Experiment 8: Assay of Chloroquine

Chloroquine phosphate (Chloroquine phosphate)

C18H26ClN3,2H3PO4

**Relative molecular mass.** 515.9

# Graphic formula.

**Chemical name.** 7-Chloro-4-[[4-(diethylamino)-1-methylbutyl]amino]quinoline phosphate (1:2); *N*4-(7-chloro-4-quinolinyl)-*N*1,*N*1- diethyl-1,4-pentanediamine phosphate (1:2); CAS Reg. No. 50-63-5.

**Description.** A white or almost white, crystalline powder: odourless or almost odourless. **Solubility.** Soluble in 4 parts of water; very slightly soluble in ethanol (~750 g/l) TS and ether R. **Category.** Antimalarial; antiamoebic.

**Definition.** Chloroquine phosphate contains not less than 98.0% and not more than 101.0% of C18H26ClN3,2H3PO4, calculated with reference to the dried substance.

**pH value (*1.13*).** pH of a 0.10 g/mL solution, 3.5-4.5.

**Assay.** Dissolve about 0.23 g, accurately weighed, in 20 mL of glacial acetic acid R1 with the aid of heat (preferably heat under reflux condenser), cool and add 20 mL of dioxan R. Titrate with perchloric acid (0.1 mol/l) VS as described under 2.6 Non- aqueous titration, Method A. Each mL of perchloric acid (0.1 mol/l) VS is equivalent to 25.79 mg of C18H26ClN3,2H3PO4.