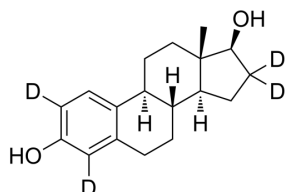


## Certificate of Analysis

**Product Name:** Estradiol-d<sub>4</sub>  
**Cat. No.:** CS-0254543  
**CAS No.:** 66789-03-5  
**Batch No.:** 142070  
**Chemical Name:** Estra-1,3,5(10)-triene-2,4,16,16-d<sub>4</sub>-3,17-diol, (17β)-

### PHYSICAL AND CHEMICAL PROPERTIES

**Molecular Formula:** C<sub>18</sub>H<sub>20</sub>D<sub>4</sub>O<sub>2</sub>  
**Molecular Weight:** 276.41  
**Storage:** Storage temp. 2-8°C  
**Chemical Structure:**



### ANALYTICAL DATA

**Appearance:** White to off-white (Solid)  
**<sup>1</sup>H NMR Spectrum:** Consistent with structure  
**LCMS:** Consistent with structure  
**Purity (LCMS):** 99.50%  
**Isotopic Enrichment:** D<sub>4</sub>=73.16%, D<sub>3</sub>= 22.2%, D<sub>2</sub>=4.5 %, D<sub>1</sub>=0.1%  
**Conclusion:** The product has been tested and complies with the given specifications.

**Caution: Product has not been fully validated for medical applications. For research use only.**

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