

INDOFINE Chemical Company, Inc.

121 Stryker Lane, Bldg. 30, Suite 1 • Hillsborough, NJ 08844 • U.S.A.

Phone: (908) 359-6778 • FAX: (908) 359-1179

website: www.indofinechemical.com

e-mail: chemical@indofinechemical.com

-CERTIFICATE OF ANALYSIS-

Product: DL-Dithiothreitol
Code No: MB1015
CAS No: 3483-12-3
Formula: C₄H₁₀O₂S₂
Batch No: 502978
Re-test date: 01/06/2023

| Sl. No | TESTS | SPECIFICATION LIMITS | RESULTS |
|--------|--|--|--------------------------------|
| 1. | Description | A white free flowing powder, hygroscopic | Complies |
| 2. | Solubility | Freely soluble in water, methanol and in Methylene chloride | Complies |
| 3. | Clarity a) In water b) In sodium acetate | 5%(w/v) Solution in water is clear and colorless Clear and colourless | Complies Complies |
| 4. | Identification by a) IR b) TLC | IR Spectrum of sample exhibits maxima at the same wavelengths as that of a similar preparation of reference compound. R _f value of the sample is comparable with that of the standard. | Complies Complies |
| 5. | Melting Range | 42 - 44°C | 42 to 43°C |
| 6. | Related Substance a) TLC b)UV Spectroscopy | Single individual impurity NMT 0.5% Total Impurities NMT 2.0% Content of Oxidized DTT (Dihydroxydithiane) NMT 0.4% | Complies Complies 0.154% |
| 7. | UV Absorbance A) At 500nm B) At 280nm | Absorbance of 0.1M Solution at 500nm NMT 0.050 Absorbance of 0.1M Solution at 280nm NMT 0.100 | 0.002 0.046 |
| 8. | pH / Acidity | pH of 0.1M solution in water is between 4.0 and 6.0 | 5.29 |
| 9. | Assay (By Iodimetry) | NLT 99% | 99.59% |
| 10. | Loss on Drying | < 0.5% | 0.13% |
| 11. | Purity by GC | > 98% | 99.27% |
| 12. | Heavy Metals as Lead (Pb) | NMT 1mg per kg | Nil |
| 13. | Sulphate | NMT 50mg per kg | 33.0 mg |

Prepared by:
Ramesh Mandadi
Ramesh Mandadi
Director of Operations

Reviewed and Approved by:
Sujata Moton
Sujata Moton
VP