



NQAC

Nestlé Quality Assurance Center  
Dublin

# Technical Datasheet

**Analysis Name:** Sulfites in Foods by Monier-Williams

**Method Number:** AOAC 990.28

**Scope of Application:** This general method measures free sulfites and a reproducible amount of bound sulfites in food and food ingredients. False positive results are obtained from garlic powder, soy protein, onions, leeks, kale, brussel sprouts, horseradish, cabbage, and ginger.

**Description:** Sulfites are converted to sulfur dioxide by heating with a refluxing solution of hydrochloric acid. A nitrogen stream carries the  $\text{SO}_2$  gas through a water-cooled condenser into hydrogen peroxide, which oxidizes the  $\text{SO}_2$  to sulfuric acid. The  $\text{H}_2\text{SO}_4$  is titrated with sodium hydroxide. The sample sulfite content is proportional to the generated  $\text{H}_2\text{SO}_4$ .

**Sample Weight** 200 g

**Required:** We recommend that samples be sent in original containers to avoid degradation or loss of sulfites. Samples will be tested as received.

**Method Reference:** AOAC, 990.28, 17th Edition 2000: "Sulfites in Foods, Optimized Monier-Williams Method".

Food Chemical Codex (FCC) IV, "Sulfur Dioxide Determination", pp 841 – 842.

**Analytical Platform:** Titration

**Special Information:** False positives are obtained from garlic, soy, onions, leeks, kale, brussel sprouts, horseradish, cabbage, and ginger.

Analyte Reported	Alias	Unit of Measure	Limit of Quantification	Reproducibility
Sulfur Dioxide		mg/kg	10.0	20%