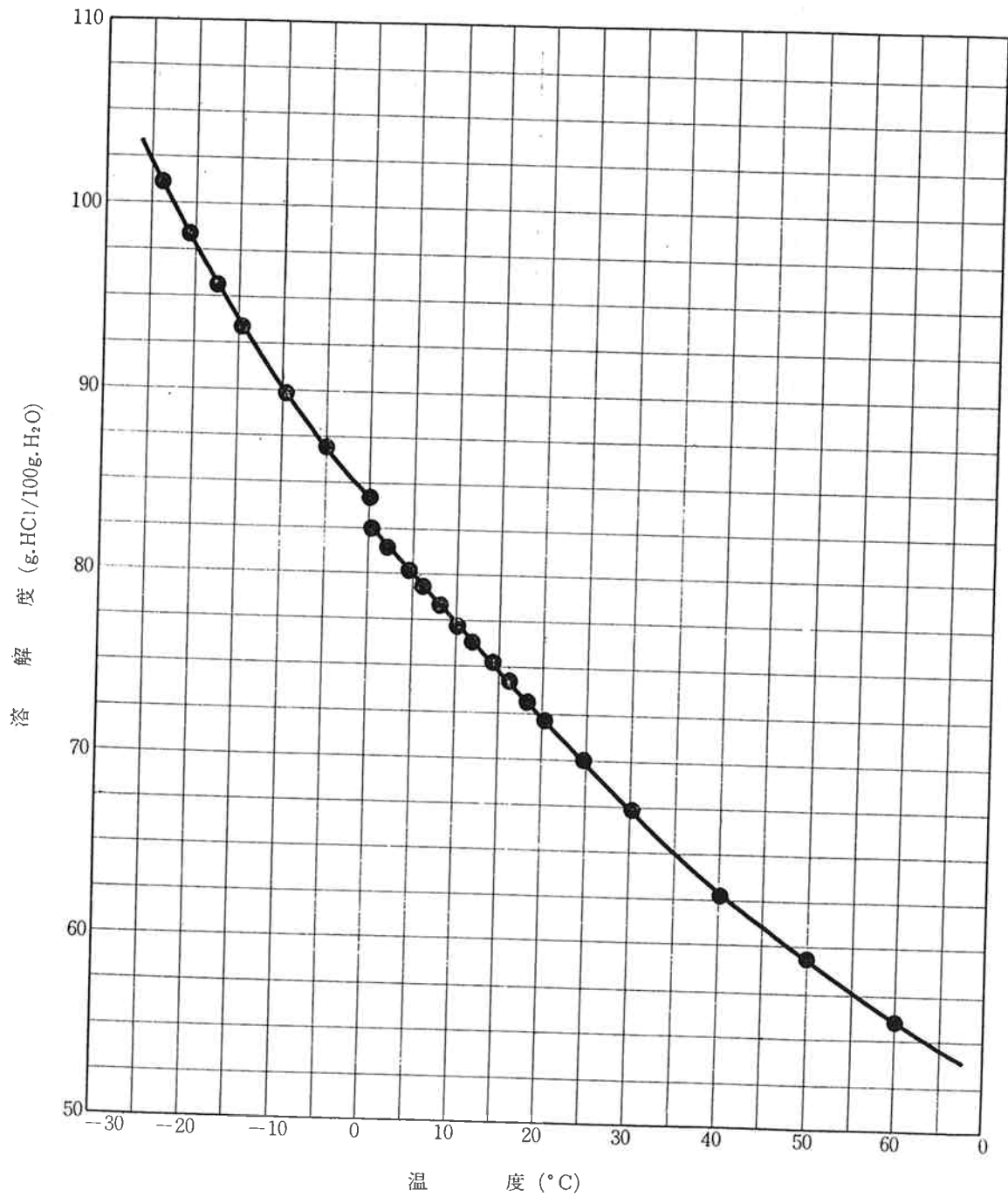


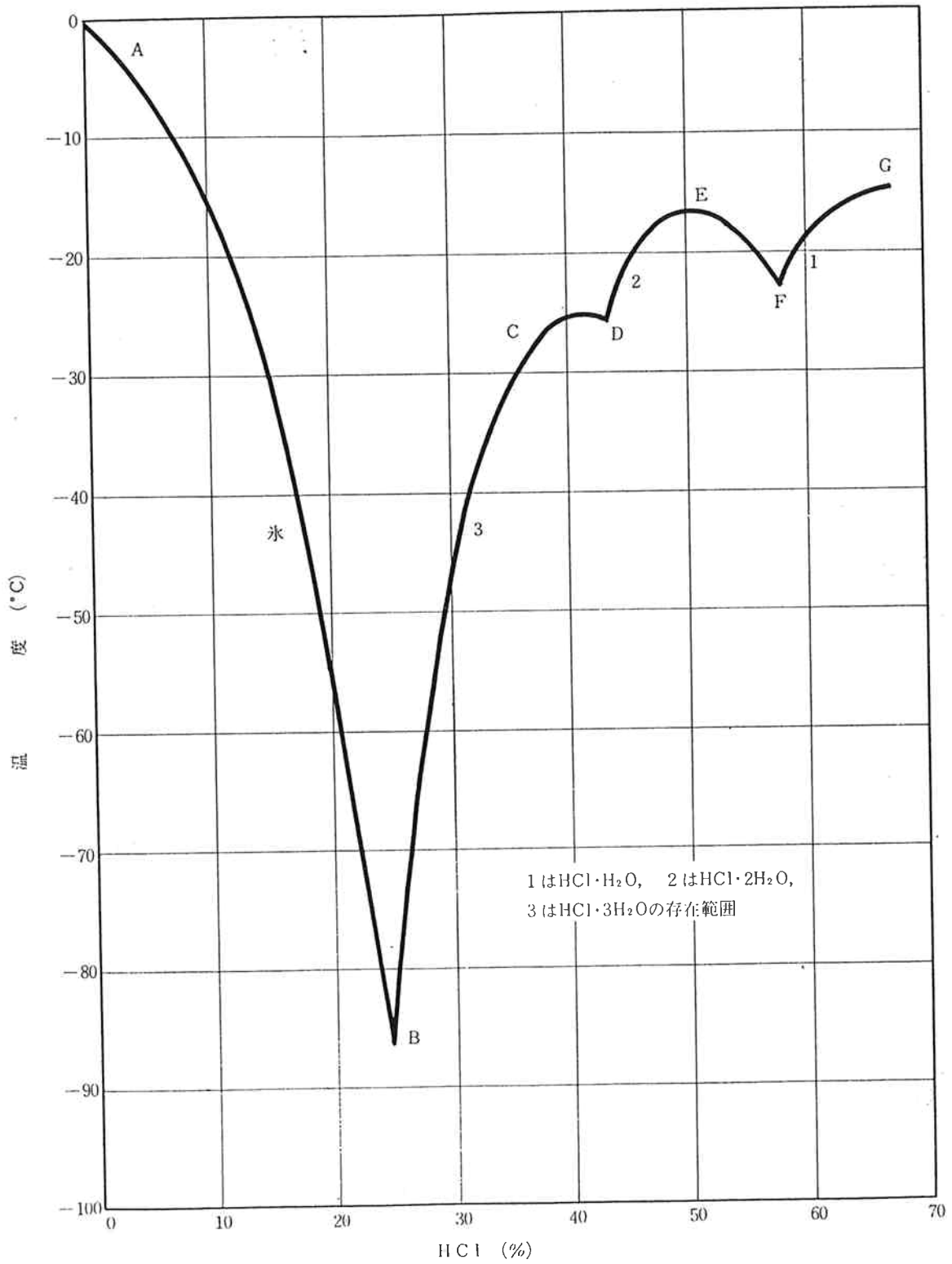
塩酸の物性表

1. 塩化水素の溶解度



[Seidell, "Solubilities of inorganic and metal Organic Compounds" 4th Ed., Vol. 1, 1108 (1958)]

