

TABLE II (Continued)

Solution number	Pressure (bar)	Temperature (°C)			
		26.61	35.00	45.01	54.83
<i>n</i> -(C ₃ H ₇) ₄ NI					
1	1.0	162.74	171.72	182.18	189.42
	137.9	155.65	164.09	174.56	181.86
	275.8	148.70	157.02	165.16	175.64
	413.7	142.53	150.79	160.48	168.70
	551.6	136.49	144.64	154.07	162.22
	689.5	130.85	139.15	148.20	156.20
	827.4	126.01	134.04	142.67	150.61
	965.3	121.25	128.87	137.78	145.45
1103.2	116.69	124.20	132.90	140.44	
2	1.0	127.34	134.51	142.91	150.36
	137.9	121.62	128.30	136.81	144.24
	275.8	116.00	122.62	130.89	138.59
	413.7	111.08	117.60	125.61	133.00
	551.6	106.26	112.71	120.51	127.87
	689.5	101.80	108.34	115.90	122.23
	827.4	97.99	104.31	111.55	118.69
	965.3	94.22	100.21	107.73	114.55
1103.2	90.66	96.55	103.89	110.66	
4	1.0	93.41	98.79	105.20	110.99
	137.9	89.02	94.04	100.44	105.28
	275.8	84.80	89.72	95.90	101.72
	413.7	81.11	85.95	91.88	97.48
	551.6	77.52	82.29	88.04	93.60
	689.5	74.20	79.02	84.66	90.00
	827.4	71.34	76.00	81.41	86.68
	965.3	68.55	72.98	78.52	83.58
1103.2	65.92	70.27	75.68	80.68	
6	1.0	63.00	65.96	70.35	74.35
	137.9	59.89	62.64	66.95	70.84
	275.8	57.01	60.55	63.81	67.69
	413.7	54.46	57.90	61.03	64.77
	551.6	52.03	55.39	59.55	62.09
	689.5	49.80	53.17	57.15	59.63
	827.4	47.86	51.10	54.95	57.36
	965.3	45.97	49.08	52.98	55.26
1103.2	44.20	47.25	51.06	53.30	
7	1.0	29.92	31.78	34.04	36.17
	137.9	28.37	30.09	32.30	34.34
	275.8	26.94	28.62	30.71	32.73
	413.7	25.69	27.31	29.33	31.26
	551.6	24.50	26.09	28.07	29.93
	689.5	23.41	25.00	26.90	28.72
	827.4	22.48	24.00	25.83	27.60
	965.3	21.56	23.02	24.88	26.58
1103.2	20.71	22.14	23.96	25.63	
8	1.0	14.68	15.64	16.87	18.05
	137.9	13.90	14.80	15.99	17.12
	275.8	13.19	14.10	15.20	16.30
	413.7	12.57	13.45	14.51	15.57
	551.6	11.99	12.85	13.93	14.90
	689.5	11.46	12.31	13.35	14.31
	827.4	11.00	11.82	12.83	13.76
	965.3	10.56	11.35	12.36	13.26
1103.2	10.14	10.92	11.91	12.79	

TABLE II (Concluded)

(b) Atmospheric pressure cells

Solution number	Salt	Temperature (°C)			
		26.61	35.00	45.01	54.83
1	Me ₄ NI	80.10	84.62	89.53	94.33
	Et ₄ NI	164.68	173.68	183.25	192.65
	<i>n</i> -Pr ₄ NI	164.39	173.36	183.48	192.80
2	Me ₄ NI	74.71	78.88	83.40	87.84
	Et ₄ NI	187.32	197.41	208.75	219.16
	<i>n</i> -Pr ₄ NI	129.28	136.40	144.51	152.09
3	Me ₄ NI	57.64	60.79	64.65	68.78
	Et ₄ NI	116.67	123.22	131.06	138.23
	<i>n</i> -Pr ₄ NI	122.59	129.67	137.78	145.15
4	Me ₄ NI	52.89	55.85	59.30	62.28
	Et ₄ NI	150.11	158.36	167.00	176.08
	<i>n</i> -Pr ₄ NI	95.10	100.59	106.73	111.84
5	Me ₄ NI	41.14	43.68	46.50	49.02
	Et ₄ NI	102.69	108.44	114.80	121.00
	<i>n</i> -Pr ₄ NI	80.00	84.64	89.88	94.93
6	Me ₄ NI	37.59	39.77	42.30	44.97
	Et ₄ NI	62.34	65.98	70.64	74.58
	<i>n</i> -Pr ₄ NI	62.71	66.41	70.88	75.11
7	Me ₄ NI	33.97	36.02	38.25	40.32
	Et ₄ NI	61.27	64.66	68.89	72.52
	<i>n</i> -Pr ₄ NI	30.07	31.85	34.04	35.93
8	Me ₄ NI	21.07	22.34	23.79	25.13
	Et ₄ NI	20.98	22.24	23.71	25.13
	<i>n</i> -Pr ₄ NI	14.60	15.54	16.66	17.68

TABLE III

Concentrations of acetone solutions at atmospheric pressure and 26.61 °C (mole l⁻¹) × 10⁴

High-pressure cell	Salt*		
	Me ₄ NI	Et ₄ NI	<i>n</i> -Pr ₄ NI
1	4.4682	9.7287	10.669
2	4.2011	11.250	8.1184
3	3.0912	6.5892	7.6156
4	2.8066	8.7703	5.7834
5	2.1695	5.7462	4.7770
6	1.9456	3.3412	3.6471
7	1.7243	3.2916	1.6966
8	1.0707	1.0684	0.8000

*The solvent conductivities for the acetone used to make up these solutions were: Me₄NI, 2.08 × 10⁻⁸ Ω⁻¹ cm⁻¹; Et₄NI, 2.85 × 10⁻⁸ Ω⁻¹ cm⁻¹; and *n*-Pr₄NI, 9.64 × 10⁻⁸ Ω⁻¹ cm⁻¹.

at pressures up to 12 000 atm. It has sometimes been assumed that η varies with T according to (29)

$$[4] \quad \eta = C e^{E/RT},$$

where C is independent of T and P and E is