



BASIC INFORMATION

TARGET	Bloom structure (cuticle and epicuticular wax)
CROP	Wine grape, cv. Merlot (<i>Vitis vinifera</i>)
SPRAY VOLUME	500 l/ha
LOCATION	Somerset West, Western Cape • South Africa
TRIAL DATE	January – February 2014
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FIELD SITUATION

Two rows of a Merlot vineyard in Somerset West were used in this trial. One row was treated with **PREV-AM** 0,4 % and one row was kept as the Untreated Control. Two applications were conducted, 2 weeks and 1 week before harvest.

During berry growth and ripening, the cuticle and epicuticular wax (bloom) passes through various developmental stages. This serves as a protective barrier against water loss and pathogen attack.

The most common genera of wild yeasts found on grape skins include *Metschnikowiaceae*, *Pichia*, *Candida* and *Zygosaccharomyces*. Wild yeasts can produce high-quality, unique-flavored wines; but they are often unpredictable and may introduce less desirable traits to the wine.

Few wild yeast, lactic and acetic acid bacteria naturally live on the surface of grapes. Traditional wine makers, particularly in Europe, advocate use of wild yeast as a characteristic of the region's terroir; but many winemakers prefer to control fermentation with predictable cultured yeast.

CONCLUSIONS

- No significant differences could be seen on any photos for the Untreated or **PREV-AM** treated. The waxy layer was present at the 250x magnification as lighter streaks across the surface for both treatments. The photos with a brushed off bloom looked significantly different.
- We conclude that **PREV-AM** applied at 0,4 % does not wash off the bloom.

FIGURE 1

Grape bunches just before harvest on 24 february 2014. No significant differences were observed.



FIGURE 2

Light microscope photos of the berry skin on the same day as harvest. No significant differences were seen.

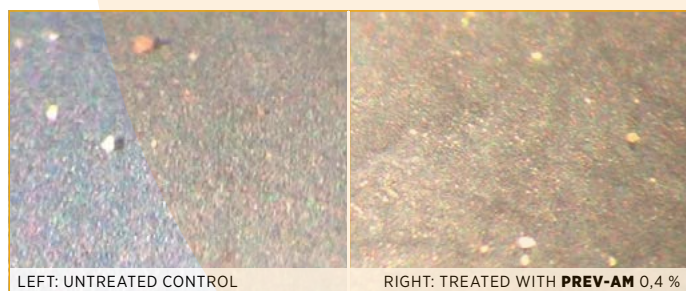


FIGURE 3

Field photo of the bloom which has been brushed off by leaves on the top of the bunch. Significant difference was seen when the bloom was removed.



FIGURE 4

Electron Microscope photos (Stellenbosch University) one day after harvest using the Variable Pressure method.

