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Product Information

Calcium acetate hydrate, *ReagentPlus*

Product Number **C1000**
Store at Room Temperature

CAS RN: 114460-21-8 (hydrate)
62-54-4 (anhydrous)

Molecular Formula: $Ca(CH_3COO)_2 \cdot x\ H_2O$
Molecular Weight: 158.17 (anhydrous)
Synonym: lime acetate

Assay: ≥ 99% (titration)

Product Description

Calcium acetate is utilized in the manufacture of acetic acid and acetone. It has been used in the manufacture of metallic soaps and synthetic resins, in lubricants as a corrosion inhibitor, and as a mordant in dyeing.[1] In biomaterials research, calcium acetate has been utilized in the development of potential bioresorbable bone graft substitutes based on poly(propylene glycol-co-fumaric acid).[2,3]

Calcium acetate has been utilized in the crystallization of proteins, such as human annexin II and the bacterial heme oxygenase (Hmu O), and of a complex of human CDK6 with a virus-encoded cyclin.[4,5,6] A cell culture study of iron availability to Caco2 cells in the presence of calcium acetate has been described.[6,7] An investigation of the loading of amphipathic weak acid molecules into preformed liposomes that uses calcium acetate in varying concentrations has been reported.[8]

A review of the separation of neutral carbohydrates by capillary electrophoresis, including the use of calcium acetate as a carrier, has been published.[9]

Precautions and Disclaimer

This product is for R&D use only, not for drug, household, or other uses. Please consult the Material Safety Data Sheet for information regarding hazards and safe handling practices.

Preparation Instructions

This product is soluble in water (200 mg/ml), yielding a clear to slightly hazy, colorless to faint yellow solution.

References

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3. Lewandrowski, K. U., et al., Bioresorbable bone graft substitutes of different osteoconductivities: a histologic evaluation of osteointegration of poly(propylene glycol-co-fumaric acid)-based cement implants in rats. *Biomaterials*, **21(8)**, 757-764 (2000).
4. Tran, J. T., et al., Cloning, purification and crystallization of full-length human annexin 2. *Acta Crystallogr. D Biol. Crystallogr.*, **58(Pt 10 Pt 2)**, 1854-1857 (2002).
5. Chu, G. C., et al., Crystallization and preliminary X-ray diffraction analysis of a recombinant bacterial heme oxygenase (Hmu O) from *Corynebacterium diphtheriae*. *J. Struct. Biol.*, **126(2)**, 171-174 (1999).
6. Schulze-Gahmen, U., and Kim, S. H., Crystallization of a complex between human CDK6 and a virus-encoded cyclin is critically dependent on the addition of small charged organic molecules. *Acta Crystallogr. D. Biol. Crystallogr.*, **57(Pt 9)**, 1287-1289 (2001).
7. Glahn, R. P., et al., A comparison of iron availability from commercial iron preparations using an *in vitro* digestion/Caco2 cell culture model. *J. Nutr. Biochem.*, **11(2)**, 62-68 (2000).
8. Clerc, S., and Barenholz, Y., Loading of amphipathic weak acids into liposomes in response to transmembrane calcium acetate gradients. *Biochim. Biophys. Acta*, **1240(2)**, 257-265 (1995).
9. Honda, S., Separation of neutral carbohydrates by capillary electrophoresis. *J. Chromatogr. A*, **720(1-2)**, 337-351 (1996).

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