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DIELECTRIC AND MAGNETIC STUDY OF IRON- NICKEL- MANGANESE TERNARY LEVO TARTRATE CRYSTALS

S.J.Joshi[1] and **M.J.Joshi**[2]
[1]Bahauddin Science College, India
[2]Saurashtra University, India

Several metallic tartrates deserve special attention due to their various applications. In the present investigation, mixed tartrate crystals of three different metals are reported. Using single diffusion gel growth technique, iron–nickel–manganese (Fe–Ni–Mn) ternary levo-tartrate compound crystals were grown with different concentrations. Spherulitic crystals with different coloration were obtained for various concentrations of metals. The concentrations of metals were determined by EDAX. The presence of functional groups was confirmed using Fourier transform infrared (FT-IR) spectroscopy. The powder XRD study suggested that the crystals belong to the orthorhombic system. Paramagnetic nature of the crystals was revealed from VSM study. The dielectric study suggested that the dielectric constant, conductivity, imaginary part of permittivity and dissipation factor decreases with increasing frequency. Resistivity of the sample increases with increasing frequency.

energyjoshi@rediffmail.com