

PINNACLE™



PRODUCT

A specific yeast designed for use in bioprotection applications



TYPE

Metschnikowia pulcherrima



ORIGIN

The Australian Wine Research Institute and made under licence by AB Biotek.

AWRI Bioprotect

product information



Applications

AWRI Bioprotect has natural antimicrobial activity that allows this yeast to be used as a bioprotective agent to be added to grapes directly. For good quality grapes with little infection/spoilage, it is possible to partially replace or completely replace the sulphur dioxide if AWRI Bioprotect is combined with other technologies. Bioprotect can be added to the grape bins in the vineyard as well as to the juice prior to standard yeast inoculation.

Fermentation characteristics

- AWRI Bioprotect has a very long lag phase of two to three days; any fermentation of this yeast will be unlikely. As such a *Saccharomyces cerevisiae* yeast of choice is possible. Although AWRI Bioprotect is unlikely to ferment, it protects the juice from the moment of addition.
- This yeast has very low alcohol tolerance of 4-5% v/v.
- *Metschnikowia* are aerobic yeast, thus some foaming is visible after applying this yeast to grapes or grape juice.

Nitrogen requirements

AWRI Bioprotect is considered a low nitrogen consumer and does not need nitrogen additions to undergo its bioprotective properties.

Total SO₂ production

AWRI Bioprotect produces very low Total SO₂ levels during fermentation.

Volatile acidity

This yeast has shown very low VA levels in application trials.

Killer activity

AWRI Bioprotect is Killer Positive, as well as producing pulcherriminic acid, a precursor to the well-known microbial toxin pulcherrimin pigment that can suppress growth of spoilage organisms such as *Brettanomyces* and *Pichia* (Türkel et al., 2009)



Figure 1: Bioprotective effect of *Metschnikowia pulcherrima* Pinnacle AWRI Bioprotect compared to a control *Saccharomyces cerevisiae* yeast on the growth of the spoilage organism *Brettanomyces bruxellensis*. Serial dilutions of the strains (10^{-1} , 10^{-2} and 10^{-3} from right to left) were spotted on nutrient plates.

The information presented is based on our research and commercial testing and provides a general assessment of product performance. Nothing contained herein is representative of a warranty or guarantee for which the manufacturer can be held legally responsible.

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