COMPONENTS:	ORIGINAL MEASUREMENTS:
(1) Lanthanum fluoride; LaF_3; [13709-38-1] (2) Bis-(2-ethylhexyl)phosphoric acid; $C_{16}H_{35}O_4P$; [298-07-7] (3) Petroleum ether	Kirmse, E. M. *Wiss. Hefte, Paed. Inst. Koethen* 1978, *2*, 85-90.
VARIABLES:	PREPARED BY:
Room temperature	T. Mioduski

EXPERIMENTAL VALUES:

The solubility of LaF_3 in 1 m solution of di(2-ethylhexl)phosphoric acid in petroleum ether at room temperature was reported to be

0.02 mass %

The solid phase was dried in a desiccator over P_4O_{10} and its La:F ratio was found to be about 1:3.

AUXILIARY INFORMATION

METHOD/APPARATUS/PROCEDURE:

Isothermal method. About 100 mg LaF_3 and 10-20 cm^3 of solvent mechanically agitated at room temp for 100 hours. Samples of satd solution for analyses were obtaine by decantation or by centrifuging. 5-10 g of saturated solution were heated with about 10 cm^3 of 10 % KOH solution to obtain quantitative separation of solid $La(OH)_3$ and a basic F^- solution. The $La(OH)_3$ was filtered, washed and dissolved with HCl. La was determined by complexometric titration using a potentiometric method (1). The fluoride content of the basic filtrate was determined photometrically using Al-Eriochrome cyanine color lake (2).

SOURCE AND PURITY OF MATERIALS:

La_2O_3 (source and purity not specified) was dissolved in HCl and the fluoride precipitated with HF. The ppt ($LaF_3.0.5H_2O$) was dehydrated by washing with acetone followed by drying at 310°C for 120 hours.

The other components were purified and dried by standard methods.

ESTIMATED ERROR:

Nothing specified.

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) Lanthanum fluoride; LaF_3; [13709-38-1] (2) Halongenated organic solvents	Dressler, H. *Dissertationschrift.* Paed. Inst. Koethen. GDR. 1980.
VARIABLES: Room temperature	**PREPARED BY:** T. Mioduski and M. Salomon

EXPERIMENTAL VALUES:

solvent			LaF_3 solubility[a] mass %	mol kg^{-1}	solid phase La:F:solvent ratio
1-(chloromethoxy)propane;	C_4H_9ClO;	[3587-57-3]	0.026	1.33×10^{-3}	1:2.70:0.52
1-(chloromethoxy)butane;	$C_5H_{11}ClO$;	[2351-69-1]	0.045 0.05	2.30×10^{-3} 2.6×10^{-3}	b
1-(chloromethoxy)pentane;	$C_6H_{13}ClO$;	[19416-65-0]	0.022	1.12×10^{-3}	1:2.41:0.40
1-(bromomethoxy)butane;	$C_5H_{11}BrO$;	[59375-51-8]	0.053	2.71×10^{-3}	1:3.19:0.40
1-(bromomethoxy)pentane;	$C_6H_{13}BrO$;		0.055	2.81×10^{-3}	1:2.43:0.22
Nonafluoro-1-butanesulfonyl fluoride;	$C_4F_{10}SO_2F$;	[375-72-4]	0.060	3.06×10^{-3}	1:3.12:0.12
heptadecafluoro-1-octanesulfonyl fluoride;	$C_8F_{18}O_2S$;	[307-35-7]	0.011	5.62×10^{-4}	1:2.90:0.06

[a] Molalities calculated by the compilers.

[b] La:F:ether:H_2O ratio reported as 1:2.96:0.23:0.54

AUXILIARY INFORMATION

METHOD/APPARATUS/PROCEDURE:	SOURCE AND PURITY OF MATERIALS:
Method analogous to that described in (1). No other information available.	It appears that the fluoride was prepared as in (1). In spite of drying the fluoride by two methods at 573 K, the La:F:H_2O ratio was 1:3.01:0.20. 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) Lanthanum fluoride; LaF_3; [13709-38-1] (2) Benzene; C_6H_6; [71-43-2] (3) Substituted benzenes	Dressler, H. *Dissertationschrift.* Paed. Inst. Koethen. GDR. 1980.
VARIABLES:	PREPARED BY:
Room temperature	T. Mioduski and M. Salomon

EXPERIMENTAL VALUES:

The solubility of LaF_3 was determined in three substituted benzene solvents containing 0.5 mol dm^{-3} benzene.

solvent (component 3)			LaF_3 solubility[a] mass %	mol kg^{-1}	solid phase La:F:solvent ratio
1,3-dinitrobenzene;	$C_6H_4N_2O_4$;	[99-65-0]	0.026	1.33×10^{-3}	1:2.89:0.16
1-fluoro-2,4-dinitrobenzene;	$C_6H_3FN_2O_4$;	[70-34-8]	0.011	5.62×10^{-4}	1:3.02:0.20
1-chloro-2,4-dinitrobenzene;	$C_6H_3ClN_2O_4$;	[97-00-7]	0.015	7.66×10^{-4}	1:3.05:0.17

[a] Molalities calculated by the compilers.

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 La:F:H_2O ratio was 1:3.01:0.20.

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) Lanthanum fluoride; LaF_3; [13709-38-1] (2) Benzenamine (aniline); C_6H_7N; [62-53-3]	Kirmse, E. M. *Wiss. Hefte, Paed. Inst. Koethen* 1978, *2*, 85-90.
VARIABLES:	PREPARED BY:
Room temperature	T. Mioduski

EXPERIMENTAL VALUES:

The solubility of LaF_3 in aniline at room temperature was reported as

0.03 mass %.

