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## Studying of 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; $Et_2O - diethyl$ 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;  $Et_2O$  – diethyl ether) and formation of chloride complex compounds of  $5CeCl_3 \cdot 2ZnCl_2 \cdot Et_2O$ ;  $4EuCl_3 \cdot ZnCl_2 \cdot Et_2O$ ,  $2GdCl_3 \cdot 2ZnCl_2 \cdot 3Et_2O$ ,  $2DyCl_3 \cdot ZnCl_2 \cdot 7Et_2O$ ,  $2DyCl_3 \cdot 2ZnCl_2 \cdot Et_2O$  types have been determined during isothermal studying of solubility in  $M^nCl_n \cdot ZnCl_2 \cdot Et_2O$  systems at 298 K.

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

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