

make exactly 500 mL. Pipet 5 mL of this solution, and add a solution of anhydrous sodium carbonate (1 in 100) to make exactly 200 mL. Perform the test with this solution as directed under the Ultraviolet-visible Spectrophotometry. Determine the absorbance  $A$  of this solution at the wavelength of maximum absorption at about 580 nm, using water as the blank.

$$\begin{aligned} & \text{Amount (mg) of } C_{20}H_8Br_4Na_2O_{10}S_2 \\ & = \frac{A}{881} \times 200,000 \end{aligned}$$

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

## Sulfobromophthalein Sodium Injection

スルホブロモフタレインナトリウム注射液

Sulfobromophthalein Sodium Injection is an aqueous solution for Injection. It contains not less than 94% and not more than 106% of the labeled amount of sulfobromophthalein sodium ( $C_{20}H_8Br_4Na_2O_{10}S_2$ ; 838.00).

**Method of preparation** Prepare as directed under Injections, with Sulfobromophthalein Sodium.

**Description** Sulfobromophthalein Sodium Injection is a clear and colorless or pale yellow liquid.

pH: 5.0 – 6.0

**Identification (1)** Measure a volume of Sulfobromophthalein Sodium Injection, equivalent to 0.02 g of Sulfobromophthalein Sodium according to the labeled amount, and proceed as directed in the Identification (1) under Sulfobromophthalein Sodium.

**(2)** Measure a volume of Sulfobromophthalein Sodium Injection, equivalent to 0.1 g of Sulfobromophthalein Sodium according to the labeled amount, add 0.5 g of anhydrous sodium carbonate, and evaporate on a water bath to dryness. Ignite the residue until it is charred. Proceed as directed in the Identification (2) under Sulfobromophthalein Sodium.

**Pyrogen** Add isotonic sodium chloride solution to Sulfobromophthalein Sodium Injection to make a 0.5 w/v% solution of Sulfobromophthalein Sodium according to the labeled amount. Inject into each of the rabbits 5 mL of this solution per kg of body mass: it meets the requirements of the Pyrogen Test.

**Assay** Measure exactly a volume of Sulfobromophthalein Sodium Injection, equivalent to about 0.1 g of sulfobromophthalein sodium ( $C_{20}H_8Br_4Na_2O_{10}S_2$ ), add water to make exactly 500 mL, and proceed as directed in the Assay under Sulfobromophthalein Sodium.

$$\begin{aligned} & \text{Amount (mg) of sulfobromophthalein sodium} \\ & (C_{20}H_8Br_4Na_2O_{10}S_2) \\ & = \frac{A}{881} \times 200,000 \end{aligned}$$

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

## Sulfur

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S: 32.07

Sulfur, when dried, contains not less than 99.5% of S.

**Description** Sulfur occurs as a light yellow to yellow powder. It is odorless and tasteless.

It is freely soluble in carbon disulfide, and practically insoluble in water, in ethanol (95) and in diethyl ether.

**Identification (1)** Ignite Sulfur: it burns with a blue flame and gives a pungent odor of sulfur dioxide.

**(2)** Dissolve 5 mg of Sulfur in 5 mL of sodium hydroxide TS by heating in a water bath, cool, and add 1 drop of sodium pentacyanonitrosylferrate (III) TS: a blue-purple color develops.

**(3)** Boil 1 mg of sulfur with 2 mL of pyridine and 0.2 mL of sodium hydrogen carbonate TS: a blue color develops.

**Purity (1)** Clarity of solution—Dissolve 1.0 g of Sulfur in a mixture of 20 mL of a solution of sodium hydroxide (1 in 6) and 2 mL of ethanol (95) by boiling: the solution is clear. Dissolve 2.0 g of Sulfur in 10 mL of carbon disulfide: the solution is almost clear or slightly opalescent.

**(2)** Acid or alkali—Shake 2.0 g of Sulfur with 50 mL of freshly boiled and cooled water, and add 2 drops of phenolphthalein TS: no red color develops. Further add 1.0 mL of 0.1 mol/L sodium hydroxide VS: a red color develops.

**(3)** Arsenic—Prepare the test solution with 0.20 g of Sulfur according to Method 3, and perform the test using Apparatus B (not more than 10 ppm).

**Loss on drying** Not more than 1.0% (1 g, in vacuum, not more than 0.67 kPa, silica gel, 4 hours).

**Residue on ignition** Not more than 0.25% (1 g).

**Assay** Weigh accurately about 0.4 g of Sulfur, previously dried, dissolve in 20 mL of potassium hydroxide-ethanol TS and 10 mL of water by boiling, cool, and add water to make exactly 100 mL. Transfer exactly 25 mL of the solution to a 400-mL beaker, add 50-mL of hydrogen peroxide TS, and heat on a water bath for 1 hour. Acidify the solution with dilute hydrochloric acid, add 200 mL of water, heat to boil, add hot barium chloride TS dropwise until no more precipitate is formed, and heat on a water bath for 1 hour. Collect the precipitate, and wash with water until the last washing shows no opalescence with silver nitrate TS. Dry the precipitate, heat strongly to constant mass, and weigh as barium sulfate ( $BaSO_4$ ; 233.39). Perform a blank determination, and make any necessary correction.

$$\begin{aligned} & \text{Amount (mg) of sulfur (S)} \\ & = \text{amount (mg) of barium sulfate (BaSO}_4\text{)} \times 0.13739 \end{aligned}$$