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Add the following:

0.05 N Sodium Thiosulfate VS

Transfer 500 mL of [0.1 N sodium thiosulfate VS](#) to a 1000-mL volumetric flask. Dilute with [carbon dioxide-free water](#) to volume.

Standardization

See [Volumetric Solutions, 1. Introduction](#).

See [Titrimetry \(541\)](#).

Standardize by one of the following procedures.

[NOTE—Other standardization procedures may be used. See [Volumetric Solutions, 2. Preparation and Standardization, 2.3 Standardization](#).]

Standardization with visual endpoint: Accurately weigh about 25 mg of primary standard [potassium iodate](#), previously dried according to the label instructions or, if this information is not available, dried at 180° for 1 h, and dissolve in 100 mL of [water](#) in a glass-stoppered, 500-mL flask. Swirl to dissolve the solid, remove the stopper, and quickly add 500 mg of [potassium iodide](#) and 5 mL of [hydrochloric acid](#). Titrate the liberated iodine with the 0.05 N sodium thiosulfate solution until the solution is pale yellow. Add 3 mL of [starch TS](#), and continue the titration until the blue color disappears. Perform a blank determination.

where Assay is the content/potency of potassium iodate.

$$N = \frac{\text{mgKIO}_3 \times (\text{Assay}/100)}{35.67 \times [\text{mL}(\text{sample}) - \text{mL}(\text{blank})] \text{Na}_2\text{S}_2\text{O}_3}$$

Standardization with potentiometric endpoint: Accurately weigh about 25 mg of primary standard [potassium iodate](#), previously dried according to the label instructions or, if this information is not available, dried at 180° for 1 h, and dissolve in 100 mL of [water](#) in a glass-stoppered, 500-mL flask. Swirl to dissolve the solid, remove the stopper, and quickly add 500 mg of [potassium iodide](#) and 5 mL of [hydrochloric acid](#). Titrate the liberated iodine with the 0.05 N sodium thiosulfate solution using a combined platinum electrode. Perform a blank determination.

where Assay is the content/potency of potassium iodate.

$$N = \frac{\text{mgKIO}_3 \times (\text{Assay}/100)}{35.67 \times [\text{mL}(\text{sample}) - \text{mL}(\text{blank})] \text{Na}_2\text{S}_2\text{O}_3}$$

Restandardize the solution as frequently as supported by laboratory stability data. In the absence of such data, restandardize the solution weekly.

[NOTE—If this volumetric solution is used in a qualitative application such as pH adjustment, dissolution medium, or diluent, its standardization is not required.]▲ (USP 1-DEC-2020)

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

Topic/Question	Contact	Expert Committee
0.05 N SODIUM THIOSULFATE VS	Margareth R.C. Marques Principal Scientific Liaison	HDQ Headquarters

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