EXTRACLEAR®

Formulation of pectolytic enzymes with strong secondary activity, for the clarification of wines and preparation for bottling.

Suitable for the preparation of products intended for direct human consumption, in the scope of regulated use in oenology. Natural product without GMO. Complies with Commission Regulation (EU) 2019/934, the Food Chemical Codex and JECFA.

SPECIFIC CHARACTERISTICS AND OENOLOGICAL PROPERTIES

EXTRACLEAR® is a liquid formulation (from *Aspergillus niger*) specifically designed to optimise ageing and to prepare wines for bottling.

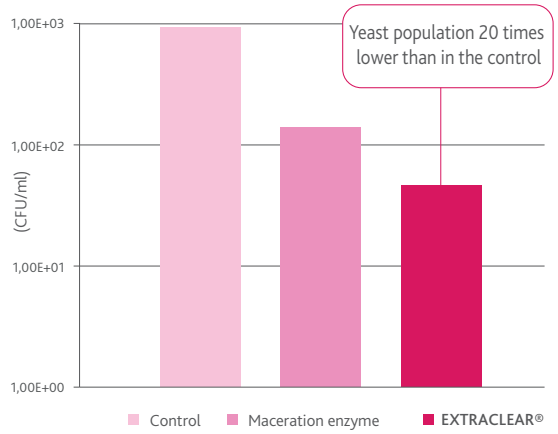
EXTRACLEAR® accelerates mechanisms related to the natural clarification of wine.

The diversity and abundance of its secondary activity make **EXTRACLEAR®** a particularly suitable solution for:

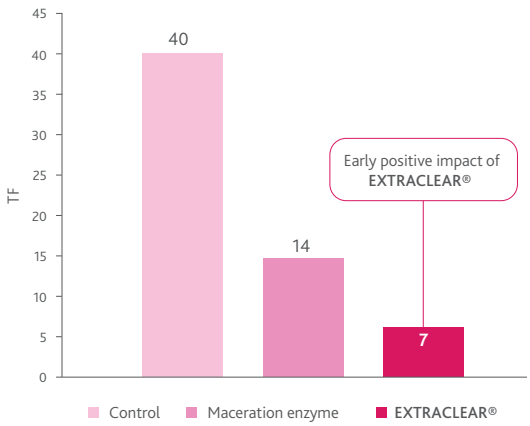
- Clarification of wines with a heavy load of clogging colloids, such as press wines and wines resulting from thermovinification.
- Significantly improves the filterability of wines.
- Reduces the microbiological load by promoting the sedimentation of microorganisms in suspension.

EXPERIMENTAL RESULTS

Total yeasts at the start of ageing



Assessment of the filterability of a red wine at the start of ageing after early enzyme treatment



Analysis of wine taken from the middle of the vessel. Turbidity (NTU) for the different protocols: control = 86, maceration = 29, EXTRACLEAR® = 16 Addition of EXTRACLEAR (6 mL/hL) in the last third of the AF. Maceration enzyme added at 4 g/hL on filling the vat. Natural clarification at 15°C for 6 weeks.

Filterability index (TF) interpretation grid	
TF < 4	Wine that can be filtered for bottling
4 < TF < 8	**Clogging wine to be filtered**
8 < TF < 30	Highly clogging wine to be treated
TF > 30	Wine that will be very difficult to filter

Early enzyme treatment with a specific formulation further reduces the turbidity and microbial load and improves filterability as from the start of ageing.

*: . 1: Vallet-Courbin, A., Lacampagne, S., Canal-Llauberes, R. M., Malzieu, S. M., Kanev, T., Mietton-Peuchot, M., & Ghidossi, R. (2021). A New Test of Filterability for Unprocessed Wines Evaluation of the Enzyme Efficiency. Journal of Food Engineering and Technology, 10(2), 55–66

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PHYSICAL CHARACTERISTICS

Appearance	liquid
Colour	brown
Insoluble matter	none
Stabilisers	glycerol
Standardisation activity (PGU/mL)	420
Approximate density (g/L)	1130

CHEMICAL AND MICROBIOLOGICAL ANALYSES

Toxins and mycotoxins	not detectable
Coliforms (CFU/g)	< 30
E.coli (/25 g)	none
Salmonella (/25 g)	none
Lead (ppm)	< 5
Arsenic (ppm)	< 3
Mercury (ppm)	< 0,5
Cadmium (ppm)	< 0,5

PROTOCOL FOR USE

OENOLOGICAL CONDITIONS

- Use **EXTRACLEAR®** as from the last third of the fermentation (taking advantage of the moderate temperature for enhanced effectiveness) and throughout ageing.
- Bentonite : Enzymes are irreversibly inactivated by bentonite. Any bentonite treatment must always take place after the enzymes have acted, or enzymes should be added after the bentonite is removed.
- SO_2 : Enzymes are not sensitive to usual doses of SO_2 (<300 mg/L) but it is not recommended to put enzymes in direct contact with sulphite solutions.
- The preparations are generally active at temperatures from 5°C to 60°C and at wine pH of 2.9 to 4.

DOSES

All types of wine: Red, white, rosé.

For rapid clarification and significant action on filterability:

- End of fermentation > 15°C: 3 - 6 mL/hL
- Ageing < 12°C: 5 - 6 mL/hL

Adjust the dose according to vintage conditions, grape variety, contact time, temperature and pH.

ADDITION

Dilute **EXTRACLEAR®** in 10 times its volume of water or wine before addition.

Safe practice: refer to the product safety sheet.

STORAGE RECOMMENDATION

- Store off the ground in the original unopened packaging in a cool (2 - 10°C) and dry area not liable to impart odours.
- Optimal date of use: 3 years.

PACKAGING

1 L / 1.14 kg jerry can.

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CS 61 611 – 33072 BORDEAUX CEDEX – Tél. : +33 (0)5 56 86 53 04 - www.laffort.com