UREASE

Urea amidohydrolase

Reaction:

$$(NH_2)_2CO + H_2O \xrightarrow{\text{Urease}} 2NH_3 + CO_2$$

Product Description

Appearance： White powder, lyophilized

Source： Jack Bean

Enzyme Comission Number：EC 3.5.1.5

CAS Number： 9002-13-5

Storage Temperature -20℃

Specific Activity：≥ 200U/mg protein

Unit definition：One unit will hydrolyze one micromole of urea per min at pH 8.0 at 37℃.

Preparation Instructions

The enzyme is reconstituted in 50mM Tris-HCl buffer, pH 8.0 for activity assay.

Properties

Molecular Weight：480 kDa (Gel filtration)

Isoelectic point： 5.1

Michaelis constant: 3.7×10^{-3}M (Urea)

Optimum pH: 7.5

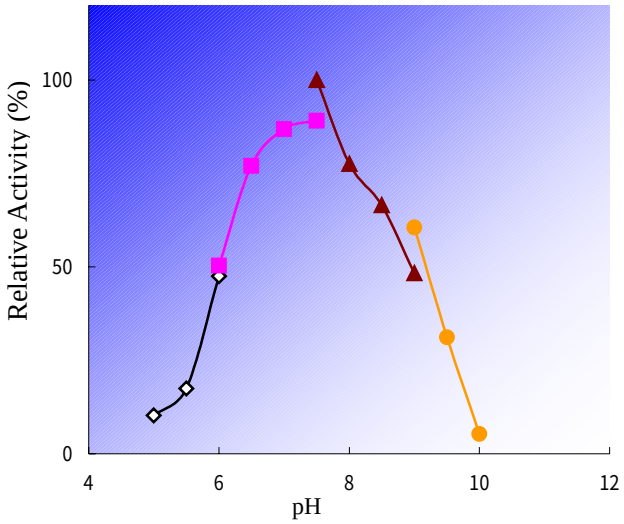
Optimum temperature: 55℃

pH Stability： 5.0~10.0 (30℃, 17hr)

Thermal Stability： < 55℃ (pH8.0, 1hr)

Inhibitors： Ag^{+}， Hg^{2+}

Fig. 1　pH Optimum



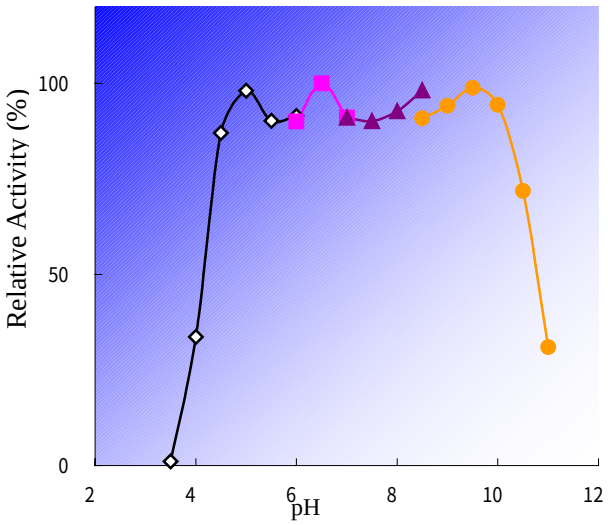
◇: 50mM acetate buffer

■: 50mM phosphate buffer

▲: 50mM Tris-HCl buffer

●: 50mM glycine-NaOH buffer

Fig. 2　pH Stability



Treatment : 30℃, 17 hr

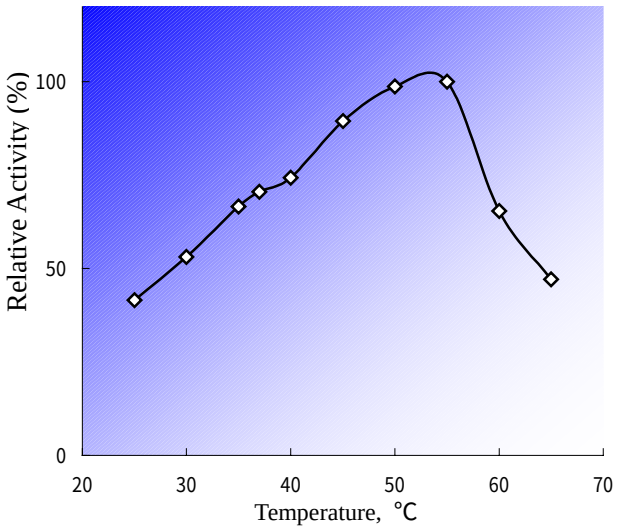
◇: 50mM acetate buffer

■: 50mM phosphate buffer

▲: 50mM Tris-HCl buffer

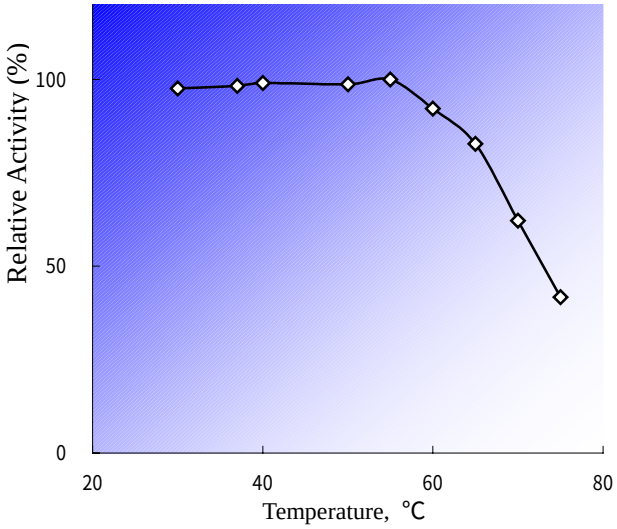
●: 50mM glycine-NaOH buffer

Fig.3. Optimum temperature



Buffer: 50mM Tris-HCl buffer , pH 8.0

Fig.4. Thermal stability



Treatment: 50mM Tris-HCl buffer, pH 8.0, 1hr