

Glucose Dehydrogenase

ORIGIN: *RECOMBINANT ASPERGILLUS SOJAE*

CAT#: GLDE-70-1195

EC#: 1.1.5.9

SPECIFICATIONS

Appearance: Yellow to brown lyophilizate

Activity: ≥ 700 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 PRINCIPAL



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 continuous glucose monitoring (CGM) meter. The Enzyme has Low xylose interference.

UNIT DEFINITION

One unit (U) causes the reduction of one micromole of DCIP per minute under the 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: 6.4×10^{-2} M (D-Glucose)

pH Optimum: 7.0–7.5

pH Stability: 2.5–9.5

Optimum temperature: 45°C

Thermal stability (liquid form): below 60°C

Thermal stability (powder form): Stable at 30°C for at least one month

Inhibitor: Mn^{2+} , Ag^{+}

Glucose Dehydrogenase

Figure -1 pH Optimum

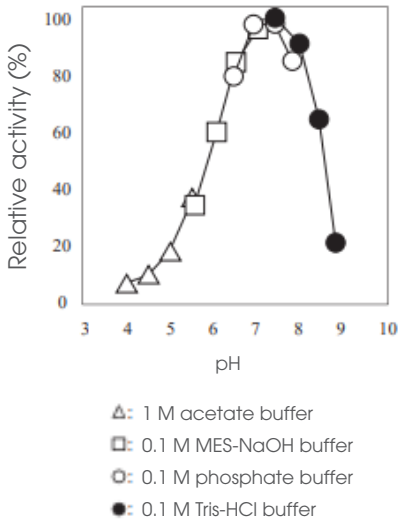


Figure -2 pH Stability

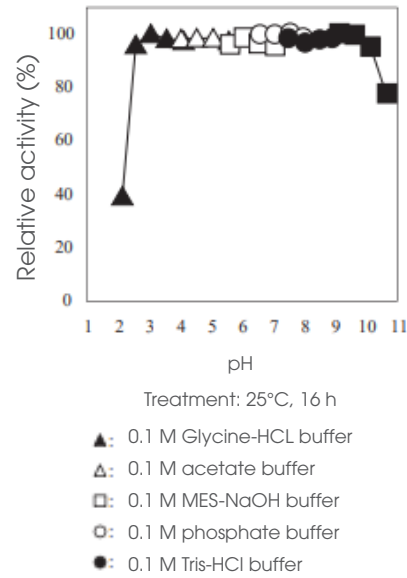


Figure -3 Optimum temperature

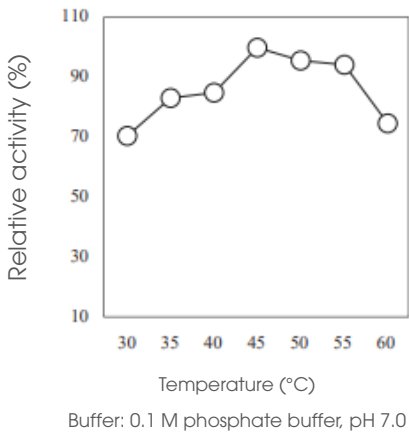
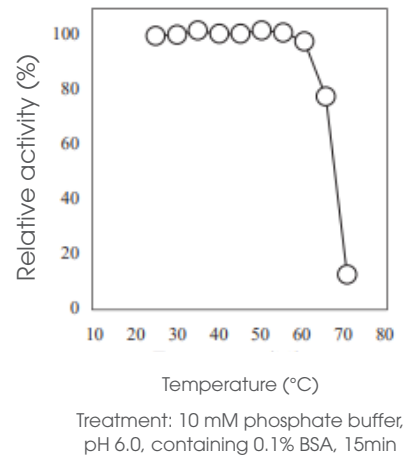


Figure -4 Thermal stability



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