**α-AMYLASE (Bacillus amyloliquefaciens) (Lot 120201b)**

**Non-recombinant**

**E-BAASS**

(EC 3.2.1.1)

CAZy Family: GH13

**PROPERTIES**

1. **ELECTROPHORETIC PURITY:**
   - Several bands on isoelectric focusing (pI = 4.8-5.2)
   - Single major band on SDS-gel electrophoresis (MW = 54,700). Few minor bands.

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 6.0)</td>
<td>54.0</td>
</tr>
<tr>
<td>α-Glucosidase (p-nitrophenyl α-glucoside)</td>
<td>0.006</td>
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<tr>
<td>myloglucosidase (p-Nitrophenyl β-maltoside)</td>
<td>0.005</td>
</tr>
<tr>
<td>endo -1,4-β-Glucanase (CM-Cellulose 4M)</td>
<td>0.092</td>
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</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) (i.e. Ceralpha Reagent) at pH 6.5 and 40°C.

3. **PHYSICOCHEMICAL PROPERTIES:**
   - **pH Optima:** 6.5
   - **pH Stability:** 5.5-7.5
   - **Temperature Optima:** 65°C
   - **Temperature Stability:** < 70°C

4. **STORAGE CONDITIONS:**
   The enzyme is supplied in vials of 20 mL as a stabilised solution and should be stored below -10°C. It is supplied at a concentration of 145 U/mL on Ceralpha Reagent at pH 6.5 and 40°C (i.e. 430 U/mL on soluble starch under the same assay conditions).

   *This enzyme has been used for structural studies of the branching pattern of amylopectins, especially for isolation of clusters and building blocks.*


Figure 1. SDS Gel electrophoresis of E-BAASS (lot 120201b)

Figure 2. Isoelectric focussing of E-BAASS (lot 120201b)