

## 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 to yellow 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** 100U/mg-solid or more

**Contaminants** Asparaginase <  $2.0 \times 10^{-2}\%$  Arginase <  $2.0 \times 10^{-3}\%$   $\text{NH}_4^+$  <  $5.0 \times 10^{-4}\mu\text{g}/\text{U}$

**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 ( $\text{Ag}^+$ ,  $\text{Hg}^{++}$ , 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)