Certificate of Analysis

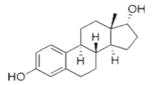


Product Identification

Chemical Structure

Chemical name (17α)-Estra-1,3,5(10)-triene-3,17-diol

 $\begin{tabular}{lll} \textbf{Batch number} & E1591-1-1 \\ \textbf{Batch molecular formula} & C_{18}H_{24}O_2.0.2H_2O \\ \textbf{Batch molecular weight} & 275.99 \\ \end{tabular}$



Method	QC requirement	QC Result
HPLC	Reverse Phase HPLC shows >98% purity	Meets specification: 100%
NMR	1H NMR in DMSO at 400 MHz consistent with structure	Meets specification
Mass spectrum	Electrospray positive analysis shows molecular ion	Meets specification
Microanalysis	Elemental analysis is within 0.4% for the batch molecular formula	Meets specification
Physical appearance	White to off-white solid	Meets specification: White solid
Solubility	Soluble in DMSO (100 mM) and in ethanol (100 mM)	Meets specification

Produced by Signature

Passed by Signature

Date **25-06-2**

 $This \ product \ is \ for \ RESEARCH \ USE \ ONLY \ and \ is \ not \ intended \ for \ the rapeut ic \ or \ diagnostic \ use. \ Not \ for \ human \ or \ veterinary \ use.$