COMPONENTS:	ORIGINAL MEASUREMENTS:
(1) Samarium bromide; $SmBr_3$; [13759-87-0] (2) 1,2-Diethoxyethane; $C_6H_{14}O_2$; [629-14-1]	Kirmse, E.M. *Tr. II Vses. Konf. po Teor. Rastvorov* 1971, 200-6.
VARIABLES: T/K = 298	**PREPARED BY:** T. Mioduski and M. Salomon

EXPERIMENTAL VALUES:

The solubility of $SmBr_3$ in 1,2-dimethoxyethane at 25°C was reported as

0.8 mass %

The corresponding molality calculated by the compiler is

0.021 mol kg^{-1}

The nature of the solid phase was not specified.

AUXILIARY INFORMATION

METHOD/APPARATUS/PROCEDURE:
Experimental details not given, but were probably similar to previous works of the author which are compiled throughout this volume.

Nature of solid phase not specified.

SOURCE AND PURITY OF MATERIALS:
Nothing specified, but based on previous work by the author the anhydrous salt was probably prepared by the method of Taylor and Carter (1).

ESTIMATED ERROR:
Nothing specified.

REFERENCES:
1. Taylor, M.D.; Carter, C.P. *J. Inorg. Nucl. Chem.* 1962, *24*, 387.

COMPONENTS:	ORIGINAL MEASUREMENTS:
(1) Samarium bromide; $SmBr_3$; [13759-87-0] (2) Alkyl ethers	Kirmse, E.M.; Dressler, H. *Z. Chem.* 1975, *15*, 239-40.
VARIABLES: Room Temperature (293-298 K)	**PREPARED BY:** T. Mioduski and M. Salomon

EXPERIMENTAL VALUES:

solvent			$SmBr_3$ solubility[a] mass %	mol kg^{-1}
1-methoxybutane;	$C_5H_{12}O$;	[628-28-4]	3.0	0.079
1-methoxypentane;	$C_6H_{14}O$;	[628-80-8]	2.2	0.058
1-methoxyheptane;	$C_8H_{18}O$;	[629-32-3]	7.3	0.202
1-methoxyoctane;	$C_9H_{20}O$;	[929-56-6]	13.5	0.400
1-methoxynonane;	$C_{10}H_{22}O$;	[7289-51-2]	7.6	0.211
1-methoxydecane;	$C_{11}H_{24}O$;	[7289-52-3]	4.6	0.124

[a]Molalities calculated by the compilers. Compositions of the solid phases were not specified.

AUXILIARY INFORMATION

METHOD/APPARATUS/PROCEDURE:	SOURCE AND PURITY OF MATERIALS:
The solute-solvent mixtures were isothermally agitated (at room temperature) until equilibrium was attained. The anhydrous reagents were handled in a dry box containing P_4O_{10}. Pr was determined by complexometric titration using Xylenol Orange indicator. The reported solubilities are mean values based on four determinations.	Nothing specified.
	ESTIMATED ERROR: Nothing specified.
	REFERENCES:

COMPONENTS:	ORIGINAL MEASUREMENTS:
(1) Samarium bromide; $SmBr_3$; [13759-87-0] (2) Tetrahydrofuran; C_4H_8O; [109-99-9]	Rossmanith, K. *Monatsh. Chem.* 1966, 97, 1357-64.
VARIABLES:	**PREPARED BY:**
Room temperature: T/K about 294-296	T. Mioduski

EXPERIMENTAL VALUES:

The solubility of $SmBr_3$ in tetrahydrofuran at 21-23°C was reported to be

0.55 g/100 ml solution

The solid phase is

$SmBr_3.3.5C_4H_8O$.

AUXILIARY INFORMATION

METHOD/APPARATUS/PROCEDURE:

Isothermal method employed. The solution was equilibrated in an extractor for 60-80 hours at room temperature. Samarium was determined by the oxalate method and by titration with EDTA using Xylenol Orange indicator. For the solid phase analysis, the solvent was determined by difference.

Anhydrous substances were handled in a dry box through which was passed a current of dry and CO_2-free nitrogen.

SOURCE AND PURITY OF MATERIALS:

Sources and purities not specified. $SmBr_3$ prepared by reaction of the oxide at high temperatures with an excess of NH_4Br followed by heating the product in a current of dry nitrogen, and then in vacuum to removed unreacted NH_4Br.

Tetrahydrofuran was distilled from $LiAlH_4$.

ESTIMATED ERROR:

Nothing specified.

REFERENCES:

COMPONENTS:	ORIGINAL MEASUREMENTS:
(1) Samarium bromide; $SmBr_3$; [13759-87-0] (2) 1,4-Dioxane; $C_4H_8O_2$; [123-91-1]	Kirmse, E.M.; Zwietasch, K.J.; Tirschmann, J.; Oelsner, L.; Niedergeases, U. *Z. Chem.* 1968, *8*, 472-3; Kirmse, E.M. *Tr. II Vses. Konf. po Teor. Rastvorov.* 1971, 200-6.
VARIABLES:	PREPARED BY:
Room temperature: T/K around 298	T. Mioduski

EXPERIMENTAL VALUES:

The solubility of $SmBr_3$ in p-dioxane at about 25°C was given as

1.3 mass %

The corresponding molality calculated by the compiler is

0.034 mol kg^{-1}

The nature of the solid phase was not specified.

AUXILIARY INFORMATION

METHOD/APPARATUS/PROCEDURE:	SOURCE AND PURITY OF MATERIALS:
The solute-solvent mixtures were isothermally agitated at 25°C or at room temperature. Authors state that the difference found for the solubility was within experimental error limits. Sm was determined by complexometric titration. No other details given.	The anhydrous salt was prepared by the method of Taylor and Carter (1). No other information given.
	ESTIMATED ERROR: Nothing specified.
	REFERENCES: 1. Taylor, M.D.; Carter, C.P. *J. Inorg. Nucl. Chem.* 1962, *24*, 387.

COMPONENTS:	ORIGINAL MEASUREMENTS:
(1) Samarium bromide; $SmBr_3$; [13759-87-0] (2) Alkyl amines	Kirmse, E. M. *Tr. II Vses. Konf. po Teor. Rastvorov* 1971, 200-6.
VARIABLES: T/K = 298	**PREPARED BY:** T. Mioduski and M. Salomon

EXPERIMENTAL VALUES:

solvent			$SmBr_3$ solubility[a] mass %	mol kg^{-1}
1-propanamine;	$n\text{-}C_3H_9N$;	[107-10-8]	23.8	0.801
2-propanamine;	$iso\text{-}C_3H_9N$;	[75-31-0]	33.1	1.26_8
1-butanamine;	$n\text{-}C_4H_{11}N$;	[109-73-9]	38.5	1.60_5
2-butanamine;	$sec\text{-}C_4H_{11}N$;	[13952-84-6]	23.8	0.801
di-2-butylamine;	$(sec\text{-}C_4H_9)_2NH$;	[626-23-3]	0.03	8×10^{-4}

[a]Molalities calculated by the compilers.

AUXILIARY INFORMATION

METHOD/APPARATUS/PROCEDURE:

Experimental details not given, but were probably similar to previous works of the author which are compiled throughout this volume.

Nature of solid phases not specified.

SOURCE AND PURITY OF MATERIALS:

Nothing specified, but based on previous work by the author the anhydrous salt was probably prepared by the method of Taylor and Carter (1).

ESTIMATED ERROR:

Nothing specified.

REFERENCES:

1. Taylor, M.D.; Carter, C.P. *J. Inorg. Nucl. Chem.* 1962, *24*, 387.