The corresponding molality calculated by the compiler is

1.5×10^{-3} mol kg^{-1}

The solid phase was dried in a desiccator over P_4O_{10} and its La:F ratio was found to be very close to 1:3.

AUXILIARY INFORMATION

METHOD/APPARATUS/PROCEDURE:

Isothermal method. About 100 mg of LaF_3 and 10-20 cm^3 of solvent mechanically agitated at room temperature for 100 hours. Samples of saturated solution for analyses were obtained by decantation or by centrifuging. 5-10 g of saturated solution were heated with about 10 cm3 of 10 % KOH solution for 1-3 hours to obtain quantitative separation of solid $La(OH)_3$ and a basic F^- solution. $La(OH)_3$ was filtered, washed and dissolved with HCl. La was determined several times by complexometric titration using a potentiometric method (1). The fluoride content of the basic filtrate was determined photometrically using Al-Eriochrome cyanine color lake (2).

SOURCE AND PURITY OF MATERIALS:

La_2O_3 (source and purity not specified) was dissolved in HCl and the fluoride precipitated with HF. The ppt ($LaF_3.0.5H_2O$) was dehydrated by washing with acetone followed by drying at 310°C for 120 hours.

The solvent was purified and dried by standard methods.

ESTIMATED ERROR:

Soly: results for which rel error exceeded 50% were rejected. The reported value is a mean of at least two detns.

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) Lanthanum fluoride; LaF_3; [13709-38-1] (2) Methanol; CH_4O; [67-56-1]	Kirmse, E. M. *Wiss. Hefte, Paed. Inst. Koethen* 1978, 2, 85-90.
VARIABLES:	PREPARED BY:
Room temperature	T. Mioduski

EXPERIMENTAL VALUES:

The solubility of LaF_3 in methanol was reported to be

0.02 mass %

The corresponding molality calculated by the compiler is

1.0×10^{-3} mol kg^{-1}

The solid phase was dried in a desiccator over P_4O_{10} and its La:F ratio was found to be very close to 1:3.

AUXILIARY INFORMATION

METHOD/APPARATUS/PROCEDURE:

Isothermal method. About 100 mg of LaF_3 and 10-20 cm^3 of solvent mechanically agitated at room temperature for 100 hours. Samples of saturated solution for analyses were obtained by decantation or by centrifuging. 5-10 g of saturated solution were heated with about 10 cm^3 of 10 % KOH solution for 1-3 hours to obtain quantitative separation of solid $La(OH)_3$ and a basic F^- solution. $La(OH)_3$ was filtered, washed and dissolved with HCl. La was determined several times by complexometric titration using a potentiometric method (1). The fluoride content of the basic filtrate was determined photometrically using Al-Eriochrome cyanine color lake (2).

SOURCE AND PURITY OF MATERIALS:

La_2O_3 (source and purity not specified) was dissolved in HCl and the fluoride precipitated with HF. The ppt ($LaF_3.0.5H_2O$) was dehydrated by washing with acetone followed by drying at 310°C for 120 hours.

The solvent was purified and dried by standard methods.

ESTIMATED ERROR:

Soly: results for which rel error exceeded 50% were rejected. The reported value is a mean of at least two detns.

Temp: nothing specified.

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) Lanthanum fluoride; LaF_3; [13709-38-1] (2) Urea; CH_4N_2O; [57-13-6] (3) Methanol; CH_4O; [67-56-1]	Kirmse, E. M. *Wiss. Hefte, Paed. Inst. Koethen* 1978, *2*, 85-90.
VARIABLES:	PREPARED BY:
Room temperature : T/K = 291-295	T. Mioduski

EXPERIMENTAL VALUES:

The solubility of LaF_3 in methanol saturated with urea at room temperature was reported to be

$$1.7 \times 10^{-2} \text{ mass \%}$$

The urea content was not given.

The solid phase was dried in a desiccator over P_4O_{10} and its La:F ratio was found to be about 1:3.

AUXILIARY INFORMATION

METHOD/APPARATUS/PROCEDURE:

Isothermal method. About 100 mg LaF_3 and 10-20 cm^3 of solvent mechanically agitated at room temp (18-22°C) for 100 hours. Samples of saturated solution for analyses were obtained by decantation or by centrifuging. 5-10 g of saturated solution were heated with about 10 cm^3 of 20 % KOH solution for 3 hours to obtaine quantitative separation of solid $La(OH)_3$ and a basic F^- solution. The $La(OH)_3$ was filtered, washed and dissolved with HCl. La was determined several times by complexometric titration using a potentiometric method (1). The fluoride content of the basic filtrate was determined photometrically using Al-Eriochrome cyanine color lake (2).

SOURCE AND PURITY OF MATERIALS:

La_2O_3 (source and purity not specified) was dissolved in HCl and the fluoride precipitated with HF. The ppt ($LaF_3.0.5H_2O$) was dehydrated by washing with acetone followed by drying at 310°C for 120 hours.

The other components were purified and dried by standard methods.

ESTIMATED ERROR:

Soly: results for which rel error exceeded 50% were rejected. The reported value is a mean of at least two detns.

Temp: nothing specified.

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) Lanthanum fluoride; LaF_3; [13709-38-1] (2) Ethanol; C_2H_6O; [64-17-5]	Kirmse, E. M. *Wiss. Hefte, Paed. Inst. Koethen* 1978, *2*, 85-90.
VARIABLES:	PREPARED BY:
Room temperature	T. Mioduski

EXPERIMENTAL VALUES:

The solubility of LaF_3 in ethanol was reported to be

0.03 mass %

The corresponding molality calculated by the compiler is

1.5×10^{-3} mol kg^{-1}

The solid phase was dried in a desiccator over P_4O_{10} and its La:F ratio was found to be very close to 1:3.

