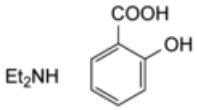
Edition: BP 2025 (Ph. Eur. 11.6 update)

Diethylamine Salicylate

General Notices



$C_{11}H_{17}NO_3$ 211.3 *4419-92-5*

Action and use

Counter-irritant.

Preparation

Diethylamine Salicylate Cream

DEFINITION

Diethylamine Salicylate contains not less than 99.0% and not more than 101.0% of $C_{11}H_{17}NO_3$.

CHARACTERISTICS

White or almost white crystals.

Very soluble in *water*; freely soluble in *ethanol (96%)*.

IDENTIFICATION

A. The *infrared absorption spectrum*, Appendix II A, is concordant with the *reference spectrum* of diethylamine salicylate *(RS 099)*.
B. To 0.2 g add 5 mL of 1M *sodium hydroxide*, heat to boiling point, cool and acidify with *2M hydrochloric acid*; a white precipitate is produced. The *melting point* of the precipitate, after recrystallisation from *water* and drying at 105°, is about 160°, Appendix V A.

TESTS

Acidity

Dissolve 2 g in 25 mL of *water* and titrate with *0.1M sodium hydroxide VS* using *phenol red solution* as indicator. Not more than 0.2 mL of *0.1M sodium hydroxide VS* is required to change the colour of the solution.

Clarity and colour of solution

A 50% w/v solution is *clear*, Appendix IV A, and not more intensely coloured than *reference solution* BY_5, Appendix IV B, Method II.

Melting point

100° to 102°, Appendix V A.

Sulfate

0.6 g complies with the *limit test for sulfates*, Appendix VII (250 ppm).

Loss on drying

When dried at 60° for 3 hours, loses not more than 0.1% of its weight. Use 1 g.

ASSAY

Carry out Method I for *non-aqueous titration*, Appendix VIII A, using 0.4 g and *1-naphtholbenzein solution* as indicator. Each mL of *0.1M perchloric acid VS* is equivalent to 21.13 mg of $C_{11}H_{17}NO_3$.

STORAGE

Diethylamine Salicylate should be protected from light. It should not be allowed to come into contact with iron or iron salts.