CREATIVE BIOMART®
Assay Kit

Lactose/Sucrose/D-Glucose Colorimetric Assay Kit

Product Information

Cat.No. Kit-2062

Product Overview

This rapid and simple specific enzymatic method is used for the simultaneous determination of lactose, sucrose and D-glucose. Free D-glucose in the sample is determined directly with GOPOD Reagent by conversion to a red coloured quinoneimine dye compound through the combined action of glucose oxidase and peroxidase. Sucrose is hydrolysed to D-glucose and D-fructose with b-fructosidase, and measured as D-glucose. Lactose is hydrolysed to D-glucose and D-galactose using β-galactosidase (lactase) and measured as D-glucose.

Size

100 tests

Description

Sucrose 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. Lactose, or milk sugar, is formed in the mammary glands of all lactating animals and is present in milk and milk products. Sucrose and milk solids (containing lactose) are major constituents of many flour mixtures used in the production of cakes, biscuits, breads and confectionary goods.

Applications

This rapid and simple specific enzymatic method is used for the simultaneous determination of lactose, sucrose and Dglucose in flour mixtures as well as other foodstuffs, pharmaceuticals, cosmetics and biological samples.

Kit Components

Solution 1. Buffer (20 mL, pH 4.6). Stable for 2 years at 4 °C. Dilute the content of bottle 1 to 100 mL with distilled water before use. Stable for >1 year at 4°C. Suspension 2. β-Fructosidase (2.2 mL). Stable for 2 years at 4 °C. Swirl bottle before use. Add 0.02 ml of Suspension 2 plus 0.180 ml of Solution 1, per assay, to a test tube and homogenise (Solution 1+2). This solution should be prepared for each assay day. Suspension 3. β-Galactosidase (2.2 mL). Stable for 2 years at 4 °C. Swirl

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bottle before use. Add 0.02 ml of Suspension 3 plus 0.180 ml of Solution 1, per assay, to a test tube and homogenise (Solution 1+3). This solution should be prepared for each assay day. Solution 4. GOD-POD reagent buffer (30 mL, pH 7.4), phydroxybenzoic acid and sodium azide (0.64% w/v) as a preservative. Stable for 3 years at 4 °C. Dilute the contents of the bottle to 1.0 L with distilled water and use immediately. Mixture 5. GOD-POD reagent enzymes. Freeze-dried powder of glucose oxidase (GOD), peroxidase (POD) and 4- aminoantipyrine. Stable for 5 years at -20 °C. Dissolve the contents of one bottle 5 in approx. 20 mL of solution 4 and quantitatively transfer this to the bottle containing the remainder of solution 4. Cover this bottle with aluminum foil to protect the enclosed reagent from light. Stable for 3 months at 2-5 °C or 12 months at -20 °C. Solution 6. D-Glucose standard solution (5 mL, 1.0 mg/mL) in 0.2% (w/v) benzoic acid. Stable for 5 years at room temperature. Use as supplied. Powder 7. Control flour sample. Lactose, sucrose and Dglucose contents shown on vial label. Use as supplied. Prepare as a sample (see Examples of sample preparation)

Detection method Colorimetric method

Compatible Sample Types

Flour mixtures, milk and milk products, ice-creams, chocolate, pharmaceuticals, cosmetics and biological samples.

Features & Benefits

Simple methodRapid reactionStable reagents

Sensitivity

Range: 100-1000 mg/L

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