


 ENZYMES
BY

SORACHIM

Creatininase from microorganism

CNH-311

SPECIFICATIONS

Product name	Creatinine amidohydrolase
EC	3.5.2.10
Appearance	White amorphous powder lyophilized
Activity	Grade III 150 U/mg-solid or more
Contaminant	NADH oxidase $\leq 5.0 \times 10^{-2}$ % Catalase ≤ 2.0 %
Stabilizers	Sucrose, BSA
Stability	Stable at - 20°C for at least 12 months
Molecular weight	approx. 175,000
Isoelectric point	4.7
Michaelis constants	3.2×10^{-2} M (Creatinine), 5.7×10^{-2} M (Creatine)
Structure	8 subunits per mol of enzyme (One mol of zinc is bound to each subunit)
Inhibitors	Ag ⁺ , Hg ²⁺ N-bromosuccinimide, EDTA
Optimum pH	6.5 - 7.5
Optimum temperature	70 °C
pH Stability	pH 7.5 - 9.0 (5°C, 16hr)
Thermal stability	below 70 °C (pH 7.5, 30min)

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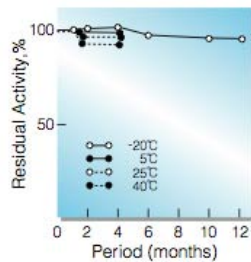


Fig.1. Stability (Powder form)
(kept under dry conditions)

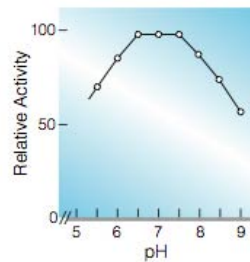


Fig.3. pH-Activity
(37°C, 10min-reaction in 50mM buffer solution: pH5.5, acetate; pH6.0-8.0, phosphate; pH8.5-9.0, carbonate)

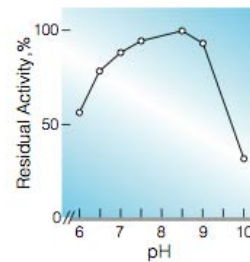


Fig.5. pH-Stability
(25°C, 16hr-treatment with 50mM buffer solution: pH6.0-8.0, phosphate; pH8.5-9.0, carbonate)

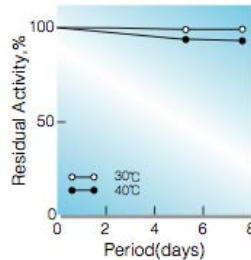


Fig.2. Stability (Liquid form)
(in 50 mM Tris-HCl buffer solution) pH7.5

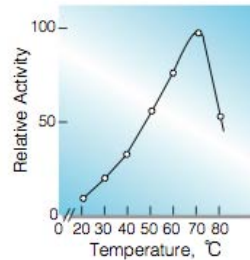


Fig.4. Temperature activity
(10min-reaction in 50mM phosphate) buffer, pH7.4

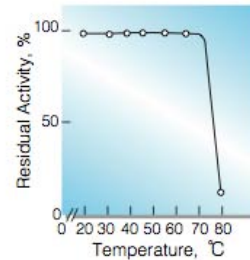


Fig.6. Thermal stability
(30min-treatment with 50mM phosphate buffer, pH7.4)

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