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A9434 ▶ **Sigma-Aldrich®**

Ammonium chloride

★★★★★ (0)

for molecular biology, suitable for cell culture, ≥99.5%

Synonym(s):

Salmiac

Linear Formula:

NH₄Cl

CAS Number: **12125-02-9**

Molecular Weight: 53.49

Beilstein: 4371014

EC Number: **235-186-4**

MDL number: **MFCD00011420**

eCl@ss: 38050207

PubChem Substance ID: **24891452**

NACRES: NA.31

SKU	Pack Size	Availability	Price	Quantity	
A9434-500G	500 G	✓ Only 5 left in stock (more on the way) Details...	€86.30	− + i	
A9434-1KG	1 KG	✓ Available to ship on October 10, 2022 Details...	€163.00	− + i	

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RECOMMENDED PRODUCTS

<

NH₄Cl

Sigma-Aldrich

254134

Ammonium chloride

99.998% trace metals basis

View Price and Availability

NH₄Cl

Sigma-Aldrich

09718

Ammonium chloride

BioUltra, for molecular biology, ≥99.5% (AT)

View Price and Availability

>

PROPERTIES

grade	for molecular biology
Quality Level	200
vapor density	1.9 (vs air)
vapor pressure	1 mmHg (160.4 °C)
assay	≥99.5%
form	powder or crystals
technique(s)	cell culture mammalian: suitable

mp	340 °C (subl.) (lit.)
anion traces	phosphate (PO ₄ ³⁻): ≤2 ppm sulfate (SO ₄ ²⁻): ≤20 ppm
cation traces	Fe: ≤2 ppm heavy metals (as Pb): ≤5 ppm
foreign activity	DNase, RNase, protease, none detected
SMILES string	N.Cl
InChI	1S/ClH.H3N/h1H;1H3
InChI key	NLXLAEXVIDQMFP-UHFFFAOYSA-N

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Related Categories

[Salts](#)

DESCRIPTION

Application

Ammonium chloride has been used:

- as an inhibitor of endosome acidification in vero cells
- as an autophagy inhibitor in vascular smooth muscle cell (VSMC)
- in the depletion and lysis of erythrocytes in testis parenchyma homogenate

Packaging

500 g in poly bottle

1 kg in poly bottle

Biochem/physiol Actions

Ammonium chloride is one of the three principal components of the nitrogen cycle. Ammonium chloride administration promotes creatinine and urea clearance and induces metabolic acidosis in mice. Excess of ammonium chloride inhibits Krebs' pathway in brain and depletes ATP in astrocytes. Ammonium chloride inhibits acidification in the endosome-lysosome system. Ammonium chloride is a hemolysing agent used for the lysis of erythrocytes.

SAFETY INFORMATION

Pictograms



GHS07

Signal Word

Warning

Hazard Statements

H302 - H319

Precautionary Statements

P264 - P270 - P280 - P301 + P312 -
P305 + P351 + P338 - P337 + P313

Hazard Classifications

Acute Tox. 4 Oral - Eye Irrit. 2

Storage Class Code

13 - Non Combustible Solids

WGK

WGK 1

Flash Point(F)

Not applicable

Flash Point(C)

Not applicable

Personal Protective**Equipment**

dust mask type N95 (US),

Eyeshields, Gloves

REGULATORY LISTINGS

Regulatory Listings are mainly provided for chemical products. Only limited information can be provided here for non-chemical products. No entry means none of the components are listed. It is the user's obligation to ensure the safe and legal use of the product.

EU REACH Annex XVII (Restriction List)CAS No. **12125-02-9**

DOCUMENTATION

Certificate of Analysis

Enter Lot Number to search for Certificate of Analysis (COA).

Lot Number

e.g. 023J5431

How to enter Lot Number (COA)**Search****Certificate of Origin**

Enter Lot Number to search for Certificate of Origin (COO).

Lot Number

e.g. 023J5431

How to enter Lot Number (COO)

Search

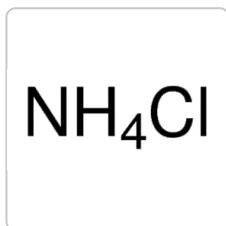
More Documents

[Spectra - ATR-IR](#)

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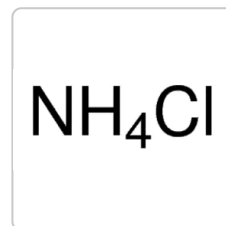
Supelco

09685

Ammonium ion solution for ISE

1000 mg/kg N, analytical standard (for ion-selective electrodes)

[View Price and Availability](#)



Sigma-Aldrich

09724

Ammonium chloride

tested according to Ph. Eur.

[View Price and Availability](#)



PEER REVIEWED PAPERS

Infectious bronchitis virus entry mainly depends on clathrin mediated endocytosis and requires classical endosomal/lysosomal system

Wang H, et al.

Virology, 528, 118-136 (2019)

Aqueous ammonia and ammonium chloride hydrates: Principal infrared spectra

Max JJ and Chapados C

Journal of Molecular Structure, 1046, 124-135 (2013)

Effect of ammonium chloride and dietary phosphorus in the azotaemic rat. I. Renal function and biochemical changes

Jara A, et al.

Nephrology, Dialysis, and Transplantation, 19(8), 1986-1992 (2004)

Nrf2 Activation Provides Atheroprotection in Diabetic Mice Through Concerted Upregulation of Antioxidant, Anti-inflammatory, and Autophagy Mechanisms

Lazaro I, et al.

Frontiers in Pharmacology, 9, 118-136 (2018)

Inhibition of endosome-lysosome system acidification enhances porcine circovirus 2 infection of porcine epithelial cells

Misinzo G, et al.

Journal of Virology, 82(3), 1128-1135 (2008)

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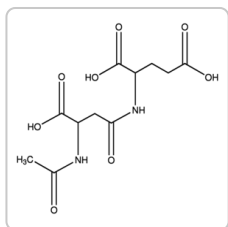
PROTOCOLS AND ARTICLES

Protocols

GenElute™ Mammalian Genomic DNA Miniprep Kit Protocol

The GenElute Mammalian Genomic DNA Purification Kit Protocol describes the isolation of pure, high molecular weight DNA from a variety of mammalian sources.

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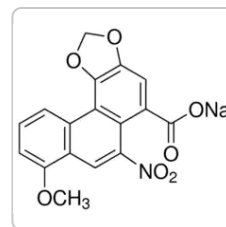


Sigma-Aldrich

A9436

N-Acetyl-β-Asp-Glu

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Sigma-Aldrich

A9451

Aristolochic acid I sodium salt
powder, ≥97%

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Reviews



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TECHNICAL SERVICE

Our team of scientists has experience in all areas of research including Life Science, Material Science, Chemical Synthesis, Chromatography, Analytical and many others.

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