



Diffusion of Fe^{3+} Ions in Agar Gel Medium Containing Transition Metal Sulfates at Different Electrolyte Concentration

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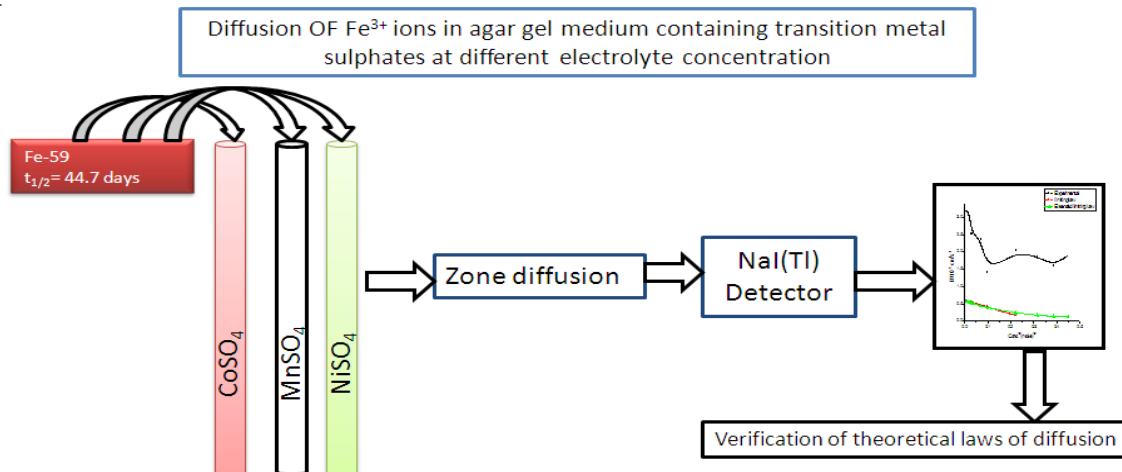
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ABSTRACT

The determination of diffusion coefficients of Fe^{3+} ions in agar gel medium containing MnSO_4 , CoSO_4 , NiSO_4 , CuSO_4 and ZnSO_4 electrolytes is discussed. The diffusion coefficients in various electrolytes are measured over a concentration range of 1×10^{-4} to 2×10^{-1} M using zone diffusion technique at 25°C . The obtained values are compared with the theoretically predicted values based on Onsager's theory and the observed deviations are accounted qualitatively on the basis of various interactions occurring in the ion-gel-water system.

Graphical Abstract:



Keywords: Diffusion, ferric ions, supporting electrolyte, transition metal sulfates.