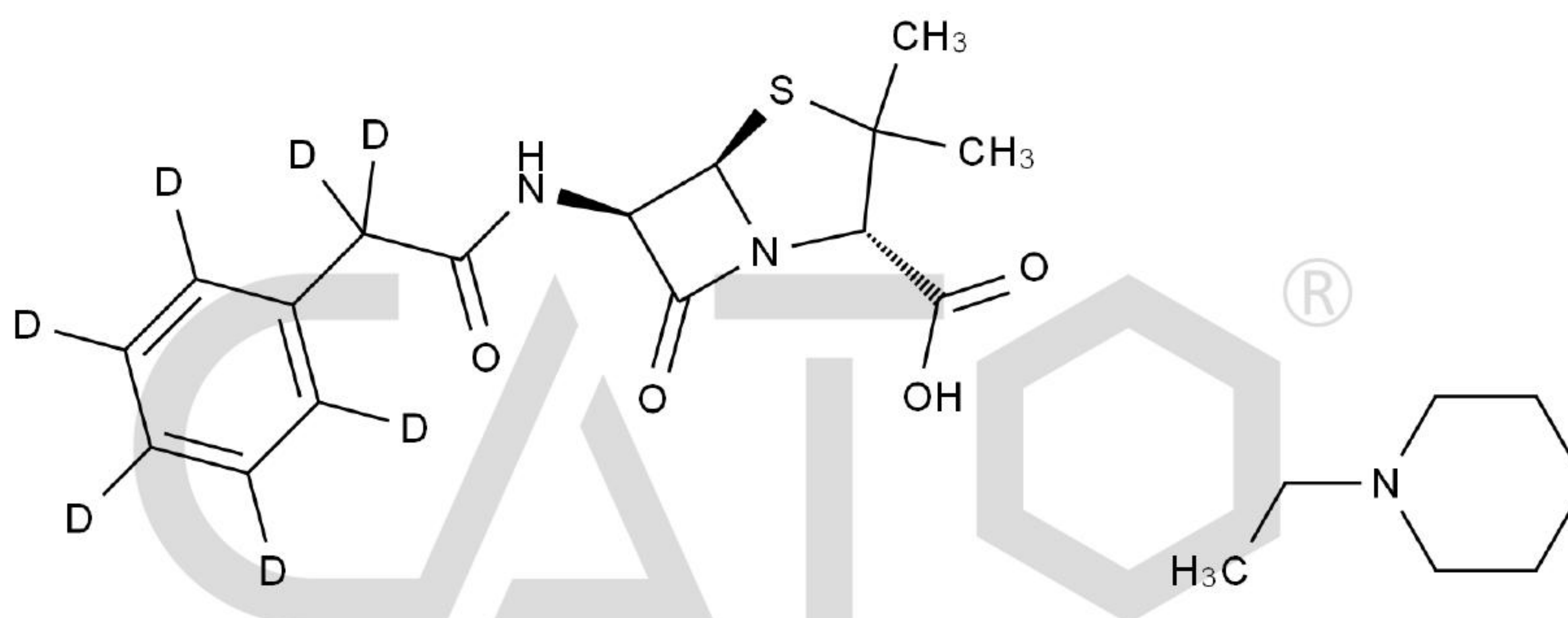


# Certificate of Analysis

## Reference Material & Standard

|                           |                                                                                                                 |                            |                                           |
|---------------------------|-----------------------------------------------------------------------------------------------------------------|----------------------------|-------------------------------------------|
| <b>Product Name:</b>      | Benzylpenicilline-d7 N-ethylpiperidinium Salt                                                                   | <b>Catalogue Number:</b>   | CCAD301366                                |
| <b>Synonyms:</b>          | N/A                                                                                                             | <b>Lot Number:</b>         | 0902-RH-0077                              |
| <b>CAS Number:</b>        | 1217445-37-8                                                                                                    | <b>Expiry Date:</b>        | May 24, 2030                              |
| <b>Molecular Formula:</b> | C <sub>16</sub> H <sub>11</sub> D <sub>7</sub> N <sub>2</sub> O <sub>4</sub> S C <sub>7</sub> H <sub>15</sub> N | <b>Storage:</b>            | 2°C ~ 8°C Protected from light and Sealed |
| <b>Molecular Weight:</b>  | 341.43 113.20                                                                                                   | <b>Shipping Condition:</b> | Shipping at Room Temperature              |

Chemical Structure:



| Test Items      | Method            | Results     |
|-----------------|-------------------|-------------|
| Appearance      | Visual inspection | White Solid |
| Identification  | LCMS&HNMR         | Confirmed   |
| Chemical Purity | HPLC              | 99.0%       |
| Isotopic Purity |                   | 99.2%       |
| Uncertainty     |                   | ±0.2%       |

## 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:

Prepared by:

Lisa

Reviewed by:

Hin Lam

Approved by General Manager:

David

Date: Sep 03, 2026

Date: Sep 04, 2026

Date: Sep 04, 2026



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