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ProductInformation

Xylanase
from *Aureobasidium pullulans*

Product Number **X 4001**
Storage Temperature 2–8 °C

EC 3.2.1.8
CAS# 37278-89-0

Synonym: 1,4-β-D-Xylan xylanohydrolase

Product Description
β(1→4) xylans are heterogeneous polysaccharides found in the cell walls of all land plants. The hydrolysis of their characteristic backbones involves β(1→4) xylanases (EC 3.2.1.8) and β-xylosidases (EC 3.2.1.37). Xylanases attack internal xylosidic linkages along the backbone and β-xylosidases release xylosyl residues by endwise attack.[1]

Isolated β(1→4) xylans are generally polydisperse and highly branched heteropolymers. Homoxylans, which consist of purely xylosyl residues, have been isolated from esparto grass and tobacco only.[2] The acetylated xylan of hardwoods and the arabinoxylan of softwoods are the two major forms. 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; whereas, there are 12% arabinosyl substituents in softwoods. The xylans in grasses generally are arabinoxylans with some having branches of galactosyl, glucuronyl, and xylosyl residues.[3]

The product is supplied as a lyophilized powder containing 20-40% protein (Biuret) in sorbitol and sodium acetate buffer salts.

Specific activity: 100-300 units/ mg protein
Contaminant activity:
- Cellulase (less than 0.5%)
- β-Glucosidase (less than 0.05%)
- β–Xylosidase (less than 0.01%)

Unit definition: One unit will liberate 1 μmole of reducing sugar measured as xylose equivalents from xylan (Product Code X 0627) per minute at pH 4.5 at 30 °C.

Precautions and Disclaimer
This product is for laboratory research use only. Please consult the Material Safety Data Sheet for information regarding hazards and safe handling practices.

Preparation Instructions
The product is soluble in water (1 mg/ml).

Storage/Stability
It is recommended to store the product desiccated at 2-8 °C. The product as supplied is stable for 3 years when stored properly.

References
1. Wong, K.K.Y., et al., Microbiol. Rev., **52**, 305-317 (1988).
2. Chanda, et al, J. Chem. Soc., 1289-1297, (1950).
3. Aspinall, G.O., in The Biochemistry of Plants (Chemistry of cell wall polysaccharides), Preiss, J., ed., Academic Press (New York, NY: 1980), vol. 3, pp. 473-500.
4. Leathers, T.D., et al., Biotechnol. Bioeng. Symp. **14**, 225 (1984).
5. Leathers, T.D., Appl. & Enviro. Microbiol., **52**, 1026 (1986).

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