

The Effect of Sintering Temperature on Magnetic Properties of Barium Ferrite Produced by Coprecipitation

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Abstract: Isotropic samples of Barium Ferrite are prepared by coprecipitation method. To study the effect of sintering temperature on magnetic properties of Barium ferrite we have sintered the samples in different temperature from 900 up to 1100°C. Mean partical size and porosity of the samples are determind by scanning electron microscop (SEM), magnetic phase and magnetic parameters are measured by X-ray diffractometry (XRD) and DC Magnetic Hysteresis Loop. Experimental results show that the best magnetic parameters, coercive force H_c , remanence magnetization B_r , and maximum stored magenetic energy $(BH)_{max}$ is found in samples with sintering temperature about 900 to 950°C.