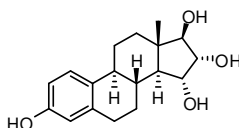




## Certificate of Analysis

**Axon Catalogue ID:** 1926 **Batch Number:** 3  
**Product Name:** Estetrol  
**Alternative Name(s):** N.A.  
**IUPAC Name:** (8R,9S,13S,14S,15R,16R,17R)-13-Methyl-7,8,9,11,12,13,14,15,16,17-decahydro-6H-cyclopenta[a]phenanthrene-3,15,16,17-tetraol

**Structure:**



**Amount:**

**CAS number(s):** 15183-37-6  
**Molecular Formula:** C<sub>18</sub>H<sub>24</sub>O<sub>4</sub> **Molecular Weight:** 304.38  
**Batch Molecular Formula:** C<sub>18</sub>H<sub>24</sub>O<sub>4</sub>.1.25H<sub>2</sub>O **Batch Molecular Weight:** 326.90  
**Appearance:** Off-white solid **Observed mp:** 241 °C  
**TLC (R<sub>f</sub>):** 0.19 DCM/MeOH (9:1)  
**Chemical Purity:** 99.3%  
**Optical Purity (ee):** Optically pure  
**Optical Rotation (observed):** [α]<sub>D</sub> = 113.2° with c = 0.1 in EtOH  
**<sup>1</sup>H-NMR:** Analytical data confirm chemical structure  
**Mass Spec:** Analytical data confirm chemical structure  
**Microanalysis:** Calculated: C 66.13, H 8.17, N 0.00; Found: C 66.15, H 8.19, N <0.10  
**Storage Conditions:** Store at +4 °C

<b>Solubility Data:</b>	<b>Solvent</b>	<b>Solubility (mg/ml)</b>	<b>Solubility (mM)</b>	<b>Remarks</b>
	Water	0.0	0.0	Insoluble
	0.1N NaOH (aq)	15.0	45.9	
	0.1N HCl (aq)			Not Tested
	DMSO	32.7	>100 mM	
	EtOH	32.7	>100 mM	

**Remarks:**

**QC Date:** 13-8-2021

The purity of Axon Ligands is confirmed by HPLC, MS, NMR and/or microanalysis. Analytical data are available upon request. Request can be submitted by e-mail to [info@axonmedchem.com](mailto:info@axonmedchem.com) indicating Catalogue ID and Batch number.

**Caution: Not fully tested. For research purposes only**