

ENZYMES
BY

SORACHIM

Creatinine Deiminase from microorganism

CNI-311

SPECIFICATIONS

Product name	Creatinine iminohydrolase
EC	3.5.4.21
Appearance	White amorphous powder lyophilized
Activity	Grade III, 10U/mg-solid or more (containing ~ 30% of stabilizer)
Contaminants	Creatinine amidohydrolase $\leq 1.0 \times 10^{-2}$ % Creatine amidinohydrolase $\leq 1.0 \times 10^{-2}$ % Urease $\leq 1.0 \times 10^{-2}$ % NADH oxidase $\leq 1.0 \times 10^{-2}$ % NH ₄ ⁺ $\leq 1.0 \times 10^{-2}$ µg/u
Stabilizers	Mannitol
Stability	Stable at - 20°C for at least 12 months
Molecular weight	approx. 260,000
Isoelectric point	4.4
Michaelis constant	3.5×10 ⁻³ M (Creatinine)
Structure	6 subunits per mol of enzyme
Inhibitors	Ag ⁺ , Hg ²⁺ , o-phenanthroline, monoiodoacetate
Optimum pH	8.5 - 9.5
Optimum temperature	65 - 75°C
pH Stability	pH 7.0 - 11.0 (30°C, 20hr)
Thermal stability	below 65°C (pH 7.5, 1hr)

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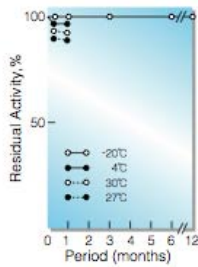


Fig.1. Stability (Powder form)
(kept under dry conditions)

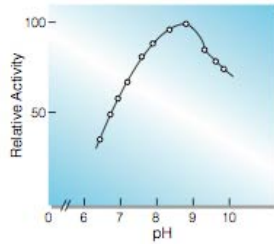


Fig.2. pH-Activity
(37°C in Britton-Robinson buffer; The activity was assayed by the indophenol method.³⁾)

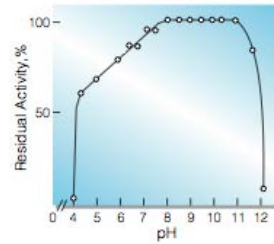


Fig.4. pH-Stability
(30°C, 20hr-treatment with Britton-Robinson buffer)

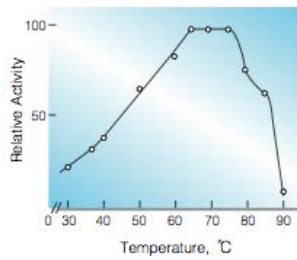


Fig.3. Temperature activity
(in 50mM K-phosphate buffer, pH 7.5; The activity was assayed by the indophenol method.³⁾)

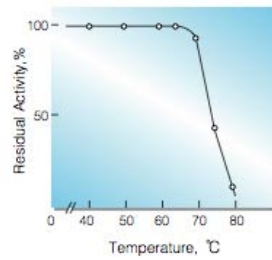


Fig.5. Thermal stability
(1hr-treatment with 50mM K-phosphate buffer, pH7.5)

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