

Acute toxicity of silver (Ag+) to freshwater organisms

- Validity according to Klimisch (1997); only records with a validity of 1 or 2 (green) can be used for ERL derivation.
 - Bold records are selected for ERL derivation. These records are (1) valid; (2) based on measured dissolved concentrations of Ag+; (3) performed in water with DOC < 2 mg/L or labwater or filtered natural water or well water; (4) with a pH of 6-9; (5) EC50s/LC50s for acute and NOECs/EC10s for chronic studies.
 - When for a certain species, data for different endpoints are available (e.g., growth, reproduction) the data for the most sensitive endpoint are selected. If there are more data for the same endpoint, the geometric mean is used.

Species	Species properties	Analyzed	Test compound	Purity	Test type	Test water	Filtered y/n	pH	Temperature [°C]	Hardness [mg CaCO ₃ /L]	DOC mg/L	Exp time	Criterion	Test endpoint	Value total [µg Ag ⁺ /L]	Value dissolved [µg Ag ⁺ /L]	Value unkn. / nominal [µg Ag ⁺ /L]	Validity	Notes	Reference
Bacteria																				
<i>Escherichia coli</i>	mid log phase	N	AgNO ₃		S	am			37			30 min	LC50	survival			591000	3	1, 2	Matsumura et al. 2003
<i>Escherichia coli</i>	strain K12	N	AgNO ₃		S	dtw		6,8	rt			15 min	LC50	survival			310	3	21	Bronk et al. 2001
<i>Escherichia coli</i>	strain K12	N	AgNO ₃		S	dtw		6,8	rt			15 min	LC50	survival			260	3	22	Bronk et al. 2001
<i>Escherichia coli</i>	strain J 53; log phase cells	N	AgNO ₃		S	am			37			20 h	EC50	growth			10668	3	23	Gupta et al. 1998
<i>Pseudomonas aeruginosa</i>	ATCC 10145; log-phase	N	AgNO ₃		S	rw			25	0,029		8 h	EC100	inactivation			10	4	1,24	Hwang et al., 2006
<i>Vibrio fischeri</i>	Microtox assay	Y	AgNO ₃	AAS standard	S	dw		6,0	15	0	0	15 min	NOEC	luminescence	110			2	4,25,205,206	Fulladosa et al., 2005
<i>Vibrio fischeri</i>	Microtox assay	Y	AgNO ₃	AAS standard	S	dw		7,0	15	0	0	15 min	NOEC	luminescence	110			2	4,25,205,206	Fulladosa et al., 2005
Nitrifying bacteria	WWTP sludge	N	AgNO ₃		S	am		7,5					EC50	nitrification			810	3	1,2,26	Choi and Hu 2008
Nitrifying bacteria	WWTP sludge	N	AgNO ₃		S	am		7,5					EC50	nitrification			> 1000	4	27	Choi and Hu 2009
Nitrifying bacteria	WWTP sludge	Y			S			7				21 h	IC50	O ₂ consumption		20,8	330	4	27,28	Cecen et al. 2010
Nitrifying bacteria	WWTP sludge	Y			S			7				21 h	IC50	CO ₂ release		26,5	420	4	27,28	Cecen et al. 2010
Algae																				
<i>Chlamydomonas reinhardtii</i>	exponential growth; 2x10 ⁵ cells/mL	Y	AgNO ₃		S	am		7,45	25	65	0	1 h	EC50	photosynthetic yield		19,6		2	2,29,206	Navarro et al., 2008
<i>Chlamydomonas reinhardtii</i>	exponential growth; 2x10 ⁵ cells/mL	Y	AgNO ₃		S	am		7,45	25	65	0	2 h	EC50	photosynthetic yield		17,8		2	2,29,206	Navarro et al., 2008
<i>Chlamydomonas reinhardtii</i>	UTCC11		110 ^m Ag		F	am		7	20	15			EC50	growth rate			1,60	3	235	Hiriart-Baer et al., 2006
<i>Chlamydomonas reinhardtii</i>	UTCC11			ag	S	am			20			6 h	EC50	growth rate			1,29	3		Lee et al., 2005
<i>Chlorella vulgaris</i>		Y	AgNO ₃		S	am		7,2	rt	40	0	96 h	EC50	Cell density		22,15		2	3,4,33,34,35,206	Kolts et al., 2009
<i>Chlorella vulgaris</i>		Y	AgNO ₃		S	am			rt		0	96 h	EC50	Cell density		21,7		2	3,4,30,31,34,206	Kolts et al., 2009
<i>Chlorella vulgaris</i>		Y	AgNO ₃		S	am		7,2	rt	40	0	96 h	EC50	Cell density		13		2	3,4,30,32,34,206	Kolts et al., 2009
<i>Pseudokirchneriella subcapitata</i>		Y	AgNO ₃		S	am		7,2	rt	40	0	96 h	EC50	Cell density		6,47		2	3,4,30,33,34,206	Kolts et al., 2009
<i>Pseudokirchneriella subcapitata</i>		Y	AgNO ₃		S	am		7,2	rt	40	0	96 h	EC50	Cell density		9,47		2	3,4,32,34,35,206	Kolts et al., 2009
<i>Pseudokirchneriella subcapitata</i>		N	AgNO ₃		S							10 d	EC50	growth			70	3	2,36	Schmittschmitt et al. 1996
<i>Pseudokirchneriella subcapitata</i>		N	Ag ₂ SO ₄		S							10 d	EC50	growth			90	3	2,36	Schmittschmitt et al. 1996
<i>Pseudokirchneriella subcapitata</i>			AgNO ₃ , AgSO ₄										EC50				> 125	4		Schmittschmitt et al. 1996 in Ratte 1999
<i>Pseudokirchneriella subcapitata</i>		Y	Ag ₂ SO ₃	formulation	S	am		7.8-8.2	23		0	72 h	EC50	growth rate	3,4			2	5,6,18,37,206,233	Oldersma et al 2003 in DAR silver thiosulphate
<i>Pseudokirchneriella subcapitata</i>			110 ^m Ag		F	am		7	20	15			EC50	growth rate			2,30	3	235	Hiriart-Baer et al., 2006
<i>Pseudokirchneriella subcapitata</i>				ag	S	am			20			6 h	EC50	growth rate			2,80	3		Lee et al., 2005

Macrophyta																
<i>Elodea canadensis</i>		N	AgNO3	S	am	6,7	24	10	24 h	EC50	photosynthesis	100	3	1	Brown and Rattigan 1979	
<i>Elodea canadensis</i>		N	AgNO3	S	am	6,7	24	10	28 d	EC50	plant health	7500	3	1	Brown and Rattigan 1979	
<i>Lactuca sativa</i>	seeds	N	AgNO3	S	dw				96 h	EC50	root length	1000	3	236	Fjällborg et al., 2006	
<i>Lemna minor</i>		N	AgNO3	S	am	6,7	24	10	28 d	EC50	plant health	270	3	1	Brown and Rattigan 1979	
<i>Lemna minor</i>		N	AgNO3	S	am	5,5	24		7 d	EC50	frond number	< 5	3	1	Gubbins et al 2011	
<i>Lemna minor</i>		N	AgNO3	S	am	5,5	24		14 d	EC50	frond number	< 5	3	1	Gubbins et al 2011	
<i>Lemna minor</i>		N	AgNO3	S	am	5,5	24		7 d	EC50	growth rate	7,5	3	1	Gubbins et al 2011	
<i>Lemna minor</i>		N	AgNO3	S	am	5,5	24		14 d	EC50	growth rate	8,5	3	1	Gubbins et al 2011	
<i>Lemna minor</i>		N	AgNO3	S	am	6,8	24		3 w	EC50	frond number	0,19	3	1, 2	Hutchinson and Czyska 1975	
<i>Lemna minor</i>	clone 7868	N	AgNO3	S	am	5,5	25	166	7 h	EC50	frond abscission	51	3	1	Topp et al. 2011	
<i>Lemna minor</i>	clone 7766	N	AgNO3	S	am	5,5	25	166	7 h	EC50	frond abscission	65	3	1	Topp et al. 2011	
<i>Lemna minor</i>	clone 9441	N	AgNO3	S	am	5,5	25	166	7 h	EC50	frond abscission	78	3	1	Topp et al. 2011	
<i>Lemna minor</i>	clone 8389	N	AgNO3	S	am	5,5	25	166	7 h	EC50	frond abscission	94	3	1	Topp et al. 2011	
<i>Lemna minor</i>	clone 7123	N	AgNO3	S	am	5,5	25	166	7 h	EC50	frond abscission	113	3	1	Topp et al. 2011	
<i>Lemna minor</i>	clone 8292	N	AgNO3	S	am	5,5	25	166	7 h	EC50	frond abscission	168	3	1	Topp et al. 2011	
<i>Lemna minor</i>	clone 8623	N	AgNO3	S	am	5,5	25	166	7 h	EC50	frond abscission	330	3	1	Topp et al. 2011	
<i>Lemna minor</i>	clone 7194	N	AgNO3	S	am	5,5	25	166	7 h	EC50	frond abscission	525	3	1	Topp et al. 2011	
<i>Lemna minor</i>	clone 7022	N	AgNO3	S	am	5,5	25	166	7 h	EC50	frond abscission	1294	3	1	Topp et al. 2011	
<i>Lemna minor</i>	fronds	Y	AgNO3	S					7 d	EC50	growth rate	30		4	17	Naumann et al 2007 in REACH dossier
<i>Lemna minor</i>	fronds	Y	AgNO3	S					7 d	EC50	growth rate	81		4	17	Naumann et al 2007 in REACH dossier
<i>Lemna minor</i>	clone St; fronds	N	AgNO3	S	am	5,5	25	166	7 d	EC50	frond number	81	3	238	Naumann et al., 2007	
<i>Lemna minor</i>	clone St; fronds	N	AgNO3	S	am	5,5	25	166	7 d	EC50	weight	30	3	238	Naumann et al., 2007	
<i>Lemna minor</i>	clone St; fronds	N	AgNO3	S	am	5,5	25	166	7 d	EC50	chlorophyll	37	3	238	Naumann et al., 2007	
<i>Lemna paucicostata</i>	strain 6746	N	AgNO3	S	am	4,1	25	700	7 d	EC50	frond number	970	3	1,2	Nasu and Kugimoto 1981	
<i>Lemna paucicostata</i>	strain 6746	N	AgNO3	S	am	5,1	25	700	7 d	EC50	frond number	1100	3	1,2	Nasu and Kugimoto 1981	
<i>Lemna paucicostata</i>	strain 6746	N	AgNO3	S	am	6,1	25	120	7 d	EC50	frond number	400	3	1,2	Nasu and Kugimoto 1981	
<i>Lemna paucicostata</i>	strain 6746	N	AgNO3	S	am	7,1	25	120	7 d	EC50	frond number	200	3	1,2	Nasu and Kugimoto 1981	
<i>Salvinia natans</i>		N	AgNO3	S	am	6,8	24		3 w	EC50	frond number	0,92	3		1,2	Hutchinson and Czyska 1975
Fungi																
<i>Saccharomyces cerevisiae</i>	strain S288C	N	AgNO3	S	am			30	96 h	EC90	growth	270	3	38	Yang and Pon 2003	
<i>Saccharomyces cerevisiae</i>	strain S288C	N	AgNO3	S	am			30	48 h	EC90	growth	539	3	38	Yang and Pon 2003	
Cnidaria																
<i>Hydra sp.</i>										LC50	mortality	26	4		Brooke et al., 1986 in Wood et al., 2002	
Platyhelminthes																
<i>Dugesia dorotocephala</i>			Ag2S						96 h	LC100	mortality	> 1000000	4	7	Ewell et al. 1993 in Ratte 1999	
<i>Dugesia dorotocephala</i>			AgNO3						96 h	LC50	mortality	30	4	7	Ewell et al. 1993 in Ratte 1999	
<i>Dugesia dorotocephala</i>			NaAgS2O3						96 h	LC100	immobility	> 1300	4	7	Ewell et al. 1993 in Ratte 1999	

Rotifera																			
<i>Philodina acuticornis</i>		N	AgNO3		S	am	7.4-7.8	20	24		96 h	EC50	motion	14000	3	1	Buikema et al 1974		
Nematoda																			
<i>Caenorhabditis elegans</i>	3-4 d	N	AgNO3	rg	S	am		20			96 h	LC50	mortality	100	3	237	Williams and Dusenbery, 1990		
Mollusca																			
<i>Aplexa hypnorum</i>	adult	Y	AgNO3	99,99	R	nw	n	7,5	25,5	50,4	?	96 h	LC50	mortality	241		2	4,39,207	Holcombe et al. 1983
<i>Aplexa hypnorum</i>			AgNO3								96 h	LC50	mortality		400	4	7,40	Holcombe et al. 1983 in Ratte 1999	
<i>Aplexa hypnorum</i>	adult	Y	AgNO3		F	nw	n	7,4	17,2	44,7	?	96 h	LC50	mortality	83		2	9,12,41,207	Holcombe et al. 1987
<i>Corbicula fluminea</i>	3-5mm, field collected	Y	AgNO3	rg	R	nw	n	7,8	20	34,8	?	96 h	LC50	mortality	154,5	87,4	2	4,11,41,207	Diamond et al 1990
<i>Lymnaea luteola</i>	adult; 2.1 cm; 0.5 g		AgNO3	rg	R	dtw		7,4	32	195	510	96 h	LC50	mortality		4,2	3	58	Khangarot and Ray, 1988 BECT
<i>Planorbis trivolis</i>			Ag2S									96 h	LC100	mortality		> 1000000	4	7	Ewell et al. 1993 in Ratte 1999
<i>Planorbis trivolis</i>			AgNO3									96 h	LC50	mortality		30	4	7	Ewell et al. 1993 in Ratte 1999
<i>Planorbis trivolis</i>			NaAgS2O3									96 h	LC100	mortality		> 1300	4	7	Ewell et al. 1993 in Ratte 1999
Annelida																			
<i>Lumbricus variegatus</i>			Ag2S									96 h	LC100	mortality		> 1000000	4	7	Ewell et al. 1993 in Ratte 1999
<i>Nepheleopsis obscura</i>	1.3 g	Y	AgNO3		F	nw	n	7,4	17,2	44,7	?	96 h	LC50	mortality	29		2	9,12,41,207	Holcombe et al. 1987
<i>Tubifex tubifex</i>	field collected	N	AgNO3	rg	R			7,6	30	245		96 h	LC50	mortality		31	3	1	Khangarot 1991
<i>Tubifex tubifex</i>															30	4			Khangarot 1991, in Kangharot & Das, 2009
Crustacea																			
<i>Alona affinis</i>												LC50	mortality		37	4			Ghosh et al. 1990 in Wood et al., 2002
<i>Caecidotea intermedia</i>			Ag2S									96 h	LC100	mortality		> 1000000	4	7	Ewell et al. 1993 in Ratte 1999
<i>Cambarus diogenes diogenes</i>	adult	Y	AgNO3	tmg	F	rtw		8,2	15	120	0	96 h	LC50	mortality	65,85		1	206	Bianchini et al. 2002a
<i>Cambarus diogenes diogenes</i>	early juvenile	Y	AgNO3	tmg	F	rtw		8,2	15	120	0	96 h	LC50	mortality		0,9	1	2,43,206	Bianchini et al. 2002a
<i>Ceriodaphnia dubia</i>	< 24 h	Y	AgNO3	ag	R	am		7.4-7.8	25	80-100	≤ 0.4	48 h	LC50	mortality		0,31	2	6,44,47	Kolts et al 2008
<i>Ceriodaphnia dubia</i>	< 24 h	Y	AgNO3	ag	R	am		7.4-7.8	25	80-100	1.8-2.0	48 h	LC50	mortality		0,53	2	45,47	Kolts et al 2008
<i>Ceriodaphnia dubia</i>	< 24 h	Y	AgNO3	ag	R	am		7.4-7.8	25	80-100	2.0-2.1	48 h	LC50	mortality		0,32	2	46,47	Kolts et al 2008
<i>Ceriodaphnia dubia</i>	< 24 h	Y	AgNO3	ag	R	am		7.4-7.8	25	80-100	1.9-2.0	48 h	LC50	mortality		6,1	2	47,48	Kolts et al 2008
<i>Ceriodaphnia dubia</i>	< 24 h	Y	AgNO3	rg	R	am		7.4-7.8	25±2	80-100	0	48 h	LC50	mortality	0,5		2	9,14,49,50,206	Bielmyer et al. 2002
<i>Ceriodaphnia dubia</i>	< 24 h	Y	AgNO3	rg	R	am		7.4-7.8	25±2	80-100	0	96 h	LC50	mortality	0,5		2	9,14,50,206	Bielmyer et al. 2002
<i>Ceriodaphnia dubia</i>	< 24 h	Y	AgNO3	rg	R	am		7.4-7.8	25±2	80-100	0	8 d	LC50	mortality	0,3		2	9,14,50,206	Bielmyer et al. 2002
<i>Ceriodaphnia dubia</i>	< 24 h	Y	AgGSH		R	am		7.4-7.8	25±2	80-100	0	96 h	LC50	mortality	2,5		2	9,14,50,51,206	Bielmyer et al. 2002
<i>Ceriodaphnia dubia</i>	< 24 h	Y	AgGSH		R	am		7.4-7.8	25±2	80-100	0	8 d	LC50	mortality	2,2		2	9,14,50,51,206	Bielmyer et al. 2002
<i>Ceriodaphnia dubia</i>	< 24 h	Y	AgCys		R	am		7.4-7.8	25±2	80-100	0	48 h	LC50	mortality	4,7		2	9,14,50,52,206	Bielmyer et al. 2002
<i>Ceriodaphnia dubia</i>	< 24 h	Y	AgCys		R	am		7.4-7.8	25±2	80-100	0	96 h	LC50	mortality	4,7		2	9,14,50,52,206	Bielmyer et al. 2002
<i>Ceriodaphnia dubia</i>	< 24 h	Y	AgCys		R	am		7.4-7.8	25±2	80-100	0	8 d	LC50	mortality	4,7		2	9,14,50,52,206	Bielmyer et al. 2002
<i>Ceriodaphnia dubia</i>	< 24 h					am			25			48 h	LC50	mortality			4		Peng et al. 2002
<i>Ceriodaphnia dubia</i>													LC50	mortality	0,9		4		Rodgers et al. 1997 in Peng et al. 2002
<i>Ceriodaphnia dubia</i>	24 h	Y	AgNO3		S	nw	n	7.5-8.2	20	68-70	?	96 h	LC50	mortality		0,92	2	8,53,207	Rodgers et al. 1997a
<i>Ceriodaphnia dubia</i>	24 h	Y	AgCl		S	nw	n	7.5-8.2	20	68-70	?	96 h	LC50	mortality		> 1930	2	8.207	Rodgers et al. 1997a
<i>Ceriodaphnia dubia</i>	24 h	Y	AgS2O3		S	nw	n	7.5-8.2	20	68-70	?	96 h	LC50	mortality		> 12000	2	8.207	Rodgers et al. 1997a
<i>Ceriodaphnia dubia</i>													LC50	mortality	0,8		4		Diamond et al. 1997 in Peng et al. 2002
<i>Ceriodaphnia dubia</i>	< 24 h	Y	AgNO3		R	am		7.4-7.8	20	70-90	0	48 h	LC50	mortality		0,86	2	54.171.206.234	Diamond et al. 1997
<i>Ceriodaphnia dubia</i>	< 24 h	Y	AgNO3		R	am		7.4-7.8	20	70-90	0	48 h	LC50	mortality		0,7	2	54.171.206.234	Diamond et al. 1997
<i>Ceriodaphnia dubia</i>	< 24 h	Y	AgNO3		R	am		7.4-7.8	20	70-90	0	48 h	LC50	mortality		0,55	2	54.171.206.234	Diamond et al. 1997
<i>Ceriodaphnia dubia</i>	< 24 h	Y	AgNO3		R	nw	n	6,8	20	74	1,2	48 h	LC50	mortality		3,8	2	171.217	Diamond et al. 1997
<i>Ceriodaphnia dubia</i>	< 24 h	Y	AgNO3		R	nw	n	7,2	20	90	1,4	48 h	LC50	mortality		1,2	2	171.218	Diamond et al. 1997
<i>Ceriodaphnia dubia</i>	< 24 h	Y	AgNO3		R	nw	n	7,5	20	76	2,8	48 h	LC50	mortality		1,6	2	171.219	Diamond et al. 1997
<i>Ceriodaphnia dubia</i>	< 24 h	Y	AgNO3		R	nw	n	7	20	106	5,5	48 h	LC50	mortality		1,1	2	171.220	Diamond et al. 1997
<i>Ceriodaphnia dubia</i>	< 24 h	Y	AgNO3	rg	S	nw	y	8,10	26	225	5,66	48 h	LC50	immobility/ mortality		3,24	1	55,56,208	Bielmyer et al 2007
<i>Ceriodaphnia dubia</i>	< 24 h	Y	AgNO3	rg	S	nw	y	8,04	26	197	11,5	48 h	LC50	immobility/ mortality		1,45	1	55,57,209	Bielmyer et al 2007
<i>Ceriodaphnia dubia</i>	< 24 h	Y	AgNO3	rg	S	nw	y	8,14	26	131	1,77	48 h	LC50	immobility/ mortality		0,34	1	55,56,210	Bielmyer et al 2007

<i>Ceriodaphnia dubia</i>	< 24 h	Y	AgNO3	rg	S	nw	y	7,75	26	28	3,85	48 h	LC50	immobility/ mortality	1,28	1	55,56,211	Bielmyer et al 2007	
<i>Ceriodaphnia dubia</i>	< 24 h	Y	AgNO3	rg	S	nw	y	7,84	26	129	4,34	48 h	LC50	immobility/ mortality	4,24	1	55,57,212	Bielmyer et al 2007	
<i>Ceriodaphnia dubia</i>	< 24 h	Y	AgNO3	rg	S	dtw		8,07	26	63	4,55	48 h	LC50	immobility/ mortality	0,76	1	55.213	Bielmyer et al 2007	
<i>Ceriodaphnia dubia</i>	< 24 h	Y	AgNO3	rg	S	nw	y	7,20	26	39	6,16	48 h	LC50	immobility/ mortality	1,15	1	55,57,214	Bielmyer et al 2007	
<i>Ceriodaphnia dubia</i>	< 24 h	Y	AgNO3	rg	S	nw	y	7,82	26	80	12	48 h	LC50	immobility/ mortality	9,52	1	55,56,215	Bielmyer et al 2007	
<i>Ceriodaphnia dubia</i>	< 24 h	Y	AgNO3	rg	S	nw	y	6,84	26	12	5,02	48 h	LC50	immobility/ mortality	1,69	1	55,56,216	Bielmyer et al 2007	
<i>Ceriodaphnia dubia</i>	< 24 h	Y	AgNO3	rg	R	rw		7.4-7.8	25	80-100	0	48 h	EC50	immobility/ mortality	0,19	0,1	1	6,58,206	Kolts et al 2006
<i>Ceriodaphnia dubia</i>	< 24 h	Y	AgNO3	rg	R	rw		7.4-7.8	25	80-100	0	48 h	EC50	immobility/ mortality	0,72	0,41	1	6,58,206	Kolts et al 2006
<i>Ceriodaphnia dubia</i>	< 24 h	Y	AgNO3	rg	R	rw		7.4-7.8	25	80-100	0	48 h	EC50	immobility/ mortality	0,42	0,3	1	6,58,206	Kolts et al 2006
<i>Ceriodaphnia dubia</i>	< 24 h	Y	AgNO3	rg	R	rw		7.4-7.8	25	80-100		48 h	EC50	immobility/ mortality	0,76	0,1	3	6,59	Kolts et al 2006
<i>Ceriodaphnia dubia</i>	< 24 h	Y	AgNO3	rg	R	rw		7.4-7.8	25	80-100		48 h	EC50	immobility/ mortality	0,91	0,56	3	6,59	Kolts et al 2006
<i>Ceriodaphnia dubia</i>	< 24 h	Y	AgNO3	rg	R	rw		7.4-7.8	25	80-100		48 h	EC50	immobility/ mortality	0,72	0,23	3	6,59	Kolts et al 2006
<i>Ceriodaphnia dubia</i>	< 24 h	Y	AgNO3	rg	R	rw		7.4-7.8	25	80-100		48 h	EC50	immobility/ mortality	29	9,8	3	6,60	Kolts et al 2006
<i>Ceriodaphnia dubia</i>	< 24 h	Y	AgNO3	rg	R	rw		7.4-7.8	25	80-100		48 h	EC50	immobility/ mortality	35	14,1	3	6,60	Kolts et al 2006
<i>Ceriodaphnia dubia</i>	< 24 h	Y	AgNO3	rg	R	rw		7.4-7.8	25	80-100		48 h	EC50	immobility/ mortality	39	14,5	3	6,61	Kolts et al 2006
<i>Ceriodaphnia dubia</i>	< 24 h	Y	AgNO3	rg	R	rw		7.4-7.8	25	80-100		48 h	EC50	immobility/ mortality	38	15,7	3	6,62	Kolts et al 2006
<i>Ceriodaphnia reticulata</i>	< 24 h	N	AgNO3	rg	S	nw	y	8	23	240		48 h	LC50	mortality		1,4	3	12,58	Elnabarawy et al., 1986
<i>Ceriodaphnia reticulata</i>	< 4 h	N			S	nw	n	7.2-7.4	24-25	45		48 h	LC50			11	3		Mount and Norberg, 1984
<i>Ceriodaphnia pulex</i>	< 24 h	N	AgNO3	>99	R	dtw		8,2	25	142		48 h	LC50	mortality		160	3	1	Griffitt et al 2008
<i>cladocerans</i>					S	am		7	20	16		48 h	LC50	mortality		27	3	63	Hook and Fisher 2001
<i>Crangonyx pseugracilis</i>	4 mm	N	AgNO3	ag	R	tw/dw		6,75	13	45-55		48 h	LC50	mortality		6	3	58	Martin and Holdich, 1986
<i>Crangonyx pseugracilis</i>	4 mm	N	AgNO3	ag	R	tw/dw		6,75	13	45-55		96 h	LC50	mortality		5	3	58	Martin and Holdich, 1986
<i>Cypris subglobosa</i>	collected at fish ponds	N	AgNO3	rg (>98%)	R	nw	y	7,6	21	245		24 h	EC50	immobility		37	3	1	Khangarot & Das, 2009
<i>Cypris subglobosa</i>	collected at fish ponds	N	AgNO3	rg (>98%)	R	nw	y	7,6	21	245		48 h	EC50	immobility		13	3	1	Khangarot & Das, 2009
<i>Daphnia magna</i>	< 24 h	Y	AgNO3	tmg	R	rtw		8,2	20	115	0	48 h	LC50	mortality	0,26		2	221	Bianchini et al. 2002b
<i>Daphnia magna</i>	adult	Y	AgNO3	tmg	R	rtw		8,2	20	115	0	48 h	LC50	mortality		0,34	2	2,43,221	Bianchini et al. 2002b
<i>Daphnia magna</i>	neonates	Y	AgNO3		R	am		8,2	20			48 h	LC50	mortality	0,22		2	4,8,206	Bianchini et al. 2002a
<i>Daphnia magna</i>	neonates	Y	AgNO3		R	am		8,2	20			48 h	LC50	mortality	0,28		2	4,8,64,206	Bianchini et al. 2002a
<i>Daphnia magna</i>	< 24 h	Y	AgNO3		R	am		8,2	20	115		48 h	LC50	mortality	6,88	3,09	2	4,8,65,206	Bianchini and Wood 2008
<i>Daphnia magna</i>	< 24 h	Y	AgNO3		R	am		8,2	20	115		48 h	LC50	mortality	8,28	3,21	2	4,8,65,66,206	Bianchini and Wood 2008
<i>Daphnia magna</i>	< 24 h	Y	AgNO3		R	am		8,2	20	460		48 h	LC50	mortality	8,2	3,54	2	4,8,65,206	Bianchini and Wood 2008
<i>Daphnia magna</i>	neonates	Y	AgNO3		R	rtw		8,2	20			48 h	LC50	mortality	6,9		2*	5,67	Bianchini and Wood 2001 in Bianchini and Wood 2002
<i>Daphnia magna</i>	< 24 h	N	AgNO3	ag	S	am		7,6	20	92		48 h	LC50	mortality		0,47	3	68	Bury et al. 2002
<i>Daphnia magna</i>	< 24 h	N	AgNO3	ag	S	am		7,6	20	92		48 h	LC50	mortality		1,2	3	69	Bury et al. 2002
<i>Daphnia magna</i>	< 24 h	N	AgNO3	ag	S	am		7,6	20	92		48 h	LC50	mortality		2,77	3	70	Bury et al. 2002
<i>Daphnia magna</i>	< 24 h	N	AgNO3	ag	S	am		7,6	20	92		48 h	LC50	mortality		26,84	3	71	Bury et al. 2002
<i>Daphnia magna</i>																14	4		Khangarot and Ray 1989 or Rathore 2001 in Khangarot & Das, 2009
<i>Daphnia magna</i>		N		rg	S	nw	y	7.2-7.8	11.5-14.5	240		48 h	LC50	mortality		10	3	1	Khangarot and Ray 1989b
<i>Daphnia magna</i>		N	AgNO3		S	am		7,6	13	240		48 h	EC50	immobility		10	3	1	Khangarot and Ray 1987b

<i>Daphnia magna</i>			Ag2S							48 h	EC50	mobility			> 1000000	4	7	Ewell et al. 1993 in Ratte 1999	
<i>Daphnia magna</i>			Ag2SO4							48 h	LC50	mortality			20	4	7	Ewell et al. 1993 in Ratte 1999	
<i>Daphnia magna</i>			AgNO3							96 h	LC50	mortality			5	4	7	Ewell et al. 1993 in Ratte 1999	
<i>Daphnia magna</i>	< 24 h	Y	AgNO3	rg	S	nw	n (well water)	7,5	20	38	48 h	LC50	mortality	1,1		2	4.207.222	Nebeker et al. 1983	
<i>Daphnia magna</i>	< 24 h	Y	AgNO3	rg	S	nw	n (well water)	7,5	20	40	48 h	LC50	mortality	0,6		2	4.207.222	Nebeker et al. 1983	
<i>Daphnia magna</i>	< 24 h	Y	AgNO3	rg	S	nw	n (well water)	7,5	20	33	48 h	LC50	mortality	1,1		2	4,72,207,222	Nebeker et al. 1983	
<i>Daphnia magna</i>	< 24 h	Y	AgNO3	rg	S	nw	n (well water)	7,5	20	33	48 h	LC50	mortality	12,5		3	4,15,72,207,222	Nebeker et al. 1983	
<i>Daphnia magna</i>		Y	Ag2+		S			7,2	19,5	33	48 h	EC50		1,1		2*	4,72	Nebeker 1983 DAR silver thiosulphate	
<i>Daphnia magna</i>		Y	Ag2+		S			7,2	19,5	33	48 h	EC50		12,5		2*	4,15,72	Nebeker 1983 DAR silver thiosulphate	
<i>Daphnia magna</i>	< 24 h	Y	AgNO3		S			7,5	19,5	38-40	48 h	EC50		1,1		2*	4	Nebeker 1983 DAR silver thiosulphate	
<i>Daphnia magna</i>	< 24 h	Y	AgNO3		S			7,5	19,5	38-40	48 h	EC50		0,6		2*	4	Nebeker 1983 DAR silver thiosulphate	
<i>Daphnia magna</i>			NaAgS2O3							96 h	LC50	mortality			> 1330	4	7	Nebeker et al. 1983 in Ratte 1999	
<i>Daphnia magna</i>			AgNO3							48 h	LC50	mortality			0,9	4	73	Nebeker et al. 1983 in Ratte 1999	
<i>Daphnia magna</i>			AgNO3							48 h	LC50	mortality			12,5	4*		Nebeker et al. 1983 in Ratte 1999	
<i>Daphnia magna</i>	< 24 h	Y	AgNO3		S	nw	n (well water)	7,8	20	255	48 h	LC50	mortality	51		2	4,74,207, 239	Nebeker 1982	
<i>Daphnia magna</i>	< 24 h	Y	AgNO3		S	nw	n (well water)	8,6	20	73	48 h	LC50	mortality	11		2	4,75,207	Nebeker 1982	
<i>Daphnia magna</i>	< 24 h	Y	AgNO3		S	nw	n (well water)	7,2	20	60	48 h	LC50	mortality	0,81		2	4,76,207	Nebeker 1982	
<i>Daphnia magna</i>	< 24 h	Y	AgNO3		S	nw	n (well water)	7,7	20	46	48 h	LC50	mortality	0,64		2	4,77,207	Nebeker 1982	
<i>Daphnia magna</i>	< 24 h	Y	AgNO3		S	nw	n (well water)	7,4	20	46	48 h	LC50	mortality	0,96		2	4,78,207	Nebeker 1982	
<i>Daphnia magna</i>	< 24 h	Y	AgNO3		S	nw	n (well water)	7	20	54	48 h	LC50	mortality	2,9		2	4.207	Nebeker 1982	
<i>Daphnia magna</i>	< 24 h	Y	AgNO3	99,70%	S	dtw		8,1	20	49	1,2	48 h	LC50	mortality	1		2	2,4,217	Erickson et al 1998
<i>Daphnia magna</i>	< 24 h	Y	AgNO3	99,70%	S	dtw		8,1	20	49	1,2	48 h	LC50	mortality	7,8		3	2,4,15	Erickson et al 1998
<i>Daphnia magna</i>	< 24 h	Y	AgNO3	99,70%	S	dtw		8,1	20	49	1,2	48 h	LC50	mortality	1,3		2	2,4,16,217	Erickson et al 1998
<i>Daphnia magna</i>	< 24 h	Y	AgNO3	99,70%	S	dtw		8,1	20	49	1,2	48 h	LC50	mortality	11,1		3	2,4,15,16	Erickson et al 1998
<i>Daphnia magna</i>	< 24 h	Y	AgNO3	99,70%	S	dtw		7,9	20	48	1,5	48 h	LC50	mortality	0,58		2	4,79,223	Erickson et al 1998
<i>Daphnia magna</i>	< 24 h	Y	AgNO3	99,70%	S	nw	y	8,0	20	81	18,5	48 h	LC50	mortality	35		2	4,80,224	Erickson et al 1998
<i>Daphnia magna</i>		N	AgNO3		S	rw		8.0-8.2	22	250	48 h	EC84	immobility/mortality		0,15	3	1,17,81	Fjällborg et al., 2006	
<i>Daphnia magna</i>		N	AgNO3		S			7.2-7.6	22	45	48 h	EC84	immobility/mortality		0,06	3	1,17,81	Fjällborg et al., 2006	
<i>Daphnia magna</i>	< 24 h	Y	AgNO3		R	rw		8	20-22	115	< 0.4	48 h	EC50	immobility/mortality	0,29	0,23	1	4,82,83	Glover et al 2005
<i>Daphnia magna</i>	< 24 h	Y	AgNO3		R	rw		8	20-22	115	0,57	48 h	EC50	immobility/mortality	1,4	1,35	2	4,82,225	Glover et al. 2005
<i>Daphnia magna</i>	< 24 h	Y	AgNO3		R	rw		8	20-22	115	0,99	48 h	EC50	immobility/mortality	1,48	1,41	2	4,82,226	Glover et al. 2005
<i>Daphnia magna</i>	< 24 h	Y	AgNO3		R	rw		8	20-22	115	1,86	48 h	EC50	immobility/mortality	1,84	1,72	2	4,82,227	Glover et al. 2005
<i>Daphnia magna</i>	< 24 h	Y	AgNO3		R	rw		8	20-22	115	0,89	48 h	EC50	immobility/mortality	1,59	1,56	2	4,82,228	Glover et al. 2005
<i>Daphnia magna</i>	< 24 h	Y	AgNO3		R	rw		8	20-22	115	1,91	48 h	EC50	immobility/mortality	2,29	2,33	2	4,82,229	Glover et al. 2005
<i>Daphnia magna</i>	< 24 h	Y	AgNO3		R	rw		8	20-22	115	1,46	48 h	EC50	immobility/mortality	3,51	2,84	2	4,82,230	Glover et al. 2005
<i>Daphnia magna</i>	< 24 h	Y	AgNO3		R	rw		8	20-22	115	1,34	48 h	EC50	immobility/mortality	2,8	2,08	2	4,82,231	Glover et al. 2005
<i>Daphnia magna</i>	< 24 h	Y	AgNO3		R	rw		8	20-22	115	1,26	48 h	EC50	immobility/mortality	2	1,41	2	4,82,232	Glover et al. 2005
<i>Daphnia magna</i>	< 24 h	Y	AgNO3		R	rw		8	20-22	115		48 h	EC50	mortality	1.31-16.42	1.29-16.65	3	4,82,84	Glover et al 2005: ETC 24: 2934
<i>Daphnia magna</i>	neonates	Y	AgNO3	rg	R	am		8,3	22	100	0	48 h	LC50	mortality	0,844		1	4,85	Karen et al. 1999
<i>Daphnia magna</i>	neonates	Y	AgNO3	rg	R	am		8,3	22	100	0	48 h	LC50	mortality	1,01		1	4,85	Karen et al. 1999
<i>Daphnia magna</i>	neonates	Y	AgNO3	rg	R	am		8,3	22	100	0	48 h	LC50	mortality	0,941		1	4,85	Karen et al. 1999

