

Status: Currently Official on 15-Feb-2025
Official Date: Official as of 01-May-2020
Document Type: NF Monographs
DocId: GUID-5D2BAB59-3309-4F61-A7FF-8885FD2690BB_4_en-US
DOI: https://doi.org/10.31003/USPNF_M54720_04_01
DOI Ref: p87mr

© 2025 USPC
Do not distribute

Monoethanolamine



C_2H_7NO 61.08

Ethanol, 2-amino-

2-Aminoethanol CAS RN®: 141-43-5.

DEFINITION

Monoethanolamine contains NLT 98.0% and NMT 100.5% by weight of monoethanolamine (C_2H_7NO).

IDENTIFICATION

Change to read:

- **A.** ▲ [SPECTROSCOPIC IDENTIFICATION TESTS \(197\)](#), [Infrared Spectroscopy: 197F](#) ▲ (CN 1-MAY-2020)

ASSAY

PROCEDURE

Sample solution: Weigh a glass-stoppered weighing bottle containing 25 mL of water. Add 1 g of Monoethanolamine, and reweigh.

Blank: 25 mL of water

Titrimetric system

(See [Titrimetry \(541\)](#).)

Mode: Direct titration

Titrant: 0.5 N hydrochloric acid VS

Endpoint detection: Visual

Analysis: Transfer the *Sample solution* to a suitable flask, add a mixed indicator of 5 parts bromocresol green TS and 6 parts methyl red TS for a total of approximately 11 parts of solution. Titrate the *Sample solution* with *Titrant*. Perform a blank determination.

Calculate the percentage of monoethanolamine (C_2H_7NO) in the portion of sample taken:

$$\text{Result} = \frac{(V_s - V_b) \times N \times F}{W} \times 100$$

V_s = *Titrant* volume consumed by the *Sample solution* (mL)

V_b = *Titrant* volume consumed by the *Blank* (mL)

N = actual normality of the *Titrant* (mEq/mL)

F = equivalency factor, 61.08 mg/mEq

W = sample weight (mg)

Acceptance criteria: 98.0%–100.5%

IMPURITIES

- [RESIDUE ON IGNITION \(281\)](#): NMT 0.1%

SPECIFIC TESTS

- [SPECIFIC GRAVITY \(841\)](#): 1.013–1.016
- [DISTILLING RANGE, Method II \(721\)](#): NLT 95% of it distills between 167° and 173°, a correction factor of 0.052° per mm applied as necessary.

ADDITIONAL REQUIREMENTS

- **PACKAGING AND STORAGE:** Preserve in tight, light-resistant containers.
- [USP REFERENCE STANDARDS \(11\)](#)
[USP Monoethanolamine RS](#)

Auxiliary Information - Please [check for your question in the FAQs](#) before contacting USP.

Topic/Question	Contact	Expert Committee
MONOETHANOLAMINE	Documentary Standards Support	SE2020 Simple Excipients

Chromatographic Database Information: [Chromatographic Database](#)

Most Recently Appeared In:

Pharmacopeial Forum: Volume No. PF 31(5)

Current DocID: GUID-5D2BAB59-3309-4F61-A7FF-8885FD2690BB_4_en-US

DOI: https://doi.org/10.31003/USPNF_M54720_04_01

DOI ref: [p87mr](#)

OFFICIAL