

## Enzyme Treatment

### SIHAZYM Uni®

## Granulated Wine Enzyme Compound for Extraction and Clarification of Grape Mash

SIHAZYM Uni enzyme is a high pectolytic enzyme compound. Due to its composition, it is suitable for must clarification and for extraction of grape mash. Using SIHAZYM Uni enzyme for clarifying must leads to rapid depectinization and therefore effective clarification. When used at mash stage the defined secondary activities of SIHAZYM Uni enzyme ensure increased extraction of colorants and grape aroma and tannin components.

The specific benefits of SIHAZYM Uni enzyme:

- Rapid and effective depectinization of grape must
- Rapid release of grape ingredients
- Reduction of mash viscosity
- Increased colorant, aroma compound and polysaccharide release
- Higher quantity of free run must
- Free of cinnamylesterase activity

### Application

SIHAZYM Uni enzyme is a multi-purpose enzyme for the treatment of grape musts, mashes and young wines. Depectinization of the must is ensured through the high pectolytic activity. The release of polysaccharides and anthocyanins is through the combination of pectolytic activities.

Based on the dosage recommendation add the product directly into the mash container, the grape mill, the press, or the grape mash container as a 10% solution in water. It is important to ensure optimum distribution of the enzyme solution in the mash, either through continuous addition to the mash flow via an injector pump or through partial addition (with running agitator) during filling of the mash containers. During must pre-clarification the enzyme/water solution should be added to the clarification tank (stirring may be advisable).

### Activity

SIHAZYM Uni enzyme has an activity of 420 PLU/dr (240 PLU/g). The product is cleaned of cinnamyl esterase activity.

### Dosage

Application	Dosage lb/1,000 gal (g/hl) mash	Duration
White wine mash	0.08 – 0.33 (1 – 4)	1 – 4 h
Red wine mash		
Traditional mash fermentation	0.08 – 0.25 (1 – 3)	5 – 20 days
Pumping-over	0.08 – 0.25 (1 – 3)	2 – 8 days (fermentation phase)
Recooled mash (up to 122 °F (50 °C))	0.17 – 0.25 (2 – 3)	2 – 4 h
Sedimentation		
Must clarification (approx. 59 °F (15 °C))	0.17 – 0.25 (2 – 3)	2 – 4 h
Must clarification (approx. 46.4 – 50 °F (8 – 10 °C))	0.25 – 0.33 (3 – 4)	2 – 4 h
Unfermented sweetening must white/red	0.17 – 0.42 (2 – 5)	2 – 6 h (before clarification)
Hardly filterable young wine	0.17 – 0.42 (2 – 5)	2 – 6 h (7 days before clarification)

### Special Notes

Contact with bentonite causes irreversible damage to enzymes through adsorption.

The enzymatization reaction must be completed prior to using bentonite, or the bentonite must be removed before the enzyme is added.

Any bentonite treatment that may be required should therefore be carried out before the enzyme treatment, because otherwise the enzyme would be adsorbed and deactivated by the bentonite. The application of up to 8.4 lb/1,000 gal (1,000 mg/l SO<sub>2</sub>) has no influence on enzyme activity.

Each packaging unit includes a dosing spoon:

0.22 lb (100 g) can – 0.01 lb (5 g) dosing spoon

1.1 lb (500 g) can – 0.02 lb (10 g) dosing spoon



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## Safety and Purity

The product is a white, virtually dust-free, and soluble micro-granulate without preservatives. It meets the requirements of the FAO/WHO JEFCA and FCC recommendations for food enzymes, supplemented through an upper limit value of  $10^4$ /g for total viable count.

Further safety information can be found in the relevant Material Safety Data Sheet, which can be downloaded from our website.

## Storage

SIHAZYM Uni enzyme is a micro-granulate that can be stored for up to three years at 39.2 – 42.8 °F (4 – 6 °C, ~ refrigerator temperature) without losing its designated activity. The product should be stored dry and well-sealed once opened.

## Delivery Information

SIHAZYM Uni enzyme is sold under article no. 95.230 and is available in the following package sizes:

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

## Certified Quality

During the production process, SIHAZYM Uni enzyme is regularly monitored to ensure consistently high quality.

These inspections include technical functional criteria as well as safeness in accordance with relevant laws governing production of foods. Strict controls are additionally carried out immediately prior to and during final packaging.

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