



# ENDOZYM<sup>®</sup> Thiol

Pectolitic enzymatic preparation to enhance nuances of flowers and citrus



## → TECHNICAL DESCRIPTION

**Endozym Thiol** is a liquid pectolitic enzymatic preparation with specific secondary activities, facilitating the hydrolysis of grape thiol aromatic precursors, such as 4MMP (4-mercapto-4-methylpentan-2-one), A3MH (3-mercaptohexil-acetate), 3MH (3-mercaptohexan-1-ol), 4MMPOH (4-mercapto-4 methylpentan-1-ol), 3MMB (3-mercapto-3-methylbutan-1-ol).

These aromatic precursors are important components of aromatic and semi-aromatic varieties, however, these thiols come anchored to a Cysteine group, which makes them non-volatile. During alcoholic fermentation, these aromatic compounds are separated through the action of exogenous enzymes and enzymes produced by the yeast. **Endozym Thiol** is a liquid carbon sulfur lyase that favors the hydrolysis of these aromatic thiols precursors and enhances their expression in the wine.

**Endozym Thiol** is preferably added during the second fermentation day as the activity of **Endozym Thiol** depends on the sugar quantity still present during the fermentation stage. As thiols are a family of easily oxidised compounds, AEB recommends the addition of Elevage Glu at the first racking of white wines to reduce the redox potential and to protect thiols from possible oxidation.

## → COMPOSITION AND TECHNICAL CHARACTERISTICS

Enzymatic activity	Activity/g
Total UP (U/g)	12,000

*The value is approximate and is not a specification.*

The total measure of enzyme activity, which is indicated for each preparation, can be expressed as: **Total UP** (U/g), which is the measure of enzyme activity resulting from the sum of PL, PG, PE activities measured individually.

**Endozym Thiol** is purified by the following activities:

**CE** (Cinnamyl Esterase): is an activity found in unpurified enzymes, which causes the formation of volatile phenols, compounds which lend unpleasant aromatic nuances to the wine, which, if present in high concentrations, are reminiscent of horse sweat.

**Anthocyanase**: is a secondary enzymatic activity which causes a partial breakdown of the anthocyanins with a consequent increase of orange hues in the wines. AEB enzymes are obtained from *Aspergillus niger* strains, which do not produce anthocyanase.

## → DOSAGE

From 2 to 4 mL/hL of musts.





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## → INSTRUCTIONS FOR USE

Dissolve **Endozym Thiol** in a 1:10 ratio in water, juice or wine and add uniformly to musts the must on the second day of fermentation. Do not treat with bentonite or other fining agents for 24 hours after addition to avoid inactivation of the enzyme.

## → ADDITIONAL INFORMATION

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

Enzymes are resistant to SO<sub>2</sub> levels normally used in winemaking, however it is good practice not to put them in direct contact with sulfur solutions.

### ACTIVITY CONTROL

There are various methods for evaluating enzymatic activity. A system utilized by AEB is a method of direct measure, directly linked to the concentration of the PL, PG and PE; the total of the three activities yields the Total UP per gram unity. The determination methods of pectolitic units together with the relative activity diagrams are made available to all technical personnel by AEB.

## → STORAGE AND PACKAGING

Keep **Endozym Thiol** in the original sealed packaging away from light, and in a cool, dry, odour-free place at a temperature below 20°C. Do not freeze. Observe the expiry date on the packaging. Use promptly after opening.

1 kg net bottle in 4 kg net cartons.

