CREATIVE BIOMART®
Assay Kit

D-Fructose/D-Glucose Assay Kit

Product Information

Cat.No. Kit-2055

Product Overview

Enzymatic method for the determination of D-Fructose and D-Glucose (total sugars). Based on the spectrophotometric measurement of NADPH produced through the reactions, after addition of hexokinase (HK), phosphoglucose isomerase (PGI) and Glucose-6-phosphate dehydrogenase (G6PDH).

Size

110 tests

Description

D-Fructose and D-glucose occur widely in plant organisms. In foods, they occur mainly in honey, wine and beer, and a range of solid foodstuffs such as bread and pastries, chocolate and candies. In the wine industry, the content of Dfructose and D-glucose (total reducing sugars) is one of the key quality parameters; it represents the amount of sugar available for yeast fermentation.

Applications

This rapid and simple specific enzymatic method is used for the simultaneous determination of D-fructose and D-glucose in foodstuffs, pharmaceuticals, cosmetics and biological samples. The analysis of these sugars can also be performed separately. This kit can be used for the auto-analysis of total reducing sugars.

Kit Components

Solution 1. Imidazole buffer (25 mL, 2 M, pH 7.6) plus MgCl2 (100 mM) and sodium azide (0.02 % w/v) as a preservative. Stable for 2 years at 4 °C. Solution 2. NADP+ (250 mg) plus ATP (500 mg) and PVP (120 mg). Stable for 2 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; 212 U/mL) in 3.2 M ammonium sulphate (2.25 mL). Stable for 2 years at 4 °C. Swirl bottle before use. Suspension 4. Phosphoglucose isomerase (EC 5.3.1.9; 1000 U/mL) in 3.2 M ammonium sulphate (2.25

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mL). Stable for 2 years at 4 °C. Swirl bottle before use. Solution 5. D-Fructose/D-glucose standard solution (5 mL, 0.20 mg/mL of each sugar). 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 reactionsPrevention of tanins inhibition (PVPP included)Suitable for manual and micro volume formats

Sensitivity

Reaction volume: 2.34 mLRange: 2-800 mg/LDetection limit: 0.66 mg/L

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