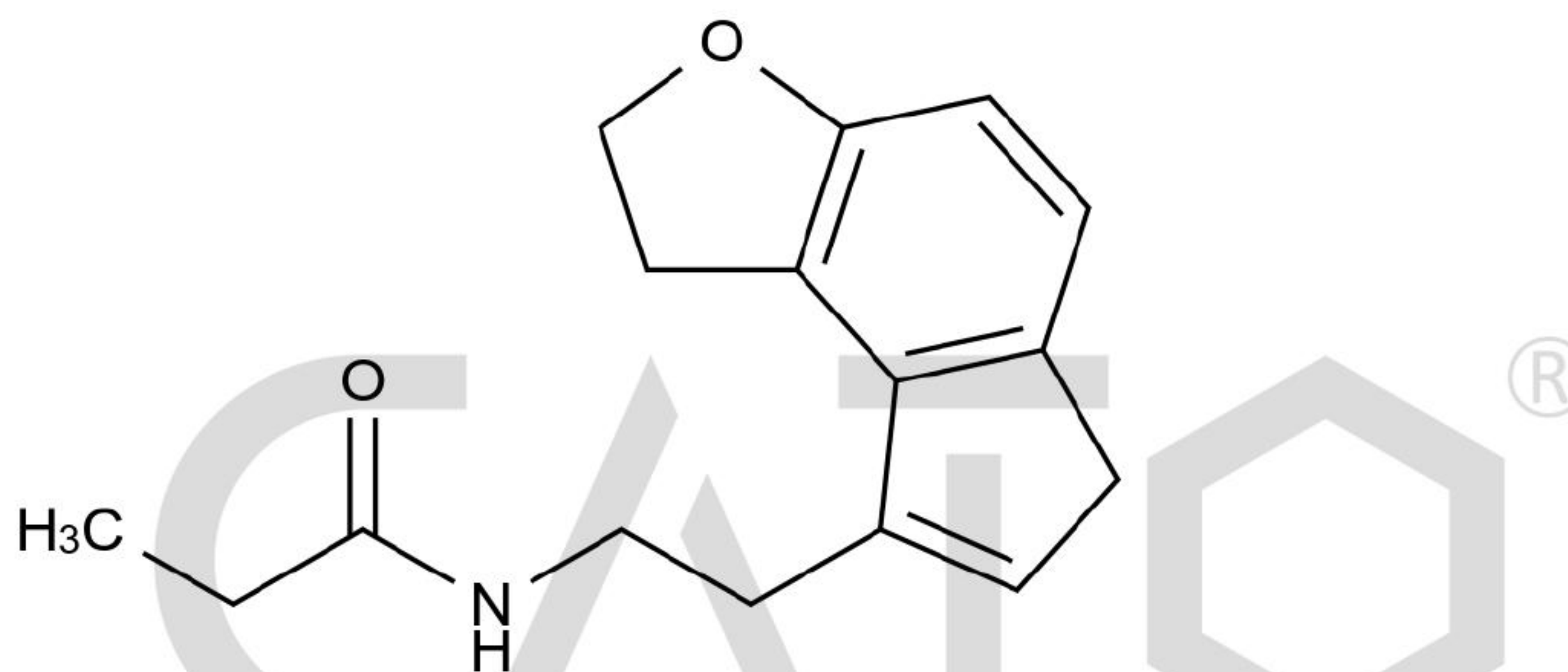


# Certificate of Analysis

## Reference Material & Standard

|                           |                                                 |                            |                                           |
|---------------------------|-------------------------------------------------|----------------------------|-------------------------------------------|
| <b>Product Name:</b>      | Ramelteon Impurity 23                           | <b>Catalogue Number:</b>   | C4X-262223                                |
| <b>Synonyms:</b>          | N/A                                             | <b>Lot Number:</b>         | 0812-RH-0021                              |
| <b>CAS Number:</b>        | 196597-30-5                                     | <b>Expiry Date:</b>        | Feb 21, 2030                              |
| <b>Molecular Formula:</b> | C <sub>16</sub> H <sub>19</sub> NO <sub>2</sub> | <b>Storage:</b>            | 2°C ~ 8°C Protected from light and Sealed |
| <b>Molecular Weight:</b>  | 257.33                                          | <b>Shipping Condition:</b> | Shipping at Room Temperature              |

## Chemical Structure:



| Test Items     | Method            | Results     |
|----------------|-------------------|-------------|
| Appearance     | Visual inspection | White Solid |
| Identification | LCMS&HNMR         | Confirmed   |
| Purity         | HPLC              | 99.2103%    |
| Loss on Drying | TGA               | 0.3554%     |
| Assay          |                   | 98.9%       |

## Comment:

The calculation of the mass balance method follows the formula (calculated on the non-dried basis):

Assay (%) = (100% - Loss on Drying) \* Purity HPLC (%) / 100%

Loss on Drying is considered as absolute effect, HPLC purity is considered as relative effect.

## Signature:

Prepared by:

*Jim*

Reviewed by:

*Lisa*

Approved by General Manager:

*David*

Date: Aug 12, 2026

Date: Aug 13, 2026

Date: Aug 13, 2026



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Page 1 of 6



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