CREATIVE BIOMART®
Assay Kit

L-Malic acid Colorimetric Assay Kit

Product Information

Cat.No. Kit-2065

Product Overview

Enzymatic and rapid colorimetric test for the determination of L-malic acid. Based on the spectrophotometric measurement of INT-formazan formed through the combined action of L-malate dehydrogenase (L-LDH), aspartate aminotransferase (AST) and diaphorase.

Size

5 x 10 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. Microbial decomposition of L-malic acid leads to the formation of Llactate; this can be a desirable reaction in the wine industry, where the level of L-malic acid is monitored, along with Llactic acid, during malolactic fermentation.

Applications

This rapid and simple colorimetric method is used for the determination of L-malic acid (L-malate) in a wide range of matrices. Although specially developed for quantification of L-malic acid in wine industry, this kit is also adequate to Lmalic acid measurement in other foodstuffs such as fruit juice, beer, bread, fruit and vegetable products, as well as in cosmetics, pharmaceuticals and biological samples. Simple, robust, and accurate, this assay can be performed using an inexpensive visible spectrophotometer.

Kit Components

Solution 1. Glycylglycine buffer (60 mL, 0.25 M, pH 10.0) plus L-glutamate (0.25 M), Triton X100 (1.25% V/V) and sodium azide (0.02% w/v) as a preservative. Stable for 2 years at 4 °C. Mixture 2 (5 x). NAD+ (30 mg) plus INT (1.1 mg) and FAD (75 ug). Stable for 5 years at -20 °C. Dissolve content of 1 bottle in 12 mL of Solution 1. Stable for at least 48 h. Suspension 3. Aspartate aminotransferase (AST/GOT), LMalate dehydrogenase (LMDH) and Diaphorase in 3.2 M ammonium sulphate (2.2 mL).

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Stable for 2 years at 4 °C. Swirl bottle before use. Solution 4. L-Malic acid standard solution (5 mL, 0.4 mg/mL). Stable for >2 years at 4 °C. This standard solution can be used when there is some doubt about the method accuracy. Powder 5: PVPP (polyvinylpolypyrrolidone; 10 g)

Detection method Colorimetric 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

Simple and robust formatUse of inexpensive visible spectrophotometerRapid reaction

Sensitivity

Reaction volume: 3.04 mLRange: 8-800 mg/LDetection limit: 8 mg/L

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