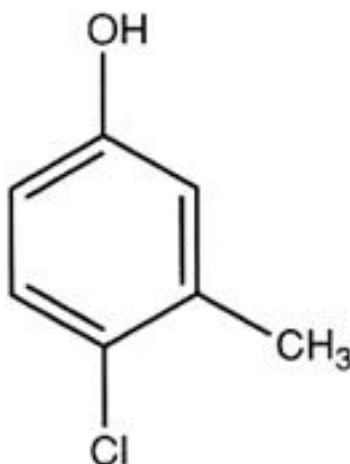


Chlorocresol (Chlorocresolum)

C_7H_7ClO

Relative molecular mass. 142.6

Chemical name. 4-Chloro-*m*-cresol; 4-chloro-3-methylphenol; CAS Reg. No. 59-50-7.

Description. Colourless or almost colourless crystals or a white, crystalline powder; odour, characteristic.

Solubility. Slightly soluble in water; very soluble in ethanol (~750 g/l) TS; freely soluble in ether R, fatty oils, and sodium hydroxide (~80 g/l) TS.

Category. Antimicrobial preservative.

Storage. Chlorocresol should be kept in a well-closed container, protected from light.

Requirements

Chlorocresol contains not less than **98.0%** and not more than the equivalent of **101.0%** of C_7H_7ClO .

Identity tests

A. To 0.5 g of a fine powder, add 10 mL of carbon-dioxide-free water R, shake for 2 minutes, and filter. Add 0.1 mL of ferric chloride (25 g/l) TS; a bluish colour is produced.

B. Mix 0.05 g with 0.5 g of anhydrous sodium carbonate R and ignite with a strong flame. Cool, add a mixture of 5 mL of water and 5 mL of nitric acid (~130 g/l) TS to the residue, and filter. Add 1 mL of silver nitrate (0.1 mol/l) VS to the filtrate; a white precipitate is produced.

Melting range. 64-67 °C.

Non-volatile residue. Place 2 g in a porcelain dish and heat on a water-bath until volatilized. Dry the residue at 105 °C and weigh; not more than 1.0 mg/g.

Assay. Place about 0.07 g, accurately weighed, in a ground-glass-stoppered flask and dissolve in 30 mL of glacial acetic acid R. Add 25 mL of potassium bromate (0.0167 mol/l) VS, a solution composed of 3 g of potassium bromide R dissolved in 20 mL of water, and 10 mL of hydrochloric acid (~420 g/l) TS. Allow to stand protected from light for 15 minutes. Add 1 g of potassium iodide R and 100 mL of water. Titrate with sodium thiosulfate (0.1 mol/l) VS, shaking vigorously, and add starch TS as indicator towards the end of the titration. Repeat the procedure without the Chlorocresol being examined and make any necessary corrections.

Each mL of potassium bromate (0.0167 mol/l) VS is equivalent to 3.565 mg of C_7H_7ClO .