

ENZYMES

Lactate Dehydrogenase

ORIGIN Microbial

CAT# LADE-70-1411
 EC# 1.2.3.3

► SPECIFICATIONS

Appearance	Freeze dried powder
Activity	> 100 U/mg powder at 25°C
Contaminants	NADH Oxidase <0.0001% Alpha-Ketoglutaric Dehydrogenase <0.0003% Glutamic-oxaloacetic Transaminase <0.0005% Glutamic-pyruvic Transaminase <0.0005%

► ASSAY PRINCIPLE

Lactate Dehydrogenase (LDH) catalyses the following reaction:



The disappearance of NADH can be measured spectrophotometrically at 340nm.

► UNIT DEFINITION

One unit of activity is defined as the amount of enzyme that will catalyse the oxidation of 1.0 micromole of NADH per minute at 25°C under standard assay method conditions.

► APPLICATION

Useful for enzymatic determination of lactic acid.

CHARACTERISTICS

Molecular Weight:	64kDa
Isoelectric Point:	4.3
K _m values:	NADH 7.6 x 10 ⁻⁴ M NADH Oxidase 6.7 x 10 ⁻⁴ M
Optimum pH (Fig. 1):	5.0
Optimum Temperature (Fig. 2):	40°C
pH Stability (Fig. 3):	5.5 to 8.5 (30°C for 60 minutes)
Thermal Stability (Fig. 4):	Below 35°C (pH 7.0 for 60 minutes)

FIGURE 1: OPTIMUM pH

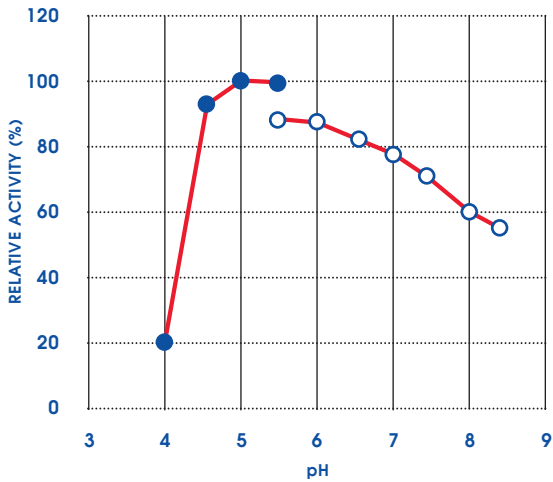


FIGURE 2: OPTIMUM TEMPERATURE

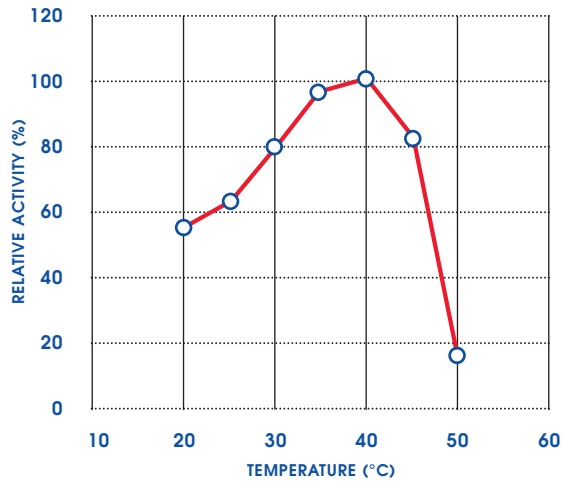


FIGURE 3: pH STABILITY (30°C FOR 1HR.)

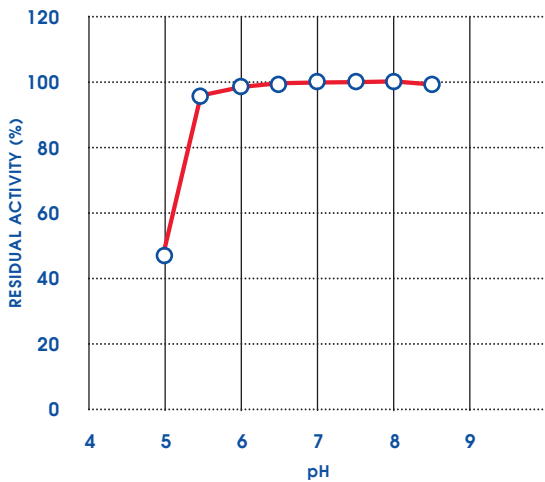
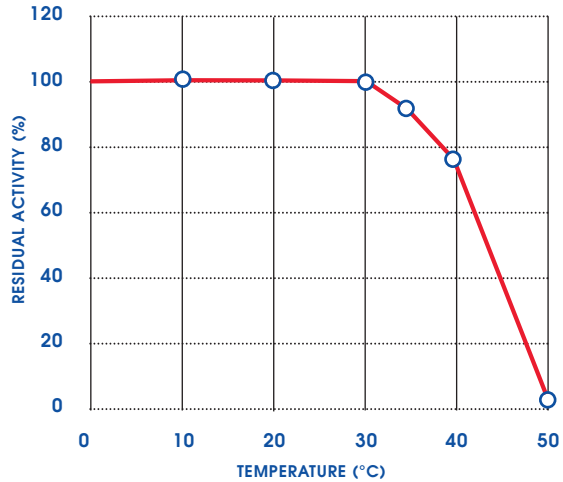


FIGURE 4: THERMAL STABILITY (pH 7.0 FOR 1HR.)



(1) Messerschmidt, A. et al. (1992) Refined crystal structure of ascorbate oxidase at 1.9 Å resolution. J.Mol.Biol., 224 (1), pp. 179-205.

THE AMERICAS

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