ENZYMES Uricase

ORIGIN Arthrobacter globiformis

CAT# URIC-70-1721 EC# 1.7.3.3

SPECIFICATIONS

Appearance White to off-white freeze dried powder

Powder Activity ≥10 U/mg powder at 25°C

APPLICATION

Useful in enzymatic determiantion of uric acid.

UNIT DEFINITION

One unit of activity is defined as the amount of enzyme that will catalyse the oxidation of 1.0 micromole of uric acid per minute at 25°C under the standard assay conditions.

ASSAY PRINCIPLE

Uricase catalyses the following reaction:

Uric acid + $2H_2 O_2 + O_2$ Allantoin + $H_2O_2 + CO_2$

As uric acid degrades there is a decrease in absorbance which can be measured spectrophotometrically at 293nm.

CHARACTERISTICS

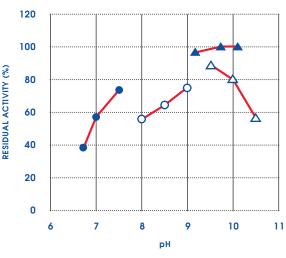
| Molecular Weight: | 117kDa (TSK gel G3000SWXL) |
|-----------------------------|---|
| Isoeletric Point: | 4.61 |
| K _m Values: | 1.3 x 10 ⁻⁴ M |
| Optimum pH (Fig. 1): | 8.5 - 9.5 |
| pH Stability (Fig. 2): | 6.0 - 9.5 (37°C, 60 minutes) |
| Thermal Stability (Fig. 3): | Stable at 50°C and below (pH 9.0, 10 minutes) |
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FIGURE 1: OPTIMUM pH

120 100 80 40 20 3 4 5 6 7 8 9 10 pH

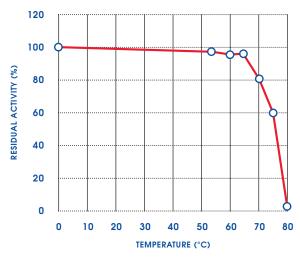
FIGURE 2: pH STABILITY



- 3,3-DIMETHYLGLUTARATE-NAOH BUFFER O PHOSPHATE BUFFER
- A TRIS-HCL BUFFER
- △ BORATE BUFFER
- PHOSPHATE BUFFERGLYCINE BUFFER
- O TRIS BUFFER

 BORATE BUFFER

FIGURE 3: THERMAL STABILITY



pH 9.0, 10 min.; 20mM Borate buffer

THE AMERICAS

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