

Enzyme Treatment Panzym® Pro Clear



Special Enzyme for the Depectinization of Apple and Pear Juice

Panzym Pro Clear enzyme from Eaton's Begerow Product Line is a highly active enzyme preparation with polygalacturonase 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 is very fast degradation of pectin structures regardless of pH value and the degree of ripeness of the fruit. The product also ensures complete removal of arabans.

Application and Effect

Due to the special activity spectrum of the pectolytic main activity, Panzym Pro Clear enzyme can easily be integrated into any processing technology. Panzym Pro Clear enzyme can thus be added to the juice flow downstream of the flavor recovery system or the pasteurization system.

Effect on the juice:

- Brilliant alcohol test
- Full, quick removal of pectin
- High temperature stability (up to 131 °F (55 °C))
- High efficiency at low pH values

Dosage

Application	Dosage fl oz/1,000 gal (ml/1,000 l)	Temperature & time
Apple/pear juice	2.56 – 6.4 (20 – 50)	122 – 131 °F (50 – 55 °C)/ 1 – 2 hours

Shorter or longer maceration times are possible. Full pectin breakdown can be verified by an alcohol test (pectin test).

For juice enzyme treatment the product is added continuously into the juice line via a metering pump or in portions to the tank, ideally after heating or de-flavoring < 122 °F (< 50 °C). A 10% enzyme solution (aqueous enzyme solution) should be used for this purpose.

Special Notes

The enzyme efficiency is temperature-dependent. Optimum activity is between 113 and 131 °F (45 and 55 °C). The reaction speed drops with a decrease in temperature. While activity is generally maintained, the effect is delayed. Panzym Pro Clear enzyme becomes inactive at temperatures exceeding 140 °F (60 °C).

Before proceeding with downstream processing steps (e.g. fining, filtration), it is advisable to use an alcohol test (pectin test) to verify that pectin has been completely broken down.

Safety

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

Panzym Pro Clear enzyme has a pectolytic activity of 29,200 PGNU/fl dr (7,900 PGNU/ml, polygalacturonase).

Panzym Pro Clear enzyme is aseptically bottled after sterile filtration. Panzym Pro Clear enzyme is a brownish, liquid enzyme compound and has the 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

The product should be stored at 41 – 50 °F (5 – 10 °C) in intact packaging and protected from the sun.

Enzyme activity is standardized, yet activity will diminish over time. The activity of liquid enzymes is reduced by 1 – 2% per month. This loss is optimally compensated for over the minimum shelf life through the enzyme formulation.

Unfavorable storage conditions (direct sunlight, increased storage temperatures) may require a higher dosage.

Delivery Information

Panzym Pro Clear enzyme is sold under article no. 95.240.250 and is available in the following packaging size:

6.6 gal (25 l) PE canister

HS Customs Tariff: 3507 90 90

Certified Quality

Panzym Pro Clear enzyme is regularly monitored during production to ensure a consistently high quality. These inspections include wide-ranging technical functional criteria as well as safety in accordance with the relevant laws governing the production of foods. Strict controls also take place immediately before and during final packaging.

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

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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.

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