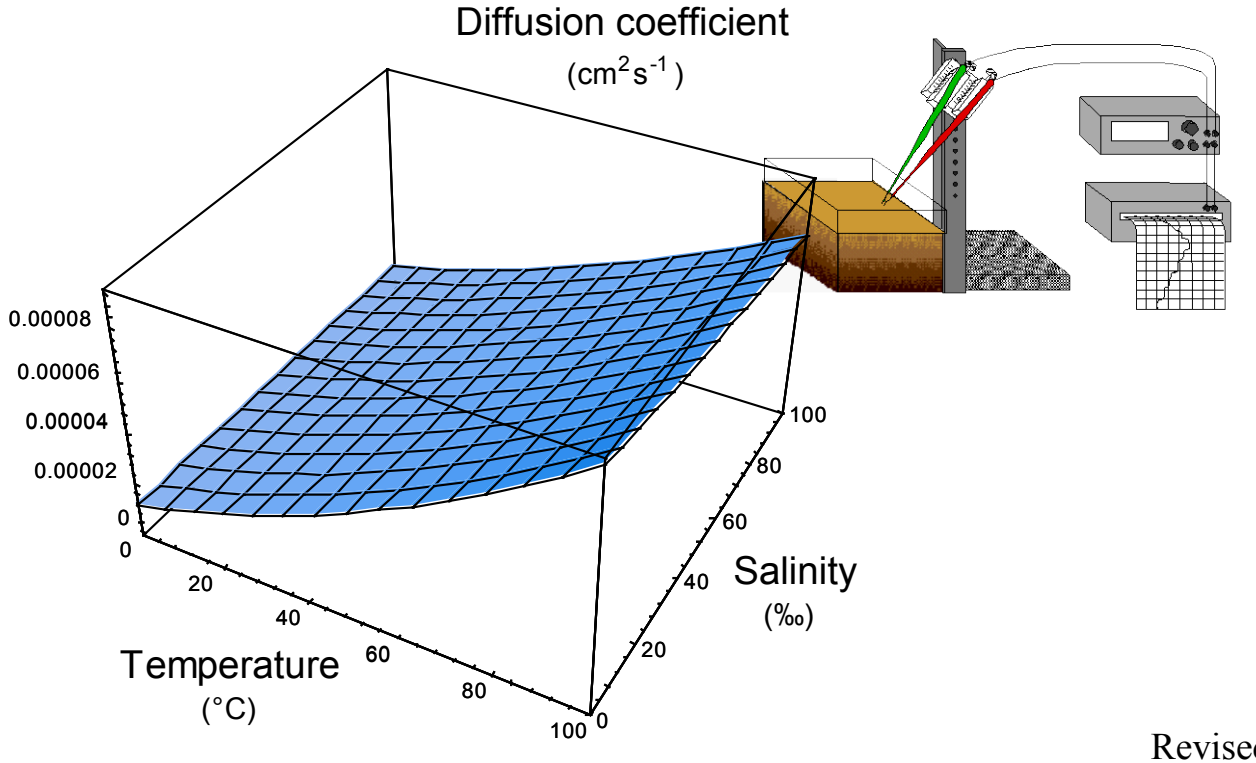
UNISENSE

Seawater and Gases

Tabulated physical parameters of interest to people working with microsensors in marine systems.



Revised tables compiled by
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Content

Cover page: Diffusion coefficient for oxygen at various temperatures & salinities

diffO2 = Diffusivity of oxygen in distilled water at 10°C
= 1.57*10^-5 cm2 s-1
Table from Broeker & Peng, 1974,
estimated from Himmelblau, 1964
The value at 10 °C is used to scale the calculated Di[T,S,P]

To calculate diffusion coefficient for other gasses

To get diffusivity of	*multiply table values by*
H2	1.9470
N2	0.8301
He	2.6602
Ar	0.7573
Rn	0.5825
CO	0.8495
CO2	0.7961
CH4	0.8495
N2O	1.0049
H2S	0.7573
SO2	0.7476

Di[T,S,P] = the diffusion constant of oxygen at Temperature T (0≤T≤40 °C)
and salinity S, (0<S<40‰) at pressure P, (0<P<1000bar) => cm2 s-1
Calculated from formula:
Di[T2,S2,P2]=Di[T1,S1,P1]*(dynvisc[T1,S1,P1]/dynvisc[T2,S2,P2])*(T2/T1)
Equation from: Li & Gregory, 1974, Geochim. Cosmochim, 38:703-714
using Di[T1,S1,P1]=difO2 with T1=10°C, S1=0‰ and P1=1bar (see above)

solO2[T,S] = solubility of oxygen at temperature T (0≤T≤40 °C)
and salinity S, (0<S<40‰) at pressure P = 1 bar => µmol kg-1
formula found in Garcia and Gordon. 1992,
Oxygen solubility in seawater: Better fitting equations,
(calulated for any salinity)
Limnol. Oceanogr. 37:1307-1312

Oxygen conversion factors
0.032 mg/µmol
0.02241 ml/µmol
1.428 mg/ml

dens[T,S] = density of seawater at temperature T (0≤T≤40)
and salinity S, (0<S<40‰) at pressure P = 1 bar => g cm-3
Equation from:Standard Methods for examination of water and wastewater 1992, 18 th ed. Edited by A Greenberg et al. p 2-48
"2520 C. Density method"
reprinted from: Millero & Poisson, 1981.
International one-atmosphere equation of state of seawater,
Deep Sea Res. 28:625

dynvisc[T,S,P] = dynamic viscosity of seawater at temperature T (0≤T≤40)
and salinity S, (0<S<40‰) at pressure P, (0<P<1000bar)
=> cp = centi poise = 10*^3 Pa s = 10*^-2 g cm-1 s-1
Formula from: Chemical Oceanography vol. 4, 1975, 2'ed. Edited by Riley, Table 25, p 338, developed by Millero, 1974
with pressure corrections by Matthäus,1972

kinvisc[T,S] = kinematic viscosity of water at temperature T (0≤T≤40)
and salinity S, (0<S<40‰) at pressure P = 1 bar
=> cp g-1 cm3 = 10*^-2 cm2 s-1
Calculated from dynamic viscosity:
kinvisc[T,S] = dynvisc[T,S]/dens[T,S]

Schmidt number [T,S] = (kinematic viscosity / diffusion coefficient) at Temperature T, (0≤T≤40°C) and salinity S, (0<S<40‰) at pressure P = 1 bar
=> Dimensionless

DATA-TABLE 1 *by Niels Ramsing & Jens Gundersen*

Diffusion coefficient for oxygen at different temperatures and salinities of seawater

Units: 10^-5 cm2 s-1

Salinity	Temperature (°C)																				
(‰)	0.0	1.0	2.0	3.0	4.0	5.0	6.0	7.0	8.0	9.0	10.0	11.0	12.0	13.0	14.0	15.0	16.0	17.0	18.0	19.0	20.0
0.0	1.1041	1.1465	1.1899	1.2344	1.2798	1.3261	1.3734	1.4214	1.4702	1.5198	1.5700	1.6209	1.6723	1.7243	1.7769	1.8300	1.8836	1.9377	1.9924	2.0478	2.1039
1.0	1.1026	1.1448	1.1881	1.2324	1.2777	1.3239	1.3709	1.4188	1.4675	1.5169	1.5669	1.6176	1.6689	1.7208	1.7732	1.8261	1.8796	1.9336	1.9882	2.0434	2.0993
2.0	1.1011	1.1432	1.1863	1.2305	1.2756	1.3216	1.3685	1.4162	1.4647	1.5140	1.5639	1.6144	1.6656	1.7173	1.7695	1.8223	1.8756	1.9295	1.9839	2.0390	2.0949
3.0	1.0996	1.1415	1.1845	1.2285	1.2735	1.3193	1.3661	1.4137	1.4620	1.5111	1.5608	1.6112	1.6622	1.7137	1.7658	1.8185	1.8717	1.9254	1.9797	2.0347	2.0904
4.0	1.0981	1.1399	1.1827	1.2266	1.2714	1.3171	1.3637	1.4111	1.4593	1.5082	1.5578	1.6080	1.6588	1.7102	1.7622	1.8147	1.8677	1.9213	1.9755	2.0304	2.0860
5.0	1.0966	1.1382	1.1809	1.2246	1.2693	1.3148	1.3613	1.4085	1.4566	1.5053	1.5547	1.6048	1.6555	1.7068	1.7586	1.8109	1.8638	1.9173	1.9714	2.0261	2.0815
6.0	1.0950	1.1366	1.1792	1.2227	1.2672	1.3126	1.3589	1.4060	1.4539	1.5024	1.5517	1.6017	1.6522	1.7033	1.7550	1.8072	1.8599	1.9133	1.9672	2.0218	2.0771
7.0	1.0935	1.1350	1.1774	1.2208	1.2651	1.3104	1.3565	1.4034	1.4512	1.4996	1.5487	1.5985	1.6489	1.6998	1.7514	1.8034	1.8560	1.9092	1.9631	2.0175	2.0727
8.0	1.0921	1.1333	1.1756	1.2189	1.2631	1.3082	1.3541	1.4009	1.4485	1.4968	1.5457	1.5953	1.6456	1.6964	1.7478	1.7997	1.8522	1.9053	1.9589	2.0133	2.0684
9.0	1.0906	1.1317	1.1738	1.2169	1.2610	1.3060	1.3518	1.3984	1.4458	1.4939	1.5427	1.5922	1.6423	1.6930	1.7442	1.7960	1.8483	1.9013	1.9548	2.0090	2.0640
10.0	1.0891	1.1301	1.1721	1.2150	1.2589	1.3037	1.3494	1.3959	1.4431	1.4911	1.5398	1.5891	1.6390	1.6895	1.7406	1.7923	1.8445	1.8973	1.9507	2.0048	2.0597
11.0	1.0876	1.1285	1.1703	1.2131	1.2569	1.3015	1.3471	1.3934	1.4405	1.4883	1.5368	1.5860	1.6358	1.6861	1.7371	1.7886	1.8407	1.8934	1.9467	2.0006	2.0554
12.0	1.0861	1.1268	1.1686	1.2112	1.2549	1.2994	1.3447	1.3909	1.4378	1.4855	1.5339	1.5829	1.6325	1.6828	1.7336	1.7849	1.8369	1.8894	1.9426	1.9965	2.0511
13.0	1.0846	1.1252	1.1668	1.2093	1.2528	1.2972	1.3424	1.3884	1.4352	1.4827	1.5309	1.5798	1.6293	1.6794	1.7300	1.7813	1.8331	1.8855	1.9386	1.9923	2.0468
14.0	1.0832	1.1236	1.1651	1.2075	1.2508	1.2950	1.3401	1.3859	1.4326	1.4799	1.5280	1.5767	1.6261	1.6760	1.7265	1.7776	1.8293	1.8816	1.9345	1.9881	2.0425
15.0	1.0817	1.1220	1.1633	1.2056	1.2488	1.2928	1.3377	1.3835	1.4300	1.4772	1.5251	1.5737	1.6229	1.6727	1.7231	1.7740	1.8256	1.8777	1.9305	1.9840	2.0383
16.0	1.0802	1.1204	1.1616	1.2037	1.2467	1.2907	1.3354	1.3810	1.4274	1.4744	1.5222	1.5706	1.6197	1.6693	1.7196	1.7704	1.8218	1.8739	1.9265	1.9799	2.0340
17.0	1.0788	1.1188	1.1599	1.2018	1.2447	1.2885	1.3331	1.3786	1.4248	1.4717	1.5193	1.5676	1.6165	1.6660	1.7161	1.7668	1.8181	1.8700	1.9226	1.9758	2.0298
18.0	1.0773	1.1173	1.1581	1.2000	1.2427	1.2864	1.3308	1.3761	1.4222	1.4690	1.5164	1.5646	1.6133	1.6627	1.7127	1.7633	1.8144	1.8662	1.9186	1.9717	2.0256
19.0	1.0759	1.1157	1.1564	1.1981	1.2407	1.2842	1.3286	1.3737	1.4196	1.4662	1.5136	1.5615	1.6102	1.6594	1.7093	1.7597	1.8107	1.8624	1.9147	1.9677	2.0215
20.0	1.0744	1.1141	1.1547	1.1963	1.2388	1.2821	1.3263	1.3713	1.4170	1.4635	1.5107	1.5585	1.6070	1.6561	1.7058	1.7561	1.8070	1.8586	1.9108	1.9636	2.0173
21.0	1.0730	1.1125	1.1530	1.1944	1.2368	1.2800	1.3240	1.3689	1.4145	1.4608	1.5078	1.5556	1.6039	1.6529	1.7024	1.7526	1.8034	1.8548	1.9068	1.9596	2.0132
22.0	1.0716	1.1110	1.1513	1.1926	1.2348	1.2779	1.3218	1.3665	1.4119	1.4581	1.5050	1.5526	1.6008	1.6496	1.6990	1.7491	1.7997	1.8510	1.9030	1.9556	2.0090
23.0	1.0701	1.1094	1.1496	1.1908	1.2328	1.2757	1.3195	1.3641	1.4094	1.4554	1.5022	1.5496	1.5977	1.6464	1.6957	1.7456	1.7961	1.8473	1.8991	1.9516	2.0049
24.0	1.0687	1.1078	1.1479	1.1889	1.2309	1.2736	1.3173	1.3617	1.4068	1.4528	1.4994	1.5467	1.5946	1.6431	1.6923	1.7421	1.7925	1.8435	1.8952	1.9476	2.0008
25.0	1.0673	1.1063	1.1462	1.1871	1.2289	1.2715	1.3150	1.3593	1.4043	1.4501	1.4966	1.5437	1.5915	1.6399	1.6890	1.7386	1.7889	1.8398	1.8914	1.9437	1.9968
26.0	1.0658	1.1047	1.1446	1.1853	1.2269	1.2694	1.3128	1.3569	1.4018	1.4474	1.4938	1.5408	1.5884	1.6367	1.6856	1.7351	1.7853	1.8361	1.8875	1.9397	1.9927
27.0	1.0644	1.1032	1.1429	1.1835	1.2250	1.2674	1.3106	1.3545	1.3993	1.4448	1.4910	1.5378	1.5854	1.6335	1.6823	1.7317	1.7817	1.8324	1.8837	1.9358	1.9887
28.0	1.0630	1.1016	1.1412	1.1817	1.2231	1.2653	1.3083	1.3522	1.3968	1.4422	1.4882	1.5349	1.5823	1.6303	1.6790	1.7283	1.7782	1.8287	1.8799	1.9319	1.9847
29.0	1.0616	1.1001	1.1395	1.1799	1.2211	1.2632	1.3061	1.3498	1.3943	1.4395	1.4854	1.5320	1.5793	1.6272	1.6757	1.7248	1.7746	1.8250	1.8761	1.9280	1.9806
30.0	1.0602	1.0986	1.1379	1.1781	1.2192	1.2612	1.3039	1.3475	1.3918	1.4369	1.4827	1.5291	1.5763	1.6240	1.6724	1.7214	1.7711	1.8214	1.8724	1.9241	1.9767
31.0	1.0588	1.0970	1.1362	1.1763	1.2173	1.2591	1.3017	1.3452	1.3894	1.4343	1.4799	1.5263	1.5732	1.6209	1.6691	1.7180	1.7676	1.8177	1.8686	1.9203	1.9727
32.0	1.0574	1.0955	1.1346	1.1745	1.2154	1.2570	1.2996	1.3429	1.3869	1.4317	1.4772	1.5234	1.5702	1.6177	1.6659	1.7146	1.7640	1.8141	1.8649	1.9164	1.9687
33.0	1.0560	1.0940	1.1329	1.1728	1.2135	1.2550	1.2974	1.3405	1.3845	1.4291	1.4745	1.5205	1.5673	1.6146	1.6626	1.7113	1.7606	1.8105	1.8612	1.9126	1.9648
34.0	1.0546	1.0925	1.1313	1.1710	1.2116	1.2530	1.2952	1.3382	1.3820	1.4265	1.4718	1.5177	1.5643	1.6115	1.6594	1.7079	1.7571	1.8069	1.8575	1.9087	1.9608
35.0	1.0532	1.0910	1.1296	1.1692	1.2097	1.2509	1.2930	1.3359	1.3796	1.4240	1.4691	1.5149	1.5613	1.6084	1.6562	1.7046	1.7536	1.8033	1.8538	1.9049	1.9569
36.0	1.0518	1.0895	1.1280	1.1675	1.2078	1.2489	1.2909	1.3336	1.3772	1.4214	1.4664	1.5120	1.5584	1.6053	1.6530	1.7012	1.7502	1.7998	1.8501	1.9012	1.9530
37.0	1.0504	1.0880	1.1264	1.1657	1.2059	1.2469	1.2887	1.3314	1.3747	1.4189	1.4637	1.5092	1.5554	1.6023	1.6498	1.6979	1.7467	1.7962	1.8464	1.8974	1.9492
38.0	1.0491	1.0865	1.1248	1.1639	1.2040	1.2449	1.2866	1.3291	1.3723	1.4163	1.4610	1.5064	1.5525	1.5992	1.6466	1.6946	1.7433	1.7927	1.8428	1.8936	1.9453
39.0	1.0477	1.0850	1.1231	1.1622	1.2021	1.2429	1.2845	1.3268	1.3699	1.4138	1.4584	1.5036	1.5496	1.5962	1.6434	1.6913	1.7399	1.7892	1.8391	1.8899	1.9414
40.0	1.0463	1.0835	1.1215	1.1605	1.2003	1.2409	1.2823	1.3246	1.3675	1.4113	1.4557	1.5008	1.5466	1.5931	1.6403	1.6880	1.7365	1.7857	1.8355	1.8862	1.9376

DATA-TABLE 2 *by Niels Ramsing & Jens Gundersen*

Diffusion coefficient for oxygen at different temperatures and salinities of seawater

Units: 10^-5 cm2 s-1

Salinity	Temperature (°C)																				
(‰)	20.0	21.0	22.0	23.0	24.0	25.0	26.0	27.0	28.0	29.0	30.0	31.0	32.0	33.0	34.0	35.0	36.0	37.0	38.0	39.0	40.0
0.0	2.1039	2.1608	2.2186	2.2776	2.3379	2.3999	2.4637	2.5297	2.5984	2.6703	2.7458	2.8256	2.9106	3.0016	3.0997	3.2063	3.3228	3.4512	3.5939	3.7536	3.9342
1.0	2.0993	2.1561	2.2139	2.2727	2.3330	2.3948	2.4584	2.5243	2.5929	2.6645	2.7398	2.8194	2.9042	2.9949	3.0926	3.1987	3.3147	3.4425	3.5843	3.7431	3.9225
2.0	2.0949	2.1515	2.2091	2.2679	2.3280	2.3897	2.4532	2.5190	2.5873	2.6588	2.7339	2.8133	2.8977	2.9881	3.0855	3.1912	3.3066	3.4337	3.5748	3.7326	3.9108
3.0	2.0904	2.1469	2.2044	2.2631	2.3230	2.3846	2.4480	2.5136	2.5818	2.6531	2.7280	2.8072	2.8914	2.9814	3.0784	3.1837	3.2986	3.4251	3.5653	3.7222	3.8992
4.0	2.0860	2.1424	2.1997	2.2583	2.3181	2.3795	2.4428	2.5083	2.5763	2.6474	2.7222	2.8011	2.8850	2.9748	3.0714	3.1762	3.2906	3.4164	3.5559	3.7118	3.8877
5.0	2.0815	2.1378	2.1951	2.2535	2.3132	2.3745	2.4376	2.5030	2.5709	2.6418	2.7163	2.7950	2.8787	2.9681	3.0644	3.1688	3.2826	3.4078	3.5466	3.7015	3.8762
6.0	2.0771	2.1333	2.1904	2.2487	2.3083	2.3695	2.4325	2.4977	2.5654	2.6362	2.7105	2.7890	2.8724	2.9615	3.0574	3.1614	3.2747	3.3993	3.5373	3.6913	3.8648
7.0	2.0727	2.1288	2.1858	2.2440	2.3034	2.3645	2.4274	2.4924	2.5600	2.6306	2.7047	2.7830	2.8661	2.9549	3.0505	3.1540	3.2668	3.3908	3.5280	3.6811	3.8534
8.0	2.0684	2.1243	2.1812	2.2392	2.2986	2.3595	2.4222	2.4872	2.5546	2.6250	2.6990	2.7770	2.8599	2.9484	3.0436	3.1467	3.2590	3.3823	3.5188	3.6710	3.8421
9.0	2.0640	2.1198	2.1766	2.2345	2.2938	2.3545	2.4172	2.4819	2.5492	2.6195	2.6932	2.7710	2.8536	2.9419	3.0367	3.1394	3.2512	3.3739	3.5096	3.6609	3.8309
10.0	2.0597	2.1154	2.1720	2.2298	2.2890	2.3496	2.4121	2.4767	2.5439	2.6140	2.6875	2.7651	2.8475	2.9354	3.0299	3.1321	3.2434	3.3655	3.5005	3.6508	3.8198
11.0	2.0554	2.1109	2.1675	2.2252	2.2842	2.3447	2.4071	2.4716	2.5385	2.6085	2.6818	2.7592	2.8413	2.9289	3.0231	3.1249	3.2357	3.3572	3.4914	3.6409	3.8087
12.0	2.0511	2.1065	2.1630	2.2205	2.2794	2.3398	2.4020	2.4664	2.5332	2.6030	2.6761	2.7533	2.8352	2.9225	3.0163	3.1177	3.2280	3.3489	3.4824	3.6310	3.7977
13.0	2.0468	2.1021	2.1584	2.2159	2.2746	2.3350	2.3971	2.4613	2.5279	2.5975	2.6705	2.7474	2.8290	2.9161	3.0095	3.1105	3.2203	3.3406	3.4734	3.6211	3.7867
14.0	2.0425	2.0977	2.1539	2.2113	2.2699	2.3301	2.3921	2.4561	2.5227	2.5921	2.6649	2.7416	2.8230	2.9097	3.0028	3.1034	3.2127	3.3324	3.4645	3.6113	3.7759
15.0	2.0383	2.0934	2.1495	2.2067	2.2652	2.3253	2.3871	2.4511	2.5174	2.5867	2.6593	2.7358	2.8169	2.9034	2.9961	3.0963	3.2051	3.3242	3.4556	3.6015	3.7650
16.0	2.0340	2.0890	2.1450	2.2021	2.2605	2.3205	2.3822	2.4460	2.5122	2.5813	2.6537	2.7300	2.8109	2.8970	2.9895	3.0892	3.1976	3.3161	3.4468	3.5918	3.7543
17.0	2.0298	2.0847	2.1406	2.1976	2.2559	2.3157	2.3773	2.4409	2.5070	2.5759	2.6482	2.7243	2.8049	2.8908	2.9828	3.0822	3.1901	3.3080	3.4380	3.5822	3.7436
18.0	2.0256	2.0804	2.1362	2.1930	2.2512	2.3109	2.3724	2.4359	2.5018	2.5706	2.6426	2.7185	2.7989	2.8845	2.9762	3.0752	3.1826	3.3000	3.4292	3.5726	3.7329
19.0	2.0215	2.0761	2.1318	2.1885	2.2466	2.3062	2.3675	2.4309	2.4967	2.5653	2.6371	2.7128	2.7929	2.8782	2.9697	3.0682	3.1751	3.2920	3.4205	3.5630	3.7223
20.0	2.0173	2.0718	2.1274	2.1840	2.2420	2.3014	2.3626	2.4259	2.4915	2.5600	2.6317	2.7071	2.7870	2.8720	2.9631	3.0613	3.1677	3.2840	3.4118	3.5535	3.7118
21.0	2.0132	2.0676	2.1230	2.1795	2.2374	2.2967	2.3578	2.4209	2.4864	2.5547	2.6262	2.7014	2.7811	2.8658	2.9566	3.0543	3.1603	3.2760	3.4032	3.5441	3.7013
22.0	2.0090	2.0634	2.1187	2.1751	2.2328	2.2920	2.3530	2.4160	2.4813	2.5494	2.6208	2.6958	2.7752	2.8597	2.9501	3.0475	3.1530	3.2681	3.3946	3.5347	3.6909
23.0	2.0049	2.0591	2.1143	2.1706	2.2282	2.2873	2.3482	2.4111	2.4763	2.5442	2.6153	2.6902	2.7694	2.8536	2.9436	3.0406	3.1457	3.2603	3.3861	3.5253	3.6806
24.0	2.0008	2.0549	2.1100	2.1662	2.2237	2.2827	2.3434	2.4061	2.4712	2.5390	2.6100	2.6846	2.7635	2.8474	2.9372	3.0338	3.1384	3.2524	3.3776	3.5160	3.6703
25.0	1.9968	2.0508	2.1057	2.1618	2.2192	2.2781	2.3387	2.4013	2.4662	2.5338	2.6046	2.6790	2.7577	2.8414	2.9308	3.0270	3.1312	3.2447	3.3692	3.5068	3.6601
26.0	1.9927	2.0466	2.1014	2.1574	2.2147	2.2734	2.3339	2.3964	2.4612	2.5286	2.5992	2.6735	2.7519	2.8353	2.9244	3.0203	3.1240	3.2369	3.3608	3.4976	3.6499
27.0	1.9887	2.0424	2.0972	2.1530	2.2102	2.2688	2.3292	2.3915	2.4562	2.5235	2.5939	2.6680	2.7462	2.8293	2.9181	3.0135	3.1168	3.2292	3.3524	3.4884	3.6398
28.0	1.9847	2.0383	2.0929	2.1487	2.2057	2.2643	2.3245	2.3867	2.4512	2.5184	2.5886	2.6624	2.7404	2.8233	2.9118	3.0069	3.1097	3.2215	3.3441	3.4793	3.6297
29.0	1.9806	2.0342	2.0887	2.1444	2.2013	2.2597	2.3198	2.3819	2.4463	2.5133	2.5833	2.6570	2.7347	2.8173	2.9055	3.0002	3.1025	3.2139	3.3358	3.4703	3.6197
30.0	1.9767	2.0301	2.0845	2.1400	2.1969	2.2552	2.3152	2.3771	2.4413	2.5082	2.5781	2.6515	2.7290	2.8114	2.8992	2.9936	3.0955	3.2063	3.3276	3.4613	3.6098
31.0	1.9727	2.0260	2.0803	2.1357	2.1925	2.2506	2.3105	2.3723	2.4364	2.5031	2.5728	2.6461	2.7234	2.8054	2.8930	2.9869	3.0884	3.1987	3.3194	3.4523	3.5999
32.0	1.9687	2.0219	2.0761	2.1315	2.1881	2.2461	2.3059	2.3676	2.4315	2.4981	2.5676	2.6407	2.7177	2.7995	2.8868	2.9804	3.0814	3.1912	3.3112	3.4434	3.5900
33.0	1.9648	2.0179	2.0720	2.1272	2.1837	2.2417	2.3013	2.3629	2.4267	2.4931	2.5624	2.6353	2.7121	2.7936	2.8806	2.9738	3.0744	3.1837	3.3031	3.4345	3.5802
34.0	1.9608	2.0138	2.0678	2.1229	2.1793	2.2372	2.2967	2.3581	2.4218	2.4881	2.5573	2.6299	2.7065	2.7878	2.8744	2.9673	3.0675	3.1762	3.2950	3.4257	3.5705
35.0	1.9569	2.0098	2.0637	2.1187	2.1750	2.2327	2.2921	2.3535	2.4170	2.4831	2.5521	2.6246	2.7010	2.7820	2.8683	2.9608	3.0606	3.1688	3.2870	3.4169	3.5608
36.0	1.9530	2.0058	2.0596	2.1145	2.1707	2.2283	2.2876	2.3488	2.4122	2.4781	2.5470	2.6192	2.6954	2.7762	2.8622	2.9543	3.0537	3.1614	3.2790	3.4082	3.5512
37.0	1.9492	2.0018	2.0555	2.1103	2.1664	2.2239	2.2830	2.3441	2.4074	2.4732	2.5419	2.6139	2.6899	2.7704	2.8561	2.9479	3.0468	3.1540	3.2710	3.3995	3.5416
38.0	1.9453	1.9979	2.0514	2.1061	2.1621	2.2195	2.2785	2.3395	2.4026	2.4682	2.5368	2.6086	2.6844	2.7646	2.8500	2.9415	3.0400	3.1467	3.2631	3.3908	3.5321
39.0	1.9414	1.9939	2.0474	2.1020	2.1578	2.2151	2.2740	2.3349	2.3978	2.4633	2.5317	2.6034	2.6789	2.7589	2.8440	2.9351	3.0332	3.1394	3.2552	3.3822	3.5226
40.0	1.9376	1.9900	2.0433	2.0978	2.1536	2.2107	2.2696	2.3303	2.3931	2.4584	2.5266	2.5981	2.6735	2.7532	2.8380	2.9288	3.0264	3.1322	3.2474	3.3737	3.5132

