



# ENDOZYM<sup>®</sup> Rouge Liquid XL

Enzyme for extracting colour from black grapes



## → TECHNICAL DESCRIPTION

**ENDOZYM Rouge Liquid XL** is a liquid enzyme preparation, specifically for extracting colour from black grape skins, which combines pectolytic activities with a high cellulasic and hemicellulasic action. The cellulasic and hemicellulasic activities enable the anthocyanins and tannins to be freed from the cellulose-rich areas inside the berry without having to intervene with forceful mechanical systems.



Part of the grape rich in tannins and pecto-cellulosic polysaccharides

The pectolytic activities, in the enzyme mix for colour extraction, serve to promote the leaching of anthocyanins and tannins from the macerated grapes. The use of **ENDOZYM Rouge Liquid XL** makes it possible to obtain wines/ musts, rich in noble skin tannins and varietal aromas, without having to resort to vigorous extraction systems that could favour the release of astringent and vegetal tannins, and that often produce very high lees values. Another important advantage of using **ENDOZYM Rouge Liquid XL** lies in the fact that during racking, thanks to the mix of enzymatic activities, the colouring substances are perfectly diluted from the skins and the free run-off yields are significantly increased, resulting in a higher must bloom and a higher yield of high-quality wine.

### Advantages of using **ENDOZYM Rouge Liquid XL**:

- Promotes rapid colour extraction
- Promotes violet tints in wines
- Favours the release of tannins in the medium
- Favours the release of varietal aromas
- Favours must flower yield at the pressing stage
- Enables complete release of the colouring substance without having to resort to vigorous mechanical actions
- Helps reduce the formation of lees in the wines obtained
- Allows easier lees management in the post vinification phase.

## → COMPOSITION AND TECHNICAL CHARACTERISTICS

Enzyme preparation based on PL (Pectinlyase), PE (Pectinesterase), PG (Polygalacturonase), CMC (Cellulase).

### Enzyme activities present in **ENDOZYM Rouge Liquid XL**:

**PL (Pectinliasis):** degrades both esterified and non-esterified pectins. This is a key enzyme activity, as it enables a very high clarification rate.

**PE (Pectinesterase):** assists PG in the degradation of pectin.





## ENDOZYM® Rouge Liquid XL

**PG (Polygalacturonase):** degrades only non-esterified pectins. It represents an enzymatic activity that in synergy with PL activity is decisive for the degree of clarification of musts and the filterability of wine. The combination of PL and PG activities enables high yields in must flower to be obtained extremely quickly.

**CMC (Cellulase):** this is a complex of several enzymatic activities which, in synergy with pectinase, enables the release of colouring matter, tannins and aromatic precursors from the grape skin. The overall measure of enzyme activity, which is indicated for each preparation, can be expressed as: Total UP (U/g), which is the measure of the enzyme unit resulting from the sum of the PL, PG, PE activities measured individually.

**ENDOZYM Rouge Liquid XL** is purified from the following activities:

**CE (Cinnamyl Esterase):** is an activity present in non-purified enzymes, which causes the formation of volatile phenols, compounds that impart unpleasant aromatic notes to wine which, when present in high concentrations, are reminiscent of horse sweat.

**Anthocyanase:** this is a secondary enzyme activity that causes a partial degradation of anthocyanins and a consequent increase in the orange hue of wines. AEB enzymes are obtained from *Aspergillus niger* strains that do not produce anthocyanase.

### → DOSAGE

1 to 5 mL/hL or quintal. The dosage indicated varies depending on the temperature of the must or crushed grapes. By using higher doses, the unfavourable influence of low temperatures can be corrected.

### → INSTRUCTIONS FOR USE

Dilute directly in 20 parts non-sulphurised must or demineralised water or add directly to grapes, crushed grapes or must. Use at the beginning or when filling tanks.

### → ADDITIONAL INFORMATION

#### SO<sub>2</sub> INFLUENCE

Enzymes are not sensitive to oenological levels of sulphur dioxide, but it is good practice not to place them in direct contact with sulphurous solutions.

#### MONITORING ACTIVITY

There are different methods for assessing enzyme activity. One system used by AEB is the direct measurement method linked to the concentration of PL, PG and PE; the sum of the three activities gives rise to the unit Total UP per gram. AEB provides technicians with methods for determining pectolytic units and activity diagrams.

### → STORAGE AND PACKAGING

Store **ENDOZYM Rouge Liquid XL** in its original sealed packaging, away from light, in a cool dry place free of odours, preferably below 20°C. Do not freeze. Respect the shelf life indicated on the packaging. Use quickly after first opening.

1 kg bottles in 4 kg boxes.  
10 kg drums.

