

Product Information

Manganese(II) chloride solution

Product Number **M 1787**
Store at Room Temperature

Product Description

CAS Number: 7773-01-5

Synonyms: manganous chloride, manganese dichloride (solid)¹

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

Manganese chloride occurs in nature as the mineral scacchite. It is used in industrial applications such as dyeing and disinfecting, the purification of natural gas, and as a drying agent for linseed oil.¹

In biochemistry, manganese is a cofactor in restriction enzymes such as *Bam*H I and *Eco*R V.^{2,3} MnCl_2 is used as a source of manganese ion in biological research, such as in studies of manganese uptake in rat liver and of inhibition of *Mycoplasma* strain growth.^{4,5} The alteration in gene expression of glutamate/aspartate transporter, taurine transporter, and metallothionein I in astrocytes that have been exposed to MnCl_2 has been studied.⁶

Manganese chloride has been substituted for magnesium chloride to investigate alterations in activity of the Herpes simplex virus type 1 DNA polymerase.⁷ MnCl_2 has been shown to inhibit choline transport at the blood brain barrier in rats.⁸

Precautions and Disclaimer

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

References

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3. Stanford, N. P., et al., DNA cleavage by the *Eco*RV restriction endonuclease: pH dependence and proton transfers in catalysis. *J. Mol. Biol.*, **288(1)**, 105-116 (1999).
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7. Villani, G., et al., Effect of manganese on *in vitro* replication of damaged DNA catalyzed by the herpes simplex virus type-1 DNA polymerase. *Nucleic Acids Res.* **30(15)**, 3323-3332 (2002).
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