Bepotastine Besilate

Published on: 18 January, 2024 **Last date for comments:** 03 March, 2024

This draft proposal contains monograph text for inclusion in the Indian Pharmacopoeia (IP). The content of this draft document is not final, and the text may be subject to revisions before publication in the IP. This draft does not necessarily represent the decisions or the stated policy of the IP or Indian Pharmacopoeia Commission (IPC).

Manufacturers, regulatory authorities, health authorities, researchers, and other stakeholders are invited to provide their feedback and comments on this draft proposal. Manufacturers are also invited to submit samples of their products to the IPC to ensure that the proposed monograph adequately controls the quality of the product(s) they manufacture. Comments and samples received after the last date will not be considered by the IPC before finalizing the monograph.

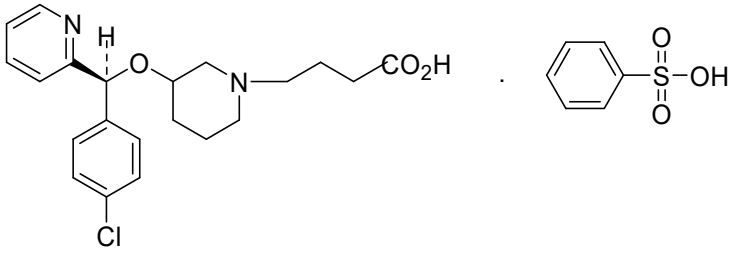
Please send any comments you may have on this draft document to lab.ipc@gov.in, with a copy to Dr. Gaurav Pratap Singh (email: gpsingh.ipc@gov.in) before the last date for comments.

Document History and Schedule for the Adoption Process

Description	Details
Document version	1.0
Category	New Inclusion
Monograph proposed for inclusion	IP 2026
Tentative effective date of monograph	July, 2026
First draft published on IPC website for public comments	18 January, 2024
Draft revision published on IPC website for public comments	--
Further follow-up action as required.	

Bepotastine Besilate

Bepotastine Besylate



$C_{21}H_{25}ClN_2O_3.C_6H_6O_3S$ Mol. Wt. 547.1

Bepotastine Besilate is (S)-4-{4-[(4-Chlorophenyl)(pyridin-2-yl)methoxy]piperidin-1-yl}butanoic acid mono benzenesulfonate.

Bepotastine Besilate contains not less than 99.0 per cent and not more than 101.0 per cent of $C_{21}H_{25}ClN_2O_3.C_6H_6O_3S$, calculated on the anhydrous basis.

Category. Antihistaminic.

Description. A white to pale yellowish -white, crystals or crystalline powder.

Identification

A. Determine by infrared absorption spectrophotometry (2.4.6). Compare the spectrum with that obtained with *bepotastine besilate IPRS* or with the reference spectrum of bepotastine besilate.

B. Mix 30 mg of the substance under examination with 0.1 g of *sodium nitrate*, 0.1 g of *anhydrous sodium carbonate* and gradually ignite. After cooling, dissolve the residue in 2 ml of *dilute hydrochloric acid*, 10 ml of *water*, filter if necessary and add *barium chloride solution*; a white precipitate is produced.

Tests

pH(2.4.24). 3.7 to 3.9, determined in a 1.0 per cent w/v solution.

Enantiomer. Determine by liquid chromatography (2.4.14).

Test solution. Dissolve 20 mg of the substance under examination in the mobile phase and dilute to 100.0 ml with the mobile phase.

Reference solution. A 0.0001 per cent w/v solution of *bepotastine besilate IPRS* in the mobile phase.

Chromatographic system
- a stainless steel column 15 cm × 6 mm, packed with beta-cyclodextrin bonded to porous silica (5 µm) (Such as ChiraDex®),
- column temperature: 40°,
- mobile phase: a mixture of 75 volumes of *0.02 M potassium dihydrogen phosphate*, adjusted to pH 3.0 and 25 volumes of *acetonitrile,*
- flow rate: 1 ml per minute, *[NOTE – Flow rate may be adjusted so that the retention time of bepotastine is about 17 minutes]*,
- spectrophotometer set at 225 nm,
- injection volume: 10 µl.

Inject the reference solution. The test is not valid unless the column efficiency is not less than 3000 theoretical plates, the tailing factor is not less than 0.8 and not more than 1.5 and the relative standard deviation for replicate injections is not more than 5.0 per cent.

Inject the reference solution and the test solution. In the chromatogram obtained with the test solution, the area of any peak corresponding to R-isomer (at relative retention time about 0.9) is not more than the area of the principal peak in the chromatogram obtained with the reference solution (0.5 per cent).

Related substances. Determine by liquid chromatography (2.4.14).

Test solution. Dissolve 40 mg of the substance under examination in the mobile phase and dilute to 100.0 ml with the mobile phase.

Reference solution. A 0.0004 per cent w/v solution of *bepotastine besilate IPRS* in the mobile phase.

Chromatographic system
- a stainless steel column 15 cm × 4.6 mm, packed with octylsilane bonded to porous silica (5 µm),
- column temperature: 40°,
- mobile phase: a 0.1 per cent w/v solution of *1-pentane sulphonic acid sodium salt* in a mixture of 70 volumes of *0.05 M potassium dihydrogen phosphate*, adjusted to pH 3.0 and 30 volumes of *acetonitrile,*
- flow rate: 1 ml per minute, *[NOTE – Flow rate may be adjusted so that the retention time of bepotastine is about 6 minutes]*,
- spectrophotometer set at 220 nm,
- injection volume: 20 µl.

Inject the reference solution. The test is not valid unless the column efficiency is not less than 3000 theoretical plates, the tailing factor is not less than 0.8 and not more than 1.5 and the relative standard deviation for replicate injections is not more than 2.0 per cent.

Inject the reference solution and the test solution. In the chromatogram obtained with the test solution, the area of any peak at relative retention time of about 2.5 to bepotastine is not more than the area of the principal peak in the chromatogram obtained with the reference solution (1.0 per cent). the area of any other secondary peak is not more than0.1 times the area of the principal peak in the chromatogram obtained with the reference solution (0.1 per cent) and the sum of the areas of all the secondary peak sis not more than the area of the principal peak in the chromatogram obtained with the reference solution (1.0 per cent). Ignore any peak with an area less than 0.5 times the area of the principal peak in the chromatogram obtained with the reference solution (0.05 per cent).

Heavy metals (2.3.13). 1.0 g complies with limit test for heavy metals, Method B (20 ppm).

Sulphated ash (2.3.18). Not more than 0.1 per cent.

Water (2.3.43). Not more than 0.1 per cent, determined on 0.3 g.

Assay. Dissolve 0.8 g of the substance under examination in 60 ml of *glacial acetic acid*. Titrate with *0.1 M perchloric acid*, determining the end-point potentiometrically (2.4.25). Carry out a blank titration.

1 ml of *0.1 M perchloric acid* is equivalent to 0.05471 g of $C_{21}H_{25}ClN_2O_3.C_6H_6O_3S$.

Storage. Store protected from moisture, at a temperature not exceeding 30°.