

48. Effect of aluminum substituted on the structural and magnetic properties of Co-Zn ferrite synthesized by standard ceramic technique

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ABSTRACT

Composition $\text{Co}_{0.7}\text{Zn}_{0.3}\text{Fe}_{2-x}\text{Al}_x\text{O}_4$ with varying aluminum from 0.0 to 0.1 on the step of 0.1 has been obtained by standard ceramic technique. X-ray analysis shows that they are single phase cubic spinel structure. The lattice parameter (a) and X-ray density (dx) are decreases as the aluminum content x increases. The value of saturation magnetization (Ms) decreases due to the substitution of aluminum ions in place of Fe^{3+} .

Keywords: Co-Zn-Al ferrite, Structural, Magnetic properties etc