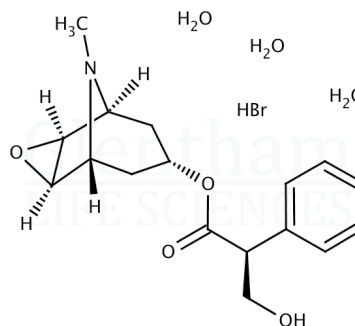


## Certificate of Analysis

|                   |                                              |
|-------------------|----------------------------------------------|
| Product Name      | Hyoscyamine hydrobromide, BP, Ph. Eur. grade |
| Glenthams Code    | GL2191                                       |
| CAS Number        | 6533-68-2                                    |
| MDL Number        | MFCD00150066                                 |
| Batch Number      | 983NPG                                       |
| Molecular Weight  | 438.31                                       |
| Molecular Formula | $C_{17}H_{21}NO_4 \cdot HBr \cdot 3H_2O$     |
| Storage Temp.     | +20°C                                        |



| Property                       | Specification                                                    | Batch 983NPG             |
|--------------------------------|------------------------------------------------------------------|--------------------------|
| Physical Description           | White or almost white crystalline powder, or colourless crystals | White crystalline powder |
| Specific Optical Rotation      | -27.0 - -24.0 ° (c=5, water)                                     | -25.6°                   |
| Identification (IR)            | To conform to standard                                           | Conforms                 |
| Identification                 | Ppt. melting point test: 188 - 193 °C                            | 191.4°C                  |
| Identification                 | To pass test D                                                   | Conforms                 |
| Solubility (5% in water)       | Clear, colourless solution                                       | Conforms                 |
| pH (5% in water)               | 4.0 - 5.5                                                        | 4.66                     |
| Impurity B (HPLC)              | ≤ 0.5%                                                           | Conforms                 |
| Impurities A, C, D (HPLC)      | ≤ 0.1%                                                           | Conforms                 |
| Any Other Impurity (HPLC)      | ≤ 0.1%                                                           | Conforms                 |
| Total Impurities (HPLC)        | ≤ 0.7%                                                           | Conforms                 |
| Sulphated Ash                  | ≤ 0.1%                                                           | 0.04%                    |
| Water                          | 10.0 - 13.0 %                                                    | 11.1%                    |
| Assay                          | 99.0 - 101.0 % (anhydrous substance)                             | 99.96%                   |
| Pharmacopoeia Specification(s) | BP, Ph. Eur.                                                     | Conforms to BP, Ph. Eur. |

|                       |            |
|-----------------------|------------|
| Specification Version | v1.0       |
| Manufacture Date      | 2018-04-26 |
| Re-Test Date          | 2024-04-26 |

Glenthams Life Sciences confirm that the above referenced product conformed to the information displayed in this document on the quality release date. Please check [www.glenthams.com](http://www.glenthams.com) or contact us using the details above for the current version of this document.

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