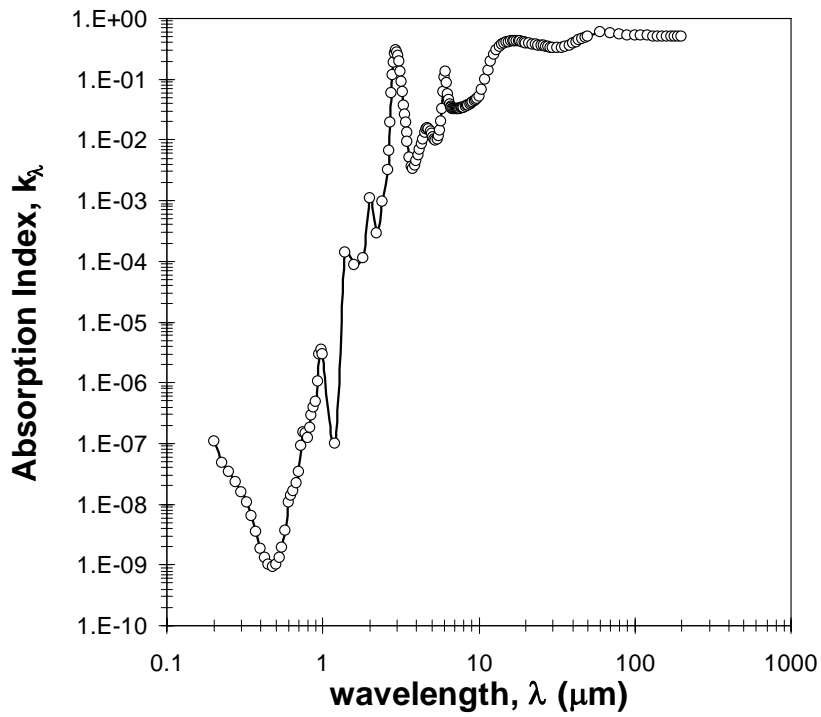
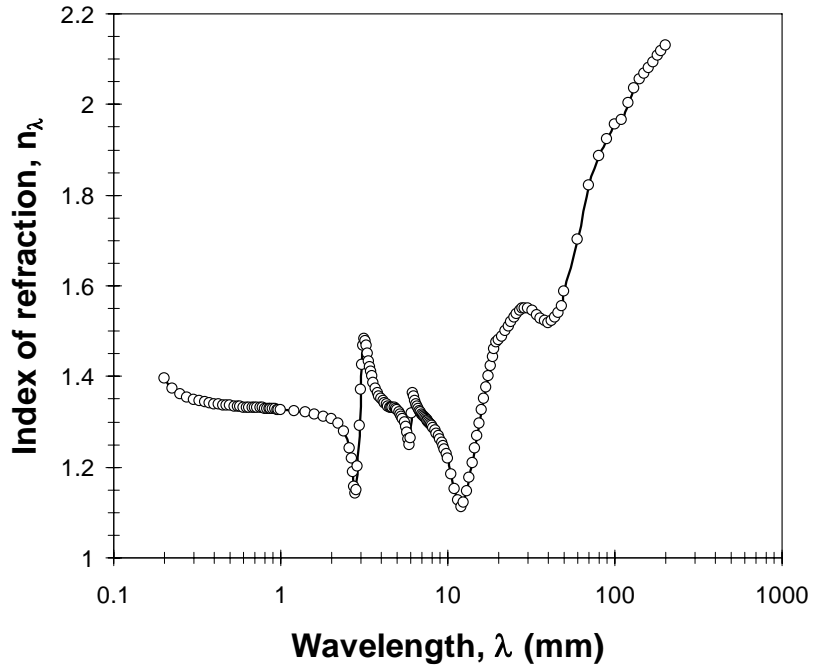


### Optical Properties of Liquid Water at 25°C and Atmospheric Pressure

Source: G. M. Hale and M. R. Querry, Optical Constants of Water in the 200-nm to 200- $\mu\text{m}$  Wavelength Region, Applied Optics, Vol. 12, No. 3, pp. 555-563.

