Creative Enzymes®

Native Jack bean Urease

Cat. No. PHAM-180

Lot. No. (See product label)

Introduction

Description	Ureases (EC 3.5.1.5), functionally, belong to the superfamily of amidohydrolases and phosphotriesterases. It is an enzyme that catalyzes the hydrolysis of urea into carbon dioxide and ammonia. The reaction occurs as follows: $(NH2)2CO + H2O \rightarrow CO2 + 2NH3$.
Applications	This enzyme is useful for enzymatic determination of urea in clinical analysis.
Synonyms	EC 3.5.1.5; Urease

Product Information

Source	Jack bean
Appearance	White amorphous powder, lyophilized
Form	Freeze dried powder
EC Number	EC 3.5.1.5
CAS No.	9002-13-5
Molecular Weight	approx. 480 kDa
Activity	GradeⅡ(-201) 100U/mg-solid or more
Contaminants	Asparaginase < 2.0×10^{-2}% Arginase < 2.0×10^{-3}% NH_4^+ < 5.0×10^{-4}μg/U
Isoelectric point	5.0-5.1
pH Stability	pH 5.5-8.5 (30°C, 17hr)
Optimum pH	6
Thermal stability	below 50°C (pH 8.0, 60min)
Optimum temperature	60°C
Michaelis Constant	1.05×10^{-2}M (Urea)
Structure	8 active sites with SH-groups per mole of the enzyme
Inhibitors	Heavy metal ions (Ag^+,Hg^{++},etc.)
Stabilizers	EDTA, glutathione, succinate, BSA

Storage and Shipping Information

Stability	Store at -20°C (A decrease in activity of ca.15% may occur within 6 months)