

Enzyme Treatment

Panzym[®] HT 300

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Special Enzyme for Starch Degradation in Pomaceous Fruit Juice (Hot Enzymation)

Description

Panzym[®] HT 300 the high concentrated Amyloglucosidase for the safe and economic degradation of starch. Panzym[®] HT 300 is produced 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[®] HT 300 hydrolyzes gelatinized starch and Dextrine completely thus assisting the clarification and filtration of the juices.

The enzyme requirement can easily be ascertained by conducting the iodine test. 1 ml of diluted iodine (20 g potassium iodide and 1 g iodine) are poured on top of 10 ml fruit juice. Blue colouring (high amounts of starch), violet colouring (partially hydrolyzed starch) or red colouring (Dextrine) formation indicates that the test is positive.

In order to ascertain the total amount of starch (gelatinized/non gelatinized) prior heating of the fruit juice samples to 80 °C and subsequent cooling down to 25 °C is necessary.

Gelatinized starch and dextrine age and this retrograding process occurs particularly in juice and concentrates that are stored under cool conditions. Retrograded starch is no longer detectable when applying the iodine test and enzymatic starch degradation is no longer possible. Therefore the addition of Panzym[®] HT 300 should take place as early as possible, most adviseably in heat-treated juices.

Dosage

High starch content
(early season fresh fruit) 2 – 3 ml/100 l

Average (medium)
starch content
(end-of-season fruit) 1 – 2 ml/100 l

Low starch content
(Stored fruit) 0,5 – 1 ml/100 l

With extremely high starch content, lower temperatures or shorter holding times a higher enzyme dosage will increase the enzymation efficiency significantly.

Panzym[®] HT 300 is inactivated at temperatures exceeding 65 °C and by contact with bentonite.

Special Notes

Dosage: Stirring should be avoided.

The dosage strongly depends on the quality, type, degree of ripeness and operating conditions.

Holding time: Enzymes need time to react. Therefore please allow a holding time of at least 30 minutes.

Temperature: The enzyme is also active at higher temperatures (up to 65 °C). However, higher temperatures are critical for aroma quality and can lead to microbial problems within a temperature range of 30 – 45 °C. Mash temperatures below 10 °C should be avoided.

Panzym[®] HT 300 is inactivated either in the flavoring system or during pasteurization.

Safety and Purity

Panzym[®] HT 300 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.

The Amyloglucosidase activity is standardized to 300 AU/ml. Descriptions of the analytical methods and EU safety data sheets are available on request.

Panzym[®] HT 300 is bottled aseptically after sterile filtration and is therefore practically germ-free.

Storage

Panzym[®] HT 300 must be stored in a cool (< 5 °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[®] HT 300 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 article no. 95.129.010)

12 x 1 l PE-Bottles per box

25 l PE-Jerrycans
(BEGEROW article no. 95.129.250)

HS customs tariff: 3507 90 90

Certified Quality

Panzym® HT 300 is regularly tested for uniform high product quality during the production process. These tests include comprehensive technical function criteria as well as safeness according to food product laws. Furthermore, stringent inspections are performed immediately prior to and during final packaging.



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