DATA-TABLE 3 *by Niels Ramsing & Jens Gundersen*

Diffusion coefficient for oxygen at different temperatures and salinities of seawater

Units: 10^-5 cm2 s-1

Salinity	Temperature (°C)																				
(‰)	0.0	5.0	10.0	15.0	20.0	25.0	30.0	35.0	40.0	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0	90.0	95.0	100.0
0.0	1.1050	1.3269	1.5700	1.8343	2.1198	2.4265	2.7543	3.1035	3.4741	3.8664	4.2806	4.7170	5.1760	5.6580	6.1636	6.6933	7.2478	7.8276	8.4337	9.0668	9.7279
5.0	1.0969	1.3160	1.5558	1.8161	2.0969	2.3982	2.7199	3.0620	3.4248	3.8083	4.2127	4.6383	5.0854	5.5544	6.0457	6.5598	7.0973	7.6587	8.2448	8.8562	9.4936
10.0	1.0890	1.3057	1.5426	1.7996	2.0766	2.3735	2.6903	3.0269	3.3835	3.7602	4.1570	4.5744	5.0124	5.4716	5.9522	6.4547	6.9796	7.5274	8.0987	8.6941	9.3142
15.0	1.0812	1.2955	1.5297	1.7836	2.0569	2.3497	2.6618	2.9933	3.3441	3.7144	4.1042	4.5139	4.9435	5.3936	5.8643	6.3561	6.8694	7.4047	7.9624	8.5431	9.1474
20.0	1.0734	1.2855	1.5170	1.7678	2.0377	2.3265	2.6342	2.9606	3.3059	3.6701	4.0532	4.4556	4.8773	5.3187	5.7800	6.2617	6.7641	7.2875	7.8325	8.3995	8.9889
25.0	1.0656	1.2755	1.5045	1.7523	2.0188	2.3037	2.6071	2.9287	3.2687	3.6270	4.0037	4.3990	4.8131	5.2462	5.6986	6.1707	6.6626	7.1749	7.7077	8.2616	8.8369
30.0	1.0580	1.2657	1.4921	1.7370	2.0001	2.2813	2.5805	2.8975	3.2322	3.5849	3.9554	4.3440	4.7507	5.1759	5.6197	6.0825	6.5644	7.0659	7.5872	8.1286	8.6904
35.0	1.0503	1.2559	1.4799	1.7219	1.9818	2.2593	2.5544	2.8668	3.1966	3.5437	3.9082	4.2902	4.6899	5.1074	5.5429	5.9968	6.4691	6.9603	7.4705	7.9999	8.5487
40.0	1.0428	1.2462	1.4678	1.7070	1.9637	2.2377	2.5287	2.8367	3.1616	3.5033	3.8620	4.2377	4.6305	5.0406	5.4682	5.9134	6.3765	6.8577	7.3572	7.8751	8.4115
45.0	1.0352	1.2367	1.4558	1.6923	1.9458	2.2163	2.5034	2.8071	3.1272	3.4638	3.8168	4.1863	4.5725	4.9754	5.3952	5.8321	6.2863	6.7579	7.2470	7.7538	8.2783
50.0	1.0278	1.2272	1.4439	1.6777	1.9282	2.1952	2.4785	2.7780	3.0935	3.4250	3.7725	4.1360	4.5157	4.9116	5.3239	5.7528	6.1983	6.6606	7.1399	7.6359	8.1488
55.0	1.0204	1.2177	1.4322	1.6633	1.9108	2.1744	2.4540	2.7493	3.0603	3.3868	3.7290	4.0867	4.4601	4.8492	5.2543	5.6753	6.1125	6.5659	7.0354	7.5212	8.0230
60.0	1.0130	1.2084	1.4205	1.6490	1.8936	2.1539	2.4298	2.7211	3.0277	3.3494	3.6862	4.0383	4.4056	4.7882	5.1862	5.5997	6.0287	6.4734	6.9336	7.4094	7.9004
65.0	1.0057	1.1991	1.4090	1.6349	1.8766	2.1337	2.4060	2.6933	2.9955	3.3125	3.6443	3.9908	4.3522	4.7284	5.1195	5.5257	5.9468	6.3831	6.8343	7.3004	7.7810
70.0	0.9984	1.1899	1.3976	1.6210	1.8598	2.1137	2.3825	2.6660	2.9639	3.2763	3.6031	3.9443	4.2998	4.6698	5.0542	5.4533	5.8668	6.2949	6.7374	7.1941	7.6647
75.0	0.9912	1.1808	1.3863	1.6072	1.8432	2.0940	2.3594	2.6390	2.9328	3.2407	3.5626	3.8985	4.2484	4.6123	4.9903	5.3824	5.7885	6.2087	6.6427	7.0904	7.5512
80.0	0.9841	1.1718	1.3751	1.5936	1.8268	2.0746	2.3365	2.6124	2.9022	3.2057	3.5228	3.8536	4.1980	4.5560	4.9277	5.3130	5.7120	6.1244	6.5502	6.9891	7.4405
85.0	0.9770	1.1628	1.3640	1.5801	1.8106	2.0553	2.3139	2.5862	2.8720	3.1712	3.4837	3.8095	4.1485	4.5008	4.8663	5.2451	5.6370	6.0420	6.4598	6.8901	7.3324
90.0	0.9699	1.1540	1.3530	1.5667	1.7946	2.0363	2.2917	2.5604	2.8423	3.1373	3.4452	3.7661	4.0999	4.4465	4.8061	5.1785	5.5636	5.9613	6.3714	6.7934	7.2268
95.0	0.9629	1.1451	1.3421	1.5535	1.7787	2.0176	2.2697	2.5349	2.8130	3.1039	3.4074	3.7234	4.0521	4.3933	4.7470	5.1132	5.4917	5.8824	6.2849	6.6989	7.1237
100.0	0.9560	1.1364	1.3314	1.5404	1.7630	1.9990	2.2480	2.5098	2.7842	3.0709	3.3701	3.6815	4.0052	4.3411	4.6891	5.0492	5.4213	5.8051	6.2003	6.6065	7.0230
105.0	0.9491	1.1277	1.3207	1.5274	1.7475	1.9807	2.2266	2.4850	2.7557	3.0385	3.3334	3.6403	3.9591	4.2898	4.6322	4.9865	5.3523	5.7294	6.1175	6.5161	6.9245
110.0	0.9422	1.1191	1.3101	1.5146	1.7322	1.9626	2.2055	2.4606	2.7277	3.0066	3.2973	3.5998	3.9138	4.2394	4.5764	4.9249	5.2846	5.6552	6.0364	6.4276	6.8281
115.0	0.9354	1.1106	1.2996	1.5019	1.7170	1.9447	2.1846	2.4364	2.7000	2.9752	3.2618	3.5599	3.8692	4.1899	4.5217	4.8645	5.2182	5.5825	5.9570	6.3411	6.7339
120.0	0.9286	1.1021	1.2892	1.4893	1.7020	1.9270	2.1640	2.4126	2.6727	2.9442	3.2268	3.5206	3.8254	4.1412	4.4679	4.8052	5.1532	5.5113	5.8792	6.2563	6.6417
125.0	0.9219	1.0938	1.2789	1.4768	1.6872	1.9096	2.1436	2.3891	2.6459	2.9136	3.1924	3.4820	3.7823	4.0934	4.4150	4.7471	5.0893	5.4415	5.8030	6.1733	6.5515
130.0	0.9153	1.0854	1.2687	1.4645	1.6725	1.8923	2.1235	2.3659	2.6193	2.8836	3.1585	3.4440	3.7400	4.0464	4.3631	4.6900	5.0267	5.3730	5.7283	6.0920	6.4632
135.0	0.9087	1.0772	1.2586	1.4523	1.6580	1.8752	2.1036	2.3430	2.5932	2.8539	3.1250	3.4065	3.6983	4.0002	4.3121	4.6339	4.9652	5.3058	5.6551	6.0124	6.3767
140.0	0.9021	1.0690	1.2485	1.4402	1.6436	1.8583	2.0840	2.3204	2.5674	2.8246	3.0921	3.3697	3.6573	3.9548	4.2620	4.5788	4.9049	5.2399	5.5833	5.9343	6.2920
145.0	0.8956	1.0609	1.2386	1.4282	1.6294	1.8416	2.0646	2.2981	2.5419	2.7958	3.0597	3.3334	3.6169	3.9101	4.2127	4.5247	4.8457	5.1753	5.5129	5.8578	6.2091
150.0	0.8891	1.0528	1.2287	1.4164	1.6153	1.8251	2.0455	2.2761	2.5168	2.7674	3.0277	3.2977	3.5772	3.8661	4.1643	4.4715	4.7875	5.1118	5.4439	5.7829	6.1278
155.0	0.8827	1.0448	1.2190	1.4047	1.6014	1.8088	2.0265	2.2543	2.4920	2.7393	2.9962	3.2625	3.5381	3.8229	4.1167	4.4193	4.7304	5.0495	5.3761	5.7093	6.0481
160.0	0.8763	1.0369	1.2093	1.3930	1.5876	1.7927	2.0078	2.2329	2.4675	2.7117	2.9652	3.2278	3.4996	3.7803	4.0699	4.3680	4.6743	4.9884	5.3096	5.6372	5.9701
165.0	0.8700	1.0290	1.1997	1.3815	1.5740	1.7767	1.9893	2.2117	2.4434	2.6844	2.9346	3.1937	3.4617	3.7385	4.0238	4.3175	4.6192	4.9283	5.2444	5.5665	5.8935
170.0	0.8637	1.0213	1.1902	1.3701	1.5605	1.7609	1.9711	2.1907	2.4196	2.6575	2.9044	3.1601	3.4244	3.6973	3.9785	4.2679	4.5650	4.8694	5.1804	5.4971	5.8185
175.0	0.8575	1.0135	1.1808	1.3588	1.5471	1.7453	1.9530	2.1700	2.3961	2.6310	2.8746	3.1269	3.3877	3.6567	3.9340	4.2191	4.5118	4.8115	5.1175	5.4290	5.7449
180.0	0.8513	1.0058	1.1715	1.3476	1.5339	1.7299	1.9352	2.1496	2.3728	2.6048	2.8453	3.0942	3.3515	3.6168	3.8901	4.1711	4.4595	4.7546	5.0558	5.3622	5.6727
185.0	0.8451	0.9982	1.1622	1.3366	1.5208	1.7146	1.9175	2.1294	2.3499	2.5790	2.8164	3.0620	3.3158	3.5775	3.8470	4.1240	4.4080	4.6987	4.9952	5.2966	5.6018
190.0	0.8390	0.9907	1.1531	1.3256	1.5079	1.6995	1.9001	2.1094	2.3273	2.5535	2.7879	3.0303	3.2807	3.5388	3.8046	4.0776	4.3575	4.6438	4.9357	5.2323	5.5323
195.0	0.8330	0.9832	1.1440	1.3147	1.4951	1.6845	1.8829	2.0897	2.3049	2.5283	2.7597	2.9990	3.2461	3.5007	3.7628	4.0319	4.3078	4.5898	4.8772	5.1690	5.4641
200.0	0.8270	0.9758	1.1350	1.3040	1.4824	1.6698	1.8658	2.0703	2.2829	2.5035	2.7320	2.9682	3.2120	3.4632	3.7217	3.9870	4.2589	4.5367	4.8197	5.1070	5.3972

DATA-TABLE 4 *by Niels Ramsing & Jens Gundersen*

Diffusion coefficient for oxygen at different temperatures and pressures of seawater

Values calculated at 35‰ salinity. Units: 10^-5 cm2 s-1

Pressure	Temperature (°C)																			
(bar)	0.0	1.0	2.0	3.0	4.0	5.0	6.0	7.0	8.0	9.0	10.0	11.0	12.0	13.0	14.0	15.0	16.0	17.0	18.0	19.0	20.0
0	1.0502	1.0899	1.1302	1.1714	1.2132	1.2558	1.2992	1.3432	1.3880	1.4335	1.4798	1.5268	1.5745	1.6229	1.6720	1.7219	1.7724	1.8237	1.8757	1.9284	1.9818
10	1.0512	1.0908	1.1312	1.1723	1.2142	1.2567	1.3000	1.3441	1.3888	1.4343	1.4805	1.5275	1.5751	1.6235	1.6725	1.7223	1.7728	1.8241	1.8760	1.9286	1.9820
20	1.0522	1.0918	1.1322	1.1733	1.2151	1.2577	1.3009	1.3449	1.3897	1.4351	1.4813	1.5281	1.5757	1.6240	1.6731	1.7228	1.7733	1.8244	1.8763	1.9289	1.9822
30	1.0532	1.0928	1.1331	1.1742	1.2160	1.2585	1.3018	1.3458	1.3905	1.4359	1.4820	1.5288	1.5764	1.6246	1.6736	1.7233	1.7737	1.8248	1.8766	1.9291	1.9824
40	1.0541	1.0938	1.1341	1.1752	1.2169	1.2594	1.3027	1.3466	1.3912	1.4366	1.4827	1.5295	1.5770	1.6252	1.6741	1.7237	1.7741	1.8251	1.8769	1.9294	1.9826
50	1.0551	1.0947	1.1350	1.1761	1.2178	1.2603	1.3035	1.3474	1.3920	1.4374	1.4834	1.5301	1.5776	1.6257	1.6746	1.7242	1.7745	1.8255	1.8772	1.9296	1.9827
60	1.0561	1.0957	1.1360	1.1770	1.2187	1.2612	1.3044	1.3482	1.3928	1.4381	1.4841	1.5308	1.5782	1.6263	1.6751	1.7246	1.7748	1.8258	1.8774	1.9298	1.9829
70	1.0570	1.0966	1.1369	1.1779	1.2196	1.2621	1.3052	1.3490	1.3936	1.4388	1.4848	1.5314	1.5788	1.6268	1.6756	1.7250	1.7752	1.8261	1.8777	1.9300	1.9831
80	1.0579	1.0975	1.1378	1.1788	1.2205	1.2629	1.3060	1.3498	1.3943	1.4395	1.4854	1.5320	1.5793	1.6273	1.6760	1.7255	1.7756	1.8264	1.8780	1.9302	1.9832
90	1.0589	1.0984	1.1387	1.1797	1.2214	1.2637	1.3068	1.3506	1.3951	1.4402	1.4861	1.5327	1.5799	1.6279	1.6765	1.7259	1.7759	1.8267	1.8782	1.9304	1.9834
100	1.0598	1.0993	1.1396	1.1806	1.2222	1.2646	1.3076	1.3514	1.3958	1.4409	1.4868	1.5333	1.5805	1.6284	1.6770	1.7263	1.7763	1.8270	1.8785	1.9306	1.9835
110	1.0607	1.1002	1.1405	1.1814	1.2231	1.2654	1.3084	1.3521	1.3965	1.4416	1.4874	1.5339	1.5810	1.6289	1.6774	1.7267	1.7766	1.8273	1.8787	1.9308	1.9837
120	1.0616	1.1011	1.1414	1.1823	1.2239	1.2662	1.3092	1.3529	1.3973	1.4423	1.4880	1.5345	1.5816	1.6294	1.6779	1.7271	1.7770	1.8276	1.8789	1.9310	1.9838
130	1.0624	1.1020	1.1422	1.1831	1.2247	1.2670	1.3100	1.3536	1.3980	1.4430	1.4887	1.5350	1.5821	1.6298	1.6783	1.7274	1.7773	1.8279	1.8791	1.9312	1.9839
140	1.0633	1.1029	1.1431	1.1840	1.2256	1.2678	1.3107	1.3544	1.3987	1.4436	1.4893	1.5356	1.5826	1.6303	1.6787	1.7278	1.7776	1.8281	1.8794	1.9313	1.9840
150	1.0642	1.1037	1.1439	1.1848	1.2264	1.2686	1.3115	1.3551	1.3993	1.4443	1.4899	1.5362	1.5831	1.6308	1.6791	1.7282	1.7779	1.8284	1.8796	1.9315	1.9841
160	1.0650	1.1046	1.1447	1.1856	1.2272	1.2694	1.3123	1.3558	1.4000	1.4449	1.4905	1.5367	1.5836	1.6312	1.6795	1.7285	1.7782	1.8286	1.8798	1.9316	1.9842
170	1.0659	1.1054	1.1456	1.1864	1.2279	1.2701	1.3130	1.3565	1.4007	1.4455	1.4911	1.5373	1.5841	1.6317	1.6799	1.7289	1.7785	1.8289	1.8799	1.9318	1.9843
180	1.0667	1.1062	1.1464	1.1872	1.2287	1.2709	1.3137	1.3572	1.4014	1.4462	1.4916	1.5378	1.5846	1.6321	1.6803	1.7292	1.7788	1.8291	1.8801	1.9319	1.9844
190	1.0676	1.1070	1.1472	1.1880	1.2295	1.2716	1.3144	1.3579	1.4020	1.4468	1.4922	1.5383	1.5851	1.6326	1.6807	1.7295	1.7791	1.8293	1.8803	1.9320	1.9845
200	1.0684	1.1079	1.1480	1.1888	1.2303	1.2724	1.3151	1.3586	1.4026	1.4474	1.4928	1.5388	1.5856	1.6330	1.6811	1.7299	1.7793	1.8295	1.8805	1.9321	1.9846
210	1.0692	1.1087	1.1488	1.1896	1.2310	1.2731	1.3158	1.3592	1.4033	1.4480	1.4933	1.5393	1.5860	1.6334	1.6814	1.7302	1.7796	1.8297	1.8806	1.9322	1.9846
220	1.0700	1.1094	1.1496	1.1903	1.2317	1.2738	1.3165	1.3599	1.4039	1.4485	1.4939	1.5398	1.5865	1.6338	1.6818	1.7305	1.7799	1.8299	1.8808	1.9323	1.9847
230	1.0708	1.1102	1.1503	1.1911	1.2325	1.2745	1.3172	1.3605	1.4045	1.4491	1.4944	1.5403	1.5869	1.6342	1.6821	1.7308	1.7801	1.8301	1.8809	1.9324	1.9847
240	1.0716	1.1110	1.1511	1.1918	1.2332	1.2752	1.3179	1.3612	1.4051	1.4497	1.4949	1.5408	1.5874	1.6346	1.6825	1.7310	1.7803	1.8303	1.8810	1.9325	1.9848
250	1.0723	1.1118	1.1518	1.1925	1.2339	1.2759	1.3185	1.3618	1.4057	1.4502	1.4954	1.5413	1.5878	1.6349	1.6828	1.7313	1.7806	1.8305	1.8812	1.9326	1.9848
260	1.0731	1.1125	1.1526	1.1933	1.2346	1.2766	1.3192	1.3624	1.4063	1.4508	1.4959	1.5417	1.5882	1.6353	1.6831	1.7316	1.7808	1.8307	1.8813	1.9327	1.9848
270	1.0738	1.1132	1.1533	1.1940	1.2353	1.2772	1.3198	1.3630	1.4068	1.4513	1.4964	1.5422	1.5886	1.6357	1.6834	1.7319	1.7810	1.8308	1.8814	1.9327	1.9848
280	1.0746	1.1140	1.1540	1.1947	1.2360	1.2779	1.3204	1.3636	1.4074	1.4518	1.4969	1.5426	1.5890	1.6360	1.6837	1.7321	1.7812	1.8310	1.8815	1.9328	1.9848
290	1.0753	1.1147	1.1547	1.1954	1.2366	1.2785	1.3210	1.3642	1.4079	1.4523	1.4974	1.5431	1.5894	1.6364	1.6840	1.7323	1.7814	1.8311	1.8816	1.9328	1.9848
300	1.0760	1.1154	1.1554	1.1960	1.2373	1.2791	1.3216	1.3648	1.4085	1.4528	1.4978	1.5435	1.5898	1.6367	1.6843	1.7326	1.7816	1.8313	1.8817	1.9329	1.9848
310	1.0767	1.1161	1.1561	1.1967	1.2379	1.2798	1.3222	1.3653	1.4090	1.4533	1.4983	1.5439	1.5901	1.6370	1.6846	1.7328	1.7817	1.8314	1.8818	1.9329	1.9848
320	1.0774	1.1168	1.1568	1.1974	1.2386	1.2804	1.3228	1.3659	1.4095	1.4538	1.4987	1.5443	1.5905	1.6373	1.6848	1.7330	1.7819	1.8315	1.8818	1.9329	1.9848
330	1.0781	1.1175	1.1574	1.1980	1.2392	1.2810	1.3234	1.3664	1.4100	1.4543	1.4992	1.5447	1.5908	1.6376	1.6851	1.7332	1.7821	1.8316	1.8819	1.9329	1.9848
340	1.0788	1.1181	1.1581	1.1986	1.2398	1.2816	1.3240	1.3669	1.4105	1.4548	1.4996	1.5451	1.5912	1.6379	1.6853	1.7334	1.7822	1.8317	1.8820	1.9330	1.9847
350	1.0795	1.1188	1.1587	1.1993	1.2404	1.2822	1.3245	1.3675	1.4110	1.4552	1.5000	1.5454	1.5915	1.6382	1.6856	1.7336	1.7824	1.8318	1.8820	1.9330	1.9847
360	1.0801	1.1194	1.1593	1.1999	1.2410	1.2827	1.3250	1.3680	1.4115	1.4557	1.5004	1.5458	1.5918	1.6385	1.6858	1.7338	1.7825	1.8319	1.8820	1.9329	1.9846
370	1.0808	1.1201	1.1600	1.2005	1.2416	1.2833	1.3256	1.3685	1.4120	1.4561	1.5008	1.5462	1.5921	1.6387	1.6860	1.7340	1.7826	1.8320	1.8821	1.9329	1.9846
380	1.0814	1.1207	1.1606	1.2011	1.2422	1.2838	1.3261	1.3690	1.4124	1.4565	1.5012	1.5465	1.5924	1.6390	1.6862	1.7341	1.7827	1.8320	1.8821	1.9329	1.9845
390	1.0820	1.1213	1.1612	1.2017	1.2427	1.2844	1.3266	1.3695	1.4129	1.4569	1.5016	1.5468	1.5927	1.6392	1.6864	1.7343	1.7828	1.8321	1.8821	1.9329	1.9844
400	1.0826	1.1219	1.1618	1.2022	1.2433	1.2849	1.3271	1.3699	1.4133	1.4573	1.5019	1.5472	1.5930	1.6395	1.6866	1.7344	1.7829	1.8322	1.8821	1.9328	1.9844

