



Product Information

Magnesium chloride solution

Product Number **M 1028**
Store at Room Temperature

Product Description

This product is a 1.00 ± 0.01 M solution, prepared in 18 megohm water and $0.2 \mu\text{m}$ filtered. It is designated as Molecular Biology grade and is suitable for molecular biology applications. This product has been analyzed for the presence of nucleases and proteases.

Magnesium chloride is a widely used reagent in chemistry and molecular biology as a source of magnesium ion. Magnesium has a variety of biological roles in enzymology, cell membrane and wall structural integrity, muscle cell physiology, and nucleic acid structure.^{1,2} Magnesium is an essential co-factor in many enzymes, including deoxyribonuclease (DNase), the restriction enzymes *EcoR* I and *EcoR* V, and Ribonuclease H.^{3,4} Magnesium also stabilizes polymeric nucleic acids such as transfer RNA and ribozymes.⁵

Conditions for optimal use of MgCl_2 in the polymerase chain reaction (PCR) have been investigated.^{6,7} The use of MgCl_2 in the trypsin-mediated proteolysis of the mammalian α -ketoglutarate dehydrogenase complex has been reported.⁸ A protocol that includes MgCl_2 for dideoxy-mediated sequencing reactions using bacteriophage T7 DNA polymerase has been published.⁹

Precautions and Disclaimer

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

References

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