COMPONENTS:	ORIGINAL MEASUREMENTS:	
<pre>(1) Scandium chloride; ScCl₃; [10361-84-9]</pre>	Kirmse, E. M.	
(2) Methanol; CH40; [67-56-1]	Z. Chem. <u>1961</u> , 1, 332–4.	
VARIABLES:	PREPARED BY:	
One temperature: T/K = 298.2	T. Mioduski	
EXPERIMENTAL VALUES:		
The solubility of ScCl ₃ in methanol at 25° C w	as reported to be	
4	5.5 mass %	
The corresponding molality calculated by the	compiler is	
5	.52 mol kg ⁻¹	
The solid phase was reported to be ScCl ₃ .3CH ₃ ScCl ₃ .2CH ₃ OH (see discussion below).	OH which could be further dehydrated to	
5 5		
COMMENTS AND/OR ADDITIONAL DATA:		
Since in the saturated solution there are almost 6 moles of solvent per mole of salt, the author suggests that ScCl ₃ has a coordination number of 6.		
AUXILIARY	INFORMATION	
METHOD/APPARATUS/PROCEDURE: Isothermal method. About 10-15 cm ³ alcohol and ScCl ₃ placed in glass stoppered bottles and mechanically rotated at 200 rpm in a thermostat for 14-15 days. After allowing the equilibrated slns to settle for 3 days, aliquots were removed for analyses. Sc determined gravimetrically by evaporation of solvent followed by ignition to Sc20 ₃ . Identical results obtained by centrifuging the equilibrated slns prior to analyses.	SOURCE AND PURITY OF MATERIALS: Anhydrous ScCl ₃ prepared by heating Sc_2O_3 and activated charcoal in a stream of chlorine at 900-1000°C (1). Source and purity of Sc_2O_3 not specified. Methanol was purified by fractional dis- tillation from $CaSO_4.0.5H_2O$.	
Solid phase composition determined by analysis of wet residues. Samples dried in vacuum (l1 \pm 1 mm Hg) over P ₂ O ₅ at 18 \pm 1°C and weighed every 24 hours until the mass was constant. Sc and Cl analysed gravimetrically as Sc ₂ O ₃ and AgCl. It is not clear if ele- mental C and H analyses were also carried out. After 28 days of drying, the solid phase composition was found to be ScCl ₃ .3CH ₃ OH. Additional drying in a desic- cator or in a dry box yielded a solid phase of composition ScCl ₃ .2CH ₃ OH.	ESTIMATED ERROR: Soly: nothing specified. Temp: precision <u>+</u> 0.2 K. REFERENCES: 1. Petru, F.; Hajek, B.; Prochazka, V.; Vit, J. Collect. Czech. Chem. Comm. <u>1957</u> , 22, 1534.	

ORIGINAL MEASUREMENTS:		
Kirmse, E. M.		
Z. Chem. <u>1961</u> , 1, 332-4.		
PREPARED BY:		
T. Mioduski		
as reported as follows:		
aliquot 2		
soly/mass %		
37.3		
37.4		
corresponding (mean) molality calculated by		
$_{3}$ CH $_{2}$ OH which could be further dehydrated to		
Since in the saturated solution there are almost 6 moles of solvent per mole of salt, the author suggests that ScCl ₃ has a coordination number of 6.		
INFORMATION		
SOURCE AND PURITY OF MATERIALS: Anhydrous ScCl ₃ prepared by heating Sc ₂ O ₃ and activated charcoal in a stream of chlorine at 900-1000°C (1). Source and purity of Sc ₂ O ₃ not specified. Ethanol was dried with metallic sodium and distilled.		
ESTIMATED ERROR: Soly: std deviation about 0.2 mass % (compiler). Temp: precision <u>+</u> 0.2 K. REFERENCES: 1. Petru, F.; Hajek, B.; Prochazka, V.; Vit, J. Collect. Czech. Chem. Commn. <u>1957</u> , 22, 1534.		

