The complex formation between lead(II) ions and chloride and bromide ions in melts of Ca(NO$_3$)$_2$ · 4 H$_2$O · aCH$_3$CONH$_2$ has been studied at different temperatures between 30 and 70 °C. The formation constants of the complexes PbX$^+$ and PbX$_2$ (X = Cl, Br) were determined from emf measurements by means of Ag/AgX electrodes. The dependence of the formation constants for PbCl$^+$ on the solvent melt composition has been analysed. The thermodynamic parameters $\Delta H^0_{11}$ and $\Delta S^0_{11}$ for PbX$^+$ complex formation have been estimated. The parameters are compared with the literature data for the same process in dilute aqueous solutions and in some hydrated and anhydrous salt melts.

*Key words:* Lead(II) Halide Complexes; Acetamide; Calcium Nitrate Tetrahydrate.