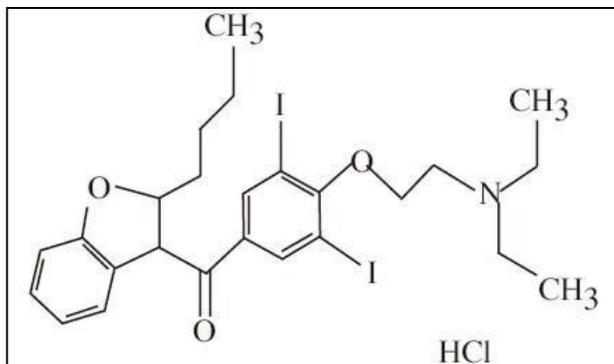


**Amiodarone HCl**  
**200 mg Tablet**

**Structure:**



**Molecular Formula and Mass:** C<sub>25</sub>H<sub>29</sub>I<sub>2</sub>NO<sub>3</sub> • HCl – 681.77

**Category:** Anti-arrhythmic heart medication

**Sample:**

Grind one tablet and dissolve in 100 mL ethanol. Shake at least 10 min and filter. Concentration = 200 mg/100 mL = 2.00 mg/mL. Further dilute 1.00 mL with 9.00 mL of ethanol for a total volume of 10.0 mL and a final theoretical concentration of 0.200 mg/mL, which is the required sample solution concentration representing 100%.

**Standards:**

High Standard:

The high limit is 115%; therefore the concentration of the high standard = (0.200 mg/mL X 1.15 = 0.230 mg/mL. Weigh approximately 11.5 mg of standard. If you weighed 11.6 mg of standard, dissolve it in: (11.6 mg)/(0.230 mg/mL) = 50.4 mL of ethanol. This makes the high standard solution concentration equal to 0.230 mg/mL.

Low Standard:

The low limit is 85%; therefore the concentration of the low standard = (0.200 mg/mL X 0.85 = 0.170 mg/mL. Dilute 1.00 mL of high standard to 1.35 mL by adding 0.35 mL of methanol (1.15/0.85 = 1.35).

**Spotting:**

Spot on the 5 X 10 cm silica gel TLC aluminium plate with 3.00 µL aliquots as follows:

Left spot	low standard (85%) = 0.510 µg
Center Spot	100% sample = 0.600 µg
Right Spot	high standard (115%) = 0.690 µg

**Development:**

Mix 34.0 mL of ethyl acetate, 6.00 mL of methanol and 6.00 mL of concentrated ammonia. Develop the plate in a small glass chamber with approximately 20.0 mL of this solution until the solvent front reaches within 1 cm of the top of the TLC plate.

(R<sub>f</sub> = 0.80)

**Detection:**

UV:

Dry the plate and observe under ultraviolet light at 254 nm. Observe the intensities and the sizes of the spots.

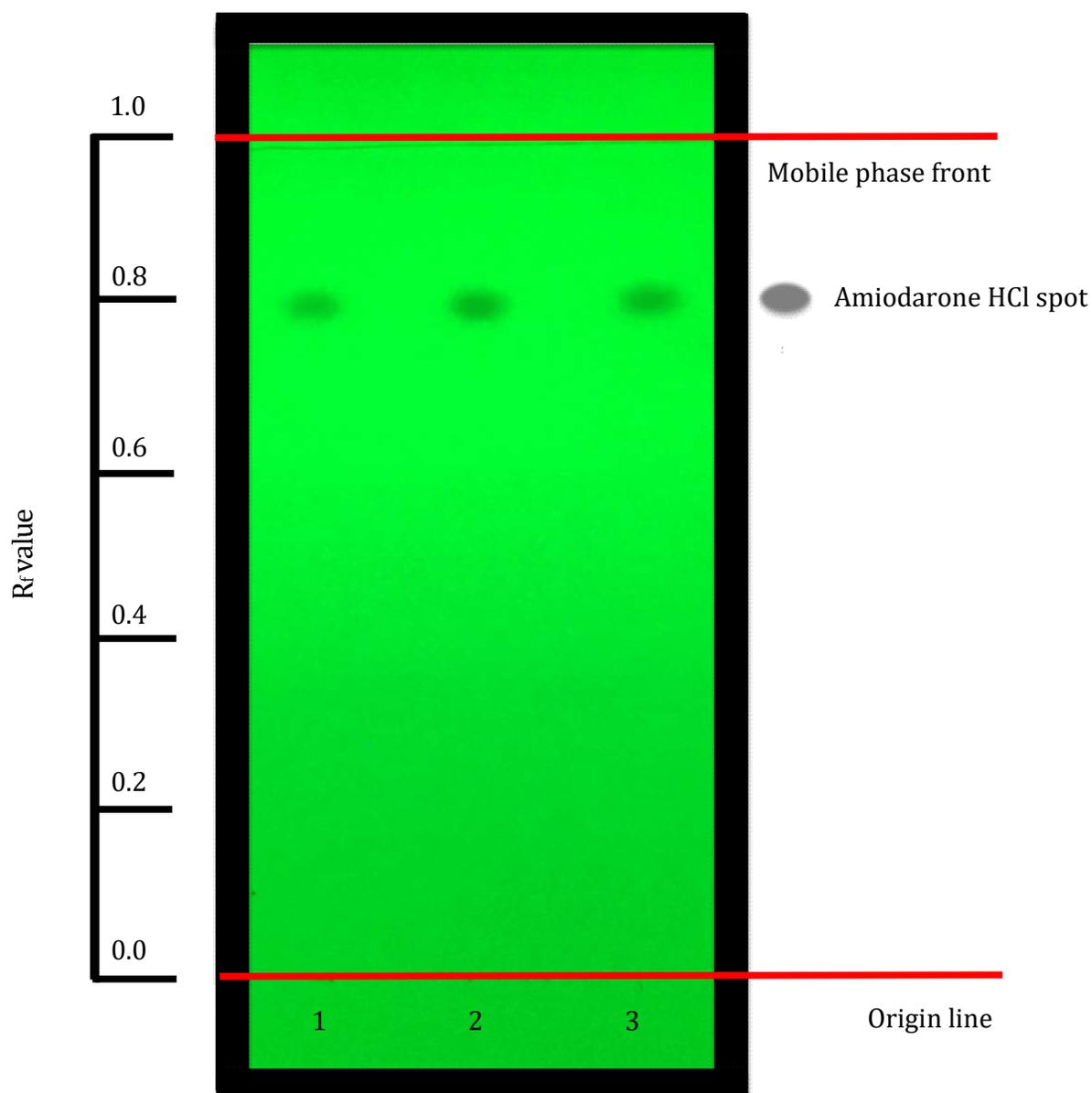


Plate observed under ultraviolet light at 254 nm

Lane 1: Low standard (85%) = 0.510  $\mu\text{g}$

Lane 2: 100% sample = 0.600  $\mu\text{g}$

Lane 3: High standard (115%) = 0.690  $\mu\text{g}$

Developed and tested by Kaitlin Nguyen and Joseph Sherma  
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