MAGNETIC PROPERTIES OF $Cu(nad)_2(H_2O)_2SO_4$ - NEW $S = 1/2$ HEISENBERG ZIGZAG CHAIN?

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Thermodynamic properties of a polymeric compound $Cu(nad)_2(H_2O)_2SO_4$ have been studied down to 100 mK. Since according to structural studies in the title compound the interaction between pairs of chains is mediated by hydrogen bonds, the studied material can by treated as an $S = 1/2$ Heisenberg zigzag spin chain. The possibility of tunning these interactions is discussed. The experimental specific heat data have been interpreted by using comparative analysis of experimental data obtained on the materials from the class $Cu(X)_2(H_2O)_2SO_4$ $(X = nad, phen, en)$.

9.7 cm

13.4 cm

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