



# INDOFINE Chemical Company, Inc.

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## CERTIFICATE OF ANALYSIS

Product: DL-Dithiothreitol  
 Code No: MB1015  
 CAS No: 3483-12-3  
 Molecular Weight: 154.25  
 Formula: C<sub>4</sub> H<sub>10</sub> O<sub>2</sub> S<sub>2</sub>  
 Batch #: 487331

Description	A white free flowing powder, hygroscopic	Complies
Solubility	Freely soluble in water, methanol and methylene chloride	Complies
Clarity a) in water b) in sodium acetate	5% (w/v) solution in water is clear and colourless Clear and colourless	Complies Complies
Identification by a) IR	IR Spectrum of sample exhibits maxima at the same wavelengths as that of a similar preparation of reference compound.	Complies
b) TLC	R <sub>f</sub> value of the sample is comparable with that of the standard.	Complies
Melting Range	42 - 44 °C	42 - 43 °C
Related Substance a) TLC	Single individual impurity NMT 0.5% Total impurities NMT 2.0%	Complies Complies
b) UV Spectroscopy	Content of Oxidized DTT (Dihydroxydithiane) NMT 0.4%	0.137%
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	0.005 0.032
pH/Acidity	pH of 0.1M solution in water is between 4.0 and 6.0	5.32
Assay (By Iodimetry)	NLT 99%	99.57%
Loss on Drying	< 0.5%	0.18%
Assay by GC	> 98%	98.37%
Heavy Metals as Lead (Pb)	NMT 1mg per kg	Nil
Sulphate	NMT 50mg per kg	19 mg

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