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22 Date of Revision

4 May 2017.

Sodium Sulfite

1 Nonproprietary Names

BP: Sodium Sulfite

JP: Dried Sodium Sulfite

PhEur: Sodium Sulfite

USP–NF: Sodium Sulfite

2 Synonyms

Disodium sulfite; exsiccated sodium sulfite; E221; natrii sulfis anhydricus; natrii sulfis siccatus; sulfurous acid disodium salt.

3 Chemical Name and CAS Registry Number

Sodium sulfite [7757-83-7]

4 Empirical Formula and Molecular Weight

Na₂SO₃ 126.04

5 Structural Formula

See Section 4.

6 Functional Category

Antimicrobial preservative; antioxidant.

7 Applications in Pharmaceutical Formulation or Technology

Sodium sulfite is used as an antioxidant in applications similar to those for sodium metabisulfite.⁽¹⁾ It is also an effective antimicrobial preservative, particularly against fungi at low pH (0.1% w/v of

sodium sulfite is used). Sodium sulfite is used in cosmetics, food products, and pharmaceutical applications such as parenteral formulations, inhalations, oral formulations, and topical preparations.

See also Sodium Metabisulfite.

8 Description

Sodium sulfite occurs as an odorless white powder or hexagonal prismatic crystals. Note that the commercially available sodium sulfite is often presented as a white to tan- or pink-colored powder that would not conform to the pharmacopeial specification.

9 Pharmacopeial Specifications

See Table I.

Table I: Pharmacopeial specifications for sodium sulfite.

Test	JP XVII	PhEur 9.2	USP 40–NF 35 S1
Characters	+	+	–
Identification	+	+	+
Appearance of solution	–	+	+
Heavy metals	≤20 ppm	–	≤10 ppm
Arsenic	≤4 ppm	–	–
Iron	–	≤10 ppm	≤10 ppm
Selenium	–	≤10 ppm	≤10 ppm
Thiosulfates	+	≤0.1%	≤0.1%
Zinc	–	≤25 ppm	≤25 ppm
Assay	≥97%	95.0–100.5%	95.0–100.5%