

Detection of Sulphite in wine and juices with QUANTOFIX® Sulphite

Background



Since ancient times humans have used sulphite [SO_3^{2-}] and sulphur dioxide as antioxidants and preservative agents in wine and juices. Sulphite prevents the growth of microorganisms and the modification through oxygen.

The human organism is generally accustomed to sulphite, but high quantities may cause diarrhoea, nausea and headache.

The German directive for juices "Verordnung über Fruchtsaft..." allows a maximum value of 10 mg/l for sulphur dioxide.

According to the German directive for wine, wine is divided in white wine and red wine. For white wine with less than 5g residual sugar per litre a maximum quantity of 210 mg/l sulphur dioxide is allowed.

Red wine may have a maximum value of 160 mg/l sulphur dioxide.

Since the 25th November 2004 the directive "VO (EG) 1991/2004" is effective. According to this, every wine bottle must be labelled with the addition "contains sulphite" or "contains sulphur dioxide".

Test procedure

Free sulphite:

Fill a glass with sample. Red wine and dark juice should be filtered using activated charcoal paper to avoid false high readings caused by the intense colour of the sample. Dip the test strip into the liquid for one second. Wait 30 seconds and compare the test field with the colour scale on the tube. Multiply the reading by 1.5 to get the result for the SO_2 content. A salmon colouration indicates the presence of free sulphite in wine or juices.



To test currant juice filter with activated charcoal paper



Dip the test strip 1 second into the juice



Compare the test field with the colour scale on the tube

Total sulphite:

Pour wine or juice into a glass. Pre-filter dark juice and wine with activated charcoal paper. Add sodium hydroxide¹⁾ to the sample and bring it to pH12. Dip the QUANTOFIX® Sulphite test strip into the sample for one second. Wait 30 seconds and compare the test field with the colour scale on the tube. A salmon colouration detects total sulphite.



Add sodium hydroxide¹⁾ to the white wine and mix it



Check the value pH12



Dip sulphite test strip into sample for 1 second and compare it with colour scale

Product data and ordering information: QUANTOFIX® Sulfit

Part No	MN91306
Price	£24.40 (ex VAT) per 100 test strips
Colour reaction	white to salmon
Limit of sensitivity	0-10-25-50-100-250-500-1000 mg/l SO ₃ ²⁻



Important information:

Depending on the concentration sodium hydroxide is strongly caustic. Please pay attention on the information on the package as well as on the information in the material safety data sheets.

¹⁾ not provided with the test