AUXILIARY INFORMATION

METHOD/APPARATUS/PROCEDURE:

Isothermal method. About 100 mg LaF_3 and 10-20 cm^3 of solvent mechanically agitated at room temperature for 100 hours. Samples of saturated solution for analyses were obtained by decantation or by centrifuging. 5-10 g of saturated solution were heated with about 10 cm^3 of 10 % KOH solution for 1-3 hours to obtain quantitative separation of solid $La(OH)_3$ and a basic F^- solution. $La(OH)_3$ was filtered, washed and dissolved with HCl. La was determined several times by complexometric titration using a potentiometric method (1). The fluoride content of the basic filtrate was determined photometrically using Al-Eriochrome cyanine color lake (2).

SOURCE AND PURITY OF MATERIALS:

La_2O_3 (source and purity not specified) was dissolved in HCl and the fluoride precipitated with HF. The ppt ($LaF_3.0.5H_2O$) was dehydrated by washing with acetone followed by drying at 310°C for 120 hours.

The solvent was purified and dried by standard methods.

ESTIMATED ERROR:

Soly: results for which rel error exceeded 50% were rejected. The reported value is a mean of at least two detns.

Temp: nothing specified.

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) Lenthanum fluoride; LaF_3; [13709-38-1] (2) Urea; CH_4N_2O; [57-13-6] (3) Ethanol; C_2H_6O; [67-17-5]	Kirmse, E. M. *Wiss, Hefte, Paed. Inst. Koethen* 1978, 2, 85-90.
VARIABLES:	PREPARED BY:
Room temperature	T. Mioduski

EXPERIMENTAL VALUES:

The solubility of LaF_3 in ethanol saturated with urea at room temperature was reported to be

$$5 \times 10^{-3} \text{ mass \%}.$$

The urea content was not given.

The solid phase was dried in a desiccator over P_4O_{10} and its La:F ratio was found to be about 1:3.

AUXILIARY INFORMATION

METHOD/APPARATUS/PROCEDURE:

Isothermal method. About 100 mg LaF_3 and 10-20 g of solvent mechanically agitated at room temperature for 100 hours. Samples of saturated solution for analyses were obtained by decantation or by centrifuging. 5-10 g of saturated solution were heated with about 10 cm^3 of 10 % KOH solution for 1-3 hours to obtain quantitative separation of solid $La(OH)_3$ and a basic F^- solution. $La(OH)_3$ was filtered, washed and dissolved with HCl. La was determined several times by complexometric titration using a potentiometric method (1). The fluoride content of the basic filtrate was determined photometrically using Al-Eriochrome cyanine color lake (2).

SOURCE AND PURITY OF MATERIALS:

La_2O_3 (source and purity not specified) was dissolved in HCl and the fluoride precipitated with HF. The ppt ($LaF_3.0.5H_2O$) was dehydrated by washing with acetone followed by drying at 310°C for 120 hours.

The other components were purified and dried by standard methods.

ESTIMATED ERROR:

Soly: results for which rel error exceeded 50% were rejected. The reported value is a mean of at least two detns.

Temp: nothing specified.

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) Lanthanum fluoride; LaF_3; [13709-38-1] (2) 1,2-Ethanediol (ethylene glycol); $C_2H_6O_2$; [107-21-1]	Kirmse, E. M. *Wiss. Hefte, Paed. Inst. Koethen* 1978, 2, 85-90.
VARIABLES:	PREPARED BY:
Room temperature	T. Mioduski

EXPERIMENTAL VALUES:

The solubility of LaF_3 in ethylene glycol at room temperature was reported to be

0.02 mass %

The corresponding molality calculated by the compiler is

1.0×10^{-3} mol kg^{-1}

The solid phase was dried in a desiccator over P_4O_{10} and its La:F ratio was found to be very close to 1:3.

AUXILIARY INFORMATION

METHOD/APPARATUS/PROCEDURE:

Isothermal method. About 100 mg LaF_3 and 10-20 cm^3 of solvent mechanically agitated at room temperature for 100 hours. Samples of saturated solution for analyses were obtained by decantation or by centrifuging. 5-10 g of saturated solution were heated with about 10 cm^3 of 10 % KOH solution for 1-3 hours to obtain quantitative separation of solid $La(OH)_3$ and a basic F^- solution. $La(OH)_3$ was filtered, washed and dissolved with HCl. La was determined several times by complexometric titration using a potentiometric method (1). The fluoride content of the basic filtrate was determined photometrically using Al-Eriochrome cyanine color lake (2).

SOURCE AND PURITY OF MATERIALS:

La_2O_3 (source and purity not specified) was dissolved in HCl and the fluoride precipitated with HF. The ppt ($LaF_3.0.5H_2O$) was dehydrated by washing with acetone followed by drying at 310°C for 120 hours.

The solvent was purified and dried by standard methods.

ESTIMATED ERROR:

Soly: results for which rel error exceeded 50% were rejected. The reported value is a mean of at least two detns.

Temp: nothing specified.

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) Lanthanum fluoride; LaF_3; [13709-38-1] (2) 2-Methyl-1-propanol (isobutanol); $C_4H_{10}O$; [78-83-1]	Kirmse, E. M. *Wiss. Hefte, Paed. Inst. Koethen* 1978, 2, 85-90.
VARIABLES:	PREPARED BY:
Room temperature	T. Mioduski

EXPERIMENTAL VALUES:

The solubility of LaF_3 in isobutanol at room temperature was reported to be

0.03 mass %

The corresponding molality calculated by the compiler is

1.5×10^{-3} mol kg^{-1}

The solid phase was dried in a desiccator over P_4O_{10} and its La:F ratio was found to be very close to 1:3.

