ENZYMES
CAT# PERO-70-6925
EC# 1.11.1.7

ENZYMES

Peroxidase RZ 3.0

ORIGIN *Ex horseradish*

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SPECIFICATIONS

Activity	>270 PPG U/mg powder at 20°C
RZ	>3.0

APPLICATION

Useful for the enzymatic determination of hydrogen peroxide.

UNIT DEFINITION

One unit of activity is defined as the amount of enzyme that will catalyse the production of 1mg of purpurogallin from pyrogallol in 20 seconds at 20°C under standard assay method conditions.

ASSAY PRINCIPLE

Peroxidase (POD) catalyses the following reaction:

$$3H_2O_2 + 2\ \text{Pyrogallol} \xrightarrow{\text{POD}} \text{Purpurogallin} + 5H_2O_2 + CO_2$$

CHARACTERISTICS

Molecular Weight (SDS Page):	40kDa (gel filtration)
Isoelectric point:	7.2
Optimum pH (Fig. 1):	6.0 to 6.5
Optimum Temperature (Fig. 2):	40°C
pH Stability (Fig. 3):	5.0 to 10.0 (25°C for 24 hours)
Thermal Stability (Fig. 4):	Stable for 10 minutes at pH 7.0

All characteristics determined by the Guaiacol Assay Procedure at 20°C, pH 6.0.

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FIG. 1: OPTIMUM pH

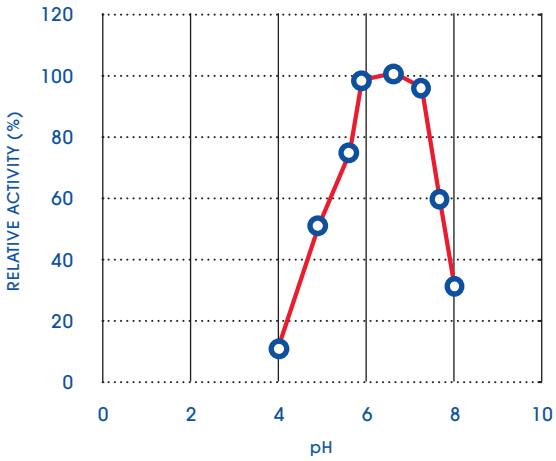


FIG. 2: OPTIMUM TEMPERATURE

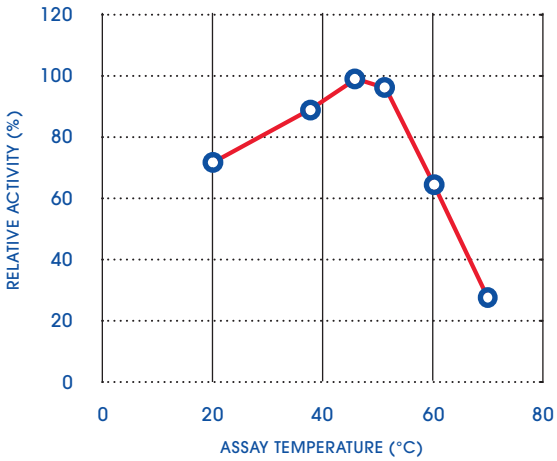
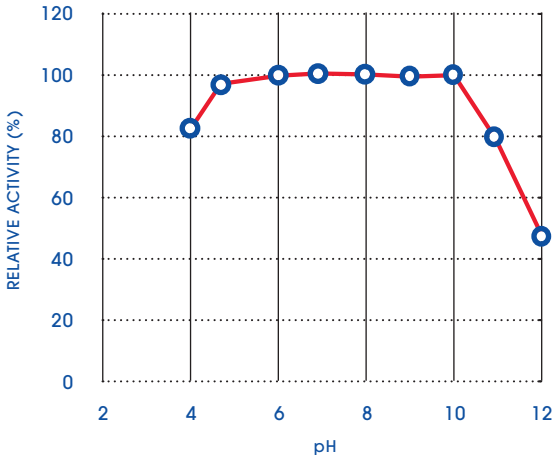
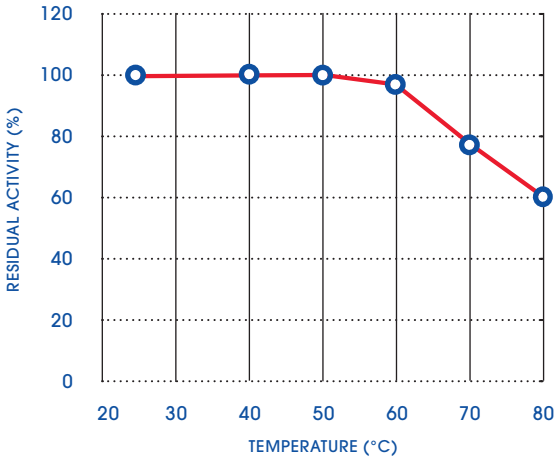


FIG. 3: pH STABILITY



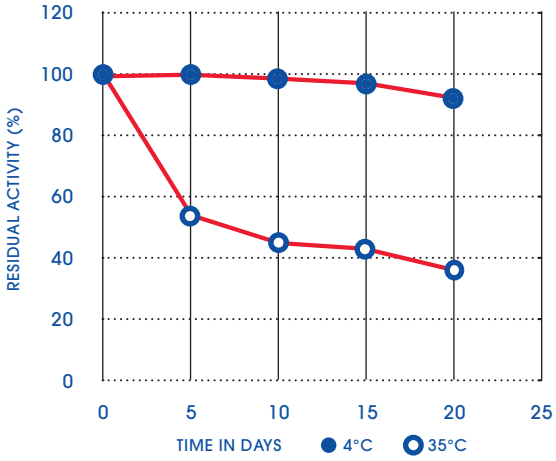
pH 3.0–5.0, Citrate buffer; pH 6.0–8.0, Phosphate buffer; pH 9.0–11.0, Glycine buffer
25°C, 24 hours

FIG. 4: THERMAL STABILITY OF POD



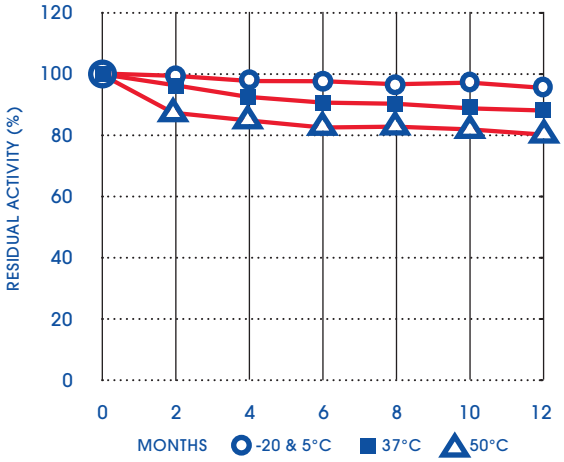
POD solution in 50mM phosphate buffer
pH 7.0, 10 mins incubation

FIG. 5: LIQUID STABILITY (4°C & 35°C)



POD Solution in 50mM phosphate buffer pH 7.0
0.1% sodium azide

FIG. 6: DRY POWDER STABILITY (-20 & 5°C, 37°C & 50°C)



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