

and 5 mL of 2-propanol by warming. After cooling, add 30 mL of 1,4-dioxane, and titrate with 0.1 mol/L perchloric acid-dioxane VS (potentiometric titration). Perform a blank determination, and make any necessary correction.

Each mL of 0.1 mol/L perchloric acid-dioxane VS  
= 25.617 mg of C<sub>23</sub>H<sub>14</sub>Na<sub>2</sub>O<sub>11</sub>

**Containers and storage** Containers—Tight containers.  
Storage—Light-resistant.

## Sodium Iodide

ヨウ化ナトリウム

NaI: 149.89

Sodium Iodide, when dried, contains not less than 99.0% of NaI.

**Description** Sodium Iodide occurs as colorless crystals or a white, crystalline powder. It is odorless.

Sodium Iodide is very soluble in water, and freely soluble in glycerin and in ethanol (95).

It deliquesces in moist air.

**Identification** A solution of Sodium Iodide (1 in 20) responds to the Qualitative Tests for sodium salt and for iodide.

**Purity** (1) Clarity and color of solution—Dissolve 1.0 g of Sodium Iodide in 2 mL of water: the solution is clear and colorless.

(2) Alkali—Dissolve 1.0 g of Sodium Iodide in 10 mL of freshly boiled and cooled water, and add 1.0 mL of 0.005 mol/L sulfuric acid VS and 1 drop of phenolphthalein TS: no color is produced.

(3) Chloride, bromide and thiosulfate—Dissolve 0.20 g of Sodium Iodide in 5 mL of ammonia TS, add 15.0 mL of 0.1 mol/L silver nitrate VS, shake for a few minutes, and filter. To 10 mL of the filtrate add 15 mL of dilute nitric acid: no brown color appears. The solution has no more turbidity than the following control solution.

Control solution: To 0.30 mL of 0.01 mol/L hydrochloric acid VS add 2.5 mL of ammonia TS, 7.5 mL of 0.1 mol/L silver nitrate VS and 15 mL of dilute nitric acid.

(4) Nitrate, nitrite and ammonium—Place 1.0 g of Sodium Iodide in a 40-mL test tube, and add 5 mL of water, 5 mL of sodium hydroxide TS and 0.2 g of aluminum wire. Insert a pledget of absorbent cotton in the mouth of the test tube, and place a piece of moistened red litmus paper on the cotton. Heat the test tube on a water bath for 15 minutes: the evolved gas does not turn moistened red litmus paper to blue.

(5) Cyanide—Dissolve 0.5 g of Sodium Iodide in 10 mL of water. To 5 mL of this solution add 1 drop of iron (II) sulfate TS and 2 mL of sodium hydroxide TS, warm, and add 4 mL of hydrochloric acid: no green color develops.

(6) Iodate—Dissolve 0.5 g of Sodium Iodide in 10 mL of freshly boiled and cooled water, and add 2 drops of dilute sulfuric acid and 1 drop of starch TS: no blue color develops immediately.

(7) Heavy metals—Proceed with 2.0 g of Sodium Iodide

according to Method 1, and perform the test. Prepare the control solution with 2.0 mL of Standard Lead Solution (not more than 10 ppm).

(8) Barium—Dissolve 0.5 g of Sodium Iodide in 10 mL of water, add 1 mL of dilute sulfuric acid, and allow to stand for 5 minutes: no turbidity is produced.

(9) Potassium—Dissolve 1.0 g of Sodium Iodide in water, and add water to make 100 mL. To 4.0 mL of this solution add 1.0 mL of dilute acetic acid, shake, add 5.0 mL of a solution of sodium tetraphenylboron (1 in 30), immediately shake, and allow to stand for 10 minutes: the solution has no more turbidity than the following control solution.

Control solution: Dissolve 9.5 mg of potassium chloride in water, and add water to make 1000 mL. To 4.0 mL of this solution add 1.0 mL of dilute acetic acid, shake, and then proceed as directed above.

(10) Arsenic—Prepare the test solution with 0.40 g of Sodium Iodide according to Method 1, and perform the test using Apparatus B (not more than 5 ppm).

**Loss on drying** Not more than 5.0% (2 g, 120°C, 2 hours).

**Assay** Weigh accurately about 0.4 g of Sodium Iodide, previously dried, in an iodine flask, dissolve in 10 mL of water, add 35 mL of hydrochloric acid and 5 mL of chloroform, and titrate with 0.05 mol/L potassium iodate VS while shaking vigorously until the red-purple color of the chloroform layer disappears. The end point is attained when the red-purple color does not reappear in the chloroform layer within 5 minutes after the layer has been decolorized.

Each mL of 0.05 mol/L potassium iodate VS  
= 14.989 mg of NaI

**Containers and storage** Containers—Tight containers.  
Storage—Light-resistant.

## Sodium Iodide (<sup>123</sup>I) Capsules

ヨウ化ナトリウム (<sup>123</sup>I) カプセル

Sodium Iodide (<sup>123</sup>I) Capsules contain iodine-123 in the form of sodium iodide.

It conforms to the requirements of Sodium Iodide (<sup>123</sup>I) Capsules in the Minimum Requirements for Radiopharmaceuticals.

## Sodium Iodide (<sup>131</sup>I) Capsules

ヨウ化ナトリウム (<sup>131</sup>I) カプセル

Sodium Iodide (<sup>131</sup>I) Capsules are prepared by dispensing Sodium Iodide (<sup>131</sup>I) Solution into capsules and drying it.

Sodium Iodide (<sup>131</sup>I) Capsules conform to the requirements of Sodium Iodide (<sup>131</sup>I) Capsules in the Minimum Requirements for Radiopharmaceuticals.