DATA-TABLE 5 *by Niels Ramsing & Jens Gundersen*

Diffusion coefficient for oxygen at different temperatures and pressures of seawater

Values calculated at 35‰ salinity. Units: 10^-5 cm2 s-1

Pressure	Temperature (°C)																				
(bar)	0.0	1.0	2.0	3.0	4.0	5.0	6.0	7.0	8.0	9.0	10.0	11.0	12.0	13.0	14.0	15.0	16.0	17.0	18.0	19.0	20.0
400	1.0826	1.1219	1.1618	1.2022	1.2433	1.2849	1.3271	1.3699	1.4133	1.4573	1.5019	1.5472	1.5930	1.6395	1.6866	1.7344	1.7829	1.8322	1.8821	1.9328	1.9844
410	1.0832	1.1225	1.1623	1.2028	1.2438	1.2854	1.3276	1.3704	1.4137	1.4577	1.5023	1.5475	1.5933	1.6397	1.6868	1.7346	1.7830	1.8322	1.8821	1.9328	1.9843
420	1.0838	1.1231	1.1629	1.2033	1.2443	1.2859	1.3281	1.3708	1.4142	1.4581	1.5026	1.5478	1.5935	1.6399	1.6870	1.7347	1.7831	1.8322	1.8821	1.9327	1.9842
430	1.0844	1.1237	1.1635	1.2039	1.2449	1.2864	1.3286	1.3713	1.4146	1.4585	1.5030	1.5481	1.5938	1.6401	1.6872	1.7348	1.7832	1.8323	1.8821	1.9327	1.9841
440	1.0850	1.1242	1.1640	1.2044	1.2454	1.2869	1.3290	1.3717	1.4150	1.4588	1.5033	1.5484	1.5940	1.6403	1.6873	1.7349	1.7833	1.8323	1.8821	1.9326	1.9840
450	1.0856	1.1248	1.1646	1.2049	1.2459	1.2874	1.3295	1.3721	1.4154	1.4592	1.5036	1.5486	1.5943	1.6405	1.6875	1.7350	1.7833	1.8323	1.8820	1.9325	1.9838
460	1.0861	1.1253	1.1651	1.2054	1.2463	1.2878	1.3299	1.3725	1.4157	1.4595	1.5039	1.5489	1.5945	1.6407	1.6876	1.7351	1.7834	1.8323	1.8820	1.9325	1.9837
470	1.0866	1.1258	1.1656	1.2059	1.2468	1.2883	1.3303	1.3729	1.4161	1.4599	1.5042	1.5491	1.5947	1.6409	1.6877	1.7352	1.7834	1.8323	1.8820	1.9324	1.9836
480	1.0872	1.1264	1.1661	1.2064	1.2473	1.2887	1.3307	1.3733	1.4165	1.4602	1.5045	1.5494	1.5949	1.6411	1.6879	1.7353	1.7835	1.8323	1.8819	1.9323	1.9834
490	1.0877	1.1269	1.1666	1.2069	1.2477	1.2892	1.3311	1.3737	1.4168	1.4605	1.5048	1.5496	1.5951	1.6412	1.6880	1.7354	1.7835	1.8323	1.8818	1.9322	1.9833
500	1.0882	1.1274	1.1671	1.2073	1.2482	1.2896	1.3315	1.3740	1.4171	1.4608	1.5050	1.5499	1.5953	1.6414	1.6881	1.7354	1.7835	1.8323	1.8818	1.9321	1.9831
510	1.0887	1.1278	1.1675	1.2078	1.2486	1.2900	1.3319	1.3744	1.4175	1.4611	1.5053	1.5501	1.5955	1.6415	1.6882	1.7355	1.7835	1.8322	1.8817	1.9319	1.9830
520	1.0892	1.1283	1.1680	1.2082	1.2490	1.2904	1.3323	1.3747	1.4178	1.4614	1.5055	1.5503	1.5956	1.6416	1.6883	1.7355	1.7835	1.8322	1.8816	1.9318	1.9828
530	1.0897	1.1288	1.1684	1.2087	1.2494	1.2908	1.3326	1.3751	1.4181	1.4616	1.5058	1.5505	1.5958	1.6417	1.6883	1.7356	1.7835	1.8321	1.8815	1.9317	1.9826
540	1.0901	1.1292	1.1689	1.2091	1.2498	1.2911	1.3330	1.3754	1.4184	1.4619	1.5060	1.5507	1.5960	1.6419	1.6884	1.7356	1.7835	1.8321	1.8814	1.9315	1.9824
550	1.0906	1.1297	1.1693	1.2095	1.2502	1.2915	1.3333	1.3757	1.4186	1.4621	1.5062	1.5508	1.5961	1.6420	1.6885	1.7356	1.7835	1.8320	1.8813	1.9314	1.9823
560	1.0910	1.1301	1.1697	1.2099	1.2506	1.2919	1.3337	1.3760	1.4189	1.4624	1.5064	1.5510	1.5962	1.6420	1.6885	1.7356	1.7834	1.8319	1.8812	1.9312	1.9821
570	1.0915	1.1305	1.1701	1.2103	1.2510	1.2922	1.3340	1.3763	1.4192	1.4626	1.5066	1.5512	1.5963	1.6421	1.6885	1.7356	1.7834	1.8318	1.8811	1.9310	1.9818
580	1.0919	1.1309	1.1705	1.2107	1.2513	1.2925	1.3343	1.3766	1.4194	1.4628	1.5068	1.5513	1.5965	1.6422	1.6886	1.7356	1.7833	1.8318	1.8809	1.9309	1.9816
590	1.0923	1.1313	1.1709	1.2110	1.2517	1.2929	1.3346	1.3768	1.4197	1.4630	1.5069	1.5515	1.5966	1.6423	1.6886	1.7356	1.7833	1.8317	1.8808	1.9307	1.9814
600	1.0927	1.1317	1.1713	1.2114	1.2520	1.2932	1.3349	1.3771	1.4199	1.4632	1.5071	1.5516	1.5966	1.6423	1.6886	1.7356	1.7832	1.8315	1.8806	1.9305	1.9812
610	1.0931	1.1321	1.1716	1.2117	1.2523	1.2935	1.3351	1.3774	1.4201	1.4634	1.5073	1.5517	1.5967	1.6424	1.6886	1.7355	1.7831	1.8314	1.8805	1.9303	1.9809
620	1.0934	1.1324	1.1720	1.2120	1.2526	1.2938	1.3354	1.3776	1.4203	1.4636	1.5074	1.5518	1.5968	1.6424	1.6886	1.7355	1.7830	1.8313	1.8803	1.9301	1.9807
630	1.0938	1.1328	1.1723	1.2124	1.2529	1.2940	1.3357	1.3778	1.4205	1.4637	1.5075	1.5519	1.5969	1.6424	1.6886	1.7354	1.7829	1.8312	1.8801	1.9299	1.9805
640	1.0942	1.1331	1.1726	1.2127	1.2532	1.2943	1.3359	1.3780	1.4207	1.4639	1.5077	1.5520	1.5969	1.6424	1.6886	1.7354	1.7828	1.8310	1.8800	1.9297	1.9802
650	1.0945	1.1335	1.1729	1.2130	1.2535	1.2945	1.3361	1.3782	1.4209	1.4640	1.5078	1.5521	1.5970	1.6424	1.6885	1.7353	1.7827	1.8309	1.8798	1.9294	1.9799
660	1.0948	1.1338	1.1732	1.2132	1.2538	1.2948	1.3363	1.3784	1.4210	1.4642	1.5079	1.5521	1.5970	1.6424	1.6885	1.7352	1.7826	1.8307	1.8796	1.9292	1.9797
670	1.0951	1.1341	1.1735	1.2135	1.2540	1.2950	1.3366	1.3786	1.4212	1.4643	1.5080	1.5522	1.5970	1.6424	1.6885	1.7351	1.7825	1.8306	1.8794	1.9290	1.9794
680	1.0954	1.1344	1.1738	1.2138	1.2543	1.2952	1.3367	1.3788	1.4213	1.4644	1.5081	1.5522	1.5970	1.6424	1.6884	1.7350	1.7824	1.8304	1.8792	1.9287	1.9791
690	1.0957	1.1347	1.1741	1.2140	1.2545	1.2955	1.3369	1.3789	1.4215	1.4645	1.5081	1.5523	1.5970	1.6424	1.6883	1.7349	1.7822	1.8302	1.8789	1.9284	1.9788
700	1.0960	1.1349	1.1743	1.2143	1.2547	1.2957	1.3371	1.3791	1.4216	1.4646	1.5082	1.5523	1.5970	1.6423	1.6883	1.7348	1.7821	1.8300	1.8787	1.9282	1.9785
710	1.0963	1.1352	1.1746	1.2145	1.2549	1.2958	1.3373	1.3792	1.4217	1.4647	1.5082	1.5523	1.5970	1.6423	1.6882	1.7347	1.7819	1.8298	1.8785	1.9279	1.9782
720	1.0966	1.1354	1.1748	1.2147	1.2551	1.2960	1.3374	1.3793	1.4218	1.4648	1.5083	1.5523	1.5970	1.6422	1.6881	1.7346	1.7817	1.8296	1.8782	1.9276	1.9779
730	1.0968	1.1357	1.1750	1.2149	1.2553	1.2962	1.3376	1.3795	1.4219	1.4648	1.5083	1.5523	1.5970	1.6422	1.6880	1.7344	1.7816	1.8294	1.8780	1.9273	1.9775
740	1.0971	1.1359	1.1753	1.2151	1.2555	1.2963	1.3377	1.3796	1.4220	1.4649	1.5083	1.5523	1.5969	1.6421	1.6879	1.7343	1.7814	1.8292	1.8777	1.9270	1.9772
750	1.0973	1.1361	1.1755	1.2153	1.2556	1.2965	1.3378	1.3797	1.4220	1.4649	1.5083	1.5523	1.5969	1.6420	1.6877	1.7341	1.7812	1.8289	1.8775	1.9267	1.9769
760	1.0975	1.1363	1.1756	1.2155	1.2558	1.2966	1.3379	1.3797	1.4221	1.4649	1.5083	1.5523	1.5968	1.6419	1.6876	1.7340	1.7810	1.8287	1.8772	1.9264	1.9765
770	1.0977	1.1365	1.1758	1.2156	1.2559	1.2967	1.3380	1.3798	1.4221	1.4650	1.5083	1.5522	1.5967	1.6418	1.6875	1.7338	1.7808	1.8285	1.8769	1.9261	1.9762
780	1.0979	1.1367	1.1760	1.2158	1.2561	1.2968	1.3381	1.3799	1.4222	1.4650	1.5083	1.5522	1.5966	1.6417	1.6873	1.7336	1.7806	1.8282	1.8766	1.9258	1.9758
790	1.0981	1.1369	1.1761	1.2159	1.2562	1.2969	1.3382	1.3799	1.4222	1.4650	1.5083	1.5521	1.5965	1.6416	1.6872	1.7334	1.7803	1.8280	1.8763	1.9255	1.9754
800	1.0982	1.1370	1.1763	1.2160	1.2563	1.2970	1.3382	1.3800	1.4222	1.4650	1.5082	1.5521	1.5964	1.6414	1.6870	1.7332	1.7801	1.8277	1.8760	1.9251	1.9751

DATA-TABLE 6 *by Niels Ramsing & Jens Gundersen*

Oxygen solubility at different temperatures and salinities of seawater

Units: µmol/l

Salinity	Temperature (°C)																				
(‰)	0.0	1.0	2.0	3.0	4.0	5.0	6.0	7.0	8.0	9.0	10.0	11.0	12.0	13.0	14.0	15.0	16.0	17.0	18.0	19.0	20.0
0.0	456.6	444.0	431.9	420.4	409.4	398.9	388.8	379.2	369.9	361.1	352.6	344.4	336.6	329.1	321.9	314.9	308.3	301.8	295.6	289.7	283.9
1.0	453.5	441.0	429.0	417.6	406.7	396.3	386.3	376.7	367.6	358.8	350.4	342.3	334.5	327.1	319.9	313.0	306.4	300.0	293.9	287.9	282.2
2.0	450.4	438.0	426.1	414.8	404.0	393.6	383.7	374.3	365.2	356.5	348.1	340.1	332.4	325.0	317.9	311.1	304.5	298.2	292.1	286.2	280.6
3.0	447.3	435.0	423.2	412.0	401.3	391.0	381.2	371.8	362.8	354.2	345.9	338.0	330.4	323.0	316.0	309.2	302.7	296.4	290.4	284.5	278.9
4.0	444.2	432.0	420.4	409.2	398.6	388.5	378.7	369.4	360.5	351.9	343.7	335.9	328.3	321.0	314.0	307.3	300.9	294.6	288.6	282.9	277.3
5.0	441.1	429.1	417.5	406.5	396.0	385.9	376.3	367.0	358.2	349.7	341.6	333.7	326.2	319.0	312.1	305.5	299.0	292.9	286.9	281.2	275.7
6.0	438.1	426.1	414.7	403.8	393.3	383.3	373.8	364.6	355.9	347.5	339.4	331.6	324.2	317.1	310.2	303.6	297.2	291.1	285.2	279.5	274.0
7.0	435.1	423.2	411.9	401.1	390.7	380.8	371.3	362.3	353.6	345.2	337.2	329.6	322.2	315.1	308.3	301.7	295.4	289.4	283.5	277.9	272.4
8.0	432.1	420.3	409.1	398.4	388.1	378.3	368.9	359.9	351.3	343.0	335.1	327.5	320.2	313.1	306.4	299.9	293.6	287.6	281.8	276.2	270.8
9.0	429.1	417.5	406.3	395.7	385.5	375.8	366.5	357.6	349.0	340.8	333.0	325.4	318.2	311.2	304.5	298.1	291.9	285.9	280.1	274.6	269.2
10.0	426.1	414.6	403.6	393.0	383.0	373.3	364.1	355.2	346.8	338.6	330.8	323.4	316.2	309.3	302.6	296.2	290.1	284.2	278.5	273.0	267.6
11.0	423.2	411.8	400.8	390.4	380.4	370.8	361.7	352.9	344.5	336.5	328.7	321.3	314.2	307.3	300.8	294.4	288.3	282.5	276.8	271.3	266.1
12.0	420.3	409.0	398.1	387.8	377.9	368.4	359.3	350.6	342.3	334.3	326.7	319.3	312.2	305.4	298.9	292.6	286.6	280.8	275.1	269.7	264.5
13.0	417.4	406.2	395.4	385.2	375.3	366.0	357.0	348.3	340.1	332.2	324.6	317.3	310.3	303.5	297.1	290.8	284.8	279.1	273.5	268.1	262.9
14.0	414.5	403.4	392.7	382.6	372.8	363.5	354.6	346.1	337.9	330.0	322.5	315.3	308.3	301.7	295.2	289.1	283.1	277.4	271.9	266.5	261.4
15.0	411.7	400.6	390.1	380.0	370.4	361.1	352.3	343.8	335.7	327.9	320.5	313.3	306.4	299.8	293.4	287.3	281.4	275.7	270.2	265.0	259.9
16.0	408.8	397.9	387.4	377.4	367.9	358.7	350.0	341.6	333.5	325.8	318.4	311.3	304.5	297.9	291.6	285.5	279.7	274.0	268.6	263.4	258.3
17.0	406.0	395.2	384.8	374.9	365.4	356.4	347.7	339.4	331.4	323.7	316.4	309.4	302.6	296.1	289.8	283.8	278.0	272.4	267.0	261.8	256.8
18.0	403.2	392.5	382.2	372.4	363.0	354.0	345.4	337.2	329.2	321.7	314.4	307.4	300.7	294.2	288.0	282.1	276.3	270.8	265.4	260.3	255.3
19.0	400.4	389.8	379.6	369.9	360.6	351.7	343.1	335.0	327.1	319.6	312.4	305.5	298.8	292.4	286.3	280.3	274.6	269.1	263.8	258.7	253.8
20.0	397.7	387.1	377.0	367.4	358.2	349.3	340.9	332.8	325.0	317.6	310.4	303.5	296.9	290.6	284.5	278.6	273.0	267.5	262.3	257.2	252.3
21.0	394.9	384.5	374.5	364.9	355.8	347.0	338.6	330.6	322.9	315.5	308.4	301.6	295.1	288.8	282.7	276.9	271.3	265.9	260.7	255.7	250.8
22.0	392.2	381.8	371.9	362.4	353.4	344.7	336.4	328.5	320.8	313.5	306.5	299.7	293.2	287.0	281.0	275.2	269.7	264.3	259.1	254.1	249.3
23.0	389.5	379.2	369.4	360.0	351.0	342.4	334.2	326.3	318.7	311.5	304.5	297.8	291.4	285.2	279.3	273.5	268.0	262.7	257.6	252.6	247.9
24.0	386.8	376.6	366.9	357.6	348.7	340.2	332.0	324.2	316.7	309.5	302.6	295.9	289.6	283.4	277.5	271.9	266.4	261.1	256.0	251.1	246.4
25.0	384.1	374.0	364.4	355.2	346.4	337.9	329.8	322.1	314.6	307.5	300.7	294.1	287.8	281.7	275.8	270.2	264.8	259.5	254.5	249.6	244.9
26.0	381.5	371.5	361.9	352.8	344.0	335.7	327.7	320.0	312.6	305.5	298.7	292.2	285.9	279.9	274.1	268.5	263.2	258.0	253.0	248.2	243.5
27.0	378.8	368.9	359.5	350.4	341.7	333.4	325.5	317.9	310.6	303.6	296.8	290.4	284.2	278.2	272.4	266.9	261.6	256.4	251.5	246.7	242.1
28.0	376.2	366.4	357.0	348.0	339.5	331.2	323.4	315.8	308.6	301.6	294.9	288.5	282.4	276.5	270.7	265.3	260.0	254.9	250.0	245.2	240.6
29.0	373.6	363.9	354.6	345.7	337.2	329.0	321.2	313.8	306.6	299.7	293.1	286.7	280.6	274.7	269.1	263.6	258.4	253.3	248.5	243.8	239.2
30.0	371.0	361.4	352.2	343.4	334.9	326.9	319.1	311.7	304.6	297.8	291.2	284.9	278.8	273.0	267.4	262.0	256.8	251.8	247.0	242.3	237.8
31.0	368.5	358.9	349.8	341.1	332.7	324.7	317.0	309.7	302.6	295.9	289.3	283.1	277.1	271.3	265.8	260.4	255.3	250.3	245.5	240.9	236.4
32.0	365.9	356.5	347.4	338.8	330.5	322.5	314.9	307.7	300.7	294.0	287.5	281.3	275.4	269.6	264.1	258.8	253.7	248.8	244.0	239.4	235.0
33.0	363.4	354.0	345.1	336.5	328.3	320.4	312.9	305.6	298.7	292.1	285.7	279.5	273.6	268.0	262.5	257.2	252.2	247.3	242.6	238.0	233.6
34.0	360.9	351.6	342.7	334.2	326.1	318.3	310.8	303.7	296.8	290.2	283.9	277.8	271.9	266.3	260.9	255.7	250.6	245.8	241.1	236.6	232.2
35.0	358.4	349.2	340.4	332.0	323.9	316.2	308.8	301.7	294.9	288.3	282.0	276.0	270.2	264.6	259.3	254.1	249.1	244.3	239.7	235.2	230.9
36.0	355.9	346.8	338.1	329.7	321.7	314.1	306.7	299.7	293.0	286.5	280.3	274.3	268.5	263.0	257.7	252.5	247.6	242.8	238.2	233.8	229.5
37.0	353.5	344.4	335.8	327.5	319.6	312.0	304.7	297.7	291.1	284.6	278.5	272.5	266.8	261.4	256.1	251.0	246.1	241.4	236.8	232.4	228.2
38.0	351.0	342.0	333.5	325.3	317.4	309.9	302.7	295.8	289.2	282.8	276.7	270.8	265.2	259.7	254.5	249.5	244.6	239.9	235.4	231.0	226.8
39.0	348.6	339.7	331.2	323.1	315.3	307.9	300.7	293.9	287.3	281.0	274.9	269.1	263.5	258.1	252.9	247.9	243.1	238.5	234.0	229.7	225.5
40.0	346.2	337.4	329.0	320.9	313.2	305.8	298.7	292.0	285.4	279.2	273.2	267.4	261.8	256.5	251.4	246.4	241.6	237.0	232.6	228.3	224.1

