

Method Abstract

Summary: The wine sample is mixed with the total acidity buffer. The sample acidity neutralizes a proportionate amount of hydroxide ions (OH⁻) in the buffer. The decreased concentration of OH⁻ ions dialyzes across a membrane, causing the bromocresol purple indicator to change color. The absorbance is measured at 420 nm.

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

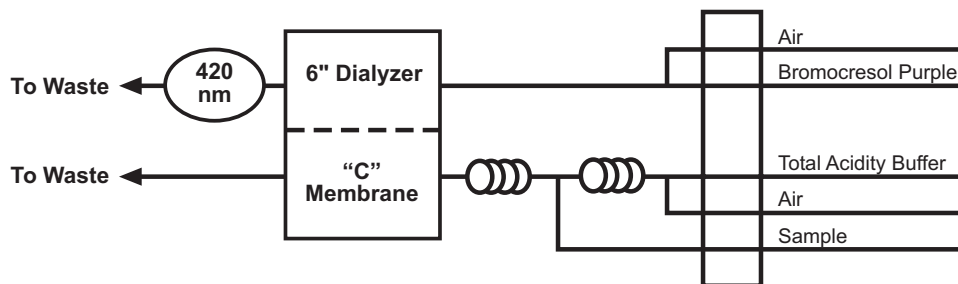
Performance Specifications:

Range:	0.35–15 g/L as tartaric acid
	0.035–1.5 g/100 mL as tartaric acid
Throughput:	60 samples/hour
Precision:	
1.0 g/L or 0.10 g/100 mL	<3% RSD
15 g/L or 1.5 g/100 mL	<2% RSD
Method Detection Limit (MDL):	not determined

Chemicals:

Brij®-35, 30% w/v (Part #A21-0110-33)	Sodium Phosphate Dibasic Dodecahydrate, Na ₂ HPO ₄ •12H ₂ O
Bromocresol Purple, C ₂₁ H ₁₆ Br ₂ O ₃ S	Tartaric Acid, C ₄ H ₆ O ₆
Ethanol, anhydrous, C ₂ H ₅ OH	Triton® X-100, 4-(C ₈ H ₁₇)C ₆ H ₄ (OCH ₂ CH ₂) _n OH, n~10
Potassium Phosphate Monobasic, KH ₂ PO ₄	
Sodium Hydroxide, NaOH	
Sodium Metabisulfite, Na ₂ S ₂ O ₅	

Basic Flow Diagram:



Note: The Method Detection Limit (MDL) of this method was not determined because total acidity concentrations below 0.01 g/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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