

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: $(\text{NH}_2)_2\text{CO} + \text{H}_2\text{O} \rightarrow \text{CO}_2 + 2\text{NH}_3$.

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 Gradell(-201) 100U/mg-solid or more

Contaminants Asparaginase < $2.0 \times 10^{-2}\%$ Arginase < $2.0 \times 10^{-3}\%$ NH_4^+ < $5.0 \times 10^{-4}\mu\text{g/U}$

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 $1.05 \times 10^{-2}\text{M}$ (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)