DATA-TABLE 7 *by Niels Ramsing & Jens Gundersen*

Oxygen solubility at different temperatures and salinities of seawater

Units: µmol/l

Salinity	Temperature (°C)																				
(‰)	20.0	21.0	22.0	23.0	24.0	25.0	26.0	27.0	28.0	29.0	30.0	31.0	32.0	33.0	34.0	35.0	36.0	37.0	38.0	39.0	40.0
0.0	283.9	278.3	273.0	267.8	262.8	257.9	253.2	248.7	244.3	240.0	235.9	231.9	228.0	224.2	220.5	217.0	213.5	210.1	206.7	203.5	200.4
1.0	282.2	276.7	271.4	266.3	261.3	256.5	251.8	247.3	243.0	238.7	234.6	230.6	226.8	223.0	219.4	215.8	212.3	209.0	205.7	202.5	199.3
2.0	280.6	275.1	269.8	264.7	259.8	255.0	250.4	245.9	241.6	237.4	233.3	229.4	225.6	221.8	218.2	214.7	211.2	207.9	204.6	201.4	198.3
3.0	278.9	273.5	268.3	263.2	258.3	253.6	249.0	244.6	240.3	236.1	232.1	228.1	224.3	220.6	217.0	213.5	210.1	206.8	203.6	200.4	197.3
4.0	277.3	271.9	266.7	261.7	256.8	252.1	247.6	243.2	238.9	234.8	230.8	226.9	223.1	219.5	215.9	212.4	209.0	205.7	202.5	199.4	196.3
5.0	275.7	270.3	265.2	260.2	255.4	250.7	246.2	241.8	237.6	233.5	229.5	225.7	221.9	218.3	214.7	211.3	207.9	204.6	201.4	198.3	195.3
6.0	274.0	268.7	263.6	258.7	253.9	249.3	244.8	240.5	236.3	232.2	228.3	224.4	220.7	217.1	213.6	210.2	206.8	203.6	200.4	197.3	194.3
7.0	272.4	267.2	262.1	257.2	252.5	247.9	243.4	239.1	235.0	230.9	227.0	223.2	219.5	215.9	212.4	209.0	205.7	202.5	199.4	196.3	193.3
8.0	270.8	265.6	260.6	255.7	251.0	246.5	242.1	237.8	233.7	229.7	225.8	222.0	218.3	214.8	211.3	207.9	204.7	201.5	198.3	195.3	192.3
9.0	269.2	264.1	259.1	254.2	249.6	245.1	240.7	236.5	232.4	228.4	224.5	220.8	217.2	213.6	210.2	206.8	203.6	200.4	197.3	194.3	191.3
10.0	267.6	262.5	257.6	252.8	248.2	243.7	239.4	235.2	231.1	227.1	223.3	219.6	216.0	212.5	209.1	205.7	202.5	199.4	196.3	193.3	190.3
11.0	266.1	261.0	256.1	251.3	246.7	242.3	238.0	233.8	229.8	225.9	222.1	218.4	214.8	211.3	208.0	204.7	201.4	198.3	195.3	192.3	189.4
12.0	264.5	259.5	254.6	249.9	245.3	240.9	236.7	232.5	228.5	224.6	220.9	217.2	213.7	210.2	206.8	203.6	200.4	197.3	194.2	191.3	188.4
13.0	262.9	257.9	253.1	248.4	243.9	239.6	235.3	231.2	227.3	223.4	219.7	216.0	212.5	209.1	205.7	202.5	199.3	196.2	193.2	190.3	187.4
14.0	261.4	256.4	251.6	247.0	242.5	238.2	234.0	229.9	226.0	222.2	218.5	214.9	211.4	208.0	204.6	201.4	198.3	195.2	192.2	189.3	186.5
15.0	259.9	254.9	250.2	245.6	241.1	236.8	232.7	228.6	224.7	220.9	217.3	213.7	210.2	206.8	203.6	200.4	197.2	194.2	191.2	188.3	185.5
16.0	258.3	253.4	248.7	244.2	239.8	235.5	231.4	227.4	223.5	219.7	216.1	212.5	209.1	205.7	202.5	199.3	196.2	193.2	190.2	187.4	184.6
17.0	256.8	252.0	247.3	242.8	238.4	234.2	230.1	226.1	222.2	218.5	214.9	211.4	208.0	204.6	201.4	198.2	195.2	192.2	189.3	186.4	183.6
18.0	255.3	250.5	245.9	241.4	237.0	232.8	228.8	224.8	221.0	217.3	213.7	210.2	206.8	203.5	200.3	197.2	194.1	191.2	188.3	185.4	182.7
19.0	253.8	249.0	244.4	240.0	235.7	231.5	227.5	223.6	219.8	216.1	212.5	209.1	205.7	202.4	199.2	196.1	193.1	190.2	187.3	184.5	181.7
20.0	252.3	247.6	243.0	238.6	234.3	230.2	226.2	222.3	218.6	214.9	211.4	207.9	204.6	201.3	198.2	195.1	192.1	189.2	186.3	183.5	180.8
21.0	250.8	246.1	241.6	237.2	233.0	228.9	224.9	221.1	217.3	213.7	210.2	206.8	203.5	200.3	197.1	194.1	191.1	188.2	185.4	182.6	179.9
22.0	249.3	244.7	240.2	235.8	231.7	227.6	223.6	219.8	216.1	212.5	209.1	205.7	202.4	199.2	196.1	193.0	190.1	187.2	184.4	181.6	179.0
23.0	247.9	243.2	238.8	234.5	230.3	226.3	222.4	218.6	214.9	211.4	207.9	204.6	201.3	198.1	195.0	192.0	189.1	186.2	183.4	180.7	178.0
24.0	246.4	241.8	237.4	233.1	229.0	225.0	221.1	217.4	213.7	210.2	206.8	203.4	200.2	197.1	194.0	191.0	188.1	185.2	182.5	179.8	177.1
25.0	244.9	240.4	236.0	231.8	227.7	223.7	219.9	216.2	212.5	209.0	205.6	202.3	199.1	196.0	193.0	190.0	187.1	184.3	181.5	178.8	176.2
26.0	243.5	239.0	234.7	230.5	226.4	222.5	218.6	214.9	211.4	207.9	204.5	201.2	198.0	194.9	191.9	189.0	186.1	183.3	180.6	177.9	175.3
27.0	242.1	237.6	233.3	229.1	225.1	221.2	217.4	213.7	210.2	206.7	203.4	200.1	197.0	193.9	190.9	188.0	185.1	182.4	179.6	177.0	174.4
28.0	240.6	236.2	231.9	227.8	223.8	219.9	216.2	212.5	209.0	205.6	202.3	199.0	195.9	192.9	189.9	187.0	184.2	181.4	178.7	176.1	173.5
29.0	239.2	234.8	230.6	226.5	222.5	218.7	215.0	211.4	207.9	204.5	201.2	198.0	194.8	191.8	188.9	186.0	183.2	180.5	177.8	175.2	172.6
30.0	237.8	233.5	229.3	225.2	221.3	217.4	213.7	210.2	206.7	203.3	200.1	196.9	193.8	190.8	187.9	185.0	182.2	179.5	176.9	174.3	171.7
31.0	236.4	232.1	227.9	223.9	220.0	216.2	212.5	209.0	205.5	202.2	199.0	195.8	192.7	189.8	186.9	184.0	181.3	178.6	175.9	173.4	170.9
32.0	235.0	230.7	226.6	222.6	218.7	215.0	211.3	207.8	204.4	201.1	197.9	194.7	191.7	188.7	185.9	183.0	180.3	177.6	175.0	172.5	170.0
33.0	233.6	229.4	225.3	221.3	217.5	213.8	210.1	206.7	203.3	200.0	196.8	193.7	190.7	187.7	184.9	182.1	179.4	176.7	174.1	171.6	169.1
34.0	232.2	228.0	224.0	220.0	216.2	212.5	209.0	205.5	202.1	198.9	195.7	192.6	189.6	186.7	183.9	181.1	178.4	175.8	173.2	170.7	168.2
35.0	230.9	226.7	222.7	218.8	215.0	211.3	207.8	204.3	201.0	197.8	194.6	191.6	188.6	185.7	182.9	180.1	177.5	174.9	172.3	169.8	167.4
36.0	229.5	225.4	221.4	217.5	213.8	210.1	206.6	203.2	199.9	196.7	193.6	190.5	187.6	184.7	181.9	179.2	176.5	173.9	171.4	168.9	166.5
37.0	228.2	224.1	220.1	216.2	212.5	208.9	205.4	202.1	198.8	195.6	192.5	189.5	186.6	183.7	180.9	178.2	175.6	173.0	170.5	168.1	165.7
38.0	226.8	222.7	218.8	215.0	211.3	207.7	204.3	200.9	197.7	194.5	191.4	188.5	185.6	182.7	180.0	177.3	174.7	172.1	169.6	167.2	164.8
39.0	225.5	221.4	217.5	213.8	210.1	206.6	203.1	199.8	196.6	193.4	190.4	187.4	184.5	181.7	179.0	176.3	173.8	171.2	168.7	166.3	164.0
40.0	224.1	220.1	216.3	212.5	208.9	205.4	202.0	198.7	195.5	192.4	189.3	186.4	183.5	180.8	178.1	175.4	172.8	170.3	167.9	165.5	163.1

DATA-TABLE 8 *by Niels Ramsing & Jens Gundersen*

Oxygen solubility at different temperatures and salinities of seawater

Units: µmol/l

Salinity	Temperature (°C)																				
(‰)	0.0	5.0	10.0	15.0	20.0	25.0	30.0	35.0	40.0	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0	90.0	95.0	100.0
0.0	456.6	398.9	352.6	314.9	283.9	257.9	235.9	217.0	200.4	185.6	172.2	159.9	148.3	137.2	126.5	115.9	105.5	95.1	84.7	74.5	64.3
5.0	441.1	385.9	341.6	305.5	275.7	250.7	229.5	211.3	195.3	181.0	168.1	156.2	145.0	134.2	123.8	113.6	103.4	93.3	83.2	73.2	63.3
10.0	426.1	373.3	330.8	296.2	267.6	243.7	223.3	205.7	190.3	176.6	164.1	152.6	141.7	131.3	121.2	111.3	101.4	91.6	81.7	71.9	62.2
15.0	411.7	361.1	320.5	287.3	259.9	236.8	217.3	200.4	185.5	172.3	160.2	149.1	138.6	128.5	118.7	109.0	99.4	89.8	80.2	70.7	61.2
20.0	397.7	349.3	310.4	278.6	252.3	230.2	211.4	195.1	180.8	168.0	156.4	145.6	135.5	125.7	116.2	106.8	97.5	88.1	78.8	69.4	60.2
25.0	384.1	337.9	300.7	270.2	244.9	223.7	205.6	190.0	176.2	163.9	152.7	142.3	132.4	123.0	113.7	104.6	95.5	86.4	77.3	68.2	59.2
30.0	371.0	326.9	291.2	262.0	237.8	217.4	200.1	185.0	171.7	159.9	149.0	139.0	129.4	120.3	111.3	102.5	93.6	84.8	75.9	67.0	58.2
35.0	358.4	316.2	282.0	254.1	230.9	211.3	194.6	180.1	167.4	155.9	145.5	135.7	126.5	117.7	109.0	100.4	91.8	83.2	74.5	65.8	57.2
40.0	346.2	305.8	273.2	246.4	224.1	205.4	189.3	175.4	163.1	152.1	142.0	132.6	123.7	115.1	106.7	98.3	90.0	81.6	73.1	64.7	56.3
45.0	334.4	295.8	264.6	238.9	217.6	199.6	184.2	170.8	159.0	148.3	138.6	129.5	120.9	112.6	104.4	96.3	88.2	80.0	71.8	63.5	55.3
50.0	323.0	286.1	256.3	231.7	211.3	194.0	179.2	166.3	154.9	144.7	135.3	126.5	118.2	110.1	102.2	94.3	86.4	78.5	70.5	62.4	54.4
55.0	311.9	276.7	248.2	224.7	205.1	188.5	174.3	161.9	151.0	141.1	132.1	123.6	115.5	107.7	100.0	92.4	84.7	77.0	69.2	61.3	53.5
60.0	301.3	267.7	240.4	217.9	199.1	183.2	169.6	157.7	147.1	137.6	128.9	120.7	112.9	105.4	97.9	90.5	83.0	75.5	67.9	60.2	52.6
65.0	291.0	258.9	232.8	211.3	193.3	178.1	165.0	153.5	143.4	134.2	125.8	117.9	110.4	103.1	95.8	88.6	81.4	74.1	66.6	59.2	51.7
70.0	281.0	250.4	225.5	204.9	187.7	173.0	160.5	149.5	139.8	130.9	122.8	115.2	107.9	100.8	93.8	86.8	79.8	72.6	65.4	58.1	50.8
75.0	271.4	242.2	218.4	198.7	182.2	168.2	156.1	145.6	136.2	127.7	119.9	112.5	105.5	98.6	91.8	85.0	78.2	71.2	64.2	57.1	50.0
80.0	262.2	234.2	211.5	192.6	176.8	163.4	151.9	141.7	132.7	124.6	117.0	109.9	103.1	96.4	89.9	83.3	76.6	69.9	63.0	56.1	49.1
85.0	253.2	226.6	204.8	186.8	171.7	158.8	147.7	138.0	129.3	121.5	114.2	107.3	100.8	94.3	88.0	81.6	75.1	68.5	61.8	55.1	48.3
90.0	244.5	219.1	198.3	181.1	166.7	154.3	143.7	134.4	126.0	118.5	111.5	104.9	98.5	92.3	86.1	79.9	73.6	67.2	60.7	54.1	47.5
95.0	236.2	211.9	192.1	175.6	161.8	150.0	139.8	130.8	122.8	115.6	108.8	102.4	96.3	90.2	84.3	78.2	72.1	65.9	59.6	53.1	46.6
100.0	228.1	205.0	186.0	170.3	157.1	145.8	136.0	127.4	119.7	112.7	106.2	100.0	94.1	88.3	82.5	76.6	70.7	64.6	58.4	52.2	45.8
105.0	220.3	198.2	180.2	165.1	152.5	141.7	132.3	124.0	116.7	109.9	103.6	97.7	92.0	86.3	80.7	75.0	69.3	63.4	57.4	51.2	45.1
110.0	212.7	191.7	174.5	160.1	148.0	137.7	128.7	120.8	113.7	107.2	101.2	95.4	89.9	84.4	79.0	73.5	67.9	62.1	56.3	50.3	44.3
115.0	205.4	185.4	169.0	155.2	143.7	133.8	125.2	117.6	110.8	104.5	98.7	93.2	87.9	82.6	77.3	72.0	66.5	60.9	55.2	49.4	43.5
120.0	198.4	179.3	163.6	150.5	139.5	130.0	121.8	114.5	108.0	102.0	96.4	91.0	85.9	80.8	75.7	70.5	65.2	59.8	54.2	48.5	42.8
125.0	191.6	173.4	158.5	146.0	135.4	126.3	118.4	111.5	105.2	99.4	94.1	88.9	83.9	79.0	74.0	69.0	63.9	58.6	53.2	47.7	42.1
130.0	185.0	167.7	153.4	141.5	131.4	122.8	115.2	108.5	102.5	97.0	91.8	86.9	82.0	77.3	72.5	67.6	62.6	57.5	52.2	46.8	41.3
135.0	178.7	162.2	148.6	137.2	127.6	119.3	112.1	105.7	99.9	94.6	89.6	84.8	80.2	75.6	70.9	66.2	61.3	56.4	51.2	46.0	40.6
140.0	172.6	156.9	143.9	133.1	123.8	115.9	109.0	102.9	97.3	92.2	87.4	82.9	78.4	73.9	69.4	64.8	60.1	55.3	50.3	45.1	39.9
145.0	166.6	151.7	139.4	129.0	120.2	112.7	106.0	100.2	94.9	90.0	85.4	80.9	76.6	72.3	67.9	63.5	58.9	54.2	49.3	44.3	39.2
150.0	160.9	146.7	134.9	125.1	116.7	109.5	103.2	97.5	92.4	87.7	83.3	79.0	74.9	70.7	66.5	62.2	57.7	53.1	48.4	43.5	38.6
155.0	155.4	141.9	130.7	121.3	113.3	106.4	100.3	95.0	90.1	85.6	81.3	77.2	73.2	69.1	65.1	60.9	56.6	52.1	47.5	42.7	37.9
160.0	150.1	137.2	126.5	117.6	110.0	103.4	97.6	92.5	87.8	83.4	79.3	75.4	71.5	67.6	63.7	59.6	55.4	51.1	46.6	42.0	37.2
165.0	144.9	132.7	122.5	114.0	106.7	100.5	94.9	90.0	85.5	81.4	77.4	73.6	69.9	66.1	62.3	58.4	54.3	50.1	45.7	41.2	36.6
170.0	139.9	128.3	118.7	110.5	103.6	97.6	92.3	87.6	83.4	79.4	75.6	71.9	68.3	64.7	61.0	57.2	53.2	49.1	44.9	40.5	36.0
175.0	135.1	124.1	114.9	107.2	100.6	94.9	89.8	85.3	81.2	77.4	73.8	70.2	66.8	63.3	59.7	56.0	52.1	48.2	44.0	39.7	35.3
180.0	130.5	120.0	111.3	103.9	97.6	92.2	87.4	83.1	79.1	75.5	72.0	68.6	65.2	61.9	58.4	54.8	51.1	47.2	43.2	39.0	34.7
185.0	126.0	116.0	107.8	100.8	94.8	89.6	85.0	80.9	77.1	73.6	70.3	67.0	63.8	60.5	57.1	53.7	50.1	46.3	42.4	38.3	34.1
190.0	121.7	112.2	104.3	97.7	92.0	87.0	82.7	78.7	75.2	71.8	68.6	65.4	62.3	59.2	55.9	52.6	49.1	45.4	41.6	37.6	33.5
195.0	117.5	108.5	101.0	94.7	89.3	84.6	80.4	76.7	73.2	70.0	66.9	63.9	60.9	57.9	54.7	51.5	48.1	44.5	40.8	36.9	32.9
200.0	113.5	104.9	97.8	91.8	86.7	82.2	78.2	74.6	71.4	68.3	65.3	62.4	59.5	56.6	53.6	50.4	47.1	43.6	40.0	36.3	32.4

