

## Certificate of Analysis

Date of Testing: 2023-12-28 15:52:54  
Date of Next Testing: 2027-12-27 15:52:54  
Product Name: **Diethanolamine**  
CAS Number: 111-42-2  
Specifications & Purity: 99%  
Lot #: L2322277  
SKU #: **D112360**  
**Analysis:** **309380**  
Storage Temperature: Room temperature, Argon charged, Desiccated

Parameter	Limit Values	Result
Purity(Titration by HClO <sub>4</sub> )	98.5-101.5 (%)	99.98 %
Refractive index n <sub>20</sub> /D	1.474-1.479	1.48
Purity(GC)	99-100 (%)	99.04 %
Appearance (D112360)	White solid or colorless to yellow liquid	White solid or colorless to yellow liquid
Infrared spectrum	Conforms to Structure	Conforms to Structure
Solubility in H <sub>2</sub> O , Colorless ,Clear ,50 mg/mL in pass H <sub>2</sub> O		Pass



John Su  
QA & QC Manager