

# Enzyme Treatment

## Panzym<sup>®</sup> Flux

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### Special Pectinase for improving Filtrability during Cross Flow Filtration

#### Description

PANZYM<sup>®</sup> Flux is a special pectinase for improving filter capacity during ultrafiltration of fruit juice. Because of its broad spectrum of specific, highly active side activities (cellulase, hemicellulase and in particular rhamnogalacturonase and galactomannanase) the amount of polysaccharides blocking the membrane is considerably reduced, thus increasing the yield of a cross flow plant. The extensive colloid break-down also allows fruit juice manufacturers to fulfil critical specifications of the alcohol test, especially when it comes to berry juices.

PANZYM<sup>®</sup> Flux is obtained from a selected strain of *Aspergillus niger* and is available as a clear, brown liquid with a slight smell, typical of fermented products.

#### Application and Mode of Action

PANZYM<sup>®</sup> Flux is used in fruit juice production together with pectolytic and amylolytic enzymes. As a rule the enzyme is added to the first juice portions in the enzymation tank. The combination of pectolytic and amylolytic activities with colloid-degrading activities ensures quick, reliable degradation of cloud-stable colloids and colloids which can inhibit cross flow filtration.

#### Dosage

Berry juice:	3 – 4 ml/100 l	(1 – 2 h at 50 °C)
Apple/pear juice:	2 – 3 ml/100 l	(1 – 2 h at 50 °C)
Fruitwine	1 – 2 ml/hl	(during fermentation)

The effectiveness of the enzyme is temperature-dependent. The activity optimum occurs at 45 – 55 °C. As the temperature falls, the rate reaction falls. Although the activity remains unchanged, in principle, the effect is greatly delayed. At temperatures lower than 15 °C, therefore, an increased dosage should invariably be used. PANZYM<sup>®</sup> Flux is inactivated at temperatures exceeding 60 °C and by contact with bentonite.

#### Safety and Purity

PANZYM<sup>®</sup> Flux complies with the specifications of FAO/WHO (JECFA and FCC) for food-grade enzymes. If used according to the instructions and processed correctly, the use of this enzyme does not entail any health hazards.

PANZYM<sup>®</sup> Flux is bottled aseptically after sterile filtration and is therefore practically germ-free. The product does not contain any preservatives. Descriptions of the analytical methods and EU-safety data sheet are available on request.

#### Storage

PANZYM<sup>®</sup> Flux must be stored in a cool (0 – 10 °C) and dry place. Under these conditions it will maintain its declared activity for at least 1 year. At storage temperatures of 20 °C, PANZYM<sup>®</sup> Flux will maintain the declared activity for at least 3 months, after which a loss of activity of 1 -2 % per month must be expected. Once opened, packages should be used up immediately.

#### Delivery Information

1 l	PE bottle (BEGEROW art. no. 95.121.010)
12 x 1 l	Bottles in carton
25 l	PE Jerrycans (BEGEROW art. no. 95.121.250)

HS customs tariff: 3507 90 90

#### Certified Quality

PANZYM<sup>®</sup> Flux is produced by Novozymes Switzerland AG, Neumatt, CH-4243 Dittingen, and is regularly monitored throughout the manufacturing process to ensure consistently high product quality. These tests cover both technical functional criteria and absolute safety under foodstuff legislation. Additional strict controls are carried out immediately before and during the final packing stage.



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