

# Specification for Sodium Metabisulphite

Sodium metabisulphite

$\text{Na}_2\text{S}_2\text{O}_5$

INS:223

Formula wt 190.11

CAS:[7681-57-4]

## DESCRIPTION

Sodium Metabisulphite occurs as colorless crystals or as a white to yellow, crystalline powder. It is freely soluble in water and slightly soluble in alcohol. Its solutions are acid to litmus.

**Function** Preservative; antioxidant

## REQUIREMENTS

**Identification** A 1:10 aqueous solution gives positive tests for *Sodium and for Sulfite*, Appendix IIIA.

**Assay** Not less than 90.0% and not more than 100.5% of  $\text{Na}_2\text{S}_2\text{O}_5$

**Iron** Not more than 10mg/kg.

**Lead** Not more than 2mg/kg.

**Selenium** Not more than 5mg/kg.

## TESTS

**Assay** Add about 200 mg of sample, accurately weighted, to exactly 50mL of 0.1 N iodine contained in a glass-stoppered flask, and stopper the flask. Allow the solution to stand for 5 min, and 1 mL of hydrochloric Acid, and titrate the excess iodine with 0.1 N sodium thiosulfate, adding starch TS as the indicator. Each milliliter of 0.1 N iodine is equivalent to 4.752mg of  $\text{Na}_2\text{S}_2\text{O}_5$

**Iron** Add 2 mL of hydrochloric acid to 500 mg of sample, and evaporate to dryness on a steam bath. Dissolve the residue in 2 mL of hydrochloric acid and 20 mL of water, add a few drops of bromine TS, and boil the solution to remove the bromine. Cool, dilute with water to 25 mL, then add 50mg of ammonium persulfate and 5 mL of ammonium thiocyanate TS. Any red or pink color does not exceed that produced in a control containing 1.0 mL of *Iron Standard Solution*.

**Lead** Determine as directed in the *APDC Extraction Method* under *Lead Limit Test*, Appendix IIIB.

**Selenium** Determine as directed in *Method I* under *Selenium Limit Test*, Appendix IIIB, using 200 mg of sample and 100 mg of magnesium oxide.

**Packaging and Storage** Store in well-filled, tight containers, and avoid exposure to excessive heat.