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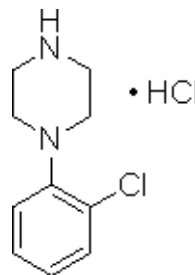
Outside USA: eurtechserv@sial.com

## Certificate of Analysis

Product Name:

1-(2-Chlorophenyl)piperazine monohydrochloride - 95%

**Product Number:** C67605  
**Batch Number:** MKBN4313V  
**Brand:** ALDRICH  
**CAS Number:** 41202-32-8  
**MDL Number:** MFCD00012761  
**Formula:** C<sub>10</sub>H<sub>13</sub>ClN<sub>2</sub> · HCl  
**Formula Weight:** 233.14 g/mol  
**Quality Release Date:** 07 JAN 2013



Test	Specification	Result
Appearance (Color)	White to Beige	White
Appearance (Form)	Powder or Crystals or Powder with Chunk(s) or Crystals with Chunk(s)	Powder
Proton NMR Spectrum	Conforms to Structure	Conforms
Carbon	48.5 - 54.6 %	51.5 %
Nitrogen	11.3 - 12.7 %	12.0 %
Purity (HPLC)	≥ 94 %	100 %

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.