

Enzyming Panzym® YieldMASH



Pure, Highly Effective Polygalacturonase, Specially Developed for Mash Enzyming of Pomaceous Fruit

Panzym YieldMASH enzyme from Eaton's Begerow Product Line is a pectolytic, liquid enzyme preparation, produced through submersion fermentation of *Aspergillus species*.

This special mashing enzyme with high polygalacturonase activity was developed for enzyming of pomaceous fruit. The product is based on a polygalacturonase without interfering secondary activities.

Effect on the mash:

- Panzym YieldMASH enzyme has a standard activity of 18.5 PEU/fl oz (5 PGU/ml) at pH 3.5
- Significant increase in press capacity; higher capacity for horizontal presses, belt presses, or decanters
- Large proportion of free running juice
- Very good juice yield; up to 96% in combination with aqueous extraction possible
- No over-maceration
- High tolerance for fluctuations in temperature and pH value
- Marc is suitable for pectin extraction
- Dry marc enables simple, fast and easy discharge/press cleaning; fewer disposal problems
- Suitable for optimum secondary extraction

Effect on the juice:

- The juice meets the relevant quality standards
- Soluble pectin is broken down efficiently
- Product cannot produce cellobiose
- Little trub and sediment
- Also suitable for production of haze-stable juices
- Lower release of colloids into the juice, therefore easier subsequent processing (better filterability)

Application and Effect

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

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

Dosage

Application	Dosage fl oz/long ton (ml/to)	Holding time/ temperature °F (°C)
Mash from fresh fruit	1.4 - 2 40 - 60	30 - 60 minutes/ 58 - 86 (15 - 30)
Mash from stored fruit	1.7 - 3.4 50 - 100	30 - 60 minutes/ 58 - 86 (15 - 30)

Special Notes

Dosage: Avoid stirring. The dosage strongly depends on the quality, type, degree of ripeness, 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 30 °C are critical for the quality of the flavor and can lead to microbial problems within a temperature range of 86 - 131 °F (30 - 45 °C). Avoid mash temperatures below 50 °F (10 °C).

Safety and Purity

Panzym YieldMASH enzyme meets the specifications of FAO/WHO (JECFA and FCC) for enzymes used in the food industry. Application of the product poses no hazard to health if used as directed and processed properly.

Panzym YieldMASH enzyme is produced based on the self-cloning technique.

According to

- the German Genetic Engineering Act (implementing Directive 90/219/EEC),
- Austrian legislation (BGBL 510/1994), and
- the Swiss regulations (Ordinance on the Release into the Environment of Organisms SR 14,911),

It is classified as a non-genetically modified product.

Panzym YieldMASH enzyme is filled aseptically following sterile filtration and is therefore virtually germ-free. Panzym YieldMASH enzyme is a yellowish liquid enzyme preparation with a density of approximately 10,015 lb/gal (1.12 g/ml) and a typical odor of fermented products.

Further safety information can be found in the relevant Material Safety Data Sheet, which can be downloaded from our website.

Storage

Eaton recommends to store the product with the packaging intact away from sunlight at a temperature of 32 to 50 °F (0 – 10°C). The product is formulated for optimum stability. Nevertheless, the activity of enzymes gradually diminishes over time. Excessively long periods of storage and/or adverse conditions including high temperatures could necessitate increasing the dosage.

Delivery Information

Panzym YieldMASH enzyme is sold under article no. 95.226.250 and is available in the following package size:

