AMYLOGLUCOSIDASE (*A. niger*) GLYCEROL FREE (Lot 151201a)

E-AMGDFNG **01/16**

(EC 3.2.1.3) 4-alpha-D-glucan glucohydrolase
CAZy: GH Family15
CAS: 9032-08-0

PROPERTIES

1. ELECTROPHORETIC PURITY:

- Single band on isoelectric focusing (pI ~ 4.0)
- Single major band on SDS-gel electrophoresis (MW ~ 143,500)
- ~ 6520 U/mL (40°C, pH 4.5 on soluble starch)

Note: This activity is twice that of purified AMG preparations used in TDF assays (e.g. **E-AMGDF-100ML**), so the volume of enzyme used per assay can be halved.

One Unit of amyloglucosidase activity is defined as the amount of enzyme required to release one µmole of glucose reducing-sugar equivalents per minute from soluble starch (10 mg/mL) at pH 4.5 and 40°C.

2. SPECIFICITY:

Hydrolysis of terminal (1,4)-linked α-D-glucose residues successively from non-reducing ends of the chains with release of β-D-glucose.

3. SPECIFIC ACTIVITY AND LEVELS OF OTHER ACTIVITIES:

Substrate	Activity (U/mL)
Starch (amyloglucosidase)	~ 6520
p-Nitrophenyl-β-maltoside	~ 400
Maltose	~ 710
Ceralpha Reagent (α-amylase)	~ 210
Barley β-Glucan (cellulase)	< 0.10
Wheat Arabinoxylan (β-xylanase)	< 0.016

4. PHYSICOCHEMICAL PROPERTIES:

pH Optima:	4.0
pH Stability:	4.0-5.5
Temperature Optima:	70°C
Temperature Stability:	< 60°C

5. STORAGE CONDITIONS:

The enzyme is supplied in buffered solution plus 0.02% (w/v) sodium azide and should be stored at 4°C.

This enzyme is recommended for use in **Total Dietary Fibre** analytical procedures and the **Megazyme Total Starch test** method.

The preparation is free of glycerol so can be used in TDF procedures where glycerol is used as an internal standard (e.g. AOAC Method 2001.03/AACC Method 32-41.01; the Matsutani Method).

The preparation is effectively devoid of cellulase and is free of catalase.