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- ★ YAN
- ★ density



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Dedicated Analytical Solutions

Start preparing now for 2012

WITH THE 2011 season behind us, it is now time to start thinking about the 2012 vintage. What better way to prepare for the next year than to do a stocktake of the chemicals and additives that will be required in the winery, and to assess whether they are still sound and fit for use.

The AWRI winemaking and extension services team are often asked about winemaking chemicals and additives. Here are some of the most common questions and responses.

Do winemaking chemicals have an expiry date?

This depends on the chemical but, generally speaking, winemaking chemicals will remain sound if kept in air-tight containers for 12 months.

Most winemaking chemicals are purchased for use within the upcoming vintage, and the amounts purchased are calculated on the expected use during that period.

However, for a number of reasons, chemicals might be left over and expected to be used the following vintage. This is where checking becomes essential before re-using for the following vintage.

Ascorbic/erythorbic acid and potassium metabisulfite (PMS) are the additives most likely to deteriorate, particularly in the presence of oxygen, so air-tight storage is a must. If there is remaining stock of ascorbic/erythorbic acid, PMS and tartaric acid, then these should be checked before re-using for the following vintage.

How do I check that my chemicals are sound or fit for use?

Visit the AWRI website for information on screening tests: www.awri.com.au/industry_support/winemaking_resources/sensory_assessment/screening_tests.asp

Acids and PMS should not contain lumps or hardened clumps. This indicates that the material has been exposed to moisture, which can cause deterioration of the chemical. A simple means of checking is to weigh out a known amount of PMS and dissolve it in water (an accurate balance is required to perform this test). Simply analyse the water for the concentration of free SO₂, which will give you an idea if your PMS is still active and useable.

A similar test can also be performed on ascorbic/erythorbic acid. Tartaric acid should also be checked, especially for purity upon receipt, and for any taint or

contaminant pick-up. The International Oenological Codex (http://news.reseau-concept.net/images/oiv/Client/Codex_2006_FR.pdf) can be used as a reference for screening tests for assessing winemaking chemicals and additives, and these are also summarised on the AWRI website.

The tests are designed to provide an indication as to whether or not the substance contains obvious impurities and/or taints. This is done, most often through a basic sensory assessment (note that PMS should not be sensorily assessed). Where possible, these tests should be conducted with another person and the results measured against analytical laboratory-grade comparable chemicals. This procedure should form part of your quality assurance procedures, or HACCP plan.

It is also recommended, to take retention or holdback samples of screened chemicals and additives. These should be stored in glass jars, with aluminium foil placed under the lid, for a set period of time (a minimum of two years is recommended).

How should I store winemaking chemicals?

Acids and PMS are best stored in sealable opaque plastic containers, free of air and moisture at all times. After vintage is complete, you are unlikely to access these as often, and this is when you should be careful about re-using opened bags. After 12 months, opened bags should be discarded, and unopened bags should be checked before using, as moisture and air might have permeated the material, causing deterioration of the chemical.

Do the bags protect chemicals from contamination?

Generally, no, they don't. Most winemaking chemicals are contained within a paper bag with a plastic lining. Unfortunately, these are not strong enough to prevent permeation of contaminants and taints. Assessing chemicals upon receipt and after periods of non-use is important. Winemaking chemicals should be stored separate to cleaning chemicals.

The AWRI's winemakers are available to help Australian wine and grape producers. Call us on 08 8313 6600 or email at: winemakingservices@awri.com.au. 