<i>Daphnia magna</i>	neonates	Y	AgNO3	rg	R	am	8,3	22	100	0	48 h	LC50	mortality	1,374	1	4,85	Karen et al. 1999	
<i>Daphnia magna</i>	neonates	Y	AgNO3	rg	R	am	8,3	22	200	0	48 h	LC50	mortality	1,009	1	4,85	Karen et al. 1999	
<i>Daphnia magna</i>	neonates	Y	AgNO3	rg	R	am	8,3	22	200	0	48 h	LC50	mortality	0,578	1	4,85	Karen et al. 1999	
<i>Daphnia magna</i>	neonates	Y	AgNO3	rg	R	am	8,3	22	200	0	48 h	LC50	mortality	1,37	1	4,85	Karen et al. 1999	
<i>Daphnia magna</i>	neonates	Y	AgNO3	rg	R	am	8,3	22	200	0	48 h	LC50	mortality	1,138	1	4,85	Karen et al. 1999	
<i>Daphnia magna</i>	neonates	Y	AgNO3	rg	R	am	8,3	22	100	2	48 h	LC50	mortality	2,74	1	4,85	Karen et al. 1999	
<i>Daphnia magna</i>	neonates	Y	AgNO3	rg	R	am	8,3	22	100	2	48 h	LC50	mortality	1,393	1	4,85	Karen et al. 1999	
<i>Daphnia magna</i>	neonates	Y	AgNO3	rg	R	am	8,3	22	100	2	48 h	LC50	mortality	1,27	1	4,85	Karen et al. 1999	
<i>Daphnia magna</i>	neonates	Y	AgNO3	rg	R	am	8,3	22	100	2	48 h	LC50	mortality	1,479	1	4,85	Karen et al. 1999	
<i>Daphnia magna</i>	neonates	Y	AgNO3	rg	R	am	8,3	22	200	2	48 h	LC50	mortality	1,559	1	4,85	Karen et al. 1999	
<i>Daphnia magna</i>	neonates	Y	AgNO3	rg	R	am	8,3	22	200	2	48 h	LC50	mortality	1,443	1	4,85	Karen et al. 1999	
<i>Daphnia magna</i>	neonates	Y	AgNO3	rg	R	am	8,3	22	200	2	48 h	LC50	mortality	1,774	1	4,85	Karen et al. 1999	
<i>Daphnia magna</i>	neonates	Y	AgNO3	rg	R	am	8,3	22	200	2	48 h	LC50	mortality	1,466	1	4,85	Karen et al. 1999	
<i>Daphnia magna</i>	neonates	Y	AgNO3	rg	R	am	8,3	22	100	5	48 h	LC50	mortality	3,256	1	4,85	Karen et al. 1999	
<i>Daphnia magna</i>	neonates	Y	AgNO3	rg	R	am	8,3	22	100	5	48 h	LC50	mortality	2,502	1	4,85	Karen et al. 1999	
<i>Daphnia magna</i>	neonates	Y	AgNO3	rg	R	am	8,3	22	100	5	48 h	LC50	mortality	1,666	1	4,85	Karen et al. 1999	
<i>Daphnia magna</i>	neonates	Y	AgNO3	rg	R	am	8,3	22	100	5	48 h	LC50	mortality	2,947	1	4,85	Karen et al. 1999	
<i>Daphnia magna</i>	neonates	Y	AgNO3	rg	R	am	8,3	22	200	5	48 h	LC50	mortality	2,006	1	4,85	Karen et al. 1999	
<i>Daphnia magna</i>	neonates	Y	AgNO3	rg	R	am	8,3	22	200	5	48 h	LC50	mortality	1,993	1	4,85	Karen et al. 1999	
<i>Daphnia magna</i>	neonates	Y	AgNO3	rg	R	am	8,3	22	200	5	48 h	LC50	mortality	2,039	1	4,85	Karen et al. 1999	
<i>Daphnia magna</i>	neonates	Y	AgNO3	rg	R	am	8,3	22	200	5	48 h	LC50	mortality	1,532	1	4,85	Karen et al. 1999	
<i>Daphnia magna</i>	neonates	Y	AgNO3	rg	R	am	8,3	22	100	10	48 h	LC50	mortality	2,595	1	4,85	Karen et al. 1999	
<i>Daphnia magna</i>	neonates	Y	AgNO3	rg	R	am	8,3	22	100	10	48 h	LC50	mortality	2,641	1	4,85	Karen et al. 1999	
<i>Daphnia magna</i>	neonates	Y	AgNO3	rg	R	am	8,3	22	100	10	48 h	LC50	mortality	2,317	1	4,85	Karen et al. 1999	
<i>Daphnia magna</i>	neonates	Y	AgNO3	rg	R	am	8,3	22	100	10	48 h	LC50	mortality	2,513	1	4,85	Karen et al. 1999	
<i>Daphnia magna</i>	neonates	Y	AgNO3	rg	R	am	8,3	22	200	10	48 h	LC50	mortality	2,561	1	4,85	Karen et al. 1999	
<i>Daphnia magna</i>	neonates	Y	AgNO3	rg	R	am	8,3	22	200	10	48 h	LC50	mortality	3,794	1	4,85	Karen et al. 1999	
<i>Daphnia magna</i>	neonates	Y	AgNO3	rg	R	am	8,3	22	200	10	48 h	LC50	mortality	2,503	1	4,85	Karen et al. 1999	
<i>Daphnia magna</i>	neonates	Y	AgNO3	rg	R	am	8,3	22	200	10	48 h	LC50	mortality	3,124	1	4,85	Karen et al. 1999	
<i>Daphnia magna</i>		Y	Ag		S	am	7.8-8.1				48 h	EC50	immobility	0,26	2	4,5,18,37,206	DAR silver thiosulphate	
<i>Daphnia magna</i>	< 24 h	N	Ag	≥80%	S	am	6.7-8.1	22	72		48 h	LC50	mortality		1,5	3	LeBlanc 1980	
<i>Daphnia magna</i>	24 h	Y	AgNO3		S	nw	7.5-8.2	20	68-70	?	96 h	LC50	mortality	1,06	2	8,89,207	Rodgers et al. 1997a	
<i>Daphnia magna</i>	24 h	Y	AgCl		S	nw	7.5-8.2	20	68-70	?	96 h	LC50	mortality	>1930	2	8.207	Rodgers et al. 1997a	
<i>Daphnia magna</i>	24 h	Y	AgS2O3		S	nw	7.5-8.2	20	68-70	?	96 h	LC50	mortality	>12000	2	8.207	Rodgers et al. 1997a	
<i>Daphnia magna</i>	< 24 h	Y	AgNO3		F	nw	7,4	17,2	44,7	?	48 h	LC50	mortality	0,9	2	9,12,41,207	Holcombe et al. 1987	
<i>Daphnia magna</i>		N	AgNO3		S	rw					48 h	LC50	mortality		7,7	3	15	Brooke et al. 1994
<i>Daphnia magna</i>		N	AgNO3		S	rw					48 h	LC50	mortality		1,1	3	1	Brooke et al. 1994
<i>Daphnia magna</i>		N	AgNO3		S	rw					48 h	LC50	mortality		11,2	3	15,16	Brooke et al. 1994
<i>Daphnia magna</i>		N	AgNO3		S	rw					48 h	LC50	mortality		1,4	3	15,16	Brooke et al. 1994
<i>Daphnia magna</i>	< 24 h	N	AgNO3	rg	S	nw	8	23	240		48 h	LC50	mortality		1,5	3	12,58	Elnabarawy et al., 1986
<i>Daphnia magna</i>		N	AgNO3		S	rtw	8.0-8.2	22	250		48 h	EC84	mortality		0,15	3	17	Fjällborg et al., 2006
<i>Daphnia magna</i>		N	AgNO3		S	rtw	7.2-7.6	22	45		48 h	EC84	mortality		0,06	3	17	Fjällborg et al., 2006
<i>Daphnia pulex</i>	adult	N	AgNO3	>99	R	dtw	8,2	25	142		48 h	LC50	mortality		8	3	1	Griffitt et al 2008
<i>Daphnia pulex</i>	< 24 h	N	AgNO3	ag	S	am	6,8	20	6		48 h	LC50	mortality		0,3	3	90	Bury et al. 2002
<i>Daphnia pulex</i>	< 24 h	N	AgNO3	ag	S	am	6,8	20	6		48 h	LC50	mortality		0,6	3	68	Bury et al. 2002
<i>Daphnia pulex</i>	< 24 h	N	AgNO3	ag	S	am	6,8	20	6		48 h	LC50	mortality		1,1	3	91	Bury et al. 2002
<i>Daphnia pulex</i>	< 24 h	N	AgNO3	ag	S	am	6,8	20	6		48 h	LC50	mortality		1,3	3	92	Bury et al. 2002
<i>Daphnia pulex</i>	< 24 h	N	AgNO3	ag	S	am	6,8	20	6		48 h	LC50	mortality		1,8	3	93	Bury et al. 2002
<i>Daphnia pulex</i>	< 24 h	N	AgNO3	ag	S	am	6,8	20	6		48 h	LC50	mortality		2,6	3	94	Bury et al. 2002
<i>Daphnia pulex</i>	< 24 h	N	AgNO3	ag	S	am	6,8	20	6		48 h	LC50	mortality		1,2	3	95	Bury et al. 2002
<i>Daphnia pulex</i>	< 24 h	N	AgNO3	ag	S	am	6,8	20	6		48 h	LC50	mortality		1,2	3	96	Bury et al. 2002
<i>Daphnia pulex</i>	< 24 h	N	AgNO3	ag	S	am	6,8	20	6		48 h	LC50	mortality		0,9	3	97	Bury et al. 2002
<i>Daphnia pulex</i>	< 24 h	N	AgNO3	ag	S	am	6,8	20	6		48 h	LC50	mortality		1,1	3	98	Bury et al. 2002
<i>Daphnia pulex</i>	< 24 h	N	AgNO3	rg	S	nw	8	23	240		48 h	LC50	mortality		1,9	3	12,58	Elnabarawy et al., 1986
<i>Daphnia pulex</i>	< 24 h	N			S	nw	7.2-7.4	24-25	45		48 h	LC50			14	3	Mount and Norberg, 1984	
<i>Gammarus fasciatus</i>			Ag2S								96 h	LC50	mortality		> 1000000	4	7	Ewell et al. 1993 in Ratte 1999
<i>Gammarus pseudolimnaeus</i>	0.67 mm	Y	AgNO3	rg	F	nw	7,4	19,9	44,3	?	96 h	LC50	mortality	4,5	2	4	Lima et al 1982	
<i>Gammarus pseudolimnaeus</i>		Y	AgNO3		S		7,4	20			96 h	LC50	mortality	4,5		2*	Lima 1982 in DAR silver thiosulphate	
<i>Gammarus pulex</i>		N	AgNO3	ag	R	am	7,6	10	85		48 h	LC50	mortality		2,1	3	99	Bury et al. 2002
<i>Gammarus pulex</i>		N	AgNO3	ag	R	am	7,6	10	85		48 h	LC50	mortality		4,9	3	100	Bury et al. 2002
<i>Gammarus pulex</i>		N	AgNO3	ag	R	am	7,6	10	85		48 h	LC50	mortality		5,9	3	101	Bury et al. 2002
<i>Gammarus pulex</i>		N	AgNO3	ag	R	am	7,6	10	85		48 h	LC50	mortality		2,1	3	102	Bury et al. 2002
<i>Gammarus pulex</i>		N	AgNO3	ag	R	am	7,6	10	85		48 h	LC50	mortality		8,5	3	103	Bury et al. 2002
<i>Gammarus pulex</i>		N	AgNO3	ag	R	am	7,6	10	85		48 h	LC50	mortality		4,3	3	104	Bury et al. 2002
<i>Hyalella azteca</i>	1-11 d	Y	metalloid Ag		S	dtw	7,39	24-25	124	1,1	7 d	LC50	mortality		1,05	3	12,13,105	Borgmann et al 2005

<i>Hyalella azteca</i>	1-11 d	Y	metalloid Ag	S	10% dtw, 90% dw	8,21	24-25	18	0,28	7 d	LC50	mortality	0,25	2	4.105	Borgmann et al 2005			
<i>Hyalella azteca</i>	2-5mm	Y	AgNO3	rg	R	nw	n	7,8	20	34,8	?	96 h	LC50	mortality	1,9	0,8	2	4.11,42	Diamond et al 1990
<i>Hyalella azteca</i>						7,7		35,2		4 d	LC50	mortality		1,9	4*			Diamond et al., 1990 in Borgmann et al., 2005	
<i>Hyalella azteca</i>	2-3 weeks	Y	AgNO3		S	nw	n	6.9-7.5	20	10-15	?	96 h	LC50	mortality	6,8		2	8.106.207	Rodgers et al. 1997a
<i>Hyalella azteca</i>	2-3 weeks	Y	AgCl		S	nw	n	6.9-7.5	20	10-15	?	96 h	LC50	mortality	> 1930		2	8.207	Rodgers et al. 1997a
<i>Hyalella azteca</i>	2-3 weeks	Y	AgS2O3		S	nw	n	6.9-7.5	20	10-15	?	96 h	LC50	mortality	> 12000		2	8.207	Rodgers et al. 1997a
<i>Hyalella azteca</i>						6.9-7.5		10-15		4 d	LC50	mortality		6,8	4*			Rodgers et al., 1997 in Borgmann et al., 2005	
<i>Hyalella azteca</i>	2-3 weeks	Y	AgNO3		S	am		6.9-7.5	20	10-15	?	10 d	NOEC	survival	4		2	4,8	Rodgers et al. 1997a
<i>Hyalella azteca</i>	2-3 weeks	Y	AgCl		S	am		6.9-7.5	20	10-15	?	10 d	LC50	mortality	>1930		2	4,8	Rodgers et al. 1997a
<i>Hyalella azteca</i>	2-3 weeks	Y	Ag(S2O3)n		S	am		6.9-7.5	20	10-15	?	10 d	LC50	mortality	>12000		2	4,8	Rodgers et al. 1997a
<i>Hyalella azteca</i>			AgNO3							10 d	NOEC	mortality		4	4*	86		Rodgers et al, 1997 in INERIS, 2006 en Stoffdatenblatt, 1999	
<i>Hyalella azteca</i>	7-14 d	Y	AgNO3	F	dtw	7,17	22,9	50,7		10 d	LC50	mortality	5,4	4,9		2	4	Call et al 2006	
<i>Hyalella azteca</i>			AgNO3							10 d	LC50			397700	3	87		Ratte 1999	
<i>Hyalella azteca</i>	2-3 weeks	Y	AgNO3		S	nw	n	6.9-7.5	20	10-15	?	10 d	LC50	mortality	5,8		2	8,88	Rodgers et al. 1997a
<i>Hyalella azteca</i>	2-3 weeks	Y	AgCl		S	nw	n	6.9-7.5	20	10-15	?	10 d	LC50	mortality	> 1930		2	8	Rodgers et al. 1997a
<i>Hyalella azteca</i>	2-3 weeks	Y	AgS2O3		S	nw	n	6.9-7.5	20	10-15	?	10 d	LC50	mortality	> 12000		2	8	Rodgers et al. 1997a
<i>Hyalella azteca</i>						6.9-7.5		10-15		10 d	LC50	mortality		5,8	4*			Rodgers et al., 1997 in Borgmann et al., 2005	
<i>Moina dubia</i>											LC50	mortality		4,5	4			Ghosh et al., 1990 in Wood et al., 2002	
<i>Orconectes immunis</i>	adult	Y	AgNO3		F	nw	n	7,4	17,2	44,7	?	48 h	LC50	mortality	560		2	9,12,41,207	Holcombe et al. 1987
<i>Simocephalus vetulus</i>	< 24 h	N			S	nw	n	7.2-7.4	24-25	45		48 h	LC50	mortality		15	3		Mount and Norberg, 1984
Insecta																			
<i>Chironomus plumosus</i>	larvae	Y	AgCl	ag	S	dtw		25-28				96 h	LC50	mortality	4200	4	9,10		Vedamanikam and Shazilli, 2008
<i>Chironomus plumosus</i>	larvae	Y	AgCl	ag	S	dtw		20-26				96 h	LC50	mortality	4500	4	9,10		Vedamanikam and Shazilli, 2008
<i>Chironomus plumosus</i>	larvae	Y	AgCl	ag	S	dtw		25				96 h	LC50	mortality	4200	4	9,10		Vedamanikam and Shazilli, 2008
<i>Chironomus plumosus</i>	larvae	Y	AgCl	ag	S	dtw		35				96 h	LC50	mortality	7800	4	9,10		Vedamanikam and Shazilli, 2008
<i>Chironomus plumosus</i>	larvae	Y	AgCl	ag	S	dtw		30				96 h	LC50	mortality	7800	4	9,10		Vedamanikam and Shazilli, 2008
<i>Chironomus plumosus</i>	larvae	Y	AgCl	ag	S	dtw		28				96 h	LC50	mortality	9800	4	9,10		Vedamanikam and Shazilli, 2008
<i>Chironomus plumosus</i>	larvae	Y	AgCl	ag	S	dtw		25				96 h	LC50	mortality	9800	4	9,10		Vedamanikam and Shazilli, 2008
<i>Chironomus plumosus</i>	larvae	Y	AgCl	ag	S	dtw		23				96 h	LC50	mortality	7800	4	9,10		Vedamanikam and Shazilli, 2008
<i>Chironomus plumosus</i>	larvae	Y	AgCl	ag	S	dtw		20				96 h	LC50	mortality	4800	4	9,10		Vedamanikam and Shazilli, 2008
<i>Chironomus plumosus</i>	larvae	Y	AgCl	ag	S	dtw		15				96 h	LC50	mortality	3900	4	9,10		Vedamanikam and Shazilli, 2008
<i>Chironomus plumosus</i>	larvae	Y	AgCl	ag	S	dtw		10				96 h	LC50	mortality	3100	4	9,10		Vedamanikam and Shazilli, 2008
<i>Chironomus tentans</i>	larvae	N	AgNO3		S	nw	n	6,3	14	25		48 h	EC50	mobility	10,4	3	1		Khargarot and Ray 1989a
<i>Chironomus tentans</i>															10	4			Khargarot and Ray 1989 in Kangharot & Das, 2009
<i>Chironomus tentans</i>	2nd instar	Y	AgNO3		S	nw	n	6.9-7.5	20	10-15	?	96 h	LC50	mortality	676		2	8.107	Rodgers et al. 1997a
<i>Chironomus tentans</i>	2nd instar	Y	AgCl		S	nw	n	6.9-7.5	20	10-15	?	96 h	LC50	mortality	>1930		2	8.107	Rodgers et al. 1997a
<i>Chironomus tentans</i>	2nd instar	Y	AgS2O3		S	nw	n	6.9-7.5	20	10-15	?	96 h	LC50	mortality	>12000		2	8	Rodgers et al. 1997a
<i>Culicoides furens</i>	larvae	Y	AgCl	ag	S	dtw		25-28				96 h	LC50	mortality	400	4	9,10,108		Vedamanikam and Shazilli, 2008
<i>Culicoides furens</i>	larvae	Y	AgCl	ag	S	dtw		20-26				96 h	LC50	mortality	600	4	9,10,108		Vedamanikam and Shazilli, 2008
<i>Culicoides furens</i>	larvae	Y	AgCl	ag	S	dtw		25				96 h	LC50	mortality	400	4	9,10,108		Vedamanikam and Shazilli, 2008

<i>Culicoides furens</i>	larvae	Y	AgCl	ag	S	dtw		35				96 h	LC50	mortality			34100	4	9,10,108	Vedamanikam and Shazilli, 2008
<i>Culicoides furens</i>	larvae	Y	AgCl	ag	S	dtw		30				96 h	LC50	mortality			42200	4	9,10,108	Vedamanikam and Shazilli, 2008
<i>Culicoides furens</i>	larvae	Y	AgCl	ag	S	dtw		28				96 h	LC50	mortality			42200	4	9,10,108	Vedamanikam and Shazilli, 2008
<i>Culicoides furens</i>	larvae	Y	AgCl	ag	S	dtw		25				96 h	LC50	mortality			42200	4	9,10,108	Vedamanikam and Shazilli, 2008
<i>Culicoides furens</i>	larvae	Y	AgCl	ag	S	dtw		23				96 h	LC50	mortality			37100	4	9,10,108	Vedamanikam and Shazilli, 2008
<i>Culicoides furens</i>	larvae	Y	AgCl	ag	S	dtw		20				96 h	LC50	mortality			34000	4	9,10,108	Vedamanikam and Shazilli, 2008
<i>Culicoides furens</i>	larvae	Y	AgCl	ag	S	dtw		15				96 h	LC50	mortality			34100	4	9,10,108	Vedamanikam and Shazilli, 2008
<i>Culicoides furens</i>	larvae	Y	AgCl	ag	S	dtw		10				96 h	LC50	mortality			25600	4	9,10,108	Vedamanikam and Shazilli, 2008
<i>Isonychia bicolor</i>	5-8mm, field collected	Y	AgNO3	rg	R	nw	n	7,8	20	34,8	?	96 h	LC50	mortality	6,8	3,2		2	4,11,42	Diamond et al 1990
<i>Leuctra sp.</i>	6-8mm, field collected	Y	AgNO3	rg	R	nw	n	7,8	20	34,8	?	96 h	LC50	mortality	2,5	1,2		2	4,11,42	Diamond et al 1990
<i>Psephenus herricki</i>	< 5mm, field collected	Y	AgNO3	rg	R	nw	n	7,8	20	34,8	?	96 h	LC50	mortality	>306			2	4,11	Diamond et al 1990
<i>Stenonema modestum</i>	4-6mm, field collected	Y	AgNO3	rg	R	nw	n	7,8	20	34,8	?	96 h	LC50	mortality	3,9	1,8		2	4,11,42	Diamond et al 1990
<i>Tanytarsus dissimilis</i>	3rd instar	Y	AgNO3	rg	S	nw	n	7,4	20	44,3	?	48 h	LC50	mortality	3160			2	4.109	Lima et al 1982
<i>Tanytarsus dissimilis</i>	3rd instar	Y	AgNO3		S	nw	n	7,4	20	44		48 h	LC50	mortality	3160			2*		Lima 1982 in DAR silver thiosulphate
<i>Tanytarsus dissimilis</i>	3rd & 4th instar	Y	AgNO3		F	nw	n	7,4	17,2	44,7	?	48 h	LC50	mortality	420			2	9,12,41	Holcombe et al. 1987
Pisces																				
<i>Anguilla anguilla</i>	58,5	N	AgNO3		R	rw		5,92		24		24 h	LC50	mortality			750	3	1	Grosell et al. 1998
<i>Anguilla anguilla</i>	58,5	N	AgNO3		R	rw		8,22		328		24 h	LC50	mortality			100000	3	1	Grosell et al. 1998
<i>Anguilla anguilla</i>			AgNO3		S							24 h	LC50	mortality			100	4	7	Grosell et al. 1998 in Ratte 1999
<i>Anguilla anguilla</i>	adults; 60 g	N	AgNO3		F	dtw		14		1		96 h	LC50	mortality			34,4	3		Grossell et al., 2000
<i>Channa punctatus</i>	60-80 mm; 1.8-3.5 g	N	AgNO3		R	dtw		7,3	30	250		96 h	LC50	mortality			18,89	3	58	Khargarot and Ray, 1988 AHH
<i>Cottus baridi</i>													LC50	mortality			5,3	4		Goettl and Davies, 1978 in Wood et al., 2002
<i>Cottus baridi</i>													LC50	mortality			13,6	4		Goettl and Davies, 1978 in Wood et al., 2002
<i>Cyprinus carpio</i>													LC50	mortality			2,7	4		Rao et al., 1975 in Wood et al., 2002
<i>Danio rerio</i>	adult	N	AgNO3	>99	R	dtw		8,2		142		48 h	LC50	mortality			22,2	3	1	Griffitt et al 2008
<i>Danio rerio</i>	juvenile, < 24 h	N	AgNO3	>99	R	dtw		8,2		142		48 h	LC50	mortality			> 10000	3	7	Griffitt et al 2008
<i>Gambusia affinis</i>	4-5 cm	Y	AgNO3	rg	R	nw	n	7,8	20	34,8	?	96 h	LC50	mortality	23,5	20,1		2	4,11	Diamond et al 1990
<i>Gasterosteus aculeatus</i>			Ag+										LC50	mortality			3	4	5.110	Bard et al. 1976 in Ratte 1999
<i>Gasterosteus aculeatus</i>			Ag+										LC50	mortality			3	4	5	McKee and Wolf 1963 in Bard et al 1976
<i>Ictalurus punctatus</i>	14.2 g	Y	AgNO3	99,99	F	nw	n	7.2-7.3	23,1	40,6	?	96 h	LC50	mortality	17,3			2	4.111	Holcombe et al. 1983
<i>Ictalurus punctatus</i>			AgNO3		F							96 h	LC50	mortality			17	4*		Holcombe et al. 1983 in Ratte 1999
<i>Jordanella floridae</i>	0.044 g, 30d	Y	AgNO3	rg	F	nw	n	7,4	24,7	44,3	?	96 h	LC50	mortality	9,2			2	4	Lima et al 1982
<i>Jordanella floridae</i>	30 days, 0.044 g	Y	AgNO3		F	nw	n	7,4		44		48 h	LC50	mortality	9,2			2*		Lima 1982 in DAR silver thiosulphate
<i>Lebistes reticulatus</i>	10-14 mm; 0.18-0.20 g	N	AgNO3		R	dtw		7,3	30	250		96 h	LC50	mortality			6,44	3	58	Khargarot and Ray, 1988 AHH
<i>Lepomis macrochirus</i>	62 d	Y	AgNO3	rg	R	nw	n	7,8	20	34,8	?	96 h	LC50	mortality	31,7	24,3		2	4,11,42	Diamond et al 1990
<i>Lepomis macrochirus</i>	2.9 g	Y	AgNO3		F	nw	n	7,4	17,2	44,7	?	96 h	LC50	mortality	13			2	9,12,41	Holcombe et al. 1987
<i>Leptophlebia sp.</i>													LC50	mortality			2,2	4		Brooke et al., 1986 in Wood et al., 2002
<i>Oncorhynchus kisutch</i>													LC50	mortality			11,1	4		Nishiuchi, 1979 in Wood et al., 2002
<i>Oncorhynchus kisutch</i>													LC50	mortality			12,5	4		Nishiuchi, 1979 in Wood et al., 2002
<i>Oncorhynchus kisutch</i>	juveniles	N	AgNO3		S			6.9-7.9		41		96 h	LC50	mortality			12,5	4		Buhl and Hamilton, 1991 in REACH dossier

