

ENZYMES

BY

SORACHIM

p-Hydroxybenzoate Hydroxylase from Microorganism

HBH-311

SPECIFICATIONS

Product name	4-hydroxybenzoate, NADPH:oxygen oxidoreductase (3-hydroxylating)
EC	1.14.13.2
Appearance	Yellowish amorphous powder lyophilized
Activity	Grade III, 20 U/mg-solid or more (containing approx. 40% stabilizers)
Contaminants	NADPH oxidase $\leq 1.0 \times 10^{-1}\%$
Stabilizers	Sugars, FAD
Stability	Stable at - 20°C for at least 12 months
Molecular weight	55,000 ~ 60,000
Michaelis constants	2.0×10^{-5} M (p-Hydroxybenzoate), 4.0×10^{-5} M (NADPH)
Structure	One mol of FAD per mol of enzyme
Inhibitors	Ag ⁺ , Hg ²⁺ , PCMB, SDS
Optimum pH	7.7 - 7.9
Optimum temperature	35°C
pH Stability	pH 5.0 - 7.5 (25°C, 72hr)
Thermal stability	below 40°C (pH 6.0, 15min)

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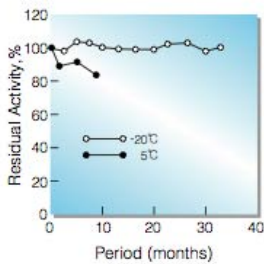


Fig.1. Stability (Powder form)
(kept under dry conditions)

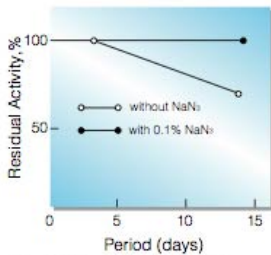


Fig.2. Stability (Liquid form at 25°C)
[enzyme concentration:500U/ml
buffer composition:50mM K-phosphate
buffer,pH6.0]

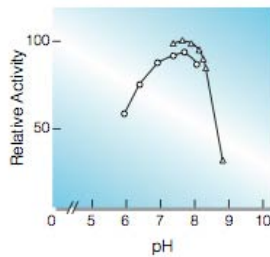


Fig.3. pH-Activity

[37°C in 50mM buffer solution:
○—○,K-phosphate; △—△,Tris-
malate]

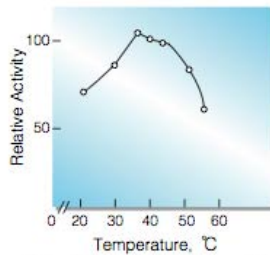


Fig.4. Temperature activity

(in 50mM Tris-malate buffer, pH8.2)

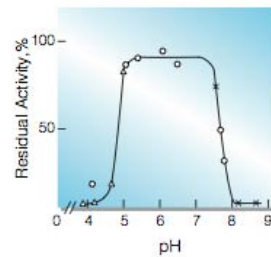


Fig.5. pH-Stability

[25°C in 72hr-treatment with 50mM
buffer solution:△—△,acetate;
○—○,K-phosphate; x—x, glycine-NaOH]

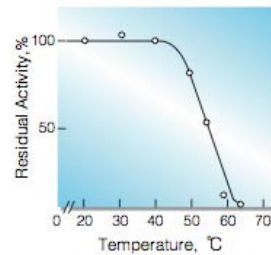


Fig.6. Thermal stability

[15min-treatment with 50mM
K-phosphate buffer,pH6.0]