

Cholesterol Esterase

Catalogue No. CHES-70-1041

ORIGIN

Pseudomonas sp.

SPECIFICATIONS

Appearance	Off-white to pale brown free flowing powder
Activity	>10 U/mg powder at 37°C
Specific Activity	>15 U/mg protein at 37°C
Contaminants	
o Glucose oxidase	<0.05%
o Uricase	<0.05%
Additive	BSA

CHARACTERISTICS

Molecular weight	30kDa (SDS-PAGE)
Isoelectric point	6.0
K _m value	3.0 x 10 ⁻⁵ M
Activator	Triton X-100
Inhibitors	Ag ⁺ , Hg ²⁺
Stabilisers	Mg ²⁺ , Ca ²⁺
Optimum pH (Fig. 1)	7.0
Optimum temp (Fig. 2)	37°C
pH stability (Fig. 3)	5.0 - 9.0 (37°C, 60 min.)
Thermal stability (Fig. 4)	Below 50°C (pH 7.0, 10 min.)
Substrate specificity	See Table 1
Lyophilised stability	1 year at 5°C or below

FIG.1 Optimum pH

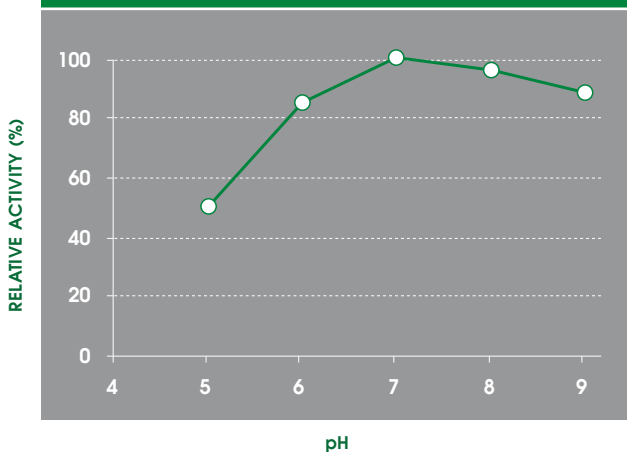


FIG.2 Optimum Temperature

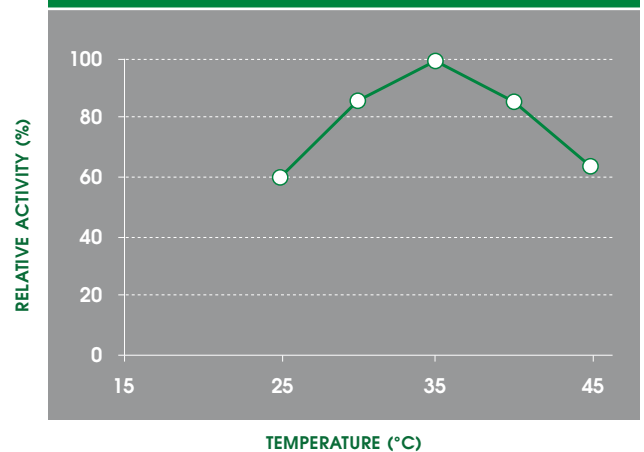


FIG. 3 pH Stability

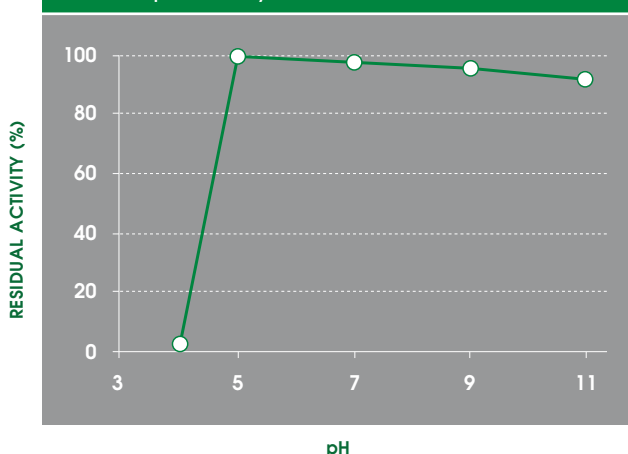


FIG. 4 Thermal Stability

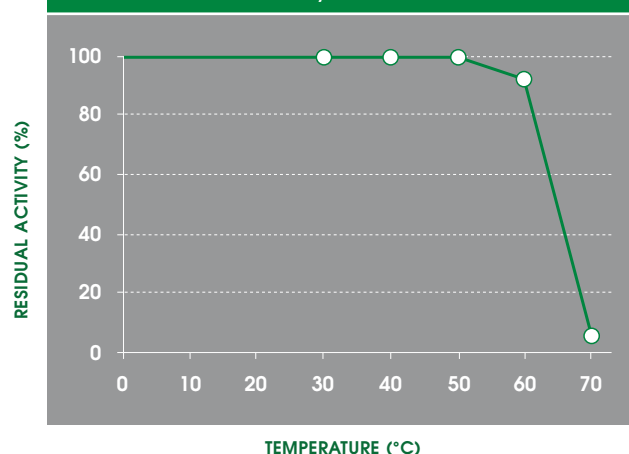


TABLE 1 The substrate specificity of Cholesterol Esterase

Cholesterol Ester	Relative Activity (%)	Cholesterol Ester	Relative Activity (%)
Acetate (2:0)	6%	Myristate (14:0)	84%
Butyrate (4:0)	9%	Palmitate (16:0)	94%
Caprylate (10:0)	28%	Oleate (18:0)	90%
Laurinate (12:0)	80%	Linoleate (18:2)	100%

ASSAY PRINCIPLE

Cholesterol Esterase catalyses the following reaction:



The appearance of quinoeimine dye formed by coupling with 4-aminoantipyrine and phenol is measured at 500nm spectrophotometrically.

UNIT DEFINITION

One unit of activity is defined as the amount of enzyme that will catalyse the production of 1.0 micromole of cholesterol per minute at 37°C under standard assay method conditions.

(See Analytical Method for full details)