

# ENZYMES

BY

# SORACHIM

## Diaphorase from Microorganism

### DAD-311

#### SPECIFICATIONS

Name	NAD(P)H: (acceptor) oxidoreductase
EC	1.6.99.-
Appearance	Yellowish amorphous powder, lyophilized
Activity	Grade III, 500 U/mg-solid or more
Contaminants	Myokinase: $\leq 5.0 \times 10^{-1} \%$ , NADH oxidase: $\leq 1.0 \times 10^{-1} \%$
Stability	Stable at -20 °C for at least 12 months
Molecular weight	48,000
Michaelis constants	$2.2 \times 10^{-4}$ M (NADH), $2.9 \times 10^{-2}$ M (NADPH)
Inhibitors	$\text{Fe}^{3+}$ , $\text{Mn}^{2+}$ , $\text{Cu}^{2+}$ , $\text{Pb}^{2+}$
Isoelectric point	5.0
Optimum pH	8.0
Optimum temperature	60°C
pH Stability	5.0 – 10.0
Thermal stability	below 70°C
Substrate specificity	Either NADH or NADPH can be used as a reductant.

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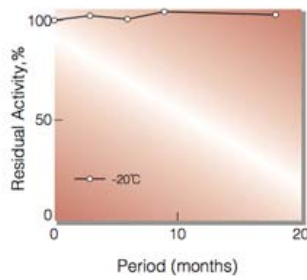
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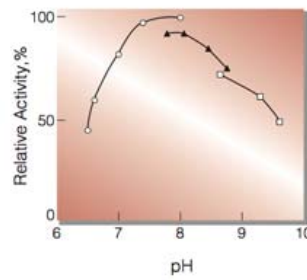
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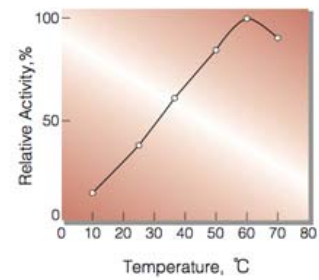


**Fig. 1. Stability (Powder form)**  
[Kept under dry conditions]



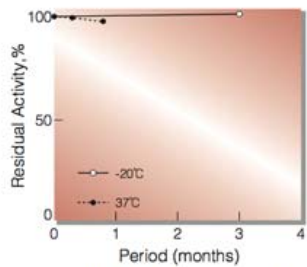
**Fig. 3. pH-Activity**

[37°C, in 0.1M buffer solution;  
○—○, KPB; ▲—▲, Tris-HCl;  
□—□, Glyc-NaOH]



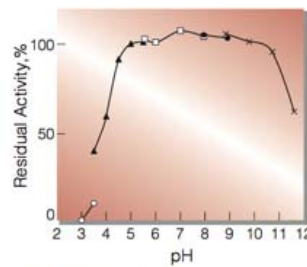
**Fig. 5. Temperature activity**

[in 50mM K-Phosphate buffer, pH7.5]



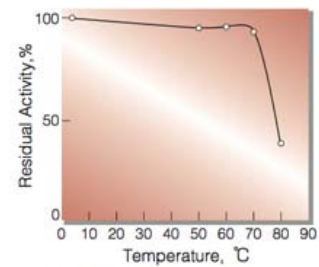
**Fig. 2. Stability (Powder form)**

[Kept under dry conditions]



**Fig. 4. pH-Stability**

[25°C, 20hr-treatment with 0.1M buffer solution; ○—○, Glycine-HCl;  
▲—▲, Acetate; □—□, KPB;  
●—●, Tris-HCl; X—X, Glycine-NaOH]



**Fig. 6. Thermal stability**

[15 min-treatment with 0.1M K-Phosphate buffer, pH7.5; Enzyme concentration : 10 U/ml]