Xanthine Oxidase from Microorganism

XTO-212

SPECIFICATIONS

Name	Xanthine: oxygen oxidoreductase
EC	1.1.3.22
Appearance	Reddish brown amorphous powder, lyophilized
Activity	Grade II, 10 U/mg-solid or more
Contaminants	Catalase : ≤ 5.0%, Adenosine deaminase : ≤ 1.0×10^{-3}% Uricase ≤ 1.0×10^{-3}%, Phosphatase ≤ 1.0×10^{-3}% Purine-nucleoside phosphorylase ≤ 5.0×10^{-3}%
Stabilizers	Sodium glutamate, BSA
Stability	Stable at -20℃ for at least 12 months
Molecular weight	approx. 160,000
Isoelectric point	4.0 ± 0.1
Michaelis constants	4.5×10^{-5}M (Xanthine), 7.6×10^{-5}M (Hypoxanthine)
Inhibitors	Reducing agents, Hg^{2+}, Ag^{+}, MIA
Optimum pH	7.5 - 8.0
Optimum temperature	65℃
pH Stability	pH 6.5 - 9.0 (25℃, 15hr)
Thermal stability	below 55℃ (pH 8.0, 30min)

ENZYMES

BY

SORACHIM

Xanthine Oxidase from Microorganism

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SPECIFICATIONS

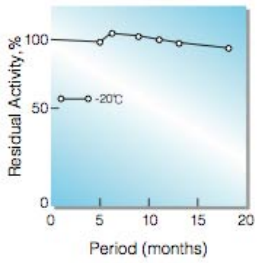

Fig.1. Stability (Powder form)

(kept under dry conditions)

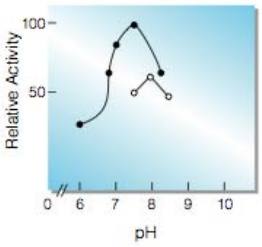

Fig.3. pH-Activity

[37℃ in 4min-reaction in 50mM buffer solution
●:pH6.0-8.2 K-phosphate
○:pH7.5-8.5 Tris-HCl]

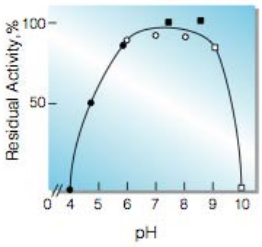

Fig.5. pH-Stability

[25℃ 15hr with 50mM buffer solution
●:pH4.0-6.0 acetate
○:pH6.0-8.0 K-phosphate
■:pH8.0-9.0 Tris-HCl
□:pH9.0-10.0 Na-K carbonate]

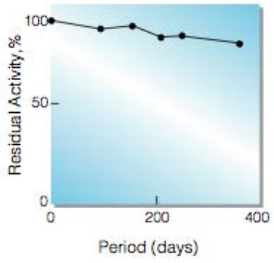

Fig.2. Stability (Liquid form)

[in 50mM buffer solution 4℃,pH6.8
enzyme concn.:60U/ml]

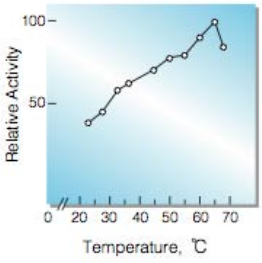

Fig.4. Thermal activity

(in 50mM Tris-HCl buffer, pH8.0)

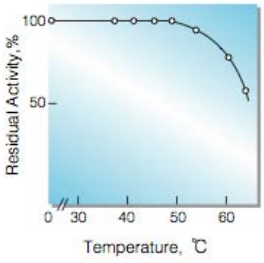

Fig.6. Thermal stability

[30min-treatment with 50mM Tris-HCl buffer,pH8.0]