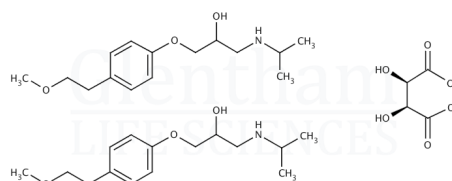


Certificate of Analysis

Product Name	Metoprolol tartrate, EP grade
Glentham Code	GP9016
CAS Number	56392-17-7
EINECS	260-148-9
MDL Number	MFCD00056257
Additional CAS	51384-51-1
Batch Number	697BUJ
Molecular Weight	684.82
Molecular Formula	$(C_{15}H_{25}NO_3)_2 \cdot C_4H_6O_6$
Storage Temp.	+20°C



Property	Specification	Batch 697BUJ
Physical Description	White or almost white crystalline powder, or colourless crystals	White crystalline powder
Identification (IR)	To conform to standard	Conforms
Specific Optical Rotation	+7.0 - +10.0 ° (c=2, water)	+8.4°
Solubility (2% in water)	Clear solution, colour: ≤ B8	Conforms
pH (2% in water)	6.0 - 7.0	6.5
Impurities M, N, O (TLC)	To pass EP tests (a) ≤ 0.5%, (b) ≤ 0.2%	Conforms
Impurities A, B, C, D, E, F, G, H, J (HPLC)	≤ 0.30% (each)	A: 0.03%, C: 0.0015%, Others: Not detected
Any Individual Impurity (HPLC)	≤ 0.10%	≤ 0.05%
Total Impurities (HPLC)	≤ 0.50%	0.03%
Sulphated Ash	≤ 0.1%	0.02%
Loss on Drying	≤ 0.5%	0.19%
Assay	99.0 - 100.5 % (dried substance)	100.3%
Pharmacopoeia Specification(s)	EP	Conforms to EP

Specification Version	v1.0
Manufacture Date	2018-04-01
Re-Test Date	2024-06-20

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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