AUXILIARY INFORMATION

METHOD/APPARATUS/PROCEDURE:

Isothermal method. About 100 mg of LaF_3 and 10-20 cm^3 of solvent mechanically agitated at room temp for 50 hours. Samples of saturated solution for analyses were obtained by decantation. 5-10 g of saturated solution were heated with about 10 cm^3 of 10 % KOH solution for 3 hours to obtain quantitative separation of solid $La(OH)_3$ and a basic F^- solution. La was determined several times by complexometric titration using a potentiometric method (1). The fluoride content of the basic filtrate was determined photometrically using Al-Eriochrome cyanine color lake (2).

The reported solubility is the mean of at least two determinations.

SOURCE AND PURITY OF MATERIALS:

La_2O_3 (source and purity not specified) was dissolved in HCl and the fluoride precipitated with HF. The ppt ($LaF_3.0.5H_2O$) was dehydrated by washing with acetone followed by drying at 310°C for 120 hours.

The solvent was purified and dried by standard methods.

ESTIMATED ERROR:

Nothing specified.

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) Lanthanum fluoride; LaF_3; [13709-38-1] (2) 2-Butanol; $C_4H_{10}O$; [78-92-2]	Kirmse, E. M. *Wiss. Hefte, Paed. Inst. Koethen* 1978, 2, 85-90.
VARIABLES:	PREPARED BY:
Room temperature	T. Mioduski

EXPERIMENTAL VALUES:

The solubility of LaF_3 in 2-butanol at room temperature was reported to be

0.02 mass %

The corresponding molality calculated by the compiler is

1.0×10^{-3} mol kg^{-1}

The solid phase was dried in a desiccator over P_4O_{10} and its La:F ratio was found to be very close to 1:3.

AUXILIARY INFORMATION

METHOD/APPARATUS/PROCEDURE:

Isothermal method. About 100 mg LaF_3 and 10-20 cm^3 of solvent mechanically agitated at room temperature for 100 hours. Samples of saturated solution for analyses were obtained by decantation or by centrifuging. 5-10 g of saturated solution were heated with about 10 cm^3 of 10 % KOH solution for 1-3 hours to obtain quantitative separation of solid $La(OH)_3$ and a basic F^- solution. $La(OH)_3$ was filtered, washed and dissolved with HCl. La determined several times by complexometric titration using a potentiometric method (2). The fluoride content of the basic filtrate was determined photometrically using Al-Eriochrome cyanine color lake (2).

SOURCE AND PURITY OF MATERIALS:

La_2O_3 (source and purity not specified) was dissolved in HCl and the fluoride precipitated with HF. The ppt ($LaF_3.0.5H_2O$) was dehydrated by washing with acetone followed by drying at 310°C for 120 hours.

The solvent was purified and dried by standard methods.

ESTIMATED ERROR:
Soly: results for which rel error exceeded 50% were rejected. The reported value is a mean of at least two detns.

Temp: nothing specified.

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) Lanthanum fluoride; LaF_3; [13709-38-1] (2) 2-Methyl-2-butanol (t-pentanol); $C_5H_{12}O$; [75-85-4]	Kirmse, E. M. *Wiss, Hefte, Paed. Inst. Koethen* 1978, 2, 85-90.
VARIABLES:	PREPARED BY:
Room temperature	T. Mioduski

EXPERIMENTAL VALUES:

The solubility of LaF_3 in t-pentanol at room temperature was reported to be

$$0.02_5 \text{ mass \%}$$

The corresponding molality calculated by the compiler is

$$1.3 \times 10^{-3} \text{ mol kg}^{-1}$$

The solid phase was dried in a desiccator over P_4O_{10} and its La:F ratio was found to be very close to 1:3.

AUXILIARY INFORMATION

METHOD/APPARATUS/PROCEDURE:

Isothermal method. About 100 mg LaF_3 and 10-20 cm^3 of solvent mechanically agitated at room temperature for 100 hours. Samples of saturated solution for analyses were obtained by decantation or by centrifuging. 5-10 g of saturated solution were heated with about 10 cm^3 of 10 % KOH solution for 1-3 hours to obtain quantitative separation of solid $La(OH)_3$ and a basic F^- solution. $La(OH)_3$ was filtered, washed and dissolved with HCl. La was determined several times by complexometric titration using a potentiometric method (1). The fluoride content of the basic filtrate was dtermined photometrically using Al-Eriochrome cyanine color lake (2).

SOURCE AND PURITY OF MATERIALS:

La_2O_3 (source and purity not specified) was dissolved in HCl and the fluoride precipitated with HF. The ppt ($LaF_3.0.5H_2O$) was dehydrated by washing with acetone followed by drying at 310°C for 120 hours.

The solvent was purified and dried by standard methods.

ESTIMATED ERROR:

Soly: results for which rel error exceeded 50% were rejected. The reported value is a mean of at least two detns.

Temp: nothing specified.

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) Lanthanum fluoride; LaF_3; [13709-38-1] (2) Alkyl ethers	Dressler, H. *Dissertationschrift.* Paed. Inst. Koethen. GDR. 1980.
VARIABLES:	PREPARED BY:
Room temperature	T. Mioduski and M. Salomon

EXPERIMENTAL VALUES:

solvent			LaF_3 solubility[a] mass %	mol kg^{-1}	solid phase La:F:solvent ratio
1,2-dimethoxyethane;	$C_4H_{10}O_2$;	[110-71-4]	0.017	8.68×10^{-4}	1:2.82:0.31
1-ethoxy-2-methoxyethane;	$C_5H_{12}O_2$;	[5137-45-1]	0.005	2.6×10^{-4}	1:2.87:0.26
1-methoxy-2-methylpropane;	$C_5H_{12}O$;	[625-44-5]	0.002	1.0×10^{-4}	1:2.97:0.36
1-methoxybutane;	$C_5H_{12}O$;	[628-28-4]	0.003	1.5×10^{-4}	b
1-methoxypentane	$C_6H_{14}O$;	[628-80-8]	0.005	2.6×10^{-4}	1:3.20:0.33
1-methoxyheptane;	$C_8H_{18}O$;	[629-32-3]	0.004	2.0×10^{-4}	1:2.88:0.22
1-methoxyoctane;	$C_9H_{20}O$;	[929-56-6]	0.003	1.5×10^{-4}	c
1-methoxydecane;	$C_{11}H_{24}O$;	[7289-52-3]	0.020	1.02×10^{-3}	1:2.98:0.11

[a] Molalities calculated by the compilers.

