

**Table 1.1:** Volume absorption and scattering coefficients for pure water,  $a_w(\lambda)$  and  $b_w(\lambda)$ , respectively. Values for  $a_w(\lambda)$  are those of Sogandares and Fry (1997) [340 to 390 nm], Pope and Fry (1997) [400 to 700 nm], and Van Zee *et al.* (2002) as derived from Kou *et al.* (1993) [705 to 750 nm]. Alternative values of  $b_w(\lambda)$  compared here are denoted (B) (Buitveld, *et al.* 1994) and (M) (Morel 1974). The linear temperature dependence of pure water absorption,  $\frac{\partial a_w(\lambda)}{\partial T}$ , is due to Pegau and Zaneveld (1993) and Pegau *et al.* (1997).

$\lambda$	$a_w$	$\frac{\partial a_w(\lambda)}{\partial T}$	$b_w$	$b_w$	$\lambda$	$a_w$	$\frac{\partial a_w(\lambda)}{\partial T}$	$b_w$	$b_w$	$\lambda$	$a_w$	$\frac{\partial a_w(\lambda)}{\partial T}$	$b_w$	$b_w$
nm	$\text{m}^{-1}$	$\text{m}^{-1}\text{ }^\circ\text{C}$	$\text{m}^{-1}$ (B)	$\text{m}^{-1}$ (M)	nm	$\text{m}^{-1}$	$\text{m}^{-1}\text{ }^\circ\text{C}$	$\text{m}^{-1}$ (B)	$\text{m}^{-1}$ (M)	nm	$\text{m}^{-1}$	$\text{m}^{-1}\text{ }^\circ\text{C}$	$\text{m}^{-1}$ (B)	$\text{m}^{-1}$ (M)
340	0.0325	0.0000	0.0104	0.0118	500	0.0242	0.0001	0.0021	0.0022	630	0.3184	0.0002	0.0008	0.0009
350	0.0204	0.0000	0.0092	0.0103	505	0.0300	0.0001	0.0020		635	0.3309	0.0000	0.0008	
360	0.0156	0.0000	0.0082	0.0091	510	0.0382	0.0002	0.0019	0.0020	640	0.3382	-0.0001	0.0008	0.0008
370	0.0114	0.0000	0.0073	0.0081	515	0.0462	0.0002	0.0018		645	0.3513	0.0000	0.0007	
380	0.0100	0.0000	0.0065	0.0072	520	0.0474	0.0002	0.0018	0.0019	650	0.3594	0.0001	0.0007	0.0007
390	0.0088	0.0000	0.0059	0.0065	525	0.0485	0.0002	0.0017		655	0.3852	0.0002	0.0007	
400	0.0070	0.0000	0.0053	0.0058	530	0.0505	0.0001	0.0017	0.0017	660	0.4212	0.0002	0.0007	0.0007
405	0.0060	0.0000	0.0050		535	0.0527	0.0001	0.0016		665	0.4311	0.0002	0.0006	
410	0.0056	0.0000	0.0048	0.0052	540	0.0551	0.0001	0.0015	0.0016	670	0.4346	0.0002	0.0006	0.0007
415	0.0052	0.0000	0.0045		545	0.0594	0.0001	0.0015		675	0.4390	0.0001	0.0006	
420	0.0054	0.0000	0.0043	0.0047	550	0.0654	0.0001	0.0014	0.0015	680	0.4524	0.0000	0.0006	0.0006
425	0.0061	0.0000	0.0041		555	0.0690	0.0001	0.0014		685	0.4690	-0.0001	0.0006	
430	0.0064	0.0000	0.0039	0.0042	560	0.0715	0.0001	0.0013	0.0014	690	0.4929	-0.0002	0.0006	0.0006
435	0.0069	0.0000	0.0037		565	0.0743	0.0001	0.0013		695	0.5305	-0.0001	0.0005	
440	0.0083	0.0000	0.0036	0.0038	570	0.0804	0.0001	0.0012	0.0013	700	0.6229	0.0002	0.0005	0.0005
445	0.0095	0.0000	0.0034		575	0.0890	0.0002	0.0012		705	0.7522	0.0007	0.0005	
450	0.0110	0.0000	0.0033	0.0035	580	0.1016	0.0003	0.0011	0.0012	710	0.8655	0.0016	0.0005	0.0005
455	0.0120	0.0000	0.0031		585	0.1235	0.0005	0.0011		715	1.0492	0.0029	0.0005	
460	0.0122	0.0000	0.0030	0.0031	590	0.1487	0.0006	0.0011	0.0011	720	1.2690	0.0045	0.0005	0.0005
465	0.0125	0.0000	0.0028		595	0.1818	0.0008	0.0010		725	1.5253	0.0065	0.0004	
470	0.0130	0.0000	0.0027	0.0029	600	0.2417	0.0010	0.0010	0.0011	730	1.9624	0.0087	0.0004	0.0005
475	0.0143	0.0000	0.0026		605	0.2795	0.0011	0.0010		735	2.5304	0.0108	0.0004	
480	0.0157	0.0000	0.0025	0.0026	610	0.2876	0.0011	0.0009	0.0010	740	2.7680	0.0122	0.0004	0.0004
485	0.0168	0.0000	0.0024		615	0.2916	0.0010	0.0009		745	2.8338	0.0119	0.0004	
490	0.0185	0.0000	0.0023	0.0024	620	0.3047	0.0008	0.0009	0.0009	750	2.8484	0.0106	0.0004	0.0004
495	0.0213	0.0001	0.0022		625	0.3135	0.0005	0.0008						