

Is $LaNi_2$ corresponding reference material for $La_xHo_{1-x}Ni_2$ solid solutions ?

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The heat capacity measurements have been performed on $La_xHo_{1-x}Ni_2$ solid solutions with x values of 0.2 and 0.4 for temperatures between 2 and 295 K in zero and 0.42 T magnetic fields. To isolate conduction electron and phonon contributions from the total heat capacity the measurements of heat capacity of isostructural $LaNi_2$ and $LuNi_2$ compounds were performed. The magnetic susceptibility measurements of $LaNi_2$ and $LuNi_2$ compounds exhibits a very weak temperature dependence above 50 K. The results obtained suggest that in case $La_xHo_{1-x}Ni_2$ solid solutions $LaNi_2$ should be not employed as reference material and only $LuNi_2$ may be consider as reliable one.

13.4 cm

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9.7 cm