

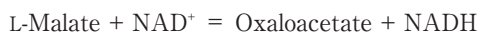
# MDH (P.H.)

## Malate dehydrogenase

L-Malate : NAD<sup>+</sup> oxidoreductase (EC 1.1.1.37)

### from Pig heart (mitochondrial)

#### Reaction Equation



#### Specification

##### Specific Activity

IU/mg protein

##### Contaminants

Fumarase (L-Malate)	<0.01%
L-Lactate dehydrogenase	<0.01%
Glutamic-oxaloacetic transaminase	<0.01%
Glutamate dehydrogenase (NAD <sup>+</sup> )	<0.002%
NADH oxidase	<0.001%

##### Specifications

>1,100 units

#### Assay Procedure

##### I. Spectrophotometric Method

Wavelength ; 340 nm, Light path length ; 1 cm,  
Temperature ; 25°C

Pipette the following reagents into a cuvette

2.80 mL Potassium phosphate buffer (0.1 mol/L, pH 7.5)

0.15 mL Oxaloacetate (10 mmol/L)

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

0.02 mL MDH (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)

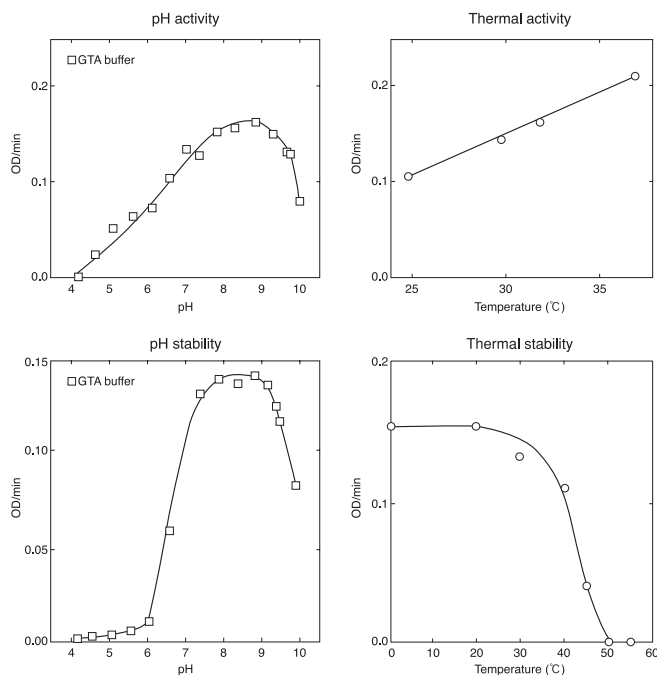
$D$  = Enzyme dilution factor

6.3 = mM extinction coefficient of NADH  
(L·mmol<sup>-1</sup>·cm<sup>-1</sup>)

$d$  = Light path length (1 cm)

$v$  = Volume of enzyme sample (0.02 mL)

#### Reference Data



#### Preparation and storage

Product Code : MDH-12

Ammonium sulfate suspension.....1°C~10°C

IU per 1 ml suspension is approximately 10,000 units.

#### OYC No./Package

OYC No.	Package
46615012	5,000 units
46616012	25,000 units
46617012	100,000 units
46414902	Bulk

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