Scandium Chloride 3				
COMPONENTS :		ORIGINAL MEASUREM	ŒNTS:	
 Scandium chlorid. [10361-84-9] 1-Propanol; C₃H₈ 	,	Kirmse, E. M. Z. Chem. <u>1961</u> ,	1, 332-4.	
VARIABLES:	<u></u>	PREPARED BY:		
One temperature: T/K	= 298.2	T. Mioduski		
EXPERIMENTAL VALUES: The solubility of ScCl	.3 in 1-propanol at 25°C	was reported as	follows	
	Run 1	Ru	n 2	
	aliquot l	aliquot l	aliquot 2	
	soly/mass %	-	soly/mass %	
first analyses	26.1	25.7	26.3	
second analyses	26.2	26.1		
third analyses	26.1			
ScCl ₃ .2C ₃ H ₇ OH. COMMENTS AND/OR ADDITI Since in the saturated		ost 6 moles of so	e further dehydrated to lvent per mole of salt,	
	AUXILIARY	INFORMATION		
METHOD/APPARATUS/PROCE Isothermal method. At and ScCl ₃ placed in gl and mechanically rotat thermostat for 14-15 d the equilibrated slns aliquots were removed determined gravimetric solvent followed by ig Identical results obtat the equilibrated slns	bout 10-15 cm ³ alcohol ass stoppered bottles and at 200 rpm in a lays. After allowing to settle for 3 days, for analyses. Sc ally by evaporation of mition to Sc_2O_3 . Lined by centrifuging	and activated c chlorine at 900 purity of Sc ₂ 0 ₃	prepared by heating Sc ₂ O ₃ harcoal in a stream of -1000°C (1). Source and not specified. dried with freshly prepared	1
Solid phase composition analysis of wet residu in vacuum (ll \pm 1 mm H 1°C and weighed every mass was constant. So gravimetrically as Sog not clear if elemental also carried out. Aft the solid phase composis ScCl ₃ .4C ₃ H ₇ OH. Additi desiccator or in a dry phase of composition S	tes. Samples dried (g) over P ₂ O ₅ at 18 ± 24 hours until the and Cl analysed O ₃ and AgCl. It is C and H analyses were ter 28 days of drying, dition was found to be conal drying in a box yielded a solid	Temp: precision REFERENCES: 1. Petru, F.; H	ajek, B.; Prochazka, V.; llect. Czech. Chem. Commun.	
not clear if elemental also carried out. Aft the solid phase compos ScCl ₃ .4C ₃ H ₇ OH. Additi desiccator or in a dry	Č and H analyses were er 28 days of drying, dition was found to be onal drying in a box yielded a solid	1. Petru, F.; H Vit, J. Co	llect. Czech. Chem. Commu	in.

COMPONENTS:		ORIGINAL MEASUREME	NTS:
<pre>(1) Scandium chloride [10361-84-9]</pre>	; ScCl ₃ ;	Kirmse, E. M.	
(2) 1-Butanol; C ₄ H ₁₀ 0	; [71-36-3]	Z. Chem. <u>1961</u> , 1,	, 332-4.
VARIABLES:		PREPARED BY:	
One temperature: T/K •	- 298.2	T. Mioduski	
EXPERIMENTAL VALUES:			
The solubility of ScCl ₃	in l-butanol at 25°C v	as reported as fol	llows:
	Run 1	I	Run 2
	aliquot l	aliquot l	aliquot 2
	soly/mass %	soly/mass %	soly/mass %
first analyses	27.9	23.6	23.7
second analyses	27.7	23.7	
third analyses	27.8		
<pre>the compiler is 2.23 mol kg⁻¹. The solid phase was reported to be ScCl₃.3CLHgOH which could be further dehydrated to ScCl₃.2CLHgOH. COMMENTS AND/OR ADDITIONAL DATA: Since in the saturated solution there are almost 6 moles of solvent per mole of salt, the author suggests that ScCl₃ has a coordination number of 6.</pre>			
	AUXILIARY	INFORMATION	
METHOD/APPARATUS/PROCED Isothermal method. Abo and ScCl ₃ placed in gla and mechanically rotate thermostat for 14-15 da the equilibrated slns t aliquots were removed f determined gravimetrica solvent followed by ign Identical results obtai the equilibrated slns p	but 10-15 cm ³ alcohol ass stoppered bottles at 200 rpm in a ays. After allowing so settle for 3 days, for analyses. Sc ally by evaporation of attion to Sc203. aned by centrifuging	and activated cha chlorine at 900-1 purity of Sc ₂ 03 r	prepared by heating Sc ₂ O ₃ arcoal in a stream of LOOO ^O C (1). Source and
Solid phase composition analysis of wet residue vacuum (ll \pm 1 mm Hg) o and weighed every 24 ho constant. Sc and Cl an as Sc ₂ O ₃ and AgCl. It mental C and H analyses out. After 29 days of phase composition was f H ₀ OH. Additional dryin in a dry box yielded a position ScCl ₃ .2C ₄ H ₉ OH.	s. Samples dried in over P_2O_5 at $18 \pm 1^{\circ}C$ ours until the mass was halysed gravimetrically is not clear if ele- s were also carried drying, the solid cound to be ScCl ₃ .3C _h ag in a desiccator or solid phase of com-	(compiler) Temp: precision REFERENCES: 1. Petru, F.; Ha;	± 0.2 K. Jek, B.; Prochazka, V.; Zect. Czech. Chem. Commun.

