

Table B.4 Solubility Data for NH₃ and SO₂ in Water

Mass NH ₃ per 100 Masses	(a) Ammonia						
	H ₂ O	Partial Pressure NH ₃ , mm Hg					
	0 °C	10 °C	20 °C	30 °C	40 °C	50 °C	60 °C
100	947						
90	785						
80	636	987					
70	500	780					
60	380	600	945				
50	275	439	686				
40	190	301	470	719			
30	119	190	298	454	692		
25	89.5	144	227	352	534	825	
20	64	103.5	166	260	395	596	834
15	42.7	70.1	114	179	273	405	583
10	25.1	41.8	69.6	110	167	247	361
7.5	17.7	29.9	50.0	79.7	120	179	261
5	11.2	19.1	31.7	51.0	76.5	115	165
4		16.1	24.9	40.1	60.8	91.1	129.2
3		11.3	18.2	29.6	45.0	67.1	94.3
2			12.0	19.3	30.0	44.5	61.0
1					15.4	22.2	30.2

Mass SO ₂ per 100 Masses	(b) Sulfur Dioxide							
	H ₂ O	Partial Pressure of SO ₂ , mm Hg						
	0 °C	7 °C	10 °C	15 °C	20 °C	30 °C	40 °C	50 °C
20	646	657						
15	474	637	726					
10	308	417	474	567	698			
7.5	228	307	349	419	517	688		
5.0	148	198	226	270	336	452	665	
2.5	69	92	105	127	161	216	322	458
1.5	38	51	59	71	92	125	186	266
1.0	23.3	31	37	44	59	79	121	172
0.7	15.2	20.6	23.6	28.0	39.0	52	87	116
0.5	9.9	13.5	15.6	19.3	26.0	36	57	82
0.3	5.1	6.9	7.9	10.0	14.1	19.7		
0.1	1.2	1.5	1.75	2.2	3.2	4.7	7.5	12.0
0.05	0.6	0.7	0.75	0.8	1.2	1.7	2.8	4.7
0.02	0.25	0.3	0.3	0.3	0.5	0.6	0.8	1.3

Adapted from Foust, Wenzel, Clump, Maus, and Anderson, *Principles of Unit Operations*, John Wiley & Sons, New York, 1960.