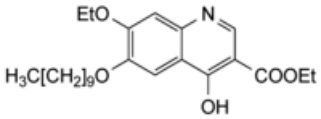
Edition: BP 2025 (Ph. Eur. 11.6 update)

Decoquinate

General Notices



$C_{24}H_{35}NO_5$ 417.6 *18507-89-6*

Action and use

Antiprotozoal (veterinary).

Preparation

Decoquinate Premix

DEFINITION

Decoquinate is ethyl 6-decyloxy-7-ethoxy-4-hydroxyquinoline-3-carboxylate. It contains not less than 99.0% and not more than 101.0% of $C_{24}H_{35}NO_5$, calculated with reference to the dried substance.

CHARACTERISTICS

A cream to buff-coloured, microcrystalline powder; odourless or almost odourless.

Insoluble in *water*; very slightly soluble in *chloroform* and in *ether*; practically insoluble in *ethanol (96%)*.

IDENTIFICATION

A. The *infrared absorption spectrum*, Appendix II A, is concordant with the *reference spectrum* of decoquinate *(RSV 14)*.

B. The *light absorption*, Appendix II B, in the range 230 to 350 nm of the solution used in the test for Light absorption exhibits a well-defined maximum only at 265 nm.

TESTS

Light absorption

Dissolve 40 mg in 10 mL of hot *chloroform* and, keeping the solution warm, dilute slowly with 70 mL of *absolute ethanol*. Cool and dilute to 100 mL with *absolute ethanol*. Immediately dilute 10 mL to 100 mL with *absolute ethanol*. To 10 mL of the solution add 10 mL of 0.1M *hydrochloric acid* and dilute to 100 mL with *absolute ethanol*. The *absorbance* of the

resulting solution at the maximum at 265 nm is 0.38 to 0.42, calculated with reference to the dried substance, Appendix II B.

Related substances

Carry out the method for *thin-layer chromatography*, Appendix III A, using the following solutions.

(1) 1.0% w/v of the substance being examined in *chloroform*, prepared with the aid of heat.
(2) 0.0050% w/v of *diethyl 4-decyloxy-3-ethoxyanilinomethylene malonate BPCRS* in *chloroform*.
(3) 0.010% w/v of the substance being examined in *chloroform*.

CHROMATOGRAPHIC CONDITIONS

(a) Use as the coating *silica gel F_{254}* (Merck silica gel 60 F_{254} plates are suitable).
(b) Use the mobile phase as described below.
(c) Apply 10 µL of each solution.
(d) Develop the plate to 15 cm.
(e) After removal of the plate, dry in air and examine under *ultraviolet light (254 nm)*.

MOBILE PHASE

5 volumes of *anhydrous formic acid*, 10 volumes of *absolute ethanol* and 85 volumes of *chloroform*.

LIMITS

Any *secondary spot* corresponding to diethyl 4-decyloxy-3-ethoxyanilinomethylene malonate in the chromatogram obtained with solution (1) is not more intense than the spot in the chromatogram obtained with solution (2) (0.5%) and any other *secondary spot* is not more intense than the spot in the chromatogram obtained with solution (3) (1%).

Loss on drying

When dried to constant weight at 105°, loses not more than 0.5% of its weight. Use 1 g.

Sulfated ash

Not more than 0.1%, Appendix IX A.

ASSAY

Dissolve 1 g in a mixture of 50 mL of *chloroform* and 50 mL of *anhydrous acetic acid* and carry out Method I for *non-aqueous titration*, Appendix VIII A, using *crystal violet solution* as indicator. Each mL of *0.1M perchloric acid VS* is equivalent to 41.76 mg of $C_{24}H_{35}NO_5$.