

3050 Spruce Street, Saint Louis, MO 63103, USA

Website: www.sigmaaldrich.com

Email USA: techserv@sial.com

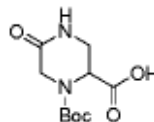
Outside USA: eurtechserv@sial.com

Certificate of Analysis

Product Name:

1-Boc-5-oxo-piperazine-2-carboxylic acid - 97%

Product Number: 739154
Lot Number: MKBJ5975V
Brand: ALDRICH
CAS Number: 1246553-28-5
Formula: C₁₀H₁₆N₂O₅
Formula Weight: 244.24 g/mol
Quality Release Date: 13 APR 2012



| Test | Specification | Result |
|---------------------|-----------------------|-----------|
| Appearance (Color) | White to Yellow | Off-White |
| Appearance (Form) | Powder or Crystals | Powder |
| Infrared spectrum | Conforms to Structure | Conforms |
| Proton NMR Spectrum | Conforms to Structure | Conforms |
| Carbon | 47.4 - 50.9 % | 48.5 % |
| Nitrogen | 11.0 - 11.9 % | 11.3 % |

Jamie Gleason, Manager
Quality Control
Milwaukee, Wisconsin US

Sigma-Aldrich warrants, that at the time of the quality release or subsequent retest date this product conformed to the information contained in this publication. The current Specification sheet may be available at Sigma-Aldrich.com. For further inquiries, please contact Technical Service. Purchaser must determine the suitability of the product for its particular use. See reverse side of invoice or packing slip for additional terms and conditions of sale.