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Strong Iodine Solution

DEFINITION

Strong Iodine Solution contains, in each 100 mL, NLT 4.5 g and NMT 5.5 g of iodine (I), and NLT 9.5 g and NMT 10.5 g of potassium iodide (KI).

Strong Iodine Solution may be prepared by dissolving 50 g of Iodine and 100 g of Potassium Iodide in 100 mL of Purified Water, then adding Purified Water to make the product measure 1000 mL.

IDENTIFICATION

- **A.**

  Analysis: Dilute 1 drop with 10 mL of water, and add 1 mL of starch TS.

  Acceptance criteria: A deep blue color is produced.

- **B. Identification Tests—General, *Potassium*⟨191⟩ and *Iodide*⟨191⟩**

  Analysis: Evaporate a few mL on a steam bath to dryness, and ignite gently to volatilize any free iodine.

  Acceptance criteria: Meets the requirements

ASSAY

- **Iodine**

  Sample solution: Transfer 10.0 mL of Solution into a glass-stoppered 500-mL flask, and add 10 mL of water.

  Titrimetric system

  Mode: Direct titration

  Titrant: 0.1 N sodium thiosulfate VS

  Endpoint detection: Visual

  Analysis: Titrate the *Sample solution* with *Titrant*, adding 3 mL of starch TS as the endpoint is approached. Each mL of 0.1 N sodium thiosulfate is equivalent to 12.69 mg of iodine (I).

  Acceptance criteria: 4.5–5.5 g of iodine (I) in each 100 mL

- **Potassium Iodide**

  Sample solution: Transfer 10.0 mL of Solution to a glass-stoppered 500-mL flask, add 30 mL of water and 50 mL of hydrochloric acid, and cool to room temperature.

  Titrimetric system

  Mode: Direct titration

  Titrant: 0.05 M potassium iodate VS

  Endpoint detection: Visual

  Analysis: Titrate the *Sample solution* with *Titrant* until the dark brown solution that is produced becomes pale brown. Add 1 mL of amaranth TS, and continue the titration slowly until the red color just changes to yellow. The difference between the number of mL of 0.05 M potassium iodate used and half the number of mL of *Titrant* used in the *Assay* for *Iodine*, multiplied by 16.60, represents the number of mg of KI in the volume of the Solution taken.

  Acceptance criteria: 9.5–10.5 g of potassium iodide (KI) in each 100 mL

ADDITIONAL REQUIREMENTS

- **Packaging and Storage:** Preserve in tight containers, preferably at a temperature not exceeding 35°.

Topic/Question	Contact	Expert Committee
STRONG IODINE SOLUTION	Brian Serumaga Science Program Manager	CMP2020 Compounding 2020

Chromatographic Database Information: Chromatographic Database

Most Recently Appeared In:
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