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Ammonium chloride
Cell Culture Tested

Product Number **A0171**
Store at Room Temperature

Product Description

Molecular Formula: NH_4Cl
Molecular Weight: 53.49
CAS Number: 12125-02-9
Synonyms: ammonium muriate, sal ammoniac, salmiac[1]

This product is cell culture tested and is appropriate for use in cell culture experiments.

Ammonium chloride is a reagent that is used in a variety of industrial and research applications. Industrial uses include electroplating, tinning, and the manufacture of dyes. It is also used as a fluxing agent for the galvanizing of steel, the refinement of zinc, and the coating of sheet iron with zinc.[1]

In biological research, ammonium chloride is often used for the lysis of human red blood cells.[2,3,4] Ammonium chloride has been used in the study of basic calcium phosphate crystals in fibroblasts.[5] The use of ammonium chloride in the isolation of proteins from 50S ribosomal subunits of *Bacillus stearothermophilus* has been described.[6] A study of the nucleic acid binding protein HSP15 that uses ammonium chloride to investigate the effect of different salt conditions on HSP15 binding to 50S subunits has been published.[7]

A differential pulse voltammetry procedure for the detection of copper, lead, cadmium, and nickel in environmental matrices that uses ammonia-ammonium chloride buffer has been reported.[8]

Precautions and Disclaimer

For Laboratory Use Only. Not for drug, household or other uses.

Preparation Instructions

This product is soluble in water (100 mg/ml. It is also soluble in methanol and ethanol.[1] The pH of various percentage solutions of NH_4Cl has been reported:

1% solution = pH 5.5
3% solution = pH 5.1
10% solution = pH 5.0[1]

References

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4. Baerlocher, G. M., et al., Telomere length measurement by fluorescence *in situ* hybridization and flow cytometry: tips and pitfalls. Cytometry, **47(2)**, 89-99 (2002).
5. Halverson, P. B., et al, Intracellular calcium responses to basic calcium phosphate crystals in fibroblasts. Osteoarthritis Cartilage, **6(5)**, 324-329 (1998).
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7. Korber, P., et al., HSP15: a ribosome-associated heat shock protein. EMBO J., **19(4)**, 741-748 (2000).
8. Locatelli, C., Measurement of voltammetric peak area and resolution of overlapping peaks in the simultaneous determination of copper, lead, cadmium, and nickel in environmental matrixes. J. AOAC Int., **83(6)**, 1321-1326 (2000).

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