

CERTIFICATE OF ANALYSIS

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1. Identification

Catalogue H941895 Number:

Product: 4-Hydroxy-17b-estradiol

Structure:

CAS 5976-61-4

Synonym: (17β)-Estra-1,3,5(10)-triene-3,4,17-

triol; 4-Hydroxyestradiol;

Molecular Formula:

C18H24O3

Molecular weight:

288.38

Source of Product:

Synthetic

Solubility:

Ethanol (Slightly, Heated), Ethyl Acetate (Slightly, Heated), Methanol (Slightly

Purity: 98%

Storage Condition: -20°C

Lot Number: 5-SBT-155-1

HC

Shipping This Product Is Stable To Be Shipped

Condition: At Room Temperature

2. Warning

Warning 1: Warning 2: Warning 3:

3. Analytical Information

Tests: Specifications: Results:

Appearance Light Yellow to Very Dark Yellow Solid Beige to Very Dark Yellow Solid

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NMR Conforms to Structure Conforms

Elemental Analysis Conforms %C: 73.88, %H: 8.56

MS Conforms to Structure Conforms

HPLC Purity >95% 96.10% (205 nm)

Specific Rotation Report Result $+70.8^{\circ}$ (c = 0.1, Ethanol)

Additional Information: N/A

Purity is based on the analytical results of the tests performed. NMR and Elemental Analysis (if available) may have an accuracy of \pm 2%. Isotopic purity is based on mass distribution observed. The contents of the specifications are subject to change without advance notice, and the specification values displayed here are the most up to date values.

4. Signatures

Reviewed By Reviewed By C of A Approved Test Date Retest Date

Swathi Reddy Toni Rantanen Chanell Chu 4/26/2022 4/24/2029

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