DATA-TABLE 9 *by Niels Ramsing & Jens Gundersen*

Density of seawater at different temperatures and salinities

Units: g/cm3

Salinity	Temperature (°C)																				
(‰)	0.0	1.0	2.0	3.0	4.0	5.0	6.0	7.0	8.0	9.0	10.0	11.0	12.0	13.0	14.0	15.0	16.0	17.0	18.0	19.0	20.0
0.0	0.9998	0.9999	0.9999	1.0000	1.0000	1.0000	0.9999	0.9999	0.9999	0.9998	0.9997	0.9996	0.9995	0.9994	0.9992	0.9991	0.9989	0.9988	0.9986	0.9984	0.9982
1.0	1.0007	1.0007	1.0008	1.0008	1.0008	1.0008	1.0007	1.0007	1.0006	1.0006	1.0005	1.0004	1.0003	1.0002	1.0000	0.9999	0.9997	0.9995	0.9994	0.9992	0.9990
2.0	1.0015	1.0015	1.0016	1.0016	1.0016	1.0016	1.0015	1.0015	1.0014	1.0014	1.0013	1.0012	1.0011	1.0009	1.0008	1.0007	1.0005	1.0003	1.0001	0.9999	0.9997
3.0	1.0023	1.0023	1.0024	1.0024	1.0024	1.0024	1.0023	1.0023	1.0022	1.0021	1.0021	1.0020	1.0018	1.0017	1.0016	1.0014	1.0013	1.0011	1.0009	1.0007	1.0005
4.0	1.0031	1.0032	1.0032	1.0032	1.0032	1.0032	1.0031	1.0031	1.0030	1.0029	1.0028	1.0027	1.0026	1.0025	1.0023	1.0022	1.0020	1.0018	1.0017	1.0015	1.0013
5.0	1.0039	1.0040	1.0040	1.0040	1.0040	1.0040	1.0039	1.0039	1.0038	1.0037	1.0036	1.0035	1.0034	1.0033	1.0031	1.0030	1.0028	1.0026	1.0024	1.0022	1.0020
6.0	1.0047	1.0048	1.0048	1.0048	1.0048	1.0047	1.0047	1.0046	1.0046	1.0045	1.0044	1.0043	1.0042	1.0040	1.0039	1.0037	1.0036	1.0034	1.0032	1.0030	1.0028
7.0	1.0055	1.0056	1.0056	1.0056	1.0056	1.0055	1.0055	1.0054	1.0054	1.0053	1.0052	1.0051	1.0049	1.0048	1.0047	1.0045	1.0043	1.0041	1.0039	1.0037	1.0035
8.0	1.0063	1.0064	1.0064	1.0064	1.0064	1.0063	1.0063	1.0062	1.0061	1.0061	1.0060	1.0058	1.0057	1.0056	1.0054	1.0053	1.0051	1.0049	1.0047	1.0045	1.0043
9.0	1.0072	1.0072	1.0072	1.0072	1.0072	1.0071	1.0071	1.0070	1.0069	1.0068	1.0067	1.0066	1.0065	1.0063	1.0062	1.0060	1.0058	1.0057	1.0055	1.0053	1.0050
10.0	1.0080	1.0080	1.0080	1.0080	1.0080	1.0079	1.0079	1.0078	1.0077	1.0076	1.0075	1.0074	1.0073	1.0071	1.0070	1.0068	1.0066	1.0064	1.0062	1.0060	1.0058
11.0	1.0088	1.0088	1.0088	1.0088	1.0087	1.0087	1.0086	1.0086	1.0085	1.0084	1.0083	1.0082	1.0080	1.0079	1.0077	1.0076	1.0074	1.0072	1.0070	1.0068	1.0066
12.0	1.0096	1.0096	1.0096	1.0096	1.0095	1.0095	1.0094	1.0094	1.0093	1.0092	1.0091	1.0089	1.0088	1.0087	1.0085	1.0083	1.0081	1.0079	1.0077	1.0075	1.0073
13.0	1.0104	1.0104	1.0104	1.0104	1.0103	1.0103	1.0102	1.0101	1.0101	1.0100	1.0098	1.0097	1.0096	1.0094	1.0093	1.0091	1.0089	1.0087	1.0085	1.0083	1.0081
14.0	1.0112	1.0112	1.0112	1.0112	1.0111	1.0111	1.0110	1.0109	1.0108	1.0107	1.0106	1.0105	1.0103	1.0102	1.0100	1.0099	1.0097	1.0095	1.0093	1.0090	1.0088
15.0	1.0120	1.0120	1.0120	1.0120	1.0119	1.0119	1.0118	1.0117	1.0116	1.0115	1.0114	1.0113	1.0111	1.0110	1.0108	1.0106	1.0104	1.0102	1.0100	1.0098	1.0096
16.0	1.0128	1.0128	1.0128	1.0128	1.0127	1.0127	1.0126	1.0125	1.0124	1.0123	1.0122	1.0120	1.0119	1.0117	1.0116	1.0114	1.0112	1.0110	1.0108	1.0106	1.0103
17.0	1.0136	1.0136	1.0136	1.0136	1.0135	1.0134	1.0134	1.0133	1.0132	1.0131	1.0129	1.0128	1.0127	1.0125	1.0123	1.0121	1.0120	1.0118	1.0115	1.0113	1.0111
18.0	1.0144	1.0144	1.0144	1.0143	1.0143	1.0142	1.0142	1.0141	1.0140	1.0138	1.0137	1.0136	1.0134	1.0133	1.0131	1.0129	1.0127	1.0125	1.0123	1.0121	1.0119
19.0	1.0152	1.0152	1.0152	1.0151	1.0151	1.0150	1.0149	1.0148	1.0147	1.0146	1.0145	1.0144	1.0142	1.0140	1.0139	1.0137	1.0135	1.0133	1.0131	1.0128	1.0126
20.0	1.0160	1.0160	1.0160	1.0159	1.0159	1.0158	1.0157	1.0156	1.0155	1.0154	1.0153	1.0151	1.0150	1.0148	1.0146	1.0144	1.0143	1.0140	1.0138	1.0136	1.0134
21.0	1.0168	1.0168	1.0168	1.0167	1.0167	1.0166	1.0165	1.0164	1.0163	1.0162	1.0161	1.0159	1.0157	1.0156	1.0154	1.0152	1.0150	1.0148	1.0146	1.0144	1.0141
22.0	1.0176	1.0176	1.0176	1.0175	1.0175	1.0174	1.0173	1.0172	1.0171	1.0170	1.0168	1.0167	1.0165	1.0164	1.0162	1.0160	1.0158	1.0156	1.0154	1.0151	1.0149
23.0	1.0184	1.0184	1.0184	1.0183	1.0183	1.0182	1.0181	1.0180	1.0179	1.0177	1.0176	1.0175	1.0173	1.0171	1.0169	1.0167	1.0165	1.0163	1.0161	1.0159	1.0156
24.0	1.0192	1.0192	1.0192	1.0191	1.0191	1.0190	1.0189	1.0188	1.0187	1.0185	1.0184	1.0182	1.0181	1.0179	1.0177	1.0175	1.0173	1.0171	1.0169	1.0166	1.0164
25.0	1.0200	1.0200	1.0200	1.0199	1.0198	1.0198	1.0197	1.0196	1.0194	1.0193	1.0192	1.0190	1.0188	1.0187	1.0185	1.0183	1.0181	1.0179	1.0176	1.0174	1.0172
26.0	1.0209	1.0208	1.0208	1.0207	1.0206	1.0206	1.0205	1.0203	1.0202	1.0201	1.0199	1.0198	1.0196	1.0194	1.0192	1.0191	1.0188	1.0186	1.0184	1.0182	1.0179
27.0	1.0217	1.0216	1.0216	1.0215	1.0214	1.0213	1.0212	1.0211	1.0210	1.0209	1.0207	1.0206	1.0204	1.0202	1.0200	1.0198	1.0196	1.0194	1.0192	1.0189	1.0187
28.0	1.0225	1.0224	1.0224	1.0223	1.0222	1.0221	1.0220	1.0219	1.0218	1.0216	1.0215	1.0213	1.0212	1.0210	1.0208	1.0206	1.0204	1.0202	1.0199	1.0197	1.0194
29.0	1.0233	1.0232	1.0232	1.0231	1.0230	1.0229	1.0228	1.0227	1.0226	1.0224	1.0223	1.0221	1.0219	1.0218	1.0216	1.0214	1.0211	1.0209	1.0207	1.0204	1.0202
30.0	1.0241	1.0240	1.0240	1.0239	1.0238	1.0237	1.0236	1.0235	1.0234	1.0232	1.0231	1.0229	1.0227	1.0225	1.0223	1.0221	1.0219	1.0217	1.0215	1.0212	1.0210
31.0	1.0249	1.0248	1.0248	1.0247	1.0246	1.0245	1.0244	1.0243	1.0241	1.0240	1.0238	1.0237	1.0235	1.0233	1.0231	1.0229	1.0227	1.0225	1.0222	1.0220	1.0217
32.0	1.0257	1.0256	1.0256	1.0255	1.0254	1.0253	1.0252	1.0251	1.0249	1.0248	1.0246	1.0244	1.0243	1.0241	1.0239	1.0237	1.0234	1.0232	1.0230	1.0227	1.0225
33.0	1.0265	1.0264	1.0264	1.0263	1.0262	1.0261	1.0260	1.0258	1.0257	1.0256	1.0254	1.0252	1.0250	1.0248	1.0246	1.0244	1.0242	1.0240	1.0237	1.0235	1.0232
34.0	1.0273	1.0272	1.0272	1.0271	1.0270	1.0269	1.0268	1.0266	1.0265	1.0263	1.0262	1.0260	1.0258	1.0256	1.0254	1.0252	1.0250	1.0248	1.0245	1.0243	1.0240
35.0	1.0281	1.0281	1.0280	1.0279	1.0278	1.0277	1.0276	1.0274	1.0273	1.0271	1.0270	1.0268	1.0266	1.0264	1.0262	1.0260	1.0258	1.0255	1.0253	1.0250	1.0248
36.0	1.0289	1.0289	1.0288	1.0287	1.0286	1.0285	1.0283	1.0282	1.0281	1.0279	1.0277	1.0276	1.0274	1.0272	1.0270	1.0267	1.0265	1.0263	1.0260	1.0258	1.0255
37.0	1.0297	1.0297	1.0296	1.0295	1.0294	1.0293	1.0291	1.0290	1.0289	1.0287	1.0285	1.0283	1.0281	1.0279	1.0277	1.0275	1.0273	1.0271	1.0268	1.0266	1.0263
38.0	1.0305	1.0305	1.0304	1.0303	1.0302	1.0301	1.0299	1.0298	1.0296	1.0295	1.0293	1.0291	1.0289	1.0287	1.0285	1.0283	1.0281	1.0278	1.0276	1.0273	1.0271
39.0	1.0313	1.0313	1.0312	1.0311	1.0310	1.0309	1.0307	1.0306	1.0304	1.0303	1.0301	1.0299	1.0297	1.0295	1.0293	1.0291	1.0288	1.0286	1.0283	1.0281	1.0278
40.0	1.0322	1.0321	1.0320	1.0319	1.0318	1.0316	1.0315	1.0314	1.0312	1.0310	1.0309	1.0307	1.0305	1.0303	1.0301	1.0298	1.0296	1.0294	1.0291	1.0289	1.0286

DATA-TABLE 10 *by Niels Ramsing & Jens Gundersen*

Density of seawater at different temperatures and salinities

Units: g/cm3

Salinity	Temperature (°C)																				
(‰)	20.0	21.0	22.0	23.0	24.0	25.0	26.0	27.0	28.0	29.0	30.0	31.0	32.0	33.0	34.0	35.0	36.0	37.0	38.0	39.0	40.0
0.0	0.9982	0.9980	0.9978	0.9975	0.9973	0.9970	0.9968	0.9965	0.9962	0.9959	0.9957	0.9953	0.9950	0.9947	0.9944	0.9940	0.9937	0.9933	0.9930	0.9926	0.9922
1.0	0.9990	0.9988	0.9985	0.9983	0.9981	0.9978	0.9975	0.9973	0.9970	0.9967	0.9964	0.9961	0.9958	0.9955	0.9951	0.9948	0.9944	0.9941	0.9937	0.9933	0.9930
2.0	0.9997	0.9995	0.9993	0.9991	0.9988	0.9986	0.9983	0.9980	0.9977	0.9974	0.9971	0.9968	0.9965	0.9962	0.9959	0.9955	0.9952	0.9948	0.9945	0.9941	0.9937
3.0	1.0005	1.0003	1.0001	0.9998	0.9996	0.9993	0.9990	0.9988	0.9985	0.9982	0.9979	0.9976	0.9973	0.9969	0.9966	0.9963	0.9959	0.9956	0.9952	0.9948	0.9944
4.0	1.0013	1.0010	1.0008	1.0006	1.0003	1.0001	0.9998	0.9995	0.9992	0.9989	0.9986	0.9983	0.9980	0.9977	0.9973	0.9970	0.9967	0.9963	0.9959	0.9956	0.9952
5.0	1.0020	1.0018	1.0016	1.0013	1.0011	1.0008	1.0005	1.0003	1.0000	0.9997	0.9994	0.9991	0.9987	0.9984	0.9981	0.9977	0.9974	0.9970	0.9967	0.9963	0.9959
6.0	1.0028	1.0025	1.0023	1.0021	1.0018	1.0016	1.0013	1.0010	1.0007	1.0004	1.0001	0.9998	0.9995	0.9992	0.9988	0.9985	0.9981	0.9978	0.9974	0.9970	0.9966
7.0	1.0035	1.0033	1.0031	1.0028	1.0026	1.0023	1.0020	1.0018	1.0015	1.0012	1.0009	1.0006	1.0002	0.9999	0.9996	0.9992	0.9989	0.9985	0.9981	0.9978	0.9974
8.0	1.0043	1.0041	1.0038	1.0036	1.0033	1.0031	1.0028	1.0025	1.0022	1.0019	1.0016	1.0013	1.0010	1.0006	1.0003	1.0000	0.9996	0.9992	0.9989	0.9985	0.9981
9.0	1.0050	1.0048	1.0046	1.0043	1.0041	1.0038	1.0035	1.0033	1.0030	1.0027	1.0024	1.0020	1.0017	1.0014	1.0010	1.0007	1.0003	1.0000	0.9996	0.9992	0.9988
10.0	1.0058	1.0056	1.0053	1.0051	1.0048	1.0046	1.0043	1.0040	1.0037	1.0034	1.0031	1.0028	1.0025	1.0021	1.0018	1.0014	1.0011	1.0007	1.0003	1.0000	0.9996
11.0	1.0066	1.0063	1.0061	1.0058	1.0056	1.0053	1.0050	1.0047	1.0045	1.0042	1.0038	1.0035	1.0032	1.0029	1.0025	1.0022	1.0018	1.0015	1.0011	1.0007	1.0003
12.0	1.0073	1.0071	1.0068	1.0066	1.0063	1.0061	1.0058	1.0055	1.0052	1.0049	1.0046	1.0043	1.0039	1.0036	1.0033	1.0029	1.0026	1.0022	1.0018	1.0014	1.0010
13.0	1.0081	1.0078	1.0076	1.0073	1.0071	1.0068	1.0065	1.0062	1.0059	1.0056	1.0053	1.0050	1.0047	1.0043	1.0040	1.0036	1.0033	1.0029	1.0025	1.0022	1.0018
14.0	1.0088	1.0086	1.0083	1.0081	1.0078	1.0076	1.0073	1.0070	1.0067	1.0064	1.0061	1.0057	1.0054	1.0051	1.0047	1.0044	1.0040	1.0037	1.0033	1.0029	1.0025
15.0	1.0096	1.0093	1.0091	1.0088	1.0086	1.0083	1.0080	1.0077	1.0074	1.0071	1.0068	1.0065	1.0062	1.0058	1.0055	1.0051	1.0048	1.0044	1.0040	1.0036	1.0032
16.0	1.0103	1.0101	1.0099	1.0096	1.0093	1.0091	1.0088	1.0085	1.0082	1.0079	1.0076	1.0072	1.0069	1.0066	1.0062	1.0059	1.0055	1.0051	1.0048	1.0044	1.0040
17.0	1.0111	1.0109	1.0106	1.0103	1.0101	1.0098	1.0095	1.0092	1.0089	1.0086	1.0083	1.0080	1.0076	1.0073	1.0070	1.0066	1.0062	1.0059	1.0055	1.0051	1.0047
18.0	1.0119	1.0116	1.0114	1.0111	1.0108	1.0106	1.0103	1.0100	1.0097	1.0094	1.0090	1.0087	1.0084	1.0080	1.0077	1.0073	1.0070	1.0066	1.0062	1.0058	1.0055
19.0	1.0126	1.0124	1.0121	1.0119	1.0116	1.0113	1.0110	1.0107	1.0104	1.0101	1.0098	1.0095	1.0091	1.0088	1.0084	1.0081	1.0077	1.0073	1.0070	1.0066	1.0062
20.0	1.0134	1.0131	1.0129	1.0126	1.0123	1.0121	1.0118	1.0115	1.0112	1.0109	1.0105	1.0102	1.0099	1.0095	1.0092	1.0088	1.0084	1.0081	1.0077	1.0073	1.0069
21.0	1.0141	1.0139	1.0136	1.0134	1.0131	1.0128	1.0125	1.0122	1.0119	1.0116	1.0113	1.0109	1.0106	1.0103	1.0099	1.0096	1.0092	1.0088	1.0084	1.0080	1.0077
22.0	1.0149	1.0146	1.0144	1.0141	1.0138	1.0136	1.0133	1.0130	1.0127	1.0123	1.0120	1.0117	1.0114	1.0110	1.0107	1.0103	1.0099	1.0096	1.0092	1.0088	1.0084
23.0	1.0156	1.0154	1.0151	1.0149	1.0146	1.0143	1.0140	1.0137	1.0134	1.0131	1.0128	1.0124	1.0121	1.0117	1.0114	1.0110	1.0107	1.0103	1.0099	1.0095	1.0091
24.0	1.0164	1.0161	1.0159	1.0156	1.0153	1.0151	1.0148	1.0145	1.0142	1.0138	1.0135	1.0132	1.0128	1.0125	1.0121	1.0118	1.0114	1.0110	1.0106	1.0103	1.0099
25.0	1.0172	1.0169	1.0166	1.0164	1.0161	1.0158	1.0155	1.0152	1.0149	1.0146	1.0143	1.0139	1.0136	1.0132	1.0129	1.0125	1.0121	1.0118	1.0114	1.0110	1.0106
26.0	1.0179	1.0177	1.0174	1.0171	1.0169	1.0166	1.0163	1.0160	1.0157	1.0153	1.0150	1.0147	1.0143	1.0140	1.0136	1.0133	1.0129	1.0125	1.0121	1.0117	1.0113
27.0	1.0187	1.0184	1.0182	1.0179	1.0176	1.0173	1.0170	1.0167	1.0164	1.0161	1.0157	1.0154	1.0151	1.0147	1.0144	1.0140	1.0136	1.0132	1.0129	1.0125	1.0121
28.0	1.0194	1.0192	1.0189	1.0186	1.0184	1.0181	1.0178	1.0175	1.0171	1.0168	1.0165	1.0162	1.0158	1.0155	1.0151	1.0147	1.0144	1.0140	1.0136	1.0132	1.0128
29.0	1.0202	1.0199	1.0197	1.0194	1.0191	1.0188	1.0185	1.0182	1.0179	1.0176	1.0172	1.0169	1.0166	1.0162	1.0158	1.0155	1.0151	1.0147	1.0143	1.0139	1.0135
30.0	1.0210	1.0207	1.0204	1.0202	1.0199	1.0196	1.0193	1.0190	1.0186	1.0183	1.0180	1.0177	1.0173	1.0170	1.0166	1.0162	1.0158	1.0155	1.0151	1.0147	1.0143
31.0	1.0217	1.0215	1.0212	1.0209	1.0206	1.0203	1.0200	1.0197	1.0194	1.0191	1.0187	1.0184	1.0180	1.0177	1.0173	1.0170	1.0166	1.0162	1.0158	1.0154	1.0150
32.0	1.0225	1.0222	1.0219	1.0217	1.0214	1.0211	1.0208	1.0205	1.0201	1.0198	1.0195	1.0191	1.0188	1.0184	1.0181	1.0177	1.0173	1.0169	1.0166	1.0162	1.0158
33.0	1.0232	1.0230	1.0227	1.0224	1.0221	1.0218	1.0215	1.0212	1.0209	1.0206	1.0202	1.0199	1.0195	1.0192	1.0188	1.0185	1.0181	1.0177	1.0173	1.0169	1.0165
34.0	1.0240	1.0237	1.0235	1.0232	1.0229	1.0226	1.0223	1.0220	1.0216	1.0213	1.0210	1.0206	1.0203	1.0199	1.0196	1.0192	1.0188	1.0184	1.0180	1.0176	1.0172
35.0	1.0248	1.0245	1.0242	1.0239	1.0236	1.0233	1.0230	1.0227	1.0224	1.0221	1.0217	1.0214	1.0210	1.0207	1.0203	1.0199	1.0196	1.0192	1.0188	1.0184	1.0180
36.0	1.0255	1.0253	1.0250	1.0247	1.0244	1.0241	1.0238	1.0235	1.0232	1.0228	1.0225	1.0221	1.0218	1.0214	1.0211	1.0207	1.0203	1.0199	1.0195	1.0191	1.0187
37.0	1.0263	1.0260	1.0257	1.0255	1.0252	1.0249	1.0245	1.0242	1.0239	1.0236	1.0232	1.0229	1.0225	1.0222	1.0218	1.0214	1.0210	1.0207	1.0203	1.0199	1.0195
38.0	1.0271	1.0268	1.0265	1.0262	1.0259	1.0256	1.0253	1.0250	1.0247	1.0243	1.0240	1.0236	1.0233	1.0229	1.0225	1.0222	1.0218	1.0214	1.0210	1.0206	1.0202
39.0	1.0278	1.0275	1.0273	1.0270	1.0267	1.0264	1.0261	1.0257	1.0254	1.0251	1.0247	1.0244	1.0240	1.0237	1.0233	1.0229	1.0225	1.0221	1.0218	1.0213	1.0209
40.0	1.0286	1.0283	1.0280	1.0277	1.0274	1.0271	1.0268	1.0265	1.0262	1.0258	1.0255	1.0251	1.0248	1.0244	1.0240	1.0237	1.0233	1.0229	1.0225	1.0221	1.0217

Density of seawater at different temperatures and salinities

Units: g/cm3

Salinity	Temperature (°C)																				
(‰)	0.0	5.0	10.0	15.0	20.0	25.0	30.0	35.0	40.0	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0	90.0	95.0	100.0
0.0	0.9998	1.0000	0.9997	0.9991	0.9982	0.9970	0.9957	0.9940	0.9922	0.9902	0.9881	0.9858	0.9834	0.9809	0.9785	0.9761	0.9739	0.9720	0.9704	0.9694	0.9692
5.0	1.0039	1.0040	1.0036	1.0030	1.0020	1.0008	0.9994	0.9977	0.9959	0.9939	0.9917	0.9894	0.9871	0.9846	0.9822	0.9799	0.9777	0.9759	0.9745	0.9736	0.9736
10.0	1.0080	1.0079	1.0075	1.0068	1.0058	1.0046	1.0031	1.0014	0.9996	0.9976	0.9954	0.9931	0.9907	0.9883	0.9859	0.9836	0.9815	0.9798	0.9784	0.9777	0.9778
15.0	1.0120	1.0119	1.0114	1.0106	1.0096	1.0083	1.0068	1.0051	1.0032	1.0012	0.9990	0.9967	0.9944	0.9920	0.9896	0.9873	0.9853	0.9836	0.9824	0.9818	0.9820
20.0	1.0160	1.0158	1.0153	1.0144	1.0134	1.0121	1.0105	1.0088	1.0069	1.0049	1.0027	1.0004	0.9980	0.9956	0.9933	0.9910	0.9891	0.9874	0.9863	0.9858	0.9862
25.0	1.0200	1.0198	1.0192	1.0183	1.0172	1.0158	1.0143	1.0125	1.0106	1.0085	1.0063	1.0040	1.0016	0.9993	0.9969	0.9947	0.9928	0.9912	0.9902	0.9898	0.9904
30.0	1.0241	1.0237	1.0231	1.0221	1.0210	1.0196	1.0180	1.0162	1.0143	1.0122	1.0100	1.0077	1.0053	1.0029	1.0006	0.9984	0.9965	0.9950	0.9941	0.9938	0.9945
35.0	1.0281	1.0277	1.0270	1.0260	1.0248	1.0233	1.0217	1.0199	1.0180	1.0159	1.0136	1.0113	1.0089	1.0066	1.0043	1.0021	1.0003	0.9988	0.9979	0.9978	0.9986
40.0	1.0322	1.0316	1.0309	1.0298	1.0286	1.0271	1.0255	1.0237	1.0217	1.0196	1.0173	1.0150	1.0126	1.0102	1.0079	1.0058	1.0040	1.0026	1.0018	1.0018	1.0027
45.0	1.0362	1.0356	1.0348	1.0337	1.0324	1.0309	1.0293	1.0274	1.0254	1.0233	1.0210	1.0186	1.0163	1.0139	1.0116	1.0095	1.0077	1.0064	1.0057	1.0057	1.0068
50.0	1.0403	1.0396	1.0387	1.0376	1.0363	1.0347	1.0330	1.0312	1.0291	1.0270	1.0247	1.0223	1.0199	1.0176	1.0153	1.0132	1.0115	1.0102	1.0095	1.0097	1.0109
55.0	1.0443	1.0436	1.0427	1.0415	1.0401	1.0386	1.0368	1.0349	1.0329	1.0307	1.0284	1.0260	1.0236	1.0212	1.0190	1.0169	1.0152	1.0140	1.0134	1.0136	1.0149
60.0	1.0484	1.0476	1.0466	1.0454	1.0440	1.0424	1.0406	1.0387	1.0366	1.0344	1.0321	1.0297	1.0273	1.0249	1.0227	1.0206	1.0190	1.0178	1.0172	1.0176	1.0190
65.0	1.0525	1.0516	1.0506	1.0493	1.0479	1.0462	1.0444	1.0425	1.0404	1.0382	1.0358	1.0334	1.0310	1.0286	1.0264	1.0244	1.0227	1.0215	1.0211	1.0215	1.0230
70.0	1.0566	1.0557	1.0546	1.0532	1.0518	1.0501	1.0483	1.0463	1.0442	1.0419	1.0396	1.0372	1.0347	1.0323	1.0301	1.0281	1.0264	1.0253	1.0249	1.0254	1.0271
75.0	1.0607	1.0597	1.0585	1.0572	1.0557	1.0540	1.0521	1.0501	1.0480	1.0457	1.0433	1.0409	1.0384	1.0361	1.0338	1.0318	1.0302	1.0291	1.0288	1.0294	1.0312
80.0	1.0648	1.0638	1.0626	1.0612	1.0596	1.0579	1.0560	1.0540	1.0518	1.0495	1.0471	1.0446	1.0422	1.0398	1.0375	1.0356	1.0340	1.0329	1.0326	1.0333	1.0352
85.0	1.0689	1.0678	1.0666	1.0651	1.0635	1.0618	1.0599	1.0578	1.0556	1.0533	1.0509	1.0484	1.0459	1.0435	1.0413	1.0393	1.0377	1.0367	1.0365	1.0373	1.0393
90.0	1.0731	1.0719	1.0706	1.0691	1.0675	1.0657	1.0638	1.0617	1.0595	1.0571	1.0547	1.0522	1.0497	1.0473	1.0450	1.0431	1.0415	1.0405	1.0404	1.0412	1.0433
95.0	1.0772	1.0760	1.0747	1.0731	1.0715	1.0696	1.0677	1.0656	1.0633	1.0610	1.0585	1.0560	1.0535	1.0510	1.0488	1.0468	1.0453	1.0444	1.0442	1.0451	1.0473
100.0	1.0814	1.0801	1.0787	1.0772	1.0755	1.0736	1.0716	1.0695	1.0672	1.0648	1.0623	1.0598	1.0573	1.0548	1.0526	1.0506	1.0491	1.0482	1.0481	1.0491	1.0514
105.0	1.0856	1.0843	1.0828	1.0812	1.0795	1.0776	1.0756	1.0734	1.0711	1.0687	1.0662	1.0636	1.0611	1.0586	1.0564	1.0544	1.0529	1.0520	1.0520	1.0530	1.0554
110.0	1.0898	1.0884	1.0869	1.0852	1.0835	1.0816	1.0795	1.0773	1.0750	1.0726	1.0700	1.0674	1.0649	1.0624	1.0601	1.0582	1.0567	1.0559	1.0559	1.0570	1.0595
115.0	1.0940	1.0926	1.0910	1.0893	1.0875	1.0856	1.0835	1.0813	1.0789	1.0765	1.0739	1.0713	1.0687	1.0662	1.0640	1.0620	1.0605	1.0597	1.0598	1.0610	1.0636
120.0	1.0982	1.0967	1.0951	1.0934	1.0916	1.0896	1.0875	1.0852	1.0829	1.0804	1.0778	1.0752	1.0726	1.0701	1.0678	1.0658	1.0644	1.0636	1.0637	1.0649	1.0676
125.0	1.1025	1.1009	1.0993	1.0975	1.0956	1.0936	1.0915	1.0892	1.0868	1.0843	1.0817	1.0790	1.0764	1.0739	1.0716	1.0697	1.0682	1.0674	1.0676	1.0689	1.0717
130.0	1.1067	1.1051	1.1034	1.1016	1.0997	1.0977	1.0955	1.0932	1.0908	1.0882	1.0856	1.0829	1.0803	1.0778	1.0755	1.0735	1.0721	1.0713	1.0715	1.0729	1.0757
135.0	1.1110	1.1093	1.1076	1.1058	1.1038	1.1018	1.0996	1.0972	1.0948	1.0922	1.0896	1.0869	1.0842	1.0816	1.0793	1.0774	1.0759	1.0752	1.0754	1.0769	1.0798
140.0	1.1153	1.1136	1.1118	1.1099	1.1079	1.1059	1.1036	1.1013	1.0988	1.0962	1.0935	1.0908	1.0881	1.0855	1.0832	1.0812	1.0798	1.0791	1.0794	1.0808	1.0839
145.0	1.1196	1.1178	1.1160	1.1141	1.1121	1.1100	1.1077	1.1053	1.1028	1.1002	1.0975	1.0947	1.0920	1.0894	1.0871	1.0851	1.0837	1.0830	1.0833	1.0848	1.0880
150.0	1.1239	1.1221	1.1202	1.1183	1.1162	1.1141	1.1118	1.1094	1.1069	1.1042	1.1015	1.0987	1.0960	1.0934	1.0910	1.0890	1.0876	1.0869	1.0872	1.0888	1.0921
155.0	1.1282	1.1263	1.1244	1.1225	1.1204	1.1182	1.1159	1.1135	1.1109	1.1082	1.1055	1.1027	1.0999	1.0973	1.0949	1.0929	1.0915	1.0908	1.0912	1.0929	1.0961
160.0	1.1325	1.1306	1.1287	1.1267	1.1246	1.1224	1.1201	1.1176	1.1150	1.1123	1.1095	1.1067	1.1039	1.1012	1.0988	1.0968	1.0954	1.0948	1.0952	1.0969	1.1002
165.0	1.1369	1.1350	1.1330	1.1309	1.1288	1.1266	1.1242	1.1217	1.1191	1.1164	1.1135	1.1107	1.1079	1.1052	1.1028	1.1008	1.0993	1.0987	1.0991	1.1009	1.1043
170.0	1.1413	1.1393	1.1373	1.1352	1.1330	1.1308	1.1284	1.1259	1.1232	1.1204	1.1176	1.1147	1.1119	1.1092	1.1067	1.1047	1.1033	1.1027	1.1031	1.1049	1.1085
175.0	1.1457	1.1436	1.1416	1.1395	1.1373	1.1350	1.1326	1.1300	1.1273	1.1245	1.1217	1.1188	1.1159	1.1132	1.1107	1.1087	1.1072	1.1066	1.1071	1.1090	1.1126
180.0	1.1501	1.1480	1.1459	1.1438	1.1415	1.1392	1.1368	1.1342	1.1315	1.1287	1.1258	1.1228	1.1199	1.1172	1.1147	1.1126	1.1112	1.1106	1.1111	1.1130	1.1167
185.0	1.1545	1.1524	1.1502	1.1481	1.1458	1.1435	1.1410	1.1384	1.1357	1.1328	1.1299	1.1269	1.1240	1.1212	1.1187	1.1166	1.1152	1.1146	1.1151	1.1171	1.1208
190.0	1.1589	1.1568	1.1546	1.1524	1.1501	1.1477	1.1453	1.1426	1.1399	1.1370	1.1340	1.1310	1.1280	1.1252	1.1227	1.1206	1.1192	1.1186	1.1192	1.1212	1.1250
195.0	1.1634	1.1612	1.1590	1.1567	1.1544	1.1520	1.1495	1.1469	1.1441	1.1411	1.1381	1.1351	1.1321	1.1293	1.1267	1.1246	1.1232	1.1226	1.1232	1.1252	1.1291
200.0	1.1679	1.1656	1.1634	1.1611	1.1588	1.1563	1.1538	1.1511	1.1483	1.1453	1.1423	1.1392	1.1362	1.1334	1.1308	1.1287	1.1272	1.1266	1.1272	1.1293	1.1333

