P O D

Peroxidase

Donor : hydrogen-peroxide oxidoreductase (EC 1.11.1.7)

from Horseradish roots

Reaction Equation

Donor + H_2O_2 = Oxidized donor + $2H_2O$

Specification

	Specifications
Specific Activity	
IU/mg protein	＞450 units
Contaminants	
Catalase	＜0.5%
Phosphatase	＜0.005%

Assay Procedure

Ⅰ. Spectrophotometric Method

Wavelength ; 510 nm, Light path length ; 1 cm,
Temperature ; 25℃

Pipette the following reagents into a cuvette

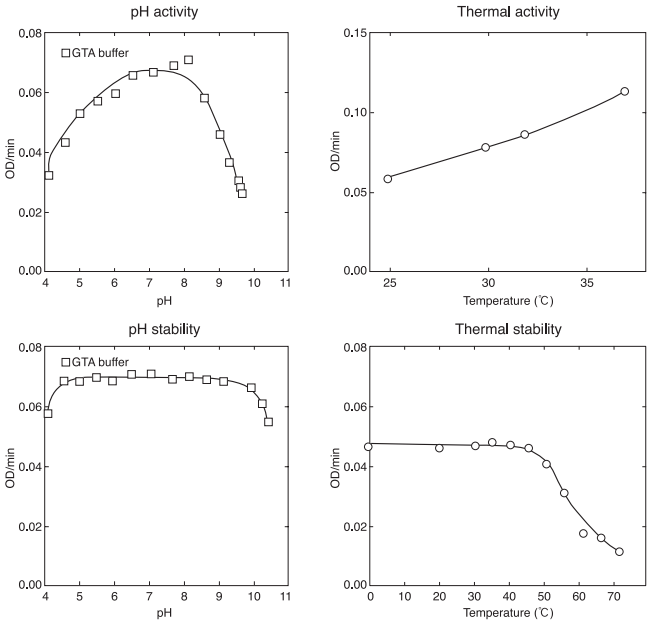
1.40 mL	Phenol solution (0.17 mol/L) containing 4-Aminoantipyrine (2.5 mmol/L)
1.50 mL	Potassium phosphate (0.2 mol/L, pH 7.0) containing Hydrogen peroxide (1.7 mmol/L)
0.10 mL	POD (about 0.5～1.0 IU/mL)

Ⅱ. Calculation

$$\frac{\Delta A/\min \cdot V \cdot D}{6.58 \cdot d \cdot v} = IU/mL$$

ΔA/min = The change in absorbance at 510 nm/minute
V = Total volume of reaction mixture (3.00 mL)
D = Enzyme dilution factor
6.58 = mM extinction coefficient of Quinoneimine dye ($L \cdot mmol^{-1} \cdot cm^{-1}$)
d = Light path length (1 cm)
v = Volume of enzyme sample (0.10 mL)

Reference Data



Preparation and storage

Product Code : POD-03
Lyophilized powder (contains no ammonium sulfate)
……below －20℃
IU per 1 mg powder is approximately 450 units.
＊RZ value is about 3.0. *RZ value = A_{403}/A_{275}

OYC No./Package

OYC No.	Package
46261003	10,000 units
46262003	50,000 units
46260903	Bulk

(Research reagent use only, not for medical use.)