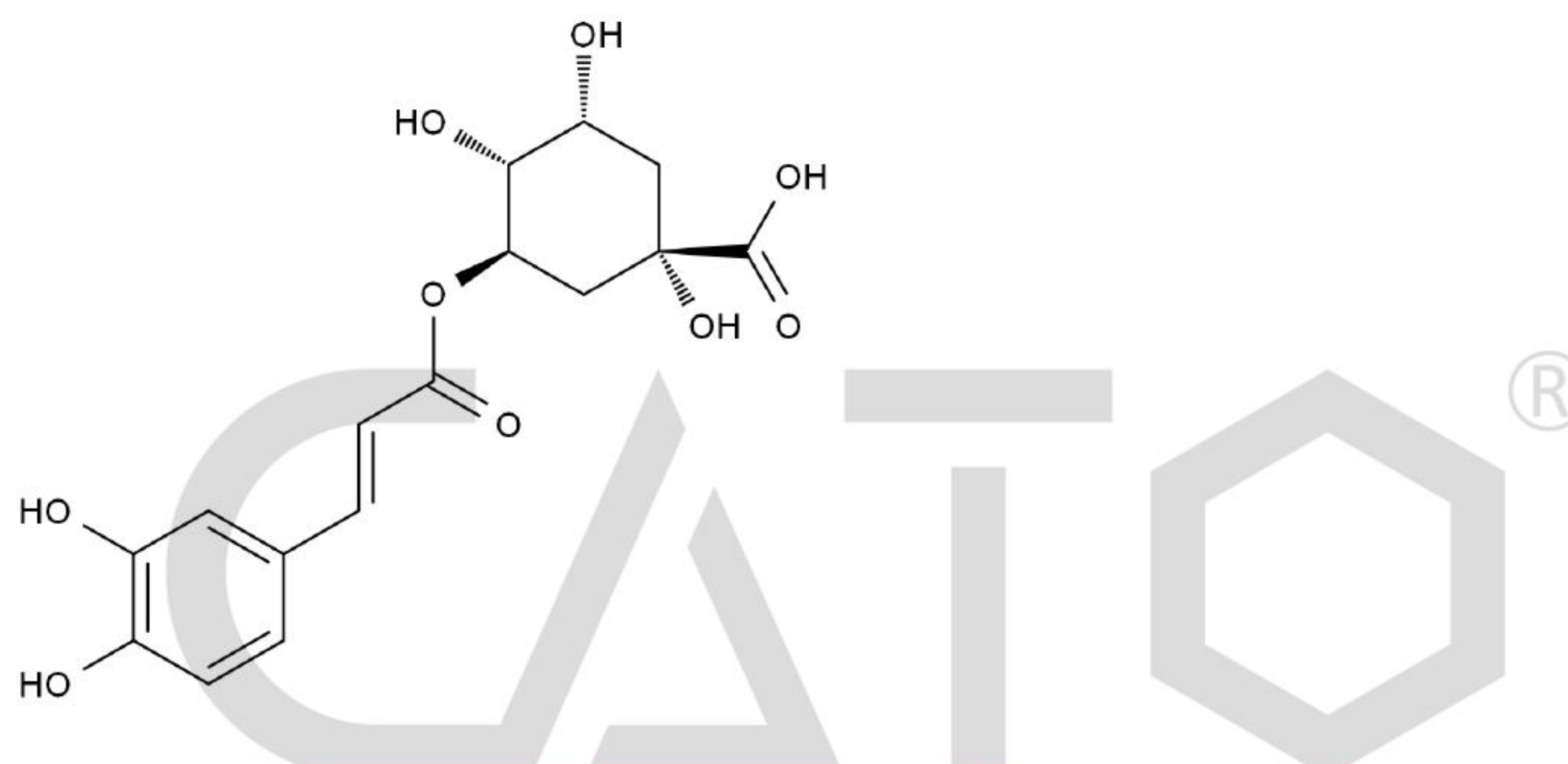


# Certificate of Analysis

## Reference Material & Standard

|                           |                                                |                            |                                           |
|---------------------------|------------------------------------------------|----------------------------|-------------------------------------------|
| <b>Product Name:</b>      | Chlorogenic Acid                               | <b>Catalogue Number:</b>   | CCPD101169                                |
| <b>Synonyms:</b>          | N/A                                            | <b>Lot Number:</b>         | 0224-RB-0006                              |
| <b>CAS Number:</b>        | 327-97-9                                       | <b>Expiry Date:</b>        | Mar 26, 2030                              |
| <b>Molecular Formula:</b> | C <sub>16</sub> H <sub>18</sub> O <sub>9</sub> | <b>Storage:</b>            | 2°C ~ 8°C Protected from light and Sealed |
| <b>Molecular Weight:</b>  | 354.31                                         | <b>Shipping Condition:</b> | Shipping at Room Temperature              |

### Chemical Structure:



| Test Items     | Method            | Results         |
|----------------|-------------------|-----------------|
| Appearance     | Visual inspection | Off-White Solid |
| Identification | LCMS&IR&HNMR      | Confirmed       |
| Purity         | HPLC              | 99.075%         |
| Water Content  | Karl Fischer      | 2.5702%         |
| Assay          |                   | 96.5%           |
| Uncertainty    |                   | ±0.4%           |

### Comment:

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

$$\text{Assay (\%)} = (100\% - \text{Water Content}) * \text{Purity HPLC (\%)} / 100\%$$

Water Content is considered as absolute effect, HPLC purity is considered as relative effect.
- 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:

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Reviewed by:

*Hinlam*

Approved by General Manager:

*David*

Date: Mar 27, 2026

Date: Mar 27, 2026

Date: Mar 27, 2026

