

## Water qualities at the upper reaches of river and relationship between DO and oxidation–reduction potential (ORP)

Date	Full tide1 Ebb tide2	pH	BOD (mg/L)	COD (mg/L)	SS (mg/L)	DO (mg/L)	Electric conductivity (ms/cm)	T-N (mg/L)	NH <sub>4</sub> -N (mg/L)	NO <sub>3</sub> -N (mg/L)	NO <sub>2</sub> -N (mg/L)	T-P (mg/L)	Chlorine ion (mg/L)	Oxidation– reduction potential (mV)
1999.5.17	1	7.5	14	24	5	ND	32						13000	
1999.5.17	2	7.4	9.0	18	24	ND	30						13000	
1999.6.14	1	7.3	4.7	7.6	3	ND	35	2.0				0.34	14000	110
1999.6.14	2	7.4	4.9	10	3	ND	35	2.1				0.36	13000	140
1999.7.13	1	8.1	9.4	13	21	8.3	33	1.6				0.36	13000	140
1999.7.13	2	7.6	18	16	33	3.8	33	2.9				0.54	13000	140
1999.7.22	2							2.3	1.2		0.16	0.47		
1999.8.17	1	7.3	7.7	7.3	13	16	28	1.5	0.48	0.42	0.01	0.34	12000	120
1999.8.17	2	8.0	11	12	25	10	27						11000	
1999.8.23	2							2.1	1.5	0.54	0.05	0.39		3
1999.9.10	1	7.6	7.5	15	2	ND	36	2.6	1.6	0.12	0.01	0.37	13000	-170
1999.9.10	2	7.3	8.0	20	2	ND	36	2.6	2.2	0.15	0.02	0.37	13000	-230
1999.10.12	1	7.5	4.4	9.4	2	ND	39	1.8	0.89	0.06	0.02	0.30	10000	-27
1999.10.12	2	7.4	5.0	10	3	ND	36	2.0	0.64	0.08	0.03	0.31	12000	-47
1999.11.4	1	7.6	2.9	4.2	19	2.7	1.5						550	
1999.11.4	2	6.9	3.0	4.2	7	ND	1.7	1.5	0.24	0.08	0.07	0.34	660	-78
1999.12.9	1	7.1	3.6	4.2	3	1.8	35	3.7	1.4	0.01	0.02	0.28	11000	32
1999.12.9	2	7.2	3.9	8.7	3	1.8	32	3.4	0.79	0.05	0.05	0.27	10000	-32
2000.1.17	1	7.0	5.8	9.4	13	5.8	2.2	3.9	1.2	0.15	0.09	0.36	800	34
2000.1.17	2	7.0	10	17	27	ND	8.8	3.5	1.2	0.23	0.08	0.51	3000	-12
2000.2.14	1	7.5	6.5	3.9	5	4.4	30	3.0	0.61	0.26	0.12	0.18	12000	55
2000.2.14	2	7.2	7.3	4.9	7	4.0	32	2.3	0.61	0.29	0.12	0.19	12000	130
2000.3.21	1	7.3	5.2	13	3	ND	34	1.9	0.68	0.08	0.04	0.25	13000	7
2000.3.21	2	7.3	5.6	13	4	ND	35	2.2	0.54	0.09	0.07	0.25	10000	-190

2weeks passed after the assition  
of WK

The water level is low because  
of being under construction  
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•The value of ORP near the upper reaches of river lowers, and decreases to the minus side. Such an aquatic environment is completely created by microorganisms.

•The upper reaches of river receive the effluent from the sewage treatment works, and are highly polluted areas.

•In highly polluted environment, living microorganisms are greatly activated, and the value of ORP tends change widely.

\* What's WK technology? It's the activation of microorganisms caused by WK