CREATIVE BIOMART®
Assay Kit

Methanol Assay Kit (Colorimetric)

Product Information

Cat

Kit-1002

Common Name

Methanol

Cat.No. Kit-1002

Description

Methanol is the simplest alcohol, consisting exclusively of a methyl group and a hydroxyl moiety. It is both an important industrial molecule (solvent, fuel, building block for chemical synthesis) and a biological metabolite; many bacteria generate methanol as a result of anaerobic metabolism. In humans, ingestion of large quantities of methanol is toxic and suppresses the nervous system; this is termed 'methanol poisoning'. As such, methanol is frequently used as an additive in industrial alcohols to prevent human consumption. The toxicity of methanol is primarily due to the biological product of its metabolism, formaldehyde, which is further metabolized into formic acid. At lower concentrations, methanol poisoning can cause loss of coordination and discomfort, and at higher concentrations will lead to kidney failure, blindness, and even death. In the gut, microbial breakdown of pectin-rich foods produces small amounts of methanol. In addition, some bacteria are capable of metabolizing methane gas, generating methanol, and so monitoring methanol concentration is also relevant for industrial purposes and renewable energy research. Methanol Assay Kit utilizes an enzymatic mechanism by which conversion of methanol is correlated stoichiometrically with generation of a colorimetric signal that can be quantified at 450 nm. The assay shows greater than 100-fold specificity for methanol over ethanol. The method is suitable for use in a range of biological and consumable samples, and can detect as little as 500 pmol methanol.

Applications

Determination of methanol in biological samples, anaerobic bacterial cultures, agricultural products and food products.

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CREATIVE BIOMART®
Assay Kit

Methanol Assay Kit (Colorimetric)

Storage

-20°C

Shipping

Gel Pack

Size

100 assays

Kit Components

Methanol Assay Buffer; Methanol Developer; Methanol Enzyme Mix; Methanol Probe; Pure Methanol Stock (24.7 M)

Target Species

Mammalian /others

Detection method Absorbance (450 nm)

Compatible Sample Types

Cell and Tissueculture supernatants, urine, plasma and serum, as well as many other samples

Features & Benefits

Simpleprocedure; takes ~40 minutes - 1 hour; Fast and convenient; Kit contains the necessary reagents for accurate and specific measurement of Methanol in biological samples

Sensitivity

The kit detects 500 ppm Methanol

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