2. HCl-H₂O 平衡図



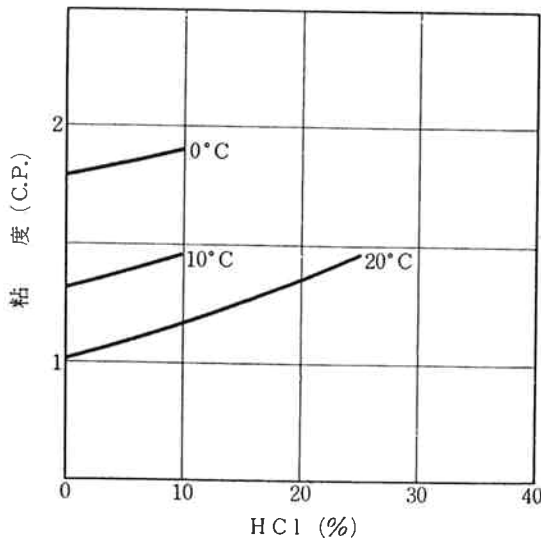
[Seidell, "Solubilities of inorganic and metal organic compounds", 4th Ed., Vol. 1, 1109 (1958)]

3. 塩酸の比重

HCl (%)	温度 (°C)							
	-5	0	10	20	40	60	80	100
1	1.0048	1.0052	1.0048	1.0032	0.9970	0.9881	0.9768	0.9636
2	1.0104	1.0106	1.0100	1.0082	1.0019	0.9930	0.9819	0.9688
4	1.0213	1.0213	1.0202	1.0181	1.0116	1.0026	0.9919	0.9791
6	1.0321	1.0319	1.0303	1.0279	1.0211	1.0121	1.0016	0.9892
8	1.0428	1.0423	1.0403	1.0376	1.0305	1.0215	1.0111	0.9992
10	1.0536	1.0528	1.0504	1.0474	1.0400	1.0310	1.0206	1.0090
12	1.0645	1.0634	1.0607	1.0574	1.0497	1.0406	1.0302	1.0188
14	1.0754	1.0741	1.0711	1.0675	1.0594	1.0502	1.0398	1.0286
16	1.0864	1.0849	1.0815	1.0776	1.0692	1.0598	1.0494	1.0383
18	1.0975	1.0958	1.0920	1.0878	1.0790	1.0694	1.0590	1.0479
20	1.1087	1.1067	1.1025	1.0980	1.0888	1.0790	1.0685	1.0574
22	1.1200	1.1177	1.1131	1.1083	1.0986	1.0886	1.0780	1.0668
24	1.1314	1.1287	1.1238	1.1187	1.1085	1.0982	1.0874	1.0761
26	1.1426	1.1396	1.1344	1.1290	1.1183	1.1076	1.0967	1.0853
28	1.1537	1.1505	1.1449	1.1392	1.1280	1.1169	1.1058	1.0942
30	1.1648	1.1613	1.1553	1.1493	1.1376	1.1260	1.1149	1.1030
32				1.1593				
34				1.1691				
36				1.1789				
38				1.1885				
40				1.1980				

