

β -Glucosidase

β -D-Glucoside glucohydrolase (EC 3.2.1.21)

from Sweet almond

Reaction Equation

Hydrolysis of terminal, non-reducing β -D-glucose residues with release of β -D-glucose
 β -D-Glucoside + H₂O = Alcohol + β -D-Glucose

Specification

Specific Activity

IU/mg protein

Specifications
>30 units

Contaminants

α -Amylase

<0.01%

Assay Procedure

I. Spectrophotometric Method

Wavelength ; 400 nm, Light path length ; 1 cm,
Temperature ; 37°C

Pipette the following reagents into a cuvette

1.00 mL Acetate buffer (0.1 mol/L, pH 5.0)
0.50 mL ρ -Nitrophenyl- β -D-glucopyranoside
(6.03 mg/mL)

Reserve activation (37°C, 5 min)

0.50 mL β -Glucosidase (about 0.01~0.02 IU/mL)

Enzyme activation (exactly 15 min, 37°C) : A_{II}

Use dilution buffer instead (0.50 mL) of
 β -glucosidase as a blank and operate the same
instructions above : A_I

2.00 mL Na₂CO₃ (0.2 mol/L)

Enzyme activation terminated.

II. Calculation

$$\frac{\Delta A \cdot V \cdot D}{18.1 \cdot d \cdot t \cdot v} = \text{IU/mL}$$

ΔA = The change in absorbance at 400 nm
(A_{II} - A_I)

V = Total volume of reaction mixture (4.00 mL)

D = Enzyme dilution factor

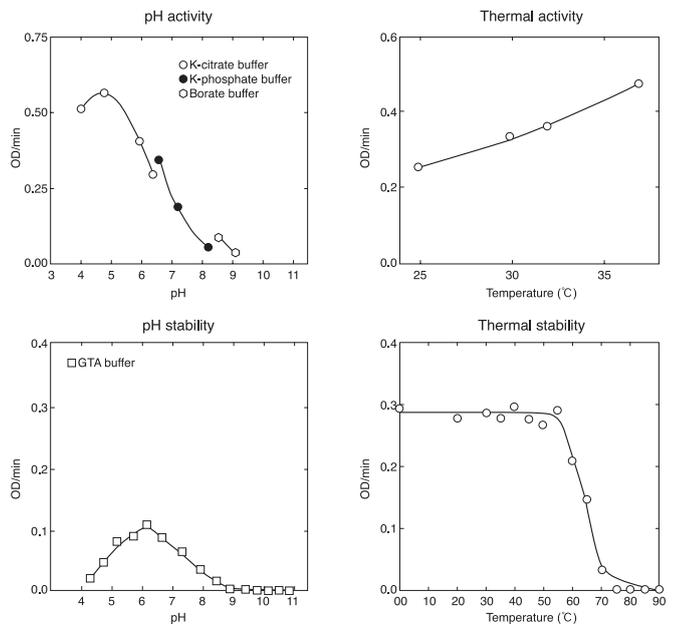
18.1 = mM extinction coefficient of ρ -Nitrophenol
(L·mmol⁻¹·cm⁻¹)

d = Light path length (1 cm)

v = Volume of enzyme sample (0.50 mL)

t = Enzyme activation time (15 min)

Reference Data



Preparation and storage

Product Code : β -GluD-93

Lyophilized powder (contains no ammonium sulfate)

.....below -20°C

IU per 1 mg powder is approximately 40 units.

OYC No./Package

OYC No.	Package
46361003	2,000 units
46362003	10,000 units
46363003	50,000 units
46360903	Bulk

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

