CREATIVE BIOMART®
Assay Kit

Pyruvic acid Assay Kit

Product Information

Cat.No. Kit-2066

Product Overview

Enzymatic method for the determination of pyruvic acid. Based on the spectrophotometric measurement of NAD+ formed through the action of D-lactate dehydrogenase (D-LDH).

Size

100 tests

Description

Pyruvic acid, the simplest alpha-keto acid, plays a key role in several biochemical pathways: final product of glucose oxidation through glycolysis; supplies energy to living cells in the citric acid cycle; can also be converted to carbohydrates via gluconeogenesis, to fatty acids or energy through acetylCoA, to the amino acid alanine and to ethanol. As a product of fermentation, pyruvic acid can be found especially in dark beers. This acid is also found in wine, fruits and cheese. The pyruvate is the active ingredient in various dietary supplements implicated in the control of body weight.

Applications

This rapid and simple specific enzymatic method is used for the determination of pyruvic acid (pyruvate) in foodstuffs such as wine, fruits and cheese, as well as in blood and urine as a useful clinical marker for several pathologies.

Kit Components

Solution 1 (2x). Tris/HCl (30 mL, 0.4 M, pH 7.4), MgCl2 (12 mM) and sodium azide (0.02 % w/v) as a preservative. Stable for >2 years at 4°C. Tablets 2. 135 tablets of NADH supplied in a plastic vial containing desiccant. Allow this container to warm to room temperature (in the presence of a desiccant if possible) before opening to remove tablets. Stable for 3 years when stored dry at 4 °C or -20 °C. Add 4 tablets and 1.6 mL of solution 1 per 3 assays, including blank reaction, to a test tube and stir intermittently over 1-2 min (solution 1+2). Once dissolved, the reagent is suitable for use for approx. 5 days and 4 weeks, when stored at 4 °C and -20 °C, respectively. Suspension 3. D-Lactate

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dehydrogenase (D-LDH, EC 1.1.1.28; 8900 U/mL) in 3.2 M ammonium sulphate (2.2 mL). Stable for 2 years at 4 °C. Solution 4. Pyruvic acid standard solution (5 mL, 0.20 mg/mL). Stable for 2 years at 4 °C. This standard can be used when there is doubt about the method accuracy (εNADH,340 nm = 6300 L×mol-1×cm-1).

Detection method UV method

Compatible Sample Types

Wine, beer, fruit juice, cheese, biological samples.

Features & Benefits

Very rapid reactionStable reagentsSuitable for manual and micro volume formats

Sensitivity

Reaction volume: 2.82 mLRange: 0.15-400 mg/LDetection limit: 0.39 mg/L

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