

## **Quality standards**

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

# **Acebutolol Capsules**

**General Notices** 

#### Action and use

Beta-adrenoceptor antagonist.

#### **DEFINITION**

Acebutolol Capsules contain Acebutolol Hydrochloride.

The capsules comply with the requirements stated under Capsules and with the following requirements.

Content of acebutolol, C<sub>18</sub>H<sub>28</sub>N<sub>2</sub>O<sub>4</sub>

95.0 to 105.0% of the stated amount.

#### **IDENTIFICATION**

The <u>infrared absorption spectrum</u> of a 0.7% w/w dispersion of the contents of the capsules in <u>potassium chloride</u>, <u>Appendix II A</u>, is concordant with the <u>reference spectrum</u> of Acebutolol hydrochloride <u>(RS 380)</u>.

#### **TESTS**

#### Related substances

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

- (1) Add to a quantity of the contents of the capsules containing the equivalent of 0.4 g of Acebutolol 20 mL of a mixture of equal volumes of *chloroform* and *methanol*, shake for 2 minutes, centrifuge and use the supernatant liquid.
- (2) Dilute 3 volumes of solution (1) to 100 volumes with a mixture of equal volumes of <u>chloroform</u> and <u>methanol</u> and further dilute 1 volume of this solution to 10 volumes with the same mixture of solvents.
- (3) Dilute 1 volume of solution (1) to 100 volumes with a mixture of equal volumes of *chloroform* and *methanol* and further dilute 1 volume of this solution to 10 volumes with the same mixture of solvents.

#### CHROMATOGRAPHIC CONDITIONS

- (a) Use a precoated silica gel F<sub>254</sub> plate (Merck silica gel 60 F<sub>254</sub> 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

20 volumes of *glacial acetic acid*, 20 volumes of *dimethylformamide* and 60 volumes of *chloroform*.

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LIMITS

In the chromatogram obtained with solution (1):

any <u>secondary spot</u> is not more intense than the spot in the chromatogram obtained with solution (2) (0.3%);

not more than two such spots are more intense than the spot in the chromatogram obtained with solution (3) (0.1%).

Disregard any spot remaining on the line of application.

#### **ASSAY**

To a quantity of the mixed contents of 20 capsules containing the equivalent of 0.15 g of Acebutolol add 150 mL of <u>water</u>, shake for 10 minutes, add sufficient <u>water</u> to produce 250 mL, centrifuge and dilute 10 mL of the supernatant liquid to 100 mL with <u>water</u>. To 10 mL of this solution add 10 mL of 0.1M <u>hydrochloric acid</u> and sufficient <u>water</u> to produce 100 mL. Measure the <u>absorbance</u> of this solution, <u>Appendix II B</u>, at the maximum at 233 nm and calculate the content of  $C_{18}H_{28}N_2O_4$  in the capsules taking 643 as the value of A(1%, 1 cm) at the maximum at 233 nm.

#### **STORAGE**

Acebutolol Capsules should be protected from light.

#### **LABELLING**

The quantity of active ingredient is stated in terms of the equivalent amount of acebutolol.