

LAFASE® HE GRAND CRU

Pectolytic enzyme preparation, purified in CE and anthocyanase for the production of full bodied red wines that are rich in colouring matter and structured tannins, destined for ageing.

*Qualified for the elaboration of products for direct human consumption in the field of the regulated use in Oenology.
In accordance with the regulation (EC) n° 606/2009 and the food chemical Codex and JECFA.*

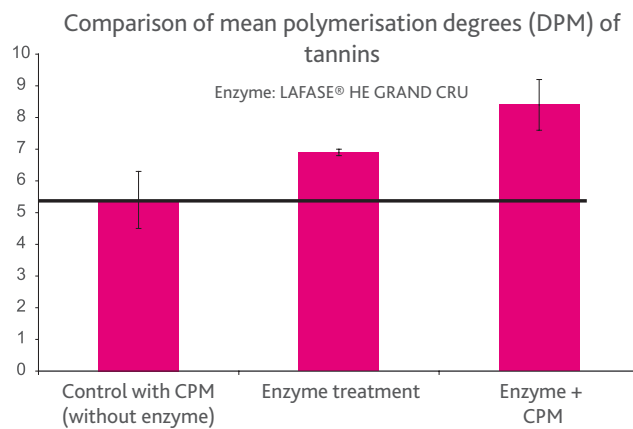
SPECIFICATIONS AND OENOLOGICAL APPLICATIONS

- **LAFASE® HE GRAND CRU** allows for strong selective extraction of Rhamnogalacturonan type II (components of the skin and pulp), favouring a better stability of colouring matter and the coating of tannins.
- Anthocyanase purification allows for a better stability of colour over time.
- The purification in CE limits the formation of ethyl phenol precursors during a potential *Brettanomyces* contamination.
- Favours wine clarification.
- For the production of structured red wines, rich in colour and polymerised tannins, with good mouthfeel.

EXPERIMENTAL RESULTS

- **LAFASE® HE GRAND CRU** allows for optimal extraction of phenolic compounds, particularly more highly polymerised tannins and anthocyanins, which have a higher stability over time.

CPM - cold pre-fermentation maceration



Analysis	Control with CPM No enzyme	Lafase HE Grand Cru (without CPM) - Traditional maceration	Lafase HE Grand Cru with CPM
Colour intensity (CI)	0.89	1.18 (+32%)	1.17 (+32%)
Total polyphenol index (OD 280 nm)	43	50 (+16%)	50 (+16%)
Turbidity (in NTU)	44.6	14.2	11.9
Polymerised phenols (mg/L)	433	614 (42%)	622 (43%)
Total anthocyanins (mg/L)	477	527 (+10%)	559 (+17%)
Polymerised anthocyanins (mg/L)	37	46 (+24%)	49 (+32%)
Monomeric anthocyanins (mg/L)	440	481 (+9%)	510 (+16%)



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PHYSICAL CHARACTERISTICS

Aspect granulates
 Colour beige
 Insoluble matter none

Standard activity
 - Pectinase (PGNU/g)* 8600
 - Cinnamoyl Esterase (CINU/1000PGNU)* < 0,5
 *+/- 15% of the declared units of enzyme activity

BIOLOGICAL & CHEMICAL ANALYSIS

Lead < 5 ppm
 Arsenic < 3 ppm
 Mercury < 0.5 ppm
 Cadmium < 0.5 ppm
 Toxins & mycotoxins not detected

Total viable germs < 5x10⁴ CFU/g
 Coliforms < 30 CFU/g
 E.coli/25g not detected
 Salmonella/25 g not detected

PROTOCOL FOR USE

ŒNOLOGICAL CONDITIONS

- LAFASE® HE GRAND CRU can be added at the crusher, including during cold pre-fermentation maceration.
- Bentonite: The enzymes are irreversibly inactivated by bentonite. Any bentonite treatment must always be carried out after the completion of enzyme activity or after the bentonite is eliminated.
- SO₂: LAFASE® HE GRAND CRU is not sensitive to normal SO₂ doses (<300 mg/L) but it is recommended not to put the enzymes and sulphurous solutions in direct contact.
- The preparations are generally active at temperatures from 5°C to 60°C, 41 - 140°F) at a wine pH of 2.9 to >4.0.

DOSAGE

Adapt the dosage to the skin quality (thickness), phenolic maturity and the state of sanitation of the grapes.

- **Red:** 3 to 5 g/100 kg of grapes.
 - Under-ripe or thick skins: 4 to 5 g/100 kg of grapes.
 - Optimal maturity or thin skins: 3 to 4 g/100 kg

Infected grapes: 5 g/100 kg (to be incorporated after fermentation has started): refer to the technical file on grapes infected by *Botrytis cinerea*.

IMPLEMENTATION

Dissolve LAFASE® HE GRAND CRU in 10 times its weight in water or must before incorporation. Once diluted, the chilled preparation can be used within the following 6 to 8 hours.

Safe practice: refer to the product safety sheet.

STORAGE

- Store in original sealed packages, in a cool dry place and in an odour-free environment.
- Optimal date of use: 4 years after packing.
- Open pack, well re-closed: 1 month after opening.

PACKAGING

100 g tin- 1 kg box (10 x 100 g) - 10 kg box (10 x 1 kg).
 500 g tin - 5 kg box (10 x 500 g).
 5 kg bags.



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