

ENZYMES

BY

SORACHIM

L- α -Glycerophosphate Oxidase from Microorganism G3O-321

SPECIFICATIONS

Product name	sn-Glycerol-3-phosphate: oxygen 2- oxidoreductase
EC	1.1.3.21
Appearance	Yellowish amorphous powder lyophilized
Activity	Grade III, 15 U/mg-solid or more
Contaminants	Lactate oxidase $\leq 2.0 \times 10^{-4}\%$ Adenosine triphosphatase $\leq 2.0 \times 10^{-4}\%$
Stabilizers	FAD, amino acids
Stability	Stable at -20°C for at least 12 months
Molecular weight	approx. 67,000 (by SDS-PAGE)
Isoelectric point	4.6 ± 0.1
Michaelis constants	$1.3 \times 10^{-3}\text{M}$
Inhibitors	Ionic detergents, SH reagents, Metal ions, etc.
Optimum pH	6.0 – 7.0
Optimum temperature	45°C
pH Stability	pH 4.5 – 8.5 (25°C , 20hr)
Thermal stability	below 45°C (pH 6.5, 15min)

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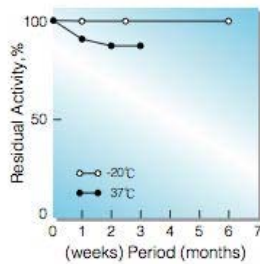


Fig.1. Stability (Powder form)
(Kept under dry form)

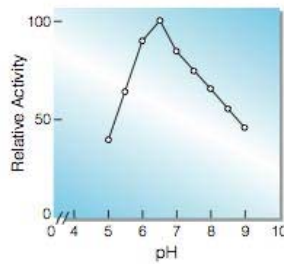


Fig.2. pH-Activity
(0.1M buffer solution: pH5.0-6.5 MES; pH6.5-7.5, PIPES-NaOH; 7.5-9.0, Tris-HCl)

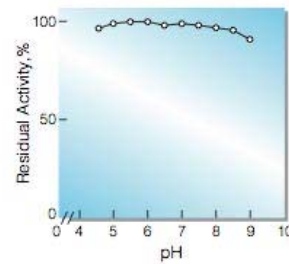


Fig.4. pH-Stability
(25°C, 20hr-treatment with 0.1M buffer solution; pH4.5-6.0, acetate; pH6.0-8.0, K-phosphate; pH8.0-9.0, Tris-HCl enzyme concn.: 20U/ml)

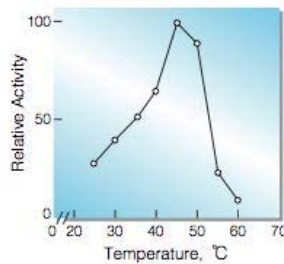


Fig.3. Temperature activity
(in 0.2M PIPES-NaOH buffer, pH6.5)

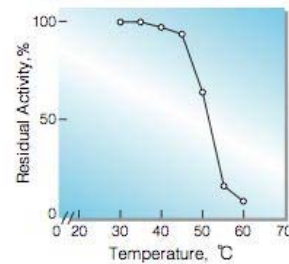


Fig.5. Thermal stability
(15min-treatment with 0.1M PIPES-NaOH buffer, pH6.5, enzyme concn.: 20U/ml)

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