

ENZYMES

BY

SORACHIM

Creatinase from Actinobacillus sp.

CRH-211

SPECIFICATIONS

Product name	Creatine amidinohydrolase
EC	3.5.3.3
Appearance	White amorphous powder lyophilized
Activity	Grade II, 6.0 U/mg-solid or more (contains approx. 50% stabilizers)
Contaminant	NADH oxidase $\leq 5.0 \times 10^{-2}$ %, Catalase ≤ 2.0 %
Stabilizers	Sugars, EDTA
Stability	Stable at -20°C for at least 12 months
Molecular weight	approx. 100,000
Isoelectric point	4.6 \pm 0.1
Michaelis constant	1.9 $\times 10^{-2}$ M (Creatine)
Structure	2 subunits per mol of enzyme
Inhibitors	Hg ²⁺ , Cu ²⁺ , Ag ⁺
Optimum pH	8.0
Optimum temperature	40 °C
pH Stability	pH 5.5 - 9.0 (25 °C, 16hr)
Thermal stability	below 50°C (pH 7.5, 30min)

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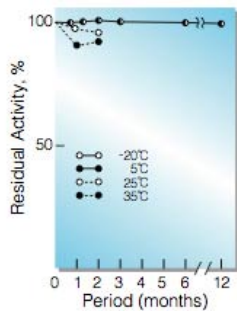


Fig.1. Stability (Powder form)
(kept under dry conditions)

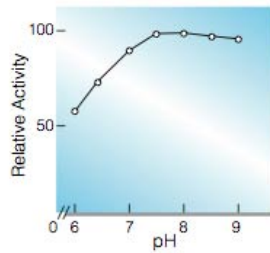


Fig.3. pH-Activity
(37°C, 10min-reaction in 50mM K-phosphate buffer)

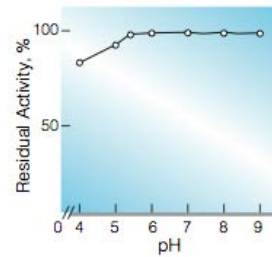


Fig.5. pH-Stability
(25°C, 16hr-treatment with 50mM buffer solution: pH4.0-5.5, Acetate pH6.0-9.0, K-phosphate)

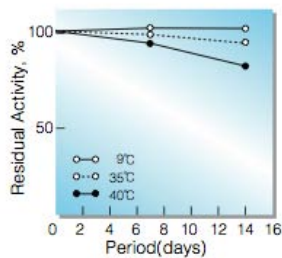


Fig.2. Stability (Liquid form)
(in 50 mM K-phosphate buffer, pH7.5)

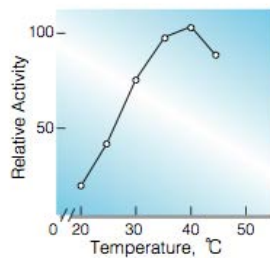


Fig.4. Temperature activity
(10min-reaction in 50mM K-phosphate buffer, pH7.5)

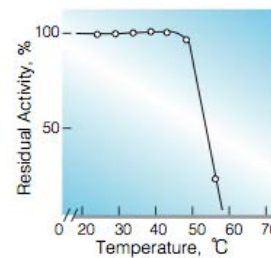


Fig.4. Thermal stability
(30min-treatment with 50mM K-phosphate buffer, pH7.5)

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