

ORIENTATION LIGHTING TIMES FOR DESTROYING CERTAIN "ORGANISMS"

Table 1: Required times for a 90 % kill rate; according to [1], 80 % efficiency had been taken into account due to the wavelength of 254 nm

Source: [1] Ultraviolet purification application information, company Philips, 2006 Koninklijke Philips Electronics N.V.

Bacteria	amount of UV radiation for 90% kill rate		Time of lighting for 90% kill rate [sec]	
	Dose	k	T8 30W, 1m	T8 30W, 3m
Bacillus anthracis	45.2	0.051	46	418
B. megatherium sp. (spores)	27.3	0.084	28	253
B. megatherium sp. (veg.)	13	0.178	13	120
B. paratyphosus	32	0.072	33	296
B. supolis	71	0.032	73	657
B. supolis spores	120	0.019	123	1110
Campylobacter jejuni	11	0.209	11	102
Clostridium tetani	120	0.019	123	1110
Corynebacterium diphtheriae	33.7	0.069	35	312
Dysentery bacilli	22	0.105	23	204
Eberthella typhosa	21.4	0.108	22	198
Escherichia coli	30	0.077	31	278
Klebsiella terrihni	26	0.089	27	241
Legionella pneumophila	9	0.256	9	83
Micrococcus candidus	60.5	0.038	62	560
Micrococcus sphaeroides	100	0.023	103	925
Mycobacterium tuberculosis	60	0.038	62	555
Neisseria catarrhalis	44	0.053	45	407
Phytomonas tumefacincs	44	0.053	45	407
Pseudomonas aeruginosa	55	0.042	57	509
Pseudomonas fluorescens	35	0.065	36	324
Proteus vulgaris	26.4	0.086	27	244
Salmonella cntcritidis	40	0.058	41	370
Salmonella paratyphi	32	0.072	33	296
Salmonella typhimurium	80	0.029	82	740
Sartina lutea	197	0.012	203	1823
Seratia marccscns	24.2	0.095	25	224
Shigcla paradysenteriae	16.3	0.141	17	151
Shigela sonnei	30	0.077	31	278
Spirillum rubrum	44	0.053	45	407
Staphylococcus albus	18.4	0.126	19	170
Staphylococcus aureus	26	0.086	27	241
Streptococcus faccalis	44	0.052	45	407
Streptococcus hemoluticus	21.6	0.106	22	200

Streptococcus lactus	61.5	0.037	63	569
Streptococcus viridans	20	0.115	21	185
Sentertidis	40	0.057	41	370
Vibrio cholerae (V.comma)	35	0.066	36	324
Yersinia enterocolidca	11	0.209	11	102

Fungi	Dose	k	T8 30W, 1m	T8 30W, 3m
Bakers' yeast	39	0.06	40	361
Brewers' yeast	33	0.07	34	305
Common yeast cake	60	0.038	62	555
Saccharomyces cerevisiae	60	0.038	62	555
Saccharomyces ellipsoideus	60	0.038	62	555
Saccharomyces sp.	80	0.029	82	740

Moulds	Dose	k	T8 30W, 1m	T8 30W, 3m
Aspergillus ftavus	600	0.003	617	5552
Aspergillus glaucus	440	0.004	452	4071
Aspergillus niger	1320	0.0014	1357	12214
Mucor racemosus A	170	0.013	175	1573
Mucor racemosus B	170	0.013	175	1573
Oospora lactis	50	0.046	51	463
Penicillium digiutum	440	0.004	452	4071
Penicillium expansum	130	0.018	134	1203
Penicillium roqueforti	130	0.018	134	1203
Rhizopus nigricans	1110	0.002	1141	10271

Viruses	Dose	k	T8 30W, 1m	T8 30W, 3m
Hepatitis A	73	0.032	75	675
Influenza virus	36	0.064	37	333
MS-2 Coliphasc	186	0.012	191	1721
Polio virus	58	0.04	60	537
Rotavirus	81	0.028	83	749

Parasites	Dose	k	T8 30W. 1m	T8 30W. 3m
Cryptosporidium parvum	25	0.092	26	231
Giardia lambiia	11	0.209	11	102

Algae	Dose	k	T8 30W. 1m	T8 30W. 3m
Blue Green	3000	0.0008	3084	27758
Chlorelb vulgaris	120	0.019	123	1110