Trichomycin

トリコマイシン

Trichomycin conforms to the requirements of Trichomycin in the Requirements for Antibiotic Products of Japan.

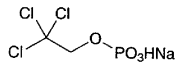
Description Trichomycin occurs as a yellow to yellow-brown powder.

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

Triclofos Sodium

Monosodium Trichloroethyl Phosphate

トリクロホスナトリウム



$C_2H_3Cl_3NaO_4P$: 251.37
Monosodium 2,2,2-trichloroethyl monohydrogenphosphate [*7246-20-0*]

Triclofos Sodium, when dried, contains not less than 97.0% and not more than 102.0% of $C_2H_3Cl_3NaO_4P$, and not less than 41.0% and not more than 43.2% of chlorine (Cl: 35.45).

Description Triclofos Sodium is a white, crystalline powder.

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

It is hygroscopic.

Identification **(1)** Determine the infrared absorption spectrum of Triclofos Sodium as directed in the potassium bromide disk method under the Infrared Spectrophotometry, and compare the spectrum with the Reference Spectrum: both spectra exhibit similar intensities of absorption at the same wave numbers.

(2) To 0.5 g of Triclofos Sodium add 10 mL of nitric acid, evaporate on a water bath to dryness, and ignite further over a flame. Dissolve the residue in 5 mL of water, and filter it necessary: the filtrate responds to the Qualitative Tests for sodium salt.

(3) To 0.1 g of Triclofos Sodium add 1 g of anhydrous sodium carbonate, and heat for 10 minutes. After cooling, dissolve the residue in 40 mL of water, filter if necessary, and render the filtrate acidic with dilute nitric acid: the solution responds to the Qualitative Tests (2) for chloride. The remainder of the filtrate responds to the Qualitative Tests (1) for chloride and to the Qualitative Tests for phosphate.

pH Dissolve 1.0 g of Triclofos Sodium in 50 mL of water: the pH of this solution is between 3.0 and 4.5.

Purity **(1)** Clarity and color of solution—Dissolve 1.0 g of Triclofos Sodium in 50 mL of water: the solution is clear and colorless.

(2) Chloride—Perform the test with 0.20 g of Triclofos Sodium. Prepare the control solution with 1.0 mL of 0.01 mol/L hydrochloric acid VS (not more than 0.178%).

(3) Heavy metals—Proceed with 1.0 g of Triclofos Sodium according to Method 1, and perform the test. Prepare the control solution with 2.0 mL of Standard Lead Solution (not more than 20 ppm).

(4) Arsenic—Prepare the test solution with 1.0 g of Triclofos Sodium according to Method 1, and perform the test using Apparatus B (not more than 2 ppm).

(5) Free phosphoric acid—Weigh accurately about 0.3 g of Triclofos Sodium, previously dried, dissolve in water to make exactly 100 mL, and use this solution as the sample solution. Pipet 5 mL each of the sample solution and Standard Phosphoric Acid Solution, add 2.5 mL of hexaammonium heptamolybdate-sulfuric acid TS and 1 mL of 1-amino-2-naphthol-4-sulfonic acid TS, shake, add water to make exactly 25 mL, and allow to stand at 20°C for 30 minutes. Perform the test with these solutions, using a solution obtained in the same manner with 5 mL of water as the blank, as directed under the Ultraviolet-visible Spectrophotometry. Determine the absorbances, A_T and A_S, of each solution from the sample solution and Standard Phosphoric Acid Solution at 740 nm: the content of the free phosphoric acid is not more than 1.0%.

$$\text{Content (\%) of the free phosphoric acid } (H_3PO_4) = \frac{A_T}{A_S} \times \frac{1}{W} \times 257.8$$

W: Amount (mg) of the sample taken.

Loss on drying Not more than 5.0% (1 g, in vacuum, 100°C, 3 hours).

Assay **(1)** Triclofos sodium—Weigh accurately about 0.2 g of Triclofos Sodium, previously dried, place in a Kjeldhal flask, add 2 mL of sulfuric acid and 2.5 mL of nitric acid, and heat until brown gas are not evolved. After cooling, add 1 mL of nitric acid, heat until white fumes are produced, and cool. Repeat this procedure until the solution becomes colorless. Transfer this solution to a flask using 150 mL of water, add 50 mL of molybdenum (III) oxide-citric acid TS, heat gently to boil, add gradually 25 mL of quinoline TS with stirring, and heat on a water bath for 5 minutes. After cooling, filter the precipitate, and wash repeatedly with water until the washing does not indicate acidity. Transfer the precipitate to a flask using 100 mL of water, add exactly 50 mL of 0.5 mol/L sodium hydroxide VS, dissolve, and titrate with 0.5 mol/L hydrochloric acid VS until the color of the solution changes from purple to yellow (indicator: 3 drops of phenolphthalein-thymol blue TS). Perform a blank determination.

Each mL of 0.5 mol/L sodium hydrochloride VS
= 4.834 mg of $C_2H_3Cl_3NaO_4P$

(2) Chlorine—Weigh accurately about 0.01 g of Triclofos Sodium, previously dried, perform the test according to the procedure of determination for chlorine as directed under the Oxygen Flask Combustion Method, using 1 mL of 1 mol/L sodium hydroxide TS and 20 mL of water as the absorbing liquid.

Containers and storage Containers—Tight containers.