

Fructosyl-peptide oxidase

ORIGIN: RECOMBINANT *E. COLI*

CAT#: FRU-70-134-01

EC#: 1.5.3

SPECIFICATIONS

Appearance: Yellow lyophilizate

Activity: ≥ 5.0 U/mg lyophilizate

Contaminant: Catalase $\leq 1.0\%$

ASSAY PRINCIPLE



The appearance of quinoneimine dye is measured spectrophotometrically at 555 nm.

APPLICATION

The enzyme is useful for the determination of fructosyl-peptide and fructosyl-L-amino acid.

UNIT DEFINITION

One unit (U) is defined as the amount of enzyme which produces 1 μmol of hydrogen peroxide per min at 37°C and pH 8.0 under the assay conditions.

CHARACTERISTICS

Molecular weight: ca. 60 kDa (gel filtration)

Structure: monomer of 52 kDa (SDS-PAGE)

Michaelis constant: 1.5×10^{-3} M (fructosyl-valyl-histidine)

5.0×10^{-3} M (fructosyl-glycine)

9.0×10^{-3} M (N^{ϵ} -fructosyl-lysine)

pH Optimum: 7.5–8.5

pH Stability: 5.5–9.5

Optimum temperature: 37–45°C

Thermal stability: below 45°C

Stabilizers: Sodium glutamate, EDTA

Specificity: fructosyl-valyl-histidine (100), fructosyl-glycine (150)

N^{ϵ} -fructosyl-lysine (68.6)

Fructosyl-peptide oxidase

Figure -1 pH Optimum

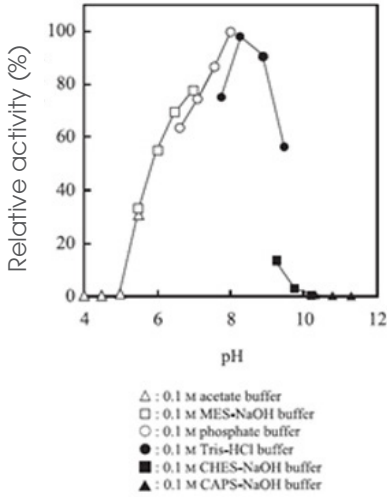


Figure -2 pH Stability

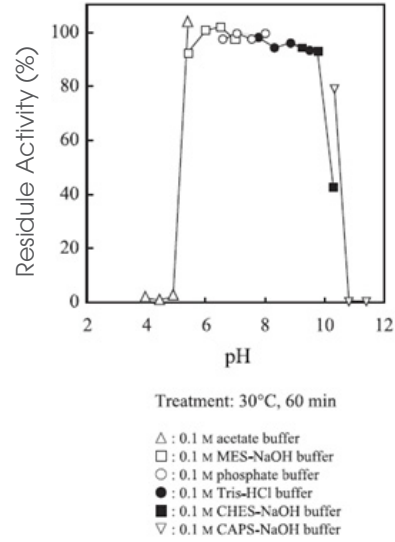


Figure -3 Optimum temperature

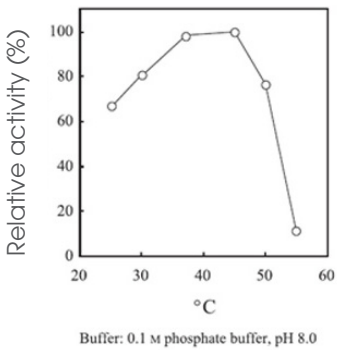
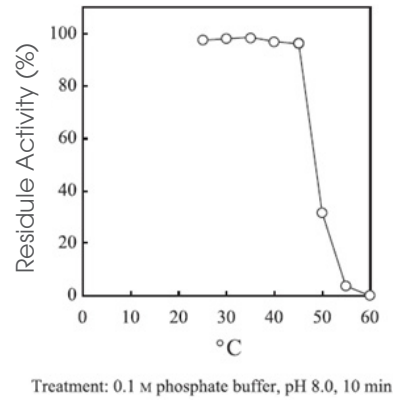


Figure -4 Thermal stability



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



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