

rD-LDH

D-Lactate dehydrogenase, recombinant from bacteria

D-Lactate : NAD⁺ oxidoreductase (EC 1.1.1.28)

Host cell : E. coli

Reaction Equation



Specification

Specific Activity

IU/mg protein

Specifications

>800 units

Contaminants

Malate dehydrogenase

Myokinase

Pyruvate kinase

Alanine aminotransferase

Aspartate aminotransferase

α -Hydroxyglutamate dehydrogenase

<0.03%

<0.02%

<0.003 %

<0.001 %

<0.001%

<0.001%

Profile

pH stability : pH 5.0 - 10.0 (25°C, 1 week)

Thermal stability : $\leq 50^\circ\text{C}$ (pH 9.0, 15 min)

Optimum pH : 7.0

Optimum temperature : 45°C

K_m value : 261 $\mu\text{mol/L}$ (Pyruvate)

115 $\mu\text{mol/L}$ (NADH)

MW : 44 kD (SDS-PAGE)

Assay Procedure

I. Spectrophotometric Method

Wavelength ; 340 nm, Light path length ; 1 cm,

Temperature ; 25°C

Pipette the following reagents into a cuvette

3.00 ml K-phosphate buffer (100 mmol/L, pH 7.0)

0.10 ml Na-pyruvate (25.4 mmol/L)

0.05 ml NADH (10 mg/ml) dissolved in Tris
(10 mmol/L)

0.02 ml rD-LDH (about 3 IU/ml)

II. Calculation

$$\frac{\Delta A/\text{min} \cdot V \cdot D}{6.3 \cdot d \cdot v} = \text{IU/mL}$$

$\Delta A/\text{min}$ = The change in absorbance at 340 nm/minute

V = Total volume of reaction mixture (3.02 mL)

D = Enzyme dilution factor

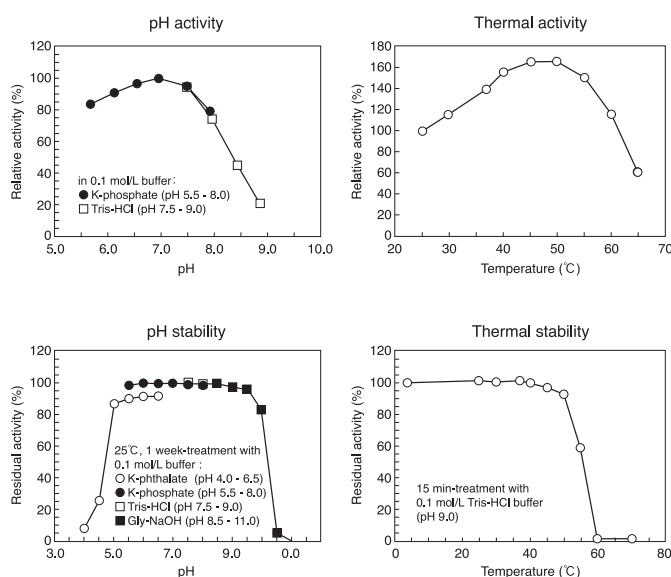
6.3 = mM extinction coefficient of NADH

(L · mmol⁻¹ · cm⁻¹)

d = Light path length (1 cm)

v = Volume of enzyme sample (0.02 mL)

Reference Data



Preparation and storage

Lyophilized powder (contains no ammonium sulfate)

.....below -20°C

IU per 1 mg powder is approximately 200 units.

OYC No./Package

OYC No.
46762903

Package
1,000 units

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



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