ENZYMES

BY

SORACHIM

Creatinase from microorganism

CRH-221

SPECIFICATIONS

Product name	Creatine amidinohydrolase
EC	3.5.3.3
Appearance	White amorphous powder lyophilized
Activity	Grade II 4.0 U/mg-solid or more
Contaminant	NADH oxidase ≤ 5.0×10^{-2} % Catalase ≤ 2.0%
Stabilizers	Sugars, EDTA
Stability	Stable at - 20°C for at least 12 months
Molecular weight	approx. 67,000 by gel filtration
Isoelectric point	4.5 ± 0.1
Michaelis constant	4.5×10^{-3} M (Creatine)
Inhibitors	Hg^{2+} , Cu^{2+} , Ag^{+} , SH reagent (NEM), PCMB
Optimum pH	6.5 - 7.5
Optimum temperature	40 - 50 °C
pH Stability	pH 4.0 - 10.0 (25 °C, 20hr)
Thermal stability	below 50°C (pH 7.5, 30min)

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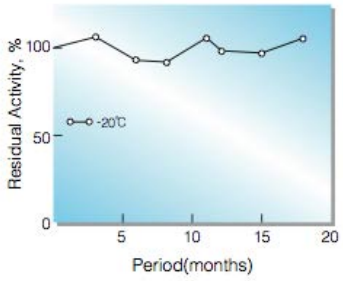

Fig.1.Stability (Powder form)

(kept under dry conditions)

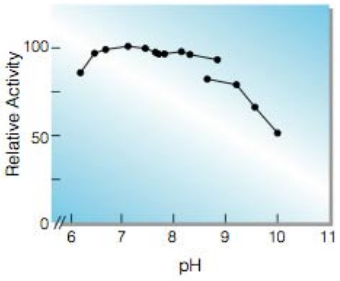

Fig.2. pH-Activity

37℃ 10min-reaction in 50mM buffer solution:pH6.2-7.8, K-phosphate; pH7.7-8.9, Tris-HCl;pH9.2-10.0, Glycine-NaOH

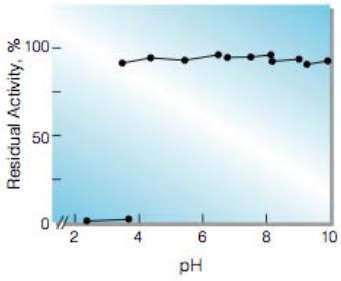

Fig.4. pH-Stability

25℃ 16hr-treatment wiht 50mM buffer solution:pH2.4-3.4, Glycine-HCl; pH3.5-6.2, Acetate; pH6.5-7.9, K-Phosphate;pH7.9-8.8, Tris-HCl;pH9.0-9.7, Glycine-NaOH

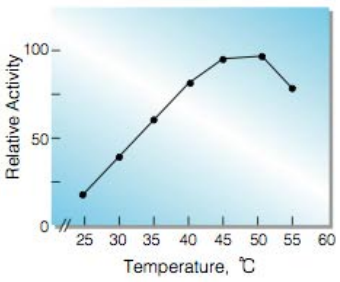

Fig.3. Temperature activity

10-min reaction in 50mM K-phosphate buffer, pH7.5

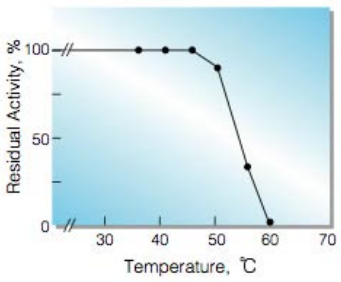

Fig.5.Thermal stability

30min-treatment with 50mM K-phosphate buffer, pH7.5