

G-6-PDH (L.M.)

Glucose-6-phosphate 1-dehydrogenase

D-Glucose-6-phosphate : NADP⁺ 1-oxidoreductase (EC 1.1.1.49)

from *Leuconostoc mesenteroides*

Reaction Equation



Specification

Specific Activity

IU/mg protein
(in case of using NAD⁺ as coenzyme)

Contaminants

Hexokinase
Phosphoglucose isomerase
Phosphogluconate dehydrogenase
Creatine kinase
Glutathione reductase
Phosphoglucomutase
Myokinase
Lactate dehydrogenase

Specifications

>400 units

<0.01%

<0.005%

<0.001%

<0.001%

<0.001%

<0.001%

<0.001%

<0.01%

Assay Procedure

I. Spectrophotometric Method

Wavelength ; 340 nm, Light path length ; 1 cm,
Temperature ; 30°C

Pipette the following reagents into a cuvette

2.80 mL Tris-HCl buffer (55 mmol/L, pH 7.8)
containing MgCl₂ (3.3 mmol/L)

0.10 mL NAD⁺ (60 mmol/L)

0.10 mL G-6-P (0.1 mol/L)

0.02 mL G-6-PDH (L.M.) (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 (3.12 mL)

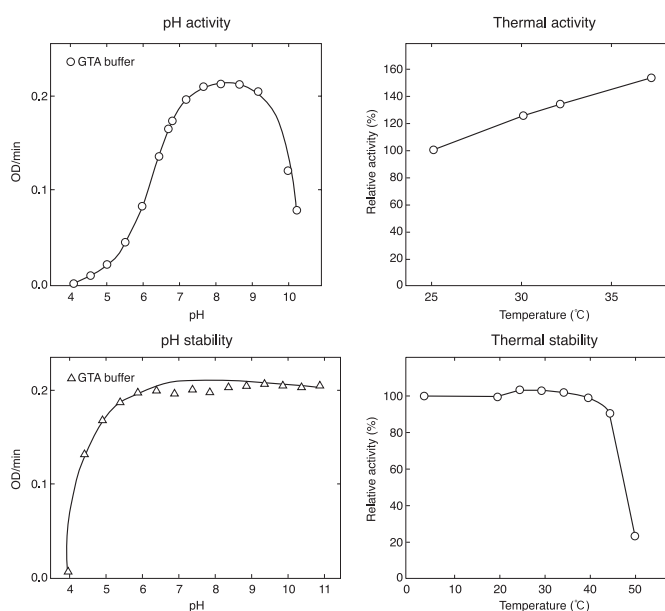
D = Enzyme dilution factor

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

Product Code : G-6-PDH-93

Lyophilized powder (contains no ammonium sulfate)

.....below -20°C

IU per 1 mg powder is approximately 600 units.

OYC No./Package

OYC No.	Package
46535083	200 units
46536083	1,000 units
46536903	Bulk

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

