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Supplement of

Chemical and physical transformations of mercury in the ocean: a review

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1 Table S1. DGM Concentrations in Seawater.

Location	Concentration, fM	Reference
North Pacific	30-90	Laurier et al. (2003)
South and equatorial Pacific Ocean	60-200	Laurier et al. (2003)
South and equatorial Pacific Ocean	60-140	Kim and Fitzgerald (1986)
Equatorial Pacific	50-225	Kim and Fitzgerald (1986)
Equatorial Pacific	15-690	Mason and Fitzgerald (1993)
Equatorial Pacific	40-325	Mason and Fitzgerald (1993)
North Atlantic Ocean	100-720	Mason et al. (1998)
North Atlantic Ocean	150-1500	Mason et al. (1998)
North Atlantic Ocean	28-89	Andersson et al. (2011)
South Atlantic Ocean	400-2000	Mason and Sullivan (1999)
South and Equatorial Atlantic Ocean	80-160	Mason et al. (2001)
South and Equatorial Atlantic Ocean	110	Gardfeldt et al. (2003)
Ireland, Mace Head	107	Gardfeldt et al. (2003)
Mediterranean Sea, East	170	Gardfeldt et al. (2003)
Mediterranean Sea, West	75	Gardfeldt et al. (2003)
Tyrrhenian Sea	95	Gardfeldt et al. (2003)
Mediterranean Sea, East	201-221	Ferrara et al. (2003)
Mediterranean Sea, West	88	Ferrara et al. (2003)
Mediterranean Sea, West	670	Ferrara et al. (2003)
Mediterranean Sea, West	35-220	Cossa et al. (1997)
Mediterranean Sea	30-370	Horvat et al. (2003)
Mediterranean Sea, West	200	Andersson et al. (2007)
Tyrrhenian Sea	100-300	Andersson et al. (2007)

Location	Concentration, fM	Reference
Ionian Sea	80-330	Andersson et al. (2007)
Adriatic Sea	150-210	Andersson et al. (2007)
Adriatic Sea, North	350-1030	Andersson et al. (2007)
Mediterranean Sea, Strait of Sicily	100-140	Andersson et al. (2007)
Mediterranean Sea, Strait of Messina	220	Andersson et al. (2007)
Mediterranean Sea, Strait of Otranto	130-180	Andersson et al. (2007)
Mediterranean Sea	120-190	Andersson et al. (2007)
North Sea	60-800	Baeyens and Leermakers (1998)
North Sea	150-370	Coquery and Cossa (1995)
Baltic Sea	70-100	Wangberg et al. (2001)
Baltic Sea	50-160	Kuss and Schneider (2007)
Arctic Ocean, Beringia	25-670	Andersson et al. (2008)
Canada, Bay St.Francois	105-720	Zhang et al. (2006)
Japan, Tokyo Bay	130-390	Narukawa et al. (2006)
Black Sea, Coastal site	251-893	Lamborg et al. (2008)
Black Sea, Western Gyre	206-1161	Lamborg et al. (2008)
Mediterranean Sea, Strait of Sicily	2250	Gardfeldt et al. (2003)
France, Arcachon Bay, Aquitaine	25-960	Bouchet et al. (2011)
USA , Chesapeake Bay	100-30	Mason et al. (1999)
USA, San Francisco Bay	20-1780	Conaway et al. (2003)
Brazil, Sepetiba Bay	160-410	Boszke et al. (2002)
Brazil, Sepetiba Bay	50-550	Molisani et al. (2007)
Global ocean (modelling)	70	Strode et al. (2007)