[b] La:F:ether:H_2O ratio reported as 1:2.87:0.20:0.58

[c] La:F:ether:H_2O ratio reported as 1:2.99:0.18:0.52

AUXILIARY INFORMATION

METHOD/APPARATUS/PROCEDURE:	SOURCE AND PURITY OF MATERIALS:
Method analogous to that described in (1). No other information available.	It appears that the fluoride was prepared as in (1). In spite of drying the fluoride by two methods at 573 K, the La:F:H_2O ratio was 1:3.01:0.20. 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) Lanthanum fluoride; LaF_3; [13709-38-1] (2) Ethyl acetate (acetic acid ethyl ester); $C_4H_8O_2$; [141-78-6]	Kirmse, E. M. *Wiss. Hefte, Paed. Inst. Koethen* 1978, *2*, 85-90.
VARIABLES:	PREPARED BY:
Room temperature	T. Mioduski

EXPERIMENTAL VALUES:

The solubility of LaF_3 in ethyl acetate at room temperature was reported to be

0.01 mass %

The corresponding molality calculated by the compiler is

5×10^{-4} mol kg^{-1}

The solid phase was dried in a desiccator over P_4O_{10} and its La:F ratio was found to be very close to 1:3.

AUXILIARY INFORMATION

METHOD/APPARATUS/PROCEDURE:

Isothermal method. About 100 mg LaF_3 and 10-20 cm^3 of solvent mechanically agitated at room temperature for 100 hours. Samples of saturated solution for analyses were obtained by decantation or by centrifuging. 5-10 g of saturated solution were heated with about 10 cm^3 of 10 % KOH solution for 1-3 hours to obtain quantitative separation of solid $La(OH)_3$ and a basic F^- solution. $La(OH)_3$ was filtered, washed and dissolved with HCl. La was determined several times by complexometric titration using a potentiometric method (1). The fluoride content of the basic filtrate was determined photometrically using Al-Eriochrome cyanine color lake (2).

SOURCE AND PURITY OF MATERIALS:

La_2O_3 (source and purity not specified) was dissolved in HCl and the fluoride precipitated with HF. The ppt ($LaF_3.0.5H_2O$) was dehydrated by washing with acetone followed by drying at 310°C for 120 hours.

The solvent was purified and dried by standard methods.

ESTIMATED ERROR:

Soly: results for which rel error exceeded 50% were rejected. The reported value is a mean of at least two detns.

Temp: nothing specified.

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) Lanthanum fluoride; LaF_3; [13709-38-1] (2) Tributyl phosphate ; $C_{12}H_{27}O_4P$; [126-73-8]	Kirmse, E. M. *Wiss. Hefte, Paed. Inst. Koethen* 1978, 2, 85-90.
VARIABLES:	PREPARED BY:
Room temperature	T. Mioduski

EXPERIMENTAL VALUES:

The solubility of LaF_3 in tributyl phosphate at room temperature was reported to be

0.03 mass %

The corresponding molality calculated by the compiler is

1.5×10^{-3} mol kg^{-1}

The solid phase was dried in a desiccator over P_4O_{10} and its La:F ratio was found to be very close to 1:3.

AUXILIARY INFORMATION

METHOD/APPARATUS/PROCEDURE:

Isothermal method. About 100 mg LaF_3 and 10-20 cm^3 of solvent mechanically agitated at room temperature for 100 hours. Samples of saturated solution for analyses were obtained by decantation or by centrifuging. 5-10 g of saturated solution were heated with about 10 cm^3 of 10 % KOH solution for 1-3 hours to obtaine quantitative separation of solid $La(OH)_3$ and a basic F^- solution. $La(OH)_3$ was filtered, washed and dissolved with HCl. La was determined several times by complexometric titration using a potentiometric method (1). The fluoride content of the basic filtrate was determined photometrically using Al-Eriochrome cyanine color lake (2).

SOURCE AND PURITY OF MATERIALS:

La_2O_3 (source and purity not specified) was dissolved in HCl and the fluoride precipitated with HF. The ppt ($LaF_3.0.5H_2O$) was dehydrated by washing with acetone followed by drying at 310°C for 120 hours.

The solvent was purified and dried by standard methods.

ESTIMATED ERROR:

Soly: results for which rel error exceeded 50% were rejected. The reported value is a mean of at least two detns.

Temp: nothing specified.

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) Lanthanum fluoride; LaF_3; [13709-38-1] (2) Dimethylsulfoxide; C_2H_6OS; [67-68-5]	Kirmse, E. M. *Wiss. Hefte, Paed. Inst. Koethen* 1978, *2*, 85-90.
VARIABLES:	PREPARED BY:
Room temperature	T. Mioduski

EXPERIMENTAL VALUES:

The solubility of LaF_3 in dimethylsulfoxide at room temperature was reported to be

0.03 mass %

The corresponding molality calculated by the compiler is

1.5×10^{-3} mol kg^{-1}

The solid phase was dried in a desiccator over P_4O_{10} and its La:F ratio was found to be very close to 1:3.

