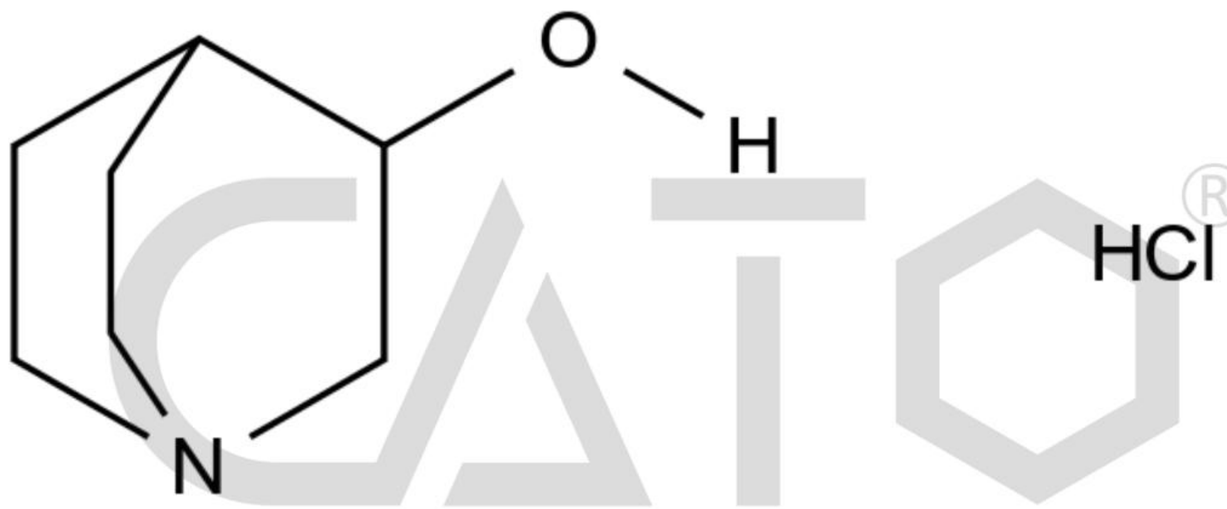
# Certificate of Analysis

## Reference Material & Standard

| | | | |
|---|---|---|---|
| **Product Name:** | quinuclidin-3-ol hydrochloride | **Catalogue Number:** | C1685953 |
| **Synonyms:** | N/A | **Lot Number:** | 0913-RH-0065 |
| **CAS Number:** | 6238-13-7 | **Expiry Date:** | Sep 17, 2030 |
| **Molecular Formula:** | $C_7H_{13}NO$ HCl | **Storage:** | -20°C±5°C Protected from light and Sealed |
| **Molecular Weight:** | 127.18 36.46 | **Shipping Condition:** | Shipping with Ice Packs |
| | | **Warning:** |  |

**Chemical Structure:**




| Test Items | Method | Results |
|---|---|---|
| **Appearance** | Visual inspection | White Solid |
| **Identification** | LCMS&HNMR | Confirmed |
| **Purity** | ELSD | 98.3% |
| **Assay** | qNMR | 98.1% |
| **Uncertainty** | | ±0.5% |

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## 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: Hinlam Date: Sep 18, 2026

Reviewed by: Lisa Date: Sep 18, 2026

Approved by General Manager: David Date: Sep 18, 2026

CATO Research Chemicals Inc.