Scandium Chloride		
COMPONENTS:		ORIGINAL MEASUREMENTS: Kirmse, E. M.
 Scandium chloride; ScCl₃; [10361-84-9] (2) 1-Pentanol; C₅H₁₂0; [71- 		Z. Chem. <u>1961</u> , 1, 332-4.
VARIABLES:		PREPARED BY:
One temperature: T/K = 298.2		T. Mioduski
EXPERIMENTAL VALUES: The solubility of ScCl ₃ in 1-pentanol at 25 [°] C was reported as follows:		
	aliquot l	aliquot 2
	soly/mass %	soly/mass %
first analyses	23.9	23.7
second analyses	23.7	23.6
third analyses		23.5
The solid phase was reported to be $ScCl_3.4C_5H_{11}OH$ which could be further dehydrated $ScCl_3.2C_5H_{11}OH$. COMMENTS AND/OR ADDITIONAL DATA: Since in the saturated solution there are almost 6 moles of solvent per mole of salt the author suggests that $ScCl_3$ has a coordination number of 6.		
	AUXILIARY	INFORMATION
METHOD/APPARATUS/PROCEDURE: Isothermal method. About 10-1 and ScCl ₃ placed in glass stor and mechanically rotated at 20 thermostat for 14-15 days. Af the equilibrated slns to settl aliquots were removed for anal determined gravimetrically by solvent followed by ignition t Identical results obtained by the equilibrated slns prior to	opered bottles 00 rpm in a ter allowing .e for 3 days, .yses. Sc evaporation of co Sc203. centrifuging	SOURCE AND PURITY OF MATERIALS: Anhydrous ScCl ₃ prepared by heating Sc ₂ 0 ₃ and activated charcoal in a stream of chlorine at 900-1000°C (1). Source and purity of Sc ₂ 0 ₃ not specified. 1-Pentanol was purified by fractional distillation.
Solid phase composition determ analysis of wet residues. Sam vacuum (ll \pm l mm Hg) over P ₂ O l ^O C and weighed every 24 hours mass was constant. Sc and Cl gravimetrically as Sc ₂ O ₃ and A not clear if elemental C and H also carried out. After 57 da the solid phase composition wa ScCl ₃ .4C ₅ H ₁ OH. Additional dr desiccator or in a dry box yie phase of composition ScCl ₃ .2C ₅	mples dried in 5 at 18 ± 5 until the analysed gCl. It is 1 analyses were ys of drying, s found to be ying in a blded a solid	ESTIMATED ERROR: Soly: std deviation about 0.15 mass % (compiler). Temp: precision ± 0.2 K. REFERENCES: 1. Petru, F.: Hajek, B.; Prochazka, V.; Vit, J. Collect. Czech. Chem. Commun. <u>1957</u> , 22, 1534.

ORIGINAL MEASUREMENTS:		
Kirmse, E. M.		
Z. Chem. <u>1961</u> , 1, 332-4.		
$2. \text{ crem}. \underline{1901}, 1, 332-4.$		
PREPARED BY:		
T. Mioduski		
1. HOUDKI		
was reported as follows:		
aliquot 2		
soly/mass %		
22.2		
21.1		
21.1		
corresponding (mean) molality calculated by		
The solid phase was reported to be ScCl ₃ .3C ₆ H ₁₃ OH which could be further dehydrated to $^{ScCl}_{3}$.2C ₆ H ₁₃ OH.		
most 6 moles of solvent per mole of salt, ation number of 6.		
INFORMATION		
SOURCE AND PURITY OF MATERIALS:		
Anhydrous ScCl ₃ prepared by heating Sc ₂ O ₃ and activated charcoal in a stream of chlorine at 900-1000°C (1). Source and purity of Sc ₂ O ₃ not specified. 1-Hexanol was purified by fractional distillation.		
ESTIMATED ERROR: Soly: std deviation about 0.5 mass % (compiler). Temp: precision <u>+</u> 0.2 K. REFERENCES: 1. Petru, F.; Hajek, B.; Prochazka, V.; Vit, J. Collect. Czech. Chem. Commun. <u>1957</u> , 22, 1534.		