AUXILIARY INFORMATION

METHOD/APPARATUS/PROCEDURE:

Isothermal method. About 100 mg LaF_3 and 10-20 cm^3 of solvent mechanically agitated at room temperature for 100 hours. Samples of saturated solution for analyses were obtained by decantation or by centrifuging. 5-10 g of saturated solution were heated with about 10 cm^3 of 10 % KOH solution for 1-3 hours to obtain quantitative separation of solid $La(OH)_3$ and a basic F^- solution. $La(OH)_3$ was filtered, washed and dissolved with HCl. La was determined several times by complexometric titration using a potentiometric method (1). The fluoride content of the basic filtrate was determined photometrically using Al-Eriochrome cyanine color lake (2).

SOURCE AND PURITY OF MATERIALS:

La_2O_3 (source and purity not specified) was dissolved in HCl and the fluoride precipitated with HF. The ppt ($LaF_3.0.5H_2O$) was dehydrated by washing with acetone followed by drying at 310°C for 120 hours.

The solvent was purified and dried by standard methods.

ESTIMATED ERROR:

Soly: results for which rel error exceeded 50% were rejected. The reported value is a mean of at least two detns.

Temp: nothing specified.

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) Lanthanum fluoride; LaF_3; [13709-38-1] (2) 2-Aminoethanol (ethanolamine); C_2H_7NO; [141-43-5]	Kirmse, E. M. *Wiss. Hefte, Paed. Inst. Koethen* 1978, *2*, 85-90.
VARIABLES:	PREPARED BY:
Room temperature	T. Mioduski

EXPERIMENTAL VALUES:

The solubility of LaF_3 in ethanolamine at room temperature was reported to be

0.03 mass %

The corresponding molality calculated by the compiler is

1.5×10^{-3} mol kg^{-1}

The solid phase was dried in a desiccator over P_4O_{10} and its La:F ratio was found to be very close to 1:3.

AUXILIARY INFORMATION

METHOD/APPARATUS/PROCEDURE:

Isothermal method. About 100 mg LaF_3 and 10-20 cm^3 of solvent mechanically agitated at room temperature for 100 hours. Samples of saturated solution for analyses were obtained by decantation or by centrifuging. 5-10 g of saturated solution were hearted with about 10 cm^3 of 10 % KOH solution for 1-3 hours to obtain quantitative separation of solid $La(OH)_3$ and a basic F^- solution. $La(OH)_3$ was filtered, washed and dissolved with HCl. La was determined several times by complexometric titration using a potentiometric method (1). The fluoride content of the basic filtrate was determined photometrically using Al-Eriochrome cyanine color lake (2).

SOURCE AND PURITY OF MATERIALS:

La_2O_3 (source and purity not specified) was dissolved in HCl and the fluoride precipitated with HF. The ppt ($LaF_3 \cdot 0.5H_2O$) was dehydrated by washing with acetone followed by drying at 310°C for 120 hours.

ESTIMATED ERROR:

Soly: results for which rel error exceeded 50% were rejected. The reported value is a mean of at least two detns.

Temp: nothing specified.

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) Lanthanum fluoride; LaF_3; [13709-38-1] (2) Triethylamine ; $C_6H_{15}N$; [121-44-8]	Kirmse, E. M. *Wiss. Hefte, Paed. Inst. Koethen* 1978, *2*, 85-90.
VARIABLES:	**PREPARED BY:**
Room temperature: T/K about 298	T. Mioduski

EXPERIMENTAL VALUES:

The solubility of LaF_3 in triethylamine at room temperature was reported to be

0.01 mass %

The corresponding molality calculated by the compiler is

$5\ 10^{-4}$ mol kg^{-1}

The solid phase was dried in a desiccator over P_4O_{10} and its La:F ratio was found to be very close to 1:3.

AUXILIARY INFORMATION

METHOD/APPARATUS/PROCEDURE:

Isothermal method. About 100 mg of LaF_3 and 10-20 cm^3 of solvent mechanically agitated at room temperature (about 25°C) for 100 h Samples of saturated solution for analyses were obtained by decantation or by centrifuging. 5-10 g of saturated solution were heated with about 10 cm^3 of 10 % KOH sln for 3-5 hours to obtain quantitative separation of solid $La(OH)_3$ and a basic F^- solution. The $La(OH)_3$ was filtered, washed and dissolved in HCl. La was determined several times by complexometric titration using a potentiometric method (1). The fluoride content of the basic filtrate was determined photometrically using Al-Eriochrome cyanine color lake (2).

SOURCE AND PURITY OF MATERIALS:

La_2O_3 (source and purity not specified) was dissolved in HCl and the fluoride precipitated with HF. The ppt ($LaF_3.0.5H_2O$) was dehydrated by washing with acetone followed by drying at 310°C for 120 hours.

The solvent was purified and dried by standard methods.

ESTIMATED ERROR:

Soly: results for which rel error exceeded 50% were rejected. The reported value is a mean of at least two detns.

Temp: nothing specified.

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) Lanthanum fluoride; LaF_3; [13709-38-1] (2) 2-Propanamine ; C_3H_9N; [75-31-0]	Kirmse, E. M. *Wiss. Hefte, Paed. Inst. Koethen* 1978, 2, 85-90.
VARIABLES:	PREPARED BY:
Room temperature	T. Mioduski

EXPERIMENTAL VALUES:

The solubility of LaF_3 in isopropylamine at room temperature was reported to be

0.02 mass %

The corresponding molality calculated by the compiler is

1.0×10^{-3} mol kg^{-1}

The solid phase was dried in a desiccator over P_4O_{10} and its La:F ratio was found to be very close to 1:3.

