



## BROMELAIN from pineapple stems (*Ananas comosus*) (Lot 200501)

**Non-recombinant**

**E-BROM**

EC: 3.4.22.32

CAS: 37189-34-7

06/20

### PROPERTIES

#### 1. PURITY:

- Highly purified by chromatography.
- Single major band on SDS-PAGE (MW = 24,000 Da); minor bands at MW ~ 22,000 and 17,000.
- Single major band on isoelectric focusing (pI 9.5).

#### 2. SPECIFIC ACTIVITY:

8 tyrosine-equivalent Units/mg on casein.

This compares to a value of ~ 1.6 tyrosine-equivalent U/mg on *N, N*-dimethylcasein for Sigma bromelain Cat. no. B5144-100UN; reported as 5-15 U/mg protein on *p*Glu-Phe-*p*-nitroanilide (Product No. P3169).

**One Unit** of activity is the amount of enzyme that will produce one  $\mu$ mole (181  $\mu$ g) of tyrosine equivalents from casein per minute at pH 7.0 and 40°C (colour determined by increase in absorbance of the supernatant solution at 280 nm). Routine assays were performed with Azo-Casein (Megazyme cat. no. **S-AZCAS**) in sodium phosphate buffer (100 mM, pH 7).

#### 3. SPECIFICITY:

Devoid of  $\alpha$ -amylase,  $\beta$ -glucanase (cellulase), *endo*-1,4- $\beta$ -xylanase and polygalacturonanase (determined by incubating high levels of the enzyme with pure polysaccharides in highly sensitive viscometric assays).

#### 4. PHYSICOCHEMICAL PROPERTIES:

pH Optima:	6.0-7.0
pH Stability:	5.0-8.0
Temperature Optima:	60°C
Temperature Stability:	< 55°C

#### 5. STORAGE CONDITIONS:

The enzyme is supplied as an ammonium sulphate solution stabilised with 0.02% w/v sodium azide and should be stored at 4°C.

The concentration of enzyme as supplied is ~ 7 mg/mL (i.e. 55 U/mL) at 40°C.

This enzyme is recommended for use in all applications requiring pure bromelain.