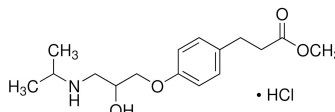


Certificate of Analysis

Product Name : Esmolol hydrochloride $\geq 98\%$ (HPLC), solid
Product Number : E8031-10MG
Batch Number : 0000097422
 Source Batch : 0000094757
 CAS Number : 81161-17-3
 Storage Temperature : Cooler/Refrigerated
 Molecular Formula : $C_{16}H_{26}NClO_4$
 Formula Weight : 331.83
 Quality Release Date : 27 May 2020



Test	Specification	Result
Appearance (Color)	White to Beige	White
Appearance (Form)	Powder	Powder
Solubility (Turbidity)	Clear	Clear
Solubility (Color)	Conforms to Requirements	Colorless
Concentration	≥ 12.0 mg/ml	36.0 mg/ml
H2O		
Purity (HPLC)	≥ 97.5 %	98.6 %
Identity	Confirmed	Confirmed
Water Content	0.0 - 3.0 mol	0.0 mol
Salt Content	0.9 - 1.1 mol	1.0 mol
Elemental Composition	Pass	Pass

Brendan Nye, QC Supervisor
 Quality Control
 Natick, Massachusetts
 US

Sigma-Aldrich warrants, that at the time of the quality release or subsequent retest date this product conformed to the information contained in this publication. The current Specification sheet may be available at Sigma-Aldrich.com. For further inquiries, please contact Technical Service. Purchase must determine the suitability of the product for its particular use. See reverse side of website or packing slip for additional terms and conditions of sale

Version Number: 01 Doc: 1046082

Page 1 of 1

