

Product Information

Xylanase from *Trichoderma viride*

Catalog Number **X3876**

Storage Temperature 2–8 °C

E.C. 3.2.1.8

CAS RN: 9025-57-4

Synonyms: endo-1,4- β -Xylanase,
1,4- β -D-Xylanxylanohydrolase

Product Description

β (1→4) Xylans are heterogeneous polysaccharides found in the cell walls of land plants. The hydrolysis of their characteristic backbones involves

β (1→4) xylanases (E.C. 3.2.1.8) and β -xylosidases (E.C. 3.2.1.37). Xylanases cleave internal xylosidic linkages in the backbone and β -xylosidases release xylosyl residues by hydrolysis at the polysaccharide terminus.¹

Isolated β (1→4) xylans are generally polydispersed and highly branched heteropolymers. Homoxylans, which consist solely of xylosyl residues, have only been isolated from esparto grass and tobacco.² The acetylated xylan of hardwoods and the arabinoxylan of softwoods are the two major forms of β (1→4) xylans. These have a single 4-O-methyl- α -D-glucuronic acid substituent on 10-15% of the xylosyl residues. 70% of the xylosyl residues in hardwoods are acetylated and the softwood xylan has 12% arabinosyl content. The xylans in grasses are generally arabinoxylans with some having branches of galactosyl, glucuronyl, and xylosyl residues.³

The product is a lyophilized powder containing ~50% protein (Biuret) with the balance being sorbitol and sodium acetate buffer salts.

Activity: 100-300 units/mg protein

Contaminant activities:

- Cellulase: <1%
- β -Glucosidase: $\leq 0.1\%$
- β -Xylosidase: $\leq 0.1\%$

Unit definition: One unit will liberate 1 μ mole of 4-nitrophenol from 4-nitrophenol-xylan per minute at pH 4.5 at 30 °C.

Precautions and Disclaimer

For R&D use only. Not for drug, household, or other uses. Please consult the Safety Data Sheet for information regarding hazards and safe handling practices.

Preparation Instructions

The product may be reconstituted at a concentration of 5–10 units/mL with 0.05% (w/v) bovine serum albumin solution.

Storage/Stability

It is recommended to store the product at 2–8 °C.

References

1. Wong, K.K. *et al.*, *Microbiol. Rev.*, **52**(3), 305-317 (1988).
2. Chanda, S.K. *et al.*, *J. Chem. Soc.*, 1289-1297 (1950).
3. Aspinall, G.O., "Chemistry of cell wall polysaccharides", in *The Biochemistry of Plants* (Preiss, J., ed.), Vol. 3. Academic Press (New York, NY: 1980), pp. 473-500 (1980).
4. Leathers, T.D. *et al.*, *Biotech. Bioengin. Sym.*, **14**, 225-240 (1984).
5. Leathers, T.D., *Appl. & Environ. Microbiol.*, **52**(5), 1026-1030 (1986).

SS,DS,RG,PHC,GCY,MAM 08/19-1