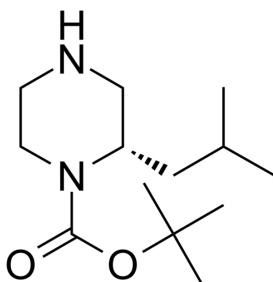


## Certificate of Analysis

**Product Name:** (S)-1-Boc-2-isobutyl-piperazine  
**Cat. No.:** CS-W020512  
**CAS No.:** 674792-06-4  
**Batch No.:** 111653

### PHYSICAL AND CHEMICAL PROPERTIES

**Molecular Formula:** C<sub>13</sub>H<sub>26</sub>N<sub>2</sub>O<sub>2</sub>  
**Molecular Weight:** 242.36  
**Storage:** Storage temp. 2-8°C  
**Chemical Structure:**



### ANALYTICAL DATA

**Appearance:** Colorless to light yellow (Liquid)  
**<sup>1</sup>H NMR Spectrum:** Consistent with structure  
**Purity (NMR):** ≥95.0%  
**Conclusion:** The product has been tested and complies with the given specifications.

**Caution: Product has not been fully validated for medical applications. For research use only.**

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