ORIGINAL MEASUREMENTS: Kirmse, E. M.			
Z. Chem. <u>1961</u> , 1, 332-4.			
PREPARED BY: T. Mioduski			
1. HIGUSKI			
5 ⁰ C was reported as follows:			
aliquot 2			
soly/mass %			
19.4			
19.7			
The mean solubility is 19.3 mass %, and the corresponding (mean) molality calculated by the compiler is 1.58 mol kg ⁻¹ . The solid phase was reported to be $ScCl_3$. ⁴ C ₇ H ₁₅ OH which could be further dehydrated to $ScCl_3$.3C ₇ H ₁₅ OH.			
COMMENTS AND/OR ADDITIONAL DATA: Since in the saturated solution there are almost 6 moles of solvent per mole of salt, the author suggests that ScCl ₃ has a coordination number of 6.			
RY INFORMATION			
SOURCE AND PURITY OF MATERIALS: Anhydrous ScCl ₃ prepared by heating Sc ₂ O ₃ and activated charcoal in a stream of chlorine at 900-1000°C (1). Source and purity of Sc ₂ O ₃ not specified. 1-Heptanol was purified by fractional of distillation.			
ESTIMATED ERROR: Soly: std deviation about 0.3 mass % (compiler). Temp: precision <u>+</u> 0.2 K. REFERENCES: 1. Petru, F.; Hajek, B.; Prochazka, V.; Vit, J. Collect. Czech. Chem. Commun. <u>1957</u> , 22, 1534.			

COMPONENTS:		ORIGINAL MEASUREMENTS:
		Kirmse, E. M.
(1) Scandium chloride; ScCl ₃ ; [10361-84-9]		Z. Chem. <u>1961</u> , 1, 332-4.
(2) 1-Octanol; C ₈ H ₁₈ O; [111-8	37-5]	
VARIABLES:		PREPARED BY:
One temperature: T/K = 298.2		T. Mioduski
EXPERIMENTAL VALUES:	·····	
The solubility of ScCl ₃ in 1-od	ctanol at 25 ⁰ C	was reported as follows:
	aliquot l	aliquot 2
٤	soly/mass %	soly/mass %
first analyses	16.9	16.9
second analyses	17.0	17.0
The mean solubility is 16.9 mass %, and the corresponding (mean) molality calculated by the compiler is 1.34 mol kg ⁻¹ . The solid phase was reported to be $ScCl_3.4C_8H_{17}OH$ which could be further dehydrated to $ScCl_3.3C_8H_{17}OH$.		
COMMENTS AND/OR ADDITIONAL DATA: Since in the saturated solution there are almost 6 moles of solvent per mole of salt, the author suggests that ScCl ₃ has a coordination number of 6.		
	AUXILIARY	INFORMATION
METHOD/APPARATUS/PROCEDURE: Isothermal method. About 10-15 and ScCl ₃ placed in glass stopp and mechanically rotated at 200 thermostat for 14-15 days. Aft the equilibrated slns to settle aliquots were removed for analy determined gravimetrically by e solvent followed by ignition to Identical results obtained by o the equilibrated slns prior to	pered bottles o rpm in a ser allowing e for 3 days, rses. Sc evaporation of o Sc ₂ O ₃ . centrifuging	SOURCE AND PURITY OF MATERIALS: Anhydrous ScCl ₃ prepared by heating Sc ₂ O ₃ and activated charcoal in a stream of chlorine at 900-1000°C (1). Source and purity of Sc ₂ O ₃ not specified. 1-Octanol was purified by fractional distillation.
Solid phase composition determinanalysis of wet residues. Sampin vacuum (ll \pm 1 mm Hg) over F 1°C and weighed every 24 hours mass was constant. Sc and Cl as gravimetrically as Sc ₂ O ₃ and Ag not clear if elemental C and H also carried out. After 114 dathe solid phase composition was ScC1 ₃ .4C ₈ H ₁₇ OH., Additional dry desiccator or in a dry box yiel phase of composition ScCl ₃ .3C ₈ H	ples dried 205 at 18 ± until the malysed cl. It is analyses were uys of drying s found to be ring in a .ded a solid	ESTIMATED ERROR: Soly: std deviation about 0.1 mass % (compiler). Temp: precision <u>+</u> 0.2 K. REFERENCES: 1. Petru, F.; Hajek, B.; Prochazka, V.; Vit, J. Collect. Czech. Chem. Commun. <u>1957</u> , 22, 1534.

