**α-AMYLASE (Bacillus licheniformis) (Lot 151201a)**

**E-BLAAM-40ML**
(EC 3.2.1.1 ) 4-alpha-D-glucan glucanohydrolase
CAZy Family: GH13

**PROPERTIES**

1. **ELECTROPHORETIC PURITY:**
   - Single major band on isoelectric focusing (pI = 7.4)
   - Single major band on SDS-gel electrophoresis (MW = 58,000)

2. **SPECIFIC ACTIVITY AND LEVEL OF OTHER ACTIVITIES:**

<table>
<thead>
<tr>
<th>Substrate</th>
<th>Specific Activity (U/mg Protein)</th>
</tr>
</thead>
<tbody>
<tr>
<td>α-Amylase (Ceralpha Reagent at pH 6.5)</td>
<td>54.0</td>
</tr>
<tr>
<td>Amyloglucosidase (p-Nitrophenyl β-maltoside)</td>
<td>undetectable</td>
</tr>
<tr>
<td>Cellulase (CM-Cellulose 4M)</td>
<td>undetectable</td>
</tr>
<tr>
<td>β-Mannanase (carob galactomannan)</td>
<td>undetectable</td>
</tr>
</tbody>
</table>

**One Unit** of α-amylase is the amount of enzyme required to release one μmole of p-nitrophenol from blocked p-nitrophenyl-maltoheptaoside per minute (in the presence of excess α-glucosidase) at pH 6.5 and 40°C.

3. **PHYSICOCHEMICAL PROPERTIES:**
   - pH Optima: 6.0-6.5
   - pH Stability: 4.5-8.0
   - Temperature Optima: 75°C
   - Temperature Stability: < 80°C

4. **STORAGE CONDITIONS:**
   The enzyme is supplied as a stabilised solution and should be stored at 4°C.

   The enzyme is supplied at a concentration of 3000 U/mL on Ceralpha Reagent at pH 6.5 and 40°C (i.e. approximately 10,000 U/mL on soluble starch under the same assay conditions).

   This enzyme is recommended for use in **Total Dietary Fibre** analytical procedures and the Megazyme **Total Starch** test method, suitable for use at pH 6.5 and above. The preparation is effectively devoid of cellulase and is free of catalase.