<i>Oncorhynchus kisutch</i>	alevin	N	AgNO3		S		6.9-7.9		41		96 h	LC50	mortality		11,1	4	Buhl and Hamilton, 1991 in REACH dossier	
<i>Oncorhynchus mykiss</i>	juvenile, 2.2 g	Y	AgNO3	tmg	rtw		8,2	15	120	0	96 h	LC50	mortality		65,85	2	2,43 Bianchini et al. 2002a	
<i>Oncorhynchus mykiss</i>	juveniles	N	AgNO3		S		6.9-7.9		41		96 h	LC50	mortality		19,2	4	Buhl and Hamilton, 1991 in REACH dossier	
<i>Oncorhynchus mykiss</i>	alevin	N	AgNO3		S		6.9-7.9		41		96 h	LC50	mortality		16,1	4	Buhl and Hamilton, 1991 in REACH dossier	
<i>Oncorhynchus mykiss</i>	2.2 g	Y	AgNO3		R	am	6,2	17	5,2	0,3	96 h	LC50	mortality	7,5		2	4.112 Bury et al 1999	
<i>Oncorhynchus mykiss</i>	2.2 g	Y	AgNO3		R	am	6,3	17	5,6	0,3	96 h	LC50	mortality	9,2		2	4.113 Bury et al 1999	
<i>Oncorhynchus mykiss</i>	2.2 g	Y	AgNO3		R	am	6,6	17	7,9	0,3	96 h	LC50	mortality	18,5		2	4.114 Bury et al 1999	
<i>Oncorhynchus mykiss</i>	2.2 g	Y	AgNO3		R	am	6,7	17	9,5	0,3	96 h	LC50	mortality	25,6		2	4.115 Bury et al 1999	
<i>Oncorhynchus mykiss</i>	2.2 g	Y	AgNO3		R	am	6,6	17	51	0,3	96 h	LC50	mortality	9,9		2	4.116 Bury et al 1999	
<i>Oncorhynchus mykiss</i>	2.2 g	Y	AgNO3		R	am	6,5	17	233	0,3	96 h	LC50	mortality	10,5		2	4.117 Bury et al 1999	
<i>Oncorhynchus mykiss</i>	2.2 g	Y	AgNO3		R	am	6,7	17	3,5	1,6	96 h	LC50	mortality	18,4		2	4.118 Bury et al 1999	
<i>Oncorhynchus mykiss</i>	2.2 g	Y	AgNO3		R	am	6,7	17	3,8	5,8	96 h	LC50	mortality	27,7		2	4.119 Bury et al 1999	
<i>Oncorhynchus mykiss</i>	69-173 mm	Y	AgNO3				6.6-6.9		20-31		96 h	LC50	mortality		6,5	3	12,13 Davies et al 1978	
<i>Oncorhynchus mykiss</i>	167 mm	Y	AgNO3				8		350		96 h	LC50	mortality		13	3	12,13 Davies et al 1978	
<i>Oncorhynchus mykiss</i>			AgNO3		F				25		96 h	LC50	mortality		6,5	4*	7.120 Davies and Ginneverl 1979 in Ratte 1999	
<i>Oncorhynchus mykiss</i>			AgNO3		F				350		96 h	LC50	mortality		8,3	4	7.120 Davies and Ginneverl 1979 in Ratte 1999	
<i>Oncorhynchus mykiss</i>	60 d	Y	AgNO3	rg	R	nw	n	7,8	12	34,8	?	144 h	LC50	mortality	4,8	3,8	2	4,11,42 Diamond et al 1990
<i>Oncorhynchus mykiss</i>	juvenile, 5.17 g	Y	AgNO3		R	am	7.9-8.2	15,5		?	168 h	LC50	mortality	3,2	2,6	2	4.121 Galvez and Wood 1997	
<i>Oncorhynchus mykiss</i>	juvenile, 5.17 g	Y	AgNO3		R	am	7.9-8.2	15,5		?	168 h	LC50	mortality	> 4.5	> 3.1	2	4.122 Galvez and Wood 1997	
<i>Oncorhynchus mykiss</i>		Y	AgNO3		F	dtw	8	14.5-15.5	120		96 h	LC50	mortality	11,6		2	4.123 Galvez and Wood 2002	
<i>Oncorhynchus mykiss</i>		Y	AgNO3		F	dtw	8	14.5-15.5	120		168 h	LC50	mortality	14,9		2	4.123 Galvez and Wood 2002	
<i>Oncorhynchus mykiss</i>		Y	AgNO3		F	dtw	8	14.5-15.5	120		168 h	LC50	mortality	> 55		3	4.124 Galvez and Wood 2002	
<i>Oncorhynchus mykiss</i>		Y	AgNO3		F	dtw	8	14.5-15.5	120		168 h	LC50	mortality	> 40		3	4.125 Galvez and Wood 2002	
<i>Oncorhynchus mykiss</i>	juveniles; 25 g	N	AgNO3		F	dtw	14	1			96 h	LC50	mortality		10,2	3	Grossell et al., 2000	
<i>Oncorhynchus mykiss</i>		Y	AgNO3		F	nw	n	6.4-8.3			96 h	LC50	mortality		28,8	3	126 Hale 1977	
<i>Oncorhynchus mykiss</i>			Ag+								168 h	LC50	mortality		3,2	4	127 Hogstrand and Wood 1998	
<i>Oncorhynchus mykiss</i>			Ag+		S						168 h	LC50	mortality		3,2	4*	Hogstrand and Wood 1998 in Ratte 1999	
<i>Oncorhynchus mykiss</i>	1-4 g	Y	AgNO3	ag	R	dtw	7.9-8.2	15	100	?	96 h	LC50	mortality	11,8		2	4.128 Hogstrand et al. 1996	
<i>Oncorhynchus mykiss</i>	1-4 g	Y	AgNO3	ag	R	dtw	7.9-8.2	15	100	?	168 h	LC50	mortality	9,1		2	4.128 Hogstrand et al. 1996	
<i>Oncorhynchus mykiss</i>	1-4 g	Y	Ag(S2O3)n		R	dtw	7.9-8.2	15	100	?	96 h	LC50	mortality	161000		2	4.128 Hogstrand et al. 1996	
<i>Oncorhynchus mykiss</i>	1-4 g	Y	Ag(S2O3)n		R	dtw	7.9-8.2	15	100	?	168 h	LC50	mortality	137000		2	4.128 Hogstrand et al. 1996	
<i>Oncorhynchus mykiss</i>	1-4 g		AgCl		R	dtw	7.9-8.2	15	100	?	168 h	LC50	mortality	>1000		2	4.128 Hogstrand et al. 1996	
<i>Oncorhynchus mykiss</i>	1-4 g		AgCl		R	dtw	7.9-8.2	15	100	?	168 h	LC50	mortality	>100000	>120	2	4.128.129 Hogstrand et al. 1996	
<i>Oncorhynchus mykiss</i>			AgNO3		S						96 h	LC50	mortality		12	4*	Hogstrand et al. 1996 in Ratte 1999	
<i>Oncorhynchus mykiss</i>			AgNO3		S						168 h				9,1	4*	Hogstrand et al. 1996 in Ratte 1999	
<i>Oncorhynchus mykiss</i>		Y	Ag(S2O3)n		SS	rw	7.9-8.2		-7		96 h	LC50	mortality		161000	4*	4.130 Hogstrand et al., 1996 in Van der Plassche et al 1999	
<i>Oncorhynchus mykiss</i>		Y	AgCln		SS	rw	7.9-8.2		-7		96 h	LC50			>100000	4	4.130.131 Hogstrand et al., 1996 in Van der Plassche et al 1999	
<i>Oncorhynchus mykiss</i>			NaAg2S2O3		S						96 h	LC50	mortality		161000	4*	Hogstrand et al. 1996 in Ratte 1999	
<i>Oncorhynchus mykiss</i>			NaAg2S2O3		S						168 h				137000	4*	Hogstrand et al. 1996 in Ratte 1999	
<i>Oncorhynchus mykiss</i>			AgCl		S						168 h	LC50	mortality		>100000	4*	Hogstrand et al. 1996 in Ratte 1999	
<i>Oncorhynchus mykiss</i>	1.2 g	Y	AgNO3		F	nw	n	7,4	17,2	44,7	?	96 h	LC50	mortality	6		2	9,12,41 Holcombe et al. 1987
<i>Oncorhynchus mykiss</i>	20 days	Y	AgNO3	rg	F	am	9	10-12	30	0	96 h	LC50	mortality	1,48		2	4.132 Karen et al. 1999	
<i>Oncorhynchus mykiss</i>	20 days	Y	AgNO3	rg	F	am	9	10-12	60	0	96 h	LC50	mortality	3,579		2	4.132 Karen et al. 1999	
<i>Oncorhynchus mykiss</i>	20 days	Y	AgNO3	rg	F	am	9	10-12	30	0	96 h	LC50	mortality	3,39		2	4.133 Karen et al. 1999	
<i>Oncorhynchus mykiss</i>	20 days	Y	AgNO3	rg	F	am	9	10-12	30	0	96 h	LC50	mortality	2,421		2	4.133 Karen et al. 1999	
<i>Oncorhynchus mykiss</i>	20 days	Y	AgNO3	rg	F	am	9	10-12	30	0	96 h	LC50	mortality	3,764		2	4.133 Karen et al. 1999	
<i>Oncorhynchus mykiss</i>	20 days	Y	AgNO3	rg	F	am	9	10-12	30	2,5	96 h	LC50	mortality	5,571		2	4.134 Karen et al. 1999	
<i>Oncorhynchus mykiss</i>	20 days	Y	AgNO3	rg	F	am	9	10-12	30	5	96 h	LC50	mortality	9,462		2	4.135 Karen et al. 1999	

<i>Oncorhynchus mykiss</i>	20 days	Y	AgNO3	rg	F	am	9	10-12	30	2,5	96 h	LC50	mortality	17,07		2	4.136	Karen et al. 1999	
<i>Oncorhynchus mykiss</i>	20 days	Y	AgNO3	rg	F	am	9	10-12	30	5	96 h	LC50	mortality	28,42		2	4.137	Karen et al. 1999	
<i>Oncorhynchus mykiss</i>												LC50	mortality			6,9	4	Lemke, 1981 in Wood et al., 2002	
<i>Oncorhynchus mykiss</i>												LC50	mortality			8,4	4	Lemke, 1981 in Wood et al., 2002	
<i>Oncorhynchus mykiss</i>												LC50	mortality			9,7	4	Lemke, 1981 in Wood et al., 2002	
<i>Oncorhynchus mykiss</i>												LC50	mortality			11,5	4	Lemke, 1981 in Wood et al., 2002	
<i>Oncorhynchus mykiss</i>												LC50	mortality			14	4	Lemke, 1981 in Wood et al., 2002	
<i>Oncorhynchus mykiss</i>												LC50	mortality			17,87	4	Lemke, 1981 in Wood et al., 2002	
<i>Oncorhynchus mykiss</i>												LC50	mortality			240	4	Lemke, 1981 in Wood et al., 2002	
<i>Oncorhynchus mykiss</i>												LC50	mortality			170	4	Lemke, 1981 in Wood et al., 2002	
<i>Oncorhynchus mykiss</i>	juvenile, <1g	Y	AgNO3		R	dtw					14	96 h	LC50	mortality	14,7	12,6	2	4,8,138	Mann et al. 2004
<i>Oncorhynchus mykiss</i>	juvenile, < 1 g	Y	AgNO3		R	dtw					14	96 h	LC50	mortality	40,7	24,3	3	4,8,138,139	Mann et al. 2004
<i>Oncorhynchus mykiss</i>	6.3 g	Y	AgNO3		F	am	7	10	10	0,7	96h	LC50	mortality	13,3	3,3	2	4.140	Morgan and Wood 2004	
<i>Oncorhynchus mykiss</i>	6.6 g	Y	AgNO3	rg	S	nw	n (well water)	7,5	10	40		96 h	LC50	mortality	72,9		2	4, 240	Nebeker et al. 1983
<i>Oncorhynchus mykiss</i>	6.6 g	Y	AgNO3	rg	S	nw	n (well water)	7,5	9	37		96 h	LC50	mortality	84,4		2	4, 240	Nebeker et al. 1983
<i>Oncorhynchus mykiss</i>	0.2 g	Y	AgNO3	rg	S	nw	n (well water)	7,5	12	26		96 h	LC50	mortality	10,9		2	4.141	Nebeker et al. 1983
<i>Oncorhynchus mykiss</i>	0.3 g	Y	AgNO3	rg	S	nw	n (well water)	7,5	12	35		96 h	LC50	mortality	8,5		2	4.141	Nebeker et al. 1983
<i>Oncorhynchus mykiss</i>	0.2 g	Y	AgNO3	rg	F	nw	n (well water)	7,5	12	29		96 h	LC50	mortality	8,6		2	4	Nebeker et al. 1983
<i>Oncorhynchus mykiss</i>	0.4 g	Y	AgNO3	rg	F	nw	n (well water)	7,5	12	42		96 h	LC50	mortality	9,7		2	4	Nebeker et al. 1983
<i>Oncorhynchus mykiss</i>	0.2 g	Y	AgNO3	rg	F	nw	n (well water)	7,5	12	36		96 h	LC50	mortality	9,2		2	4	Nebeker et al. 1983
<i>Oncorhynchus mykiss</i>			AgNO3		F							96 h	LC50	mortality			9,2	4*	Nebeker et al. 1983 in Ratte 1999
<i>Oncorhynchus mykiss</i>			AgNO3		S							96 h	LC50	mortality			79	4* 142	Nebeker et al. 1983 in Ratte 1999
<i>Oncorhynchus mykiss</i>			AgNO3		S							96 h	LC50	mortality			9,8	4*	Nebeker et al. 1983 in Ratte 1999
<i>Oncorhynchus mykiss</i>			AgNO3		F							96 h	LC50	mortality			9,2	4*	Nebeker et al. 1983 in Ratte 1999
<i>Oncorhynchus mykiss</i>		Y	AgNO3		F		7	12				96 h	LC50	mortality	9,2		2*	4	Nebeker et al. 1993 in DAR silver thiosulphate
<i>Oncorhynchus mykiss</i>		Y	AgNO3		F			12				96 h	LC50	mortality	8,6		2*	4	Nebeker et al. 1993 in DAR silver thiosulphate
<i>Oncorhynchus mykiss</i>		Y	AgNO3		F			12				96 h	LC50	mortality	9,7		2*	4	Nebeker et al. 1993 in DAR silver thiosulphate
<i>Oncorhynchus mykiss</i>		Y	AgNO3		S			10				96 h	LC50	mortality	72,9		2*	4	Nebeker et al. 1993 in DAR silver thiosulphate
<i>Oncorhynchus mykiss</i>		Y	AgNO3		S			9				96 h	LC50	mortality	84,4		2*	4	Nebeker et al. 1993 in DAR silver thiosulphate
<i>Oncorhynchus mykiss</i>		Y	AgNO3		S			12				96 h	LC50	mortality	10,9		2*	4	Nebeker et al. 1993 in DAR silver thiosulphate
<i>Oncorhynchus mykiss</i>		Y	AgNO3		S			12				96 h	LC50	mortality	8,5		2*	4	Nebeker et al. 1993 in DAR silver thiosulphate
<i>Oncorhynchus mykiss</i>	juvenile	Y			F	am		10-12	30	0	96 h	LC50	mortality	1,48	1,02	2	4.143.144	Ownby et al. 2001	
<i>Oncorhynchus mykiss</i>	juvenile	Y			F	am		10-12	70	0	96 h	LC50	mortality	3,58	3,18	2	4.143.145	Ownby et al. 2001	
<i>Oncorhynchus mykiss</i>	juvenile	Y			F	am		10-12	30	0	96 h	LC50	mortality	3,39	2,57	2	4.143.146	Ownby et al. 2001	
<i>Oncorhynchus mykiss</i>	juvenile	Y			F	am		10-12	30	0	96 h	LC50	mortality	2,42	2,19	2	4.143.147	Ownby et al. 2001	
<i>Oncorhynchus mykiss</i>	juvenile	Y			F	am		10-12	30	0	96 h	LC50	mortality	3,77	1,64	2	4.143.148	Ownby et al. 2001	
<i>Oncorhynchus mykiss</i>	juvenile	Y			F	am		10-12	30	2,5	96 h	LC50	mortality	5,57	4,17	2	4.143.149	Ownby et al. 2001	
<i>Oncorhynchus mykiss</i>	juvenile	Y			F	am		10-12	30	5	96 h	LC50	mortality	9,46	5,64	2	4.143.150	Ownby et al. 2001	
<i>Oncorhynchus mykiss</i>	juvenile	Y			F	am		10-12	30	2,5	96 h	LC50	mortality	17,1	15,3	2	4.143.151	Ownby et al. 2001	

<i>Oncorhynchus mykiss</i>	juvenile	Y		F	am		10-12	30	5	96 h	LC50	mortality	28,4	21,1	2	4.143.152	Ownby et al. 2001				
<i>Oncorhynchus</i> sp.			Ag+								LC50	mortality			3,5	4	5.153	Bard et al. 1976 in Ratte 1999			
<i>Oncorhynchus</i> sp.			Ag+								LC50	mortality			3 - 4	4	5	McKee and Wolf 1963 in Bard et al 1976			
<i>Oreochromis niloticus</i>	15.7 cm; 61.5 g	N	AgNO3		R	dtw		8,32	20	340			16 d	LC100	mortality		≤50	3	154	Öner et al 2008, 2009	
<i>Oryzias latipes</i>	4-5 months	N	AgNO3	99%	F			7-8	25				96 h	LC50	mortality		36,5	3	155	Chae et al 2009	
<i>Pimephales promelas</i>	7 d	Y	AgNO3	rg	S	nw y		8,1	26	225	5,66		96 h	LC50	mortality	20,9		1	55,56	Bielmyer et al 2007	
<i>Pimephales promelas</i>	7 d	Y	AgNO3	rg	S	10% dtw, 90% dw		6,17	26	6	2,42		96 h	LC50	mortality	1,99		1	55	Bielmyer et al 2007	
<i>Pimephales promelas</i>	7 d	Y	AgNO3	rg	S	10% dtw, 90% dw		6,17	26	6	2,42		96 h	LC50	mortality	2,18		1	55.156	Bielmyer et al 2007	
<i>Pimephales promelas</i>	7 d	Y	AgNO3	rg	S	nw y		8,04	26	197	11,5		96 h	LC50	mortality	44		1	55,57	Bielmyer et al 2007	
<i>Pimephales promelas</i>	7 d	Y	AgNO3	rg	S	nw y		8,14	26	131	1,77		96 h	LC50	mortality	6,02		1	55,56	Bielmyer et al 2007	
<i>Pimephales promelas</i>	7 d	Y	AgNO3	rg	S	nw y		7,75	26	28	3,85		96 h	LC50	mortality	2,44		1	55,56,156	Bielmyer et al 2007	
<i>Pimephales promelas</i>	7 d	Y	AgNO3	rg	S	nw y		7,75	26	28	3,85		96 h	LC50	mortality	5,23		1	55,56	Bielmyer et al 2007	
<i>Pimephales promelas</i>	7 d	Y	AgNO3	rg	S	nw y		7,84	26	129	4,34		96 h	LC50	mortality	16		1	55,57	Bielmyer et al 2007	
<i>Pimephales promelas</i>	7 d	Y	AgNO3	rg	S	dtw		7,74	26	76	4,44		96 h	LC50	mortality	3,37		1	55	Bielmyer et al 2007	
<i>Pimephales promelas</i>	7 d	Y	AgNO3	rg	S	nw y		7,2	26	39	6,16		96 h	LC50	mortality	20,2		1	55,57	Bielmyer et al 2007	
<i>Pimephales promelas</i>	7 d	Y	AgNO3	rg	S	nw y		7,79	26	85	12,4		96 h	LC50	mortality	44,1		1	55,56	Bielmyer et al 2007	
<i>Pimephales promelas</i>	7 d	Y	AgNO3	rg	S	nw y		6,84	26	12	5,02		96 h	LC50	mortality	2,49		1	55,56	Bielmyer et al 2007	
<i>Pimephales promelas</i>	7 d	Y	AgNO3	rg	S	nw y		6,84	26	12	5,02		96 h	LC50	mortality	2,96		1	55,56,156	Bielmyer et al 2007	
<i>Pimephales promelas</i>	1 d; 0.16 mg	Y	AgNO3	rg	S	dtw		7,74	26	76	4,44		96 h	LC50	mortality	1,200		1	55	Bielmyer et al 2007	
<i>Pimephales promelas</i>	4 d; 0.5 mg	Y	AgNO3	rg	S	dtw		7,74	26	76	4,44		96 h	LC50	mortality	1,20		1	55	Bielmyer et al 2007	
<i>Pimephales promelas</i>	7 d; 0.86 mg	Y	AgNO3	rg	S	dtw		7,74	26	76	4,44		96 h	LC50	mortality	3,37		1	55	Bielmyer et al 2007	
<i>Pimephales promelas</i>	27 d; 192 mg	Y	AgNO3	rg	S	dtw		7,74	26	76	4,44		96 h	LC50	mortality	5,90		1	55	Bielmyer et al 2007	
<i>Pimephales promelas</i>	41 d; 880 mg	Y	AgNO3	rg	S	dtw		7,74	26	76	4,44		96 h	LC50	mortality	10,4		1	55	Bielmyer et al 2007	
<i>Pimephales promelas</i>	30 d	N			R	rw				50			96 h	LC50	mortality			3	1	Brooke et al. 1994	
<i>Pimephales promelas</i>	30 d	N			R	rw				130			96 h	LC50	mortality		8,3	3	1	Brooke et al. 1994	
<i>Pimephales promelas</i>	30 d	N			R	rw				250			96 h	LC50	mortality		13,5	3	1	Brooke et al. 1994	
<i>Pimephales promelas</i>	30 d	N			R	rw		7,2					96 h	LC50	mortality		3,1	3	1	Brooke et al. 1994	
<i>Pimephales promelas</i>	30 d	N			R	rw		7,6					96 h	LC50	mortality		5,8	3	1	Brooke et al. 1994	
<i>Pimephales promelas</i>	30 d	N			R	rw		8,6					96 h	LC50	mortality		9	3	1	Brooke et al. 1994	
<i>Pimephales promelas</i>	30 d	N			R	rw							96 h	LC50	mortality		4,6	3	1.157	Brooke et al. 1994	
<i>Pimephales promelas</i>	30 d	N			R	rw							96 h	LC50	mortality		16	3	1.158	Brooke et al. 1994	
<i>Pimephales promelas</i>	30 d	N			R	rw							96 h	LC50	mortality		19,6	3	1.159	Brooke et al. 1994	
<i>Pimephales promelas</i>	30 d	N			R	rw							96 h	LC50	mortality		7,8	3	1	Brooke et al. 1994	
<i>Pimephales promelas</i>	30 d	N			R	rw							96 h	LC50	mortality		5	3	1.160	Brooke et al. 1994	
<i>Pimephales promelas</i>	30 d	N			R	rw							96 h	LC50	mortality		8,2	3	1.161	Brooke et al. 1994	
<i>Pimephales promelas</i>	30 d	N			F	rw							96 h	LC50	mortality		9,5	3	1,15	Brooke et al. 1994	
<i>Pimephales promelas</i>	30 d	N			F	rw							96 h	LC50	mortality		4,9	3	1	Brooke et al. 1994	
<i>Pimephales promelas</i>	30 d	N			R	rw							96 h	LC50	mortality		19,4	3	1,15	Brooke et al. 1994	
<i>Pimephales promelas</i>	30 d	N			R	rw							96 h	LC50	mortality		10	3	1	Brooke et al. 1994	
<i>Pimephales promelas</i>	30 d	N			R	rw							96 h	LC50	mortality		14,2	3	1,15,16	Brooke et al. 1994	
<i>Pimephales promelas</i>	30 d	N			R	rw							96 h	LC50	mortality		6,2	3	1,16	Brooke et al. 1994	
<i>Pimephales promelas</i>			Ag+		S					50			96 h	LC50	mortality			5	4*	Brooke et al. 1994 in Ratte 1999	
<i>Pimephales promelas</i>			Ag+		S					250			96 h	LC50	mortality			13	4*	Brooke et al. 1994 in Ratte 1999	
<i>Pimephales promelas</i>			Ag+		S			7,2					96 h	LC50	mortality			2,5	4	Brooke et al. 1994 in Ratte 1999	
<i>Pimephales promelas</i>			Ag+		S			8,6					96 h	LC50	mortality			8	4	Brooke et al. 1994 in Ratte 1999	
<i>Pimephales promelas</i>			Ag+		S								96 h	LC50	mortality			5	4	162	Brooke et al. 1994 in Ratte 1999
<i>Pimephales promelas</i>			Ag+		S								96 h	LC50	mortality			19	4*	159	Brooke et al. 1994 in Ratte 1999
<i>Pimephales promelas</i>	0.23 g	Y	AgNO3		R	am		6,2	17	5,2	0,3		96 h	LC50	mortality	6,7		2	4.163	Bury et al 1999	
<i>Pimephales promelas</i>	0.23 g	Y	AgNO3		R	am		6,3	17	5,6	0,3		96 h	LC50	mortality	7,5		2	4.164	Bury et al 1999	
<i>Pimephales promelas</i>	0.23 g	Y	AgNO3		R	am		6,6	17	7,9	0,3		96 h	LC50	mortality	7,7		2	4.165	Bury et al 1999	
<i>Pimephales promelas</i>	0.23 g	Y	AgNO3		R	am		6,7	17	9,5	0,3		96 h	LC50	mortality	8,8		2	4.166	Bury et al 1999	
<i>Pimephales promelas</i>	0.23 g	Y	AgNO3		R	am		6,6	17	51	0,3		96 h	LC50	mortality	7,8		2	4.167	Bury et al 1999	
<i>Pimephales promelas</i>	0.23 g	Y	AgNO3		R	am		6,5	17	233	0,3		96 h	LC50	mortality	9,9		2	4.168	Bury et al 1999	
<i>Pimephales promelas</i>	0.23 g	Y	AgNO3		R	am		6,7	17	3,5	1,6		96 h	LC50	mortality	13,3		2	4.169	Bury et al 1999	
<i>Pimephales promelas</i>	0.23 g	Y	AgNO3		R	am		6,7	17	3,8	5,8		96 h	LC50	mortality	18		2	4.170	Bury et al 1999	
<i>Pimephales promelas</i>	1-7 d	Y	AgNO3		R	am		7.4-7.8	20	70-90	0		48 h	LC50	mortality	3,6		2	171	Diamond et al. 1997	
<i>Pimephales promelas</i>	1-7 d	Y	AgNO3		R	am		7.4-7.8	20	70-90	0		48 h	LC50	mortality	5,6		2	171	Diamond et al. 1997	
<i>Pimephales promelas</i>	1-7 d	Y	AgNO3		R	am		7.4-7.8	20	70-90	0		48 h	LC50	mortality	5,2		2	171	Diamond et al. 1997	

<i>Pimpehales promelas</i>	1-7 d	Y	AgNO3	R	am	7.4-7.8	20	70-90	0	48 h	LC50	mortality	3,5	2	171	Diamond et al. 1997		
<i>Pimpehales promelas</i>	1-7 d	Y	AgNO3	R	nw	6,8	20	74	1,2	48 h	LC50	mortality	13	2	171	Diamond et al. 1997		
<i>Pimpehales promelas</i>	1-7 d	Y	AgNO3	R	nw	7,2	20	90	1,4	48 h	LC50	mortality	7,7	2	171	Diamond et al. 1997		
<i>Pimpehales promelas</i>	1-7 d	Y	AgNO3	R	nw	7,5	20	76	2,8	48 h	LC50	mortality	12,2	2	171	Diamond et al. 1997		
<i>Pimpehales promelas</i>	1-7 d	Y	AgNO3	R	nw	7	20	103	5,5	48 h	LC50	mortality	4,3	2	171	Diamond et al. 1997		
<i>Pimpehales promelas</i>	juvenile	Y	AgNO3	99,7%	R	dtw	8,1	25	50	1,2	96 h	LC50	mortality	5,27	5,27	2	4,19,172	Erickson et al 1998
<i>Pimpehales promelas</i>	juvenile	Y	AgNO3	99,7%	R	dtw	8,1	25	120	1,2	96 h	LC50	mortality	8,26	8,26	2	4,19,172	Erickson et al 1998
<i>Pimpehales promelas</i>	juvenile	Y	AgNO3	99,7%	R	dtw	8,1	25	250	1,2	96 h	LC50	mortality	13,4	13,4	2	4,19,172	Erickson et al 1998
<i>Pimpehales promelas</i>	juvenile	Y	AgNO3	99,7%	R	dtw	7,2	25	49	1,2	96 h	LC50	mortality	3,1	3,1	2	4,19,172	Erickson et al 1998
<i>Pimpehales promelas</i>	juvenile	Y	AgNO3	99,7%	R	dtw	7,7	25	49	1,2	96 h	LC50	mortality	5,7	5,7	2	4,19,172	Erickson et al 1998
<i>Pimpehales promelas</i>	juvenile	Y	AgNO3	99,7%	R	dtw	8,6	25	49	1,2	96 h	LC50	mortality	8,8	8,8	2	4,19,172	Erickson et al 1998
<i>Pimpehales promelas</i>	juvenile	Y	AgNO3	99,7%	R	dtw	8,1	25	49	1,2	96 h	LC50	mortality	4,5	4,5	2	4,19,172	Erickson et al 1998
<i>Pimpehales promelas</i>	juvenile	Y	AgNO3	99,7%	R	dtw	8,1	25	49	3,7	96 h	LC50	mortality	16	16	2	4,19,173	Erickson et al 1998
<i>Pimpehales promelas</i>	juvenile	Y	AgNO3	99,7%	R	dtw	8,1	25	49	11,2	96 h	LC50	mortality	19,9	19,9	2	4,19,174	Erickson et al 1998
<i>Pimpehales promelas</i>	juvenile	Y	AgNO3	99,7%	R	dtw	8,1	25	49	1,2	96 h	LC50	mortality	7,8	7,8	2	4,19	Erickson et al 1998
<i>Pimpehales promelas</i>	juvenile	Y	AgNO3	99,7%	R	dtw	8,1	25	49	1,2	96 h	LC50	mortality	8,1	8,1	2	4,19,175	Erickson et al 1998
<i>Pimpehales promelas</i>	juvenile	Y	AgNO3	99,7%	R	dtw	8,1	25	49	1,2	96 h	LC50	mortality	5	5	2	4,19,176	Erickson et al 1998
<i>Pimpehales promelas</i>	juvenile	Y	AgNO3	99,7%	F	dtw	8,1	25	49	1,2	96 h	LC50	mortality	4,7	4,7	2	2,4,19	Erickson et al 1998
<i>Pimpehales promelas</i>	juvenile	Y	AgNO3	99,7%	F	dtw	8,1	25	49	1,2	96 h	LC50	mortality	9,4	9,4	3	2,4,15,19	Erickson et al 1998
<i>Pimpehales promelas</i>	juvenile	Y	AgNO3	99,7%	S	dtw	8,1	25	49	1,2	96 h	LC50	mortality	9,7	9,7	2	2,4,19	Erickson et al 1998
<i>Pimpehales promelas</i>	juvenile	Y	AgNO3	99,7%	S	dtw	8,1	25	49	1,2	96 h	LC50	mortality	19,4	19,4	3	2,4,15,19	Erickson et al 1998
<i>Pimpehales promelas</i>	juvenile	Y	AgNO3	99,7%	S	dtw	8,1	25	49	1,2	96 h	LC50	mortality	5,9	5,9	2	2,4,16,19	Erickson et al 1998
<i>Pimpehales promelas</i>	juvenile	Y	AgNO3	99,7%	S	dtw	8,1	25	49	1,2	96 h	LC50	mortality	14	14	3	2,4,15,16,19	Erickson et al 1998
<i>Pimpehales promelas</i>	juvenile	Y	AgNO3	99,7%	S	dtw	7,94	25	48	1,5	96 h	LC50	mortality	10,4	10,4	2	4,19,177	Erickson et al 1998
<i>Pimpehales promelas</i>	juvenile	Y	AgNO3	99,7%	S	nw	8,02	25	81	18.5 (TOC)	96 h	LC50	mortality	106	106	2	4,19,178	Erickson et al 1998
<i>Pimpehales promelas</i>			AgNO3	S				130		96 h	LC50	mortality	8000	4	7,20	Erickson et al. 1998 in Ratte 1999		
<i>Pimpehales promelas</i>			AgNO3	S				249		96 h	LC50	mortality	12000	4	7,20	Erickson et al. 1998 in Ratte 1999		
<i>Pimpehales promelas</i>			AgNO3	S		7,17				96 h	LC50	mortality	3000	4	7,20	Erickson et al. 1998 in Ratte 1999		
<i>Pimpehales promelas</i>			AgNO3	S		7,65				96 h	LC50	mortality	5500	4	7,20	Erickson et al. 1998 in Ratte 1999		
<i>Pimpehales promelas</i>			AgNO3	S		8,58				96 h	LC50	mortality	8500	4	7,20	Erickson et al. 1998 in Ratte 1999		
<i>Pimpehales promelas</i>			AgNO3	S						96 h	LC50	mortality	5000	4	7,20,157	Erickson et al. 1998 in Ratte 1999		
<i>Pimpehales promelas</i>			AgNO3	S						96 h	LC50	mortality	15000	4	7,20,179	Erickson et al. 1998 in Ratte 1999		
<i>Pimpehales promelas</i>			AgNO3	S						96 h	LC50	mortality	19000	4	7,20,159	Erickson et al. 1998 in Ratte 1999		
<i>Pimpehales promelas</i>			AgNO3	S	nw					96 h	LC50	mortality	106000	4*	180	Erickson et al. 1998 in Ratte 1999		
<i>Pimpehales promelas</i>			Ag2S	S						96 h	LC50	mortality	>1000000	4	7	Ewell et al. 1993 in Ratte 1999		
<i>Pimpehales promelas</i>			Ag2S	F						96 h	LC50	mortality	>240000	4	7	Ewell et al. 1993 in Ratte 1999		
<i>Pimpehales promelas</i>			AgSCN	S						96 h	LC50	mortality	150	4	7	Ewell et al. 1993 in Ratte 1999		
<i>Pimpehales promelas</i>			AgO2CCOCH3	S						96 h	LC50	mortality	110	4	7	Ewell et al. 1993 in Ratte 1999		
<i>Pimpehales promelas</i>			AgNO3/XSNaCl	F						96 h	LC50	mortality	> 4600	3	7.181	Ewell et al. 1993 in Ratte 1999		
<i>Pimpehales promelas</i>			Ag3PO4	S						96 h	LC50	mortality	280	4	7	Ewell et al. 1993 in Ratte 1999		
<i>Pimpehales promelas</i>			Ag3AsO4	S						96 h	LC50	mortality	230	4	7	Ewell et al. 1993 in Ratte 1999		
<i>Pimpehales promelas</i>			AgVO3	S						96 h	LC50	mortality	170	4	7	Ewell et al. 1993 in Ratte 1999		
<i>Pimpehales promelas</i>			Ag2CO3	S						96 h	LC50	mortality	120	4	7	Ewell et al. 1993 in Ratte 1999		
<i>Pimpehales promelas</i>			AgCNO	S						96 h	LC50	mortality	230	4	7	Ewell et al. 1993 in Ratte 1999		
<i>Pimpehales promelas</i>			AgC6H5CO2	S						96 h	LC50	mortality	280	4	7	Ewell et al. 1993 in Ratte 1999		
<i>Pimpehales promelas</i>			Ag2SO4	S						96 h	LC50	mortality	20	4	7	Ewell et al. 1993 in Ratte 1999		
<i>Pimpehales promelas</i>			AgO2CCOH3	S						96 h	LC50	mortality	20	4	7	Ewell et al. 1993 in Ratte 1999		
<i>Pimpehales promelas</i>			AgNO3	S						96 h	LC50	mortality	20 - 110	4	7	Ewell et al. 1993 in Ratte 1999		
<i>Pimpehales promelas</i>			NaAgS2O3	F						96 h	LC50	mortality	> 28000	4	7	Ewell et al. 1993 in Ratte 1999		

