



# LALLZYME EX

## Enzyme for maceration/skin contact

### SPECIFICITIES

LALLZYME EX is an enzyme preparation of pectinase with hemi-cellulase and cellulase secondary activities.

This preparation was developed to improve the stabilization of color and tannins.

### ACTIVITIES

The standard activities of LALLZYME EX are :

- 1750 PGu/g (Poly-Galacturonase units)
- 400 PEu/g (Pectin Esterase)
- 50 PLu/g (Pectin Lyase)

### ACTION

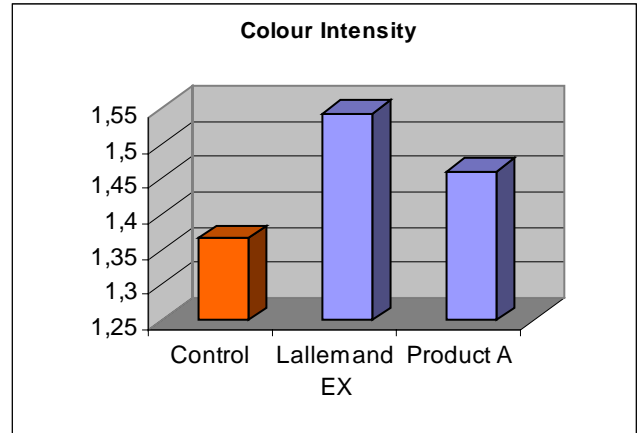
The cellulase and hemi-cellulase activities of LALLZYME EX allow an easier release of tannins which are then available to form complexes contributing to a fuller more rounded type of tannin.

LALLZYME EX :

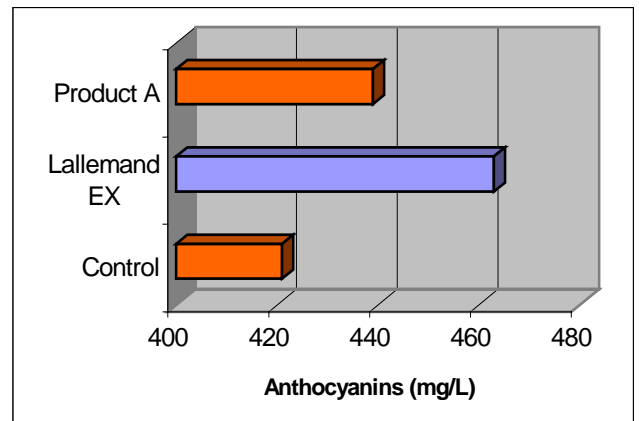
- permits the release and stabilization of less reactive tannins, which are also less astringent
- limits extraction of C6 compounds, responsible for herbaceous notes

### RESULTS

The results of trials conducted in triplicate on Sangiovese demonstrate the wines treated with enzymes have higher color intensity, and higher amounts of tannins and anthocyanins than the control (Lallemand compared results,1998).



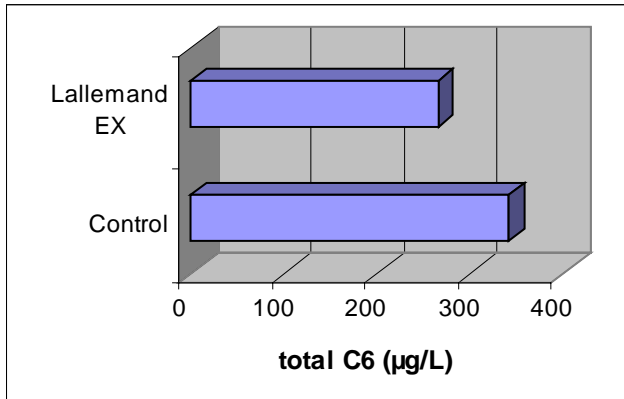
**Graph 1** – Compared color intensity (Sangiovese, 98)



**Graph2** – Compared anthocyanins concentration (Sangiovese 98)

During the same trials the concentration of C<sub>6</sub> molecules in the wines was higher in non treated wines in comparison to the ones treated with LALLZYME EX (Graph 3).





**Graph 3** - Compared concentration of C<sub>6</sub> molecules (Sangiovese 98)

The 1999 report of the “2<sup>nd</sup> Joint Burgundy-California-Oregon Winemaking Symposium”, also mentions that Pinot noir wines produced with the addition of macerating enzymes, and more particularly LALLZYME EX tended to produce wines with greater purple, increased color intensity and enhanced fruity, floral, spicy and body.

### **METHOD FOR USE**

LALLZYME EX is normally used in the doses of 2-3 g /hL of must or 15-20 g/ton grapes.

Dissolve the enzyme in water or in must in a sufficient volume so that it is distributed easily over the mass of grapes (generally the proportion used is 1:100). The enzyme can be added directly to the grapes before pressing.

In white wine, it is recommended to add LALLZYME EX during pressing if using a pneumatic press.

### **REFERENCES**

- “2<sup>nd</sup> Joint Burgundy-California-Oregon Winemaking Symposium”, 1999. University of California Davis
- Saucier C., Roux D., Glories Y., 1996, Colloidal stability, polymerized catechins. Influence of polysaccharides. “Oenologie 95. 5<sup>th</sup> International Symposium of Oenologie.”