Creative Enzymes®

# Native Microorganism Mutarotase

*Cat. No. NATE-1907*

*Lot. No.* (See product label)

## Introduction

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| ***Description*** | In enzymology, an aldose 1-epimerase (EC 5.1.3.3) is an enzyme that catalyzes the chemical reaction:alpha-D-glucose↔ beta-D-glucose. Hence, this enzyme has one substrate, alpha-D-glucose, and one product, beta-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

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| ***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 10μmol of NADH per minute at 25 °C. |
| ***Reaction*** | α-D-glucose ←→ β-D-glucose |

## Storage and Shipping Information

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