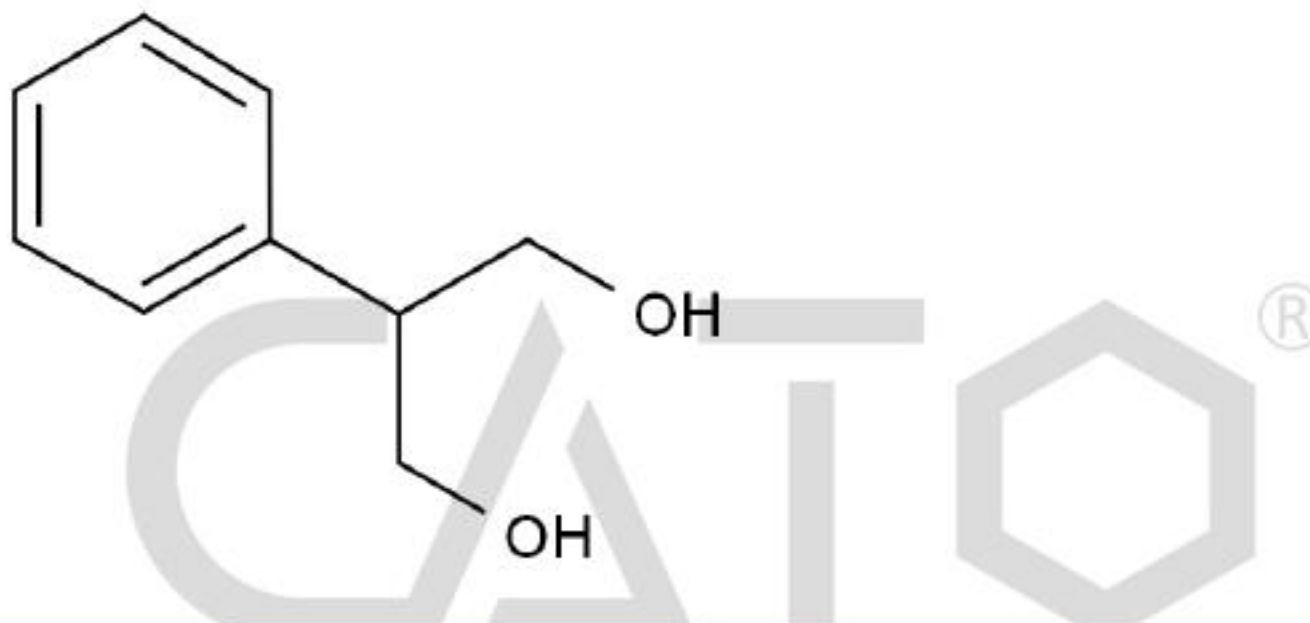


# Certificate of Analysis

## Reference Material & Standard

|                    |                                               |                   |                                           |
|--------------------|-----------------------------------------------|-------------------|-------------------------------------------|
| Product Name:      | Tiotropium Bromide Impurity 32                | Catalogue Number: | C4X-176432                                |
| Synonyms:          | N/A                                           | Lot Number:       | 1110-SA-7605                              |
| CAS Number:        | 1570-95-2                                     | Expiry Date:      | Nov 09, 27                                |
| Molecular Formula: | C <sub>9</sub> H <sub>12</sub> O <sub>2</sub> | Storage:          | 2°C ~ 8°C Protected from light and Sealed |
| Molecular Weight:  | 152.19                                        |                   |                                           |

Chemical Structure:



| Test Items      | Method            | Results                  |
|-----------------|-------------------|--------------------------|
| Appearance      | Visual inspection | White to Off-White Solid |
| Identification: | LC&HNMR           | Confirmed                |
| Purity:         | HPLC              | 98.305%                  |

Signature:

Prepared by:

*Lisa*

Reviewed by:

*Yuki*

Approved by General Manager:

*David*

Date: Nov 10, 23

Date: Nov 10, 23

Date: Nov 10, 23



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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           | Nov 10, 23 | First release.      |