<i>Pimpehales promelas</i>			AgF3CCO2	S							96 h	LC50	mortality			80	4	7	Ewell et al. 1993 in Ratte 1999	
<i>Pimpehales promelas</i>			AgNO3	F							96 h	LC50	mortality			16	4	7	Ewell et al. 1993 in Ratte 1999	
<i>Pimpehales promelas</i>			AgNO3	S				48			96 h	LC50	mortality			5000	4		Hogstrand et al. 1996 in Ratte 1999	
<i>Pimpehales promelas</i>	32-33 days, 0.15 g	Y	AgNO3	99,99	F	nw	n	7.2-7.3	23,1	44,4	?	96 h	LC50	mortality	6,7		2	4.111	Holcombe et al. 1983	
<i>Pimpehales promelas</i>	32-33 days, 0.15 g	Y	AgNO3	99,99	S	nw	n	7.2-7.3	23,5	44,8	?	96 h	LC50	mortality	14		2	4.111	Holcombe et al. 1983	
<i>Pimpehales promelas</i>			AgNO3	F							96 h	LC50	mortality			6,7	4*		Holcombe et al. 1983 in Ratte 1999	
<i>Pimpehales promelas</i>			AgNO3	S							96 h	LC50	mortality			14	4*		Holcombe et al. 1983 in Ratte 1999	
<i>Pimpehales promelas</i>	0.2 g	Y	AgNO3	F	nw	n		7,4	17,2	44,7	?	96 h	LC50	mortality	9		2	9,12,41	Holcombe et al. 1987	
<i>Pimpehales promelas</i>	3 days	N	AgNO3	S	rw			8,26	22	52		96 h	LC50	mortality			3,6	3	1,2,183,186	
<i>Pimpehales promelas</i>	3 days	N	AgNO3	S	rw			8,26	22	52		96 h	LC50	mortality			7,3	3	1,2,184,186	
<i>Pimpehales promelas</i>	3 days	N	AgNO3	S	rw			8,26	22	52		96 h	LC50	mortality			9,6	3	1,2,185,186	
<i>Pimpehales promelas</i>	28 days	N	AgNO3	S	rw			8,26	22	52		96 h	LC50	mortality			21,8	3	1,2,183,186	
<i>Pimpehales promelas</i>	28 days	N	AgNO3	S	rw			8,26	22	52		96 h	LC50	mortality			23,7	3	1,2,184,186	
<i>Pimpehales promelas</i>	28 days	N	AgNO3	S	rw			8,26	22	52		96 h	LC50	mortality			29,4	3	1,2,185,186	
<i>Pimpehales promelas</i>	24 days		AgNO3	S							96 h	LC50	mortality			19.6-24.3	4	183.186	Klaine et al. 1996 in Ratte 1999	
<i>Pimpehales promelas</i>	24 days		AgNO3	S							96 h	LC50	mortality			21.8-26.2	4	184.186	Klaine et al. 1996 in Ratte 1999	
<i>Pimpehales promelas</i>	24 days		AgNO3	S							96 h	LC50	mortality			26-338	4	185.186	Klaine et al. 1996 in Ratte 1999	
<i>Pimpehales promelas</i>	24 days		AgNO3	S							96 h	NOEC				10	4*		Klaine et al. 1996 in Ratte 1999	
<i>Pimpehales promelas</i>	embryos	N						8.3-8.5	25	227		96 h	LC50	mortality			15	3	1	Laban et al 2010
<i>Pimpehales promelas</i>		Y	AgNO3	F	nw	n (well water)	7.2-8.4	25	38	?	96 h	LC50	mortality	16	16		2	4.187	LeBlanc et al 1984	
<i>Pimpehales promelas</i>		Y	AgS2O3	F	nw	n (well water)	7.2-8.4	25	38	?	96 h	LC50	mortality	280000-360000			2	4	LeBlanc et al 1984	
<i>Pimpehales promelas</i>		Y	Ag2S	F	nw	n (well water)	7.2-8.4	25	38	?	96 h	LC50	mortality	> 240000			2	4	LeBlanc et al 1984	
<i>Pimpehales promelas</i>		Y	AgCl	F	nw	n (well water)	7.2-8.4	25	38	?	96 h	LC50	mortality	> 4600			2	4.188	LeBlanc et al 1984	
<i>Pimpehales promelas</i>		Y	AgCl	F	nw	n (well water)	7.2-8.4	25	38	?	96 h	LC50	mortality	>13000			2	4.189	LeBlanc et al 1984	
<i>Pimpehales promelas</i>		Y	Ag(S2O3)n	CF	rw		7.2-8.4		38		96 h	LC50				>280000	4*	4;130,190	LeBlanc et al., 1984 in Van der Plassche et al 1999	
<i>Pimpehales promelas</i>		Y	Ag2?S	CF	rw		7.2-8.4		38		96 h	LC50				>240000	4*	4.130.191	LeBlanc et al., 1984 in Van der Plassche et al 1999	
<i>Pimpehales promelas</i>		Y	Ag2?S	CF	rw		7.2-8.4		38		96 h	LC50				>13000	4*	4.192	LeBlanc et al., 1984 in Van der Plassche et al 1999	
<i>Pimpehales promelas</i>		Y	AgCln	CF	rw		7.2-8.4		38		96 h	LC50				>4600	4*	4.130.193	LeBlanc et al., 1984 in Van der Plassche et al 1999	
<i>Pimpehales promelas</i>			Ag2S	F							96 h	LC50	mortality			240000	4*	194	Le Blanc et al. 1984 in Ratte 1999	
<i>Pimpehales promelas</i>			AgCl	F							96 h	LC50	mortality			> 4600	4*	195	Le Blanc et al. 1984 in Ratte 1999	
<i>Pimpehales promelas</i>			AgNO3	F							96 h	LC50	mortality			16	4*		Le Blanc et al. 1984 in Ratte 1999	
<i>Pimpehales promelas</i>			NaAgS2O3	F							96 h	LC50	mortality			280000-160000	4*		Le Blanc et al. 1984 in Ratte 1999	
<i>Pimpehales promelas</i>		Y	AgNO3	F			7.2-8.4		38		96 h	LC50	mortality	16			2*	4	Le Blanc 1984 in DAR silver thiosulphate	
<i>Pimpehales promelas</i>		Y	AgS2O3	F			7.2-8.4		38		96 h	LC50	mortality	>280000			2*	4	Le Blanc 1984 in DAR silver thiosulphate	
<i>Pimpehales promelas</i>		Y	Ag2S	F			7.2-8.4		38		96 h	LC50	mortality	>240000			2*	4	Le Blanc 1984 in DAR silver thiosulphate	
<i>Pimpehales promelas</i>		Y	AgCl	F			7.2-8.4		38		96 h	LC50	mortality	>4600			2*	4	Le Blanc 1984 in DAR silver thiosulphate	
<i>Pimpehales promelas</i>												LC50	mortality			3,9	4		Lemke, 1981 in Wood et al., 2002	
<i>Pimpehales promelas</i>												LC50	mortality			5	4		Lemke, 1981 in Wood et al., 2002	

<i>Pimephales promelas</i>											LC50	mortality		5,3	4		Lemke, 1981 in Wood et al., 2002		
<i>Pimephales promelas</i>											LC50	mortality		5,6	4		Lemke, 1981 in Wood et al., 2002		
<i>Pimephales promelas</i>											LC50	mortality		6,3	4		Lemke, 1981 in Wood et al., 2002		
<i>Pimephales promelas</i>											LC50	mortality		7,4	4		Lemke, 1981 in Wood et al., 2002		
<i>Pimephales promelas</i>											LC50	mortality		10,98	4		Lemke, 1981 in Wood et al., 2002		
<i>Pimephales promelas</i>											LC50	mortality		11,1	4		Lemke, 1981 in Wood et al., 2002		
<i>Pimephales promelas</i>											LC50	mortality		11,75	4		Lemke, 1981 in Wood et al., 2002		
<i>Pimephales promelas</i>											LC50	mortality		110	4		Lemke, 1981 in Wood et al., 2002		
<i>Pimephales promelas</i>											LC50	mortality		150	4		Lemke, 1981 in Wood et al., 2002		
<i>Pimephales promelas</i>	Y	AgNO3		S			20			96 h	LC50	mortality	9,4		2*	4	Nebeker 1983 in DAR silver thiosulphate		
<i>Pimephales promelas</i>	Y	AgNO3		S			21			96 h	LC50	mortality	9,7		2*	4	Nebeker 1983 in DAR silver thiosulphate		
<i>Pimephales promelas</i>	Y	AgNO3		F			22			96 h	LC50	mortality	5,6		2*	4	Nebeker 1983 in DAR silver thiosulphate		
<i>Pimephales promelas</i>	Y	AgNO3		F			22			96 h	LC50	mortality	7,4		2*	4	Nebeker 1983 in DAR silver thiosulphate		
<i>Pimephales promelas</i>	Y	AgNO3	rg	S	nw	n (well water)	7,5	20	38	96 h	LC50	mortality	9,4		2	4	Nebeker et al. 1983		
<i>Pimephales promelas</i>	Y	AgNO3	rg	S	nw	n (well water)	7,5	21	39	96 h	LC50	mortality	9,7		2	4	Nebeker et al. 1983		
<i>Pimephales promelas</i>	Y	AgNO3	rg	F	nw	n (well water)	7,5	22	40	96 h	LC50	mortality	5,6		2	4	Nebeker et al. 1983		
<i>Pimephales promelas</i>	Y	AgNO3	rg	F	nw	n (well water)	7,5	22	36	96 h	LC50	mortality	7,4		2	4	Nebeker et al. 1983		
<i>Pimephales promelas</i>		AgNO3		F			26-42			96 h	LC50	mortality		9,2	3	199	Nebeker et al. 1983 in Ratte 1999		
<i>Pimephales promelas</i>		AgNO3		S			26-42			96 h	LC50	mortality		6,5	4	200	Nebeker et al. 1983 in Ratte 1999		
<i>Pimephales promelas</i>	Y	AgNO3		R			44-49			7 d	LC50	mortality	8,2				Norberg-King, 1989 in REACH dossier		
<i>Pimephales promelas</i>	Y	AgNO3		R			44-49			96 h	LC50	mortality	8,2				Norberg-King, 1989 in REACH dossier		
<i>Pimephales promelas</i>	0.079 g, 30 days	Y	AgNO3	rg	F	nw	n	7,4	24,7	44,3	?	96 h	LC50	mortality	10,7		2	4	Lima et al 1982
<i>Pimephales promelas</i>	30 days, 0.079 g	Y	AgNO3		F	nw	n	7,4		44		48 h	LC50	mortality	10,7		2*		Lima 1982 in DAR silver thiosulphate
<i>Pimephales promelas</i>			AgNO3							96 h	LC50	mortality		30	4	5	Ter Haar et al 1972 in Bard et al 1976		
<i>Pimephales promelas</i>			AgS2O3							96 h	LC50	mortality		>250000	4	5	Ter Haar et al 1972 in Bard et al 1976		
<i>Poecilia reticulata</i>			Ag+								LC50	mortality		4	4	5.203	Bard et al. 1976 in Ratte 1999		
<i>Poecilia reticulata</i>			Ag+								LC50	mortality		4	4	5	McKee and Wolf 1963 in Bard et al 1976		
<i>Poecilia reticulata</i>			NaAgS2O3; AgBr								LC50	mortality		100000; 3750	3	5.204	NAPM 1974 in Ratte 1999		
<i>Poecilia reticulata</i>											LC50	mortality		6,44	4		Khengarot and Ray, 1988a in Wood et al., 2002		
<i>Puntius sophore</i>	40-60 mm; 1.56-2 g	N	AgNO3		R	dtw	7,3	30	250	96 h	LC50	mortality		7,55	3	58	Khengarot and Ray, 1988 AHH		
<i>Rhinichthys osculus</i>											LC50	mortality		4,9	4		Goettl and Davies, 1978 in Wood et al., 2002		
<i>Rhinichthys osculus</i>											LC50	mortality		13,6	4		Goettl and Davies, 1978 in Wood et al., 2002		
<i>Salmo trutta</i>											LC50	mortality		1,17	4		Davies et al., 1998 in Wood et al., 2002		
<i>Thymallus arcticus</i>											LC50	mortality		6,7	4		Nishiuchi, 1979 in Wood et al., 2002		
<i>Thymallus arcticus</i>											LC50	mortality		11,1	4		Nishiuchi, 1979 in Wood et al., 2002		

<i>Thymallus arcticus</i>	juveniles	N	AgNO3	S		6.9-7.9	41		96 h	LC50	mortality	11,1	4	Buhl and Hamilton, 1991 in REACH dossier		
<i>Thymallus arcticus</i>	alevin	N	AgNO3	S		6.9-7.9	41		96 h	LC50	mortality	6,7	4	Buhl and Hamilton, 1991 in REACH dossier		
Amphibia																
<i>Bufo melanostictus</i>	1.95 cm, 100 mg	N	AgNO3	S	nw	n	7,4	31	185	96 h	LC50	mortality	4,1	3	1	Khangerot and Ray 1987a
<i>Rana hexadactyla</i>	tadpoles; 20 mm; 500 mg	N	AgNO3	rg	R		6,1	15	20	96 h	LC50	mortality	25,7	3		Khangerot et al., 1985

Notes with acute freshwater toxicity table

- 1 Test concentration not measured
- 2 Endpoint determined with data from graph
- 3 Endpoint determined from original data
- 4 Endpoint based on measured concentrations
- 5 Original reference not available
- 6 Endpoint based on concentrations measured at the start of the experiment
- 7 Original reference does not contain the cited data
- 8 Analysis performed after filtration over 0.45 µm filter
- 9 Measured concentrations within 20% of nominal
- 10 Unclear if reported concentrations are Ag⁺ or AgCl
- 11 Measured concentrations <80% of nominal
- 12 Endpoint based on nominal concentrations
- 13 Results of analysis not reported
- 14 Endpoint based on concentrations measured at the start and end of the experiment, not at each renewal
- 15 Animals were fed during the test
- 16 Aged test water was used
- 17 Test performed according to ISO standard
- 18 Test performed according to OECD guideline
- 19 Results for dissolved silver reported to be similar to the results for total silver
- 20 Unit probably wrong
- 21 Survival monitored with Polarized Light Scattering
- 22 Survival monitored with CFU
- 23 Growth performed in Luria-Bertani broth
- 24 Unclear description of test conditions; test water was synthetic drinking water; background concentration of Ag in medium was employed but the concentration is not clearly reported
- 25 AAS standard solutions were used to prepare toxicant solutions, hence purity of the test compound was high, although not specifically reported; medium contained 0.34 M NaNO₃ instead of NaCl to prevent precipitation of AgCl; due to steepness of dose response curve, EC₂₀ could not be derived, result is highest concentration that did not result in effect (interpreted as NOEC)
- 26 The tested metals were added to the collected culture and the bioassay is performed straight thereafter. The time of the assay (exposure time) is unknown; Effects in nitrifying cultures in batch reactor setup are not deemed to represent to surface water conditions.
- 27 Effects in nitrifying cultures in batch reactor setup aimed to represent WWTPs instead of surface water.
- 28 Result expressed as dissolved Ag was recalculated from nominal value of 0.33 mg/L by difference between nominal and analysed soluble Ag concentration (6.3%);
- 29 pH, hardness, temperature and medium composition derived from cited reference (Facheur et al., 2005)
- 30 1 replicate
- 31 Fritz medium without EDTA
- 32 Woods hole medium with 13 µm EDTA
- 33 Woods hole medium without EDTA
- 34 No information on performance of control in similar medium
- 35 EC₅₀ is average of 2 replicate studies
- 36 Observed biostimulation not included in estimation
- 37 Silver was tested as active ingredient in the plant protection product Florisant 100
- 38 Reported as minimum inhibitory concentration; glycerol as growth substrate
- 39 From citation in Holcome et al., 1987 it appears that endpoint refers to Ag, not to AgNO₃
- 40 Probably recalculated as AgNO₃
- 41 Simultaneous exposure of different species in different sections of the same basin
- 42
- 43 Dissolved endpoint calculated from difference in recovery between unfiltered and filtered samples
Based on free Ag⁺

44 Medium containing ≤ 0.4 mg DOC/L; 0.058 mM Cl⁻; 0.0055 mM NO₃⁻; 0.94 mM SO₄²⁻; 0.37
mM Ca²⁺; 0.056 mM K⁺; 0.54 mM Mg²⁺ and 1.21 mM Na⁺

45 Medium containing 1.8 to 2.0 mg DOC/L; 1.54 mM Cl⁻; 0.45 mM NO₃⁻; 1.18 mM SO₄²⁻; 0.91
mM Ca²⁺; 0.16 mM K⁺; 0.76 mM Mg²⁺ and 2.52 mM Na⁺; DOC originated from Desjardins
canal, Hamilton Canada

46 Medium containing 2.0 to 2.1 mg DOC/L; 0.068 mM Cl⁻; 0.048 mM NO₃⁻; 0.94 mM SO₄²⁻; 0.37
mM Ca²⁺; 0.056 mM K⁺; 0.54 mM Mg²⁺ and 1.27 mM Na⁺; DOC originated from the
Suwannee river

47

48 geomeatric mean of the lowest and highest value of a range, values in between not reported
Medium containing 1.9 to 2.0 mg DOC/L; 0.064 mM Cl⁻; 0.0062 mM NO₃⁻; 0.93 mM SO₄²⁻;
0.37 mM Ca²⁺; 0.065 mM K⁺; 0.53 mM Mg²⁺ and 1.20 mM Na⁺; DOC originated from yeast-
Cerophyll-trout chow slurry

49 Detection limit was 2 µg/L, several concentrations were below LOD

50 Daily renewal; 10 replicates per treatment; composition of medium: 3.8 g NaHCO₃, 2.4 g
CaSO₄·2H₂O, 2.4 g MgSO₄, 1.6 g of KCl per 40L

51 AgGSH = silver glutathionate

52 AgCys = silver cysteinate

53 95% confidence interval around LC50 0.69-1.23 mg/L

54 Water composition taken over from reference

55 Water chemistry well described for use in biotic ligand model;

56 Water contained no visible suspended solids

57 Water was filtered to remove suspended solids

58 Animals wer not fed

59 Animals were fed immediately after transfer to exposure solutions and after renewal

60 Animals were fed 30 min before transfer

61 Animals were fed 60 min before transfer

62 Animals were fed 120 min before transfer

63 Test performed with Ceriodaphnia dubia and Simocephalus sp. together

64 In the presence of 25 nM zinc sulfide;

65 Measured concentration 65 - 100% of nominal

66 Sulfide present in the medium

67 Test conditions and result similar to those reported in Bianchini and Wood, 2002

68 Basic medium (0.05 mM KCl)

69 Basic medium with 1 mM KCl

70 Basic medium with 10 mg/L humic acid

71 Basic medium with 0.5 µm 3-mercaptoprionic acid

72 Stock solutions of silver was prepared by dissolving of silver wire in nitric acid

73 Value is mean of three tests, 0.6, 1.1 and 1.1 (see original reference: Nebeker 1983)

74 Geometric mean of two tests (48, 55)

75 Geometric mean of two tests (8.4, 14.9)

76 Geometric mean of two tests (1.1, 0.6)

77 Geometric mean of two tests (0.63, 0.66)

78 Geometric mean of two tests (0.9, 1.03)

79 Laboratory water DOC 1.5 mg C/L

80 River water DOC 18.5 mg C/L

81 Not clear how EC84 was calculated

82 Concentrations measured using radiolabeled Ag

83 DOC concentration < 0.4 mg/L

84 Various amounts of organic matter added from different sources DOC concentrations exceeding
2 mg/L

85 No significant difference in LC50 was observed at different Cl⁻ concentrations and different
hardness

86 Deemed to be less reliable in the INERIS report because natural water was used and Ag
bioavailability might have been much less; original paper reviewed, values based on measured
dissolved Ag

87 From the original reference it appeared that these values are sediment concentrations, not water concentrations

88 95% confidence interval around LC50 5.21-6.51 mg/L

89 95% confidence interval around LC50 0.99-1.14 mg/L

90 Basic medium (0.025 mM KCl)

91 Basic medium with 0.75 mM KCl

92 Basic medium with 1.5 mM KCl

93 Basic medium with 0.5 μM $\text{Na}_2(\text{SO}_3)_2$

94 Basic medium with 1 μM $\text{Na}_2(\text{SO}_3)_2$

95 Basic medium with 2.5 mM NaNO_3

96 Basic medium with 5 mM NaNO_3

97 Basic medium with 1 mM $\text{Ca}(\text{NO}_3)_2$

98 Basic medium with 2 mM $\text{Ca}(\text{NO}_3)_2$

99 Basic medium with 50 μM $\text{Ca}(\text{NO}_3)_2$

100 Basic medium with 500 μM $\text{Ca}(\text{NO}_3)_2$

101 Basic medium with 1500 μM $\text{Ca}(\text{NO}_3)_2$

102 Basic medium with 50 μM KCl

103 Basic medium with 500 μM KCl

104 Basic medium with 1500 μM KCl

105 Test was conducted using atomic absorption standards as source for metalloids

106 95% confidence interval around LC50 6.22-7.53 mg/L

107 95% confidence interval around LC50 444-2033 mg/L

108 Values from two experiments do not match

109 Fine sand layer present

110 Cited from McKee and Wolf, 1963

111 From citation in Holcombe et al., 1987 it appears that endpoint refers to Ag, not to AgNO_3

112 Ratio Cl:Ca:DOC = 50:50:0.3; corresponding calculated ionic silver concentration 5.6 $\mu\text{g/L}$

113 Ratio Cl:Ca:DOC = 250:50:0.3; corresponding calculated ionic silver concentration 5.2 $\mu\text{g/L}$

114 Ratio Cl:Ca:DOC = 800:50:0.3; corresponding calculated ionic silver concentration 6.1 $\mu\text{g/L}$

115 Ratio Cl:Ca:DOC = 1500:50:0.3; corresponding calculated ionic silver concentration 5.3 $\mu\text{g/L}$

116 Ratio Cl:Ca:DOC = 50:500:0.3; corresponding calculated ionic silver concentration 8.0 $\mu\text{g/L}$

117 Ratio Cl:Ca:DOC = 50:2000:0.3; corresponding calculated ionic silver concentration 8.9 $\mu\text{g/L}$

118 Ratio Cl:Ca:DOC = 50:50:1; corresponding calculated ionic silver concentration 10.6 $\mu\text{g/L}$

119 Ratio Cl:Ca:DOC = 50:50:5; corresponding calculated ionic silver concentration 5.1 $\mu\text{g/L}$

120 Reference is probably Davies et al 1978

121 Chloride concentration 50 μM

122 Chloride concentration 225 μM

123 Geomean of values read from graph and highest and lowest values reported

124 Preexposed to 3 $\mu\text{g/L}$ silver for 23 days;

125 Preexposed to 5 $\mu\text{g/L}$ silver for 15 days;

126 Unknown if results based on measured or on nominal concentrations

127 Endpoint is based on results presented in two other papers: Galvez and Wood 1997 and Hogstrand et al 1996

128 Hardness derived from Ca concentration as given in paper

129 AgCl produced by addition of AgNO_3 to water with 50 mM NaCl; endpoint for dissolved refers to calculated concentration

130 Not re-evaluated

131 Water supplemented with 50 mM NaCl; fish acclimated to test water for 2 weeks prior to testing and then exposed to AgNO_3 ; speciation calculations showed that dissolved AgCl was 120 mg Ag/l using speciation calculations; no effects were observed when AgCl was directly added to test water up to 1 mg Ag/L

132 Cl- concentration of 0 mg/L and DOC concentration of 0 mg/L;

133 Cl- concentration of 3, 20 and 40 mg/L and DOC concentration of 0 mg/L

134 Cl- concentration of 0 mg/L and DOC concentration of 2.5 mg/L

135 Cl⁻ concentration of 0 mg/L and DOC concentration of 5 mg/L
136 Cl⁻ concentration of 3 mg/L and DOC concentration of 2.5 mg/L
137 Cl⁻ concentration of 40 mg/L and DOC concentration of 5 mg/L
138 Lowest endpoint selected from probit and spearman-karber calculation
139 In the presence of 100 nM zinc sulfide
140 Calculated ionic silver 1.4 µg/L
141 No aeration
142 Mean of two values, 72.9 and 84.4 (see original reference Nebeker et al. 1983)
143 Analysis after filtration over 0.2 µm
144 Predicted Ag⁺ 1.99 µg/L
145 Predicted Ag⁺ 3.73 µg/L
146 With additional Cl⁻ (3 mg/L); predicted Ag⁺ 2.88 µg/L
147 With additional Cl⁻ (20 mg/L); predicted Ag⁺ 3.73 µg/L
148 With additional Cl⁻ (40 mg/L); predicted Ag⁺ 1.02 µg/L
149 With additional DOC (2.5 mg/L); predicted Ag⁺ 2.66 µg/L
150 With additional DOC (5 mg/L); predicted Ag⁺ 1.58 µg/L
151 With additional Cl⁻ (3 mg/L) and additional DOC (2.5 mg/L); predicted Ag⁺ 3.25 µg/L
152 With additional Cl⁻ (40 mg/L) and additional DOC (5 mg/L); predicted Ag⁺ 1.26 µg/L
153 Cited from McKee and Wolf, 1963
154 Biomass 16 g/L
155 For 96 hour exposure no significant difference with nanosilver
156 fish were acclimated to the test water 7 days before testing
157 Concentration organic carbon: 1 mg C/L
158 Concentration organic carbon: 3.5 mg C/L
159 Concentration organic carbon: 11 mg C/L
160 0.2 mM NaCl
161 2.0 mM Na₂SO₄
162 Concentration organic carbon: 4 mg C/L
163 Ratio Cl:Ca:DOC = 50:50:0.3; corresponding calculated ionic silver concentration 4.9 µg/L
164 Ratio Cl:Ca:DOC = 250:50:0.3; corresponding calculated ionic silver concentration 4.1 µg/L
165 Ratio Cl:Ca:DOC = 800:50:0.3; corresponding calculated ionic silver concentration 2.3 µg/L
166
Ratio Cl:Ca:DOC = 1500:50:0.3; corresponding calculated ionic silver concentration 1.7 µg/L
167 Ratio Cl:Ca:DOC = 50:500:0.3; corresponding calculated ionic silver concentration 6.1 µg/L
168
Ratio Cl:Ca:DOC = 50:2000:0.3; corresponding calculated ionic silver concentration 8.4 µg/L
169 Ratio Cl:Ca:DOC = 50:50:1; corresponding calculated ionic silver concentration 6.2 µg/L
170 Ratio Cl:Ca:DOC = 50:50:5; corresponding calculated ionic silver concentration 0.4 µg/L
171 Endpoint recalculated on the basis of 78% dissolved silver
172 TOC concentration 1.2 mg C/L; figure legend reads mg/L for the silver concentration, since all other figures give µg/L, this is most likely a mistake
173 Humic acid added to increase TOC concentration by 2.5 mg C/L
174 Humic acid added to increase TOC concentration by 10 mg C/L
175 2 meq/L Na₂SO₄ added
176 0.2 meq NaCl added
177 Laboratory water DOC 1.5 mg C/L
178 River water DOC 18.5 mg C/L
179 Concentration organic carbon: 1.5 mg C/L
180 Unit in original ref is µg/L
181 median lethal concentration > solubility
186 3-60 mg/L chloride
187 Dissolved concentration measured with ion specific electrode; the mean measured concentration is reported to be similar to the mean free silver concentration
188 2000 mg/L Cl⁻ present
189 Tested as slurry
190 Calculated ionic Ag⁺ concentration: 0.12 ng/l

191 Tested as dispersion; calculated ionic Ag⁺ concentration: <10⁻⁵ ng/l
192 Tested as slurry; calculated ionic Ag⁺ concentration: <10⁻⁵ ng/L
193 Tested in the presence of 2,000 mg/l Cl⁻; calculated ionic Ag⁺ concentration: 0.103 mg/l; percent mortality was 40 at 4.6 mg/l
194 Test performed with dispersed solution; In this case it is unclear if the values given are for the salt tested or for the free cation. It is presumed that the values given are for salt tested and all values are recalculated to Ag⁺
195 Test performed with AgCl complexes; In this case it is unclear if the values given are for the salt tested or for the free cation. It is presumed that the values given are for salt tested and all values are recalculated to Ag⁺
196 Normal flow through conditions
197 High flow through conditions
198 Increased Cl⁻ levels of 60 mg/L; mortality in control >30%
199 Reported as mean of two values; values in original reference are 9.4 and 9.7 (see original reference Nebeker et al 1983), mean should be 9.6
200 Mean of two values, 5.6 and 7.4 (see original reference Nebeker et al 1983)
203 Cited from McKee and Wolf, 1963
204 Tested in mixture
205 NaCl in the medium replaced by NaNO₃ to prevent precipitation
206 No DOC present
207 Concentration DOC unknown
208 DOC concentration: 5.66 mg/L
209 DOC concentration: 11.5 mg/L
210 DOC concentration: 1.77 mg/L
211 DOC concentration: 3.85 mg/L
212 DOC concentration: 4.34 mg/L
213 DOC concentration: 4.55 mg/L
214 DOC concentration: 6.16 mg/L
215 DOC concentration: 12.0 mg/L
216 DOC concentration: 5.02 mg/L
217 DOC concentration: 1.2 mg/L
218 DOC concentration: 1.4 mg/L, DOC geometric mean of two values
219 DOC concentration: 2.8 mg/L
220 DOC concentration: 5.5 mg/L, DOC geometric mean of two values
221 DOC concentration: < 0.1 mg/L, NaCl 0.6 mmol/L
222 Dissolved chloride concentrations ranging from 3.0 to 21.0 mg/L
223 DOC concentration: 1.5 mg/L
224 DOC concentration: 18.5 mg/L
225 DOC concentration: 0.57 mg/L
226 DOC concentration: 0.99 mg/L
227 DOC concentration: 1.86 mg/L
228 DOC concentration: 0.89 mg/L
229 DOC concentration: 1.91 mg/L
230 DOC concentration: 1.46 mg/L
231 DOC concentration: 1.34 mg/L
232 DOC concentration: 1.26 mg/L
233 Actual testmedium not define in the summary in the DAR
234 Geomean of 4 experiments
235 Turbidostat experiment, where concentrations in the turbidostat were increased by one step every day.
236 Not a freshwater species
237 M;edium with E.coli as food
238 Medium with EDTA
239 Outlier due to high hardness, not taken up in aggregated data table
240 Outlier due to size effects; not taken up in aggregated data table.

Chronic toxicity of silver (Ag+) to freshwater organisms

- Validity according to Klimisch (1997); only records with a validity of 1 or 2 (green) can be used for ERL derivation.
 - Bold records are selected for ERL derivation. These records are (1) valid; (2) based on measured dissolved concentrations of Ag+; (3) performed in water with DOC < 2 mg/L or labwater or filtered natural water or well water; (4) with a pH of 6-9; (5) EC50s/LC50s for acute and NOECs/EC10s for chronic studies.
 - When for a certain species, data for different endpoints are available (e.g., growth, reproduction) the data for the most sensitive endpoint are selected. If there are more data for the same endpoint, the geometric mean is used.

Species	Species properties	Analyzed Test Compound	Purity	Test type	Test water	Filtered y/n	pH	Temperature [°C]	Hardness [mg CaCO ₃ /L]	DOC mg/L	Exp time	Criterion	Test endpoint	Value total [µg Ag ⁺ /L]	Value dissolved [µg Ag ⁺ /L]	Value unkn. / nominal [µg Ag ⁺ /L]	Validity	Notes	Reference
Bacteria																			
<i>Aeromonas hydrophila</i>		AgNO3		S	dtw		7	4	140		24 h	EC100	bacterial count			100	3	82	Silvestry-Rodriguez et al 2007 in REACH dossier
<i>Escherichia coli</i>		AgNO3		S	am		7	37			24 h	NOEC	growth			40	3	34	Cunningham et al 2008
<i>Escherichia coli</i>	mid log phase	AgNO3		S	am			37			30 m	NOEC	survival			< 500	3		Matsumura et al 2003
<i>Escherichia coli</i>	strain J 53; log phase cells	AgNO3		S	am			37			20 h	NOEC	growth			5393	3	15	Gupta et al. 1998
<i>Pseudomonas aeruginosa</i>		AgNO3		S	dtw		7	24	140		24 h	EC100	bacterial count			100	3	82	Silvestry-Rodriguez et al 2007 in REACH dossier
<i>Pseudomonas aeruginosa</i>		AgNO3		S	dtw		9	24	140		24 h	EC100	bacterial count			100	3	82	Silvestry-Rodriguez et al 2007 in REACH dossier
<i>Pseudomonas fluorescens</i>		AgNO3	ag	S	am		9	25			3 h	NOEC	growth			200	3	1	Fabrega et al 2009
<i>Pseudomonas fluorescens</i>		AgNO3	ag	S	am		9	25			3 h	NOEC	growth			20	3	1,35	Fabrega et al 2009
<i>Pseudomonas fluorescens</i>		AgNO3	ag	S	am		6	25		0	24 h	NOEC	growth			20	3	1	Fabrega et al 2009
<i>Pseudomonas fluorescens</i>		AgNO3	ag	S	am		6	25		0	24 h	NOEC	growth			200	3	1,35	Fabrega et al 2009
<i>Pseudomonas fluorescens</i>		AgNO3	ag	S	am		7,5	25			24 h	NOEC	growth			200	3	1	Fabrega et al 2009
<i>Pseudomonas fluorescens</i>		AgNO3	ag	S	am		7,5	25			24 h	NOEC	growth			200	3	1,35	Fabrega et al 2009
<i>Pseudomonas fluorescens</i>		AgNO3	ag	S	am		9	25			24 h	NOEC	growth			200	3	1	Fabrega et al 2009
<i>Pseudomonas fluorescens</i>		AgNO3	ag	S	am		9	25			24 h	NOEC	growth			200	3	1,35	Fabrega et al 2009
<i>Pseudomonas putida</i>		AgNO3		S	am		7	25			16 h	NOEC	growth			6	3	1	Bringmann and Kühn, 1977
<i>Pseudomonas putida</i>		AgNO3		S	am		7	25	42,5		16 h	NOEC	growth			6	3*	1	Bringmann and Kühn, 1977 in Van de Plassche et al 1999
<i>Pseudomonas putida</i>		AgNO3		S	am		7	25	42,5		16 h	NOEC	growth			6	3	1	Bringmann and Kühn, 1980 Wat Res.
<i>Pseudomonas putida</i>	KT2440 strain with lux gene	AgNO3		S	am			25	102		1 h	NOEC	luminescence			100	3	1	Gajjar et al 2009
Sulfur oxidizing bacteria				S	am		2,5-7	30			120 h	NOEC	sulfate formation			≥ 1000	3	36	Chen and Lin 2009
Mixed culture		AgNO3		S	am		7	37			24 h	NOEC	growth			3	3	34	Cunningham et al 2008
Nitrifying bacteria		AgNO3	ag	S	am		7,5					EC10	nitrification			100	3	2,37	Fabrega et al 2009
Nitrifying bacteria				S			7				21 h	IC10	respiration	4,4			4	38	Cecen et al 2010
Cyanobacteria																			
<i>Microcystis aeruginosa</i>		AgNO3		S	am		7,0	27	28,7		8 d	NOEC	growth			0,70	3	1	Bringmann and Kühn, 1978 in Vom Wasser and in Mitt. Internat. Verein.Limnol
<i>Microcystis aeruginosa</i>		AgNO3		S	am		7,0		28,7		8 d	NOEC	growth			0,70	3*		Bringmann and Kühn, 1978 in Van de Plassche et al 1999
<i>Nostoc muscorum</i>				S	am		7,5	25			15 d	EC10	yield			0,66	2	72	Publication 1987' in REACH dossier
<i>Nostoc muscorum</i>				S	am		7,5	25			15 d	EC10	yield			0,57	2	72	Publication 1987' in REACH dossier
<i>Nostoc muscorum</i>				S	am		7,5	25			15 d	EC10	yield			0,16	2	72	Publication 1990' in REACH dossier
<i>Nostoc muscorum</i>		AgCl		S	am		7,5	25			15 d	EC10	yield			0,45	2	72	Publication 1985' in REACH dossier

