Enzymation
Panzym® Univers

Multi-Purpose Enzyme for Mash Enzymation and Juice Depectinization of Pomaceous, Stone, and Soft Fruit

Panzym Univers enzyme is a multi-purpose pectinase for mash enzymation and juice depectinization of pomaceous, stone, and soft fruit. The product is particularly highly concentrated, enabling fast and economic juice extraction from fruit mash. Panzym Univers enzyme leads to complete pectin removal within a minimum amount of time and results in a brilliant alcohol test.

Panzym Univers enzyme is produced from conventional strains of *Aspergillus niger* and *Aspergillus aculeatus*. It is a clear, brown liquid with the typical odor of fermented products.

Application and Function

**Mash enzymation**
Panzym Univers enzyme leads to a breakdown of soluble pectin, reduces the juice viscosity, and increases the yield of juice and value-adding fruit ingredients. Panzym Univers enzyme is best added into the mill by a metering pump.

**Juice depectinization**
Due to its wide action spectrum, Panzym Univers enzyme leads to almost complete breakdown of pectins. This facilitates clarification and enables uncomplicated filtration with high filter service life. The juices are characterized by high stability. The product is added into the juice line or into the tank with the first juice content.

Application preferably as approx. 10% solution with cold tap water.

<table>
<thead>
<tr>
<th>Application</th>
<th>Dosage</th>
<th>Maceration time/temperature</th>
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</thead>
<tbody>
<tr>
<td><strong>Mash</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Apples/pears</td>
<td>9 – 13 (7 – 10)</td>
<td>0.5 – 1 h at 68 – 86 °F (20 – 30 °C)</td>
</tr>
<tr>
<td>Soft fruit</td>
<td>6 – 20 (5 – 16)</td>
<td>1 – 2 h at 113 – 131 °F (45 – 55 °C)</td>
</tr>
<tr>
<td>Stone fruit</td>
<td>6 – 19 (5 – 15)</td>
<td>1 – 2 h at 113 – 131 °F (45 – 55 °C)</td>
</tr>
<tr>
<td><strong>Juice</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Apples/pears</td>
<td>1 – 4 (1 – 3)</td>
<td>4 – 8 h at 68 – 86 °F (20 – 30 °C)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>1 – 2 h at 113 – 131 °F (45 – 55 °C)</td>
</tr>
<tr>
<td>Soft fruit</td>
<td>2.5 – 6 (2 – 5)</td>
<td>4 – 8 h at 68 – 86 °F (20 – 30 °C)</td>
</tr>
<tr>
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<td></td>
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The enzyme efficacy is temperature-dependent. Optimum activity is achieved at 113 – 131 °F (45 – 55 °C).

The reaction speed decreases with decreasing temperature. While activity is maintained in principle, the effect is severely delayed. At temperatures below 68 °F (20 °C), a higher dosage should therefore be used.

Panzym Univers enzyme is inactivated through temperatures exceeding 140 °F (60 °C) and contact with bentonite.
Safety and Purity

Panzym Univers enzyme complies with the FAO/WHO (JECFA and FCC) specifications for enzymes in the food industry.

Panzym Univers enzyme is filled aseptically following sterile filtration and is therefore virtually germ-free.

Panzym Univers enzyme is a brownish, liquid enzyme preparation that has the typical odor of fermented products.

Panzym Univers enzyme is characterized as follows:
- Production organism:
  - Aspergillus niger
  - Aspergillus aculeatus
- Specified activity: 9500 PECTU/g (Pectin lyase)

When used as directed and handled correctly, there are no known unfavorable effects associated with this product.

Further information on safety can be found in the Material Safety Data Sheet, which is available for download from our website.

Storage

The product should be stored with the packaging intact away from sunlight at a temperature of 32 to 50 °F (0 to 10°C).

Unfavorable storage conditions (exposure to direct sunlight, higher storage temperatures) may require a higher dosage.

Once opened, the product should be used up as soon as possible.

Delivery Information

Panzym Univers enzyme has the article number 95.258 and is supplied in the following packaging unit:
- 2.2 lb (1 kg) PE bottle
- 12 x 2.2 lb (1 kg) PE-bottle in carton

Certified Quality

Panzym Univers enzyme is inspected regularly during the production process to ensure consistently high product quality.

Strict controls also take place immediately before and during final packaging.

For more information, please email us at filtration@eaton.com or visit www.eaton.com/filtration