



>>Entry Name: Sodium selenite (Na₂SeO₃)

Synonym(s): Disodium selenate(IV). Selenious acid disodium salt, 8Cl. Selenic(IV) acid disodium salt

CAS Registry Number: 10102-18-8

Extra CAS Registry Numbers(s): 14013-56-0

Na₂SeO₃

Molecular Formula: Na₂O₃Se

Molecular Weight: 172.938

Accurate Mass: 173.880799

Percentage Composition: Na 26.59%; O 27.75%; Se 45.66%

Source/Synthesis: Synth. by reaction of Na₂SeO₄ with Na₂CO₃ at 700-800°. Synth. from mechanochemical activation (vibrational mill) of SeO₂/Na₂CO₃ mixt.

Use/Importance: Commercially available. Used in the electroplating of copper and in the prep. of electrophotographic photoreceptors

Physical Description: Moisture sensitive white powder. Undergoes monoclinic to hexagonal transformation at 617°. Dec. on heating to form Na₂O and SeO₂ which dec. further to Se and O₂

Melting Point: Mp 710°

Solubility: V. sol. H₂O (85 g per 100 cm³ at 20°)

Other Data: ΔH_f^o -958 kJ mol⁻¹

Hazard & Toxicity: Highly toxic

Aldrich: 21448-5

Fluka: 71950

Sigma: S5779

>>Derivative: Pentahydrate

CAS Registry Number: 26970-82-1

Molecular Formula: H₁₀Na₂O₈Se

Molecular Weight: 263.014

Percentage Composition: H 3.83%; Na 17.48%; O 48.66%; Se 30.02%

Source/Synthesis: Commercially available. Cryst. from Na₂SeO₃ aq. at <35°

Physical Description: White tetragonal cryst.; dec. on heating by H₂O loss

Solubility: Sol. H₂O; insol. EtOH

Hazard & Toxicity: Highly toxic

Aldrich: 30845-5

Fluka: 71955

>>Derivative: Octahydrate

CAS Registry Number: 41292-05-1

Molecular Formula: H₁₆Na₂O₁₁Se

Molecular Weight: 317.059

Percentage Composition: H 5.09%; Na 14.50%; O 55.51%; Se 24.90%

Source/Synthesis: Cryst. from aq. soln. at <-8°

Physical Description: Colourless cryst.

Hazard & Toxicity: Highly toxic

References:

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