α-AMYLASE (Bacillus licheniformis) (Lot 180635B)

E-BLAAM-40ML (EC 3.2.1.1) 4-alpha-D-glucan glucohydrolase
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:

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>pH Optima:</td>
<td>6.0-6.5</td>
</tr>
<tr>
<td>pH Stability:</td>
<td>4.5-8.0</td>
</tr>
<tr>
<td>Temperature Optima:</td>
<td>75°C</td>
</tr>
<tr>
<td>Temperature Stability:</td>
<td>&lt; 80°C</td>
</tr>
</tbody>
</table>

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 Fiber 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.