

Studying solubility of complex compounds with a general formula $aM^nCl_n \cdot mZnCl_2 \cdot pEt_2O$ in diethyl ether (where: M = Ce, Eu, Gd, Dy; a = 2-5; n = 3; m = 1.2; p = 1-7; Et₂O – diethyl ether)

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Abstract

Fields of balanced crystallization of complexes of $aM^nCl_n \cdot mZnCl_2 \cdot pEt_2O$ type (where: M = Ce, Eu, Gd, Dy; a = 2-5; n = 3; m = 1, 2; p = 1-7; Et₂O – diethyl ether) and formation of chloride complex compounds of $5CeCl_3 \cdot 2ZnCl_2 \cdot 6Et_2O$; $4EuCl_3 \cdot ZnCl_2 \cdot Et_2O$, $2GdCl_3 \cdot 2ZnCl_2 \cdot 3Et_2O$, $2DyCl_3 \cdot ZnCl_2 \cdot 7Et_2O$, $2DyCl_3 \cdot 2ZnCl_2 \cdot Et_2O$ types have been determined during isothermal studying of solubility in M^nCl_n - $ZnCl_2$ - Et_2O systems at 298 K.

The found complex compounds were isolated. The composition of phases formed in $aM^nCl_n \cdot mZnCl_2 \cdot pEt_2O$ system was determined by elemental analysis method.