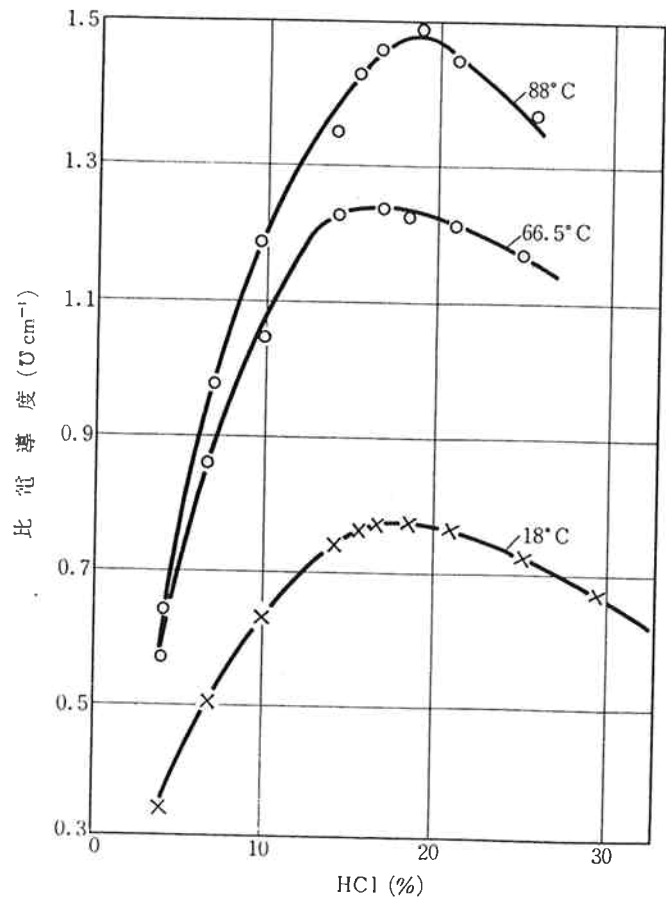
[Perry, Chemical Engineers' Handbook, 4th Ed, 3--74 (1963)]

4. 塩酸の粘度



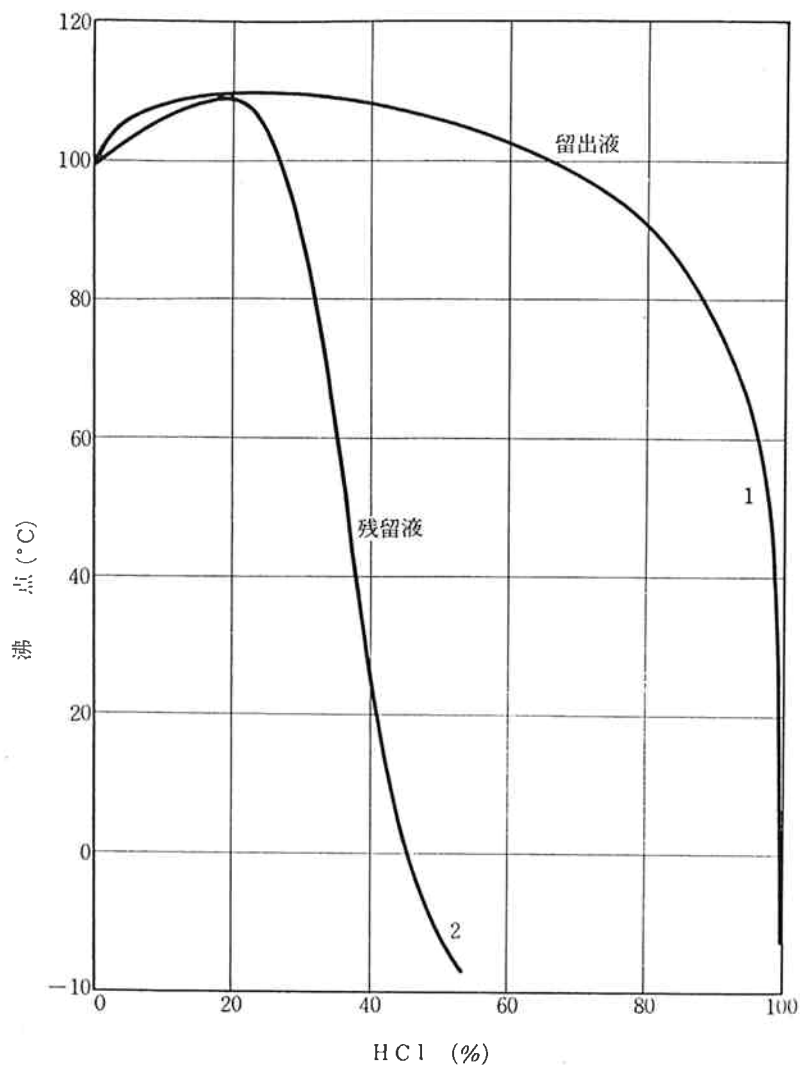
[Int. Crit. Tables, V, 12 (1929)]

