

# Certificate of Analysis

## Ammonium Hydroxide, ACS Reagent Grade

Lot Number: 4404E82

Product Number: RABA0020

Date Packaged: APR 05, 2024

Expiration Date: JAN 2026

Chemical Formula:  $\text{NH}_4\text{OH}$   
Formula weight: 35.05**Contains** $\text{NH}_4\text{OH}$  CAS No. 1336-21-6 MW 35.05

Test	Specification	Result
Appearance	Colorless liquid	Passed
Assay	28.0-30.0 % $\text{NH}_3$	29.0 % $\text{NH}_3$
Carbon Dioxide ( $\text{CO}_2$ )	max 0.002 %	< 0.002 %
Chloride (Cl)	max 0.5 ppm	< 0.5 ppm
Heavy Metals (as Pb)	max 0.5 ppm	< 0.5 ppm
Iron (Fe)	max 0.2 ppm	< 0.2 ppm
Nitrate ( $\text{NO}_3$ )	max 2 ppm	< 2 ppm
Phosphate ( $\text{PO}_4$ )	max 2 ppm	< 2 ppm
Residue after Ignition	max 0.002 %	< 0.002 %
Substances Reducing Permanganate	To Pass Test	Passed
Sulfate ( $\text{SO}_4$ )	max 2 ppm	< 2 ppm

Balances are calibrated regularly with weights certified traceable to the NIST national mass standard. All products are prepared according to master documents that assure manufacture according to validated methods. Batch records document traceability and production history for each lot manufactured.

Part Number	Size / Package Type	Shelf Life (Unopened Container)
RABA0020-500D1	500 mL glass	24 months

**Recommended Storage:** 15°C - 30°C (59°F - 86°F)

Paul Brandon (04/05/2024)

Production Manager

This document is designed to comply with ISO Guide 31 "Reference Materials -- Contents of Certificates and Labels."

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