COMPONENTS: ORIGINAL MEASUREMENTS: (1) Scandium chloride; ScCl ₃ ; Kirmse, E. M. $[10361-84-9]$ Z. Chem. <u>1961</u> , 1, 332-4. (2) 1-Nonanol; C ₉ H ₂ O; [143-08-8] PREPARED BY: VARIABLES: PREPARED BY: One temperature: T/K = 298.2 T. Mioduski		
(1) Scandium chloride; ScCl ₃ ; [10361-84-9] Z. Chem. <u>1961</u> , 1, 332-4. (2) 1-Nonanol; $C_{9}H_{2}O;$ [143-08-8] VARIABLES: PREPARED BY:		
[10361-84-9] (2) 1-Nonanol; C ₉ H ₂ O; [143-08-8] VARIABLES: PREPARED BY:		
VARIABLES: PREPARED BY:		
One temperature: T/K = 298.2 T. Mioduski		
EXPERIMENTAL VALUES:	· · · · · · · · · · · · · · · · · · ·	
The solubility of ScCl ₃ in 1-nonanol at 25 [°] C was reported as follows:		
- 5		
first analyses 13.6 mass %		
second analyses 13.4 mass %		
The mean solubility is 13.5 mass $\%$, and the corresponding (mean) molality calculated by the compiler is 1.03 mol kg ⁻¹ .		
The solid phase was reported to be ScCl ₃ .3C ₉ H ₁₉ OH.		
the author suggests that $ScCl_3$ has a coordination number of 6.		
AUXILIARY INFORMATION		
$\begin{array}{llllllllllllllllllllllllllllllllllll$	by heating Sc ₂ O ₃ n a stream of 1). Source and ified.	
Solid phase composition determined by analysis of wet residues. Samples dried in vacuum (ll ± 1 mm Hg) over P ₂ O ₅ at 18 ± 1°C and weighed every 24 hours until the mass was constant. Sc and Cl analysed gravimetrically as Sc ₂ O ₃ and AgCl. It is not clear if elemental C and H analyses were also carried out. After 146 days of drying the solid phase composition was found to be ScCl ₃ .3C ₉ H ₁₉ OH. Additional drying in a desiccator or in a dry box did not change the composition of this solvate. Soly: std deviation abc (compiler). Temp: precision ± 0.2 K REFERENCES: 1. Petru, F.; Hajek, B.; Vit, J. Collect. Cze 1957, 22, 1534.	Prochazka, V.;	

