CREATIVE BIOMART®
Assay Kit

L-Malic acid Assay Kit

Product Information

Cat.No. Kit-2064

Product Overview

Enzymatic method for the determination of L-malic acid. Based on the spectrophotometric measurement of NADH formed through the combined action of L-malate dehydrogenase (L-LDH) and aspartate aminotransferase (AST).

Size

58 tests

Description

L-Malic acid is a relevant component of the citric acid cycle that is found in animals, plants and microorganisms. It is one of the most important fruit acids found in nature and it is the acid present in highest concentrations in wine. L-Malic acid may be used in food production because it is a stronger acid than citric acid. Microbial decomposition of L-malic acid leads to the formation of L-lactate; this can be a desirable reaction in the wine industry, where the level of L-malic acid is monitored, along with L-lactic acid, during malolactic fermentation. L-Malic acid may be used as a food preservative (E296) or flavour enhancing additive.

Applications

This rapid and simple stereo-specific enzymatic method is used for the determination of L-malic acid (L-malate) in foodstuffs such as wine, beer, bread, fruit and vegetable products, fruit juice, as well as in cosmetics, pharmaceuticals and biological samples.

Kit Components

Solution 1. Glycylglycine buffer (6 mL, 1 M, pH 10.0) plus Lglutamate (1 M) and sodium azide (0.02% w/v) as a preservative. Stable for 2 years at 4 °C. Solution 2. NAD+ (380 mg) plus Polyvinylpyrrolidone (PVP; 60 mg). Stable for 5 years at -20 °C. Dissolve in 6 mL of distilled water, divide into appropriately sized aliquots and store in polypropylene tubes at -20 °C between use and on ice during use. Suspension 3. Aspartate aminotransferase (AST) / GOT (EC 2.6.1.1) suspension (1.25 mL, 600 U/mL). Stable for 2 years at 4 °C. Swirl bottle before use. Suspension 4. L-Malate dehydrogenase (EC

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1.1.1.37) suspension (1.25 mL, 15,000 U/mL). Stable for 2 years at 4 °C. Swirl bottle before use. Solution 5. L-Malic acid standard solution (5 mL, 0.15 mg/mL). Stable for >2 years at 4 °C. 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

Stable enzyme suspensionsVery rapid reactionPrevention of tanins inhibition (PVPP included)Suitable for manual and micro volume formats

Sensitivity

Reaction volume: 2.34 mLRange: 0.25-300 mg/LDetection limit: 0.25 mg/L

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