5. 塩酸の比電導度



[H. Hölemann, Chem. Eng. Tech., 34, 372 (1962)]

6. 塩酸の沸点

[E. Berl, H. Staudinger, *Angew. Chem.*, **43**, 1010 (1930)]

7. 塩酸の定沸点の溶液組成

圧力 (mmHg)	定沸点 (°C)	濃度 (%)	密度 (25°C)
700	106.424	20.360	1.0966
740	107.859	20.268	1.0962
760	108.584	20.222	1.0959
800	110.007	20.155	1.0955

[W. D. Bonner, A. C. Titus, *J. Am. Chem. Soc.*, **52**, 633 1747 (1930)]

8. 塩酸の蒸気圧

塩化水素分圧 (mmHg)

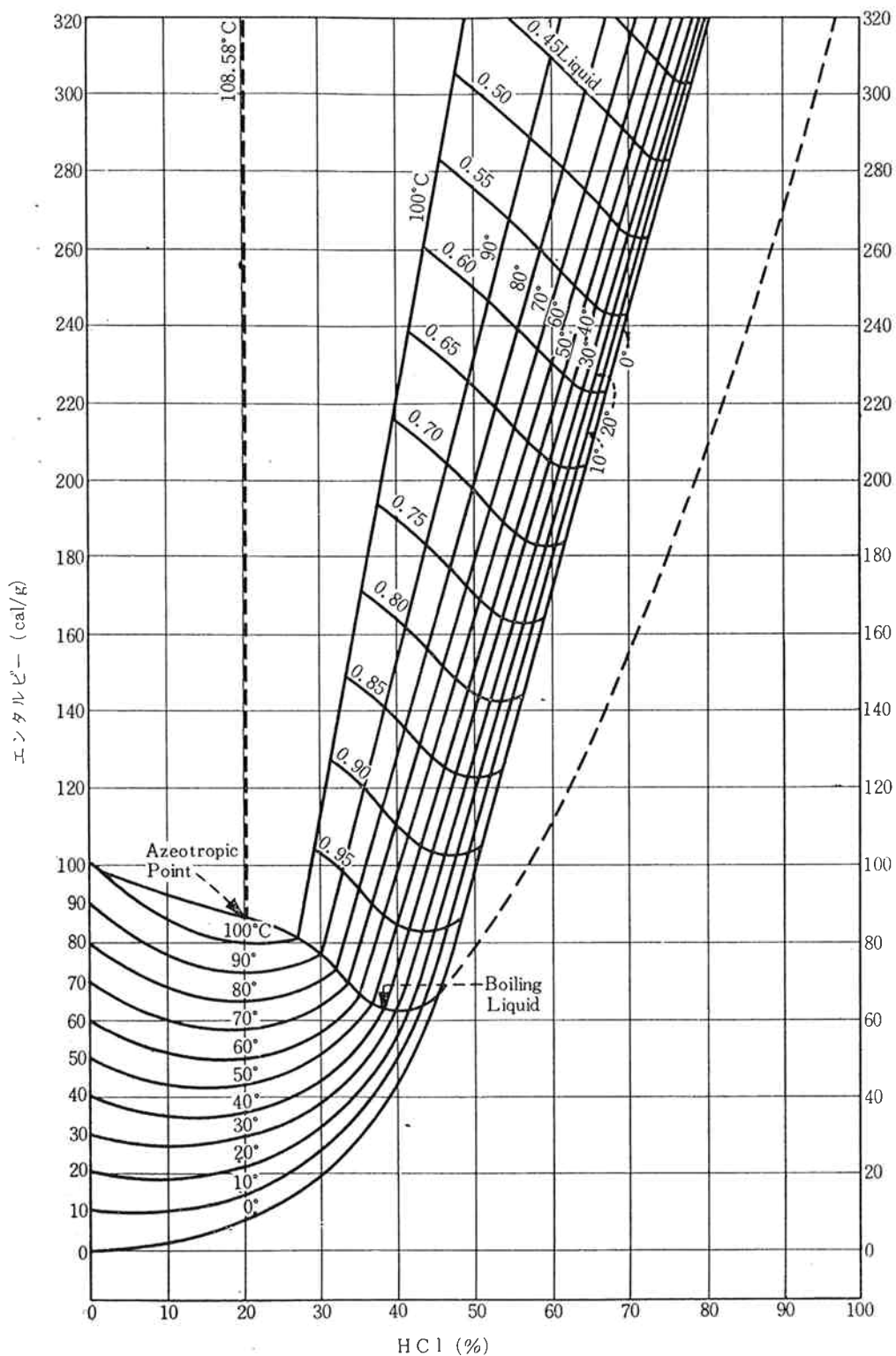
HCl (%)	温度 (°C)							
	0	10	20	30	50	80	100	110
4	0.000018	0.000069	0.00024	0.00077	0.0064	0.095	0.46	0.93
8	0.000118	0.000583	0.00178	0.00515	0.0344	0.39	1.64	3.10
12	0.00099	0.00305	0.0088	0.0234	0.136	1.34	5.1	9.3
16	0.0056	0.016	0.0428	0.106	0.55	4.66	16.1	28.
20	0.0316	0.084	0.205	0.48	2.21	15.6	49.0	83.
24	0.175	0.43	1.00	2.17	8.9	54.5	157.0	253.
28	1.0	2.27	4.90	9.90	35.7	188.	493.0	760.
32	5.7	11.8	23.5	44.5	141.	623.		
36	29.	56.4	105.5	188.	535.			
40	130.	233.	399.	627.				
44	510.	840.						

