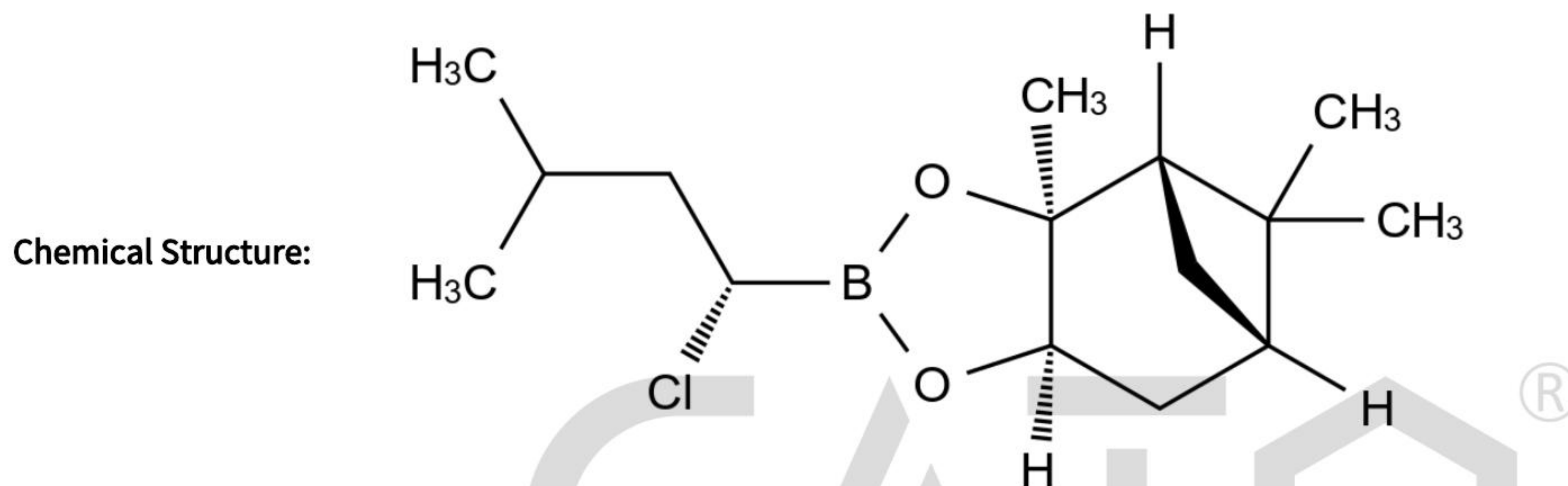


# Certificate of Analysis

## Reference Material

|                    |                                                   |                   |                                           |
|--------------------|---------------------------------------------------|-------------------|-------------------------------------------|
| Product Name:      | Bortezomib Impurity N46                           | Catalogue Number: | CP149419                                  |
| Chemical Name:     | N/A                                               | Lot Number:       | 0313-RE-0041                              |
| CAS Number:        | 85167-14-2                                        | Expiry Date:      | Mar 05, 2026                              |
| Molecular Formula: | C <sub>15</sub> H <sub>26</sub> BClO <sub>2</sub> | Storage:          | 2°C ~ 8°C Protected from light and Sealed |
| Molecular Weight:  | 284.63                                            |                   |                                           |



| Test Items        | Method            | Results                                                               |
|-------------------|-------------------|-----------------------------------------------------------------------|
| Appearance        | Visual inspection | Colorless Liquid                                                      |
| Identification    | LCMS&IR&HNMR      | Confirmed                                                             |
| Purity            | GC                | 98.5149%                                                              |
| Water Content     | Karl Fischer      | 0.1%                                                                  |
| Residual Solvents | NMR               | 0.9% ethyl acetate                                                    |
| Optical Rotation  |                   | [α] <sub>D</sub> <sup>25.0</sup> (c=0.33, CHCl <sub>3</sub> ): +39.6° |
| Assay             |                   | 97.5%                                                                 |

## Comment:

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

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

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

Signature:

Prepared by:

*Nacy*

Reviewed by:

*Xenia*

Aporoved by General manager:

*David*

Date: Mar 06, 2023

Date: Mar 16, 2023

Date: Mar 16, 2023

