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ProductInformation

Zinc sulfate heptahydrate
Cell Culture Tested

Product Number **Z 0251**
Store at Room Temperature

Product Description

Molecular Formula: $ZnSO_4 \bullet 7H_2O$
Molecular Weight: 287.5
CAS Number: 7446-20-0
Melting Point: 100 °C
Synonyms: white vitriol, zinc vitriol[1]

This product is cell culture tested (0.14 µg/ml) and is appropriate for use in cell culture applications.

Zinc sulfate heptahydrate occurs in nature as the mineral goslarite. Zinc sulfate is used in various manufacturing processes, such as calico printing, wood preservation, the production of lithopone, and the bleaching of paper.[1]

A study of the abscissic acid transduction cascade in *Arabidopsis thaliana* has used zinc sulfate as an anion channel blocker.[2] The use of zinc sulfate to investigate the internal speciation of zinc in the roots and leaves of *Phaseolus vulgaris* has been described.[3] Zinc sulfate has been utilized to induce metallothienin expression in mice.[4]

Several protocols that use zinc sulfate for protein precipitation and analysis by LC/MS have been published.[5,6] A procedure has been reported on the use of zinc sulfate to remove hemoglobin from mammalian tissue cytosol for subsequent study of lipoxygenase activity from biological samples.[7]

Precautions and Disclaimer

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

Preparation Instructions

This product is soluble in water (100 mg/ml), yielding a clear, colorless solution. The maximum solubility in water has been reported to be 1 g/0.6 ml.[1] A solution of this product in water has a pH of about 4.5[1] or higher (up to 5.5).[2]

References

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4. Jacob, S. T., et al., Induction of metallothionein by stress and its molecular mechanisms. Gene Expr., **7(4-6)**, 301-310 (1999).
5. Unger, M., et al., Quantitative liquid chromatography-mass spectrometry determination of isatin in urine using automated on-line extraction. J. Chromatogr. B Analyt. Technol. Biomed. Life Sci., **767(2)**, 245-253 (2002).
6. Polson, C., et al., Optimization of protein precipitation based upon effectiveness of protein removal and ionization effect in liquid chromatography-tandem mass spectrometry. J. Chromatogr. B Analyt. Technol. Biomed. Life Sci., **785(2)**, 263-275 (2003).
7. Hover, C. G., and Kulkarni, A. P., A simple and efficient method for hemoglobin removal from mammalian tissue cytosol by zinc sulfate and its application to the study of lipoxygenase. Prostaglandins Leukot. Essent. Fatty Acids, **62(2)**, 97-105 (2000).

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