COMPONENTS :	ORIGINAL MEASUREMENTS:
<pre>(1) Scandium chloride; ScCl₃; [10361-84-9]</pre>	Kirmse, E. M. Tr. II Vses. Konf. po Teor. Rastvorov
(2) 2-Ethoxyethanol; C ₄ H ₁₀ O ₂ ; [110-80-5]	<u>1971</u> , 200-6.
[110-00-0]	
VARIABLES:	PREPARED BY:
One temperature: T/K = 298	T. Mioduski
EXPERIMENTAL VALUES:	
The solubility of ScCl ₃ in C ₂ H ₅ OCH ₂ CH ₂ OH at 2	5° C was reported to be
2	5.3 mass %
The corresponding molality calculated by the	compiler is
2	.36 mol kg ⁻¹
AUXILIARY	INFORMATION
METHOD/APPARATUS/PROCEDURE: Nothing specified. On the basis of previous	SOURCE AND PURITY OF MATERIALS: Nothing specified. Presumably, the
papers by the author, it appears that	anhydrous chloride was prepared by the method of Taylor and Carter (1).
reaction mixtures were equilibrated for sev- eral days and that Sc was determined by com-	method of raylor and carter (1).
plexometric titration using xylenol orange indicator.	
	ESTIMATED ERROR:
	Nothing specified.
	REFERENCES: 1. Taylor, M.D.; Carter, C. P.
	J. Inorg. Nucl. Chem. <u>1962</u> , 24, 387.
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Scandium Chloride		
COMPONENTS: (1) Scandium chloride; ScCl ₃ ; [10361-84-9] (2) 1,2-Diethoxyethane; C ₆ H ₁₄ O ₂ ; [629-14-]]	ORIGINAL MEASUREMENTS: Kirmse, E. M.; Zwietasch, K. J. Z. Chem. 1967, 7, 281.	
VARIABLES: One temperature: T/K = 298	PREPARED BY: T. Mioduski	
EXPERIMENTAL VALUES:		
The solubility of ScCl ₃ in C ₂ H ₅ OCH ₂ CH ₂ OC ₂ H ₅ at 1	t 25 ⁰ C was reported to be .22 mass %	
The corresponding molatity calculated by the	compiler is	
	.0816 mol kg ⁻¹	
AUXILIARY	INFORMATION	
METHOD/APPARATUS/PROCEDURE: Isothermal method employed. The reaction mixtures were equilibrated in a dry atmos- phere with frequent shaking. The solid phase was dried in a vacuum desiccator over P ₂ 0 ₅ . Sc was determined by complexometric titration using xylenol orange indicator. Cl ⁻ deter- mined by the Volhard titration method. In the solid phase the Sc:Cl:ether ratio was found to be 1:3.00:1.13.	SOURCE AND PURITY OF MATERIALS: Sources and purities of materials not given. The anhydrous chloride was prepared by the method of Taylor and Carter (1). The solvent was prepared by the Williamson synthesis: i.e. by reaction of C_2H_5I with the monoethylether of ethylene glycol.	
	ESTIMATED ERROR: Nothing specified. REFERENCES: 1. Taylor, M.D .; Carter, C. P. J. Inorg. Mucl. Chem. <u>1962</u> , 24, 387.	

COMPONENTS:	ORIGINAL MEASUREMENTS:
(1) Scandium chloride; ScCl ₃ ; [10361-84-9]	
[10361-84-9]	Kirmse, E.M.; Dressler, H.
(2) 1-Methoxybutane (butyl methyl ether); C ₅ H ₁₂ 0; [628-28-4]	Z. Chem. <u>1975</u> , 15, 239-40.
VARIABLES:	PREPARED BY:
Room Temperature : T/K = 293-298	T. Mioduski
EXPERIMENTAL VALUES:	
The solubility of ScCl ₃ in CH ₃ (CH ₂) ₃ OCH ₃ at 3	20-25°C was reported to be
6.5	mass %.
The corresponding molality colculated by the	compiler is
The corresponding molality calculated by the	
0.4	6 mol kg^{-1} .
	INFORMATION
METHOD/APPARATUS/PROCEDURE:	SOURCE AND PURITY OF MATERIALS:
The soluto-columnt mixtures were inothermal-	Nothing specified.
The solute-solvent mixtures were isothermal- ly agitated (at room temperature) until	Nothing specificat
equilibrium was attained. The anhydrous	
reagents were handled in a dry box contain-	
ing P ₄ 0 ₁₀ . Sc was determined by complexo- metric fitration using Xylenol Orange indi-	
cator.	
	ESTIMATED ERROR:
	ESTIMATED ERROR:
	Nothing specified.
	DEDEBENOUS.
	REFERENCES:

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COMPONENTS:	ORIGINAL MEASUREMENTS: Finke, A.; Kirmse, E. M.	
<pre>(1) Scandium chloride; ScCl₃; [10361-84-9]</pre>	Z. Chem. <u>1965</u> , 5, 193-4.	
(2) Tetrahydrofuran; C ₄ H ₈ 0; [109-99-9]		
VARIABLES:	PREPARED BY:	
One temperature: T/K = 298	T. Mioduski	
EXPERIMENTAL VALUES:	L	
The solubility of ScCl ₃ in tetrahydrofuran at 25° C was reported to be		
L	0 mass %	
The corresponding molality calculated by the		
c	0.067 mol kg ⁻¹	
AUXILIARY	INFORMATION	
METHOD / APPARATUS / PROCEDURE :	SOURCE AND PURITY OF MATERIALS:	
Nothing specified. The compiler assumes that the method was similar to that des-	Nothing specified except that anhydrous components were used.	
cribed in ref (1). The equilibrated solid phase was dried at		
reduced pressure and it was found to be ScCl_3.2THF with ScCl_3.3THF and ScCl_3.2.5THF		
being intermediate products of drying. IR spectra of the solution and the dry ad- dition products are discussed. They indi-		
cate the formation of coordinate bonds of ScCl ₃ with oxygen of THF.		
	ESTIMATED ERROR:	
	Nothing specified.	
	REFERENCES: 1. Kirmse, E. M. Z. Chem. <u>1961</u> , <i>1</i> , 332.	

