

and acetic acid (100) (7:3), and titrate with 0.1 mol/L perchloric acid VS (potentiometric titration).

Each mL of 0.1 mol/L perchloric acid VS  
= 18.065 mg of  $C_{14}H_{30}Cl_2N_2O_4$

**Containers and storage** Containers—Tight containers.

## Suxamethonium Chloride for Injection

注射用塩化スキサメトニウム

Suxamethonium Chloride for Injection is a preparation for injection which is dissolved before use. It contains not less than 93% and not more than 107% of the labeled amount of suxamethonium chloride ( $C_{14}H_{30}Cl_2N_2O_4$ ; 361.31).

The concentration of Suxamethonium Chloride for Injection should be stated as the amount of suxamethonium chloride ( $C_{14}H_{30}Cl_2N_2O_4$ ).

**Method of preparation** Prepare as directed under Injections, with Suxamethonium Chloride.

**Description** Suxamethonium Chloride for Injection occurs as a white, crystalline powder or mass.

**Identification** Take an amount of Suxamethonium Chloride for Injection, equivalent to 0.05 g of Suxamethonium Chloride according to the labeled amount, dissolve in water to make 10 mL, and use this solution as the sample solution. Separately, dissolve 0.05 g of suxamethonium chloride for thin-layer chromatography in 10 mL of water, and use this solution as the standard solution. Perform the test with these solutions as directed under the Thin-layer Chromatography. Spot 1  $\mu$ L each of the sample solution and the standard solution on a plate of cellulose for thin-layer chromatography. Develop the plate with a mixture of a solution of ammonium acetate (1 in 100), acetone, 1-butanol and formic acid (20:20:20:1) to a distance of about 10 cm, and dry the plate at 105°C for 15 minutes. Spray evenly platinum chloride-potassium iodide TS on the plate: the spots obtained from the sample solution and the standard solution are blue-purple in color and have similar *R<sub>f</sub>*.

**pH** The pH of a solution of Suxamethonium Chloride for Injection (1 in 100) is between 4.0 and 5.0.

**Purity** Related substances—Take an amount of Suxamethonium Chloride for Injection, equivalent to 0.25 g of Suxamethonium Chloride according to the labeled amount, and proceed as directed in the Purity (2) under Suxamethonium Chloride.

**Assay** Weigh accurately the contents of not less than 10 preparations of Suxamethonium Chloride for Injection. Weigh accurately about 0.5 g of the contents, and proceed as directed in the Assay under Suxamethonium Chloride.

Each mL of 0.1 mol/L perchloric acid VS  
= 18.065 mg of  $C_{14}H_{30}Cl_2N_2O_4$

**Containers and storage** Containers—Hermetic containers.

## Suxamethonium Chloride Injection

塩化スキサメトニウム注射液

Suxamethonium Chloride Injection is an aqueous solution for injection. It contains not less than 93% and not more than 107% of the labeled amount of suxamethonium chloride ( $C_{14}H_{30}Cl_2N_2O_4$ ; 361.31).

The concentration of Suxamethonium Chloride Injection should be stated as the amount of suxamethonium chloride ( $C_{14}H_{30}Cl_2N_2O_4$ ).

**Method of preparation** Prepare as directed under Injections, with Suxamethonium Chloride.

**Description** Suxamethonium Chloride Injection is a clear, colorless liquid.

**Identification** Take a volume of Suxamethonium Chloride Injection, equivalent to 0.05 g of Suxamethonium Chloride according to the labeled amount, add water to make 10 mL, and use this solution as the sample solution. Separately, dissolve 0.05 g of suxamethonium chloride for thin-layer chromatography in 10 mL of water, and use this solution as the standard solution. Perform the test with these solutions as directed under the Thin-layer Chromatography. Spot 1  $\mu$ L each of the sample solution and the standard solution on a plate of cellulose for thin-layer chromatography. Develop the plate with a mixture of a solution of ammonium acetate (1 in 100), acetone, 1-butanol and formic acid (20:20:20:1) to a distance of about 10 cm, and dry the plate at 105°C for 15 minutes. Spray evenly platinum chloride-potassium iodide TS on the plate: the spots obtained from the sample solution and the standard solution are blue-purple in color and have similar *R<sub>f</sub>*.

**pH** 3.0 – 5.0

**Purity** Hydrolysis products—Perform the preliminary neutralization with 0.1 mol/L sodium hydroxide VS in the Assay: not more than 0.7 mL of 0.1 mol/L sodium hydroxide VS is required for each 200 mg of Suxamethonium Chloride ( $C_{14}H_{30}Cl_2N_2O_4$ ) taken.

**Assay** Transfer to a separator an accurately measured volume of Suxamethonium Chloride Injection, equivalent to about 0.2 g of suxamethonium chloride ( $C_{14}H_{30}Cl_2N_2O_4$ ), add 30 mL of freshly boiled and cooled water, and wash the solution with five 20-mL portions of diethyl ether. Combine the diethyl ether washings, and extract the combined diethyl ether layer with two 10-mL portions of freshly boiled and cooled water. Wash the combined water extracts with two 10-mL portions of diethyl ether. Combine the solution and the water extracts, add 2 drops of bromothymol blue TS, and neutralize with 0.1 mol/L sodium hydroxide VS. Add accurately measured 25 mL of 0.1 mol/L sodium hydroxide VS, and boil for 40 minutes under a reflux condenser, and cool. Titrate the excess sodium hydroxide with 0.1 mol/L hydrochloric acid VS. Transfer 50 mL of the freshly boiled and cooled water to a flask, add 2 drops of bromothymol blue TS, neutralize the solution with 0.1 mol/L sodium hydroxide VS, and perform a blank determination.

Each mL of 0.1 mol/L sodium hydroxide VS  
= 18.065 mg of  $C_{14}H_{30}Cl_2N_2O_4$