COMPONENTS:	ORIGINAL MEASUREMENTS:
(1) Europium fluoride; EuF_3; [13765-25-8] (2) Alkyl ethers	Dressler, H. *Dissertationschrift.* Paed. Inst. Koethen. GDR. 1980.
VARIABLES:	**PREPARED BY:**
Room Temperature	T. Mioduski and M. Salomon

EXPERIMENTAL VALUES:

solvent			EuF_3 solubility mass %	EuF_3 solubility mol/100g sln	solid phase Eu:F:solvent ratio
1-methoxydecane;	$C_{11}H_{24}O$;	[7289-52-3]	0.03	1.44×10^{-4}	1:2.83:0.06
1-(chloromethoxy)butane;	$C_5H_{11}ClO$;	[2351-69-1]	0.02	9.6×10^{-5}	1:3.15:0.16

AUXILIARY INFORMATION

METHOD/APPARATUS/PROCEDURE:

Method analogous to that described in (1). No other information available.

SOURCE AND PURITY OF MATERIALS:

It appears that the fluoride was prepared as in (1). In spite of drying the fluoride by two methods at 573 K, the Eu:F:H_2O ratio was 1:3.01:0.23.

No other information available.

ESTIMATED ERROR:

Nothing specified.

REFERENCES:

1. Kirmse, E.M.
Wiss. Hefte, Paed. Inst. Koethen. 1978, 2, 85.

COMPONENTS:	ORIGINAL MEASUREMENTS:
(1) Europium fluoride; EuF_3; [13765-25-8] (2) Dimethylsulfoxide; C_2H_6OS; [67-68-5]	Kirmse, E.M. *Wiss, Hefte, Paed. Inst. Koethen* 1978, *2*, 85-90.
VARIABLES: Room Temperature	PREPARED BY: T. Mioduski

EXPERIMENTAL VALUES:

The solubility of EuF_3 in $(CH_3)_2SO$ at room temperature was given as

0.03 mass %

The corresponding molality calculated by the compiler is

1.4×10^{-3} mol kg^{-1}

The solid phase was dried in a desiccator over P_4O_{10} and the Eu:F ratio found to be almost 1:3.

AUXILIARY INFORMATION

METHOD/APPARATUS/PROCEDURE:

Isothermal method. About 100 mg of EuF_3 was added to 10-20 cm^3 of solvent, and the mixture mechanically agitated at room temperature for 100 h. 5-10 g of saturated solution were removed by decanting or by centrifuging, and the solution evaporated to dryness. The residue was heated with about 10 cm^3 of 10% KOH solution for 1-2 h to obtain solid $Eu(OH)_3$ and a basic F^- solution. The precipitate was washed, dissolved in aq HCl, and Eu determined several times by complexometric titration with potentiometric end-point detection (1). The fluoride content in the filtrate was determined photometrically using Al-Eriochrome cyanine color lake indicator (2).

The reported solubility is a mean of "numerous parallel determinations," or "at least two parallel determinations."

SOURCE AND PURITY OF MATERIALS:

Eu_2O_3 (source and purity not specified) was dissolved in HCl and the fluoride precipitated by addition of aq HF. The solid produced was $EuF_3.0.5H_2O$ and was dehydrated by washing with acetone followed by drying at 310°C for 120 hours.

The solvent was dried and purified by "standard methods."

ESTIMATED ERROR:

Soly: results with relative errors exceeding 50% were rejected.

Temp: unknown.

REFERENCES:

1. Schilbach, U.; Kirmse, E.M. *Z. Chem.* 1974, *14*, 484.

2. Schilbach, U.; Hetze, I.; Kirmse, E.M. *Chemia Analityczna* 1975, *20*, 33.

COMPONENTS:	ORIGINAL MEASUREMENTS:
(1) Europium fluoride; EuF_3; [13765-25-8] (2) Pyridine; C_6H_5N; [110-86-1]	Kirmse, E.M. *Wiss. Hefte, Paed. Inst. Koethen* 1978, *2*, 85-90.
VARIABLES: Room Temperature	**PREPARED BY:** T. Mioduski

EXPERIMENTAL VALUES:

The solubility of EuF_3 in pyridine at room temperature was reported to be

0.15 mass %

The corresponding molality calculated by the compiler is

7.2×10^{-3} mol kg^{-1}

The solid phase was dried in a desiccator over P_4O_{11} and the Eu:F ratio found to equal almost 1:3.

AUXILIARY INFORMATION

METHOD/APPARATUS/PROCEDURE:

Isothermal method. About 100 mg of EuF_3 was added to 10-20 cm^3 of solvent, and the mixture mechanically agitated at room temperature for 100 h. 5-10 g of saturated solution were removed by decanting or by centrifuging, and the solution evaporated to dryness. The residue was heated with about 10 cm^3 of 10% KOH solution for 1-2 h to obtain solid $Eu(OH)_3$ and a basic F^- solution. The precipitate was washed, dissolved in aq HCl, and Eu determined several times by complexometric titration with potentiometric end-point detection (1). The fluoride content in the filtrate was determined photometrically using Al-Eriochrome cyanine color lake indicator (2).

The reported solubility is a mean of "numerous parallel determinations," or "at least two parallel determinations."

SOURCE AND PURITY OF MATERIALS:

Eu_2O_3 (source and purity not specified) was dissolved in HCl and the fluoride precipitated by addition of aq HF. The solid produced was $EuF_3.0.5H_2O$ and was dehydrated by washing with acetone followed by drying at 310°C for 120 hours.

The solvent was dried and purified by "standard methods."

ESTIMATED ERROR:

Soly: results with relative errors exceeding 50% were rejected.

Temp: unknown.

REFERENCES:

1. Schilbach, U.; Kirmse, E.M. *Z. Chem.* 1974, *14*, 484.
2. Schilbach, U.; Hetze, I.; Kirmse, E.M. *Chemia Analityczna* 1975, *20*, 33.