## Enzyme Treatment Panzym<sup>®</sup> Clair Rapide G

## Highly Concentrated Pectinolytic Enzyme for Winemaking – Free of Cinnamylesterase (Depsidase)

Panzym Clair Rapide G enzyme is a granulated enzyme preparation that is produced from a selected strain of aspergillus niger by means of submerged fermentation. Undesired cinnamylesterase activity (CE) and colorants are removed in a special cleaning step to thus produce a nearly white finished enzyme preparation. Panzym Clair Rapide G enzyme is a highly concentrated pectinolytic preparation; activities that are optimal tuned by the process of the winemaking and quickly degrade pectin substances in grape must.

#### **Application**

Since Panzym Clair Rapide G enzyme degrades pectin chains, it is particularly suitable for rapidly removing pectin and decreasing the viscosity of the grape must during clarification. Pectin can be removed from grape must within only 1 to 2 hours after adding the product (negative pectin test). Panzym Clair Rapide G enzyme together with the addition of extraction enzymes increases the yield of "free run juice", especially in pectin rich grape varieties. As a result, the pressing pressure and pressing period can be reduced considerably. The need for fining agents is decreased and the must is optimally fined. In addition, major aroma substances and aroma precursors are released. Panzym Clair Rapide G enzyme can also reduce the quantity of grapes needed through concentration. The active enzyme components contained in Panzym Clair Rapide G enzyme are easily dissolved in must or water using concentrations occurring under normal working conditions. The product is added as a 10% solution directly into the crushing mill or to the clarification tank prior to filling.

#### Dosage

The optimum temperature is approx. 68 °F (20 °C). Panzym Clair Rapide G enzyme is also effective at low temperatures (46 – 50 °F (8 – 10 °C)) and its effectiveness is not affected with increase of dosage up to 0.17 lb/1,000 gal (2 g/hl) at 50 °F (10 °C).

| Area of application  | Dosage<br>lb/1,000 gal<br>(g/hl) | Period<br>h |
|--|----------------------------------|-------------|
| Clarification of rosé and white must   | 0.08 - 0.17<br>(1 - 2)           | 1 – 2       |
| Clarification of high<br>pectin content must<br>(Silvaner, Muscat,<br>Gutedel) | 0.17 – 0.25<br>(2 – 3)           | 2 – 4       |
| Red wine mash (short time high heating)  | 0.17 - 0.25<br>(2 - 3)           | 4 – 6       |
| For special deposits processing (concentrating)                                | 0.17 – 0.25<br>(2 – 3)           | 6 – 12      |
| Unfermented sweetening must  | 0.25 - 0.33<br>(3 - 4)           | 6 – 12      |

### Activity

Panzym Clair Rapide G enzyme has an activity of 17,700 PGNU/dr (10,000 PGNU/g) at 68 °F (20 °C). It is clean and free of cinnamylesterase.

The standard FDU (Ferment Depectinization Unit) activity is determined by measuring the depectinization of a natural substrate.

#### **Special Notes**

Enzymes are irreversibly destroyed when brought in contact with bentonite. The enzymatization reaction must be completed prior to using bentonite or the bentonite must have been removed prior to enzymatization. The application of up to 0.4 lb/1,000 gal (50 mg/l) of SO<sub>2</sub> has no effect on the enzyme activity. The use of activated charcoal likewise reduces the effectiveness of enzymes. Enzymes are heat-sensitive. Temperatures above 131 °F (55 °C) damage enzymes irreversibly.



#### Safety and Purity

This product is a white, soluble micro-granulate free of preservatives and virtually free of dust. It complies with FAO/WHO JEFCA and FCC guidelines for food enzymes.

#### **Storage**

Panzym Clair Rapide G enzyme is a micro-granulate and is thus exceptionally resistant. When stored at a temperature of  $32-56\,^{\circ}\text{F}$  (0  $-10\,^{\circ}\text{C}$ ) it will retain its indicated activity for many years. The product should be stored in a dry place to avoid the formation of rust on the cans.

#### **Delivery Information**

Panzym Clair Rapide G enzyme is sold under article no. 95.131 and is available in the following package sizes:

0.22 lb (100 g) can 1.1 lb (500 g) can

(A dosage spoon is available free of charge. One spoon equals 0.02 lb (10 g) of enzyme granulate.)

#### **Certified Quality**

Panzym Clair Rapide G enzyme 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.

Panzym Clair Rapide G enzyme complies with the purity criteria of the international code for wine treatment products and the provisions of German wine regulations.

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

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