

Enzyme Treatment Panzym® Smash XXL

Pure Pectinlyase, Particularly for Mash Enzymation of Pomaceous Fruit

Panzym Smash XXL enzyme is a pectolytic, liquid enzyme preparation, produced by submerged fermentation of an *Aspergillus* species. A new pectinase product, produced for mash pome fruit. The product is a pure pectin lyase.

Applied to fruit mashes, Panzym Smash XXL enzyme offers exceptional mash performance. It not only significantly increases juice yield and press capacity, the resulting juice also satisfies all relevant quality standards.

Application and Function

Panzym Smash XXL enzyme was specially designed for the treatment of fruit and vegetable mashes, and for the maceration of plant tissue. Soluble and insoluble pectin, as well as haze-inducing polysaccharides, are removed efficiently. The juices resulting from mash treatment with Panzym Smash XXL enzyme meet all relevant quality specifications for fruit juices.

Panzym Smash XXL enzyme, applied to fruit or vegetable mashes and/or pomaces, results in a significant increase in capacity in solid/liquid separation (e.g. decanter, press) and higher juice yields.

The diluted enzyme solution (ideally 10% in tap water) is added directly to the mill or the mash tank, preferably via a metering pump.

Effect on the mash:

- Increased amount of free run juice
- Higher yield and capacity for horizontal presses, belt presses or decanters
- Juice yield of more than 92% is possible (HPXI Bucher presses)
- Filling capacity up to 14.76 st/h (15 to/h) (HPXI Bucher presses)
- Press capacity up to 9.84 st/h (10 to/h) (HPXI Bucher presses)
- No risk of overmaceration under normal process conditions
- Very tolerant of pH and temperature variations
- Dry pomace, therefore easier and faster press cleaning

Effect on the juice:

- Product cannot produce galacturonic acid!
- Product cannot produce cellobiose!
- The juice meets the relevant quality specifications
- Therefore a variety of options for mixing the juice
- Less trub and sediment
- Suitable for the production of cloud-stable juices
- Lower release of colloids into the juice, therefore easier subsequent treatment (better filterability)

Dosage

Application	Dosage fl oz/long ton (ml/to)	Dwell time/ temperature
Mash from fresh fruit	1.4 – 2.7 (40 – 80)	at least 30 min/ 59 – 77 °F (15 – 25 °C)
Mash from stored fruit	1.7 – 3.4 (50 – 100)	at least 30 min/ 59 – 77 °F (15 – 25 °C)
For achieving a negative alcohol test after pressing/decanting	5 – 6.8 (150 – 200)	at least 30 min/ 59 – 77 °F (15 – 25 °C)

Special Notes

Dosage: Stirring should be avoided.

The dosage strongly depends on the quality, type, degree of ripeness and operating conditions.

Holding time: Enzymes need time to react. Therefore please allow a holding time of at least 30 minutes.

Temperature: The enzyme is also active at higher temperatures (up to 149 °F (65 °C)). However, higher temperatures are critical for aroma quality and can lead to microbial problems within a temperature range of 86 – 113 °F (30 – 45 °C). Mash temperatures below 50 °F (10 °C) should be avoided.

Panzym Smash XXL enzyme is inactivated either in the flavoring system or during pasteurization.

Safety and Purity

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

Panzym Smash XXL enzyme is produced with the aid of microorganisms, which are characterized as self-cloned according to EU definition. The microorganism is classified as not genetically modified based on

- EU Directive 2001/18/EC (the version currently in effect)
- The German Genetic Engineering Act (GenTG).

The national legislation for other countries must be adhered to accordingly.

Irrespective of the classification of the production organism, the Panzym Smash XXL enzyme is **not genetically modified**.

Panzym Smash XXL enzyme is filled aseptically following sterile filtration and is therefore virtually germ-free. Panzym Smash XXL enzyme is a brownish, liquid enzyme preparation that has the typical odor of fermented products.

Panzym Smash XXL enzyme is characterized as follows:

- Production organism: *Aspergillus niger*
- Specified activity: 19,400 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 Smash XXL enzyme has the article number 95.264 and is supplied in the following packaging unit:

44 lb (20-kg) PE canister

Certified Quality

Panzym Smash XXL 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.

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