



PROTECT YOUR WINE FROM OXIDATION & SPOILAGE!

SO₂ is added to must, juice and wine to aid in the prevention of oxidation and spoilage. It is necessary to determine the actual concentration of free and bound SO₂ present in juice or wine after additions. Free and bound SO₂ combine to form total SO₂. Free SO₂ is active against microorganisms; however too much total SO₂ will inhibit malolactic bacteria during malolactic fermentation. Enartis USA offers direct addition SO₂ and equipment for various methods of testing for both free & total SO₂.

When to Test for SO₂

- After SO₂ additions, it is necessary to determine the actual concentration of free and bound SO₂ present in juice or wine. Prior to additions it is difficult to predict how much of the added SO₂ will be free and how much will be bound. In order to find the amount of bound SO₂, both free and total must be measured. Free SO₂ levels will not significantly increase until all the compounds in juice or wine that will bind with SO₂ have formed bound SO₂.
- After malolactic fermentation is complete, microbial activity is no longer desired. Now is the time to ensure that there is enough SO₂ present to eradicate any remaining microorganisms.
- SO₂ acts as an antioxidant in the bottle, so testing for SO₂ before bottling is essential. Be sure total SO₂ does not exceed the legal limit of 350ppm.

Methods of Analysis

- The Ripper method is the most basic way for testing for SO₂. The set-up is inexpensive and the procedure is quick, however there is a high margin of error. It involves the redox reaction in which sulfur dioxide reacts with iodine in the presence of a starch indicator. Sulfuric acid is added to a wine sample, along with starch indicator. Any sulfur present reacts and binds with the iodine. Unreacted iodine in the presence of starch forms a blue color indicating the end point of the titration. Total SO₂ can be determined in this way by first breaking the bonds of the bound sulfur with a strong alkaline solution such as sodium hydroxide.
- Aeration-Oxidation (AO) is an accurate way of testing for SO₂. It takes longer than the ripper method, but is still relatively simple. Free SO₂ is removed from the juice or wine by passing a stream of air through the acidified sample. The released SO₂ passes through a neutral hydrogen peroxide (H₂O₂) solution, where the reaction between H₂O₂ and SO₂ takes place. Sulfuric acid is formed and titrated with standard sodium hydroxide. For total SO₂, strong acidic conditions and heat dissociate the bound SO₂, releasing it as free SO₂.
- The Segmented Flow Analyzer is the latest SO₂ analysis method. It is as accurate as the AO method, but exceptionally quick. The Segmented Flow Analyzer is a sophisticated instrument good for a high volume of samples. The instrument uses bubbles to separate a wine sample, then the sample is passed through a dialysis membrane. The SO₂ is extracted across the membrane and measured by a spectrophotometer. Using one small sample, the instrument can test for both free and total SO₂ and volatile acidity at the same time.



Inspiring innovation.



Potassium Metabisulfite

Potassium metabisulfite is a widely used additive in winemaking with various functions including working as an antioxidant and an antibacterial agent.

As part of the Esseco Group, the world's largest producer of potassium metabisulfite, Enartis USA is able to meet the SO₂ needs for wineries of every size at competitive prices. Winy, our high-purity, non-clumping, enological potassium metabisulfite, is the superior choice when compared to other products on the market for several reasons:

- Available in 1 kg, 25 kg, per pallet, and per container load.
- Because it is stable with high purity (over 99%) and is packaged in tri-laminate packaging, a long shelf life is guaranteed.
- It does not have an offensive odor or irritate the olfactory membrane.
- The purity specifications of Winy are equal to or greater than those required by law.
- Made from a high-quality raw material, without the metals that can catalyze the oxidation of potassium metabisulfite.
- Produced using a purification process that eliminates oxygen and sulfites that can create sulfates.
- Competitive prices.

Whether you are looking for 1 kg of potassium metabisulfite or a full container load, contact Enartis USA to purchase Winy – THE HIGHER PURITY POTASSIUM METABISULFITE.

Enartis USA also carries the effervescent form of potassium metabisulfite – Effergran and Efferbarrique. The granular, effervescent form allows for additions directly to grapes, must or wine with no need for mixing or dissolving in water. Effergran and Efferbarrique are available in the following sizes:

- Efferbarrique: 2 grams of SO₂, comes in boxes with 40 bags, 12 boxes per case
- Effergran5: 5 grams of SO₂, comes in boxes with 25 bags, 12 boxes per case
- Effergran 125: 50 grams of SO₂, 125 gram bag
- Effergran 25: 100 grams of SO₂, 250 gram bag
- Effergran 1 Kg: 400 grams of SO₂, 1 Kg bag

For further information on sulfiting products, please call 707-838-6312 or email orderdesk@enartis.com.

The indications supplied are based on our current knowledge and experience, but do not relieve the user from adopting the necessary safety precautions or from the responsibility of using the product(s) properly.

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