Dynamic viscosity at different temperatures and salinities

Units: centipoise = 10^-2 g cm-1 s-1

Salinity	Temperature (°C)																				
(‰)	0.0	1.0	2.0	3.0	4.0	5.0	6.0	7.0	8.0	9.0	10.0	11.0	12.0	13.0	14.0	15.0	16.0	17.0	18.0	19.0	20.0
0.0	1.7898	1.7300	1.6729	1.6185	1.5668	1.5175	1.4706	1.4259	1.3835	1.3432	1.3048	1.2683	1.2336	1.2006	1.1692	1.1392	1.1106	1.0833	1.0572	1.0322	1.0081
1.0	1.7923	1.7325	1.6755	1.6211	1.5693	1.5201	1.4732	1.4285	1.3861	1.3457	1.3074	1.2708	1.2361	1.2031	1.1716	1.1416	1.1130	1.0856	1.0595	1.0344	1.0102
2.0	1.7948	1.7350	1.6780	1.6237	1.5719	1.5227	1.4758	1.4311	1.3887	1.3483	1.3099	1.2734	1.2386	1.2055	1.1740	1.1440	1.1153	1.0879	1.0617	1.0366	1.0124
3.0	1.7972	1.7375	1.6806	1.6263	1.5745	1.5253	1.4784	1.4338	1.3913	1.3509	1.3125	1.2759	1.2411	1.2080	1.1765	1.1464	1.1177	1.0902	1.0640	1.0388	1.0146
4.0	1.7997	1.7400	1.6831	1.6288	1.5771	1.5279	1.4810	1.4364	1.3939	1.3535	1.3150	1.2785	1.2436	1.2105	1.1789	1.1488	1.1200	1.0926	1.0662	1.0410	1.0167
5.0	1.8022	1.7426	1.6857	1.6314	1.5797	1.5305	1.4836	1.4390	1.3965	1.3561	1.3176	1.2810	1.2461	1.2130	1.1813	1.1512	1.1224	1.0949	1.0685	1.0432	1.0189
6.0	1.8047	1.7451	1.6882	1.6340	1.5823	1.5331	1.4862	1.4416	1.3991	1.3586	1.3202	1.2835	1.2486	1.2154	1.1838	1.1536	1.1247	1.0972	1.0708	1.0454	1.0211
7.0	1.8071	1.7476	1.6908	1.6366	1.5849	1.5357	1.4888	1.4442	1.4017	1.3612	1.3227	1.2861	1.2512	1.2179	1.1862	1.1560	1.1271	1.0995	1.0730	1.0476	1.0232
8.0	1.8096	1.7501	1.6933	1.6392	1.5875	1.5383	1.4914	1.4468	1.4043	1.3638	1.3253	1.2886	1.2537	1.2204	1.1886	1.1584	1.1294	1.1018	1.0753	1.0498	1.0254
9.0	1.8121	1.7526	1.6959	1.6417	1.5901	1.5409	1.4940	1.4494	1.4069	1.3664	1.3278	1.2911	1.2562	1.2228	1.1911	1.1608	1.1318	1.1041	1.0775	1.0521	1.0275
10.0	1.8146	1.7551	1.6984	1.6443	1.5927	1.5435	1.4966	1.4520	1.4095	1.3690	1.3304	1.2937	1.2587	1.2253	1.1935	1.1631	1.1341	1.1064	1.0798	1.0543	1.0297
11.0	1.8170	1.7577	1.7010	1.6469	1.5953	1.5461	1.4993	1.4546	1.4121	1.3716	1.3330	1.2962	1.2612	1.2278	1.1959	1.1655	1.1365	1.1087	1.0821	1.0565	1.0319
12.0	1.8195	1.7602	1.7035	1.6495	1.5979	1.5487	1.5019	1.4572	1.4147	1.3741	1.3355	1.2987	1.2637	1.2303	1.1984	1.1679	1.1388	1.1110	1.0843	1.0587	1.0340
13.0	1.8220	1.7627	1.7061	1.6520	1.6005	1.5513	1.5045	1.4598	1.4173	1.3767	1.3381	1.3013	1.2662	1.2327	1.2008	1.1703	1.1412	1.1133	1.0866	1.0609	1.0362
14.0	1.8244	1.7652	1.7086	1.6546	1.6031	1.5539	1.5071	1.4624	1.4199	1.3793	1.3406	1.3038	1.2687	1.2352	1.2032	1.1727	1.1435	1.1156	1.0888	1.0631	1.0384
15.0	1.8269	1.7677	1.7112	1.6572	1.6057	1.5566	1.5097	1.4650	1.4225	1.3819	1.3432	1.3063	1.2712	1.2377	1.2057	1.1751	1.1459	1.1179	1.0911	1.0653	1.0405
16.0	1.8294	1.7702	1.7137	1.6598	1.6083	1.5592	1.5123	1.4676	1.4251	1.3845	1.3458	1.3089	1.2737	1.2401	1.2081	1.1775	1.1482	1.1202	1.0934	1.0675	1.0427
17.0	1.8319	1.7728	1.7163	1.6624	1.6109	1.5618	1.5149	1.4702	1.4277	1.3870	1.3483	1.3114	1.2762	1.2426	1.2106	1.1799	1.1506	1.1225	1.0956	1.0697	1.0448
18.0	1.8343	1.7753	1.7188	1.6649	1.6135	1.5644	1.5175	1.4729	1.4302	1.3896	1.3509	1.3140	1.2787	1.2451	1.2130	1.1823	1.1530	1.1248	1.0979	1.0720	1.0470
19.0	1.8368	1.7778	1.7214	1.6675	1.6161	1.5670	1.5201	1.4755	1.4328	1.3922	1.3535	1.3165	1.2812	1.2476	1.2154	1.1847	1.1553	1.1271	1.1001	1.0742	1.0492
20.0	1.8393	1.7803	1.7239	1.6701	1.6187	1.5696	1.5227	1.4781	1.4354	1.3948	1.3560	1.3190	1.2837	1.2500	1.2179	1.1871	1.1577	1.1294	1.1024	1.0764	1.0513
21.0	1.8418	1.7828	1.7265	1.6727	1.6213	1.5722	1.5254	1.4807	1.4380	1.3974	1.3586	1.3216	1.2862	1.2525	1.2203	1.1895	1.1600	1.1318	1.1046	1.0786	1.0535
22.0	1.8442	1.7853	1.7290	1.6752	1.6239	1.5748	1.5280	1.4833	1.4406	1.4000	1.3611	1.3241	1.2887	1.2550	1.2227	1.1919	1.1624	1.1341	1.1069	1.0808	1.0557
23.0	1.8467	1.7878	1.7316	1.6778	1.6265	1.5774	1.5306	1.4859	1.4432	1.4025	1.3637	1.3266	1.2912	1.2575	1.2252	1.1943	1.1647	1.1364	1.1092	1.0830	1.0578
24.0	1.8492	1.7904	1.7341	1.6804	1.6290	1.5800	1.5332	1.4885	1.4458	1.4051	1.3663	1.3292	1.2938	1.2599	1.2276	1.1967	1.1671	1.1387	1.1114	1.0852	1.0600
25.0	1.8516	1.7929	1.7367	1.6830	1.6316	1.5826	1.5358	1.4911	1.4484	1.4077	1.3688	1.3317	1.2963	1.2624	1.2300	1.1991	1.1694	1.1410	1.1137	1.0874	1.0621
26.0	1.8541	1.7954	1.7392	1.6856	1.6342	1.5852	1.5384	1.4937	1.4510	1.4103	1.3714	1.3342	1.2988	1.2649	1.2325	1.2015	1.1718	1.1433	1.1159	1.0896	1.0643
27.0	1.8566	1.7979	1.7418	1.6881	1.6368	1.5878	1.5410	1.4963	1.4536	1.4129	1.3739	1.3368	1.3013	1.2673	1.2349	1.2038	1.1741	1.1456	1.1182	1.0919	1.0665
28.0	1.8591	1.8004	1.7443	1.6907	1.6394	1.5904	1.5436	1.4989	1.4562	1.4154	1.3765	1.3393	1.3038	1.2698	1.2373	1.2062	1.1765	1.1479	1.1205	1.0941	1.0686
29.0	1.8615	1.8029	1.7469	1.6933	1.6420	1.5930	1.5462	1.5015	1.4588	1.4180	1.3791	1.3418	1.3063	1.2723	1.2398	1.2086	1.1788	1.1502	1.1227	1.0963	1.0708
30.0	1.8640	1.8055	1.7494	1.6959	1.6446	1.5956	1.5488	1.5041	1.4614	1.4206	1.3816	1.3444	1.3088	1.2748	1.2422	1.2110	1.1812	1.1525	1.1250	1.0985	1.0730
31.0	1.8665	1.8080	1.7520	1.6984	1.6472	1.5983	1.5515	1.5067	1.4640	1.4232	1.3842	1.3469	1.3113	1.2772	1.2446	1.2134	1.1835	1.1548	1.1272	1.1007	1.0751
32.0	1.8690	1.8105	1.7545	1.7010	1.6498	1.6009	1.5541	1.5093	1.4666	1.4258	1.3867	1.3495	1.3138	1.2797	1.2471	1.2158	1.1859	1.1571	1.1295	1.1029	1.0773
33.0	1.8714	1.8130	1.7571	1.7036	1.6524	1.6035	1.5567	1.5120	1.4692	1.4284	1.3893	1.3520	1.3163	1.2822	1.2495	1.2182	1.1882	1.1594	1.1318	1.1051	1.0794
34.0	1.8739	1.8155	1.7597	1.7062	1.6550	1.6061	1.5593	1.5146	1.4718	1.4309	1.3919	1.3545	1.3188	1.2846	1.2519	1.2206	1.1906	1.1617	1.1340	1.1073	1.0816
35.0	1.8764	1.8180	1.7622	1.7087	1.6576	1.6087	1.5619	1.5172	1.4744	1.4335	1.3944	1.3571	1.3213	1.2871	1.2544	1.2230	1.1929	1.1640	1.1363	1.1095	1.0838
36.0	1.8788	1.8206	1.7648	1.7113	1.6602	1.6113	1.5645	1.5198	1.4770	1.4361	1.3970	1.3596	1.3238	1.2896	1.2568	1.2254	1.1953	1.1663	1.1385	1.1118	1.0859
37.0	1.8813	1.8231	1.7673	1.7139	1.6628	1.6139	1.5671	1.5224	1.4796	1.4387	1.3996	1.3621	1.3263	1.2921	1.2592	1.2278	1.1976	1.1687	1.1408	1.1140	1.0881
38.0	1.8838	1.8256	1.7699	1.7165	1.6654	1.6165	1.5697	1.5250	1.4822	1.4413	1.4021	1.3647	1.3288	1.2945	1.2617	1.2302	1.2000	1.1710	1.1431	1.1162	1.0903
39.0	1.8863	1.8281	1.7724	1.7191	1.6680	1.6191	1.5723	1.5276	1.4848	1.4438	1.4047	1.3672	1.3313	1.2970	1.2641	1.2326	1.2023	1.1733	1.1453	1.1184	1.0924
40.0	1.8887	1.8306	1.7750	1.7216	1.6706	1.6217	1.5749	1.5302	1.4874	1.4464	1.4072	1.3697	1.3338	1.2995	1.2665	1.2350	1.2047	1.1756	1.1476	1.1206	1.0946

DATA-TABLE 13 *by Niels Ramsing & Jens Gundersen*

Dynamic viscosity at different temperatures and salinities

Units: centipoise = 10^-2 g cm-1 s-1

Salinity	Temperature (°C)																				
(‰)	20.0	21.0	22.0	23.0	24.0	25.0	26.0	27.0	28.0	29.0	30.0	31.0	32.0	33.0	34.0	35.0	36.0	37.0	38.0	39.0	40.0
0.0	1.0081	0.9849	0.9625	0.9407	0.9195	0.8988	0.8785	0.8584	0.8385	0.8186	0.7988	0.7787	0.7585	0.7379	0.7169	0.6953	0.6731	0.6502	0.6264	0.6016	0.5758
1.0	1.0102	0.9870	0.9645	0.9427	0.9215	0.9007	0.8803	0.8602	0.8403	0.8204	0.8005	0.7804	0.7602	0.7396	0.7185	0.6970	0.6747	0.6518	0.6280	0.6033	0.5776
2.0	1.0124	0.9891	0.9666	0.9447	0.9235	0.9026	0.8822	0.8621	0.8421	0.8222	0.8022	0.7821	0.7619	0.7412	0.7202	0.6986	0.6764	0.6535	0.6297	0.6050	0.5793
3.0	1.0146	0.9912	0.9686	0.9467	0.9254	0.9046	0.8841	0.8639	0.8439	0.8239	0.8039	0.7839	0.7635	0.7429	0.7218	0.7002	0.6780	0.6551	0.6314	0.6067	0.5810
4.0	1.0167	0.9933	0.9707	0.9488	0.9274	0.9065	0.8860	0.8657	0.8457	0.8257	0.8057	0.7856	0.7652	0.7446	0.7235	0.7019	0.6797	0.6568	0.6330	0.6084	0.5827
5.0	1.0189	0.9954	0.9728	0.9508	0.9294	0.9084	0.8879	0.8676	0.8475	0.8274	0.8074	0.7873	0.7669	0.7462	0.7251	0.7035	0.6813	0.6584	0.6347	0.6101	0.5845
6.0	1.0211	0.9976	0.9748	0.9528	0.9313	0.9103	0.8897	0.8694	0.8493	0.8292	0.8091	0.7890	0.7686	0.7479	0.7268	0.7052	0.6830	0.6601	0.6364	0.6118	0.5862
7.0	1.0232	0.9997	0.9769	0.9548	0.9333	0.9123	0.8916	0.8712	0.8511	0.8310	0.8109	0.7907	0.7703	0.7496	0.7284	0.7068	0.6846	0.6617	0.6381	0.6135	0.5879
8.0	1.0254	1.0018	0.9790	0.9568	0.9353	0.9142	0.8935	0.8731	0.8529	0.8327	0.8126	0.7924	0.7719	0.7512	0.7301	0.7085	0.6863	0.6634	0.6397	0.6152	0.5896
9.0	1.0275	1.0039	0.9810	0.9588	0.9372	0.9161	0.8954	0.8749	0.8547	0.8345	0.8143	0.7941	0.7736	0.7529	0.7317	0.7101	0.6879	0.6651	0.6414	0.6169	0.5914
10.0	1.0297	1.0060	0.9831	0.9609	0.9392	0.9180	0.8972	0.8768	0.8565	0.8363	0.8161	0.7958	0.7753	0.7545	0.7334	0.7118	0.6896	0.6667	0.6431	0.6186	0.5931
11.0	1.0319	1.0081	0.9852	0.9629	0.9412	0.9200	0.8991	0.8786	0.8583	0.8380	0.8178	0.7975	0.7770	0.7562	0.7351	0.7134	0.6912	0.6684	0.6447	0.6203	0.5948
12.0	1.0340	1.0102	0.9872	0.9649	0.9431	0.9219	0.9010	0.8804	0.8601	0.8398	0.8195	0.7992	0.7787	0.7579	0.7367	0.7151	0.6929	0.6700	0.6464	0.6220	0.5966
13.0	1.0362	1.0124	0.9893	0.9669	0.9451	0.9238	0.9029	0.8823	0.8619	0.8416	0.8213	0.8009	0.7804	0.7595	0.7384	0.7167	0.6945	0.6717	0.6481	0.6236	0.5983
14.0	1.0384	1.0145	0.9914	0.9689	0.9471	0.9257	0.9048	0.8841	0.8637	0.8433	0.8230	0.8026	0.7820	0.7612	0.7400	0.7184	0.6962	0.6733	0.6498	0.6253	0.6000
15.0	1.0405	1.0166	0.9934	0.9709	0.9490	0.9276	0.9066	0.8859	0.8655	0.8451	0.8247	0.8043	0.7837	0.7629	0.7417	0.7200	0.6978	0.6750	0.6514	0.6270	0.6017
16.0	1.0427	1.0187	0.9955	0.9730	0.9510	0.9296	0.9085	0.8878	0.8673	0.8468	0.8265	0.8060	0.7854	0.7645	0.7433	0.7217	0.6995	0.6766	0.6531	0.6287	0.6035
17.0	1.0448	1.0208	0.9975	0.9750	0.9530	0.9315	0.9104	0.8896	0.8690	0.8486	0.8282	0.8077	0.7871	0.7662	0.7450	0.7233	0.7011	0.6783	0.6548	0.6304	0.6052
18.0	1.0470	1.0229	0.9996	0.9770	0.9549	0.9334	0.9123	0.8915	0.8708	0.8504	0.8299	0.8094	0.7888	0.7679	0.7466	0.7250	0.7028	0.6800	0.6564	0.6321	0.6069
19.0	1.0492	1.0250	1.0017	0.9790	0.9569	0.9353	0.9142	0.8933	0.8726	0.8521	0.8317	0.8111	0.7904	0.7695	0.7483	0.7266	0.7044	0.6816	0.6581	0.6338	0.6086
20.0	1.0513	1.0271	1.0037	0.9810	0.9589	0.9373	0.9160	0.8951	0.8744	0.8539	0.8334	0.8128	0.7921	0.7712	0.7499	0.7282	0.7061	0.6833	0.6598	0.6355	0.6104
21.0	1.0535	1.0293	1.0058	0.9830	0.9609	0.9392	0.9179	0.8970	0.8762	0.8557	0.8351	0.8145	0.7938	0.7729	0.7516	0.7299	0.7077	0.6849	0.6614	0.6372	0.6121
22.0	1.0557	1.0314	1.0079	0.9850	0.9628	0.9411	0.9198	0.8988	0.8780	0.8574	0.8369	0.8162	0.7955	0.7745	0.7532	0.7315	0.7094	0.6866	0.6631	0.6389	0.6138
23.0	1.0578	1.0335	1.0099	0.9871	0.9648	0.9430	0.9217	0.9006	0.8798	0.8592	0.8386	0.8179	0.7972	0.7762	0.7549	0.7332	0.7110	0.6882	0.6648	0.6406	0.6155
24.0	1.0600	1.0356	1.0120	0.9891	0.9668	0.9449	0.9235	0.9025	0.8816	0.8609	0.8403	0.8196	0.7989	0.7778	0.7565	0.7348	0.7126	0.6899	0.6665	0.6423	0.6173
25.0	1.0621	1.0377	1.0141	0.9911	0.9687	0.9469	0.9254	0.9043	0.8834	0.8627	0.8420	0.8214	0.8005	0.7795	0.7582	0.7365	0.7143	0.6915	0.6681	0.6440	0.6190
26.0	1.0643	1.0398	1.0161	0.9931	0.9707	0.9488	0.9273	0.9061	0.8852	0.8645	0.8438	0.8231	0.8022	0.7812	0.7598	0.7381	0.7159	0.6932	0.6698	0.6457	0.6207
27.0	1.0665	1.0419	1.0182	0.9951	0.9727	0.9507	0.9292	0.9080	0.8870	0.8662	0.8455	0.8248	0.8039	0.7828	0.7615	0.7398	0.7176	0.6949	0.6715	0.6474	0.6224
28.0	1.0686	1.0441	1.0203	0.9971	0.9746	0.9526	0.9311	0.9098	0.8888	0.8680	0.8472	0.8265	0.8056	0.7845	0.7632	0.7414	0.7192	0.6965	0.6731	0.6491	0.6242
29.0	1.0708	1.0462	1.0223	0.9992	0.9766	0.9546	0.9329	0.9117	0.8906	0.8698	0.8490	0.8282	0.8073	0.7862	0.7648	0.7431	0.7209	0.6982	0.6748	0.6508	0.6259
30.0	1.0730	1.0483	1.0244	1.0012	0.9786	0.9565	0.9348	0.9135	0.8924	0.8715	0.8507	0.8299	0.8089	0.7878	0.7665	0.7447	0.7225	0.6998	0.6765	0.6524	0.6276
31.0	1.0751	1.0504	1.0264	1.0032	0.9805	0.9584	0.9367	0.9153	0.8942	0.8733	0.8524	0.8316	0.8106	0.7895	0.7681	0.7464	0.7242	0.7015	0.6782	0.6541	0.6293
32.0	1.0773	1.0525	1.0285	1.0052	0.9825	0.9603	0.9386	0.9172	0.8960	0.8751	0.8542	0.8333	0.8123	0.7912	0.7698	0.7480	0.7258	0.7031	0.6798	0.6558	0.6311
33.0	1.0794	1.0546	1.0306	1.0072	0.9845	0.9622	0.9405	0.9190	0.8978	0.8768	0.8559	0.8350	0.8140	0.7928	0.7714	0.7497	0.7275	0.7048	0.6815	0.6575	0.6328
34.0	1.0816	1.0567	1.0326	1.0092	0.9864	0.9642	0.9423	0.9208	0.8996	0.8786	0.8576	0.8367	0.8157	0.7945	0.7731	0.7513	0.7291	0.7064	0.6832	0.6592	0.6345
35.0	1.0838	1.0588	1.0347	1.0113	0.9884	0.9661	0.9442	0.9227	0.9014	0.8803	0.8594	0.8384	0.8174	0.7962	0.7747	0.7530	0.7308	0.7081	0.6848	0.6609	0.6362
36.0	1.0859	1.0610	1.0368	1.0133	0.9904	0.9680	0.9461	0.9245	0.9032	0.8821	0.8611	0.8401	0.8190	0.7978	0.7764	0.7546	0.7324	0.7098	0.6865	0.6626	0.6380
37.0	1.0881	1.0631	1.0388	1.0153	0.9923	0.9699	0.9480	0.9264	0.9050	0.8839	0.8628	0.8418	0.8207	0.7995	0.7780	0.7562	0.7341	0.7114	0.6882	0.6643	0.6397
38.0	1.0903	1.0652	1.0409	1.0173	0.9943	0.9719	0.9498	0.9282	0.9068	0.8856	0.8646	0.8435	0.8224	0.8012	0.7797	0.7579	0.7357	0.7131	0.6899	0.6660	0.6414
39.0	1.0924	1.0673	1.0430	1.0193	0.9963	0.9738	0.9517	0.9300	0.9086	0.8874	0.8663	0.8452	0.8241	0.8028	0.7813	0.7595	0.7374	0.7147	0.6915	0.6677	0.6431
40.0	1.0946	1.0694	1.0450	1.0213	0.9983	0.9757	0.9536	0.9319	0.9104	0.8892	0.8680	0.8469	0.8258	0.8045	0.7830	0.7612	0.7390	0.7164	0.6932	0.6694	0.6449

