no discernable difference in the P-V curve between successive compressions of the 50-50 mixtures. Furthermore, the relative intensities of the X-ray diffraction lines are essentially the same in the 50-50 mixtures before and after compression, thus indicating no tendency in segregation or of ordering due to the compression. Apparently these salts are completely miscible in the high pressure CsCl structure as they are in the normal NaCl structure[10]. Figures 1 and 2 show the variation in transition pressure at 100°C for the KCl-RbCl and KCl-KBr systems, respectively. In the KCl-RbCl system the transition pressure behaves almost linearly with a slight negative deviation from additivity, while in the KBr-KCl system there is a slight positive deviation. The pressure-composition curve for this solid-solid transition is very similar in shape to the melting curve for this system. The substitution of a Rb^+ ion for a K^+ ion changes the average lattice parameter[12], melting point[10], and transition pressure in the KCl-RbCl system. However changing the anion as in the KCl-KBr system results in essentially no change in the transition pressure of this solid-solid transformation but does effect the melting temperature and the lattice parameter[12].

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Figure 1.

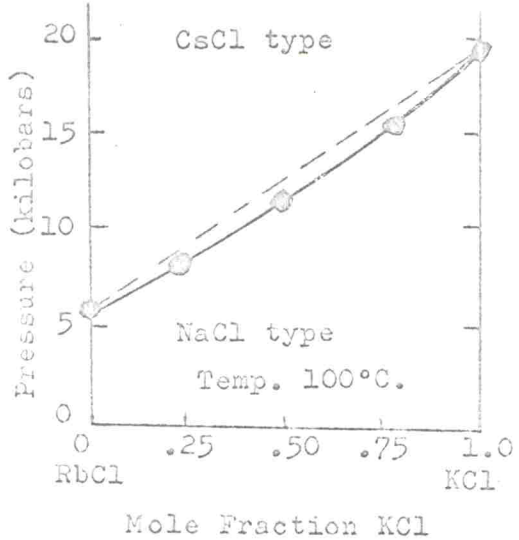

Figure 2.