水蒸気分圧 (mmHg)

HCl (%)	温度 (°C)							
	0	10	20	30	50	80	100	110
6	4.18	8.45	15.9	29.1	86.0	333	715	—
10	3.84	7.70	14.6	26.8	80.0	310	677	960
14	3.39	6.95	13.1	24.1	72.0	273	625	892
18	2.87	5.92	11.3	20.6	62.5	248	550	783
20	2.62	5.40	10.3	19.0	57.0	230	510	729
24	2.05	4.31	8.30	15.4	46.7	194	426	611
28	1.50	3.21	6.32	11.8	36.5	154	349	499
32	1.04	2.27	4.55	8.70	27.7	120	275	396
36	0.68	1.50	3.10	6.08	20.4	90.0	212	311
40	0.41	0.94	2.00	4.09	14.5	67.3	158	230

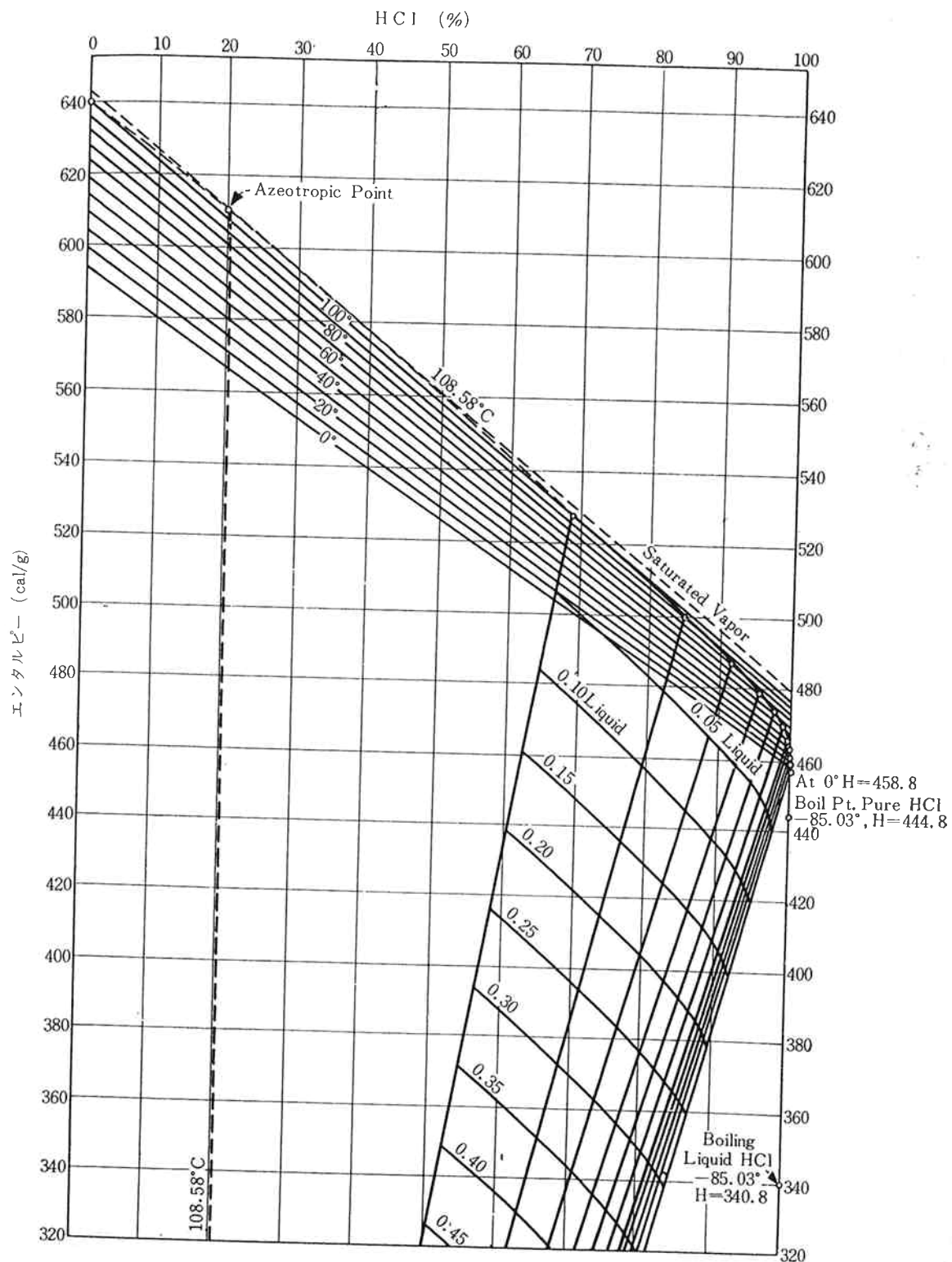
[Perry, Chemical Engineers' Handbook, 4th Ed., 3-60 (1963)]

9. 塩酸のエンタルピー



基準 : H₂O, 0°Cの液体 ; HCl, 0°Cの無限希釈溶液
 [Perry, Chemical Engineers' Handbook, 4th Ed., 3-174 (1963)]

塩酸の物性表



10. 塩化水素の溶解熱 (25°C)

H ₂ O mol 数	1	2	5	10	50	100	200
cal/mol HCl	6,268	11,668	15,308	16,608	17,514	17,650	17,735

["Selected Values of Chemical Thermodynamic Properties" U. S. Department of Commerce, National Bureau of Standards (1952) p. 22]

11. 塩酸の比熱 (cal/g. °C)

HCl (%)	温 度 (°C)				
	0	10	20	40	60
0	1.00	—	—	—	—
16.8	0.72	0.72	0.74	0.75	0.78
28.9	0.61	0.605	0.631	0.645	0.67
33.6	0.58	0.575	0.591	0.615	0.638
41.4	0.55	—	—	—	0.61

[Perry, Chemical Engineers' Handbook, 4th Ed., 3—132 (1963)]