

TABLE II. Measured diffusion coefficients for $0.1 N H_2S^{34}O_4$ in $0.1 N H_2SO_4$.^a

Temp. °K	Pressure atmos	Effective cell length cm	Observed $D \times 10^5$ cm ² /sec
273	238	0.504	0.678
273	338	0.504	0.265
273	500	0.504	0.506
273	666	0.504	0.836
273	800	0.504	0.956
273	1340	0.504	0.764
273	1850	0.557	0.786
273	2500	0.557	0.656
273	4050	0.557	0.650
273	5500	0.611	0.415
278	100	0.504	1.05
278	250	0.504	0.940
278	303	0.504	0.741
278	355	0.504	0.956
278	515	0.504	1.38
278	1000	0.504	0.982
298	238	0.504	2.22
298	370	0.504	2.36
298	803	0.504	2.62
298	1000	0.504	2.47
298	3000	0.557	1.76
298	5000	0.557	1.13
298	6850	0.611	0.721
298	8500	0.611	0.502
323	524	0.504	3.20
323	1500	0.504	3.11
323	2050	0.611	2.67
323	3400	0.557	2.47
323	5100	0.611	1.66
323	6900	0.611	1.13
323	8900	0.665	0.806
323	10150	0.665	0.631

^a Maximum deviation in reproducibility 10 percent. Average deviation 5 percent.TABLE III. Diffusion coefficients, $0.1 N Na_2S^{34}O_4$ — $0.1 N Na_2SO_4$.^a

Temp. °K	Pressure atmos	Effective cell length cm	Observed $D \times 10^5$ cm ² /sec
273	100	0.548	0.99
273	238	0.548	0.91
273	377	0.548	0.59
273	510	0.548	1.08
273	652	0.548	0.84
273	803	0.548	0.69
273	1304	0.548	0.72
273	1650	0.617	0.65
273	2050	0.617	0.54
273	4000	0.617	0.49
273	6000	0.676	0.47
298	1	0.676	1.41
298	252	0.548	1.58
298	640	0.548	1.92
298	1200	0.548	2.18
298	1900	0.617	2.89
298	2500	0.617	1.92
298	4550	0.617	1.16
298	6525	0.676	1.27
298	9000	0.676	0.96
323	120	0.548	4.32
323	510	0.548	2.90
323	1005	0.548	2.25
323	1950	0.617	1.44
323	2500	0.617	1.43
323	3500	0.617	2.93
323	4500	0.617	1.75
323	7000	0.724	1.52
323	10500	0.724	1.30

^a Maximum deviation in reproducibility 15 percent. Average deviation 5 percent.TABLE IV. Diffusion coefficients, $1 N Na_2S^{34}O_4$ — $1 N Na_2SO_4$.^a

Temp. °K	Pressure atmos	Effective cell length cm	Observed $D \times 10^5$ cm ² /sec
273	20	0.548	0.28
273	210	0.548	0.33
273	400	0.548	0.29
273	600	0.548	0.39
273	1000	0.548	0.56
273	1800	0.548	0.91
273	3050	0.617	0.55
298	34	0.548	0.90
298	238	0.548	1.01
298	238	0.548	0.86
298	605	0.548	0.76
298	1000	0.548	1.07
298	2000	0.617	1.60
298	3225	0.617	0.78
298	4500	0.617	1.03
298	6050	0.676	0.80
323	20	0.548	4.86
323	265	0.548	1.24
323	640	0.548	1.14
323	1000	0.548	1.34
323	2200	0.617	1.88
323	3000	0.617	2.24
323	3000	0.617	2.27
323	4050	0.617	1.46
323	5100	0.617	1.26
323	6550	0.724	1.81
323	6950	0.676	1.54
323	10000	0.724	1.25

^a Maximum deviation in reproducibility 15 percent. Average deviation 5 percent.TABLE V. Diffusion coefficients, $0.1 N K_2S^{34}O_4$ — $0.1 N K_2SO_4$.^a

Temp. °K	Pressure atmos	Effective cell length cm	Observed $D \times 10^5$ cm ² /sec
273	10	0.548	0.33
273	100	0.548	0.67
273	265	0.548	0.71
273	390	0.548	0.50
273	415	0.548	0.40
273	600	0.548	0.90
273	775	0.548	0.86
273	1060	0.548	0.83
273	1800	0.548	0.82
273	3075	0.617	0.66
298	100	0.548	1.40
298	252	0.548	0.98
298	258	0.548	1.04
298	610	0.548	1.30
298	610	0.548	1.44
298	1000	0.548	0.90
298	1210	0.548	0.84
298	1900	0.548	1.17
298	2850	0.617	1.59
298	3800	0.617	0.82
298	4650	0.617	0.87
323	100	0.548	3.92
323	230	0.548	2.48
323	1000	0.548	0.87
323	1500	0.548	0.75
323	1970	0.548	1.46
323	3000	0.617	2.06
323	4050	0.617	2.37
323	4950	0.617	1.44
323	6550	0.676	1.04
323	10250	0.724	0.58

^a Maximum deviation in reproducibility 10 percent. Average deviation 5 percent.

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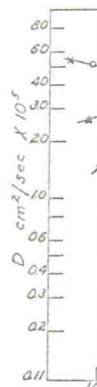


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