

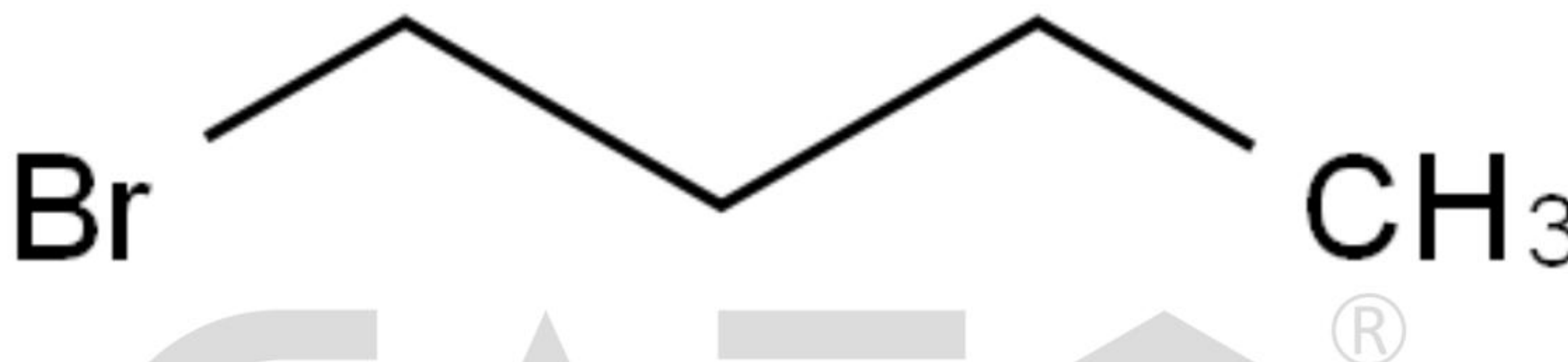
# Certificate of Analysis

## Reference Material & Standard

|                    |                                  |                   |                                           |
|--------------------|----------------------------------|-------------------|-------------------------------------------|
| Product Name:      | 1-Bromobutane                    | Catalogue Number: | C3D-2608                                  |
| Synonyms:          | N/A                              | Lot Number:       | 1118-RF-0015                              |
| CAS Number:        | 109-65-9                         | Expiry Date:      | Nov 21, 2027                              |
| Molecular Formula: | C <sub>4</sub> H <sub>9</sub> Br | Storage:          | 2°C ~ 8°C Protected from light and Sealed |
| Molecular Weight:  | 137.02                           | Warning:          |                                           |



Chemical Structure:



| Test Items     | Method            | Results           |
|----------------|-------------------|-------------------|
| Appearance     | Visual inspection | Colourless Liquid |
| Identification | GCMS&IR&HNMR      | Confirmed         |
| Purity         | GC                | 99.4%             |
| Assay          | qNMR              | 93.4%             |

## Comment:

Assay was determined by quantitative <sup>1</sup>H-NMR.

Signature:

Prepared by:

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Reviewed by:

*Koi*

Approved by General Manager:

*David*

Date: Jun 16, 2025

Date: Jun 17, 2025

Date: Jun 17, 2025

