

# APPLICATIONS

## USP Assay (LC-UV) for Chloroquine Phosphate Tablets on Luna® 5 µm C18(2) 100 x 4.6 mm HPLC Column

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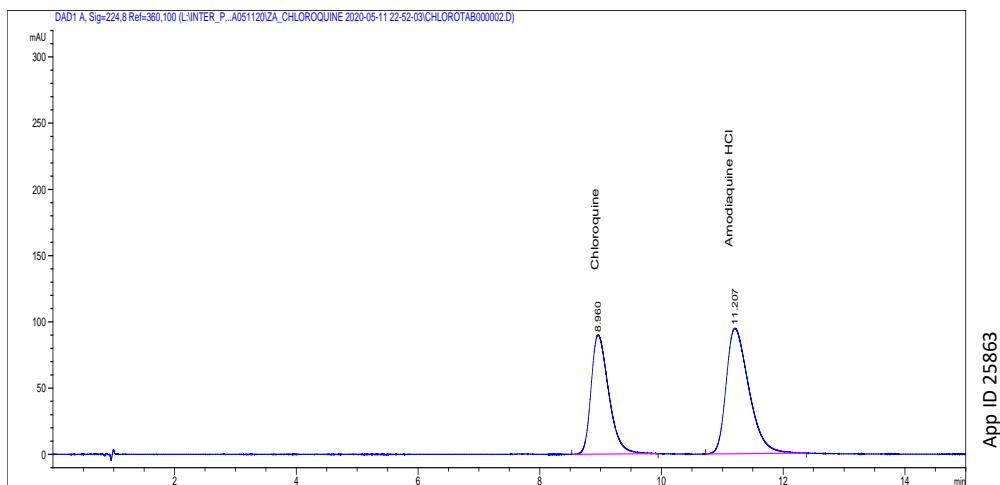
### Overview

Chloroquine phosphate is a 4-aminoquinoline compound used to prevent and treat malaria, and potential anti-viral effects has made it attractive for study as a potential treatment for COVID-19.

This application for the LC-UV assay of chloroquine phosphate tablets is based on the official USP method, utilizing a Luna 5 µm C18(2) 100 x 4.6 mm column. Standard solution (0.15 mg/mL USP Chloroquine phosphate RS in water) and system suitability solution (0.15 mg/mL USP Chloroquine phosphate RS and 0.15 mg/mL USP Amodiaquine hydrochloride RS in water) were prepared in accordance with the USP monograph. System suitability requirements were met and are summarized below.

### LC-UV Conditions

- Column:** Luna 5 µm C18(2)
  - Dimension:** 100 x 4.6 mm
  - Part No.:** [00D-4252-E0](#)
  - Mobile Phase:** Methanol / Buffer (22:78)  
Buffer: 6.8 g/L of KH<sub>2</sub>PO<sub>4</sub> in water. Add 1.0 mL of perchloric acid to each 1 L of solution, adjust with H<sub>3</sub>PO<sub>4</sub> to pH 2.5, and filter (0.45 µm).
  - Flow Rate:** 1.2 mL/min
  - Temperature:** Ambient (26 °C)
  - Detector:** UV @ 224 nm
  - Injection:** 10 µL
  - Run Time:** 15 minutes
  - Sample:**
    1. Chloroquine phosphate
    2. Amodiaquine hydrochloride
- Note: The relative retention times for chloroquine phosphate and amodiaquine hydrochloride should be about 1.0 and 1.3, respectively.



System Suitability					
Compound	Resolution NLT 1.5	Peak Symmetry NMT 1.5	RSD (peak area, 5 replicates) NMT 2.0%	Retention Time (min)	Relative Retention Time
Chloroquine phosphate		1.42	0.13%	8.96	1.0
Amodiaquine hydrochloride	3.73	1.47	0.29%	11.21	1.25

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