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Product Information

Calcium chloride dihydrate

Product Number **C3881**
Store at Room Temperature

Product Description

Molecular Formula: $\text{CaCl}_2 \cdot 2\text{H}_2\text{O}$
Molecular Weight: 147.0
CAS Number: 10035-04-8

Calcium chloride is a commonly used reagent in biochemistry. Calcium plays important roles in many biological processes, including signal transduction, muscle contraction, and maintenance of cell membrane and cell wall stability.^{1,2} Extensive reviews of the experimental measurement of biological calcium have been published.^{3,4}

Calcium chloride is used in the preparation and transformation of competent *E. coli* and in the transfection of eukaryotic cells with either plasmid DNA or high molecular weight genomic DNA.⁵ The CaCl_2 -mediated electroporation of *E. coli* with the plasmid DNA pBR322 has been studied.⁶ A protocol for the concentration of virus vectors that uses CaCl_2 has been published.⁷

CaCl_2 has been used in the stabilization and two-dimensional crystallization of the NADH-ubiquinone oxidoreductase (complex I) from *Escherichia coli*.⁸ The crystallization of porcine pancreatic elastase in the presence of CaCl_2 in the presence of sodium citrate reveals binding of calcium in the metal binding site of the protein.⁹ The effect of CaCl_2 on the total fluorescence in the polymerization of the tubulin-like FtsZ division protein of *Escherichia coli* has been studied by a multiwell fluorescent assay.¹⁰

Precautions and Disclaimer

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

Preparation Instructions

This product is soluble in water (294 mg/ml, 2 M), yielding a clear, colorless solution.

References

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