Kinematic viscosity at different temperatures and salinities

Units: 10^-2 cm2 s-1

Salinity	Temperature (°C)																				
(‰)	0.0	1.0	2.0	3.0	4.0	5.0	6.0	7.0	8.0	9.0	10.0	11.0	12.0	13.0	14.0	15.0	16.0	17.0	18.0	19.0	20.0
0.0	1.7901	1.7301	1.6730	1.6186	1.5668	1.5175	1.4706	1.4261	1.3837	1.3434	1.3052	1.2688	1.2342	1.2013	1.1700	1.1402	1.1118	1.0847	1.0587	1.0338	1.0099
1.0	1.7911	1.7312	1.6742	1.6199	1.5681	1.5189	1.4721	1.4275	1.3852	1.3450	1.3067	1.2703	1.2358	1.2029	1.1716	1.1417	1.1133	1.0861	1.0601	1.0352	1.0113
2.0	1.7921	1.7324	1.6754	1.6211	1.5695	1.5203	1.4735	1.4290	1.3867	1.3465	1.3082	1.2719	1.2373	1.2044	1.1731	1.1433	1.1148	1.0876	1.0616	1.0366	1.0127
3.0	1.7931	1.7335	1.6766	1.6224	1.5708	1.5217	1.4749	1.4305	1.3882	1.3480	1.3098	1.2734	1.2389	1.2060	1.1746	1.1448	1.1163	1.0891	1.0630	1.0381	1.0141
4.0	1.7942	1.7346	1.6778	1.6237	1.5721	1.5231	1.4764	1.4320	1.3897	1.3495	1.3113	1.2750	1.2404	1.2075	1.1762	1.1463	1.1178	1.0905	1.0645	1.0395	1.0155
5.0	1.7952	1.7357	1.6790	1.6249	1.5735	1.5245	1.4778	1.4334	1.3912	1.3511	1.3129	1.2765	1.2419	1.2090	1.1777	1.1478	1.1193	1.0920	1.0659	1.0409	1.0169
6.0	1.7962	1.7368	1.6802	1.6262	1.5748	1.5259	1.4793	1.4349	1.3927	1.3526	1.3144	1.2781	1.2435	1.2106	1.1792	1.1493	1.1208	1.0935	1.0674	1.0423	1.0182
7.0	1.7972	1.7379	1.6814	1.6275	1.5762	1.5272	1.4807	1.4364	1.3942	1.3541	1.3159	1.2796	1.2450	1.2121	1.1807	1.1508	1.1222	1.0949	1.0688	1.0437	1.0196
8.0	1.7982	1.7390	1.6826	1.6288	1.5775	1.5286	1.4821	1.4378	1.3957	1.3556	1.3174	1.2811	1.2465	1.2136	1.1822	1.1523	1.1237	1.0964	1.0702	1.0451	1.0210
9.0	1.7992	1.7401	1.6838	1.6300	1.5788	1.5300	1.4836	1.4393	1.3972	1.3571	1.3190	1.2827	1.2481	1.2151	1.1838	1.1538	1.1252	1.0979	1.0717	1.0466	1.0224
10.0	1.8002	1.7412	1.6850	1.6313	1.5802	1.5314	1.4850	1.4408	1.3987	1.3586	1.3205	1.2842	1.2496	1.2167	1.1853	1.1553	1.1267	1.0993	1.0731	1.0480	1.0238
11.0	1.8012	1.7424	1.6862	1.6326	1.5815	1.5328	1.4864	1.4422	1.4002	1.3601	1.3220	1.2857	1.2511	1.2182	1.1868	1.1568	1.1282	1.1008	1.0746	1.0494	1.0252
12.0	1.8023	1.7435	1.6874	1.6338	1.5828	1.5342	1.4878	1.4437	1.4017	1.3617	1.3235	1.2872	1.2527	1.2197	1.1883	1.1583	1.1297	1.1022	1.0760	1.0508	1.0265
13.0	1.8033	1.7446	1.6885	1.6351	1.5841	1.5356	1.4893	1.4452	1.4032	1.3632	1.3251	1.2888	1.2542	1.2212	1.1898	1.1598	1.1311	1.1037	1.0774	1.0522	1.0279
14.0	1.8043	1.7457	1.6897	1.6364	1.5855	1.5369	1.4907	1.4466	1.4046	1.3647	1.3266	1.2903	1.2557	1.2228	1.1913	1.1613	1.1326	1.1052	1.0788	1.0536	1.0293
15.0	1.8053	1.7468	1.6909	1.6376	1.5868	1.5383	1.4921	1.4481	1.4061	1.3662	1.3281	1.2918	1.2572	1.2243	1.1928	1.1628	1.1341	1.1066	1.0803	1.0550	1.0307
16.0	1.8063	1.7479	1.6921	1.6389	1.5881	1.5397	1.4935	1.4495	1.4076	1.3677	1.3296	1.2933	1.2588	1.2258	1.1943	1.1643	1.1355	1.1080	1.0817	1.0564	1.0320
17.0	1.8073	1.7490	1.6933	1.6401	1.5894	1.5411	1.4949	1.4510	1.4091	1.3692	1.3311	1.2948	1.2603	1.2273	1.1958	1.1658	1.1370	1.1095	1.0831	1.0578	1.0334
18.0	1.8083	1.7501	1.6945	1.6414	1.5907	1.5424	1.4964	1.4524	1.4106	1.3707	1.3326	1.2964	1.2618	1.2288	1.1973	1.1672	1.1385	1.1109	1.0845	1.0592	1.0347
19.0	1.8093	1.7512	1.6956	1.6426	1.5921	1.5438	1.4978	1.4539	1.4120	1.3721	1.3341	1.2979	1.2633	1.2303	1.1988	1.1687	1.1399	1.1124	1.0859	1.0606	1.0361
20.0	1.8103	1.7523	1.6968	1.6439	1.5934	1.5452	1.4992	1.4553	1.4135	1.3736	1.3356	1.2994	1.2648	1.2318	1.2003	1.1702	1.1414	1.1138	1.0874	1.0619	1.0375
21.0	1.8113	1.7534	1.6980	1.6451	1.5947	1.5465	1.5006	1.4568	1.4150	1.3751	1.3371	1.3009	1.2663	1.2333	1.2018	1.1717	1.1428	1.1152	1.0888	1.0633	1.0388
22.0	1.8123	1.7544	1.6992	1.6464	1.5960	1.5479	1.5020	1.4582	1.4164	1.3766	1.3386	1.3024	1.2678	1.2348	1.2033	1.1731	1.1443	1.1167	1.0902	1.0647	1.0402
23.0	1.8133	1.7555	1.7003	1.6476	1.5973	1.5492	1.5034	1.4596	1.4179	1.3781	1.3401	1.3039	1.2693	1.2363	1.2048	1.1746	1.1458	1.1181	1.0916	1.0661	1.0415
24.0	1.8143	1.7566	1.7015	1.6489	1.5986	1.5506	1.5048	1.4611	1.4194	1.3796	1.3416	1.3054	1.2708	1.2378	1.2062	1.1761	1.1472	1.1195	1.0930	1.0675	1.0429
25.0	1.8153	1.7577	1.7027	1.6501	1.5999	1.5520	1.5062	1.4625	1.4208	1.3810	1.3431	1.3069	1.2723	1.2393	1.2077	1.1775	1.1486	1.1210	1.0944	1.0688	1.0442
26.0	1.8163	1.7588	1.7039	1.6514	1.6012	1.5533	1.5076	1.4639	1.4223	1.3825	1.3446	1.3084	1.2738	1.2408	1.2092	1.1790	1.1501	1.1224	1.0958	1.0702	1.0456
27.0	1.8172	1.7599	1.7050	1.6526	1.6025	1.5547	1.5090	1.4654	1.4237	1.3840	1.3461	1.3099	1.2753	1.2422	1.2107	1.1805	1.1515	1.1238	1.0972	1.0716	1.0469
28.0	1.8182	1.7610	1.7062	1.6538	1.6038	1.5560	1.5104	1.4668	1.4252	1.3855	1.3475	1.3113	1.2768	1.2437	1.2121	1.1819	1.1530	1.1252	1.0986	1.0730	1.0483
29.0	1.8192	1.7620	1.7073	1.6551	1.6051	1.5573	1.5117	1.4682	1.4266	1.3869	1.3490	1.3128	1.2782	1.2452	1.2136	1.1834	1.1544	1.1266	1.1000	1.0743	1.0496
30.0	1.8202	1.7631	1.7085	1.6563	1.6064	1.5587	1.5131	1.4696	1.4281	1.3884	1.3505	1.3143	1.2797	1.2467	1.2151	1.1848	1.1558	1.1281	1.1014	1.0757	1.0509
31.0	1.8212	1.7642	1.7097	1.6575	1.6077	1.5600	1.5145	1.4710	1.4295	1.3899	1.3520	1.3158	1.2812	1.2482	1.2165	1.1863	1.1573	1.1295	1.1027	1.0770	1.0523
32.0	1.8222	1.7652	1.7108	1.6587	1.6089	1.5614	1.5159	1.4724	1.4310	1.3913	1.3534	1.3173	1.2827	1.2496	1.2180	1.1877	1.1587	1.1309	1.1041	1.0784	1.0536
33.0	1.8231	1.7663	1.7120	1.6600	1.6102	1.5627	1.5173	1.4739	1.4324	1.3928	1.3549	1.3187	1.2842	1.2511	1.2195	1.1892	1.1601	1.1323	1.1055	1.0798	1.0549
34.0	1.8241	1.7674	1.7131	1.6612	1.6115	1.5640	1.5186	1.4753	1.4338	1.3942	1.3564	1.3202	1.2856	1.2526	1.2209	1.1906	1.1616	1.1337	1.1069	1.0811	1.0563
35.0	1.8251	1.7685	1.7143	1.6624	1.6128	1.5654	1.5200	1.4767	1.4353	1.3957	1.3578	1.3217	1.2871	1.2540	1.2224	1.1920	1.1630	1.1351	1.1083	1.0825	1.0576
36.0	1.8260	1.7695	1.7154	1.6636	1.6141	1.5667	1.5214	1.4781	1.4367	1.3971	1.3593	1.3231	1.2886	1.2555	1.2238	1.1935	1.1644	1.1365	1.1096	1.0838	1.0589
37.0	1.8270	1.7706	1.7165	1.6648	1.6153	1.5680	1.5228	1.4795	1.4381	1.3986	1.3608	1.3246	1.2900	1.2569	1.2253	1.1949	1.1658	1.1379	1.1110	1.0852	1.0602
38.0	1.8280	1.7716	1.7177	1.6660	1.6166	1.5693	1.5241	1.4809	1.4395	1.4000	1.3622	1.3261	1.2915	1.2584	1.2267	1.1963	1.1672	1.1393	1.1124	1.0865	1.0615
39.0	1.8289	1.7727	1.7188	1.6672	1.6179	1.5707	1.5255	1.4823	1.4410	1.4014	1.3637	1.3275	1.2929	1.2598	1.2281	1.1978	1.1686	1.1407	1.1138	1.0878	1.0628
40.0	1.8299	1.7737	1.7200	1.6684	1.6191	1.5720	1.5268	1.4837	1.4424	1.4029	1.3651	1.3290	1.2944	1.2613	1.2296	1.1992	1.1700	1.1420	1.1151	1.0892	1.0642

Kinematic viscosity at different temperatures and salinities

Units: 10^-2 cm2 s-1

Salinity	Temperature (°C)																				
(‰)	20.0	21.0	22.0	23.0	24.0	25.0	26.0	27.0	28.0	29.0	30.0	31.0	32.0	33.0	34.0	35.0	36.0	37.0	38.0	39.0	40.0
0.0	1.0099	0.9869	0.9646	0.9430	0.9220	0.9015	0.8813	0.8614	0.8416	0.8220	0.8022	0.7824	0.7623	0.7418	0.7209	0.6995	0.6774	0.6545	0.6308	0.6061	0.5804
1.0	1.0113	0.9882	0.9659	0.9443	0.9233	0.9027	0.8825	0.8626	0.8428	0.8231	0.8034	0.7835	0.7634	0.7429	0.7220	0.7006	0.6785	0.6557	0.6320	0.6074	0.5817
2.0	1.0127	0.9896	0.9673	0.9456	0.9246	0.9040	0.8837	0.8638	0.8440	0.8243	0.8045	0.7846	0.7645	0.7441	0.7232	0.7017	0.6797	0.6569	0.6332	0.6086	0.5830
3.0	1.0141	0.9909	0.9686	0.9469	0.9258	0.9052	0.8849	0.8650	0.8452	0.8254	0.8056	0.7858	0.7656	0.7452	0.7243	0.7029	0.6808	0.6580	0.6344	0.6099	0.5843
4.0	1.0155	0.9923	0.9699	0.9482	0.9271	0.9064	0.8862	0.8662	0.8463	0.8266	0.8068	0.7869	0.7667	0.7463	0.7254	0.7040	0.6820	0.6592	0.6356	0.6111	0.5856
5.0	1.0169	0.9937	0.9713	0.9495	0.9284	0.9077	0.8874	0.8673	0.8475	0.8277	0.8079	0.7880	0.7679	0.7474	0.7265	0.7051	0.6831	0.6604	0.6368	0.6124	0.5869
6.0	1.0182	0.9950	0.9726	0.9508	0.9296	0.9089	0.8886	0.8685	0.8487	0.8289	0.8090	0.7891	0.7690	0.7485	0.7276	0.7063	0.6843	0.6616	0.6380	0.6136	0.5882
7.0	1.0196	0.9964	0.9739	0.9521	0.9309	0.9102	0.8898	0.8697	0.8498	0.8300	0.8102	0.7902	0.7701	0.7496	0.7288	0.7074	0.6854	0.6627	0.6392	0.6149	0.5895
8.0	1.0210	0.9977	0.9752	0.9534	0.9322	0.9114	0.8910	0.8709	0.8510	0.8311	0.8113	0.7914	0.7712	0.7507	0.7299	0.7085	0.6866	0.6639	0.6405	0.6161	0.5908
9.0	1.0224	0.9991	0.9766	0.9547	0.9334	0.9126	0.8922	0.8721	0.8521	0.8323	0.8124	0.7925	0.7723	0.7518	0.7310	0.7096	0.6877	0.6651	0.6417	0.6173	0.5921
10.0	1.0238	1.0005	0.9779	0.9560	0.9347	0.9139	0.8934	0.8733	0.8533	0.8334	0.8136	0.7936	0.7734	0.7530	0.7321	0.7108	0.6888	0.6662	0.6429	0.6186	0.5934
11.0	1.0252	1.0018	0.9792	0.9573	0.9360	0.9151	0.8946	0.8744	0.8545	0.8346	0.8147	0.7947	0.7745	0.7541	0.7332	0.7119	0.6900	0.6674	0.6440	0.6198	0.5946
12.0	1.0265	1.0031	0.9805	0.9586	0.9372	0.9163	0.8958	0.8756	0.8556	0.8357	0.8158	0.7958	0.7756	0.7552	0.7343	0.7130	0.6911	0.6686	0.6452	0.6211	0.5959
13.0	1.0279	1.0045	0.9818	0.9599	0.9385	0.9176	0.8970	0.8768	0.8568	0.8368	0.8169	0.7969	0.7767	0.7563	0.7354	0.7141	0.6922	0.6697	0.6464	0.6223	0.5972
14.0	1.0293	1.0058	0.9832	0.9611	0.9397	0.9188	0.8982	0.8780	0.8579	0.8380	0.8180	0.7980	0.7778	0.7574	0.7365	0.7152	0.6934	0.6709	0.6476	0.6235	0.5985
15.0	1.0307	1.0072	0.9845	0.9624	0.9410	0.9200	0.8994	0.8791	0.8591	0.8391	0.8192	0.7991	0.7789	0.7585	0.7376	0.7163	0.6945	0.6720	0.6488	0.6248	0.5998
16.0	1.0320	1.0085	0.9858	0.9637	0.9422	0.9212	0.9006	0.8803	0.8602	0.8402	0.8203	0.8002	0.7800	0.7596	0.7387	0.7175	0.6956	0.6732	0.6500	0.6260	0.6011
17.0	1.0334	1.0099	0.9871	0.9650	0.9435	0.9224	0.9018	0.8815	0.8614	0.8414	0.8214	0.8013	0.7811	0.7606	0.7398	0.7186	0.6968	0.6743	0.6512	0.6272	0.6023
18.0	1.0347	1.0112	0.9884	0.9663	0.9447	0.9237	0.9030	0.8827	0.8625	0.8425	0.8225	0.8024	0.7822	0.7617	0.7409	0.7197	0.6979	0.6755	0.6524	0.6284	0.6036
19.0	1.0361	1.0125	0.9897	0.9675	0.9460	0.9249	0.9042	0.8838	0.8637	0.8436	0.8236	0.8035	0.7833	0.7628	0.7420	0.7208	0.6990	0.6766	0.6536	0.6297	0.6049
20.0	1.0375	1.0139	0.9910	0.9688	0.9472	0.9261	0.9054	0.8850	0.8648	0.8447	0.8247	0.8046	0.7844	0.7639	0.7431	0.7219	0.7001	0.6778	0.6547	0.6309	0.6062
21.0	1.0388	1.0152	0.9923	0.9701	0.9484	0.9273	0.9066	0.8861	0.8659	0.8459	0.8258	0.8057	0.7855	0.7650	0.7442	0.7230	0.7013	0.6789	0.6559	0.6321	0.6074
22.0	1.0402	1.0165	0.9936	0.9713	0.9497	0.9285	0.9078	0.8873	0.8671	0.8470	0.8269	0.8068	0.7866	0.7661	0.7453	0.7241	0.7024	0.6801	0.6571	0.6333	0.6087
23.0	1.0415	1.0178	0.9949	0.9726	0.9509	0.9297	0.9089	0.8885	0.8682	0.8481	0.8280	0.8079	0.7877	0.7672	0.7464	0.7252	0.7035	0.6812	0.6583	0.6345	0.6100
24.0	1.0429	1.0191	0.9962	0.9739	0.9522	0.9309	0.9101	0.8896	0.8693	0.8492	0.8291	0.8090	0.7887	0.7683	0.7475	0.7263	0.7046	0.6824	0.6594	0.6358	0.6112
25.0	1.0442	1.0205	0.9975	0.9751	0.9534	0.9321	0.9113	0.8908	0.8705	0.8503	0.8302	0.8101	0.7898	0.7693	0.7486	0.7274	0.7057	0.6835	0.6606	0.6370	0.6125
26.0	1.0456	1.0218	0.9987	0.9764	0.9546	0.9333	0.9125	0.8919	0.8716	0.8514	0.8313	0.8112	0.7909	0.7704	0.7496	0.7285	0.7068	0.6846	0.6618	0.6382	0.6138
27.0	1.0469	1.0231	1.0000	0.9776	0.9558	0.9345	0.9136	0.8931	0.8727	0.8525	0.8324	0.8122	0.7920	0.7715	0.7507	0.7296	0.7079	0.6858	0.6630	0.6394	0.6150
28.0	1.0483	1.0244	1.0013	0.9789	0.9571	0.9357	0.9148	0.8942	0.8739	0.8536	0.8335	0.8133	0.7930	0.7726	0.7518	0.7307	0.7091	0.6869	0.6641	0.6406	0.6163
29.0	1.0496	1.0257	1.0026	0.9801	0.9583	0.9369	0.9160	0.8954	0.8750	0.8547	0.8346	0.8144	0.7941	0.7736	0.7529	0.7317	0.7102	0.6880	0.6653	0.6418	0.6175
30.0	1.0509	1.0270	1.0039	0.9814	0.9595	0.9381	0.9171	0.8965	0.8761	0.8559	0.8357	0.8155	0.7952	0.7747	0.7540	0.7328	0.7113	0.6892	0.6664	0.6430	0.6188
31.0	1.0523	1.0283	1.0052	0.9826	0.9607	0.9393	0.9183	0.8976	0.8772	0.8570	0.8368	0.8166	0.7963	0.7758	0.7550	0.7339	0.7124	0.6903	0.6676	0.6442	0.6200
32.0	1.0536	1.0296	1.0064	0.9839	0.9619	0.9405	0.9195	0.8988	0.8783	0.8581	0.8378	0.8176	0.7973	0.7768	0.7561	0.7350	0.7135	0.6914	0.6688	0.6454	0.6213
33.0	1.0549	1.0309	1.0077	0.9851	0.9632	0.9417	0.9206	0.8999	0.8794	0.8591	0.8389	0.8187	0.7984	0.7779	0.7572	0.7361	0.7146	0.6925	0.6699	0.6466	0.6225
34.0	1.0563	1.0322	1.0090	0.9864	0.9644	0.9429	0.9218	0.9011	0.8806	0.8602	0.8400	0.8198	0.7995	0.7790	0.7582	0.7372	0.7157	0.6937	0.6711	0.6478	0.6238
35.0	1.0576	1.0335	1.0102	0.9876	0.9656	0.9441	0.9229	0.9022	0.8817	0.8613	0.8411	0.8208	0.8005	0.7800	0.7593	0.7382	0.7168	0.6948	0.6722	0.6490	0.6250
36.0	1.0589	1.0348	1.0115	0.9888	0.9668	0.9452	0.9241	0.9033	0.8828	0.8624	0.8422	0.8219	0.8016	0.7811	0.7604	0.7393	0.7179	0.6959	0.6734	0.6502	0.6262
37.0	1.0602	1.0361	1.0128	0.9901	0.9680	0.9464	0.9253	0.9044	0.8839	0.8635	0.8432	0.8230	0.8026	0.7822	0.7614	0.7404	0.7189	0.6970	0.6745	0.6514	0.6275
38.0	1.0615	1.0374	1.0140	0.9913	0.9692	0.9476	0.9264	0.9056	0.8850	0.8646	0.8443	0.8240	0.8037	0.7832	0.7625	0.7415	0.7200	0.6981	0.6757	0.6526	0.6287
39.0	1.0628	1.0387	1.0153	0.9925	0.9704	0.9488	0.9276	0.9067	0.8861	0.8657	0.8454	0.8251	0.8047	0.7843	0.7635	0.7425	0.7211	0.6992	0.6768	0.6537	0.6299
40.0	1.0642	1.0400	1.0165	0.9938	0.9716	0.9499	0.9287	0.9078	0.8872	0.8668	0.8465	0.8262	0.8058	0.7853	0.7646	0.7436	0.7222	0.7003	0.6779	0.6549	0.6312

