BBI Solutions

UREASE

EC Number	3.5.1.5
Systematic Name	Urea amidohydrolase
Assay Principle	$Urea + H_2O \xrightarrow{Urease} CO_2 + 2NH_3$ $NH_3 + \alpha\text{-Ketoglutarate} + NADH + H^+ \xrightarrow{GLDH} L\text{-Glutamate} + NAD^+$
Unit Definition	Nessler Unit: That amount of enzyme causing the liberation of one micromole of ammonia per minute at 25°C and pH 7.0. Bergmeyer Unit: That amount of enzyme causing the hydrolysis of one micromole of urea per minute at 25°C and pH 8.0.

How can Urease be used?

Ureases are nickel-dependent enzymes that catalyse the hydrolysis of urea into ammonia and carbon dioxide.

Urease is used in liquid and powder urea laboratory reagents and biosensors. It can be used in the determination of urea in biological fluids (coupled with GLDH, in the ultraviolet method). Urease can also be used as an enzyme label in ELISA.

Why choose BBI for your supply?

BBI Solutions (BBI) is a leading manufacturer of high purity urease and has supplied the diagnostic industry with this key enzyme for over 30 years.

Our raw material selection and production procedures have been optimised to ensure we achieve high specific activity and batch-to-batch consistency, providing reagent and sensor manufacturers with urease products of proven performance.

Key Benefits

+ PROVEN PERFORMANCE

In liquid and powder reagents

+ HIGH PURITY

For biosensor applications

+ BULK CAPABILITY

Manufacturing in high volumes to reduce cost

+ BATCH-TO-BATCH REPRODUCIBILITY

Enabling consistent formulations

+ SECURE SUPPLY

We have direct relationships with our raw material suppliers to ensure a secure supply chain

Order your evaluation sample today

FEB 2021/V3

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URE2	>220 Nessler U/mg material (>90 Bergmeyer U/mg)*
URE3	>1300 Nessler U/mg protein (approx. 450 Nessler U/mg material)

*1 Bergmeyer unit is equivalent to approximately 2.4 Nessler units

FAQ's

HOW IS UREASE PRODUCED?

Urease is obtained from specially selected and cultivated jack beans. The enzyme is extracted from the beans then purified using multiple precipitation, fractionation, chromatography and filtration steps.

ARE CUSTOMISED PRODUCT SPECIFICATIONS AVAILABLE?

We will profile your requirements against our process capability to meet a specification suitable to your needs.

HOW SHOULD THE MATERIAL BE STORED?

Store desiccated at -15°C or below.

Product Analysis

An example of typical batch data

Code	URE2
Batch	1456A
Activity	
Nesslers	Bergmeyer
374 U/mg material	156 U/mg material
1740 U/mg protein	726 U/mg material
Associated activity	**Contaminants**
Ammonium ions	: <0.00001 micromoles/Unit

Related Products

Application Area	Product Name	Code	Activity
Clinical Chemistry	Glutamate Dehydrogenase	GDHB3	> 10 U/mg material
Biosensors	Glucose Oxidase	GO3A	~ 360 U/mg protein
Biosensors	Glucose Oxidase	GO3B2	~ 360 U/mg protein
Biosensors	FAD dependent Glucose Dehydrogenase	GLD1	> 625 U/mg material
Biosensors	FAD dependent Glucose Dehydrogenase	GLD3	> 300 U/mg material
Biosensors	Cholesterol Esterase	CE3	> 35 U/mg material
Biosensors	Cholesterol Oxidase	CO5F	> 12 U/mg material
Biosensors	Creatinase	CR1F	> 9 U/mg material
Biosensors	Creatininase	CNN1	> 500 U/mg material
Biosensors	Sarcosine Oxidase	SO2F	> 20 U/mg material
Biosensors	Uricase	U5	> 4 U/mg material

Order a sample today sales@bbisolutions.com
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