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ProductInformation

Amyloglucosidase
for Total Dietary Fiber Assay

Product Number **A 9913**
Storage Temperature 2-8 °C

EC# 3.2.1.3
Synonyms: 1,4-α-D-glucan glucohydrolase; glucoamylase; exo-1,4-α-D-glucosidase.

Product Description

Amyloglucosidase is an exo-1,4-α-D-glucosidase obtained from *Aspergillus niger*. This enzyme hydrolyzes α1,4 in addition to α1,6 and α1,3 glycosidic linkages from the non-reducing ends of amylose and amylopectin to produce β-D-glucose.

The rate of hydrolysis depends on the type of linkage and on the chain length of the substrate. α1,4 linkages are more easily hydrolyzed than α1,6 or α1,3 linkages. Maltotriose and, in particular, maltose are hydrolyzed at slower rates than higher oligosaccharides.

This product is free of transglucosidase activity, which would produce panose and isomaltose by transfer of glycosyl residues from a 1,4α position to a 1,6-α position.

The enzyme has the following properties:
pI = 3.4
pH optimum = 3.6 to 4.2
temperature optimum = 60 °C

This product has been application tested in the Total Dietary Fiber Assay (Product Code TDF-100A) and has been shown to be free of the following contaminating activities: pectinase, β-glucanase, and hemicellulase. Under the conditions of the Total Dietary Fiber Assay, 0.1 ml of the amyloglucosidase solution will digest 1 gram of corn or wheat starch to glucose.

Amyloglucosidase is supplied as a brown liquid containing corn syrup, potassium sorbate, and sodium benzoate. The density of the liquid product is approximately 1.2 g/ml.

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.

Storage/Stability

It is recommended to store the product at 2-8 °C. The product is stable for at least 2 years under these conditions. The enzyme may be inactivated by heating at 80 °C for 5 minutes or at 75 °C for 40 minutes.

References

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3. Vandersall, A. S., et al., Prep. Biochem., **25**, 29-55 (1995).
4. Official Methods of Analysis of AOAC International, 16th Edition, Volume II, Section 45.4.07, Method 985.29 (1997).
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