as in pharmaceuticals, cosmetics and biological samples. The analysis of D-glucose in foodstuffs is normally performed in conjunction with D-fructose, maltose and sucrose.

Kit Components

Solution 1. Imidazole buffer (25 mL, 2 M, pH 7.6) plus MgCl2 (0.5 M), MgCl2 (100 mM) and sodium azide (0.02 % w/v) as a preservative. Stable for 2 years at 4 °C. Solution 2. NADP+ (150 mg) plus ATP (440 mg). Stable for 5 years at -20 °C. Dissolve in 12 mL of distilled water, divide into appropriately sized aliquots and store in PP tubes at -20 °C between use (stable for 2 years) and keep cool during use. Suspension 3. Hexokinase (EC 2.7.1.1; 425 U/mL) and glucose-6-P dehydrogenase (EC 1.1.1.49;

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212 U/mL) in 3.2 M ammonium sulphate (2.25 mL). Stable for 2 years at 4 °C. Swirl bottle before use. Solution 4. D-Glucose standard solution (6 mL, 0.40 mg/mL) in 0.02% benzoic acid. Stable for 2 years at room temperature. This standard solution can be used when there is some doubt about the method accuracy.

Detection method UV method

Compatible Sample Types

Wine, beer, fruit juices, milk, dietetic foods, bread, jam, honey, ice-creams, fruit and vegetables, pharmaceuticals, cosmetics and biological samples.

Features & Benefits

Rapid reactionsSuitable for manual and micro volume formats

Sensitivity

Reaction volume: 2.32 mLRange: 2-800 mg/LDetection limit: 0.66 mg

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