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Sodium Selenite,

Na_2SeO_3 172.94 CAS RN®: 10102-18-8.—White, odorless, crystalline powder, usually partially hydrated. Freely soluble in water; insoluble in alcohol.

Assay: Accurately weigh about 180 mg, previously dried at 120° to constant weight, and dissolve it in 50 mL of water in a glass-stoppered flask. Add, successively, 3 g of potassium iodide and then 5 mL of hydrochloric acid, insert the stopper, and allow to stand for 10 minutes. Add 50 mL of water, 50.0 mL of 0.1 N sodium thiosulfate VS, and 3 mL of starch TS, and immediately titrate with 0.1 N iodine VS to a blue color. Perform a blank determination. The difference in volumes of 0.1 N iodine is equivalent to 4.323 mg of Na_2SeO_3 . Between 98% and 101% is found.

Solubility: One g in 10 mL of water shows not more than a faint haze.

Carbonate: To 500 mg add 1 mL of water and 2 mL of diluted hydrochloric acid: no effervescence is produced.

Chloride (Reagent test): A 500-mg portion shows not more than 0.05 mg of Cl (0.01%).

Nitrate (Reagent test): A 200-mg portion dissolved in 3 mL of water shows not more than 0.02 mg of NO_3 (0.01%).

Selenate and Sulfate (as SO_4): To 500 mg in a small evaporating dish add 20 mg of sodium carbonate and 10 mL of hydrochloric acid. Slowly evaporate the solution on a steam bath under a hood to dryness. Wash the sides of the dish with 5 mL of hydrochloric acid, and again evaporate to dryness. Dissolve the residue in a mixture of 15 mL of hot water and 1 mL of hydrochloric acid. Proceed as directed under *Sulfate in Reagents* (Reagent test, *Method I*), beginning with "Filter the solution." The test specimen shows no more turbidity than that produced by 0.15 mg of SO_4 (0.03%).

Auxiliary Information - Please [check for your question in the FAQs](#) before contacting USP.

Topic/Question	Contact	Expert Committee
SODIUM SELENITE	Margareth R.C. Marques Principal Scientific Liaison	HDQ Headquarters

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