<http://www.opticsinfobase.org/abstract.cfm?URI=ao-12-3-555>



$\lambda$ ( $\mu\text{m}$ )	n	k	$\lambda$ ( $\mu\text{m}$ )	n	k	$\lambda$ ( $\mu\text{m}$ )	n	k	$\lambda$ ( $\mu\text{m}$ )	n	k	$\lambda$ ( $\mu\text{m}$ )	n	k	$\lambda$ ( $\mu\text{m}$ )	n	k
0.2	1.396	1.10E-07	0.925	1.328	1.06E-06	3.5	1.4	0.0094	6.4	1.347	0.0449	11.5	1.126	0.142	34	1.536	0.329
0.225	1.373	4.90E-08	0.95	1.327	2.93E-06	3.6	1.385	0.00515	6.5	1.339	0.0392	12	1.111	0.199	36	1.527	0.343
0.25	1.362	3.35E-08	0.975	1.327	3.48E-06	3.7	1.374	0.0036	6.6	1.334	0.0356	12.5	1.123	0.259	38	1.522	0.361
0.275	1.354	2.35E-08	1	1.327	2.89E-06	3.8	1.364	0.0034	6.7	1.329	0.0337	13	1.146	0.305	40	1.519	0.385
0.3	1.349	1.60E-08	1.2	1.324	9.89E-08	3.9	1.357	0.0038	6.8	1.324	0.0327	13.5	1.177	0.343	42	1.522	0.409
0.325	1.346	1.08E-08	1.4	1.321	1.38E-04	4	1.351	0.0046	6.9	1.321	0.0322	14	1.21	0.37	44	1.53	0.436
0.35	1.343	6.50E-09	1.6	1.317	8.55E-05	4.1	1.346	0.00562	7	1.317	0.032	14.5	1.241	0.388	46	1.541	0.462
0.375	1.341	3.50E-09	1.8	1.312	1.15E-04	4.2	1.342	0.00688	7.1	1.314	0.032	15	1.27	0.402	48	1.555	0.485
0.4	1.339	1.86E-09	2	1.306	1.10E-03	4.3	1.338	0.00845	7.2	1.312	0.0321	15.5	1.297	0.414	50	1.587	0.514
0.425	1.338	1.30E-09	2.2	1.296	2.89E-04	4.4	1.334	0.0103	7.3	1.309	0.0322	16	1.325	0.422	60	1.703	0.587
0.45	1.337	1.02E-09	2.4	1.279	9.56E-04	4.5	1.332	0.0134	7.4	1.307	0.0324	16.5	1.351	0.428	70	1.821	0.576
0.475	1.336	9.35E-10	2.6	1.242	3.17E-03	4.6	1.33	0.0147	7.5	1.304	0.0326	17	1.376	0.429	80	1.886	0.547
0.5	1.335	1.00E-09	2.65	1.219	6.70E-03	4.7	1.33	0.0157	7.6	1.302	0.0328	17.5	1.401	0.429	90	1.924	0.536
0.525	1.334	1.32E-09	2.7	1.188	0.019	4.8	1.33	0.015	7.7	1.299	0.0331	18	1.423	0.426	100	1.957	0.532
0.55	1.333	1.96E-09	2.75	1.157	0.059	4.9	1.328	0.0137	7.8	1.297	0.0335	18.5	1.443	0.421	110	1.966	0.531
0.575	1.333	3.60E-09	2.8	1.142	0.115	5	1.325	0.0124	7.9	1.294	0.0339	19	1.461	0.414	120	2.004	0.526
0.6	1.332	1.09E-08	2.85	1.149	0.185	5.1	1.322	0.0111	8	1.291	0.0343	19.5	1.476	0.404	130	2.036	0.514
0.625	1.332	1.39E-08	2.9	1.201	0.268	5.2	1.317	0.0101	8.2	1.286	0.0351	20	1.48	0.393	140	2.056	0.5
0.65	1.331	1.64E-08	2.95	1.292	0.298	5.3	1.312	0.0098	8.4	1.281	0.0361	21	1.487	0.382	150	2.069	0.495
0.675	1.331	2.23E-08	3	1.371	0.272	5.4	1.305	0.0103	8.6	1.275	0.0372	22	1.5	0.373	160	2.081	0.496
0.7	1.331	3.35E-08	3.05	1.426	0.24	5.5	1.298	0.0116	8.8	1.269	0.0385	23	1.511	0.367	170	2.094	0.497
0.725	1.33	9.15E-08	3.1	1.467	0.192	5.6	1.289	0.0142	9	1.262	0.0399	24	1.521	0.361	180	2.107	0.499
0.75	1.33	1.56E-07	3.15	1.483	0.135	5.7	1.277	0.0203	9.2	1.255	0.0415	25	1.531	0.356	190	2.119	0.501
0.775	1.33	1.48E-07	3.2	1.478	0.0924	5.8	1.262	0.033	9.4	1.247	0.0433	26	1.539	0.35	200	2.13	0.504
0.8	1.329	1.25E-07	3.25	1.467	0.061	5.9	1.248	0.0622	9.6	1.239	0.0454	27	1.545	0.344			
0.825	1.329	1.82E-07	3.3	1.45	0.0368	6	1.265	0.107	9.8	1.229	0.0479	28	1.549	0.338			
0.85	1.329	2.93E-07	3.35	1.432	0.0261	6.1	1.319	0.131	10	1.218	0.0508	29	1.551	0.333			
0.875	1.328	3.91E-07	3.4	1.42	0.0195	6.2	1.363	0.088	10.5	1.185	0.0662	30	1.551	0.328			
0.9	1.328	4.86E-07	3.45	1.41	0.0132	6.3	1.357	0.057	11	1.153	0.0968	32	1.546	0.324			