abcam

Product datasheet

Total Sulphite Assay Kit (Colorimetric) ab211102

1 Abreviews 2 Images

Overview

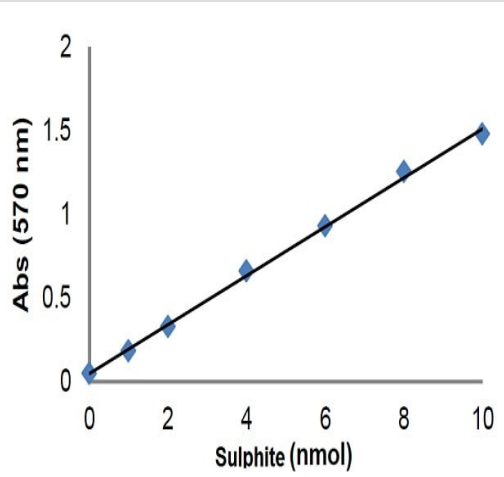
Product name	Total Sulphite Assay Kit (Colorimetric)
Detection method	Colorimetric
Sample type	Food samples
Assay type	Quantitative
Sensitivity	20 µM
Product overview	Total Sulphite Assay Kit (Colorimetric) (ab211102) provides a simple and sensitive assay to detect small concentrations of sulphite present in a variety of food and beverage samples such as wine, juices, dairy, canned products, juices or dried fruit. This assay is based on the oxidation of sulphite to sulfate, which reacts with the enzyme mix to produce a stable signal that can be detected at OD = 570 nm, and that is directly proportional to the amount of sulphite present in the sample. This assay is very sensitive and can detect as low as 20 µM of sulphite in a variety of samples.
Notes	This product is manufactured by BioVision, an Abcam company and was previously called K699 Total Sulfite Assay Kit (Colorimetric). K699-100 is the same size as the 100 test size of ab211102. Sulphites (also known as sulfites) are substances that occur naturally in the human body as by-products of the metabolism of amino acids containing sulfur side chains. They are readily oxidized to sulfates via several enzymatic reactions and excreted in urine at the rate of 1000 mg/day. The term sulphite is used for all sulphite-derived molecules: bisulphites, metasulphites, and SO_2. Total sulphite is defined as the sum of bound and free sulphite. Sulphites are often considered as allergens due to the adverse symptoms observed in asthmatic patients. Exogenous sources of sulphites include polluted air, and food and beverages containing sulphur dioxide (SO_2). SO_2 is a molecule that easily reacts with several small compounds including aldehydes, ketones, anthocyanins, cobalamine, thiamine, NAD and flavins. SO_2 also interacts with cysteine residues in proteins and promotes cross-linking. Sulphites are also used as regulated food preservatives/additives/enhancers in dried fruits, wine and beer. They are considered as GRAS (Generally Recognized as Safe) in food and beverages. In wine, SO_2 reacts with sugars, aldehydes and anthocyanins.
Platform	Microplate reader

Properties

Storage instructions Store at -20°C. Please refer to protocols.

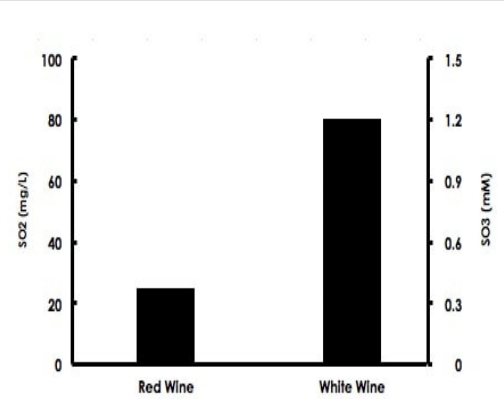
Components	100 tests
Sulphite Assay Buffer	1 x 25ml
Sulphite Enzyme Mix (200 µg)	1 vial
Sulphite Oxidizing Mix	1 x 80µl
Sulphite Probe	1 x 200µl
Sulphite Stabilizer	1 x 25ml
Sulphite Standard (200 µmol)	5 vials

Images



Total Sulphite Assay Kit (Colorimetric) (ab211102)

Typical Sulphite standard calibration curve.



Total Sulphite Assay Kit (Colorimetric) (ab211102)

Estimation of Total Sulphite Concentration in two wine samples. White wine was diluted 16-fold in Sulphite Assay Buffer and 25 µL of diluted sample was spiked with 6 nmol of Sulphite Standard. Red wine was neutralized, clarified using PVPP, and spiked with 6 nmol of Sulphite Standardl. Samples were assayed following the kit protocol. Total Sulphite concentrations: Red Wine: 24.2 mg/L SO_2; White wine: 80.9 mg/L SO_2.

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