

Enzyme Treatment Panzym® First Yield

Highly Active Pectinase for Mash Enzymation of Pomaceous Fruit

Panzym First Yield enzyme is a special pectolytic enzyme preparation for first mash enzymation. In the production of apple juice in particular, the first application of mash enzymes is designed to increase the juice yield. The balanced composition of Panzym First Yield enzyme enables a wide range of applications in terms of fruit variety and degree of ripeness.

Application and Effect

Due to the special activity spectrum of the pectolytic main activity, Panzym First Yield enzyme can easily be integrated into any processing technology. The pectin structure of the pulp can thus be broken down efficiently and fast. Haze is reduced quickly, which facilitates downstream process steps. Panzym First Yield enzyme should be distributed uniformly in the mash through dosage in the mill.

The flow of juice from the mash is facilitated, so that maximum press capacity can be achieved.

The application of Panzym First Yield enzyme during mash processing results in fast colloid breakdown that goes far beyond depectinization.

Effect on the mash:

- Increase in mash yield
- Reduction of juice haze
- Increase in press capacity
- Reduction of press cycles
- Improved filtration
- Simple press and system cleaning

Dosage

Intended application	Dosage fl oz/long ton (ml/to)	Temperature in °F (°C)/ time
Mash from fresh fruit	1.4 – 2.7 (40 – 80)	59 – 86 (15 – 30)/ min. 30 minutes
Mash from stored fruit	1.7 – 3.4 (50 – 100)	59 – 86 (15 – 30)/ min. 30 minutes
Negative alcohol test after juice extraction	5 – 6.8 (150 – 200)	59 – 86 (15 – 30)/ min. 30 minutes

Dosage recommendations will depend on the quality, fruit variety, degree of ripeness, state of health and operational requirements.

For mash enzymation the product should ideally be added via a metering pump as a 10% enzyme solution to the milling device or in the mash flow. Intensive stirring or circulation by pumping should be avoided. Panzym First Yield enzyme can be used with all common processing systems such as belt presses, hydraulic presses and decanters.

Special Notes

The enzyme efficiency is temperature-dependent. Optimum activity is between 59 and 77 °F (15°C – 25 °C). The reaction speed drops with a decrease in temperature. While activity is generally maintained, the effect is delayed. Panzym First Yield enzyme becomes inactive at temperatures > 140 °F (60 °C).

Panzym First Yield enzyme is inactivated either in the aroma shipping recovery system or during pasteurization.

Safety and Purity

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

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

Panzym First Yield enzyme is characterized as follows:

- Production organism:
 - *Aspergillus aculeatus*
 - *Aspergillus niger*
- 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 First Yield enzyme has the article number 95.256 and is supplied in the following packaging unit:

44 lb (20 kg) PE canister

Certified Quality

Panzym First Yield 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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12-2016

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