

Table 20. Laboratory incubation denitrification rates for the experiment of May 27 to May 28, 2009

[NEC, Northeast Creek watershed; BHM, Bass Harbor Marsh watershed; GW#, measurement site; mM, millimolar; NO<sub>3</sub>, nitrate; nmoles, nanomoles; hr, hour; T<sub>0</sub>, date and time chamber sealed and initial gas sampling; T<sub>1</sub>, T<sub>2</sub>, T<sub>3</sub>, T<sub>4</sub> subsequent gas sampling times; C<sub>2</sub>H<sub>2</sub>, acetylene; g, gram; N<sub>2</sub>O, nitrous oxide]

Location	Fresh weight (g)	27-May	27-May	27-May	27-May	28-May	Treatment	Number of replicate measurements	---- N <sub>2</sub> O Production rate ----		
		T <sub>0</sub>	T <sub>1</sub>	T <sub>2</sub>	T <sub>3</sub>	T <sub>4</sub>			T <sub>1</sub> to T <sub>2</sub>	T <sub>2</sub> to T <sub>3</sub>	T <sub>3</sub> to T <sub>4</sub>
									nmoles/g oven dry soil/hr	nmoles/g oven dry soil/hr	nmoles/g oven dry soil/hr
NEC GW5	20.11	10:37	10:37	14:35	18:13	9:33	+ C <sub>2</sub> H <sub>2</sub>	2	9.44	8.19	2.5
NEC GW5	20.33	10:38	10:38	14:36	18:13	9:34	+ glucose + C <sub>2</sub> H <sub>2</sub>	2	12.5	4.08	0.189
NEC GW5	20.17	10:39	10:39	14:37	18:15	9:35	Ambient	1	2.4	2.88	nd
NEC GW5	20.36	10:39	10:39	14:37	18:15	9:35	+ glucose	1	0.759	0.134	-0.104
NEC GW5	20.35	10:39	10:39	14:38	18:15	9:35	75 mM NO <sub>3</sub> + C <sub>2</sub> H <sub>2</sub>	2	4.62	9.07	26.5
NEC GW5	20.40	10:40	10:40	14:39	18:16	9:35	75 mM NO <sub>3</sub> + Glucose + C <sub>2</sub> H <sub>2</sub>	2	14	38.6	248
NEC GW5	20.05	10:41	10:41	14:40	18:17	9:36	75 mM NO <sub>3</sub>	1	4.26	12.4	51.2
NEC GW5	20.33	10:42	10:42	14:40	18:17	9:36	75 mM NO <sub>3</sub> + Glucose	1	14.3	30.4	35.9
NEC GW5	20.49	10:42	10:42	14:41	18:18	9:37	500 mM NO <sub>3</sub> + C <sub>2</sub> H <sub>2</sub>	2	4.71	8.2	20.8
NEC GW5	20.49	10:44	10:44	14:42	18:20	9:38	500 mM NO <sub>3</sub> + Glucose + C <sub>2</sub> H <sub>2</sub>	2	3.53	9.51	16.2
NEC GW5	20.19	10:44	10:44	14:43	18:20	9:39	500 mM NO <sub>3</sub>	1	2.55	6.44	16.4
NEC GW5	20.46	10:45	10:45	14:44	18:21	9:40	500 mM NO <sub>3</sub> + Glucose	1	2.66	6.71	13.8
BHM GW3	20.26	10:45	10:45	14:44	18:22	9:40	+ C <sub>2</sub> H <sub>2</sub>	1	0.128	0.278	nd
BHM GW3	20.59	10:46	10:46	14:45	18:23	9:41	+ glucose + C <sub>2</sub> H <sub>2</sub>	1	0.568	-0.161	nd
BHM GW3	20.40	10:47	10:47	14:46	18:24	9:42	Ambient	1	0.152	0	nd
BHM GW3	20.65	10:47	10:47	14:46	18:24	9:42	+ glucose	1	0.008	0.122	nd
BHM GW3	20.55	10:48	10:48	14:47	18:24	9:43	75 mM NO <sub>3</sub> + C <sub>2</sub> H <sub>2</sub>	1	10.4	25.6	nd
BHM GW3	20.80	10:49	10:49	14:47	18:25	9:43	75 mM NO <sub>3</sub> + Glucose + C <sub>2</sub> H <sub>2</sub>	1	32.5	53.8	nd
BHM GW3	20.52	10:50	10:50	14:48	18:26	9:44	75 mM NO <sub>3</sub>	1	9.49	19.3	nd
BHM GW3	20.49	10:50	10:50	14:48	18:27	9:45	75 mM NO <sub>3</sub> + Glucose	1	12.9	39.3	nd

BHM GW3	20.42	10:51	10:51	14:49	18:27	9:45	500 mM NO <sub>3</sub> + C <sub>2</sub> H <sub>2</sub>	1	8.16	16.3	nd
BHM GW3	20.19	10:52	10:52	14:50	18:29	9:46	500 mM NO <sub>3</sub> + Glucose + C <sub>2</sub> H <sub>2</sub>	1	16.2	34	nd
BHM GW3	20.75	10:52	10:52	14:50	18:29	9:46	500 mM NO <sub>3</sub>	1	4.46	10.4	nd
BHM GW3	20.17	10:53	10:53	14:51	18:30	9:47	500 mM NO <sub>3</sub> + Glucose	1	15.1	31.9	nd

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