

# Certificate of Analysis

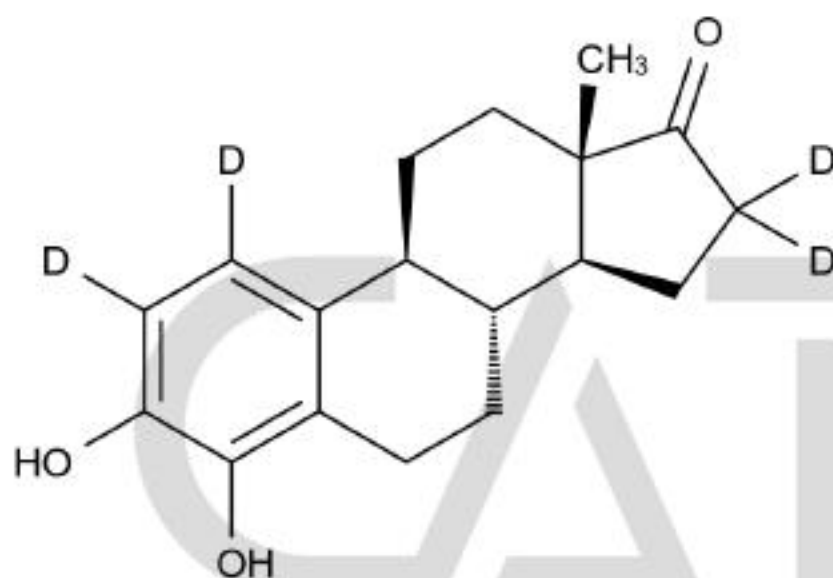
## Reference Material & Standard

|                    |                      |                   |                                           |
|--------------------|----------------------|-------------------|-------------------------------------------|
| Product Name:      | 4-Hydroxy Estrone-d4 | Catalogue Number: | CCAD303511                                |
| Synonyms:          | N/A                  | Lot Number:       | 0910-SA-7250                              |
| CAS Number:        | 81586-98-3           | Expiry Date:      | Sep 09, 28                                |
| Molecular Formula: | $C_{18}H_{18}D_4O_3$ | Storage:          | 2°C ~ 8°C Protected from light and Sealed |
| Molecular Weight:  | 290.39               |                   |                                           |

Warning:



Chemical Structure:



| Test Items      | Method            | Results                  |
|-----------------|-------------------|--------------------------|
| Appearance      | Visual inspection | Pale Beige to Grey Solid |
| Identification: | LC&HNMR           | Confirmed                |
| Purity:         | HPLC              | 97.692%                  |
| Uncertainty     |                   | ±2.0%                    |

## Comment:

The uncertainty values are the expanded uncertainty and represent an estimated standard deviation equal to the positive square root of the total variation of the uncertainty of components. A normal distribution is assumed and a coverage factor of K=2 is chosen using approximately a 95% confidence level.

Signature:

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Date: Sep 10, 24

Date: Sep 10, 24

Date: Sep 10, 24



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## Directions:

1. *Intended use: This product is suitable for identification and quantification of the analyte(s), instrument calibration, method development and quality control in analytical and R&D applications. It is not intended for administration to humans or animals, and shall not be used to diagnose, treat or cure any diseases.*
2. *Minimum sample size: 1mg is recommended as the minimum sample size.*
3. *Metrological traceability: This product meets the requirements of ISO 17034 and is traceable to NMI through an unbroken chain of comparisons.*
4. *Instructions for handling and correct use: Handling in a well-ventilated place.*

## Document Version:

| Revision No. | Date       | Reason for Revision |
|--------------|------------|---------------------|
| 01           | Sep 10, 24 | First release.      |