6.6 gal (25 l) PE canister

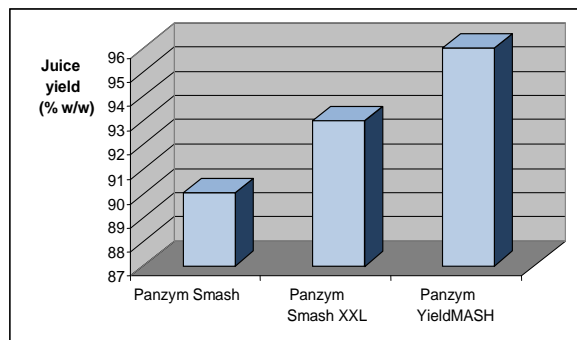
HS Customs Tariff: 3507 90 90

Certified Quality

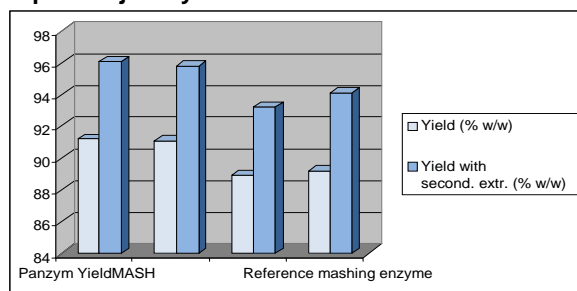
Panzym YieldMASH enzyme is regularly monitored for uniformly high product quality during the production processes. These inspections include technical functional criteria as well as safeness in accordance with relevant laws governing production of foods. Strict controls are additionally carried out immediately prior to and during final packaging.

Panzym® is a registered trademark of Novozymes A/S.

Performance

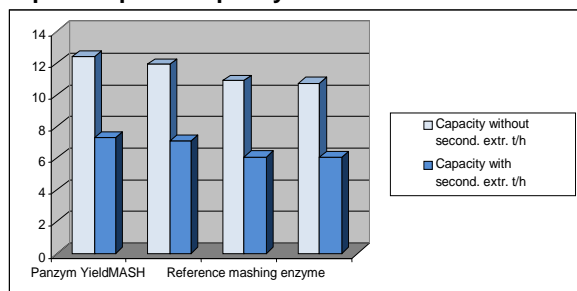


Improved juice yield



Juice yield (% w/w)	Panzym YieldMASH	Reference mashing enzyme
Without secondary extraction	91.1	88.9
With secondary extraction	91.2	89.2
With secondary extraction	95.8	93.2
With secondary extraction	96.1	94.1

Improved press capacity



Press capacity long ton (to)/h	Panzym YieldMASH	Reference mashing enzyme
Without secondary extraction	11.7 (11.9)	10.7 (10.9)
With secondary extraction	12.2 (12.4)	11.7 (11.9)
With secondary extraction	7 (7.1)	6 (6.1)
With secondary extraction	7.2 (7.3)	7 (7.1)

North America - HQ

44 Apple Street,
Tinton Falls, NJ 07724
Toll Free: 800 656-3344
(North America Only)
Voice: +1 732 212-4700

Europe/Africa/Middle East

Auf der Heide 2
53947 Nettersheim, Germany
Voice: +49 2486 809-0

Internormen Product Line

Friedensstraße 41
68804 Altlusheim, Germany
Voice: +49 6205 2094-0

Begerow Product Line

An den Nahewiesen 24
55450 Langenlonsheim, Germany
Voice: +49 6704 204-0

Brazil

Av. Julia Gaioli, 474 - Bonsucesso
07251-500 - Guarulhos
Brazil
Voice: +55 11 2465 8822

China

No. 7 Lane 280 Linhong Road,
Changning District,
Shanghai 200335, China
Voice: +86 21 5200 0422

Singapore

4 Loyang Lane #04-01/02
Singapore 508914
Voice: +65 6825 1668

For more information, please e-mail us at filtration@eaton.com or visit us online at eaton.com/filtration for a complete list of Eaton's filtration products.

Not all products in Eaton's Begerow Product Line are available in all regions. Please contact your local Eaton Filtration office to determine availability.

© 2013 Eaton Corporation. All Rights Reserved. All trademarks and registered trademarks are the property of their respective owners.

All information and recommendations appearing in this brochure concerning the use of products described herein are based on tests believed to be reliable. However, it is the user's responsibility to determine the suitability for his own use of such products. Since the actual use by others is beyond our control, no guarantee, expressed or implied, is made by Eaton as to the effects of such use or the results to be obtained. Eaton assumes no liability arising out of the use by others of such products. Nor is the information herein to be construed as absolutely complete, since additional information may be necessary or desirable when particular or exceptional conditions or circumstances exist or because of applicable laws or government regulations.



Powering Business Worldwide