

## Certificate of Analysis

Date of Testing: 2024-05-13 19:33:19  
Date of Next Testing: 2028-05-12 19:33:19  
Product Name: **Diethanolamine**  
CAS Number: 111-42-2  
Specifications & Purity: AR, ≥99%  
Lot #: E2407149  
SKU #: **D112360**  
**Analysis:** **357897**  
Storage Temperature: Room temperature, Argon charged, Desiccated

Parameter	Limit Values	Result
Purity(Titration by HClO <sub>4</sub> )	98.5-101.5 (%)	98.50 %
Refractive index n <sub>20</sub> /D	1.474-1.479	1.48
Purity(GC)	99-100 (%)	99.41 %
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