Algae																
<i>Chlamydomonas reinhardtii</i>	UTCC11		110 ^m Ag	S	am	7.0-4.5	20	15	4 d	NOEC	cell density	>1.08	3	83	Hiriart-Baer et al., 2006	
<i>Chlorella fusca</i>		N	Ag	S	am	6,8	28		12 d	NOEC	Cell density	30	3	39,41	Stokes et al 1973	
<i>Chlorella vulgaris</i>		N	Ag	S	am	6,8	28		12 d	NOEC	Cell density	10	3	40,41	Stokes et al 1973	
<i>Chlorella vulgaris</i>		Y	AgNO3	S	am	7,2	room temperature	40	0	96 h	EC10	Cell density	7,97	2	3,4,19,20,21	Kolts et al, 2009
<i>Chlorella vulgaris</i>		Y	AgNO3	S	am		room temperature		0	96 h	EC10	Cell density	6,3	2	3,4,16,17,20	Kolts et al, 2009
<i>Chlorella vulgaris</i>		Y	AgNO3	S	am	7,2	room temperature	40	0	96 h	EC10	Cell density	4,66	2	3,4,16, 18,20	Kolts et al, 2009
Green algae			NaAgS2O3								NOEC	5000	4	7	Ewell et al. 1993 in Ratte 1999	
Green algae			NaAgS2O3								NOEC	≥ 1000	4	7	Ewell et al. 1993 in Ratte 1999	
<i>Pseudokirchneriella</i>		Y	AgNO3	S	am	7,2	room temperature	40	0	96 h	EC10	Cell density	0,94	2	3,4,16,19,20	Kolts et al, 2009
<i>Pseudokirchneriella subcapitata</i>		Y	AgNO3	S	am	7,2	room temperature	40	0	96 h	EC10	Cell density	2,61	2	3,4,18,20,21	Kolts et al, 2009
<i>Pseudokirchneriella subcapitata</i>			NaAgS2O3						7 d		NOEC	10000	4	7	Ewell et al. 1993 in Ratte 1999	
<i>Pseudokirchneriella subcapitata</i>		Y	AgS2O3	S	am	7.8-8.2	formula-tion	23	0	72 h	NOEC	growth rate	0,56	2	6,14,22	DAR silver thiosulphate
<i>Scenedesmus acutiformis</i>		N	Ag	S	am	6,8		28		12 d	NOEC	Cell density	50	3	39,41	Stokes et al 1973
<i>Scenedesmus acuminatus</i>		N	Ag	S	am	6,8		28		12 d	NOEC	Cell density	10	3	40,41	Stokes et al 1973
<i>Scenedesmus quadricauda</i>		N	AgNO3	S	am	7,0		28,7		8 d	NOEC	growth	9,5	3		Bringmann and Kühn, 1978 in Van de Plassche et al 1999
<i>Scenedesmus quadricauda</i>		N	AgNO3	S	am	7,0		27	28,7	8 d	NOEC	growth	9,5	3		Bringmann and Kühn, 1978 Vom Wasser and Mitt. Internat. Verein.Limnol
<i>Scenedesmus quadricauda</i>		N	AgNO3	S	am	7,0		27		8 d	NOEC	growth	9,5	3		Bringmann and Kuhn 1977
<i>Scenedesmus quadricauda</i>		N	AgNO3	S	am	7,0		27	28,7	8 d	NOEC	growth	9,5	3		Bringmann and Kühn, 1980 Wat. Res.
<i>Scenedesmus quadricauda</i>			AgNO3							96 h	NOEC	growth	50	4	31,42	Bringmann and Kühn, 1959 in INERIS, 2006
Protozoa																
<i>Chilomonas paramecium</i>		N	AgNO3	S	am	6,9		42,3		48 h	NOEC	growth	2,6	3	31	Bringmann and Kühn, 1980a in Van de Plassche et al 1999
<i>Entosiphon sulcatum</i>		N	AgNO3	S	am	5,9		35,3		72 h	NOEC	growth	580	3	31	Bringmann, 1978 in Van de Plassche et al 1999
<i>Entosiphon sulcatum</i>		N	AgNO3	S	am	5,9	25	35,3		72 h	NOEC	growth	580	3		Bringmann and Kuhn, 1980, Wat. Res.
<i>Uronema parduczi</i>		N	AgNO3	S	am	6,9		35,3		20 h	NOEC	growth	100	3		Bringmann and Kühn, 1980b in Van de Plassche et al 1999
<i>Uronema parduczi</i>		N	AgNO3	S	am	6,9	25	35,3		20 h	NOEC	growth	100	3		Bringmann and Kühn, 1980b
Macrophyta																
<i>Lemna minor</i>		N	AgNO3	S	am	6,8		24		3 w	EC10	frond number	0,085	3	1,2	Hutchinson and Czyska 1975
<i>Lemna minor</i>		N	AgNO3	S	am	5,5		24		7 d	EC10	frond number	< 5	3	1	Gubbins et al 2011
<i>Lemna minor</i>		N	AgNO3	S	am	5,5		24		14 d	EC10	frond number	< 5	3	1	Gubbins et al 2011
<i>Lemna minor</i>		N	AgNO3	S	am	5,5		24		7 d	EC10	growth rate	1,2	3	1	Gubbins et al 2011
<i>Lemna minor</i>		N	AgNO3	S	am	5,5		24		14 d	EC10	growth rate	2,1	3	1	Gubbins et al 2011
<i>Lemna minor</i>	fronds	Y	AgNO3	S						7 d	NOEC	frond number	6	4	90	Naumann et al 2007 in REACH dossier
<i>Lemna minor</i>	fronds	Y	AgNO3	S						7 d	NOEC	weight	7	4	90	Naumann et al 2007 in REACH dossier
<i>Lemna minor</i>	clone St; fronds	N	AgNO3	S	am	5,5		25	166	7 d	EC10	frond number	6	3	89,90	Naumann et al., 2007
<i>Lemna minor</i>	clone St; fronds	N	AgNO3	S	am	5,5		25	166	7 d	EC10	weight	7	3	89,90	Naumann et al., 2007

<i>Lemna minor</i>	clone St; fronds	N	AgNO3	S	am	5,5	25	166	7 d	EC10	chlorophyll	14	3	89,90	Naumann et al., 2007				
<i>Lemna paucicostata</i>	strain 6746	N	AgNO3	S	am	4,1	25	700	7 d	EC10	frond number	26	3	1,2	Nasu and Kugimoto 1981				
<i>Lemna paucicostata</i>	strain 6746	N	AgNO3	S	am	5,1	25	700	7 d	EC10	frond number	16	3	1,2	Nasu and Kugimoto 1981				
<i>Lemna paucicostata</i>	strain 6746	N	AgNO3	S	am	6,1	25	120	7 d	EC10	frond number	1,8	3	1,2	Nasu and Kugimoto 1981				
<i>Lemna paucicostata</i>	strain 6746	N	AgNO3	S	am	7,1	25	120	7 d	EC10	frond number	2,5	3	1,2	Nasu and Kugimoto 1981				
<i>Potamogeton crispus</i>		N	AgNO3	S	am		22,5		120 h	NOEC	photosynthe sis	< 540	3	43	Xu et al 2010				
<i>Salvinia natans</i>		N	AgNO3	S	am	6,8	24		3 w	EC10	frond number	0,03	3	1,2	Hutchinson and Czyska 1975				
Fungi																			
<i>Saccharomyces cerevisiae</i>	strain S288C	N	AgNO3	S	am		30		96 h	EC90	growth	270	3	44	Yang and Pon 2003				
<i>Saccharomyces cerevisiae</i>	strain S288C	N	AgNO3	S	am		30		48 h	EC90	growth	539	3	45	Yang and Pon 2003				
Cnidaria																			
<i>Phymactis cavernata</i>			AgNO3						28 d	NOEC	growth	8,5	4	7	Breteler et al., 1982 in INERIS, 2006				
Mollusca																			
<i>Corbicula fluminea</i>		Y	AgNO3	R	nw	7,8		43,8	21 d	NOEC	mortality	7,8	4		Diamond et al., 1990 in Van de Plassche et al 1999				
<i>Corbicula fluminea</i>		Y	AgNO3	R	nw	7,8		43,8	21 d	NOEC	growth	2,6	4		Diamond et al., 1990 in Van de Plassche et al 1999				
<i>Corbicula fluminea</i>	3-5mm, field collected	Y	AgNO3	rg	R	nw	n	7,8	20	34,8	?	20 d	NOEC	mortality	7,8	4,4	2	4,10,23	Diamond et al 1990
<i>Corbicula fluminea</i>	3-5mm, field collected	Y	AgNO3	rg	R	nw	n	7,8	20	34,8	?	20 d	NOEC	growth	2,6	1,5	2	4,10,23	Diamond et al 1990
<i>Linguinia spp.</i>			NaAgS2O3						10 w	NOEC		2220	4	7	Ewell et al. 1993 in Ratte 1999				
<i>Margaritifera spp.</i>			NaAgS2O3						10 w	NOEC		2220	4	7	Ewell et al. 1993 in Ratte 1999				
<i>Mytilus edulis</i>			AgNO3						28 d	NOEC	growth	8,5	4	7	Breteler et al., 1982 in INERIS, 2006				
Crustacea																			
<i>Ceriodaphnia dubia</i>			AgNO3						10 d	NOEC	reproduction	0,53	4		Rodgers et al, 1997 in INERIS, 2006 en Stoffdatenblatt, 1999				
<i>Ceriodaphnia dubia</i>	24 h	Y	AgNO3	S	nw	n	7.5-8.2	20	68-70	?	10 d	NOEC	reproduction	0,53	2	4,8	Rodgers et al. 1997		
<i>Ceriodaphnia dubia</i>	24 h	Y	AgCl	S	nw	n	7.5-8.2	20	68-70	?	10 d	LC50	mortality	>1930	2	4,8	Rodgers et al. 1997		
<i>Ceriodaphnia dubia</i>	24 h	Y	Ag(S2O3)n	S	nw	n	7.5-8.2	20	68-70	?	10 d	LC50	mortality	>12000	2	4,8	Rodgers et al. 1997		
<i>Ceriodaphnia dubia</i>			AgNO3							NOEC	reproduction	4,5	4		Birge & Zuiderveen 1995 cited in Ratte 1999, in Stoffdatenblatt, 1999				
<i>Ceriodaphnia dubia</i>			AgNO3							NOEC	reproduction	4	4	5	Webber et al 1989 in Birge and Zuiderveen 1995				
<i>Ceriodaphnia dubia</i>			AgNO3							NOEC	reproduction	5	4	5	Webber et al 1989 in Birge and Zuiderveen 1995				
<i>Ceriodaphnia dubia</i>	< 24 h	Y	AgNO3	R	am	7.4-7.8	25	80-100	0	7 d	NOEC	mortality	0,37	2	6,13,46	Kolts et al., 2009			
<i>Ceriodaphnia dubia</i>	< 24 h	Y	AgNO3	R	am	7.4-7.8	25	80-100	0	7 d	NOEC	mortality	2,9	2	6,29,46	Kolts et al., 2009			
<i>Ceriodaphnia dubia</i>	< 24 h	Y	AgNO3	R	am	7.4-7.8	25	80-100	0	7 d	NOEC	reproduction	≥ 0.70	2	6,46	Kolts et al., 2009			
<i>Ceriodaphnia dubia</i>	< 24 h	Y	AgNO3	R	am	7.4-7.8	25	80-100	0	7 d	EC10	reproduction	2,1	2	3,6,29,46	Kolts et al., 2009			
<i>Ceriodaphnia dubia</i>			AgNO3							NOEC	reproduction	4,5	4	5	Birge & Zuiderveen 1995 in Ratte, 1999				
<i>Ceriodaphnia dubia</i>	< 24 h	Y	AgNO3	rg	R	am	7.4-7.8	25	80-100	8 d	NOEC	reproduction	0,001	3	10,11,24,25	Bielmyer et al. 2002			
<i>Ceriodaphnia dubia</i>	< 24 h	Y	AgGSH	R	am	7.4-7.8	25	80-100	8 d	NOEC	reproduction	0,1	3	10,11,24,25,2 6	Bielmyer et al. 2002				
<i>Ceriodaphnia dubia</i>	< 24 h	Y	AgCys	R	am	7.4-7.8	25	80-100	8 d	LOEC	reproduction	0,001	3	10,11,24,25,2 6,27	Bielmyer et al. 2002				
<i>Ceriodaphnia dubia</i>	< 12 h	Y	AgNO3	>99.7	R	7.8-8.4	25	88	7 d	EC10	reproduction	10,1	2	72,81	Study report, 2007'in REACH dossier				
<i>Ceriodaphnia dubia</i>	< 12 h	Y	AgNO3	>99.7	R	7.8-8.4	25	88	7 d	EC10	reproduction	6,48	2	72,81	Study report, 2007'in REACH dossier				

<i>Ceriodaphnia dubia</i>	< 12 h	Y	AgNO3	>99.7	R		7.8-8.4	25	88		7 d	EC10	reproduction	8,69	2	72,81	Study report, 2007'in REACH dossier	
<i>Ceriodaphnia dubia</i>	< 24 h	Y	AgNO3		R	nw	7.4-7.8	25	80-100		7 d	EC10	reproduction	2,48	2	72,81	Study report, 2009'in REACH dossier	
<i>Ceriodaphnia dubia</i>	< 12 h	Y	AgNO3	> 99.7	R	nw	n	7.8-8.4	25	88	4,74	7 d	NOEC	mortality	11,5	2	81	Naddy et al., 2007 Aquat Tox.
<i>Ceriodaphnia dubia</i>	< 12 h	Y	AgNO3	> 99.7	R	nw	n	7.8-8.4	25	88	4,74	7 d	EC10	mortality	11,1	2	81,85	Naddy et al., 2007 Aquat Tox.
<i>Ceriodaphnia dubia</i>	< 12 h	Y	AgNO3	> 99.7	R	nw	n	7.8-8.4	25	88	4,74	7 d	NOEC	reproduction	8,01	2	81	Naddy et al., 2007 Aquat Tox.
<i>Ceriodaphnia dubia</i>	< 12 h	Y	AgNO3	> 99.7	R	nw	n	7.8-8.4	25	88	4,74	7 d	EC10	reproduction	10,4	2	81,85	Naddy et al., 2007 Aquat Tox.
<i>Ceriodaphnia dubia</i>	< 12 h	Y	AgNO3	> 99.7	R	nw	n	7.8-8.4	25	88	4,74	7 d	NOEC	mortality	11,4	2	81	Naddy et al., 2007 Aquat Tox.
<i>Ceriodaphnia dubia</i>	< 12 h	Y	AgNO3	> 99.7	R	nw	n	7.8-8.4	25	88	4,74	7 d	NOEC	reproduction	4,19	2	81	Naddy et al., 2007 Aquat Tox.
<i>Ceriodaphnia dubia</i>	< 12 h	Y	AgNO3	> 99.7	R	nw	n	7.8-8.4	25	88	4,74	7 d	EC10	reproduction	7,9	2	81,85	Naddy et al., 2007 Aquat Tox.
<i>Ceriodaphnia dubia</i>	< 12 h	Y	AgNO3	> 99.7	R	nw	n	7.8-8.4	25	88	5,11	7 d	NOEC	mortality	11,5	2	81,87	Naddy et al., 2007 Aquat Tox.
<i>Ceriodaphnia dubia</i>	< 12 h	Y	AgNO3	> 99.7	R	nw	n	7.8-8.4	25	88	5,11	7 d	EC10	mortality	10,4	2	81,85,87	Naddy et al., 2007 Aquat Tox.
<i>Ceriodaphnia dubia</i>	< 12 h	Y	AgNO3	> 99.7	R	nw	n	7.8-8.4	25	88	5,11	7 d	NOEC	reproduction	7,87	2	81,87	Naddy et al., 2007 Aquat Tox.
<i>Ceriodaphnia dubia</i>	< 12 h	Y	AgNO3	> 99.7	R	nw	n	7.8-8.4	25	88	5,11	7 d	EC10	reproduction	9,3	2	81,85,87	Naddy et al., 2007 Aquat Tox.
<i>Ceriodaphnia dubia</i>	< 12 h	Y	AgNO3	> 99.7	R	nw	n	7.8-8.4	25	88	4,74	7 d	NOEC	mortality	17,5	2	81,88	Naddy et al., 2007 Aquat Tox.
<i>Ceriodaphnia dubia</i>	< 12 h	Y	AgNO3	> 99.7	R	nw	n	7.8-8.4	25	88	4,74	7 d	EC10	mortality	14,5	2	81,85,87	Naddy et al., 2007 Aquat Tox.
<i>Ceriodaphnia dubia</i>	< 12 h	Y	AgNO3	> 99.7	R	nw	n	7.8-8.4	25	88	4,74	7 d	NOEC	reproduction	9,94	2	81,88	Naddy et al., 2007 Aquat Tox.
<i>Ceriodaphnia dubia</i>	< 12 h	Y	AgNO3	> 99.7	R	nw	n	7.8-8.4	25	88	4,74	7 d	EC10	reproduction	13	2	81,85,87	Naddy et al., 2007 Aquat Tox.
<i>Ceriodaphnia reticulata</i>	< 24 h	N	AgNO3	rg	R	nw		8	23	240		7 d	EC50	reproduction	0,8	3*	13, 72	Publication 1986' in REACH dossier
<i>Ceriodaphnia reticulata</i>	< 24 h	N	AgNO3	rg	R	nw		8	23	240		7 d	EC50	mortality	6,4	3*	13, 72	Publication 1986' in REACH dossier
<i>Ceriodaphnia reticulata</i>	< 24 h	N	AgNO3	rg	R	nw		8	23	240		7 d	NOEC	reproduction	1	3*	13, 72	Publication 1986' in REACH dossier
<i>Ceriodaphnia reticulata</i>	< 24 h	N	AgNO3	rg	R	nw	y	8	23	240		7 d	EC50	reproduction	0,8	3	1,11,13	Elnabarawy et al., 1986
<i>Ceriodaphnia reticulata</i>	< 24 h	N	AgNO3	rg	R	nw	y	8	23	240		7 d	LC50	mortality	6,4	3	1,11,13	Elnabarawy et al., 1986
<i>Ceriodaphnia reticulata</i>	< 24 h	N	AgNO3	rg	R	nw	y	8	23	240		7 d	NOEC	reproduction	1	3	1,11,13	Elnabarawy et al., 1986
<i>Daphnia magna</i>	< 24 h	Y	AgNO3		R	am		8,2	20	115		21 d	LC10	mortality	1,83	2	4,8,30, 91	Bianchini and Wood 2008
<i>Daphnia magna</i>	< 24 h	Y	AgNO3		R	am		8,2	20	115		21 d	LC10	mortality	2,99	2	4,8,30,47, 92	Bianchini and Wood 2008
<i>Daphnia magna</i>	< 24 h	Y	AgNO3		R	am		8,2	20	460		21 d	LC10	mortality	3,18	2	4,8,30, 93	Bianchini and Wood 2008
<i>Daphnia magna</i>	< 24 h	Y	AgNO3		R	am		8,2	20	115		21 d	EC10	reproduction	2,88	2	4,8,30, 94	Bianchini and Wood 2008
<i>Daphnia magna</i>	< 24 h	Y	AgNO3		R	am		8,2	20	115		21 d	EC10	reproduction	2,40	2	4,8,30,47, 95	Bianchini and Wood 2008
<i>Daphnia magna</i>	< 24 h	Y	AgNO3		R	am		8,2	20	460		21 d	EC10	reproduction	1,98	2	4,8,30, 96	Bianchini and Wood 2008
<i>Daphnia magna</i>	neonates	Y	AgNO3		R	am		8,2	20	115		21 d	NOEC	reproduction	< 5	<2		Bianchini and Wood 2002
<i>Daphnia magna</i>	< 24 h	Y	AgNO3	rg	R	nw		7,2	19,5	60		21 d	NOEC	reproduction	1,6	2	4	Nebeker et al. 1983
<i>Daphnia magna</i>	< 24 h	Y	AgNO3		R			7,2	19,5	60		21 d	NOEC	reproduction	1,6	2*	4	Nebeker et al 1983 in DAR silver thiosulphate
<i>Daphnia magna</i>	< 24 h	Y	AgNO3	rg	R	am		7,2	19,5	75		21 d	NOEC	reproduction	8,8	2	4	Nebeker et al. 1983
<i>Daphnia magna</i>	< 24 h	Y	AgNO3	rg	R	am		7,2	19,5	180		21 d	NOEC	reproduction	3,4	2	4	Nebeker et al. 1983
<i>Daphnia magna</i>	< 24 h	Y	AgNO3		R	nw		8,6		73	?	21 d	NOEC	reproduction	14,5	2	4,48	Nebeker 1982
<i>Daphnia magna</i>	< 24 h	Y	AgNO3		R	nw		7,2		60	?	21 d	NOEC	reproduction	3,6	2	4,49	Nebeker 1982
<i>Daphnia magna</i>	< 24 h	Y	AgNO3		R	nw		7,7		46	?	21 d	NOEC	reproduction	2,7	2	4	Nebeker 1982
<i>Daphnia magna</i>	24 h	Y	AgNO3		R	nw		7,2		60		21 d	NOEC	reproduction	1,6	4*		Nebeker et al., 1983 in Van de Plassche et al 1999
<i>Daphnia magna</i>	24 h	Y	AgNO3		R	nw		7,2		75		21 d	NOEC	reproduction	8,8	4*		Nebeker et al., 1983 in Van de Plassche et al 1999
<i>Daphnia magna</i>	24 h	Y	AgNO3		R	nw		7,2		180		21 d	NOEC	reproduction	3,4	4*		Nebeker et al., 1983 in Van de Plassche et al 1999
<i>Daphnia magna</i>	< 24 h	Y	AgNO3		R	nw	n (well water)	7,2	19,5	60		21 d	EC50	reproduction	2,9	2	4	Nebeker et al. 1983
<i>Daphnia magna</i>	< 24 h	Y	AgNO3	rg	R	am		7,2	19,5	75		21 d	EC50	reproduction	3,6	2	4	Nebeker et al. 1983
<i>Daphnia magna</i>	< 24 h	Y	AgNO3	rg	R	am		7,2	19,5	180		21 d	EC50	reproduction	3,9	2	4	Nebeker et al. 1983
<i>Daphnia magna</i>			AgNO3							60			EC50	reproduction	2,9	4*		Nebeker et al. 1983 in Ratte 1999

<i>Daphnia magna</i>			AgNO3					75			EC50	reproduction		3,6	4*	Nebeker et al. 1983 in Ratte 1999			
<i>Daphnia magna</i>			AgNO3					180			EC50	reproduction		3,9	4*	Nebeker et al. 1983 in Ratte 1999			
<i>Daphnia magna</i>	24 h	Y	AgNO3	S	am	7.5-8.2	20	68-70	?	10 d	NOEC	reproduction	0,8		2	4,8	Rodgers et al. 1997a		
<i>Daphnia magna</i>	24 h	Y	AgCl	S	am	7.5-8.2	20	68-70	?	10 d	LC50	mortality	>1930		2	4,8	Rodgers et al. 1997a		
<i>Daphnia magna</i>	24 h	Y	Ag(S2O3)n	S	am	7.5-8.2	20	68-70	?	10 d	LC50	mortality	>12000		2	4,8	Rodgers et al. 1997a		
<i>Daphnia magna</i>			AgNO3							10 d	NOEC	reproduction		0,8	4*	Rodgers et al, 1997 in INERIS, 2006 en Stoffdatenblatt, 1999			
<i>Daphnia magna</i>	24 h	Y	AgNO3	S	am	7.5-8.2	20	68-70	?	10 d	LC50	mortality	1,06		2	8,50	Rodgers et al. 1997a		
<i>Daphnia magna</i>	24 h	Y	AgCl	S	am	7.5-8.2	20	68-70	?	10 d	LC50	mortality	>930		2	8	Rodgers et al. 1997a		
<i>Daphnia magna</i>	24 h	Y	AgS2O3	S	am	7.5-8.2	20	68-70	?	10 d	LC50	mortality	>12000		2	8	Rodgers et al. 1997a		
<i>Daphnia magna</i>	< 24 h	Y	AgNO3	R	am	7,2	20			21 d	NOEC	mortality	4,1			4	Publication, 1983' in REACH dossier		
<i>Daphnia magna</i>	< 24 h		AgNO3	R	am	7,2	20	60		21 d	EC10	reproduction	2,2			4	79	Publication, 1983' in REACH dossier (probably Nebeker).	
<i>Daphnia magna</i>	< 24 h		AgNO3	R	am	7,2	20	75		21 d	EC10	reproduction	9,1			4	79	Publication, 1983' in REACH dossier	
<i>Daphnia magna</i>	< 24 h		AgNO3	R	am	7,2	20	180		21 d	EC10	reproduction	5,3			4	79	Publication, 1983' in REACH dossier	
<i>Daphnia magna</i>	< 24 h		AgNO3	rg	R	nw	8	23	240	14 d	EC50	reproduction		2,2	3*	13	Publication, 1986' in REACH dossier		
<i>Daphnia magna</i>	< 24 h		AgNO3	rg	R	nw	8	23	240	14 d	LC50	mortality		3,6	3*	13	Publication, 1986' in REACH dossier		
<i>Daphnia magna</i>	< 24 h		AgNO3	rg	R	nw	8	23	240	14 d	NOEC	reproduction		< 0.56	3*	13	Publication, 1986' in REACH dossier		
<i>Daphnia magna</i>	< 24 h	N	AgNO3	rg	R	nw	y	8	23	240	14 d	NOEC	mortality		>5.6	3	1,11,13	Elnabarawy et al., 1986	
<i>Daphnia magna</i>	< 24 h	N	AgNO3	rg	R	nw	y	8	23	240	14 d	EC50	reproduction		2,2	3	1,11,13	Elnabarawy et al., 1986	
<i>Daphnia magna</i>	< 24 h	N	AgNO3	rg	R	nw	y	8	23	240	14 d	LC50	mortality		3,6	3	1,11,13,86	Elnabarawy et al., 1986	
<i>Daphnia magna</i>	< 24 h	Y	AgNO3	> 99.7	R	nw	n	7.9-8.6	20-22	160	2	21 d	NOEC	mortality	2,37		2	81	Naddy et al., 2007 Aquat Tox.
<i>Daphnia magna</i>	< 24 h	Y	AgNO3	> 99.7	R	nw	n	7.9-8.6	20-22	160	2	21 d	NOEC	reproduction	2,37		2	81	Naddy et al., 2007 Aquat Tox.
<i>Daphnia magna</i>	< 24 h	Y	AgNO3	> 99.7	R	nw	n	7.9-8.6	20-22	160	2	21 d	NOEC	growth	2,37		2	81	Naddy et al., 2007 Aquat Tox.
<i>Daphnia pulex</i>	< 24 h		AgNO3	rg	R	nw	8	23	240	14 d	EC50	reproduction		1,2	3*	13	Publication, 1986' in REACH dossier		
<i>Daphnia pulex</i>	< 24 h		AgNO3	rg	R	nw	8	23	240	14 d	LC50	mortality		2,7	3*	13	Publication, 1986' in REACH dossier		
<i>Daphnia pulex</i>	< 24 h	Y	AgNO3	rg	R	nw	8	23	240	14 d	NOEC	mortality		3,2	3*	13	Publication, 1986' in REACH dossier		
<i>Daphnia pulex</i>	< 24 h		AgNO3	rg	R	nw	8	23	240	14 d	NOEC	reproduction		<0.56	3*	13	Publication, 1986' in REACH dossier		
<i>Daphnia pulex</i>	< 24 h	N	AgNO3	rg	R	nw	y	8	23	240	14 d	NOEC	mortality		3,2	3	1,11,13	Elnabarawy et al., 1986	
<i>Daphnia pulex</i>	< 24 h	N	AgNO3	rg	R	nw	y	8	23	240	14 d	NOEC	reproduction		<0.56	3	1,11,13	Elnabarawy et al., 1986	
<i>Daphnia pulex</i>	< 24 h	N	AgNO3	rg	R	nw	y	8	23	240	14 d	EC50	reproduction		1,2	3	1,11,13	Elnabarawy et al., 1986	
<i>Daphnia pulex</i>	< 24 h	N	AgNO3	rg	R	nw	y	8	23	240	14 d	LC50	mortality		2,7	3	1,11,13	Elnabarawy et al., 1986	
<i>Hyalella azteca</i>	6-8mm	Y	AgNO3	rg	R	nw	n	7,8	20	34,8	?	21 d	NOEC	mortality	0,9	0,58	2	4,10,23	Diamond et al 1990
<i>Hyalella azteca</i>	6-8mm	Y	AgNO3	rg	R	nw	n	7,8	20	34,8	?	21 d	NOEC	growth	>1.9	≥ 1.2	2	4,10,23	Diamond et al 1990
<i>Hyalella azteca</i>		Y	AgNO3	R	nw	n	7,8	34,8		21 d	NOEC	mortality		0,9	4*			Diamond et al., 1990 in Van de Plassche et al 1999	
Insecta																			
<i>Chironomus tentans</i>	11 day old	Y	AgNO3	F	dtw	7,4	23	52	?	10 d	LC50	mortality	63	57	2	54,55	Call et al. 1999		
<i>Chironomus tentans</i>	11d larvae	Y	AgNO3	F	dtw	7,4	23	52,1	?	10 d	NOEC	growth		13	2	54,55,56	Call et al. 1999		
<i>Chironomus tentans</i>			AgNO3							10 d	NOEC	growth		13	4*		Call et al., 1999 in INERIS, 2006		
<i>Chironomus tentans</i>			AgNO3							10 d	EC50			259000	4	57	Rodgers et al, 1994		
<i>Chironomus tentans</i>			AgNO3							10 d	EC50	emergence		259000	4*		Rodgers et al. 1994 in Ratte 1999		
<i>Chironomus tentans</i>	2nd instar	Y	AgNO3	S	nw	n	6.9-7.5	20	10-15	?	10 d	LC50	mortality	259		2	4,8,58	Rodgers et al. 1997a	
<i>Chironomus tentans</i>	2nd instar	Y	AgNO3	S	nw	n	6.9-7.5	20	10-15	?	10 d	NOEC	survival	125		2	4,8	Rodgers et al. 1997a	
<i>Chironomus tentans</i>	2nd instar	Y	AgCl	S	nw	n	6.9-7.5	20	10-15	?	10 d	LC50	mortality	>1930		2	4,8	Rodgers et al. 1997a	
<i>Chironomus tentans</i>	2nd instar	Y	AgS2O3	S	am		6.9-7.5	20	10-15	?	10 d	LC50	mortality	>12000		2	4,8	Rodgers et al. 1997a	
<i>Chironomus tentans</i>			AgNO3		nw					10 d	NOEC	growth		125	4*		Rodgers et al, 1997 in INERIS, 2006 en Stoffdatenblatt, 1999		