Location	Concentration, fM	Reference
Mediterranean Sea, summer	130-370	Kotnik et al. (2007)
Mediterranean Sea, spring	110-310	Kotnik et al. (2007)
Mediterranean Sea, Tyrrhenian Sea, near Livorno	120-460	Fantozzi et al. (2007)
Mediterranean Sea, Coastal seawater (Island of Corsica)	50-580	Fantozzi et al. (2007)
Mediterranean Sea, Offshore seawater	50-110	Fantozzi et al. (2007)
Mediterranean Sea, Lagoon water	20-900	Fantozzi et al. (2007)
Atlantic Ocean, shelf, August 2008	100-220	Soerensen et al. (2013)
Atlantic Ocean, shelf, October 2009	66-114	Soerensen et al. (2013)
Atlantic Ocean, September 2008	108-148	Soerensen et al. (2013)
Atlantic Ocean, June 2009	113-127	Soerensen et al. (2013)
Atlantic Ocean, September 2009	97-125	Soerensen et al. (2013)
Atlantic Ocean, August 2010	162-230	Soerensen et al. (2013)
Yellow Sea	169-468	Ci et al.(2011)
South China Sea	107-256	Fu et al.(2010)
North Atlantic subtropics	30-85	Kuss et al.(2011)
Northern tropics	40-219	Kuss et al.(2011)
Southern tropics	10-130	Kuss et al.(2011)
South Atlantic subtropics	15-70	Kuss et al.(2011)
North Atlantic midlatitudes	15-35	Kuss et al.(2011)
Southern Ocean	100-310	Cossa et al. (2011)

1 Table S2. Total Mercury Concentrations in Seawater.

Location	Concentration, pM	Reference
North Atlantic Ocean	0.8-4.0	Mason et al. (1998)
Deep North Atlantic Ocean	1.5-3.1	Mason et al. (1998)
South and Equatorial Atlantic Ocean	0.94-2.42	Mason and Sullivan (1999)
South and Equatorial Atlantic Ocean	1.2-4.6	Mason and Sullivan (1999)
North Atlantic, Celtic Sea, LDW (lower deep water)	1.73-2.19	Cossa et al. (2004)
North Atlantic, Celtic Sea, LSW (Labrador sea water)	1.34-2.60	Cossa et al. (2004)
North Atlantic, Celtic Sea, MIW (Mediterranean intermediate water)	1.20-2.88	Cossa et al. (2004)
North Atlantic, Celtic Sea, ISOW (Iceland-Scotland overflow water)	2.31-3.11	Cossa et al. (2004)
North Atlantic, Celtic Sea	1.5-2.7	Cossa et al. (2004)
North Atlantic (Mediterranean Sea)	1.13-2.01	Cossa et al. (1997)
Gibraltar, MOW (Mediterranean outflow water)	1.82-2.64	Cossa et al. (1997)
Mediterranean Sea, West	1.29-3.79	Cossa et al. (1997)
Mediterranean Sea, West	1.05-1.87	Horvat et al. (2003)
Mediterranean Sea, West	1.72-1.93	Horvat et al. (2003)
North Pacific	0.38-0.90	Laurier et al. (2004)
Black Sea, Coastal site	1.6-7.6	Lamborg et al. (2008)
Black Sea, Western Gyre	1.9-11.8	Lamborg et al. (2008)
Mediterranean Sea, summer	0.84 – 2.08	Kotnik et al. (2007)
Mediterranean Sea, spring	0.89 -1.53	Kotnik et al. (2007)

Location	Concentration, pM	Reference
Mediterranean Sea, Strait of Sicily	3.55	Kotnik et al. (2007)
Mediterranean Sea (average)	1.25-1.75	Rajar et al. (2007)
Atlantic Ocean, shelf, August 2008	1.8-4.7	Soerensen et al. (2013)
Atlantic Ocean, shelf, October 2009	0.58-2.32	Soerensen et al. (2013)
Atlantic Ocean, September 2008	0.63	Soerensen et al. (2013)
Atlantic Ocean, September 2009	0.85	Soerensen et al. (2013)
Atlantic Ocean, August 2010	1.2-1.6	Soerensen et al. (2013)
South China Sea	4.5-7.5	Fu et al. (2010)
Southern Ocean	0.63-2.76	Cossa et al. (2011)

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