COMPONENTS :	ORIGINAL MEASUREMENTS:
	Finke, A.; Kirmse, E. M.
<pre>(1) Scandium chloride; ScCl₃; [10361-84-9]</pre>	
[10301-64-9]	Z. Chem. <u>1965</u> , 5, 193-4.
(2) Ethyl acetate; C ₄ H ₈ O ₂ ; [141-78-6]	
[141-78-6]	
VARIABLES:	PREPARED BY:
One temperature: T/K = 298	T. Mioduski
EXPERIMENTAL VALUES:	
The solubility of ScCl ₃ in ethyl acetate at 25° C was reported to be	
3	9.2 mass %
The corresponding molality calculated by the	
14	.26 mol kg ⁻¹
AUXILIARY	INFORMATION
METHOD/APPARATUS/PROCEDURE:	SOURCE AND PURITY OF MATERIALS:
Not specified. The compiler assumes that	Nothing specified except that anhydrous
the method was similar to that described in ref (1).	components were used.
The equilibrated solid phase was dried at	
reduced pressure and it was found to be ScCl ₃ .2S (S = ethyl acetate). IR spectra	
of the solution and the dry addition pro-	
duct are discussed. The spectra indicate the formation of coordinate bonds of ScCl ₃	
with oxygen of ethyl acetate.	
	ESTIMATED ERROR:
	Nothing specified.
	DI DE DE VOIA
	REFERENCES: 1. Kirmse, E. M.
	Z. Chem. <u>1961</u> , 1, 332.

COMPONENTS:			ORIGIN	NAL MEASUREMENTS	:
(1) Scandium chlor (2) Amines	ide; ScCl ₃	; [10361-84-9	1	e, E.M. em. <u>1961</u> , 1, 334	4-7
VARIABLES:		<u> </u>	PREPA	RED BY:	· · · · · · · · · · · · · · · · · · ·
One temperature:		2	Mark	Salomon	
EXPERIMENTAL VALUES	5:				
			solubi		solid phase
solvent			mass %	mol kg ⁻¹	Sc:amine ratio
diethylamine;	^C 4 ^H 11 ^N ;	[109-89-7]	0.034	$2.2_5 \times 10^{-3}$	1:3
dipentylamine;	^C 10 ^H 23 ^N ;	[2050-92-2]	0.157	1.04×10^{-2}	1:1
triethylamine;	^C 6 ^H 15 ^N ;	[121-44-8]	0.012	7.93×10^{-4}	1:3
tri-n-octylamine;	C ₂₄ H ₅₁ N;	[1116-76-3]	0.004	2.64×10^{-4}	

^a Molalities calculated by the compiler.

AUXILIARY INFORMATION		
METHOD/APPARATUS/PROCEDURE: Isothermal method. ScCl ₃ and amine placed in glass stoppered bottles (sealed with glycerine) and rotated in a thermostat at 25 ± 0.2°C for 20 days. Scandium was determined gravimetrically as Sc ₂ O ₃ . Samples of the solid phases were dried in vacuum (10 mm Hg) over P ₂ O ₅ to constant weight. Scandium was determined gravi- metrically as Sc ₂ O ₃ and chloride determined gravimetrically as AgCl. The nitrogen, carbon and hydrogen contents were determined by "usual microanalytical methods."	<pre>SOURCE AND PURITY OF MATERIALS: Anhydrous ScCl₃ prepared by heating Sc₂O₃ and activated charcoal in a stream of chlorine at 900 - 1000°C (1). Source and purity of Sc₂O₃ not specified. Comercially available amines were fraction- ated several times.</pre> ESTIMATED ERROR: Soly: nothing specified. Temp: precision ± 0.2 K. REFERENCES: 1. Petru, F; Hajek, B.; Prochazka, V.; Vit, J. Collect. Czech. Chem. Comm. <u>1957</u> , 22, 1534.	

