

# ENZYMES

BY

# SORACHIM

## Superoxide Dismutase from Bovine erythrocyte

### SOD-302

#### SPECIFICATIONS

Name	Superoxide: superoxide oxidoreductase
EC	1.15.1.1
Appearance	Bluish-green amorphous powder lyophilized
Activity	Grade III, 3000 U/mg-solid or more
Contaminants	Catalase $\leq$ 0.01%
Stability	Stable at - 20°C for at least 6 months
Molecular weight	32,000
Isoelectric point	4.95
Structure	2 subunits per mole of enzyme (Each one mole of copper and zinc is bound to each subunit)
Inhibitors	Cyanide, diethyldithiocarbamate
Optimum pH	9.0
Optimum temperature	30°C
pH Stability	pH 7.0 - 8.5 (25°C, 20hr)
Thermal stability	below 70°C (pH 7.0, 30min)

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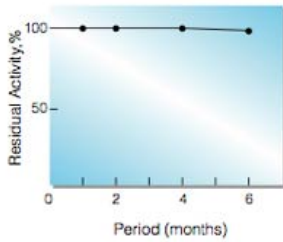


Fig.1. Stability (Powder form at 5°C)  
(kept under dry conditions)

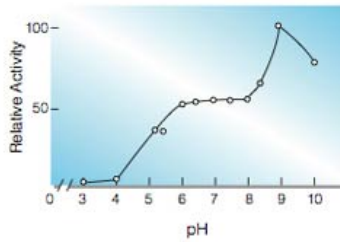


Fig.3. pH-Activity  
(25°C in 50mM buffer solution: pH3.0-5.5, acetate;  
pH5.5-8.5, phosphate; pH8.5-9.0, Tris-HCl  
pH10.0, sodium carbonate)

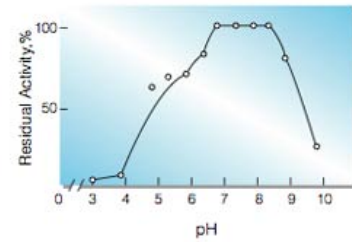


Fig.5. pH-stability  
(25°C, 20hr-treatment with 50mM buffer  
solution: (see Fig. 3))

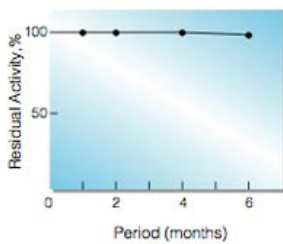


Fig.2. Stability (Liquid form at 5°C)  
(buffer composition: 10mM K-  
phosphate buffer, pH7.0)

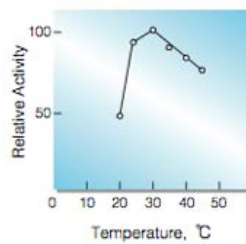


Fig.4. Temperature activity  
(in 50mM phosphate buffer, pH7.0)

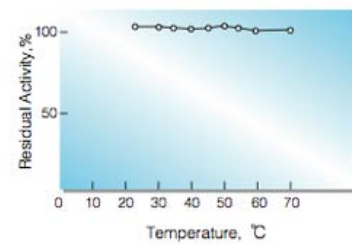


Fig.6. Thermal stability  
(30min-treatment with 50mM phosphate  
buffer, pH7.0)

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