



>>Entry Name: Sodium sulfite (Na₂SO₃)

ENTRY UNDER REVIEW

Synonym(s): Disodium sulfite. Sulfurous acid disodium salt, 8Cl

CAS Registry Number: 7757-83-7

Extra CAS Registry Numbers(s): 10102-15-5 10579-83-6

Na₂SO₃

Molecular Formula: Na₂O₃S

Molecular Weight: 126.044

Accurate Mass: 125.936349

Percentage Composition: Na 36.48%; O 38.08%; S 25.44%

Source/Synthesis: Synth. by reaction of Na₂CO₃ or NaOH with SO₂ gas. Alternatively obt. by treatment of NaCl with (NH₄)₂SO₃. Cryst. from aq. soln. as the heptahydrate which dehydrates when heated to 200°

Use/Importance: Commercially available. Antioxidant. Used in photographic processing and as a pulping agent (normally with NaOH or NaHCO₃) for wood, waste paper, etc.

Physical Description: Moisture sensitive white hexagonal cryst.

Solubility: V. sol. H₂O (13 g per 100 cm³ at 0°; 28 g per 100 cm³ at 80°); spar. sol. EtOH

Other Data: ΔH_f° -1090 kJ mol⁻¹; ΔG_f° -1002 kJ mol⁻¹; S° 146 J K⁻¹ mol⁻¹

Hazard & Toxicity: Irritant

Aldrich: 23932-1

Fluka: 71988

Sigma: S4672

References:

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Seibert, H., *Z. Anorg. Allg. Chem.*, 1954, **275**, 225, (*Raman*)

Evans, J.C. *et al.*, *Can. J. Chem.*, 1955, **33**, 1270, (*ir, Raman*)

Newman, G. *et al.*, *Spectrochim. Acta*, 1963, **19**, 213, (*ir*)

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