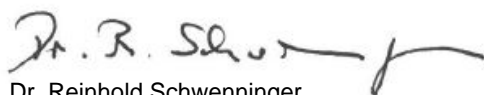


Certificate of Analysis

Product Name: Ammonium chloride
ACS reagent, $\geq 99.5\%$
Product Number: 213330
Batch Number: BCCH1021
CAS Number: 12125-02-9
Formula: NH_4Cl
Formula Weight: 53.49
Quality Release Date: 26 JAN 2022
Recommended Retest Date: JAN 2025

TEST	SPECIFICATION	RESULT
APPEARANCE (COLOR)	WHITE	WHITE
APPEARANCE (FORM)	POWDER OR CRYSTALS OR CHUNK(S)	CRYSTALS
ARGENTOMETR. TITRATION	99.5 - 101.0 %	100.1 %
PH-TEST	4.5 - 5.5	4.8
PH (METHOD)	25C (5% SOLUTION)	25C (5% SOLUTION)
SULFATED ASH	$\leq 0.01\%$	0.00 %
ACS SPECIFICATIONS	CORRESPONDS TO REQUIREMENTS	CORRESPONDS TO ACS (11TH ED.)
REMARKS ON ACS	INSOLUBLE MATTER $\leq 0.005\%$	INSOLUBLE MATTER $\leq 0.005\%$
METAL TRACE ANALYSIS (ICP)	CORRESPONDS TO REQUIREMENTS	PASSED
CALCIUM (ICP)	$\leq 10 \text{ MG/KG}$	$< 10 \text{ MG/KG}$
IRON (ICP)	$\leq 2 \text{ MG/KG}$	$< 2 \text{ MG/KG}$
MAGNESIUM (ICP)	$\leq 5 \text{ MG/KG}$	$< 5 \text{ MG/KG}$
TOTAL SULFUR AS SO_4 (ICP)	$\leq 20 \text{ MG/KG}$	$< 20 \text{ MG/KG}$
Heavy metals (by ICP)	$\leq 5 \text{ MG/KG}$	$< 5 \text{ MG/KG}$
PHOSPHATE (PO_4)	$\leq 2 \text{ MG/KG}$	$< 2 \text{ MG/KG}$



Dr. Reinhold Schwenninger

Quality Assurance

Buchs, Switzerland

Sigma-Aldrich warrants that at the time of the quality release or subsequent retest date this product conformed to the information contained in this publication. The current specification sheet may be available at Sigma-Aldrich.com. For further inquiries, please contact Technical Service. Purchaser must determine the suitability of the product for its particular use. See reverse side of invoice or packing slip for additional terms and conditions of sale.

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