

# D-LACTATE DEHYDROGENASE

## (R)-Lactate:NAD<sup>+</sup> Oxidoreductase

### Reaction:



### Product Description

**Appearance :** White powder, lyophilized

**Source :** Microorganism

**Enzyme Comission Number :** EC 1.1.1.28

**CAS Number :** 9028-36-8

**Storage Temperature** -20

**Specific Activity :** 400U/mg protein

**Unit definition :** One unit will convert one micromole of pyruvate to D-lactate per min at pH 7.4 at 25 .

### Properties

**Molecular Weight :** 38 kDa (SDS-PAGE)

**Isoelectric point :** 5.8

**Michaelis constant:**  $5.4 \times 10^{-4}$ M  
(Pyruvate, pH 7.0)

**Optimum pH:** 7.0

**Optimum temperature:** 30

**pH Stability :** 5.0~8.0 (25 , 48hr)

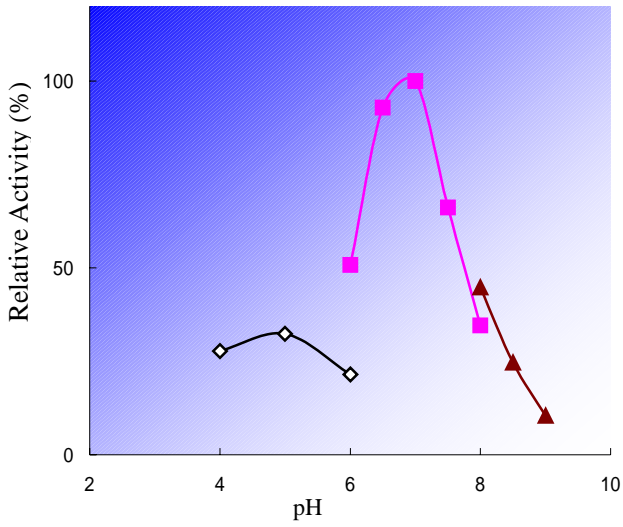
**Thermal Stability :** < 45 (pH7.0, 15min)

**Inhibitors :** Ag<sup>+</sup> , Hg<sup>2+</sup>

### Preparation Instructions

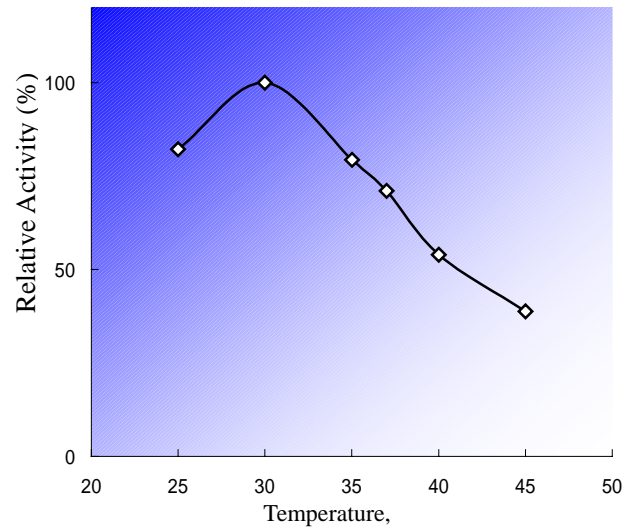
The enzyme is reconstituted in 100mM potassium phosphate buffer with 0.1% BSA, pH 7.4 for activity assay.

Fig. 1 pH Optimum



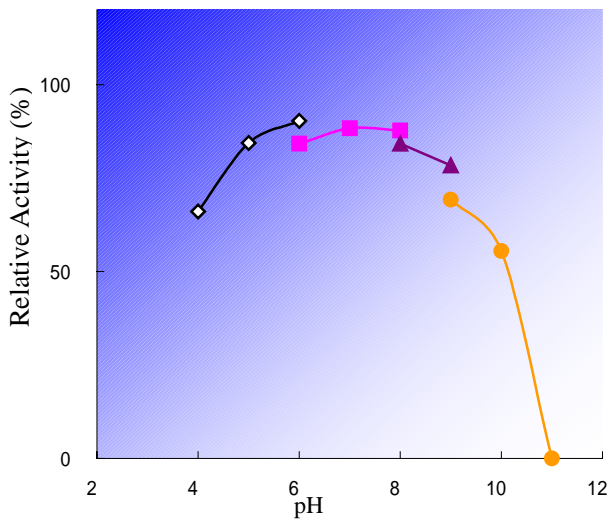
: 100mM acetate buffer  
 : 100mM phosphate buffer  
 : 100mM Tris-HCl buffer

Fig.3. Optimum temperature



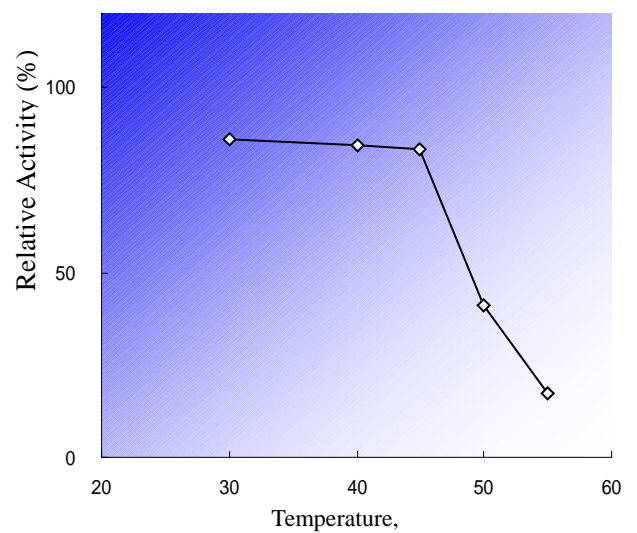
Buffer: 100mM K-phosphate buffer , pH 7.4

Fig. 2 pH Stability



Treatment : 25 ,48 hr  
 : 100mM acetate buffer  
 : 100mM phosphate buffer  
 : 100mM Tris-HCl buffer  
 : 100mM borate buffer

Fig.4. Thermal stability



Treatment: 100mM K-phosphate buffer, pH 7.0, 15min