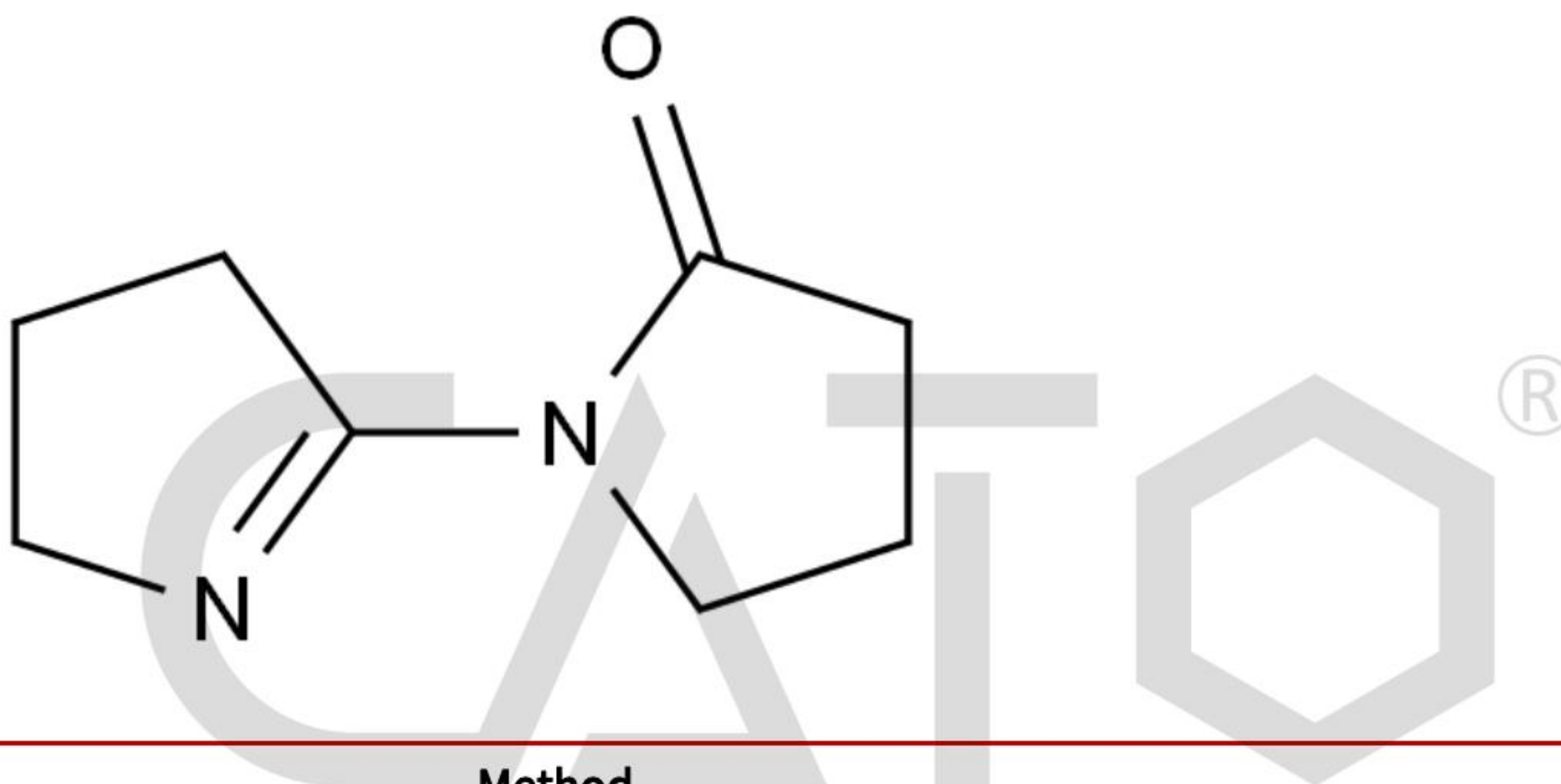


# Certificate of Analysis

## Reference Material & Standard

|                    |                                                 |                   |                                           |
|--------------------|-------------------------------------------------|-------------------|-------------------------------------------|
| Product Name:      | Piracetam Impurity 12                           | Catalogue Number: | C4X-123512                                |
| Synonyms:          | N/A                                             | Lot Number:       | 1028-RF-0136                              |
| CAS Number:        | 7060-52-8                                       | Expiry Date:      | Nov 07, 2027                              |
| Molecular Formula: | C <sub>8</sub> H <sub>12</sub> N <sub>2</sub> O | Storage:          | -20°C±5°C Protected from light and Sealed |
| Molecular Weight:  | 152.19                                          |                   |                                           |

Chemical Structure:



| Test Items        | Method            | Results             |
|-------------------|-------------------|---------------------|
| Appearance        | Visual inspection | White Solid         |
| Identification    | LCMS&HNMR         | Confirmed           |
| Purity            | HPLC              | 98.4680%            |
| Water Content     | Karl Fischer      | 3.394%              |
| Residual Solvents | NMR               | Not detected in NMR |
| Assay             |                   | 95.1%               |

## Comment:

The calculation of the 100% method follows the formula (calculated on the non-dried basis):

Assay (%) = (100% - Water Content - Residual Solvents) \* Purity HPLC (%) / 100%

Water Content and Residual Solvents are considered as absolute effect, HPLC purity is considered as relative effect.

## Signature:

Prepared by:

*Lily*

Reviewed by:

*Lisa*

Approved by General Manager:

*David*

Date: Nov 11, 2024

Date: Nov 11, 2024

Date: Nov 11, 2024

