

# Heat Capacity of $\text{K}_3\text{LnCl}_6$ Compounds with Ln = La, Ce, Pr, Nd

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The heat capacities of the solid and liquid  $\text{K}_3\text{LnCl}_6$  compounds (Ln = La, Ce, Pr, Nd) have been determined by differential scanning calorimetry (DSC) in the temperature range 300 - 1100 K. Their temperature dependence is discussed in terms of the phase transitions of these compounds as reported in literature. The heat capacity increases and decreases strongly in the vicinity of a phase transition but else varies smoothly. The  $C_p$  data were fitted by an equation which provides a satisfactory representation up to the temperatures of  $C_p$  discontinuity. The measured heat capacities were checked for consistency by calculating the enthalpy of formation of the liquid phase, which had been previously measured. The results obtained compare satisfactorily with these experimental data.

*Key words:* Lanthanum Chloride; Cerium Chloride; Praseodymium Chloride; Neodymium Chloride; Alkali Metals Chlorides; Heat Capacity; Differential Scanning Calorimetry.

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