

Method Abstract

Summary: The wine sample reacts with sodium hydroxide and then with sulfuric acid to release bound sulfur dioxide. The sulfur dioxide gas diffuses through a membrane into a formaldehyde solution. Following pararosaniline addition, a red complex is formed, and the absorbance is measured at 560 nm.

Interferences: Proteins and colored compounds that could interfere are removed via dialysis.

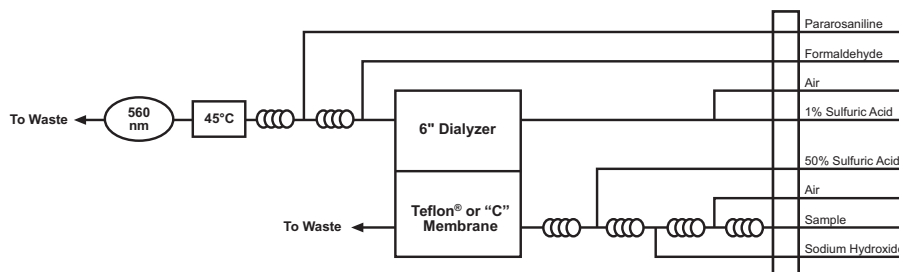
Performance Specifications:

Range:	6.0–300 mg/L (as SO ₂)
Throughput:	60 samples/hour
Precision:	
50 mg/L	<3% RSD
200 mg/L	<2% RSD
Method Detection Limit (MDL):	Not determined

Chemicals:

Brij®-35 30% w/v (OI Analytical Part #A21-0110-33)	Phosphoric Acid, concentrated, H ₃ PO ₄
Ethanol, 95%, C ₂ H ₅ OH	Sodium Hydroxide, NaOH
Formaldehyde, 37% w/v, HCHO	Sodium Metabisulfite, Na ₂ S ₂ O ₅
Pararosaniline Chloride, C ₁₉ H ₁₈ N ₃ Cl	Sulfuric Acid, concentrated, H ₂ SO ₄

Basic Flow Diagram:



Note: The Method Detection Limit (MDL) of this method was not determined because total sulfite concentrations below 6.0 mg/L are not of interest in the analysis of wine.

Selected References: Porter, D.G.; Sawyer, R. *Analyst*, **1972**, *97*, 569-575.

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Zoecklein, B. W.; Fugelsang, K. C.; Gump, B. H.; Nury, F. S. *Production Wine Analysis*, Von Nostrand Reinhold: New York, 1989.

Blouin, Jacques. *Techniques d'Analyses des Mouts et des Vins*. Dujardin-Salleron, 2, rue de la Durance, 75012 Paris, France, p 251–254, Method G5.

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