AUXILIARY INFORMATION

METHOD/APPARATUS/PROCEDURE:

Isothermal method. About 100 mg LaF_3 and 10-20 cm^3 of solvent mechanically agitated at room temperature for 100 hours. Samples of saturated solution for analyses were obtained by decantation or by centrifuging. 5-10 g of saturated solution were heated with about 10 cm^3 of 10 % KOH solution for 1-3 hours to obtain quantitative separation of solid $La(OH)_3$ and a basic F^- solution. $La(OH)_3$ was filtered, washed and dissolved with HCl. La was determined several times by complexometric titration using a potentiometric method (1). The fluoride content of the basic filtrate was determined photometrically using Al-Eriochrome cyanine color lake (2).

SOURCE AND PURITY OF MATERIALS:

La_2O_3 (source and purity not specified) was dissolved in HCl and the fluoride precipitated with HF. The ppt ($LaF_3.0.5H_2O$) was dehydrated by washing with acetone followed by drying at 310°C for 120 hours.

The solvent was purified and dried by standard methods.

ESTIMATED ERROR:
Soly: results for which rel error exceeded 50% were rejected. The reported value is a mean of at least two detns.
Temp: nothing specified.

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) Lanthanum fluoride; LaF_3; [13709-38-1] (2) Di-isobutylamine; $C_8H_{19}N$; [110-96-3]	Kirmse, E. M. *Wiss. Hefte, Paed. Inst. Koethen* 1978, *2*, 85-90.
VARIABLES:	PREPARED BY:
Room temperature	T. Mioduski

EXPERIMENTAL VALUES:

The solubility of LaF_3 in di-isobutylamine at room temperature was reported to be

$$0.01_5 \text{ mass \%}$$

The corresponding molality calculated by the compiler is

$$7.7 \times 10^{-4} \text{ mol kg}^{-1}$$

The solid phase was dried in a desiccator over P_4O_{10} and its La:F ratio was found to be very close to 1:3.

AUXILIARY INFORMATION

METHOD/APPARATUS/PROCEDURE:

Isothermal method. About 100 mg LaF_3 and 10-20 cm^3 of solvent mechanically agitated at room temperature for 100 hours. Samples of saturated solution for analyses were obtained by decantation or by centrifuging. 5-10 g of saturated solution were heated with about 10 cm^3 of 10 % KOH solution for 1-3 hours to obtain quantitative separation of solid $La(OH)_3$ and a basic F^- solution. $La(OH)_3$ was filtered, washed and dissolved with HCl. La was determined several times by complexometric titration using a potentiometric method (1). The fluoride content of the basic filtrate was determined photometrically using Al-Eriochrome cyanine color lake (2).

SOURCE AND PURITY OF MATERIALS:

La_2O_3 (source and purity not specified) was dissolved in HCl and the fluoride precipitated with HF. The ppt ($LaF_3.0.5H_2O$) was dehydrated by washing with acetone followed by drying at 310°C for 120 hours.

The solvent was purified and dried by standard methods.

ESTIMATED ERROR:

Soly: results for which rel error exceeded 50% were rejected. The reported value is a mean of at least two detns.

Temp: nothing specified.

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) Lanthanide fluoride; LaF_3; [13709-38-1] (2) Pyridine; C_5H_5N; [110-86-1]	Kirmse, E. M.; Jordan, M. *Z. Chem.* 1977, *17*, 75-6.
VARIABLES: Temperature not specified: presumably room temperature.	PREPARED BY: T. Mioduski

EXPERIMENTAL VALUES:

The solubility of LaF_3 in pyridine was reported to be

$$4 \times 10^{-2} \text{ mass \%}$$

The corresponding value in molal units calculated by the compiler is

$$2 \times 10^{-3} \text{ mol kg}^{-1}$$

AUXILIARY INFORMATION

METHOD/APPARATUS/PROCEDURE:	SOURCE AND PURITY OF MATERIALS:
Isothermal method. A sample of saturated solution was evaporated to dryness, and about 30 mg of LaF_3 heated with about 10 cm^3 of 10 % KOH solution for 1 hour to obtain quantitative separation of the precipitated $La(OH)_3$ and the fluoride solution. The precipitate was filtered, washed and dissolved in dil HCl. La was determined by complexometric titration with potentiometric end-point detection. The fluoride content of the filtrate was determined photometrically using Al-Eriochrome cyanine color lake.	Technical grade LaF_3 (VEB Fluowerke Dohna) contained 3.5 % Pr_6O_{11} and 14.5 % Nd_2O_3. The salt ($LaF_3.0.5H_2O$) was dehydrated by washing with acetone and drying at 300°C (1).
	ESTIMATED ERROR: Nothing specified.
	REFERENCES: 1. Karpenko, L. I.; Fadeeva, L.A.; Shevchenko, L. D. *Zh. Anal. Khim.* 1975, *30*, 1330.

COMPONENTS:	ORIGINAL MEASUREMENTS:
(1) Lanthanum fluoride; LaF_3; [13709-38-1] (2) Pyridine; C_5H_5N; [110-86-1]	Kirmse, E. M. *Wiss. Hefte, Paed. Inst. Koethen* 1978, *2*, 85-90.
VARIABLES:	PREPARED BY:
Room temperature	T. Mioduski

EXPERIMENTAL VALUES:

The solubility of LaF_3 in pyridine at room temperature was reported to be

$$0.03_5 \text{ mass \%}$$

The corresponding molality calculated by the compiler is

$$1.8 \times 10^{-3} \text{ mol kg}^{-1}.$$

The solid phase was dried in a desiccator over P_4O_{10} and its La:F ratio was found to be very close to 1:3.

