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ProductInformation

Manganese(II) sulfate monohydrate
Plant Cell Culture Tested

Product Number **M 7899**
Store at Room Temperature

Product Description

Molecular Formula: $MnSO_4 \bullet H_2O$
Molecular Weight: 169.0
CAS Number: 10034-96-5

This product is plant cell culture tested (0.6 µg/ml) and is appropriate for use in plant cell culture experiments.

Manganese sulfate occurs in nature as several mineral forms, jokokuite, pentahydrite, szmikite, and mallardite. It is used in industrial applications such as dyeing, porcelain glazing, and the manufacture of fertilizers and boiling oils.[1]

In biochemistry, manganese is found in various superoxide dismutases.[2,3] $MnSO_4$ is used as a source of manganese ion in biological research, such as in culturing of *Bacillus licheniformis* and the induction of chromosomal abnormalities in plants.[4,5] $MnSO_4$ has been utilized to investigate the enzyme dependent glycosylation of endogenous glycoproteins in human skeletal muscle.[6]

A protocol that uses $MnSO_4$ in the removal of contaminating genomic DNA in RNA samples for RT-PCR has been published.[7]

Precautions and Disclaimer

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

Preparation Instructions

This product is soluble in water (77 mg/ml), yielding a clear, light pink solution.

References

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3. Matsumoto, T., et al., Iron- and manganese-containing superoxide dismutases from *Methylomonas* J: identity of the protein moiety and amino acid sequence. Biochemistry, **30(13)**, 3210-3216 (1991).
4. Cromwick, A. M., and Gross, R. A., Effects of manganese (II) on *Bacillus licheniformis* ATCC 9945A physiology and γ-poly(glutamic acid) formation. Int. J. Biol. Macromol., **17(5)**, 259-267 (1995).
5. Mukhopadhyay, M. J., and Sharma, A., Comparison of different plants in screening for Mn clastogenicity. Mutat. Res., **242(2)**, 157-161 (1990).
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7. Wang, G., et al., Bacterial DNA decontamination for reverse transcription polymerase chain reaction (RT-PCR). J. Microbiol. Methods, **51(1)**, 119-121 (2002).

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