<i>Chironomus</i> sp.			NaAgS2O3									58 d	NOEC				> 444	4	7	Ewell et al. 1993 in Ratte 1999
<i>Isonychia bicolor</i>	< 4 th instar; 3-5mm	Y	AgNO3	rg	R	nw	n	7,8	20	34,8	?	14 d	NOEC	mortality	3,1	1,7		2	4,10,23	Diamond et al 1990
<i>Isonychia bicolor</i>	< 4 th instar; 3-5mm	Y	AgNO3	rg	R	nw	n	7,8	20	34,8	?	14 d	NOEC	growth	>31	≥ 17		2	4,10,23	Diamond et al 1990
<i>Isonychia bicolor</i>	< 4 th instar; 3-5mm	Y	AgNO3	rg	R	nw	n	7,8	20	34,8	?	14 d	NOEC	molts	0,31	0,17		2	4,10,23	Diamond et al 1990
<i>Isonychia bicolor</i>		Y	AgNO3		R	nw	n	7,8		34,8		14 d	NOEC	mortality			3,1	4*		Diamond et al., 1990 in Van de Plassche et al 1999
<i>Isonychia bicolor</i>		Y	AgNO3									14 d	NOEC	development			0,31	4*		Diamond et al., 1990 in Stoffdatenblatt, 2009
<i>Notonecta</i> sp.			Ag2S									58 d	LC50				> 435	4	7	Ewell et al. 1993 in Ratte 1999
<i>Stenonema modestum</i>			AgNO3									14 d	NOEC	growth			1,84	4	7	Diamond et al., 1992 in INERIS, 2006
<i>Stenonema modestum</i>													NOEC				1,84	4		Diamond et al., 1992 in Wood et al., 2002
<i>Stenonema modestum</i>													LOEC				3,4	4		Diamond et al., 1992 in Wood et al., 2002
<i>Stenonema modestum</i>	larvae; 4-6 mm	Y	AgNO3	rg	R	tw	y	7,7	12	48,5		14 d	NOEC	molting	1,84	1		2	4,84	Diamond et al., 1992
<i>Stenonema modestum</i>	larvae; 4-6 mm	Y	AgNO3	rg	R	tw	y	7,7	12	48,5		7 d	EC10	survival		3,6		2	4,84,85	Diamond et al., 1992
<i>Stenonema modestum</i>	larvae; 4-6 mm	Y	AgNO3	rg	R	tw	y	7,7	12	48,5		14 d	EC10	survival		3,9		2	4,84,85	Diamond et al., 1992
Pisces																				
<i>Carassius auratus</i>	embryo	N	AgNO3		R	rw				100-200		els	LC50	mortality			20	3	1	Birge and Zuiderveen 1995
<i>Carassius auratus</i>	embryo larvae		AgNO3									> 6 d	LC50	mortality			20	3*		Birge and Zuiderveen 1995 in Ratte 1999
<i>Carassius auratus</i>	embryo	N	AgNO3		R	rw				100-200		els	LC10	mortality			4	3	1	Birge and Zuiderveen 1995
<i>Ictalurus punctatus</i>	embryo	N	AgNO3		R	rw				100-200		els	LC50	mortality			10	3	1	Birge and Zuiderveen 1995
<i>Ictalurus punctatus</i>	embryo larvae		AgNO3									> 6 d	LC50	mortality			10	3*		Birge and Zuiderveen 1995 in Ratte 1999
<i>Ictalurus punctatus</i>	embryo	N	AgNO3		R	rw				100-200		els	LC10	mortality			2	3	1	Birge and Zuiderveen 1995
<i>Lepomis macrochirus</i>	2.94 g, 14.7 cm	Y	AgNO3		R	tw		7,5	23,9	180		6 m	NOEC	growth			70	4	11,12	Coleman and Cearley, 1974
<i>Lepomis macrochirus</i>			AgNO3									6 m	NOEC	growth			70	4*		Coleman and Cearley, 1974 in INERIS, 2006
<i>Micropterus salmoides</i>	9.6 g, 24.6 cm	Y	AgNO3		R	tw		7,5	23,9	180		6 m	NOEC	mortality			7	4	11,12	Coleman and Cearley, 1974
<i>Micropterus salmoides</i>			AgNO3									6 m	NOEC	growth			7	4*		Coleman and Cearley, 1974 in INERIS, 2006
<i>Micropterus salmonides</i>	embryo	N	AgNO3		R	rw				100-200		els	LC50	mortality			110	3	1	Birge and Zuiderveen 1995
<i>Micropterus salmonides</i>	embryo	N	AgNO3		R	rw				100-200		els	LC10	mortality			18	3	1	Birge and Zuiderveen 1995
<i>Micropterus salmonides</i>			AgNO3									> 6 d	LC50	mortality			110	4*		Birge and Zuiderveen 1995 in Ratte 1999
<i>Oncorhynchus kisutch</i>																				
<i>Oncorhynchus mykiss</i>	embryo	N	AgNO3		R	rw				100-200		els	LC50	mortality			10	3	1	Birge and Zuiderveen 1995
<i>Oncorhynchus mykiss</i>			AgNO3									> 6 d	LC50	mortality			10	4*		Birge and Zuiderveen 1995 in Ratte 1999
<i>Oncorhynchus mykiss</i>	embryo	N	AgNO3		R	rw				100-200		els	LC10	mortality			0,8	3	1	Birge and Zuiderveen 1995
<i>Oncorhynchus mykiss</i>	fertilised eggs	Y	AgNO3		F	am		7.5-8.0	12	95	2,86	75 d	NOEC	mortality	0,13			2	59	Brauner and Wood 2002a
<i>Oncorhynchus mykiss</i>	fertilised eggs	Y	AgNO3		F	am		7.5-8.0	12	95	2,86	75 d	NOEC	growth	< 0.13			2	59	Brauner and Wood 2002a
<i>Oncorhynchus mykiss</i>	fertilised eggs	Y	AgNO3		F	am		7.5-8.0	12	95	14,9	51 d	NOEC	mortality	0,02			3	59	Brauner and Wood 2002a
<i>Oncorhynchus mykiss</i>	fertilised eggs	Y	AgNO3		F	am		7.5-8.0	12	95	14,9	51 d	NOEC	growth	0,02			3	59	Brauner and Wood 2002a
<i>Oncorhynchus mykiss</i>	fertilised eggs	Y	AgNO3		F	am		7.5-8.0	12	95	1,3	75 d	NOEC	mortality	0,098			2	4,59	Brauner and Wood 2002b
<i>Oncorhynchus mykiss</i>	fertilised eggs	Y	AgNO3		F	am		7,5	13,5	95	1,3	37 d	NOEC	growth	0,098			2	4,59	Brauner and Wood 2002b
<i>Oncorhynchus mykiss</i>	eyed eggs	Y	AgNO3		F	tw		6.8-7.3	4-9	30,4	?	10 w	NOEC	mortality	0,6			2	60	Davies et al, 1978
<i>Oncorhynchus mykiss</i>	eyed eggs	Y	AgNO3		F	tw		6.8-7.3	4-9	30,4	?	10 w	NOEC	growth	< 0.6			2		Davies et al, 1978
<i>Oncorhynchus mykiss</i>	eyed eggs	Y	AgNO3		F	tw		6.6-7.4	3-17	27,5	?	18 m	NOEC	mortality	0,09			2		Davies et al, 1978
<i>Oncorhynchus mykiss</i>	eyed eggs	Y	AgNO3		F	tw		6.6-7.4	3-17	27,5	?	2 m	NOEC	growth	0,09			2		Davies et al, 1978
<i>Oncorhynchus mykiss</i>	eyed eggs	Y	AgNO3		F	tw		6.6-7.4	3-17	27,5	?	3 m	NOEC	growth	0,17			2		Davies et al, 1978
<i>Oncorhynchus mykiss</i>	eyed eggs	Y	AgNO3		F	tw		6.6-7.4	3-17	27,5	?	3.5 m	NOEC	growth	0,34			2		Davies et al, 1978
<i>Oncorhynchus mykiss</i>	eyed eggs	Y	AgNO3		F	tw		6.6-7.4	3-17	27,5	?	18 m	NOEC	growth	0,34			2		Davies et al, 1978
<i>Oncorhynchus mykiss</i>	eyed eggs	Y	AgNO3		F	nw		6.8-7.3		30,4		10 w	NOEC	mortality		< 0.6		4*	61	Davies et al, 1978 in Van de Plassche et al 1999
<i>Oncorhynchus mykiss</i>	eyed eggs	Y	AgNO3		F	nw		6.6-7.4		27,5		18 m	NOEC	mortality		0,09		2*		Davies et al, 1978 in Van de Plassche et al 1999

<i>Oncorhynchus mykiss</i>	eyed eggs	Y	AgNO3	F	nw	6.6-7.7	27,5		2 m	NOEC	growth		0,09	2*	Davies et al, 1978 in Van de Plassche et al 1999		
<i>Oncorhynchus mykiss</i>	eyed eggs	Y	AgNO3	F	nw	6.6-7.4	27,5		3 m	NOEC	growth		0,17	2*	Davies et al, 1978 in Van de Plassche et al 1999		
<i>Oncorhynchus mykiss</i>	eyed eggs	Y	AgNO3	F	nw	6.6-7.4	27,5		3.5 m	NOEC	growth		0,34	2*	Davies et al, 1978 in Van de Plassche et al 1999		
<i>Oncorhynchus mykiss</i>									60 d	LOEC	mortality	0,69		4	4,62,66	Davies et al, 1978, in Dethloff et al., 2007	
<i>Oncorhynchus mykiss</i>									60 d	LOEC	growth	0,17		4	4,62,66	Davies et al, 1978, in Dethloff et al., 2007	
<i>Oncorhynchus mykiss</i>									18 mo	LOEC	hatching	0,17		4	4,62,66	Davies et al, 1978, in Dethloff et al., 2007	
<i>Oncorhynchus mykiss</i>										NOEC			0,15	4		Davies et al., 1998 in Wood et al., 2002	
<i>Oncorhynchus mykiss</i>										LOEC			0,22	4		Davies et al., 1998 in Wood et al., 2002	
<i>Oncorhynchus mykiss</i>			AgNO3						28 d	NOEC	growth		0,7	4	7	Galvez et al., 1998 in INERIS, 2006	
<i>Oncorhynchus mykiss</i>	3.0 g, juvenile	Y	AgNO3	F	dtw	8	15.5-17.5	140	28 d	NOEC	growth		0,5	3	11,12	Galvez et al., 1998	
<i>Oncorhynchus mykiss</i>	3.0 g, juvenile	Y	AgNO3	F	dtw	8	15.5-17.5	140	28 d	NOEC	mortality		0,5	3	11,12	Galvez et al., 1998	
<i>Oncorhynchus mykiss</i>											food consumption	3		2	4	Galvez and Wood 2002	
<i>Oncorhynchus mykiss</i>		Y	AgNO3	F	dtw	8	14.5-15.5	120	23 d	NOEC	weight	3		2	4	Galvez and Wood 2002	
<i>Oncorhynchus mykiss</i>	fertilised eggs	Y	AgNO3		dtw	7,5	12,3	120	0,76	32 d	NOEC	mortality	1,22		2	63	Guadagnolo et al., 2001
<i>Oncorhynchus mykiss</i>											hatching	≥ 13.5		4	4,64,66	Guadagnolo et al., 2001, in Dethloff et al., 2007	
<i>Oncorhynchus mykiss</i>	fertilised eggs	Y	AgNO3	F	am	7	11,1	2	0,5	64 d	NOEC	reproduction	0,09	3	4,59	Morgan et al. 2005	
<i>Oncorhynchus mykiss</i>	fertilised eggs	Y	AgNO3	F	am	7	11,1	2	0,5	64 d	NOEC	mortality	0,09	3	4,59	Morgan et al. 2005	
<i>Oncorhynchus mykiss</i>	fertilised eggs	Y	AgNO3	F	am	7	11,1	150	0,5	64 d	NOEC	reproduction	≥1.21	3	4,59	Morgan et al. 2005	
<i>Oncorhynchus mykiss</i>	fertilised eggs	Y	AgNO3	F	am	7	11,1	150	0,5	64 d	NOEC	mortality	0,1	3	4,59	Morgan et al. 2005	
<i>Oncorhynchus mykiss</i>	fertilised eggs	Y	AgNO3	F	am	7	11,1	400	0,5	64 d	NOEC	reproduction	≥ 0.79	3	4,59	Morgan et al. 2005	
<i>Oncorhynchus mykiss</i>	fertilised eggs	Y	AgNO3	F	am	7	11,1	400	0,5	64 d	NOEC	mortality	≥ 0.79	3	4,59	Morgan et al. 2005	
<i>Oncorhynchus mykiss</i>									60 d	LOEC	mortality	0,51		4*	4,65,66	Nebeker et al, 1983, in Dethloff et al., 2007	
<i>Oncorhynchus mykiss</i>									60 d	LOEC	growth	0,1		4*	4,65,66	Nebeker et al, 1983, in Dethloff et al., 2007	
<i>Oncorhynchus mykiss</i>									60 d	LOEC	growth	0,36		4*	4,65,66	Nebeker et al, 1983, in Dethloff et al., 2007	
<i>Oncorhynchus mykiss</i>	eggs	Y	AgNO3	F	nw	7		36		60 d	NOEC	growth		0,36	4*		Nebeker et al., 1983 in Van de Plassche et al 1999
<i>Oncorhynchus mykiss</i>	eggs	Y	AgNO3	F	nw	7		36		60 d	NOEC	growth		0,1	4*		Nebeker et al., 1983 in Van de Plassche et al 1999
<i>Oncorhynchus mykiss</i>	embryos	N	AgNO3	F			9-12			60 d	NOEC	mortality		0,36	4*		Nebeker 1983 in DAR silver thiosulphate
<i>Oncorhynchus mykiss</i>	embryos	N	AgNO3	F			9-12			60 d	NOEC	growthrate		<0.1	4		Nebeker 1983 in DAR silver thiosulphate
<i>Oncorhynchus mykiss</i>	embryos	Y	AgNO3	F	nw	n (well water)	7,5	9-12	36	?	60 d	LOEC	survival	0,51		2	Nebeker et al. 1983
<i>Oncorhynchus mykiss</i>	embryos	Y	AgNO3	F	nw	n (well water)	7,5	9-12	36	?	60 d	NOEC	survival	0,36		2	Nebeker et al. 1983
<i>Oncorhynchus mykiss</i>	embryos	Y	AgNO3	F	nw	n (well water)	7,5	9-12	36	?	60 d	NOEC	hatching	0,2		2	Nebeker et al. 1983
<i>Oncorhynchus mykiss</i>	embryos	Y	AgNO3	F	nw	n (well water)	7,5	9-12	36	?	60 d	NOEC	growth	< 0.1		2	Nebeker et al. 1983
<i>Oncorhynchus mykiss</i>	fertilised eggs	Y	AgNO3	F	nw		9-12			60 d	LC100	mortality		1,3	4	80	Publication, 1983' in REACH dossier (probably Nebeker et al., 1983)
<i>Oncorhynchus mykiss</i>	fertilised eggs	Y	AgNO3	F	nw		9-12			60 d	EC10	mortality		0,39	4	79, 80	Publication, 1983' in REACH dossier (probably Nebeker et al., 1983)
<i>Oncorhynchus mykiss</i>	fertilised eggs	Y	AgNO3	F	nw		9-12			60 d	EC10	length		0,72	4	79, 80	Publication, 1983' in REACH dossier (probably Nebeker et al., 1983)
<i>Oncorhynchus mykiss</i>	fertilised eggs	Y	AgNO3	F	nw		9-12			60 d	EC10	weight		0,68	4	79, 80	Publication, 1983' in REACH dossier (probably Nebeker et al., 1983)
<i>Oncorhynchus mykiss</i>	fertilised eggs	Y	AgNO3	F	nw		9-12			60 d	NOEC	growth		<0.1	4	80	Publication, 1983' in REACH dossier (probably Nebeker et al., 1983)

<i>Oncorhynchus mykiss</i>	eggs	Y	AgNO3	100% CF	nw	y	7.3-8.0	12	30-36	2.3-3.0	73 d	NOEC	mortality	≥ 1.25	1	4,67,68,69	Dethloff et al 2007		
<i>Oncorhynchus mykiss</i>	eggs	Y	AgNO3	100% CF	nw	y	7.3-8.1	12	30-34	2.4-3.5	77 d	NOEC	mortality	1,09	1	4,68,69,70	Dethloff et al 2007		
<i>Oncorhynchus mykiss</i>	eggs	Y	AgNO3	100% CF	nw	y	7.3-8.0	12	30-36	2.3-3.0	73 d	NOEC	hatching	≥ 1.25	1	4,67,68,69	Dethloff et al 2007		
<i>Oncorhynchus mykiss</i>	eggs	Y	AgNO3	100% CF	nw	y	7.3-8.1	12	30-34	2.4-3.5	77 d	NOEC	hatching	≥ 2.26	1	4,68,69,70	Dethloff et al 2007		
<i>Oncorhynchus mykiss</i>	eggs	Y	AgNO3	100% CF	nw	y	7.3-8.0	12	30-36	2.3-3.0	73 d	NOEC	development /weight	≥ 1.25	1	4,67,68,69	Dethloff et al 2007		
<i>Oncorhynchus mykiss</i>	eggs	Y	AgNO3	100% CF	nw	y	7.3-8.1	12	30-34	2.4-3.5	77 d	NOEC	development /weight	0,21	1	4,68,69,70	Dethloff et al 2007		
<i>Oncorhynchus mykiss</i>											58 d	NOEC	growth	< 0.9	4	4,66	Brauner et al., 2003, in Dethloff et al., 2007		
<i>Oncorhynchus mykiss</i>											58 d	LOEC	hatching	≥ 0.9	4	4,66	Brauner et al., 2003, in Dethloff et al., 2007		
<i>Oncorhynchus mykiss</i>	embryos	Y	AgNO3	F	am			12,5	20	0,3	58 d	NOEC	growth	<0.1	2	9,11,74	Brauner et al., 2003		
<i>Oncorhynchus mykiss</i>	embryos	Y	AgNO3	F	am			12,5	20	0,3	58 d	NOEC	growth	0,1	2	9,11,74	Brauner et al., 2003		
<i>Oncorhynchus mykiss</i>	fry 22 d	Y	AgNO3	rg	R	nw	n	7,8	20	34,8	?	7 d	NOEC	mortality	≥6.7	≥ 2.3	2	10,23	Diamond et al 1990
<i>Oncorhynchus mykiss</i>		Y	AgNO3	F	nw	well water		6,93	13,1	24,7		196 d	EC10	mortality	0,17	2	71,72	Grey literature, 1998' in REACH dossier	
<i>Oncorhynchus mykiss</i>		Y	AgNO3	F	nw	well water		7,53	13,1	195		196 d	EC10	mortality	0,3	2	71,72	Grey literature, 1998' in REACH dossier	
<i>Oncorhynchus mykiss</i>		Y	AgNO3	F	nw	well water		7,62	13,1	466		196 d	EC10	mortality	0,63	2	71,72	Grey literature, 1998' in REACH dossier	
<i>Pimephales promelas</i>	<24 h	Y	AgNO3	S	nw	n	7.2-7.7		45,1			28 d	NOEC	larval development	1,07	4*		Holcombe et al., 1983 in Van de Plassche et al 1999	
<i>Pimephales promelas</i>	<24 h	Y	AgNO3	S	nw	n	7.2-7.7		45,1			28 d	NOEC	reproduction	0,37	4*		Holcombe et al., 1983 in Van de Plassche et al 1999	
<i>Pimephales promelas</i>	<24 h	Y	AgNO3	S	nw	n	7.2-7.7		45,1			28 d	NOEC	growth	0,65	4*		Holcombe et al., 1983 in Van de Plassche et al 1999	
<i>Pimephales promelas</i>	embryos, <24 h	Y	AgNO3	99,99 S	nw	n	7.2-7.7	25	45,1	?	28 d	NOEC	larval development	1,07	2		Holcombe et al., 1983		
<i>Pimephales promelas</i>	embryos, <24 h	Y	AgNO3	99,99 S	nw	n	7.2-7.7	25	45,1	?	28 d	NOEC	survival	0,37	2		Holcombe et al., 1983		
<i>Pimephales promelas</i>	embryos, <24 h	Y	AgNO3	99,99 S	nw	n	7.2-7.7	25	45,1	?	28 d	NOEC	growth/weig ht	0,65	2		Holcombe et al., 1983		
<i>Pimephales promelas</i>	< 24 h	Y	AgNO3	rg	S	am	8,3	22	50	0	96 h	LC50	mortality	2,43	1	4	Karen et al. 1999		
<i>Pimephales promelas</i>	< 24 h	Y	AgNO3	rg	S	am	8,3	22	50	5	96 h	LC50	mortality	6,05	1	4	Karen et al. 1999		
<i>Pimephales promelas</i>	< 24 h	Y	AgNO3	rg	S	am	8,3	22	50	10	96 h	LC50	mortality	9,79	1	4	Karen et al. 1999		
<i>Pimephales promelas</i>	< 24 h	Y	AgNO3	rg	S	am	8,3	22	50	0	96 h	LC50	mortality	2,67	1	4	Karen et al. 1999		
<i>Pimephales promelas</i>	< 24 h	Y	AgNO3	rg	S	am	8,3	22	50	5	96 h	LC50	mortality	9,72	1	4	Karen et al. 1999		
<i>Pimephales promelas</i>	< 24 h	Y	AgNO3	rg	S	am	8,3	22	50	10	96 h	LC50	mortality	12,28	1	4	Karen et al. 1999		
<i>Pimephales promelas</i>	< 24 h	Y	AgNO3	rg	S	am	8,3	22	50	0	96 h	LC50	mortality	1,97	1	4	Karen et al. 1999		
<i>Pimephales promelas</i>	< 24 h	Y	AgNO3	rg	S	am	8,3	22	50	5	96 h	LC50	mortality	4,23	1	4	Karen et al. 1999		
<i>Pimephales promelas</i>	< 24 h	Y	AgNO3	rg	S	am	8,3	22	50	10	96 h	LC50	mortality	3,56	1	4	Karen et al. 1999		
<i>Pimephales promelas</i>	< 24 h	Y	AgNO3	rg	S	am	8,3	22	50	0	96 h	LC50	mortality	5,5	1	4	Karen et al. 1999		
<i>Pimephales promelas</i>	< 24 h	Y	AgNO3	rg	S	am	8,3	22	50	5	96 h	LC50	mortality	8,89	1	4	Karen et al. 1999		
<i>Pimephales promelas</i>	< 24 h	Y	AgNO3	rg	S	am	8,3	22	50	10	96 h	LC50	mortality	9,82	1	4	Karen et al. 1999		
<i>Pimephales promelas</i>	< 24 h	Y	AgNO3	rg	S	am	8,3	22	100	0	96 h	LC50	mortality	2,24	1	4	Karen et al. 1999		
<i>Pimephales promelas</i>	< 24 h	Y	AgNO3	rg	S	am	8,3	22	100	5	96 h	LC50	mortality	5,39	1	4	Karen et al. 1999		
<i>Pimephales promelas</i>	< 24 h	Y	AgNO3	rg	S	am	8,3	22	100	10	96 h	LC50	mortality	8,46	1	4	Karen et al. 1999		
<i>Pimephales promelas</i>	< 24 h	Y	AgNO3	rg	S	am	8,3	22	100	0	96 h	LC50	mortality	2,34	1	4	Karen et al. 1999		
<i>Pimephales promelas</i>	< 24 h	Y	AgNO3	rg	S	am	8,3	22	100	5	96 h	LC50	mortality	9,06	1	4	Karen et al. 1999		
<i>Pimephales promelas</i>	< 24 h	Y	AgNO3	rg	S	am	8,3	22	100	10	96 h	LC50	mortality	11,18	1	4	Karen et al. 1999		
<i>Pimephales promelas</i>	< 24 h	Y	AgNO3	rg	S	am	8,3	22	100	0	96 h	LC50	mortality	2,06	1	4	Karen et al. 1999		
<i>Pimephales promelas</i>	< 24 h	Y	AgNO3	rg	S	am	8,3	22	100	5	96 h	LC50	mortality	4,41	1	4	Karen et al. 1999		
<i>Pimephales promelas</i>	< 24 h	Y	AgNO3	rg	S	am	8,3	22	100	10	96 h	LC50	mortality	5,63	1	4	Karen et al. 1999		
<i>Pimephales promelas</i>	< 24 h	Y	AgNO3	rg	S	am	8,3	22	100	0	96 h	LC50	mortality	5,63	1	4	Karen et al. 1999		
<i>Pimephales promelas</i>	< 24 h	Y	AgNO3	rg	S	am	8,3	22	100	5	96 h	LC50	mortality	8,39	1	4	Karen et al. 1999		
<i>Pimephales promelas</i>	< 24 h	Y	AgNO3	rg	S	am	8,3	22	100	10	96 h	LC50	mortality	10,19	1	4	Karen et al. 1999		
<i>Pimephales promelas</i>	< 24 h	Y	AgNO3	rg	S	am	8,3	22	200	0	96 h	LC50	mortality	2,79	1	4	Karen et al. 1999		
<i>Pimephales promelas</i>	< 24 h	Y	AgNO3	rg	S	am	8,3	22	200	5	96 h	LC50	mortality	6,83	1	4	Karen et al. 1999		
<i>Pimephales promelas</i>	< 24 h	Y	AgNO3	rg	S	am	8,3	22	200	10	96 h	LC50	mortality	8,5	1	4	Karen et al. 1999		
<i>Pimephales promelas</i>	< 24 h	Y	AgNO3	rg	S	am	8,3	22	200	0	96 h	LC50	mortality	3,19	1	4	Karen et al. 1999		
<i>Pimephales promelas</i>	< 24 h	Y	AgNO3	rg	S	am	8,3	22	200	5	96 h	LC50	mortality	8,7	1	4	Karen et al. 1999		
<i>Pimephales promelas</i>	< 24 h	Y	AgNO3	rg	S	am	8,3	22	200	10	96 h	LC50	mortality	8,44	1	4	Karen et al. 1999		
<i>Pimephales promelas</i>	< 24 h	Y	AgNO3	rg	S	am	8,3	22	200	0	96 h	LC50	mortality	2,75	1	4	Karen et al. 1999		
<i>Pimephales promelas</i>	< 24 h	Y	AgNO3	rg	S	am	8,3	22	200	5	96 h	LC50	mortality	4,19	1	4	Karen et al. 1999		
<i>Pimephales promelas</i>	< 24 h	Y	AgNO3	rg	S	am	8,3	22	200	10	96 h	LC50	mortality	4,32	1	4	Karen et al. 1999		
<i>Pimephales promelas</i>	< 24 h	Y	AgNO3	rg	S	am	8,3	22	200	0	96 h	LC50	mortality	5,47	1	4	Karen et al. 1999		
<i>Pimephales promelas</i>	< 24 h	Y	AgNO3	rg	S	am	8,3	22	200	5	96 h	LC50	mortality	8,98	1	4	Karen et al. 1999		

<i>Pimephales promelas</i>	< 24 h	Y	AgNO3	rg	S	am	8,3	22	200	10	96 h	LC50	mortality	13,35	1	4	Karen et al. 1999		
<i>Pimephales promelas</i>	embryos	Y	Ag2S		F	nw	n (well water) 7.2-8.4	25	38	?	30 d	NOEC	growth	≥ 11000	2	4	LeBlanc et al 1984		
<i>Pimephales promelas</i>	embryos	Y	Ag2S		F	nw	n (well water) 7.2-8.4	25	38	?	30 d	NOEC	survival	1800	2	4	LeBlanc et al 1984		
<i>Pimephales promelas</i>	embryos	Y	AgS2O3		F	nw	n (well water) 7.2-8.4	25	38	?	30 d	NOEC	survival	35000	2	4	LeBlanc et al 1984		
<i>Pimephales promelas</i>	embryos	Y	AgS2O3		F	nw	n (well water) 7.2-8.4	25	38	?	30 d	NOEC	growth	16000	2	4	LeBlanc et al 1984		
<i>Pimephales promelas</i>			Ag2S		F						30 d	MATC		>11000	4*		LeBlanc et al. 1984 in Ratte 1999		
<i>Pimephales promelas</i>		Y	AgS4		CF	nw	7.2-8.4	38			until 30 d p.h.	NOEC		>11000	4*	4,75,76	LeBlanc et al., 1984 in Van de Plassche et al 1999		
<i>Pimephales promelas</i>	larvae	Y	Ag2S		S		7.2-8.4	25			30 d	NOEC	growth rate	11000	2*	4,77	LeBlanc 1984 in DAR silver thiosulphate		
<i>Pimephales promelas</i>		Y	Ag(S2O3)n		CF	nw	7.2-8.4	38			until 30 d p.h.	NOEC		16000	4*	4,75	LeBlanc et al., 1984 in Van de Plassche et al 1999		
<i>Pimephales promelas</i>	larvae	Y	AgS2O3		S		7.2-8.4	25			30 d	NOEC	growth rate	16000	2*	4,77	LeBlanc 1984 in DAR silver thiosulphate		
<i>Pimephales promelas</i>	30 days old embryo-larvae		Ag2S		F							MATC		>4800	4		Ewell et al. 1993 and Le Blanc et al. 1984 in Ratte 1999		
<i>Pimephales promelas</i>	30 days old embryo-larvae		NaAgS2O3		F							MATC		16000	4*		Ewell et al. 1993 and Le Blanc et al. 1984 in Ratte 1999		
<i>Pimephales promelas</i>	larvae	Y	AgNO3	rg	R	nw	n	44-49	?	?	7 d	NOEC	growth	0,729	2		Norberg-King, 1989		
<i>Pimephales promelas</i>			AgNO3								7 d	NOEC	development	0,729	4*		Norberg-King, 1989 in Stoffdatenblatt, 2009		
<i>Pimephales promelas</i>			Ag2S		F						12 w	NOEC		800000	4	7	Ewell et al. 1993 in Ratte 1999		
<i>Pimephales promelas</i>			NaAgS2O3		F						10 w	NOEC		5000	4	7	Ewell et al. 1993 in Ratte 1999		
<i>Pimephales promelas</i>			AgNO3		F						30 d	MATC		4	4	7	Ewell et al. 1993 in Ratte 1999		
<i>Pimephales promelas</i>	fertilised eggs	Y	AgNO3		F	nw	y	25	20-35	2,4	32 d	NOEC	survival	0,9	0,35	2	4,32	Naddy et al 2007 ETC	
<i>Pimephales promelas</i>	fertilised eggs	Y	AgNO3		F	nw	y	25	20-35	2,4	32 d	NOEC	growth	0,9	0,35	2	4,32	Naddy et al 2007 ETC	
<i>Pimephales promelas</i>	fertilised eggs	Y	AgNO3		F	nw	y	25	20-35	2,4	32 d	NOEC	hatching, survival, growth	0,48		2	4,33	Naddy et al 2007 ETC	
<i>Pimephales promelas</i>	fertilised eggs	Y	AgNO3		F	nw	y	25	20-35	2,4	32 d	NOEC	growth	0,54		2	4,33,78	Naddy et al 2007 ETC	
<i>Pimephales promelas</i>	fertilised eggs	Y	AgNO3		F	nw	y	25	20-35	2,4	32 d	NOEC	survival	1,5		3	4,33,78	Naddy et al 2007 ETC	
<i>Pimephales promelas</i>	< 24 h	Y	AgNO3		F	nw	y	25	20-35	2,4	7 d	LC50	mortality	> 0.606		2	4,32	Naddy et al 2007	
<i>Pimephales promelas</i>	< 24 h	Y	AgNO3		F	nw	y	25	20-35	2,4	7 d	NOEC	mortality, growth	> 0.606		2	4,32	Naddy et al 2007	
<i>Pimephales promelas</i>	< 24 h	Y	AgNO3		F	nw		25	20-35	2,4	7 d	LC50	mortality		1	3	10,11,33	Naddy et al 2007	
<i>Pimephales promelas</i>	< 24 h	Y	AgNO3		F	nw	y	25	20-35	2,4	7 d	NOEC	growth	0,81		2	4,33	Naddy et al 2007	
<i>Pimephales promelas</i>	< 24 h	Y	AgNO3		F	nw		25	20-35	2,4	7 d	LC50	mortality		2,1	3	10,11,33,78	Naddy et al 2007	
<i>Pimephales promelas</i>	< 24 h	Y	AgNO3		F	nw	y	25	20-35	2,4	7 d	NOEC	mortality	> 2.42		2	4,33,78	Naddy et al 2007	
<i>Pimephales promelas</i>	< 24 h	Y	AgNO3		F	nw	y	25	20-35	2,4	7 d	NOEC	growth	0,54		2	4,33,78	Naddy et al 2007	
<i>Pimephales promelas</i>	24-48 h	Y	AgNO3		S	am	6.9-7.5	20	10-15	?	10 d	NOEC	mortality	2		2	2,4,8	Rodgers et al. 1997a	
<i>Pimephales promelas</i>	24-48 h	Y	AgCl		S	am	6.9-7.5	20	10-15	?	10 d	LC50	mortality	>1930		2	4,8	Rodgers et al. 1997a	
<i>Pimephales promelas</i>	24-48 h	Y	Ag(S2O3)n		S	am	6.9-7.5	20	10-15	?	10 d	LC50	mortality	>12000		2	4,8	Rodgers et al. 1997a	
<i>Pimephales promelas</i>	24-48 h	Y	AgNO3		S	nw	n	6.9-7.5	20	10-15	?	96 h	LC50	mortality	11,6		2	4,8	Rodgers et al. 1997a
<i>Pimephales promelas</i>	24-48 h	Y	AgNO3		S	nw	n	6.9-7.5	20	10-15	?	10 d	LC50	mortality	10,6		2	4,8	Rodgers et al. 1997a
<i>Pimephales promelas</i>	24-48 h	Y	AgCl		S	nw	n	6.9-7.5	20	10-15	?	96 h	LC50	mortality	>1930		2	4,8	Rodgers et al. 1997a
<i>Pimephales promelas</i>	24-48 h	Y	AgCl		S	nw	n	6.9-7.5	20	10-15	?	10 d	LC50	mortality	>930		2	4,8	Rodgers et al. 1997a
<i>Pimephales promelas</i>	24-48 h	Y	Ag(S2O3)n		S	nw	n	6.9-7.5	20	10-15	?	96 h	LC50	mortality	>12000		2	4,8	Rodgers et al. 1997a
<i>Pimephales promelas</i>	24-48 h	Y	Ag(S2O3)n		S	nw	n	6.9-7.5	20	10-15	?	10 d	LC50	mortality	>12000		2	4,8	Rodgers et al. 1997a
<i>Pimephales promelas</i>	fertilised eggs	Y	AgNO3		F	nw	n	7.3-8.2	25	30,5		32 d	NOEC	survival, growth	0,351		4*	72,73	Publication, 2007' in REACH dossier (probably Naddy et al?)
<i>Pimephales promelas</i>	fertilised eggs	Y	AgNO3								32 d	EC10	growth rate	0,39		4*	72,73, 79	Publication, 2007' in REACH dossier (probably Naddy et al?)	
<i>Pimephales promelas</i>	fertilised eggs	Y	AgNO3								32 d	EC10	mortality	0,44		4*	72,73, 79	Publication, 2007' in REACH dossier (probably Naddy et al?)	
<i>Pimephales promelas</i>	< 24 h	Y	AgNO3		R	rtw	8,2	25	79,2	4,4	96 h	LC50	mortality	6,2	4,5	2	87	VanGenderen et al., 2003	
<i>Pimephales promelas</i>	< 24 h	Y	AgNO3		R	rtw	8,2	25	80,5	3,3	96 h	LC50	mortality	21,4	16,8	2	87	VanGenderen et al., 2003	