AUXILIARY INFORMATION

METHOD/APPARATUS/PROCEDURE:

Isothermal method. About 100 mg LaF_3 and 10-20 cm^3 of solvent mechanically agitated at room temperature for 100 hours. Samples of saturated solution for analyses were obtained by decantation or by centrifuging. 5-10 g of saturated solution were heated with about 10 cm^3 of 10 % KOH solution for 1-3 hours to obtain quantitative separation of solid $La(OH)_3$ and a basic F^- solution. $La(OH)_3$ was filtered, washed and dissolved with HCl. La was determined several times by complexometric titration using a potentiometric method (1). The fluoride content of the basic filtrate was determined photometrically using Al-Eriochrome cyanine color lake (2).

SOURCE AND PURITY OF MATERIALS:

La_2O_3 (source and purity not specified) was dissolved in HCl and the fluoride precipitated with HF. The ppt ($LaF_3.0.5H_2O$) was dehydrated by washing with acetone followed by drying at 310°C for 120 hours.

The solvent was purified and dried by standard methods.

ESTIMATED ERROR:

Soly: results for which rel error exceeded 50% were rejected. The reported value is a mean of at least two detns.

Temp: nothing specified.

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) Lanthanum fluoride; LaF_3; [13709-38-1] (2) Urea; CH_4N_2O; [57-13-6] (3) Pyridine; C_5H_5N; [110-86-1]	Kirmse, E. M. *Wiss. Hefte, Paed. Inst. Koethen* 1978, 2, 85-90.
VARIABLES:	PREPARED BY:
Room temperature : T/K = 291-294	T. Mioduski

EXPERIMENTAL VALUES:

The solubility of LaF_3 at room temperature in pyridine saturated with urea was reported to be

$$1.2 \times 10^{-2} \text{ mass \%}$$

The urea content was not given.

The solid phase was dried in a desiccator over P_4O_{10} and its La:F ratio was found to be about 1:3.

AUXILIARY INFORMATION

METHOD/APPARATUS/PROCEDURE:

Isothermal method. About 100 mg of LaF_3 and 10-20 cm^3 of solvent mechanically agitated at room temperature (18-22°C) for 100 hours. Samples of saturated solution for analyses were obtained by decantation or by centrifuging. 5-10 g of saturated solution were heated with about 10 cm^3 of 10 % KOH to obtaine quantitative separation of solid $La(OH)_3$ and a basic F^- solution. The solid $La(OH)_3$ was filtered, washed and dissolved with HCl. La was determined several times by complexometric titration using a potentiometric method.(1).

The reported solubility is the mean of at least two determinations.

SOURCE AND PURITY OF MATERIALS:

La_2O_3 (source and purity not specified) was dissolved in HCl and the fluoride precipitated with HF. The ppt ($LaF_3.0.5H_2O$) was dehydrated by washing with acetone followed by drying at 310°C for 120 hours.

The other components were purified and dried by standard methods.

ESTIMATED ERROR:

Nothing specified.

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) Lanthanum fluoride; LaF_3; [13709-38-]] (2) Acidic nitrosyl fluoride; NOF.3HF; [14947-17-2]	Galkin, N. P.; Shishkov, Yu. D. Khomyakov, V. I. *Radiokhimiya* 1978, *20*, 136-41; *Soviet Radiochem.* (*Engl. Transl.*) 1978, *20*, 109-13.
VARIABLES:	PREPARED BY:
Room temperature	T. Mioduski

EXPERIMENTAL VALUES:

The solubility of LaF_3 in acidic nitrosyl fluoride at room temperature was reported to be

0.05 mass %

The molality calculated by the compiler is

2.6×10^{-3} mol kg^{-1}

AUXILIARY INFORMATION

METHOD/APPARATUS/PROCEDURE:	SOURCE AND PURITY OF MATERIALS:
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 La content. An aliquot was evaportated 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 LaF_3 as found by analyses for F,N,HF and La.	LaF_3 was at least 99 % pure. NOF.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:

COMPONENTS:	ORIGINAL MEASUREMENTS:
(1) Lanthanum fluoride; LaF_3; [13709-38-1] (2) Urea; CH_4N_2O; [57-13-6] (3) Water; H_2O; [7732-18-5]	Kirmse, E. M. *Wiss. Hefte, Paed. Inst. Koethen* 1978, *2*, 85-90.
VARIABLES:	PREPARED BY:
Room temperature	T. Mioduski

EXPERIMENTAL VALUES:

The solubility of LaF_3 in 46% aqueous solution of urea at room temperature was reported to be

$$9 \times 10^{-3} \text{ mass \%}$$

The solid phase was dried in a desiccator over P_4O_{10} and its La:F ratio was found to be about 1:3.

AUXILIARY INFORMATION

METHOD/APPARATUS/PROCEDURE:

Isothermal method. About 100 mg LaF_3 and 10-20 cm^3 of solvent mechanically agitated at room temperature for 100 hours. Samples of saturated solution for analyses were obtained by decantation or by centrifuging. 5-10 g of saturated solution were heated with about 10 cm^3 of 10 % KOH solution for 1-3 hours to obtain quantitative separation of solid $La(OH)_3$ and a basic F^- solution. $La(OH)_3$ was filtered, washed and dissolved with HCl. La was determined several times by complexometric titration using a potentiometric method (1). The fluoride content of the basic filtrate was determined photometrically using Al-Eriochrome cyanine color lake (2).

SOURCE AND PURITY OF MATERIALS:

La_2O_3 (source and purity not specified) was dissolved in HCl and the fluoride precipitated with HF. The ppt ($LaF_3.0.5H_2O$) was dehydrated by washing with acetone followed by drying at 310°C for 120 hours.

The other components were purified and dried by standard methods.

ESTIMATED ERROR:

Soly: results for which rel error exceeded 50% were rejected. The reported value is a mean of at least two detns.

Temp: nothing specified.

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.