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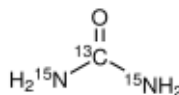
Outside USA: eurtechserv@sial.com

Certificate of Analysis

Product Name:

Urea-¹³C,¹⁵N₂ - 99 atom % ¹³C, 98 atom % ¹⁵N

Product Number: 490954
Batch Number: MBBB2767V
Brand: ALDRICH
CAS Number: 58069-83-3
MDL Number: MFCD00145506
Formula: 13CH415N2O
Formula Weight: 63.03 g/mol
Quality Release Date: 01 MAY 2014



| Test | Specification | Result |
|----------------------------|---------------|----------|
| Appearance (Color) | White | White |
| Appearance (Form) | Powder | Powder |
| Purity (HPLC) | ≥ 99.0 % | 99.0 % |
| Proton NMR Spectrum | Conforms | Conforms |
| Carbon NMR Spectrum | Conforms | Conforms |
| ¹³ C Enrichment | ≥ 99.0 % | 99.6 % |
| ¹⁵ N Enrichment | ≥ 98.0 % | 99.3 % |
| Water (by Karl Fischer) | ≤ 0.5 % | 0.1 % |

Sudhakar Parthasarathy, Scientist

Quality Control

Miamisburg, Ohio 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.