<i>Pimephales promelas</i>	< 24 h	Y	AgNO3	R	rtw	8,1	25	79,2	5,1	96 h	LC50	mortality	16	13,4	2	87	VanGenderen et al., 2003
<i>Pimephales promelas</i>	< 24 h	Y	AgNO3	R	rtw	8,2	25	81,8	4	96 h	LC50	mortality	14,3	10,1	2	87	VanGenderen et al., 2003
<i>Pimephales promelas</i>	< 24 h	Y	AgNO3	R	rtw	8,2	25	80,5	3,6	96 h	LC50	mortality	13,4	11,5	2	87	VanGenderen et al., 2003
<i>Pimephales promelas</i>	< 24 h	Y	AgNO3	R	rtw	8,2	25	80,5	3,5	96 h	LC50	mortality	13,7	12,4	2	87	VanGenderen et al., 2003
<i>Pimephales promelas</i>	< 24 h	Y	AgNO3	R	rtw	8,2	25	80,5	4,5	96 h	LC50	mortality	22,5	15,2	2	87	VanGenderen et al., 2003
<i>Pimephales promelas</i>	< 24 h	Y	AgNO3	R	rtw	8,2	25	80,5	3,8	96 h	LC50	mortality	32,9	23,3	2	87	VanGenderen et al., 2003
<i>Pimephales promelas</i>	< 24 h	Y	AgNO3	R	rtw	8	25	83,2	3,8	96 h	LC50	mortality	23,3	18,3	2	87	VanGenderen et al., 2003
<i>Pimephales promelas</i>	< 24 h	Y	AgNO3	R	rtw	8,2	25	90	<1	96 h	LC50	mortality	3,8	3,1	2	87	VanGenderen et al., 2003
<i>Pimephales promelas</i>	< 24 h	Y	AgNO3	R	rtw	8	25	87,1	5,1	96 h	LC50	mortality	7,6	7,2	2	87	VanGenderen et al., 2003
<i>Pimephales promelas</i>	< 24 h	Y	AgNO3	R	rtw	8	25	91,1	7,1	96 h	LC50	mortality	9,2	6,7	2	87	VanGenderen et al., 2003
<i>Pimephales promelas</i>	< 24 h	Y	AgNO3	R	rtw	8,1	25	91,1	14	96 h	LC50	mortality	9,9	9	2	87	VanGenderen et al., 2003
<i>Salmo trutta</i>											NOEC			0,2	4		Davies et al., 1998 in Wood et al., 2002
<i>Salmo trutta</i>											LOEC			0,25	4		Davies et al., 1998 in Wood et al., 2002
Salmo trutta	eggs	Y	AgNO3	F	nw	well water	6,8	13,3	27,9	217 d	EC10	mortality	0,19		2	71, 72	grey literature, 1998' in REACH dossier (probably Davies et al., 1998)
<i>Salmo trutta</i>	eggs	Y	AgNO3	F	nw	well water	7,5	13,3	200	217 d	EC10	mortality	0,75		2	71, 72, 97	grey literature, 1998' in REACH dossier (probably Davies et al., 1998)
<i>Salmo trutta</i>	eggs	Y	AgNO3	F	nw	well water	7,5	13,3	400	217 d	EC10	mortality	1,23		2	71, 72, 97	grey literature, 1998' in REACH dossier (probably Davies et al., 1998)
Amphibia																	
<i>Ambystoma opacum</i>	embryo	N	AgNO3	R	rw				100-200	els	LC50	mortality	240	3	1		Birge and Zuiderveen 1995
<i>Ambystoma opacum</i>	embryo	N	AgNO3	R	rw				100-200	els	LC10	mortality	30	3	1		Birge and Zuiderveen 1995
<i>Ambystoma opacum</i>			AgNO3								LC50	mortality	240	4*			Birge and Zuiderveen 1995 in Ratte 1999
<i>Bufo fowleri</i>	embryo	N	AgNO3	R	rw				100-200	els	LC50	mortality	230	3	1		Birge and Zuiderveen 1995
<i>Bufo fowleri</i>	embryo	N	AgNO3	R	rw				100-200	els	LC10	mortality	4	3	1		Birge and Zuiderveen 1995
<i>Bufo fowleri</i>			AgNO3								LC50	mortality	230	4*			Birge and Zuiderveen 1995 in Ratte 1999
<i>Gastrophryne caroliensis</i>	embryo	N	AgNO3	R	rw				100-200	els	LC50	mortality	10	3	1		Birge and Zuiderveen 1995
<i>Gastrophryne caroliensis</i>	embryo	N	AgNO3	R	rw				100-200	els	LC10	mortality	2	3	1		Birge and Zuiderveen 1995
<i>Gastrophryne caroliensis</i>			AgNO3								LC50	mortality	10	4*			Birge and Zuiderveen 1995 in Ratte 1999
<i>Rana catesbeiana</i>	embryo	N	AgNO3	R	rw				100-200	els	LC50	mortality	20	3	1		Birge and Zuiderveen 1995
<i>Rana catesbeiana</i>	embryo	N	AgNO3	R	rw				100-200	els	LC10	mortality	3	3	1		Birge and Zuiderveen 1995
<i>Rana catesbeiana</i>			AgNO3								LC50	mortality	20	4*			Birge and Zuiderveen 1995 in Ratte 1999
<i>Rana palustris</i>	embryo	N	AgNO3	R	rw				100-200	els	LC50	mortality	10	3	1		Birge and Zuiderveen 1995
<i>Rana palustris</i>	embryo	N	AgNO3	R	rw				100-200	els	LC10	mortality	1	3	1		Birge and Zuiderveen 1995
<i>Rana palustris</i>			AgNO3								LC50	mortality	10	4*			Birge and Zuiderveen 1995 in Ratte 1999
<i>Rana pipiens</i>	embryo	N	AgNO3	R	rw				100-200	els	LC50	mortality	10	3	1		Birge and Zuiderveen 1995
<i>Rana pipiens</i>	embryo	N	AgNO3	R	rw				100-200	els	LC10	mortality	0,7	3	1		Birge and Zuiderveen 1995
<i>Rana pipiens</i>			AgNO3								LC50	mortality	10	4*			Birge and Zuiderveen 1995 in Ratte 1999

Notes with chronic freshwater toxicity table

- 1 Test concentration not measured
- 2 Endpoint determined with data from graph
- 3 Endpoint determined from original data
- 4 Endpoint based on measured concentrations
- 5 Original reference not available
- 6 Endpoint based on concentrations measured at the start of the experiment
- 7 Original reference does not contain the cited data
- 8 Analysis performed after filtration over 0.45 µm filter
- 9 Measured concentrations within 20% of nominal
- 10 Measured concentrations <80% of nominal
- 11 Endpoint based on nominal concentrations
- 12 Results of analysis not reported
- 13 Animals were fed during the test
- 14 Test performed according to OECD guideline
- 15 Growth performed in Luria-Bertani broth
- 16 1 replicate
- 17 Fritz medium without EDTA
- 18 Woods hole medium with 13 µm EDTA
- 19 Woods hole medium without EDTA
- 20 No information on performance of control in similar medium
- 21 EC10 is average of 2 replicate studies
- 22 Silver was tested as active ingredient in the plant protection product Florisant 100
- 23 Dissolved endpoint calculated from difference in recovery between unfiltered and filtered
- 24 Detection limit was 2 µg/L, several concentrations were below LOD
- 25 Daily renewal; 10 replicates per treatment.
- 26 AgGSH = silver glutathionate
- 27 AgCys = silver cysteinate
- 28 Animals were fed immediately after transfer to exposure solutions and after renewal
- 29 Animals were fed 30 min before transfer
- 30 Measured concentration 65 - 100% of nominal
- 31 Not re-evaluated
- 32 Normal flow through conditions
- 33 High flow through conditions
- 34 With synthetic wastewater including meat extract
- 35 humic acid added 10 mg/L
- 36 In the presence of sediment
- 37 The tested metals were added to the collected culture and the bioassay is performed straight thereafter. The time of the assay (exposure time) is unknown
- 38 Endpoint recalculated from nominal endpoint of 0.07 mg/L by difference between nominal and analysed soluble Ag concentrations (6.3%); Effects in nitrifying cultures in batch reactor setup aimed to represent WWTPs instead of surface water
- 39 Strain isolated from contaminated lake
- 40 Laboratory strain
- 41 Not clear whether endpoints refer to measured or nominal, most likely nominal
- 42 Original reference is probably not correct
- 43 Effect on photosynthesis monitored as chlorophyll a content, chlorophyll a fluorescence and visual observation of damage to chloroplasts
- 44 Reported as minimum inhibitory concentration; glycerol as growth substrate
- 45 Reported as minimum inhibitory concentration; glucose or raffinose as growth substrate
- 46 Medium without EDTA
- 47 Sulfide present in the medium
- 48 Geometric mean of two tests NOEC 10.5 and 20 µg/L
- 49 Geometric mean of three tests NOEC 1.6, 8.8 and 3.4 µg/L
- 50 95% confidence interval around LC50 0.99-1.14 mg/L

51 Deemed to be less reliable in the INERIS report because natural water was used and Ag bioavailability might have been much less; original paper reviewed, values based on measured dissolved Ag

52 From the original reference it appeared that these values are sediment concentrations, not water concentrations

53 95% confidence interval around LC50 5.21-6.51 mg/L

54 Analysis after filtration over 0.2 µm filter

55 A layer of quartz sand was added to each test chamber

56 11.1% effect on dry weight was observed at this NOEC.

57 Summary of several tests; no information on test conditions; unit probably wrong, value of 259 ug/L is reported in Rodgers et al., 1997

58 95% confidence interval around LC50 192-371 mg/L

59 Only two concentrations tested with a spacing of two magnitudes; in the experiment with DOC added there was an effect of DOC on survival and growth.

60 At 1.2 ug/L, 25% mortality was reached within 39 d; at 10 ug/L 50% mortality was reached within 5 d

61 NOEC mortality 0.6 ug/L in original reference, NOEC growth < 0.6

62 Original reference contains NOECs, see Davies et al 1978

63 Concentration dissolved organic matter: 1.3 mg/L

64 Original reference contains NOEC, see Guadagnolo et al. 2001

65 Original reference contains NOECs, see Nebeker et al. 1983

66 ELS test

67 No NaCl added 1.8-2.8 mg Cl/L

68 According to ASTM method

69 Maximum loading was 5 g/L

70 NaCl added at 26.9-32.0 mg Cl/L

71 Equivalent to or similar to OECD guideline 210

72 "Key study" in REACH dossier

73 According to ASTM E1241-98 guideline

74 Measured water concentrations of filtered samples equal to unfiltered samples

75 Tested as slurry

76 Embryo-larval test with exposure until 30 days post-hatch

77 Original reference included

78 NaCl added 60 mg Cl/L

79 EC10 value reported in REACH dossier was a recalculation from original data

80 According to ASTM E729-80 guideline

81 According to 7d US EPA guideline, 2002

82 Bacterial colonies counted on TSA plates; only one concentration used

83 Only one concentration tested

84 Larvae from unpolluted source

85 EC10 calculated using data reported by author

86 EC50 does not seem to be correct, since at all concentrations upto the highest concentration (5.6 µg/L) survival was 100%

87 NOM added

88 Sulfide added

89 Medium with EDTA

90 According to ISO standard

91 EC10 calculated via logistic dose-response function using EC20 (2.14 ug/L) and EC50 (2.81 ug/L) reported by author

92 EC10 calculated via logistic dose-response function using EC20 (3.00 ug/L) and EC50 (3.12 ug/L) reported by author

93 EC10 calculated via logistic dose-response function using EC20 (3.31 ug/L) and EC50 (3.54 ug/L) reported by author

94 EC10 calculated via logistic dose-response function using EC20 (2.93 ug/L) and EC50 (3.02 ug/L) reported by author

- 95 EC10 calculated via logistic dose-response function using EC20 (2.54 ug/L) and EC50 (2.79 ug/L) reported by author
- 96 EC10 calculated via logistic dose-response function using EC20 (2.27 ug/L) and EC50 (2.87 ug/L) reported by author
- 97 Effect due to high hardness, not taken up in aggregated data table

Acute toxicity of silver (Ag+) to marine organisms

- Validity according to Klimisch (1997); only records with a validity of 1 or 2 (green) can be used for ERL derivation.
 - Bold records are selected for ERL derivation. These records are (1) valid; (2) based on measured dissolved concentrations of Ag+; (3) performed in water with DOC < 2 mg/L or labwater or filtered natural water or well water; (4) with a pH of 6-9; (5) EC50s/LC50s for acute and NOECs/EC10s for chronic studies.
 - When for a certain species, data for different endpoints are available (e.g., growth, reproduction) the data for the most sensitive endpoint are selected. If there are more data for the same endpoint, the geometric mean is used.

Species	Species properties	Analyzed	Test compound	Purity	Test type	Test water	filtered y/n	pH	Temperature [°C]	Salinity [‰]	DOC mg/L	Exp time	Criterion	Test endpoint	Value total [µg Ag+/L]	Value dissolved [µg Ag+/L]	Value unknow/nominal [µg Ag+/L]	Validity	Notes	Reference
Bacteria																				
<i>Escherichia coli</i>	strain J 53; log phase cells	N	AgNO3		S	am		37	5			20 h	EC50	growth		< 5394	3	1	Gupta et al. 1998	
<i>Escherichia coli</i>	strain J 53; log phase cells	N	AgNO3		S	am		37	10			20 h	EC50	growth		< 5394	3	1	Gupta et al. 1998	
<i>Escherichia coli</i>	strain J 53; log phase cells	N	AgNO3		S	am		37	20			20 h	EC50	growth		< 5394	3	1	Gupta et al. 1998	
<i>Escherichia coli</i>	strain J 53; log phase cells	N	AgNO3		S	am		37	30			20 h	EC50	growth		< 5394	3	1	Gupta et al. 1998	
<i>Vibrio fischeri</i>	microtox assay	N	AgNO3		S	am		6.5-7.5				22 h	EC50	bioluminescence		7,92	3		Hsieh et al. 2004	
Algae																				
<i>Thalassiosira weissflogii</i>	exp. Growth	Y	oxidative dissolution of nano particles	99,7	S	am		8,2	20	35	0	48 h	EC50	growth rate		20,5		2	2	Miao et al 2009
<i>Thalassiosira weissflogii</i>	exp. Growth	Y	oxidative dissolution of nano particles	99,7	S	am		8,2	20	35	0	48 h	EC50	chlorophyll -a		83,1		2	2	Miao et al 2009
<i>Thalassiosira weissflogii</i>	exp. Growth	Y	oxidative dissolution of nano particles	99,7	S	am		8,2	20	35	0	48 h	EC50	photosystem II yield		1294		2	2	Miao et al 2009
Protozoa																				
<i>Lingulodinium polyedra</i>					S	am		19	32			96 h	IC50	luminescence		13		3	3,4	Lapota et al., 2007
Mollusca																				
<i>Argopecten irradians</i>	juveniles; 20-30 mm	N	AgNO3		S	nw	y	20	25			96h	LC50	mortality		33		2	11	Nelson et al., 1976
<i>Argopecten irradians</i>	juveniles; 20-30 mm	N	AgNO3		S	nw	y	20	25			96h	LC5	mortality		14		2	11	Nelson et al., 1976
<i>Argopecten irradians</i>	juveniles; 20-30 mm	N	AgNO3		S	nw	y	20	25			96h	LC25	mortality		22		2	11	Nelson et al., 1976
<i>Crassostrea gigas</i>													LC50	mortality		11,91		4		Coglianesse and Martin, 1981 in Wood et al., 2002
<i>Crassostrea gigas</i>													LC50	mortality		15,1		4		Coglianesse and Martin, 1981 in Wood et al., 2002
<i>Crassostrea gigas</i>													LC50	mortality		19		4		Dinnel et al., 1983 in Wood et al., 2002
<i>Crassostrea gigas</i>													LC50	mortality		11,94		4	26	Coglianesse 1982 in Wood et al. 2002
<i>Crassostrea virginica</i>													LC50	mortality		24,2		4		MacInnes and Calabrese, 1978 in Wood et al., 2002
<i>Crassostrea virginica</i>													LC50	mortality		35,3		4		MacInnes and Calabrese, 1978 in Wood et al., 2002
<i>Crassostrea virginica</i>													LC50	mortality		32,2		4		MacInnes and Calabrese, 1978 in Wood et al., 2002
<i>Crassostrea virginica</i>													LC50	mortality		13		4		Zaroogian, 1981 in Wood et al., 2002
<i>Crassostrea virginica</i>													LC50	mortality		7		4		Zaroogian, 1981 in Wood et al., 2002
<i>Crassostrea virginica</i>													LC50	mortality		3		4		Zaroogian, 1981 in Wood et al., 2002
<i>Crassostrea virginica</i>													LC50	mortality		37		4		Zaroogian, 1981 in Wood et al., 2002
<i>Crassostrea virginica</i>													LC50	mortality		5,8		4	26	Calabrese et al. 1978 in Wood et al 2002

<i>Loligo opalescens</i>	post hatch larvae	Y	AgNO3	S	nw	y	8,1	8,6	30	96 h	LC50	mortality	> 100, < 200	2	9	Dinnel et al. 1989			
<i>Mercenaria mercenaria</i>											LC50	mortality		21	4	26	Calabrese and Nelson 1974 in Wood et al 2002		
<i>Mytilus edulis</i>	15.8 mm	N	AgNO3	R	nw	y	6.9-7.5	20	25	96 h	LC50	mortality		159	2	27	Nelson et al., 1988		
<i>Perna viridis</i>	75 mm; 35 g	N	AgCl	99	R	nw	7,9	28	30	96 h	LC50	mortality		3830	3	11,12,13	Vijayavel, 2009		
<i>Perna viridis</i>	85 g; field collected	N	AgCl	99	R	nw	7	28	31,3	96 h	LC50	mortality		4000	3	11,12,14	Vijayavel et al. 2007 (TEC)		
<i>Perna viridis</i>	6 cm; field collected	N	AgCl2		R	nw	8,2	28	31,3	96 h	LC50	mortality		3830	3	11,12	Vijayavel et al. 2007 (Chemosphere)		
<i>Perna viridis</i>	6 cm; field collected	N	AgCl2		R	nw	8,2	28	31,3	96 h	LOEC	oxygen consumption		2000	3	11,12	Vijayavel et al. 2007 (Chemosphere)		
<i>Perna viridis</i>	6 cm; field collected	N	AgCl2		R	nw	8,2	28	31,3	96 h	NOEC	filtration rate		1000	3	11,12,15	Vijayavel et al. 2007 (Chemosphere)		
<i>Perna viridis</i>											LC50	mortality		30	4		Mathew and Menon, 1983 in Wood et al., 2002		
Annelida																			
<i>Neanthes arenaceodentata</i>																			
											LC50	mortality		151	4		Pesch and Hoffman, 1983 in Wood et al., 2002		
<i>Neanthes arenaceodentata</i>																			
											LC50	mortality		145	4		Pesch and Hoffman, 1983 in Wood et al., 2002		
<i>Neanthes arenaceodentata</i>																			
											LC50	mortality		260	4		Pesch and Hoffman, 1983 in Wood et al., 2002		
Crustacea																			
<i>Acartia sp.</i>																			
				S	nw		7	15		48 h	LC50	mortality		43	3	10	Hook and Fisher 2001		
<i>Acartia clausi</i>																			
											LC50	mortality		13,3	4		Lussier and Cardin, 1985 in Wood et al., 2002		
<i>Acartia tonsa</i>																			
											LC50	mortality		37,8	4		Lussier and Cardin, 1985 in Wood et al., 2002		
<i>Acartia tonsa</i>																			
											LC50	mortality		30,9	4		Schimmel 1981 in Wood et al., 2002		
<i>Acartia tonsa</i>																			
											LC50	mortality		66	4		Schimmel 1981 in Wood et al., 2002		
<i>Acartia tonsa</i>																			
											LC50	mortality		35,8	4		Schimmel 1981 in Wood et al., 2002		
<i>Acartia tonsa</i>																			
											LC50	mortality		23,5	4		Schimmel 1981 in Wood et al., 2002		
<i>Acartia tonsa</i>																			
											LC50	mortality		36,4	4		Schimmel 1981 in Wood et al., 2002		
<i>Acartia tonsa</i>																			
											LC50	mortality		36,3	4		Lussier and Cardin, 1985 in Wood et al., 2002		
<i>Acartia tonsa</i>	adults	Y	AgNO3	ag	R	nw/dtw	y	6,98	20	5	0,6	48 h	LC50	mortality	11,6	7,1	2	27	Pedroso et al., 2007
<i>Acartia tonsa</i>	adults	Y	AgNO3	ag	R	nw/dtw	y	6,98	20	5	0,6	48 h	LC50	mortality	62,1	48,4	3	28	Pedroso et al., 2007
<i>Acartia tonsa</i>	adults	Y	AgNO3	ag	R	nw/dtw	y	7,38	20	15	2	48 h	LC50	mortality	87,2	79,2	2	27	Pedroso et al., 2007
<i>Acartia tonsa</i>	adults	Y	AgNO3	ag	R	nw/dtw	y	7,3	20	15	2,4	48 h	LC50	mortality	98,5	52,3	3	28	Pedroso et al., 2007
<i>Acartia tonsa</i>	adults	Y	AgNO3	ag	R	nw/dtw	y	7,46	20	30	5,1	48 h	LC50	mortality	163,2	154,6	2	27	Pedroso et al., 2007
<i>Acartia tonsa</i>	adults	Y	AgNO3	ag	R	nw/dtw	y	7,51	20	30	5,4	48 h	LC50	mortality	238,4	190,9	3	28	Pedroso et al., 2007
<i>Americamysis bahia</i>	7 days old	Y	AgNO3	99	F	nw	y	7.7-8.2	26-28	20		96 h	LC50	mortality	260		2	5,6	Ward and Kramer 2002
<i>Americamysis bahia</i>	< 24 h	Y	AgNO3	99	F	nw	y	7.7-8.2	26-28	20		96 h	LC50	mortality	280		2	5,6	Ward and Kramer 2002
<i>Americamysis bahia</i>		Y	AgNO3	99	F	nw	y	7.7-8.2	26-28	20		96 h	LC50	mortality	260		2	5,7	Ward and Kramer 2002
<i>Americamysis bahia</i>	24 h	Y	Ag		F	nw	y		22	30		96 h	LC50	mortality	249		2		Lussier et al 1985
<i>Americamysis bahia</i>												LC50	mortality	256	4			Schimmel 1981 in Wood et al., 2002	
<i>Americamysis bahia</i>												LC50	mortality	300	4			Schimmel 1981 in Wood et al., 2002	
<i>Americamysis bahia</i>												LC50	mortality	86	4			Schimmel 1981 in Wood et al., 2002	
<i>Americamysis bahia</i>												LC50	mortality	313	4			Schimmel 1981 in Wood et al., 2002	
<i>Americamysis bahia</i>												LC50	mortality	65	4			Schimmel 1981 in Wood et al., 2002	
<i>Americamysis bahia</i>												LC50	mortality	132	4			Schimmel 1981 in Wood et al., 2002	
<i>Ampelisca abdita</i>		Y	AgNO3		R	nw	y		19	31		10 d	LC50	mortality	20		2	8,9	Berry et al 1999
<i>Cancer magister</i>	zoea	Y	AgNO3		S	nw	y	8,1	8,5	30		96 h	LC50	mortality	33		2	9	Dinnel et al. 1989
<i>Cancer magister</i>	zoeae 48 h	N	AgNO3	ag	S	nw		8,1	15	33,8		96 h	LC50	mortality	55	3	3	Martin et al. 1981	
<i>Crangon spp.</i>	adult, 63 mm	Y	AgNO3		F	nw	y	7,9	13,9	30,1		96 h	LC50	mortality	> 838		2	9	Dinnel et al. 1989
<i>Titriopus brevicornis</i>												LC50	mortality	36,37	4			Menasria and Pavillon, 1994 in Wood et al., 2002	

Pisces																	
<i>Apeltes quadracus</i>													546,6	4		Cardin, 1986 in Wood et al., 2002	
<i>Anguilla anguilla</i>			AgNO3		S					24 h	LC50	mortality	750	4	16,21	Grosell et al. 1998 in Ratte 1999	
<i>Atherinops affinis</i>											LC50	mortality	183	4		Shaw et al., 1998 in Wood et al., 2002	
<i>Cymatogaster aggregata</i>	adult, 101mm	Y	AgNO3		F	nw	y	29,3	13,1	29,3	96 h	LC50	mortality	356	2	9,17	Dinnel et al. 1989
<i>Cymatogaster aggregata</i>	adult									30	96 h	LC50	mortality	356	4*	18,19	Dinnel et al. 1983 in Hogstrand and Wood 1998
<i>Cyprinodon variegatus</i>	juvenile									28	96 h	LC50	mortality	1170	4	19	US EPA 1993 in Hogstrand and Wood 1998
<i>Cyprinodon variegatus</i>											LC50	mortality	1170	4*	20	US-EPA 1980 in Ratte 1999	
<i>Cyprinodon variegatus</i>		Y			S						LC50	mortality	1400	4	19	US-EPA 1980	
<i>Cyprinodon variegatus</i>											LC50	mortality	441	4		Schimmel, 1981 in Wood et al., 2002	
<i>Cyprinodon variegatus</i>											LC50	mortality	898	4		Schimmel, 1981 in Wood et al., 2002	
<i>Cyprinodon variegatus</i>											LC50	mortality	1356	4		Schimmel, 1981 in Wood et al., 2002	
<i>Cyprinodon variegatus</i>											LC50	mortality	1510	4		Schimmel, 1981 in Wood et al., 2002	
<i>Cyprinodon variegatus</i>											LC50	mortality	1876	4		Schimmel, 1981 in Wood et al., 2002	
<i>Cyprinodon variegatus</i>											LC50	mortality	1065	4		Shaw et al., 1998 in Wood et al., 2002	
<i>Fundulus heteroclitus</i>	adult									24	96 h	LC50	mortality	2700	4	19	Dorfmann 1977 in Hogstrand and Wood 1998
<i>Menidia beryllina</i>											LC50	mortality	260	4		Shaw et al., 1998 in Wood et al., 2002	
<i>Menidia menidia</i>											LC50	mortality	110,1	4		Cardin, 1986 in Wood et al., 2002	
<i>Oligocottus maculosus</i>	juvenile, 1.33 g	Y	AgNO3		R	nw	n	7,8	10	32	96 h	LC50	mortality	664	2	9	Shaw et al. 1998
<i>Oligocottus maculosus</i>	juvenile, 1.33 g	Y	AgNO3		R	nw	n	7,8	10	32	168 h	LC50	mortality	472	2	9	Shaw et al. 1998
<i>Oligocottus maculosus</i>	juvenile, 1.33 g	Y	AgNO3		R	nw	n	7,8	10	25	96 h	LC50	mortality	331	2	9	Shaw et al. 1998
<i>Oligocottus maculosus</i>	juvenile, 1.33 g	Y	AgNO3		R	nw	n	7,8	10	25	168 h	LC50	mortality	119	2	9	Shaw et al. 1998
<i>Oligocottus maculosus</i>			AgNO3								96 h	LC50	mortality	664	4*		Shaw et al. 1998 in Ratte 1999
<i>Oligocottus maculosus</i>			AgNO3								168 h	LC50	mortality	472	4*		Shaw et al. 1998 in Ratte 1999
<i>Oligocottus maculosus</i>			AgNO3								96 h	LC50	mortality	331	4*		Shaw et al. 1998 in Ratte 1999
<i>Oligocottus maculosus</i>			AgNO3								168 h	LC50	mortality	119	4*		Shaw et al. 1998 in Ratte 1999
<i>Oligocottus maculosus</i>			AgNO3								96 h	LC50	mortality	1078600	4	16	Shaw et al. 1998 in Ratte 1999
<i>Oligocottus maculosus</i>	juvenile									32	96 h	LC50	mortality	657	4	22	Shaw et al. 1998 in Hogstrand and Wood 1998
<i>Oligocottus maculosus</i>	juvenile									32	168 h	LC50	mortality	472	4*		Shaw et al. 1998 in Hogstrand and Wood 1998
<i>Oligocottus maculosus</i>	juvenile									25	96 h	LC50	mortality	330	4	22	Shaw et al. 1998 in Hogstrand and Wood 1998
<i>Oligocottus maculosus</i>	juvenile									25	168 h	LC50	mortality	119	4*		Shaw et al. 1998 in Hogstrand and Wood 1998
<i>Oncorhynchus kisutch</i>	smolt, 131 mm	Y	AgNO3		F	nw	y	7,8	11,5	28,6	96 h	LC50	mortality	488	2	9	Dinnel et al. 1989
<i>Oncorhynchus mykiss</i>	smolt									30	96 h	LC50	mortality	487	4	19,23	Dinnel et al. 1983 in Hogstrand and Wood 1998
<i>Oncorhynchus mykiss</i>	25 g	N	AgNO3		S	am		8.1-8.2	14	25	96 h	LC50	mortality	401,5	3	24	Ferguson and Hogstrand 1998
<i>Oncorhynchus mykiss</i>	1-4 g		AgNO3		R	dtw		7.9-8.2	15	2,9	168 h	LC50	mortality	>1000000	2	9,25	Hogstrand et al. 1996
<i>Paralichthys dentatus</i>	larva	N									LC50	mortality	4,7	4		EPA 1980	
<i>Paralichthys dentatus</i>	embryo, larvae		Ag+								LOEC		4,7	4*		EPA 1980 in Ratte, 1999	
<i>Paralichthys dentatus</i>											LC50	mortality	47,7	4		Cardin, 1986 in Wood et al., 2002	
<i>Paralichthys dentatus</i>											LC50	mortality	8	4		Cardin, 1986 in Wood et al., 2002	
<i>Paralichthys dentatus</i>											LC50	mortality	15,5	4		Cardin, 1986 in Wood et al., 2002	
<i>Paralichthys dentatus</i>											LC50	mortality	565,0	4		Shaw et al., 1998 in Wood et al., 2002	
<i>Parophrys vetulus</i>	adult									30	96 h	LC50	mortality	800	4	19	Dinnel et al. 1983 in Hogstrand and Wood 1998
<i>Parophrys vetulus</i>											LC50	mortality	800	4		Dinnel et al., 1983 in Wood et al., 2002	
<i>Pseudopleuronectes americanus</i>											LC50	mortality	196,3	4		Cardin, 1986 in Wood et al., 2002	
<i>Scorpaenichthys marmoratus</i>	post hatch larvae	Y	AgNO3		S	nw	y	7,9	8,3	27	96 h	LC50	mortality	> 800	2	9	Dinnel et al. 1989
<i>Tautoglabrus adspersus</i>	141-177 mm	N	AgNO3		S			7.3-7.6	20	24	96 h	EC50	respiration	> 500	3	3	Thurberg and Collier 1977

Notes with acute marine toxicity table

- 1 Growth performed in Luria-Bertani broth
- 2 Ag⁺ from oxidative dissolution of nano-particles, which were filtrated out of the water. Results given as total dissolved Ag⁺; free Ag⁺ can be calculated by dividing result by 185366.
- 3 Test concentration not measured
- 4 Exposure in plastic
- 5 Mean measured concentrations within 20% of nominal
- 6 Value obtained in 7-days experiment
- 7 Value obtained in 28-days experiment
- 8 Mean measured concentrations >80% of nominal
- 9 Endpoint based on measured concentrations
- 10 Test performed with *Acartia tonsa* and *Acartia hudsonica* together
- 11 Endpoint based on nominal concentrations
- 12 Water not filtered
- 13 35 g biomass/L
- 14 85 g biomass/L
- 15 NOEC = LOEC/2 (20% effect)
- 16 Value could not be reproduced from original paper
- 17 Most likely same study as cited from Dinnel et al., 1983
- 18 Probably same study as described in Dinnel et al., 1989
- 19 Original reference not available
- 20
- 21 Species of the test compound unknown, it is presumed that the envalue given is for Ag⁺
- 22 Cited value refers to soft freshwater
- 23 Value differs slightly from endpoint in original paper
- 24 Refers probably to same study as reported in Dinnel et al., 1989, both Coho salmon
- 25 Initial water concentration was measured, result not reported
- 26 Test medium prepared as 50 mM NaCl solution
- 27 Original reference evaluated and results taken up in chronic data table
- 28 Organisms were not fed during the test
- 29 Organisms were fed during the test

Chronic toxicity of silver (7440-22-4) to marine organisms

- Validity according to Klimisch (1997); only records with a validity of 1 or 2 (green) can be used for ERL derivation.
 - Bold records are selected for ERL derivation. These records are (1) valid; (2) based on measured dissolved concentrations of Ag⁺; (3) performed in water with DOC < 2 mg/L or labwater or filtered natural water or well water; (4) with a pH of 6-9; (5) EC50s/LC50s for acute and NOECs/EC10s for chronic studies.
 - When for a certain species, data for different endpoints are available (e.g., growth, reproduction) the data for the most sensitive endpoint are selected. If there are more data for the same endpoint, the geometric mean is used.

