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

Deltamethrin Pour-on

General Notices

Action and use

Insecticide (veterinary).

DEFINITION

Deltamethrin Pour-on is a *pour-on solution*. It contains Deltamethrin in a suitable, oily vehicle.

The pour-on complies with the requirements stated under Veterinary Liquid Preparations for Cutaneous Application and with the following requirements.

Content of deltamethrin, $C_{22}H_{19}Br_2NO_3$

90.0 to 110.0% of the stated amount.

IDENTIFICATION

In the Assay, the chromatogram obtained with solution (1) shows a peak with the same retention time as the peak in the chromatogram obtained with solution (2).

ASSAY

Carry out the method for *liquid chromatography*, Appendix III D, using the following solutions.

(1) Mix a weighed quantity of the preparation being examined containing 30 mg of Deltamethrin with sufficient *hexane* to produce 100 mL. Dilute 1 volume to 4 volumes with *hexane*.
(2) 0.0075% w/v of *deltamethrin BPCRS* in *hexane*.
(3) 0.0075% w/v of *deltamethrin impurity standard BPCRS* in *hexane*.

CHROMATOGRAPHIC CONDITIONS

(a) Use a stainless steel column (25 cm × 4.6 mm) packed with particles of silica the surface of which has been modified with chemically-bonded nitro-phenyl groups (5 µm) (Nucleosil-NO2 is suitable).
(b) Use isocratic elution and the mobile phase described below.
(c) Use a flow rate of 2 mL per minute.
(d) Use an ambient column temperature.
(e) Use a detection wavelength of 230 nm.
(f) Inject 20 µL of each solution.

MOBILE PHASE

hexane containing 0.25% v/v of *propan-2-ol*.

SYSTEM SUITABILITY

The test is not valid unless, in the chromatogram obtained with solution (3), a peak due to (*R*)-deltamethrin appears immediately before the principal peak, as indicated in the reference chromatogram supplied with *deltamethrin impurity standard BPCRS*.

DETERMINATION OF CONTENT

Determine the *weight per mL* of the preparation, Appendix V G, and calculate the content of $C_{22}H_{19}Br_2NO_3$, weight in volume, using the declared content of $C_{22}H_{19}Br_2NO_3$ in *deltamethrin BPCRS*.