

Native Microorganism Mutarotase

Cat. No. NATE-1907

Lot. No. (See product label)

Introduction

Description In enzymology, an aldose 1-epimerase (EC 5.1.3.3) is an enzyme that catalyzes the chemical reaction: $\alpha\text{-D-glucose} \leftrightarrow \beta\text{-D-glucose}$. Hence, this enzyme has one substrate, $\alpha\text{-D-glucose}$, and one product, $\beta\text{-D-glucose}$. This enzyme belongs to the family of isomerases, specifically those racemases and epimerases acting on carbohydrates and derivatives. This enzyme participates in glycolysis and gluconeogenesis.

Applications This enzyme is useful for enzymatic determination of glucose.

Synonyms mutarotase; aldose mutarotase; galactose mutarotase; galactose 1-epimerase; D-galactose 1-epimerase; aldose 1-epimerase; EC 5.1.3.3

Product Information

Source Microorganism

Appearance Lyophilized

EC Number EC 5.1.3.3

CAS No. 9031-76-9

Molecular Weight ca. 39,500

Specific Activity more than 120 U/mg protein

Contaminants (as MRO activity = 100 %) NADHoxidase: < 0.01 %

pH Stability 3.5 - 10.0

Optimum pH 7.0 - 9.0

Thermal stability No detectable decrease in activity up to 50 °C.

Unit Definition One unit of activity is defined as the amount of Mutarotase that forms 10 μmol of NADH per minute at 25 °C.

Reaction $\alpha\text{-D-glucose} \leftrightarrow \beta\text{-D-glucose}$

Storage and Shipping Information

Storage Stable at -20 °C for at least one year.