

Enzyming Panzym® YieldMASH XXL

Highly Effective Polygalacturonase/Pectinmethylesterase Combination for Mash Enzyming of Pomaceous Fruit

Panzym YieldMASH XXL enzyme is a pectolytic enzyme preparation standardized on pectinmethylesterase. The product is a combination of surface and submers fermentation from *aspergillus* species.

The special combination of polygalacturonase and pectinmethylesterase in Panzym YieldMASH XXL enzyme results in:

- Fast and efficient pectin degradation
- Significant increase in press capacity; higher capacity for horizontal presses, belt presses, or decanters
- Wide activity range at low pH-level even as low as pH ≤ 3.0
- Broad temperature activity between < 59 °F (15 °C) up to 122 – 131 °F (50 – 55 °C)
- Broad activity range even at high polyphenol concentration
- Better filterability
- No over-maceration
- Pomace is suitable for pectin extraction

Effect on the juice:

- Low galacturonic acid concentration
- Low formation of methanol
- Product cannot produce cellobiose
- Lower release of colloids into the juice, therefore easier downstream processing (better filterability)
- The juice meets all relevant quality standards

Application and Effect

Panzym YieldMASH XXL enzyme was specially developed for enzyming of fruit mash.

Panzym YieldMASH XXL enzyme, applied to fruit mash results in a significant increase in capacity or solid/liquid separation (e.g. decanter, press) and higher juice yield.

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

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

Dosage

Application	Dosage fl oz/long ton (g/to)	Temperature in °F (°C)/time
Mash from fresh fruit	1.2 – 2.3 (50 – 70)	59 – 86 (15 – 30)/ 30 – 60 minutes
Mash from stored fruit	2.0 – 4.0 (60 – 120)	59 – 86 (15 – 30)/ 30 – 60 minutes

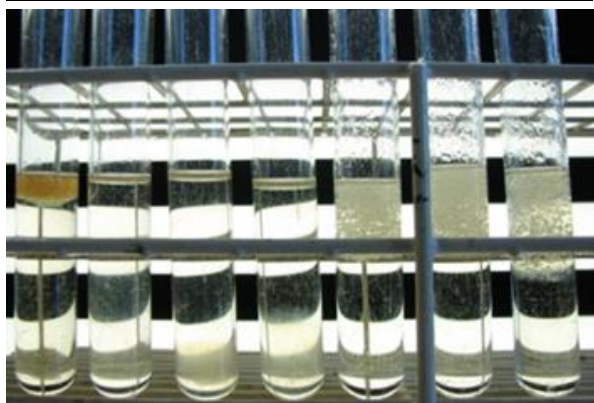
Special Notes

Dosage: Avoid stirring. The dosage strongly depends on the quality, type, degree of ripeness of the fruit, and the operating conditions.

Holding time: Enzymes need a certain amount of reaction time. Please ensure a minimum holding time of 30 minutes.

Temperature: The enzyme has wide temperature range (50 – 122 °F (10 – 50 °C)). However, higher mash temperatures above 86 °F (30 °C) are critical for the quality of the flavor and can lead to microbial problems within a temperature range of 86 – 113 °F (30 – 45 °C).

Performance



Pectin test after mashing (apple mash), tube left to right:

No. 1	control
No. 2	Panzym YieldMASH XXL enzyme
No. 3	reference
No. 4	Panzym YieldMASH enzyme
No. 5	Panzym First Yield enzyme
No. 6	reference
No. 7	reference

Safety and Purity

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

Panzym YieldMash 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 YieldMash XXL enzyme is **not genetically modified**.

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

Panzym YieldMash XXL enzyme is characterized as follows:

- Production organism: *Aspergillus niger*
- Specified activity: 3.7 PEU/g (Pectinmethylesterase)

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 YieldMash XXL enzyme has the article number 95.228 and is supplied in the following packaging unit:

44 lb (25-kg) PE canister

Certified Quality

Panzym YieldMash 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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