Species	Species properties	Analyzed	Test compo. Purity [%]	Test type	Test water	filtered y/n	pH	Temperatu [°C]	Salinity [‰]	DOC mg/L	Exp time	Criterion	Test endpoint	Value total [µg Ag+/L]	Value dissolved [µg Ag+/L]	Value unknown/nominal [µg Ag+/L]	Validity	Notes	Reference
Bacteria																			
<i>Escherichia coli</i>	strain J 53; log phase cells	N	AgNO3	S	am			37	5		20 h	NOEC	growth		< 5394		3	1	Gupta et al. 1998
<i>Escherichia coli</i>	strain J 53; log phase cells	N	AgNO3	S	am			37	10		20 h	NOEC	growth		< 5394		3	1	Gupta et al. 1998
<i>Escherichia coli</i>	strain J 53; log phase cells	N	AgNO3	S	am			37	20		20 h	NOEC	growth		< 5394		3	1	Gupta et al. 1998
<i>Escherichia coli</i>	strain J 53; log phase cells	N	AgNO3	S	am			37	30		20 h	NOEC	growth		< 5394		3	1	Gupta et al. 1998
<i>Vibrio fischeri</i>	microtox assay	N	AgNO3	S	am			15	20		2 h	NOEC	bioluminescence		108		3		Deheyn et al. 2004
<i>Vibrio fischeri</i>	wild type	N	AgNO3	S	am			22	20		9 h	NOEC	bioluminescence		10,8		3		Deheyn et al. 2004
<i>Vibrio fischeri</i>	microtox assay	N	AgNO3	S	am		6.5-7.5				22 h	NOEC	bioluminescence		5,61		3		Hsieh et al. 2004
Algae																			
<i>Champia parvula</i>	fronds	Y	AgNO3	R	nw			20-22	30		14 d	NOEC	production of cystocarps	1,2			4?	23	Steele and Thursby 1983 in REACH dossier
<i>Champia parvula</i>	fronds	Y	AgNO3	R	nw			20-22	30		14 d	NOEC	growth rate	1,9			4?	23	Steele and Thursby 1983 in REACH dossier
<i>Gymnodium sp.</i>			Ag+ oxidative dissolution of nano particles								48 h	NOEC				2-10	4	2	Wilson and Freeberg 1980 in Ratte 1999
<i>Thalassiosira weissflogii</i>	exp. Growth	Y	Ag+ oxidative dissolution of nano particles	S	am		8,2	20	35	0	48 h	NOEC	growth rate	4,9			2	3	Miao et al 2009
<i>Thalassiosira weissflogii</i>	exp. Growth	Y	Ag+ oxidative dissolution of nano particles	S	am		8,2	20	35	0	48 h	NOEC	chlorophyll-a	4,9			2	3	Miao et al 2009
Mollusca																			
<i>Crassostrea gigas</i>	10 months	N	AgNO3	R	nw				35		28 d	NOEC	mortality		20		3	4	Metayer et al., 1990
<i>Crassostrea gigas</i>	10 months	N	AgNO3	R	nw				35		28 d	NOEC	mortality		20		3*		Metayer et al., 1990 in Van der Plassche et al 1999
<i>Crassostrea gigas</i>	embryo, larvae	N	Ag+									LOEC		14			4	2	Dinnel et al 1983 in Ratte, 1999
<i>Crassostrea gigas</i>	embryo	Y	AgNO3	S	nw		8,2	20	16,5		48 h	NOEC	embryonic development	5,6			3	5,6	Coglianesse 1982
<i>Crassostrea gigas</i>	embryo	Y	AgNO3	S	nw		8,2	20	22,7		48 h	NOEC	embryonic development	10			3	5,6	Coglianesse 1982
<i>Crassostrea gigas</i>	embryo	Y	AgNO3	S	nw		8,2	20	33		48 h	NOEC	embryonic development	≥ 18			3	5,6	Coglianesse 1982
<i>Crassostrea gigas</i>	embryo	N	AgNO3	ag	S	nw	8,1	20	33,8		48 h	EC50	embryonic development	22			3	4	Martin et al. 1981
<i>Crassostrea gigas</i>	embryo	N	AgNO3	rg	S	nw	y	8,2	20	33	48 h	EC50	embryonic development	13,3			3	4,6, 24	Coglianesse and Martin, 1981

<i>Crassostrea gigas</i>	embryo	N	AgNO3	rg	S	nw	y	8,2	20	33	48 h	EC10	embryonic development		10,4	3	4,6, 24	Coglianesse and Martin, 1981
<i>Crassostrea gigas</i>	embryo	N	AgNO3	rg	S	nw	y	8,2	20	33	48 h	EC50	embryonic development		15,7	3	4,6, 24	Coglianesse and Martin, 1981
<i>Crassostrea gigas</i>	embryo	N	AgNO3	rg	S	nw	y	8,2	20	33	48 h	EC10	embryonic development		13,3	3	4,6, 24	Coglianesse and Martin, 1981
<i>Crassostrea rhizophora</i>	1 h old embryos	N	AgNO3	rg	S	nw		7.0-8.5	27	28	24 h	NOEC	embryonic development		0,927	4	7	Da Cruz et al, 2007
<i>Crassostrea virginica</i>	larvae	N	AgNO3		R	nw		7.0-8.5	25	24	12 d	LC50	mortality		25	3	4	Calabrese et al. 1977
<i>Crassostrea virginica</i>	larvae	N	AgNO3		R	nw		7.0-8.5	25	24	12 d	LC5	mortality		14,2	3	4	Calabrese et al. 1977
<i>Crassostrea virginica</i>	embryo	N	AgNO3		S	am	n.a.	7.0-8.5	26	25	42-48 h	LC50	mortality		5,8	3	4	Calabrese et al. 1973
<i>Crassostrea virginica</i>	embryo		AgNO3									LC50	mortality		5,8	3*		Calabrese et al. 1973 in Calabrese et al. 1977
<i>Crassostrea virginica</i>	larvae		AgNO3									LC50			25	4*		Calabrese et al. 1977 in Ratte 1999
<i>Crassostrea virginica</i>	embryo		Ag+								48 h	LC50			6	4*		Calabrese et al. 1977 in Ratte 1999
<i>Crepidula fornicata</i>	24 mo		Ag+									LOEC	larvae release		10	4	2	Nelson et al 1983 in Ratte, 1999
<i>Crepidula fornicata</i>	mated pairs	Y			F	nw		4.5-25	25		2 years	NOEC	reproduction	5		4*	22	Nelson et al., 1983 in REACH dossier (aangevraagd)
<i>Crepidula fornicata</i>	mated pairs	Y	AgNO3		F	nw	y	4.5-25	25		2 years	NOEC	reproduction (abortions)	1,34		2	22,25	Nelson et al., 1983
<i>Ilyanassa obsoleta</i>	embryo	N	AgNO3			nw		8	12-18		2.5 h	NOEC	embryonic development		0,0001	3		Conrad 1988
<i>Ilyanassa obsoleta</i>	embryo		Ag+									LOEC	embryonic development		< 1	4	8	Conrad 1988 in Ratte, 1999
<i>Mercenaria mercenaria</i>	larvae	N	AgNO3		R	nw		7.0-8.5	25	24	8-10 d	LC50	mortality		32,4	3	4	Calabrese et al. 1977
<i>Mercenaria mercenaria</i>	larvae	N	AgNO3		R	nw		7.0-8.5	25	24	8-10 d	LC5	mortality		18,6	3	4	Calabrese et al. 1977
<i>Mercenaria mercenaria</i>	larvae		AgNO3									LC50			32	4*		Calabrese et al. 1977 in Ratte 1999
<i>Mercenaria mercenaria</i>	embryo		AgNO3		S	am		7.0-8.5	26	25	42-48 h	LC50	mortality		21	3	4	Calabrese and Nelson 1974
<i>Mercenaria mercenaria</i>	embryo		AgNO3									LC50	mortality		21	3*		Calabrese and Nelson 1974 in Calabrese et al. 1977
<i>Mytilus edulis</i>	2.5 months, 4.5 mm	Y	AgNO3		F	nw		2.6-24.0	25		21 m	NOEC	growth		≥ 10	4	5,6	Calabrese et al. 1984
<i>Mytilus edulis</i>	field collected juvenile	Y	AgNO3		F	nw		2.4-22.8	25		12 m	NOEC	growth		25	4	5,6	Calabrese et al. 1984
<i>Mytilus edulis</i>	juvenile	Y	AgNO3		F	nw		-	25		6 m	NOEC	growth		25	4*		Calabrese et al., 1984 in Van der Plassche et al 1999
<i>Mytilus edulis</i>	embryo		Ag+								72 h	LOEC			< 4	4	2	Dinnel et al 1983 in Ratte, 1999
<i>Mytilus edulis</i>	embryo	N	AgNO3	ag	S	nw		8,1	17	33,8	48 h	EC50	embryonic development		14	3	4	Martin et al. 1981
<i>Mytilus galloprovincialis</i>	3 year	N	AgNO3		R	nw		-		35	28 d	NOEC	mortality		20	3	4	Metayer et al., 1990
<i>Mytilus galloprovincialis</i>	3 year	N	AgNO3		R	nw		-		35	28 d	NOEC	mortality		20	3*		Metayer et al., 1990 in Van der Plassche et al 1999
<i>Spisula solidissima</i>	embryo, 4 h	Y	AgNO3	ag	S	nw	y	7,6	20	32,5	1 h	NOEC	development	< 8		2	6,9	Zoto and Robinson 1985
<i>Spisula solidissima</i>	embryo, 4 h	Y	AgNO3	ag	S	nw	y	7,6	20	32,5	1 h	EC50	development	18		2	6,9	Zoto and Robinson 1985
<i>Spisula solidissima</i>	embryo, 1 h	Y	AgNO3	ag	S	nw	y	7,6	20	32,5	48 h	NOEC	development	< 4		2		Zoto and Robinson 1985
<i>Spisula solidissima</i>	embryo, 1 h	Y	AgNO3	ag	S	nw	y	7,6	20	32,5	48 h	EC50	development	14		2		Zoto and Robinson 1985
<i>Spisula solidissima</i>	embryo		Ag+								1 h	EC50			14	4*		Zoto and Robinson 1985 in Ratte 1999
<i>Spisula solidissima</i>	gametes										45 min	EC50			6	4	10	Zoto and Robinson 1985 in Ratte 1999
<i>Spisula solidissima</i>	eggs	N	AgNO3		F	nw		8	20	30	45 min	NOEC	larval development		9,5	3	4	Eyster and Morse 1984
<i>Spisula solidissima</i>	sperm	N	AgNO3		F	nw		8	20	30	45 min	NOEC	larval development		9,5	3	4	Eyster and Morse 1984
<i>Spisula solidissima</i>	eggs and sperm	N	AgNO3		F	nw		8	20	30	45 min	NOEC	larval development		0,6	3	4	Eyster and Morse 1984
<i>Spisula solidissima</i>	embryo, 24 h	N	AgNO3		F	nw		8	20	30	47 h	NOEC	larval development		9,5	3	4	Eyster and Morse 1984
<i>Spisula solidissima</i>	fertilized eggs	N	AgNO3		F	nw		8	20	30	48 h	NOEC	larval development		<9.5	3	4	Eyster and Morse 1984

Crustacea																		
<i>Americamysis bahia</i>		Y	AgNO3	rg	F	nw	y		31	28 d	NOEC	reproduction	33	2	11	Breteler et al 1982		
<i>Americamysis bahia</i>		Y	AgNO3	rg	F	nw	y		31	28 d	NOEC	survival	70	2	11	Breteler et al 1982		
<i>Americamysis bahia</i>	24 h	Y	Ag		F	nw	y	22	30	38 d	NOEC	reproduction	11	2	11	Lussier et al 1985		
<i>Americamysis bahia</i>			AgNO3							38 d	NOEC	reproduction	11	4*		Lussier et al., 1985 in INERIS, 2006		
<i>Americamysis bahia</i>			AgNO3					15-30			NOEC		9	4	2	en Stoffdatenblatt, 2009		
<i>Americamysis bahia</i>			AgNO3					20			NOEC		11	4	2	McKenney 1982 in Ward and		
<i>Americamysis bahia</i>			AgNO3					15-30			NOEC		14	4	2	McKenney 1982 in Ward and		
<i>Americamysis bahia</i>			AgNO3					15-30			NOEC		30	4	2	Kramer 2003		
<i>Americamysis bahia</i>			AgNO3					15-30			NOEC		70	4	2	McKenney 1982 in Ward and		
<i>Americamysis bahia</i>	< 24 h	Y	AgNO3		F					28 d	NOEC	reproduction	5,715	3	5,6	McKenney 1982 in Ward and		
<i>Americamysis bahia</i>	< 24 h	Y	AgNO3		F					28 d	NOEC	mortality	40	3	5,6	Kramer 2005		
<i>Americamysis bahia</i>	7 days old	Y	AgNO3	99	F	nw	y	7.7-8.2	26-28	20	7 d	NOEC	development; growth	65	2	12	McKenney 2006	
<i>Americamysis bahia</i>	7 days old	Y	AgNO3	99	F	nw	y	7.7-8.2	26-28	20	7 d	EC10	development	75,9	2	12,26	Raimondo and McKenney, 2006	
<i>Americamysis bahia</i>	7 days old	Y	AgNO3	99	F	nw	y	7.7-8.2	26-28	20	7 d	EC10	reproduction	78,9	2	12,26	Ward and Kramer 2002	
<i>Americamysis bahia</i>	< 24 h	Y	AgNO3	99	F	nw	y	7.7-8.2	26-28	20	7 d	NOEC	growth	38	2	12	Ward and Kramer 2002	
<i>Americamysis bahia</i>	< 24 h	Y	AgNO3	99	F	nw	y	7.7-8.2	26-28	20	7 d	EC10	mortality	140	2	12,26	Ward and Kramer 2002	
<i>Americamysis bahia</i>	< 24 h	Y	AgNO3	99	F	nw	y	7.7-8.2	26-28	20	7 d	EC10	development	68,7	2	12,26	Ward and Kramer 2002	
<i>Americamysis bahia</i>	< 24 h	Y	AgNO3	99	F	nw	y	7.7-8.2	26-28	20	7 d	EC10	growth	55,6	2	12,26	Ward and Kramer 2002	
<i>Americamysis bahia</i>		Y	AgNO3	99	F	nw	y	7.7-8.2	26-28	20	28 d	NOEC	mortality; growth	34	2	12	Ward and Kramer 2002	
<i>Americamysis bahia</i>		Y	AgNO3	99	F	nw	y	7.7-8.2	26-28	20	28 d	EC10	mortality	45,4	2	12,26	Ward and Kramer 2002	
<i>Americamysis bahia</i>	males	Y	AgNO3	99	F	nw	y	7.7-8.2	26-28	20	28 d	EC10	growth (length)	17,6	2	12,26	Ward and Kramer 2002	
<i>Americamysis bahia</i>	females	Y	AgNO3	99	F	nw	y	7.7-8.2	26-28	20	28 d	EC10	growth (weight)	41,3	2	12,26	Ward and Kramer 2002	
<i>Americamysis bahia</i>	7 d	Y	AgNO3	>99.9	F	nw	y	7.6-8.2	26-28	10	0.28-0.43	28 d	NOEC	mortality	6	1	11	Ward et al 2006 (ETC 25: 1809)
<i>Americamysis bahia</i>	7 d	Y	AgNO3	>99.9	F	nw	y	7.6-8.2	26-28	10	0.28-0.43	28 d	NOEC	reproduction	6	1	11	Ward et al 2006 (ETC 25: 1809)
<i>Americamysis bahia</i>	7 d	Y	AgNO3	>99.9	F	nw	y	7.6-8.2	26-28	10	0.28-0.43	28 d	NOEC	growth	13	1	11,13	Ward et al 2006 (ETC 25: 1809)
<i>Americamysis bahia</i>	7 d	Y	AgNO3	>99.9	F	nw	y	7.6-8.2	26-28	10	0.28-0.43	28 d	EC10	mortality	4,2	1	11,26	Ward et al 2006 (ETC 25: 1809)
<i>Americamysis bahia</i>	7 d	Y	AgNO3	>99.9	F	nw	y	7.6-8.2	26-28	10	0.28-0.43	28 d	EC10	reproduction	3	1	11,26	Ward et al 2006 (ETC 25: 1809)
<i>Americamysis bahia</i>	7 d	Y	AgNO3	>99.9	F	nw	y	7.6-8.2	26-28	20	0.57-0.86	28 d	NOEC	mortality	34	1	11	Ward et al 2006 (ETC 25: 1809)
<i>Americamysis bahia</i>	7 d	Y	AgNO3	>99.9	F	nw	y	7.6-8.2	26-28	20	0.57-0.86	28 d	NOEC	reproduction	60	1	11,13	Ward et al 2006 (ETC 25: 1809)
<i>Americamysis bahia</i>	7 d	Y	AgNO3	>99.9	F	nw	y	7.6-8.2	26-28	20	0.57-0.86	28 d	NOEC	growth	34	1	11	Ward et al 2006 (ETC 25: 1809)
<i>Americamysis bahia</i>	7 d	Y	AgNO3	>99.9	F	nw	y	7.6-8.2	26-28	20	0.57-0.86	28 d	EC10	mortality	51,2	1	11,26	Ward et al 2006 (ETC 25: 1809)
<i>Americamysis bahia</i>	7 d, males	Y	AgNO3	>99.9	F	nw	y	7.6-8.2	26-28	20	0.57-0.86	28 d	EC10	growth	18,4	1	11,26	Ward et al 2006 (ETC 25: 1809)
<i>Americamysis bahia</i>	7 d	Y	AgNO3	>99.9	F	nw	y	7.6-8.2	26-28	30	0.86-1.29	28 d	NOEC	mortality	19	1	11	Ward et al 2006 (ETC 25: 1809)
<i>Americamysis bahia</i>	7 d	Y	AgNO3	>99.9	F	nw	y	7.6-8.2	26-28	30	0.86-1.29	28 d	NOEC	reproduction	37	1	11	Ward et al 2006 (ETC 25: 1809)
<i>Americamysis bahia</i>	7 d	Y	AgNO3	>99.9	F	nw	y	7.6-8.2	26-28	30	0.86-1.29	28 d	NOEC	growth	72	1	11,13	Ward et al 2006 (ETC 25: 1809)
<i>Americamysis bahia</i>	7 d	Y	AgNO3	>99.9	F	nw	y	7.6-8.2	26-28	30	0.86-1.29	28 d	EC10	mortality	21,3	1	11,26	Ward et al 2006 (ETC 25: 1809)
<i>Americamysis bahia</i>	7 d	Y	AgNO3	>99.9	F	nw	y	7.6-8.2	26-28	30	0.86-1.29	28 d	EC10	reproduction	27,8	1	11,26	Ward et al 2006 (ETC 25: 1809)
<i>Americamysis bahia</i>	<24h	Y	AgNO3	>99.9	F	nw	y	7.6-8.2	26-28	10	0.28-0.43	7 d	NOEC	growth	5,3	1	11	Ward et al 2006 (ETC 25: 1809)
<i>Americamysis bahia</i>	<24h	Y	AgNO3	>99.9	F	nw	y	7.6-8.2	26-28	20	0.57-0.86	7 d	NOEC	growth	38	1	11	Ward et al 2006 (ETC 25: 1809)
<i>Americamysis bahia</i>	<24h	Y	AgNO3	>99.9	F	nw	y	7.6-8.2	26-28	30	0.86-1.29	7 d	NOEC	growth	64	1	11	Ward et al 2006 (ETC 25: 1809)
<i>Scylla serrata</i>	sperm	N				am		9	22		EC50	acrosome reaction	1,96	3	4	Zhang et al 2010		

<i>Scylla serrata</i>	sperm	N			am		9	22				NOEC	acrosome reaction	< 0.56	3	4	Zhang et al 2010	
Echinodermata																		
<i>Arbacia lixula</i>	embryo		Ag+									LOEC		0,5	4	2	Soyer 1963 in Ratte, 1999	
<i>Arbacia punctulata</i>	sperm and eggs	Y	AgNO3	>99.9	S	nw	y	6.9-8.1	19.4-21.9	29	0.86-1.29	1 h	NOEC	fertilization	9,3	1	11,12,14	Ward et al 2006 (ETC 25: 1568)
<i>Arbacia punctulata</i>	sperm and eggs	Y	AgNO3	>99.9	S	nw	y	6.9-8.1	19.4-21.9	29	0.86-1.29	1 h	EC10	fertilization	8,9	1	11,12,26	Ward et al 2006 (ETC 25: 1568)
<i>Arbacia punctulata</i>	< 4 h eggs	Y	AgNO3	>99.9	S	nw	y	6.9-8.1	19.4-21.9	29	0.86-1.29	48 h	NOEC	development	9,3	1	11,12,14	Ward et al 2006 (ETC 25: 1568)
<i>Arbacia punctulata</i>	< 4 h eggs	Y	AgNO3	>99.9	S	nw	y	6.9-8.1	19.4-21.9	29	0.86-1.29	48 h	EC10	development	20,1	1	11,12,26	Ward et al 2006 (ETC 25: 1568)
<i>Arbacia punctulata</i>	adults	Y	AgNO3	>99.9	F	nw	y	6.9-8.1	13.9-16.5	29	0.86-1.29	30 d	NOEC	mortality	19	1	11,12,14	Ward et al 2006 (ETC 25: 1568)
<i>Arbacia punctulata</i>	adults	Y	AgNO3	>99.9	F	nw	y	6.9-8.1	13.9-16.5	29	0.86-1.29	30 d	NOEC	loss of spines; spine turgor; inability to adhere to surfaces	8,6	1	11,12,15	Ward et al 2006 (ETC 25: 1568)
<i>Arbacia punctulata</i>	adults	Y	AgNO3	>99.9	F	nw	y	6.9-8.1	13.9-16.5	29	0.86-1.29	30 d	NOEC	growth	19	1	11,12,14	Ward et al 2006 (ETC 25: 1568)
<i>Dendraster excentricus</i>	sperm/eggs	Y	AgNO3			nw	y	7.8-8.1		30		80 min	EC50	fertilization	54	2	11	Dinnel et al 1989
<i>Dendraster excentricus</i>	sperm												EC50		54	4*		Dinnel et al 1989 in Zhang et al 2010
<i>Dendraster excentricus</i>	freshly fertilized eggs	Y	AgNO3		S	nw	y	8.0-8.1	12.5-13.0	30		120 h	EC50	mortality	33	2	11	Dinnel et al 1989
<i>Strongylocentrotus droebachiensis</i>	freshly fertilized eggs	Y	AgNO3		S	nw	y	7.8-8.1	8.2-8.4	30		120 h	EC50	mortality	24	2	11	Dinnel et al 1989
<i>Strongylocentrotus purpuratus</i>	freshly fertilized eggs	Y	AgNO3		S	nw	y	7.8-8.1	8.2-8.4	30		120 h	EC50	mortality	15	2	11	Dinnel et al 1989
<i>Strongylocentrotus droebachiensis</i>	sperm/eggs	Y	AgNO3			nw	y	7.8-8.1		30		80 min	EC50	fertilization	86	2	11	Dinnel et al 1989
<i>Strongylocentrotus franciscanus</i>	sperm/eggs	Y	AgNO3			nw	y	7.8-8.1		30		80 min	EC50	fertilization	112	2	11	Dinnel et al 1989
<i>Strongylocentrotus purpuratus</i>	sperm/eggs	Y	AgNO3			nw	y	7.8-8.1		30		80 min	EC50	fertilization	115	2	11	Dinnel et al 1989
<i>Strongylocentrotus droebachiensis</i>	sperm												EC50		86	4*		Dinnel et al 1989 in Zhang et al 2010
<i>Strongylocentrotus franciscanus</i>	sperm												EC50		112	4*		Dinnel et al 1989 in Zhang et al 2010
<i>Strongylocentrotus purpuratus</i>	sperm												EC50		115	4*		Dinnel et al 1989 in Zhang et al 2010
<i>Paracentrotus lividus</i>	sperm	N	AgNO3		S	nw		19		38		30 min	NOEC	fertilization	108	3	4	Warnau et al. 1996
<i>Paracentrotus lividus</i>	sperm	N	AgNO3		S	nw		19		38		75 min	NOEC	fertilization	10,8	3	4	Warnau et al. 1996
<i>Paracentrotus lividus</i>	embryo	N	AgNO3		S	nw		19		38		72 h	NOEC	mortality	81	3	4	Warnau et al. 1996
<i>Paracentrotus lividus</i>	embryo	N	AgNO3		S	nw		19		38		72 h	NOEC	development	11	3	4	Warnau et al. 1996
<i>Paracentrotus lividus</i>			AgNO3									72 h	NOEC	growth	16,9	4	16	Warnau et al., 1996 in INERIS, 2006

Pisces																		
<i>Menidia beryllina</i>	embryos	Y	AgNO3	>99.9	F	nw	y	7.6-8.2	23.1-27.0	10	0.28-0.43	28 d	NOEC	mortality	26	1	11,17	Ward et al 2006 (ETC 25: 1809)
<i>Menidia beryllina</i>	embryos	Y	AgNO3	>99.9	F	nw	y	7.6-8.2	23.1-27.0	10	0.28-0.43	28 d	NOEC	growth	26	1	11,17	Ward et al 2006 (ETC 25: 1809)
<i>Menidia beryllina</i>	embryos	Y	AgNO3	>99.9	F	nw	y	7.6-8.2	23.1-27.0	10	0.28-0.43	28 d	EC10	mortality at hatch	25	1	11,26	Ward et al 2006 (ETC 25: 1809)
<i>Menidia beryllina</i>	embryos	Y	AgNO3	>99.9	F	nw	y	7.6-8.2	23.1-27.0	10	0.28-0.43	28 d	EC10	mortality after 28 days	27,5	1	11,26	Ward et al 2006 (ETC 25: 1809)
<i>Menidia beryllina</i>	embryos	Y	AgNO3	>99.9	F	nw	y	7.6-8.2	23.1-27.0	20	0.57-0.86	28 d	NOEC	mortality	49	1	11,18	Ward et al 2006 (ETC 25: 1809)
<i>Menidia beryllina</i>	embryos	Y	AgNO3	>99.9	F	nw	y	7.6-8.2	23.1-27.0	20	0.57-0.86	28 d	NOEC	growth	49	1	11,18	Ward et al 2006 (ETC 25: 1809)
<i>Menidia beryllina</i>	embryos	Y	AgNO3	>99.9	F	nw	y	7.6-8.2	23.1-27.0	20	0.57-0.86	28 d	EC10	mortality after 28 days	71	1	11,26	Ward et al 2006 (ETC 25: 1809)
<i>Menidia beryllina</i>	embryos	Y	AgNO3	>99.9	F	nw	y	7.6-8.2	23.1-27.0	20	0.57-0.86	28 d	EC10	growth (wet weight)	14,2	1	11,26	Ward et al 2006 (ETC 25: 1809)
<i>Menidia beryllina</i>	embryos	Y	AgNO3	>99.9	F	nw	y	7.6-8.2	23.1-27.0	20	0.57-0.86	28 d	EC10	growth (dry weight)	17,4	1	11,26	Ward et al 2006 (ETC 25: 1809)
<i>Menidia beryllina</i>	embryos	Y	AgNO3	>99.9	F	nw	y	7.6-8.2	23.1-27.0	30	0.86-1.29	28 d	NOEC	mortality	130	1	11,19	Ward et al 2006 (ETC 25: 1809)
<i>Menidia beryllina</i>	embryos	Y	AgNO3	>99.9	F	nw	y	7.6-8.2	23.1-27.0	30	0.86-1.29	28 d	NOEC	growth	130	1	11,19	Ward et al 2006 (ETC 25: 1809)
<i>Menidia beryllina</i>	embryos	Y	AgNO3	>99.9	F	nw	y	7.6-8.2	23.1-27.0	30	0.86-1.29	28 d	EC10	mortality after 28 days	144	1	11,26	Ward et al 2006 (ETC 25: 1809)
<i>Menidia beryllina</i>	embryos	Y	AgNO3	>99.9	F	nw	y	7.6-8.2	23.1-27.0	10	0.28-0.43	7 d	NOEC	mortality or growth	19	1	11	Ward et al 2006 (ETC 25: 1809)
<i>Menidia beryllina</i>	embryos	Y	AgNO3	>99.9	F	nw	y	7.6-8.2	23.1-27.0	20	0.57-0.86	7 d	NOEC	mortality or growth	100	1	11	Ward et al 2006 (ETC 25: 1809)
<i>Menidia beryllina</i>	embryos	Y	AgNO3	>99.9	F	nw	y	7.6-8.2	23.1-27.0	30	0.86-1.29	7 d	NOEC	mortality or growth	460	1	11	Ward et al 2006 (ETC 25: 1809)
<i>Paralichthys dentatus</i>	embryo, larvae		Ag+										LOEC		5-8	4	2,20	Luoma et al 1995
<i>Paralichthys dentatus</i>	embryo, larvae		Ag+										LOEC		5-8	4*		Luoma et al 1995 in Ratte, 1999
<i>Pseudopleuronectes americanus</i>	embryos	Y	AgNO3		F	nw	y		7	30		18 d	NOEC	time to hatch	54	2		Klein-MacPhee et al. 1984
<i>Pseudopleuronectes americanus</i>	embryos	Y	AgNO3		F	nw	y		7	30		18 d	NOEC	viability	54	2		Klein-MacPhee et al. 1984
<i>Pseudopleuronectes americanus</i>															54	4*	21	Hogstrand and Wood, 1998 in Van der Plassche et al 1999
<i>Pseudopleuronectes americanus</i>	larvae												NOEC	hatching	54	4*		Klein-MacPhee et al. 1984 in Hogstrand and Wood 1998
<i>Pseudopleuronectes americanus</i>	embryos	Y	AgNO3		S	nw + dw	y		8,7	10			NOEC	hatching	>174	2	11	Voyer et al. 1982
<i>Pseudopleuronectes americanus</i>	embryos	Y	AgNO3		S	nw + dw	y		8,7	21			NOEC	hatching	> 167	2	11	Voyer et al. 1982
<i>Pseudopleuronectes americanus</i>	embryos	Y	AgNO3		S	nw	y		8,7	32			NOEC	hatching	> 166	2	11	Voyer et al. 1982

Notes with chronic marine toxicity table

- 1 Growth performed in Luria-Bertani broth
- 2 Original reference not available
- 3 Ag⁺ from oxidative dissolution of nano-particles, which were filtrated out of the water.
Results given as total dissolved Ag⁺; free Ag⁺ can be calculated by dividing result by 185366
- 4 Test concentration not measured
- 5 Results of analysis not reported
- 6 Endpoints based on nominal concentrations
- 7 Embryonic development test; results do not seem to be correct since the LOEC is a factor of 100 below the lowest test concentration
- 8 Unit probably wrong
- 9 Measured concentration within 25% of nominal concentration
- 10 Value probably refers to citation
- 11 Endpoints based on measured concentrations
- 12 Measured concentration within 20% of nominal concentration
- 13 No proper fit for calculation of EC10 from data in table
- 14 Corresponding calculated free ionic silver 0.0004 µg/L
- 15 Corresponding calculated free ionic silver 0.00031 µg/L
- 16 Probably expressed as AgNO₃
- 17 corresponding free ionic silver 0.0083 µg/L
- 18 corresponding free ionic silver 0.0036 µg/L
- 19 corresponding free ionic silver 0.0032 µg/L
- 20 Cited values from unpublished data
- 21 Value originates from Klein-MacPhee et al., 1984 and is cited by Hogstrand and Wood, 1998
- 22 2-generation study
- 23 Key study in REACH dossier
- 24 EC10 and EC50 calculated from data in article using Graphpad
- 25 Organisms were fed during the study
- 26 EC10 calculated form data in table

Toxicity of silver to birds/mammals.

Species	Species properties (age, sex)	Test compound	Purity [%]	Application route	Exp. time	Criterion	Test endpoint	Value mg Ag/kg diet	Ri	Notes	Reference
Birds											
<i>No data</i>											
Mamalia											
Dog		AgS2O3		diet	90 d	LOEC	pigment deposit	455	2	9	Ctgb 2004
Guinea pig		AgNO3		dermal	8 w	NOEC	mortality	2743	4	5,12	Wahlberg 1965 in Ratte et al. 1999
Guinea pig		AgNO3		dermal	8 w	NOEC	weight	2743	4	5,12	Wahlberg 1965 in Ratte et al. 1999
Mouse	10-12 weeks	AgNO3		drinking water	14 d	NOEC	health	≥ 0.06	2	3,14,16	Pelkonen et al 2003
Mouse		AgNO3/AgCl		oral	37 w	NOEC	behaviour	150	4	8,12	Rungby and Danscher 1984 in Ratte et al. 1999
Mouse		AgNO3		drinking water	125 d	NOEC	reduced activity	< 286	2	5,14,16	Rungby and Danscher 1984
Rabbit		AgNO3		diet	30 d	NOEC		≥ 4-5	2	1,14	Jones and Bailey 1974
Rabbit		AgI		diet	30 d	NOEC		≥ 10	2	1,14	Jones and Bailey 1974
Rabbit	8-10 months	AgNO3		oral	30 d	NOEC	mortality	162	3	6	Tamimi et al. 1998
Rabbit	8-10 months	AgNO3		oral	30 d	NOEC	diarrhea	< 10	3	6	Tamimi et al. 1998
Rat	10-12 months	AgNO3		oral	30 d	NOEC	mortality	≥ 975	3	6	Tamimi et al. 1998
Rat	10-12 months	AgNO3		oral	30 d	NOEC	diarrhea	16,2	3	6	Tamimi et al. 1998
Rat		AgNO3		oral	14 d	NOEC	mortality	3624	4	5,10,12	Walker 1971 in Ratte et al. 1999
Rat				oral	4 d	NOEC	mortality	33600	4	5,12	Dequidt et al 1974 in Ratte et al. 1999
Rat		AgNO3		oral	37 w	NOEC	weight	4444	4	5,10,12	Matuk et al 1981 in Ratte et al. 1999
Rat		AgS2O3		gavage	90 d	NOEC	pigment deposit	130	2	5	Ctgb 2004
Rat		AgS2O3		gavage	2 gen	NOEC	maternal body weight	130	2	5	Ctgb 2004

Rat		AgS2O3	gavage	day 6-20 of gestation	NOEC	foetal development	130	2	5	Ctgb 2004
Rat		AgNO3	drinkingwater	37 w	NOEC	body weight/mortality	< 3810	2	5,11,14,15	Matuk et al 1981
Rat	8 weeks	AgNO3	drinkingwater	81 w	NOEC	clinical condition	< 3112	2	5,13,14,15	Walker 1971
Rat	8 weeks	AgNO3	drinkingwater	12 w	NOEC	clinical condition	1556	2	5,13,15	Walker 1971
Rat		colloidal	oral	4 d	NOEC	mortality	< 33600	2	5,14	Dequidt et al 1974

Notes birds and mammals

- 1 Study examined the effect of silver on the cecal flora, no population relevant effects are reported
- 2 Studies with nanosilver have been added to the table for the purpose of comparison because of the limited available studies with "ionic" silver
- 3
Conversion from water concentration to food concentration based on water consumption equal to food consumption
- 4 The AgNO₃ was supplied in a mouthwash, controls with placebo mouthwash were performed
- 5 Recalculated from mg/kg bw/d using a conversion factor of 20
- 6 Recalculated from mg/kg bw/d using a conversion factor of 33.3
- 7 Exposure consisted of swabbing the oral cavity, consumption is not excluded and the actual intake is unknown. In the study it is stated that the effects could also be attributed to the nitrate
- 8 Recalculated from mg/kg bw/d using a conversion factor of 8.3
- 9 Recalculated from mg/kg bw/d using a conversion factor of 40
- 10 NOAEL was given for dry weight, this NOEC could not be reproduced from the original paper
- 11 Recalculated from a water concentration of 0.25% silver nitrate
- 12 unclear if concentration is expressed as Ag or as the salt
- 13 Recalculated from a water concentration of 12 mM silver nitrate
- 14 only one concentration tested
- 15 An average daily water consumption for rats of 120 ml/kgbw/d has been used for recalculation (value is based on Niethammer and Krapp (1978, EFSA guidance on birds and mammals and the website research.uiowa.edu/anima which cite from Harkness JE, Wagner JE 1989, The Biology and Medicine of Rabbits and Rodents; 3rd Edition, Lea and Febiger, Philadelphia)
- 16 An average daily water consumption for mice of 230 ml/kgbw/d has been used for recalculation (value is based on the EFSA guidance on birds and mammals)
Recalculated from a water concentration of 0.015% silver nitrate

Salinity Seawater

(Joop Bakker, Waterdienst: Grasshoff, 1976)

	mg/L	ratio to salinity
Cl-	18800	0,5527
Na	10770	0,3078
Ca	412	0,01175
Mg	1290	0,03697
SO4	2711	0,07747
K	380	0,00114
Br	67	0,00192

Totale saliniteit 34 promille

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