

Enzyme Treatment Panzym® Second Yield

Special Enzymes Designed for Use in the Second Mash Enzymation of Pomaceous Fruit Mash

Panzym Second Yield enzyme is a highly active enzyme preparation with pectinlyase main activity. The product was created from an *Aspergillus* species by combining different pectolytic enzymes from two different conventional fermentation techniques (submerge and solid phase fermentation).

The main aim was to develop a special enzyme for second mash enzymation (pomace) without a range of secondary activities, in order to achieve an efficient increase in juice yield and improved use of press capacities.

Application and Effect

Due to the special activity spectrum of pectolytic main activities, Panzym Second Yield enzyme can easily be integrated into any processing technology.

Effect on pomace during second mash enzymation

- Enhanced juice yield
- Improved use of press capacities
- Improved system sanitizing
- High tolerance of fluctuations in pH value and temperature

Effect on the juice

- Low colloidal substance content
- Improvements in downstream process steps

Dosage

Enzymation of fruit pomace depending on the first yield:

First Yield	Dosage fl oz/long ton (ml/to)	Temperature in °F (°C)/ time
80%	8.4 – 16.8 (250 – 500)	
70%	5.3 – 12.9 (160 – 380)	131 – 140 (55 – 60)/ 90 – 120 minutes
60%	4 – 8 (120 – 240)	

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

During the second mash, enzymation of the pomace good distribution of the enzyme solution should be ensured. The product should ideally be added to the mash via a metering pump as a 10% (aqueous) enzyme solution.

Special Notes

The enzyme efficacy is temperature-dependent. Optimum activity occurs between 131 – 149 °F (55 – 65 °C). The reaction speed drops with a decrease in temperature. While activity is generally maintained, the effect is delayed. Panzym Second Yield enzyme becomes inactive at temperatures > 140 °F (60 °C).

Safety and Purity

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

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

Panzym Second Yield enzyme is characterized as follows:

- Production organism:
 - *Aspergillus niger*
 - *Aspergillus aculeatus*
- Specified activity: 8500 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 Second Yield enzyme has the article number 95.261 and is supplied in the following packaging unit:

44 lb (20 kg) PE canister

Certified Quality

Panzym Second 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.

North America

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

Europe/Africa/Middle East

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

Friedensstraße 41
68804 Altlufheim, Germany
Tel: +49 6205 2094-0

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

China

No. 3, Lane 280,
Linhong Road
Changning District, 200335
Shanghai, P.R. China
Tel: +86 21 5200-0099

Singapore

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

Brazil

Rua Clark, 2061 - Macuco
13279-400 - Valinhos, Brazil
Tel: +55 11 3616-8400

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

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