## LIST OF TABLES

- 2.1 Data on X-ray diffraction for Ni<sub>0.4</sub>Mg<sub>0.09</sub>Zn<sub>0.5</sub>Fe<sub>2</sub>O<sub>4</sub> ferrite
- 2.2 Data on X-ray diffraction for Ni<sub>0.3</sub>Mg<sub>0.109</sub>Zn<sub>0.5Co0.01</sub>Fe<sub>2</sub>O<sub>4</sub> ferrite
- 2.3 Data on X-ray diffraction for Ni<sub>0.2</sub>Mg<sub>0.29</sub>Zn<sub>0.5</sub>Co<sub>0.01</sub>Fe<sub>2</sub>O<sub>4</sub> ferrite
- 2.4 Data on X-ray diffraction for Ni<sub>0.1</sub>Mg<sub>0.39</sub>Zn<sub>0.5</sub>Co<sub>0.01</sub>Fe<sub>2</sub>O<sub>4</sub> ferrite
- 2.5 Data on X-ray diffraction for Ni<sub>0</sub>Mg<sub>0.49</sub>Zn<sub>0.5</sub>Co<sub>0.01</sub>Fe<sub>2</sub>O<sub>4</sub> ferrite
- 2.6 Date on lattice parameter, band lengths and site radii for Ni<sub>(0.5-x)</sub>Mg<sub>(x-0.01)</sub>Zn<sub>0.5</sub> Co<sub>0.01</sub> Fe<sub>2</sub>O<sub>4</sub> ferrites
- 2.7 Date on X-ray density, actual density and porosity for Ni<sub>(0.5-x)</sub>Mg<sub>(x-0.01)</sub>Zn<sub>0.5</sub> Co<sub>0.01</sub> Fe<sub>2</sub>O<sub>4</sub> ferrite
- 2.8 Position of IR absorptions bands in  $Ni_{(0.5-x)}Mg_{(x-0.01)}Zn_{0.5}$  $Co_{0.01}$  Fe<sub>2</sub>O<sub>4</sub> ferrite
- 2.9 Data on force constants, band lengths for  $Ni_{0.5-x}Mg_{x-0.01}Zn_{0.5}$  Co<sub>0.01</sub> Fe<sub>2</sub>O<sub>2</sub> ferrite
- 3.1 Data on d. c. resistivity, activation energy, porosity and Curie temperature for Ni<sub>0.5-x</sub>Mg<sub>x-0.01</sub>Zn<sub>0.5</sub> Co<sub>0.01</sub> Fe<sub>2</sub>O<sub>4</sub> ferrite
- 4.1 Data on Magnetic moment, saturation magnetization  $(4\pi M_S)$  and Mr/Ms for  $Ni_{0.5-x}Mg_{x-0.01}Zn_{0.5}$   $Co_{0.01}$   $Fe_2O_4$  ferrite
- 4.2 Date on Curie temperatures obtained from resistivity and permeability observations.