COMPONENTS:	ORIGINAL MEASUREMENTS:
(1) Scandium chloride; ScCl ₃ ;	Kirmse, E.M.
[10361-84-9] (2) Amines	Tr. II Vses. Konf. po Teor. Rastvorov <u>1971</u> , 200–6.
VARIABLES :	PREPARED BY:
	TREFACED DI.
T/K = 298	T. Mioduski and M. Salomon
EXPERIMENTAL VALUES:	
	ScCl ₃ solubility ^a
solvent	-
	mass % mol kg ⁻¹
2-butanamine; C ₄ H ₁₁ N; [13952-84-6]	3.2 0.218
di-isobutylamine; C ₈ H ₁₉ N; [110-96-3]	0.1 0.0066
^a Molalities calculated by the compilers.	
AUXILIARY	INFORMATION
METHOD/APPARATUS/PROCEDURE:	SOURCE AND PURITY OF MATERIALS:
Experimental details not given, but were	Nothing specified. Presumably the
probably similar to other works of the author which are compiled throughout this	anhydrous chloride was prepared by the method of Taylor and Carter (1).
volume.	
Nature of the solid phases not specified.	
	ESTIMATED ERROR:
	Nothing specified.
	REFERENCES:
	1. Taylor , M.D.; Carter, C.P.
	J. Inorg. Nucl. Chem. <u>1962</u> , 24, 387.

COMPONENTS:	ORIGINAL MEASUREMENTS:	
(1) Scandium chloride; ScCl ₃ ;	Finke, A.; Kirmse, E. M. Z. Chem. 1965, 5, 193-4.	
[10361-84-9]	2. Chem. 2003, 5, 195-4.	
<pre>(2) Dimethylformamide; C₃H₇NO; [68-12-2]</pre>		
VARIABLES:	PREPARED BY:	
One temperature: T/K = 298	T. Mioduski	
EXPERIMENTAL VALUES:		
The solubility of ScCl ₃ in HCON(CH ₃) ₂ at 25 ^o C was reported to be		
5.5 mass %		
The corresponding molality calculated by the	compiler is	
	-	
C	.385 mol kg ⁻¹	
	INFORMATION	
METHOD/APPARATUS/PROCEDURE: Not specified. The compiler assumes that	SOURCE AND PURITY OF MATERIALS: Nothing specified except that anhydrous	
the method is similar to that described in ref (1). The equilibrated solid phase was	components were used.	
dried under reduced pressure and it was found to be ScCl ₃ .2.55 (S = dimethylforma-		
mide). IR spectra of the saturated solution and of the equilibrated solid phase were		
studied. They indicate the formation of coordinate bonds of ScCl ₃ with oxygen of		
C _{3H7} NO.		
	ESTIMATED ERROR:	
	Nothing specified.	
	REFERENCES:	
	 Kirmse, E. M. Chem. <u>1961</u>, 1, 332. 	
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COMPONENTS:	ORIGINAL MEASUREMENTS:
<pre>(1) Scandium chloride; ScCl₃; [10361-84-9]</pre>	Finke, A.; Kirmse, E. M. Z. Chem. 1965, 5, 193-4.
(2) Acetonitrile; C ₂ H ₃ N; [75-05-8]	
VARIABLES:	PREPARED BY:
One temperature: $T/K = 298$	T. Mioduski
EXPERIMENTAL VALUES:	
The solubility of ScCl ₃ in acetonitrile at a	25 ⁰ C was reported to be
	3.7 mass %
The corresponding molality calculated by th	
	0.254 mol kg ⁻¹
	INFORMATION
METHOD APPARATUS/PROCEDURE: Not specified. The compiler assumes that the method was similar to that described in ref (1). The equilibrated solid phase was dried at reduced pressure and it was found to be unstable. No new IR bands found for the solution studied.	SOURCE AND PURITY OF MATERIALS: Nothing specified except that anhydrous components were used.
	ESTIMATED ERROR:
	Nothing specified.
	REFERENCES: 1. Kirmse, E. M. 2. Chem. <u>1961</u> , 1, 332.