Schmidt number (kinematic viscosity/diffusion coefficient)

Units: 10^3 dimensionless

Salinity	Temperature (°C)																				
(‰)	0.0	1.0	2.0	3.0	4.0	5.0	6.0	7.0	8.0	9.0	10.0	11.0	12.0	13.0	14.0	15.0	16.0	17.0	18.0	19.0	20.0
0.0	1.6213	1.5091	1.4060	1.3113	1.2243	1.1443	1.0708	1.0033	0.9412	0.8840	0.8313	0.7828	0.7380	0.6967	0.6585	0.6231	0.5903	0.5598	0.5314	0.5048	0.4800
1.0	1.6245	1.5122	1.4091	1.3144	1.2273	1.1473	1.0738	1.0062	0.9439	0.8867	0.8339	0.7853	0.7405	0.6990	0.6607	0.6252	0.5923	0.5617	0.5332	0.5066	0.4817
2.0	1.6276	1.5154	1.4123	1.3175	1.2304	1.1503	1.0767	1.0090	0.9467	0.8894	0.8365	0.7878	0.7429	0.7014	0.6629	0.6274	0.5944	0.5637	0.5351	0.5084	0.4834
3.0	1.6308	1.5186	1.4154	1.3206	1.2335	1.1534	1.0797	1.0119	0.9495	0.8921	0.8392	0.7904	0.7453	0.7037	0.6652	0.6295	0.5964	0.5656	0.5370	0.5102	0.4851
4.0	1.6339	1.5217	1.4186	1.3238	1.2366	1.1564	1.0827	1.0148	0.9523	0.8948	0.8418	0.7929	0.7478	0.7060	0.6674	0.6317	0.5985	0.5676	0.5388	0.5120	0.4868
5.0	1.6371	1.5249	1.4218	1.3269	1.2397	1.1594	1.0856	1.0177	0.9551	0.8975	0.8444	0.7954	0.7502	0.7084	0.6697	0.6338	0.6005	0.5696	0.5407	0.5138	0.4885
6.0	1.6403	1.5281	1.4249	1.3300	1.2428	1.1625	1.0886	1.0206	0.9579	0.9002	0.8470	0.7980	0.7526	0.7107	0.6719	0.6360	0.6026	0.5715	0.5426	0.5155	0.4902
7.0	1.6435	1.5313	1.4281	1.3332	1.2458	1.1655	1.0916	1.0235	0.9608	0.9030	0.8497	0.8005	0.7551	0.7131	0.6742	0.6381	0.6046	0.5735	0.5445	0.5173	0.4919
8.0	1.6466	1.5345	1.4313	1.3363	1.2489	1.1685	1.0945	1.0264	0.9636	0.9057	0.8523	0.8030	0.7575	0.7154	0.6764	0.6403	0.6067	0.5755	0.5463	0.5191	0.4936
9.0	1.6498	1.5376	1.4344	1.3395	1.2520	1.1716	1.0975	1.0293	0.9664	0.9084	0.8549	0.8056	0.7600	0.7178	0.6787	0.6424	0.6088	0.5774	0.5482	0.5209	0.4953
10.0	1.6530	1.5408	1.4376	1.3426	1.2551	1.1746	1.1005	1.0322	0.9692	0.9112	0.8576	0.8081	0.7624	0.7201	0.6809	0.6446	0.6108	0.5794	0.5501	0.5227	0.4971
11.0	1.6562	1.5440	1.4408	1.3458	1.2583	1.1777	1.1035	1.0351	0.9720	0.9139	0.8602	0.8107	0.7649	0.7225	0.6832	0.6468	0.6129	0.5814	0.5520	0.5245	0.4988
12.0	1.6594	1.5472	1.4440	1.3489	1.2614	1.1807	1.1064	1.0380	0.9749	0.9166	0.8629	0.8132	0.7673	0.7248	0.6855	0.6489	0.6150	0.5834	0.5539	0.5263	0.5005
13.0	1.6625	1.5504	1.4472	1.3521	1.2645	1.1838	1.1094	1.0409	0.9777	0.9194	0.8655	0.8158	0.7698	0.7272	0.6877	0.6511	0.6171	0.5854	0.5558	0.5281	0.5022
14.0	1.6657	1.5536	1.4503	1.3552	1.2676	1.1868	1.1124	1.0438	0.9805	0.9221	0.8682	0.8183	0.7722	0.7296	0.6900	0.6533	0.6191	0.5873	0.5577	0.5299	0.5039
15.0	1.6689	1.5568	1.4535	1.3584	1.2707	1.1899	1.1154	1.0467	0.9833	0.9248	0.8708	0.8209	0.7747	0.7319	0.6923	0.6554	0.6212	0.5893	0.5596	0.5317	0.5056
16.0	1.6721	1.5600	1.4567	1.3615	1.2738	1.1929	1.1184	1.0496	0.9862	0.9276	0.8735	0.8234	0.7772	0.7343	0.6945	0.6576	0.6233	0.5913	0.5615	0.5335	0.5074
17.0	1.6753	1.5632	1.4599	1.3647	1.2769	1.1960	1.1214	1.0525	0.9890	0.9303	0.8761	0.8260	0.7796	0.7367	0.6968	0.6598	0.6254	0.5933	0.5634	0.5354	0.5091
18.0	1.6785	1.5664	1.4631	1.3678	1.2800	1.1991	1.1244	1.0555	0.9918	0.9331	0.8788	0.8286	0.7821	0.7390	0.6991	0.6620	0.6275	0.5953	0.5653	0.5372	0.5108
19.0	1.6817	1.5696	1.4663	1.3710	1.2832	1.2021	1.1274	1.0584	0.9947	0.9358	0.8814	0.8311	0.7846	0.7414	0.7014	0.6642	0.6295	0.5973	0.5672	0.5390	0.5126
20.0	1.6849	1.5728	1.4695	1.3742	1.2863	1.2052	1.1304	1.0613	0.9975	0.9386	0.8841	0.8337	0.7870	0.7438	0.7036	0.6663	0.6316	0.5993	0.5691	0.5408	0.5143
21.0	1.6881	1.5760	1.4727	1.3773	1.2894	1.2083	1.1334	1.0642	1.0004	0.9413	0.8868	0.8363	0.7895	0.7462	0.7059	0.6685	0.6337	0.6013	0.5710	0.5426	0.5160
22.0	1.6913	1.5792	1.4759	1.3805	1.2925	1.2113	1.1364	1.0671	1.0032	0.9441	0.8894	0.8389	0.7920	0.7485	0.7082	0.6707	0.6358	0.6033	0.5729	0.5444	0.5177
23.0	1.6945	1.5824	1.4791	1.3837	1.2956	1.2144	1.1394	1.0701	1.0061	0.9469	0.8921	0.8414	0.7945	0.7509	0.7105	0.6729	0.6379	0.6053	0.5748	0.5463	0.5195
24.0	1.6977	1.5856	1.4823	1.3868	1.2988	1.2175	1.1424	1.0730	1.0089	0.9496	0.8948	0.8440	0.7969	0.7533	0.7128	0.6751	0.6400	0.6073	0.5767	0.5481	0.5212
25.0	1.7009	1.5889	1.4855	1.3900	1.3019	1.2205	1.1454	1.0759	1.0118	0.9524	0.8975	0.8466	0.7994	0.7557	0.7151	0.6773	0.6421	0.6093	0.5786	0.5499	0.5230
26.0	1.7041	1.5921	1.4887	1.3932	1.3050	1.2236	1.1484	1.0789	1.0146	0.9551	0.9001	0.8492	0.8019	0.7581	0.7174	0.6795	0.6442	0.6113	0.5805	0.5517	0.5247
27.0	1.7073	1.5953	1.4919	1.3964	1.3082	1.2267	1.1514	1.0818	1.0175	0.9579	0.9028	0.8517	0.8044	0.7605	0.7197	0.6817	0.6463	0.6133	0.5825	0.5536	0.5264
28.0	1.7105	1.5985	1.4951	1.3995	1.3113	1.2298	1.1544	1.0847	1.0203	0.9607	0.9055	0.8543	0.8069	0.7629	0.7219	0.6839	0.6484	0.6153	0.5844	0.5554	0.5282
29.0	1.7137	1.6017	1.4983	1.4027	1.3144	1.2328	1.1574	1.0877	1.0232	0.9635	0.9082	0.8569	0.8094	0.7653	0.7242	0.6861	0.6505	0.6173	0.5863	0.5572	0.5299
30.0	1.7169	1.6049	1.5015	1.4059	1.3176	1.2359	1.1604	1.0906	1.0260	0.9662	0.9108	0.8595	0.8119	0.7677	0.7265	0.6883	0.6526	0.6193	0.5882	0.5591	0.5317
31.0	1.7201	1.6081	1.5047	1.4091	1.3207	1.2390	1.1635	1.0936	1.0289	0.9690	0.9135	0.8621	0.8144	0.7700	0.7288	0.6905	0.6547	0.6214	0.5901	0.5609	0.5334
32.0	1.7233	1.6114	1.5079	1.4123	1.3238	1.2421	1.1665	1.0965	1.0318	0.9718	0.9162	0.8647	0.8169	0.7724	0.7311	0.6927	0.6568	0.6234	0.5921	0.5627	0.5352
33.0	1.7265	1.6146	1.5111	1.4154	1.3270	1.2452	1.1695	1.0995	1.0346	0.9746	0.9189	0.8673	0.8194	0.7748	0.7335	0.6949	0.6590	0.6254	0.5940	0.5646	0.5369
34.0	1.7297	1.6178	1.5143	1.4186	1.3301	1.2483	1.1725	1.1024	1.0375	0.9773	0.9216	0.8699	0.8219	0.7773	0.7358	0.6971	0.6611	0.6274	0.5959	0.5664	0.5387
35.0	1.7329	1.6210	1.5175	1.4218	1.3333	1.2514	1.1755	1.1054	1.0404	0.9801	0.9243	0.8725	0.8244	0.7797	0.7381	0.6993	0.6632	0.6294	0.5978	0.5682	0.5404
36.0	1.7361	1.6242	1.5207	1.4250	1.3364	1.2544	1.1786	1.1083	1.0432	0.9829	0.9270	0.8751	0.8269	0.7821	0.7404	0.7015	0.6653	0.6315	0.5998	0.5701	0.5422
37.0	1.7393	1.6274	1.5239	1.4282	1.3396	1.2575	1.1816	1.1113	1.0461	0.9857	0.9297	0.8777	0.8294	0.7845	0.7427	0.7038	0.6674	0.6335	0.6017	0.5719	0.5439
38.0	1.7425	1.6307	1.5272	1.4314	1.3427	1.2606	1.1846	1.1142	1.0490	0.9885	0.9324	0.8803	0.8319	0.7869	0.7450	0.7060	0.6695	0.6355	0.6036	0.5738	0.5457
39.0	1.7457	1.6339	1.5304	1.4346	1.3459	1.2637	1.1877	1.1172	1.0518	0.9913	0.9351	0.8829	0.8344	0.7893	0.7473	0.7082	0.6717	0.6375	0.6056	0.5756	0.5475
40.0	1.7489	1.6371	1.5336	1.4377	1.3490	1.2668	1.1907	1.1201	1.0547	0.9941	0.9378	0.8855	0.8369	0.7917	0.7496	0.7104	0.6738	0.6396	0.6075	0.5775	0.5492

Schmidt number (kinematic viscosity/diffusion coefficient)

Units: 10^3 dimensionless

Salinity	Temperature (°C)																				
(‰)	20.0	21.0	22.0	23.0	24.0	25.0	26.0	27.0	28.0	29.0	30.0	31.0	32.0	33.0	34.0	35.0	36.0	37.0	38.0	39.0	40.0
0.0	0.4800	0.4567	0.4348	0.4140	0.3944	0.3756	0.3577	0.3405	0.3239	0.3078	0.2922	0.2769	0.2619	0.2471	0.2326	0.2182	0.2039	0.1896	0.1755	0.1615	0.1475
1.0	0.4817	0.4583	0.4363	0.4155	0.3958	0.3770	0.3590	0.3417	0.3251	0.3089	0.2932	0.2779	0.2629	0.2481	0.2335	0.2190	0.2047	0.1905	0.1763	0.1623	0.1483
2.0	0.4834	0.4599	0.4379	0.4170	0.3971	0.3783	0.3602	0.3429	0.3262	0.3100	0.2943	0.2789	0.2638	0.2490	0.2344	0.2199	0.2056	0.1913	0.1771	0.1631	0.1491
3.0	0.4851	0.4616	0.4394	0.4184	0.3985	0.3796	0.3615	0.3441	0.3273	0.3111	0.2953	0.2799	0.2648	0.2499	0.2353	0.2208	0.2064	0.1921	0.1779	0.1638	0.1498
4.0	0.4868	0.4632	0.4409	0.4199	0.3999	0.3809	0.3628	0.3453	0.3285	0.3122	0.2964	0.2809	0.2658	0.2509	0.2362	0.2217	0.2073	0.1930	0.1788	0.1646	0.1506
5.0	0.4885	0.4648	0.4425	0.4214	0.4013	0.3823	0.3640	0.3465	0.3297	0.3133	0.2974	0.2819	0.2667	0.2518	0.2371	0.2225	0.2081	0.1938	0.1796	0.1654	0.1514
6.0	0.4902	0.4664	0.4440	0.4228	0.4027	0.3836	0.3653	0.3477	0.3308	0.3144	0.2985	0.2829	0.2677	0.2527	0.2380	0.2234	0.2090	0.1946	0.1804	0.1662	0.1522
7.0	0.4919	0.4681	0.4456	0.4243	0.4041	0.3849	0.3666	0.3489	0.3320	0.3155	0.2995	0.2840	0.2687	0.2537	0.2389	0.2243	0.2098	0.1955	0.1812	0.1670	0.1530
8.0	0.4936	0.4697	0.4471	0.4258	0.4055	0.3863	0.3678	0.3502	0.3331	0.3166	0.3006	0.2850	0.2697	0.2546	0.2398	0.2252	0.2107	0.1963	0.1820	0.1678	0.1538
9.0	0.4953	0.4713	0.4487	0.4273	0.4069	0.3876	0.3691	0.3514	0.3343	0.3177	0.3017	0.2860	0.2706	0.2556	0.2407	0.2260	0.2115	0.1971	0.1828	0.1686	0.1545
10.0	0.4971	0.4729	0.4502	0.4287	0.4084	0.3889	0.3704	0.3526	0.3354	0.3188	0.3027	0.2870	0.2716	0.2565	0.2416	0.2269	0.2124	0.1980	0.1836	0.1694	0.1553
11.0	0.4988	0.4746	0.4518	0.4302	0.4098	0.3903	0.3717	0.3538	0.3366	0.3199	0.3038	0.2880	0.2726	0.2575	0.2425	0.2278	0.2132	0.1988	0.1845	0.1702	0.1561
12.0	0.5005	0.4762	0.4533	0.4317	0.4112	0.3916	0.3729	0.3550	0.3378	0.3211	0.3048	0.2890	0.2736	0.2584	0.2435	0.2287	0.2141	0.1996	0.1853	0.1710	0.1569
13.0	0.5022	0.4778	0.4549	0.4332	0.4126	0.3930	0.3742	0.3562	0.3389	0.3222	0.3059	0.2901	0.2746	0.2593	0.2444	0.2296	0.2150	0.2005	0.1861	0.1719	0.1577
14.0	0.5039	0.4795	0.4564	0.4347	0.4140	0.3943	0.3755	0.3575	0.3401	0.3233	0.3070	0.2911	0.2755	0.2603	0.2453	0.2305	0.2158	0.2013	0.1869	0.1727	0.1585
15.0	0.5056	0.4811	0.4580	0.4361	0.4154	0.3957	0.3768	0.3587	0.3412	0.3244	0.3080	0.2921	0.2765	0.2612	0.2462	0.2314	0.2167	0.2022	0.1878	0.1735	0.1593
16.0	0.5074	0.4828	0.4596	0.4376	0.4168	0.3970	0.3781	0.3599	0.3424	0.3255	0.3091	0.2931	0.2775	0.2622	0.2471	0.2322	0.2176	0.2030	0.1886	0.1743	0.1601
17.0	0.5091	0.4844	0.4611	0.4391	0.4182	0.3984	0.3794	0.3611	0.3436	0.3266	0.3102	0.2941	0.2785	0.2631	0.2480	0.2331	0.2184	0.2039	0.1894	0.1751	0.1609
18.0	0.5108	0.4861	0.4627	0.4406	0.4197	0.3997	0.3806	0.3624	0.3448	0.3277	0.3112	0.2952	0.2795	0.2641	0.2489	0.2340	0.2193	0.2047	0.1902	0.1759	0.1617
19.0	0.5126	0.4877	0.4643	0.4421	0.4211	0.4010	0.3819	0.3636	0.3459	0.3289	0.3123	0.2962	0.2805	0.2650	0.2499	0.2349	0.2202	0.2055	0.1911	0.1767	0.1625
20.0	0.5143	0.4893	0.4658	0.4436	0.4225	0.4024	0.3832	0.3648	0.3471	0.3300	0.3134	0.2972	0.2814	0.2660	0.2508	0.2358	0.2210	0.2064	0.1919	0.1775	0.1633
21.0	0.5160	0.4910	0.4674	0.4451	0.4239	0.4038	0.3845	0.3660	0.3483	0.3311	0.3145	0.2983	0.2824	0.2669	0.2517	0.2367	0.2219	0.2072	0.1927	0.1784	0.1641
22.0	0.5177	0.4926	0.4690	0.4466	0.4253	0.4051	0.3858	0.3673	0.3494	0.3322	0.3155	0.2993	0.2834	0.2679	0.2526	0.2376	0.2228	0.2081	0.1936	0.1792	0.1649
23.0	0.5195	0.4943	0.4705	0.4481	0.4268	0.4065	0.3871	0.3685	0.3506	0.3333	0.3166	0.3003	0.2844	0.2688	0.2536	0.2385	0.2236	0.2089	0.1944	0.1800	0.1657
24.0	0.5212	0.4960	0.4721	0.4496	0.4282	0.4078	0.3884	0.3697	0.3518	0.3345	0.3177	0.3013	0.2854	0.2698	0.2545	0.2394	0.2245	0.2098	0.1952	0.1808	0.1665
25.0	0.5230	0.4976	0.4737	0.4511	0.4296	0.4092	0.3897	0.3710	0.3530	0.3356	0.3188	0.3024	0.2864	0.2708	0.2554	0.2403	0.2254	0.2107	0.1961	0.1816	0.1673
26.0	0.5247	0.4993	0.4753	0.4526	0.4310	0.4105	0.3910	0.3722	0.3541	0.3367	0.3198	0.3034	0.2874	0.2717	0.2563	0.2412	0.2263	0.2115	0.1969	0.1825	0.1682
27.0	0.5264	0.5009	0.4768	0.4541	0.4325	0.4119	0.3923	0.3734	0.3553	0.3378	0.3209	0.3044	0.2884	0.2727	0.2573	0.2421	0.2271	0.2124	0.1978	0.1833	0.1690
28.0	0.5282	0.5026	0.4784	0.4556	0.4339	0.4133	0.3936	0.3747	0.3565	0.3390	0.3220	0.3055	0.2894	0.2736	0.2582	0.2430	0.2280	0.2132	0.1986	0.1841	0.1698
29.0	0.5299	0.5042	0.4800	0.4571	0.4353	0.4146	0.3948	0.3759	0.3577	0.3401	0.3231	0.3065	0.2904	0.2746	0.2591	0.2439	0.2289	0.2141	0.1994	0.1849	0.1706
30.0	0.5317	0.5059	0.4816	0.4586	0.4368	0.4160	0.3961	0.3771	0.3589	0.3412	0.3241	0.3076	0.2914	0.2756	0.2601	0.2448	0.2298	0.2149	0.2003	0.1858	0.1714
31.0	0.5334	0.5076	0.4832	0.4601	0.4382	0.4174	0.3974	0.3784	0.3600	0.3424	0.3252	0.3086	0.2924	0.2765	0.2610	0.2457	0.2307	0.2158	0.2011	0.1866	0.1722
32.0	0.5352	0.5092	0.4848	0.4616	0.4396	0.4187	0.3988	0.3796	0.3612	0.3435	0.3263	0.3096	0.2934	0.2775	0.2619	0.2466	0.2315	0.2167	0.2020	0.1874	0.1731
33.0	0.5369	0.5109	0.4863	0.4631	0.4411	0.4201	0.4001	0.3809	0.3624	0.3446	0.3274	0.3107	0.2944	0.2785	0.2629	0.2475	0.2324	0.2175	0.2028	0.1883	0.1739
34.0	0.5387	0.5126	0.4879	0.4646	0.4425	0.4215	0.4014	0.3821	0.3636	0.3458	0.3285	0.3117	0.2954	0.2794	0.2638	0.2484	0.2333	0.2184	0.2037	0.1891	0.1747
35.0	0.5404	0.5142	0.4895	0.4661	0.4439	0.4228	0.4027	0.3833	0.3648	0.3469	0.3296	0.3128	0.2964	0.2804	0.2647	0.2493	0.2342	0.2193	0.2045	0.1899	0.1755
36.0	0.5422	0.5159	0.4911	0.4677	0.4454	0.4242	0.4040	0.3846	0.3660	0.3480	0.3307	0.3138	0.2974	0.2814	0.2657	0.2502	0.2351	0.2201	0.2054	0.1908	0.1763
37.0	0.5439	0.5176	0.4927	0.4692	0.4468	0.4256	0.4053	0.3858	0.3672	0.3492	0.3317	0.3148	0.2984	0.2823	0.2666	0.2512	0.2360	0.2210	0.2062	0.1916	0.1772
38.0	0.5457	0.5193	0.4943	0.4707	0.4483	0.4269	0.4066	0.3871	0.3684	0.3503	0.3328	0.3159	0.2994	0.2833	0.2675	0.2521	0.2369	0.2219	0.2071	0.1924	0.1780
39.0	0.5475	0.5209	0.4959	0.4722	0.4497	0.4283	0.4079	0.3883	0.3695	0.3514	0.3339	0.3169	0.3004	0.2843	0.2685	0.2530	0.2377	0.2227	0.2079	0.1933	0.1788
40.0	0.5492	0.5226	0.4975	0.4737	0.4512	0.4297	0.4092	0.3896	0.3707	0.3526	0.3350	0.3180	0.3014	0.2852	0.2694	0.2539	0.2386	0.2236	0.2088	0.1941	0.1797