

Glucose Dehydrogenase

ORIGIN: *RECOMBINANT ASPERGILLUS SOJAE*

CAT#: GLDE-70-1193

EC#: 1.1.5.9

SPECIFICATIONS

Appearance: Yellow lyophilizate

Activity: ≥ 475 U/mg lyophilizate

Contaminants: NAD Glucose Dehydrogenase $< 1.0 \times 10^{-2}\%$ | Hexokinase $< 1.0 \times 10^{-2}\%$ | α -Glucosidase $< 1.0 \times 10^{-2}\%$ | β -Glucosidase $< 1.0 \times 10^{-2}\%$

ASSAY PRINCIPLE



The disappearance of the blue color of DCIP by the reduction is measured spectrophotometrically at 600 nm.

APPLICATION

The enzyme is useful for the determination of D-glucose in clinical analysis and self-monitoring blood glucose meters.

UNIT DEFINITION

One unit (U) causes the reduction of one micromole of DCIP per minute under standard assay conditions.

CHARACTERISTICS

Molecular weight: ca. 90 kDa (SDS-PAGE)

Structure: monomer, one mole of FAD per mole of enzyme glycoprotein

Michaelis constant: 9.5×10^{-2} M (D-Glucose)

pH Optimum: 7.0–7.5 (Fig. 1)

pH Stability: 2.5–7.5 (Fig. 2)

Optimum temperature: 40–50°C (Fig. 3)

Thermal stability: below 50°C (Fig. 4)

Inhibitor: Ag⁺

Specificity: D-glucose (100), Maltose (<1),
D-xylose (<1), D-galactose (<1)

Glucose Dehydrogenase

Figure -1 pH Optimum

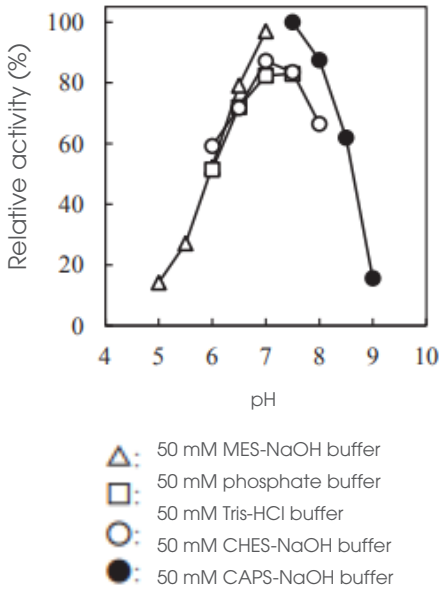


Figure -2 pH Stability

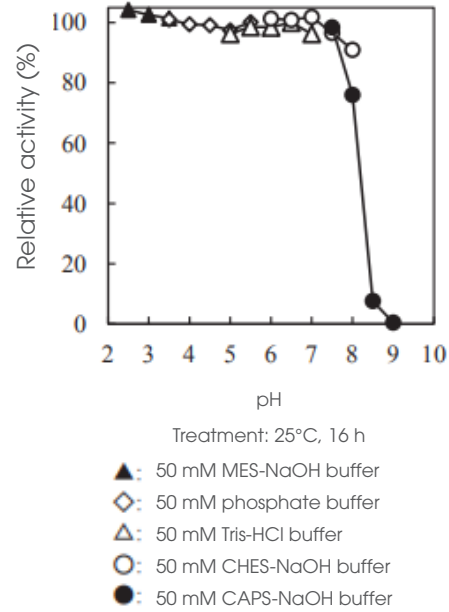


Figure -3 Optimum temperature

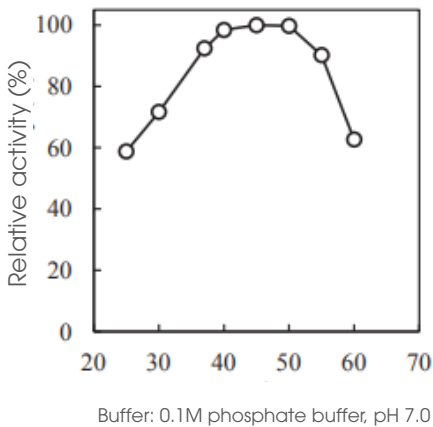
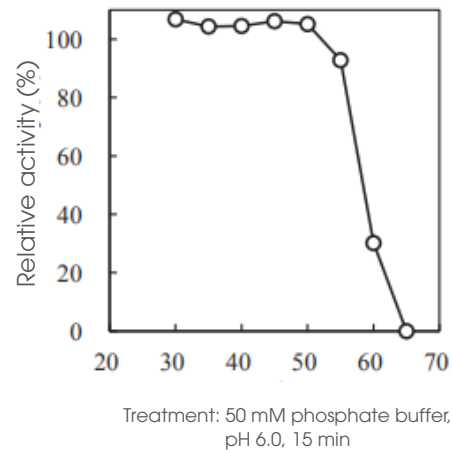


Figure -4 Thermal stability



THE AMERICAS

SEKISUI Diagnostics, LLC
 One Wall Street
 Burlington, MA 01803
 Phone: 800 332 1042
 Fax: 800 762 6311

info@sekisui-dx.com
 sekisuidiagnostics.com

INTERNATIONAL

SEKISUI Diagnostics (UK) Limited
 Liphook Way, Allington
 Maidstone, Kent, ME16 0LQ, UK
 Phone: +44 1622 607800
 Fax: +44 1622 607801



Because every result matters™