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Way now clear for haze-preventing enzymes in Australian winemaking

Australian winemakers can now use with confidence the protease enzyme mixture known as Proctase to ensure haze-free wine. An application to Food Standards Australia New Zealand (FSANZ) has just been approved, confirming that the enzymes are allowed for use in Australian winemaking for wines sold domestically or exported to New Zealand.

This approval provides the Australian wine industry with an alternative to bentonite – the clay commonly used to remove haze-forming proteins from white, rosé and sparkling wines. While bentonite is effective at removing proteins, its use results in significant wine losses. One study estimated the annual hidden cost of bentonite in the global wine industry at \$1 billion dollars.

In response to news of the approval, AWRI Managing Director, Dr Dan Johnson said “It is very exciting that the first practical, economically viable alternative to bentonite has now cleared the final regulatory hurdle for use in Australia. This excellent result stems from sustained industry investment in fundamental research and industry-relevant development.”

Proctase is used to treat haze-forming proteins in grape juice, prior to fermentation. After Proctase is added, the juice is heated for one minute. This unfolds the proteins, making them susceptible to enzyme attack. The juice is then cooled before being fermented as normal. Sensory testing has shown no negative impacts from this treatment compared to standard industry bentonite use. Trials have been successfully carried out at laboratory, pilot and winery-scale, with 5000 L volumes of Riesling, Chardonnay and Sauvignon Blanc treated at two wineries during the 2012 vintage. The costs of Proctase and juice heating are considerably lower than the batch bentonite treatment used in all but the largest wineries.

Dr Paul Smith, AWRI Research Manager – Chemistry, indicated that research is in progress to build on the current success “We’re really pleased with how effective the use of proteases with heating has been and look forward to supporting the adoption of this process by Australian winemakers. In the meantime, the team at the AWRI is continuing to investigate several additional promising alternatives to bentonite.”

Winemakers interested in tasting the three commercial-scale Proctase-treated wines and their bentonite-treated equivalents, or in trialling Proctase during the 2015 vintage, should contact the AWRI.

The research and development at the AWRI that led to this breakthrough was supported by Australia’s grapegrowers and winemakers, through their investment body the Australian Grape and Wine Authority, with matching funds from the Australian Government.

For more information, contact Ella Robinson, Communication Manager, AWRI on 0402 402 121 or ella.robinson@awri.com.au.

The Australian Wine Research Institute is the Australian grape and wine industry’s own research organisation. It supports a sustainable and successful grape and wine industry through world class research, practical solutions and knowledge transfer.