

COMPONENTS: (1) Cerium fluoride; CeF_3 ; [7758-88-5] (2) Acidic nitrosyl fluoride; $NOF \cdot 3HF$; [14947-17-2]	ORIGINAL MEASUREMENTS: Galkin, N. P.; Shishkov, Yu.D. Khomyakov, V.I. <i>Radiokhimiya</i> 1978, 20, 136-41; <i>Soviet Radiochem. (Engl. Transl.)</i> 1978, 20, 109-13.
VARIABLES: Room temperature	PREPARED BY: T. Mioduski
EXPERIMENTAL VALUES: <p>The solubility of CeF_3 in acidic nitrosyl fluoride at room temperature was reported to be</p> <p style="text-align: center;">0.09 mass %</p> <p>The molality calculated by the compiler is</p> <p style="text-align: center;">$4.6 \times 10^{-3} \text{ mol kg}^{-1}$</p>	
AUXILIARY INFORMATION	
METHOD/APPARATUS/PROCEDURE: Isothermal method employed. The solute-solvent mixture was placed in a Teflon vessel and mechanically agitated at room temperature for 10 h. The reaction mixture was allowed to settle for 24 h and the supernatant saturated solution was analysed for the Ce content. An aliquot was evaporated to dryness under vacuum at 100-150°C, and the dry residue dissolved and analysed (the method of analysis not specified). The solid phase is CeF_3 as found by analyses for F, N, HF and Ce.	SOURCE AND PURITY OF MATERIALS: CeF_3 was at least 99 % pure. $NOF \cdot 3HF$ prepared by saturation of liquid HF with NOF, and was distilled twice at 95°C before use. The melting point of acidic nitrosyl fluoride was 3.8°C ESTIMATED ERROR: Nothing specified. REFERENCES: