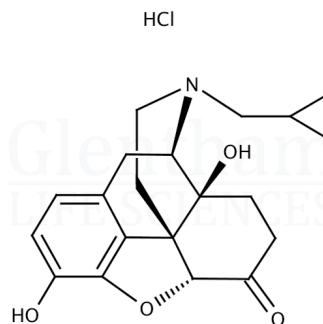


Certificate of Analysis

Product Name Naltrexone hydrochloride, Ph. Eur. grade
Glentham Code GP1217
CAS Number 16676-29-2
EINECS 240-723-0
MDL Number MFCD00069324
PubChem SID 310277441
Batch Number 742HUC

Molecular Weight 377.86
Molecular Formula $C_{19}H_{21}NO_4 \cdot HCl \cdot xH_2O$
Storage Temp. +4°C



| Property | Specification | Batch 742HUC |
|--------------------------------|---|---|
| Physical Description | White or almost white powder | Almost white powder |
| Identification | According to EP | Conforms |
| Solubility | 2% in water: Clear, colourless solution | Conforms |
| Acidity and Alkalinity | According to EP | Conforms |
| Specific Optical Rotation | -187 - -195 ° | -190.7° |
| Related Substances | According to EP | Any Individual Impurity: 0.05% (max); Total Impurities: 0.09% |
| Ethanol | ≤ 3.0% | Conforms |
| Water | ≤ 10.0% | 7.5% |
| Sulphated Ash | ≤ 0.1% | 0.03% |
| Assay | 98.0 - 102.0 % | 100.5% |
| Pharmacopoeia Specification(s) | EP | Conforms |

Specification Version v1.0
Manufacture Date 2018-02-22
Re-Test Date 2027-03-20

Glentham Life Sciences confirm that the above referenced product conformed to the information displayed in this document on the quality release date. Please check www.glentham.com or contact us using the details above for the current version of this document.

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