

Table S3. Soil chemical species concentrations in the B-horizon samples

Site	NO <sub>3</sub> -N	TN	P	Fe	Ca	TC	OC	IC	SOM	pH	EC
1	1.5	0.25	2	16.4	10840	6.28	1.94	4.33	2.9	8.33	114.9
2	1.5	0.10	2	4.2	10940	5.20	0.83	4.37	2.3	8.30	664.0
3	1.0	0.07	29	7.0	9280	2.36	0.51	1.85	1.5	8.48	110.0
4	1.5	0.10	7	6.0	5860	1.35	0.91	0.45	1.0	8.30	89.2
5	1.0	0.10	83	25.5	4200	1.41	0.91	0.51	10.2	8.00	130.0
6	0.5	0.05	6	6.0	3560	0.47	0.47	0.00	1.8	8.33	38.6
7	0.5	0.06	10	10.5	7020	1.51	0.50	1.01	4.0	8.51	51.8
8	0.5	0.10	2	5.2	11040	3.37	0.89	2.48	1.9	8.33	284.0
9	0.5	0.19	3	19.6	8340	6.51	1.72	4.78	3.1	8.95	278.0
10	2.0	0.10	3	16.2	10720	3.74	0.67	3.07	0.2	9.07	103.2
11	3.5	0.32	4	51.0	4320	3.73	3.26	0.46	3.2	8.72	277.0
12	1.0	0.07	6	6.8	5460	1.58	0.72	0.86	3.9	9.62	45.0
14	1.5	0.21	93	42.5	6860	3.98	2.14	1.84	10.0	8.43	87.9
15	20.0	0.14	112	53.5	6480	1.55	1.35	0.20	0.8	8.63	381.0
16	1.5	0.16	7	49.0	4160	1.26	0.91	0.35	8.9	9.25	573.0
17	3.5	0.20	1	10.4	7020	4.66	1.73	2.93	3.6	8.42	125.2
18	3.0	0.18	1	11.6	9100	4.80	1.61	3.20	4.4	8.61	208.0
19	0.5	0.16	2	11.0	7460	3.90	1.39	2.51	4.4	8.83	302.0
20	0.5	0.08	2	19.0	9900	3.73	0.73	3.00	6.6	9.39	109.7
21	1.0	0.10	22	12.1	9480	2.75	1.02	1.72	2.7	9.15	474.0
22	0.5	0.02	2	5.4	3020	1.06	0.08	0.98	3.9	8.74	404.0

NO<sub>3</sub>-N, P, Fe, and Ca represent nitrate-nitrogen, phosphorus, iron, and calcium (mg kg<sup>-1</sup>). TN, TC, OC, IC, and SOM represent total nitrogen, total carbon, organic carbon, inorganic carbon, and soil organic matter (%). pH is in standard units and electrical conductivity (EC) is in μS cm<sup>-1</sup>.

Table S3 (continued)

Site	NO <sub>3</sub> -N	TN	P	Fe	Ca	TC	OC	IC	SOM	pH	EC
23	2.5	0.03	15	10.3	3460	0.93	0.23	0.70	3.9	8.86	106.8
24	10.5	0.16	93	45.5	8580	3.83	1.65	2.18	0.8	8.27	406.0
25	2.0	0.04	63	30.0	4480	0.51	0.38	0.13	3.4	8.77	551.0
26	4.5	1.35	12	97.5	8820	13.97	12.70	1.27	1.8	8.35	567.0
27	3.0	0.82	4	61.5	8860	10.78	7.04	3.74	2.6	8.50	584.0
28	2.0	0.19	1	8.6	7080	5.66	1.43	4.23	1.9	8.12	1284.0
29	1.0	0.08	2	33.5	4380	0.92	0.83	0.09	1.8	7.82	162.0
30	2.0	0.10	3	13.7	10140	5.51	0.85	4.66	5.3	8.74	297.0
31	3.0	0.19	8	19.1	10860	4.27	1.79	2.48	2.4	8.73	432.0
32	1.5	0.03	4	9.5	4480	0.84	0.17	0.67	2.4	9.07	432.0
33	0.5	0.04	25	17.5	2720	0.58	0.31	0.27	2.3	9.08	336.0
36	7.5	0.23	105	93.0	5000	2.48	2.15	0.33	1.3	8.31	617.0
37	11.0	0.16	3	8.6	9380	6.17	1.19	4.98	2.3	9.24	533.0
38	1.0	0.08	1	9.1	6060	4.10	0.53	3.57	4.0	8.15	1308.0
39	1.5	0.17	5	19.6	4900	1.91	1.71	0.21	1.3	8.48	156.1
40	1.5	0.19	5	16.9	11120	4.99	2.03	2.96	2.7	7.80	34.4
41	3.0	0.27	6	12.8	6440	3.27	2.62	0.65	2.6	9.04	446.0
42	0.5	0.09	48	12.3	4180	1.32	0.82	0.51	2.9	8.85	393.0
43	1.0	0.20	57	67.5	3820	2.57	2.08	0.49	1.6	9.05	336.0
44	0.5	0.13	11	70.5	5920	1.59	1.48	0.11	5.7	9.36	60.5

NO<sub>3</sub>-N, P, Fe, and Ca represent nitrate-nitrogen, phosphorus, iron, and calcium (mg kg<sup>-1</sup>). TN, TC, OC, IC, and SOM represent total nitrogen, total carbon, organic carbon, inorganic carbon, and soil organic matter (%). pH is in standard units and electrical conductivity (EC) is in μS cm<sup>-1</sup>.

Table S3 (continued)

Site	NO <sub>3</sub> -N	TN	P	Fe	Ca	TC	OC	IC	SOM	pH	EC
45	20.0	0.14	47	74.0	4120	1.52	1.44	0.08	0.3	8.76	490.0
46	2.0	0.10	61	15.8	8080	1.17	0.79	0.38	5.2	8.69	581.0
47	1.5	0.08	5	5.5	10580	2.91	0.70	2.21	2.3	8.85	748.0
48	1.5	0.15	1	7.6	8840	4.62	0.98	3.64	3.6	8.18	535.0
49	2.5	0.16	5	15.7	6600	2.32	1.40	0.92	3.1	8.27	80.1
50	0.5	0.06	6	7.5	3640	0.73	0.73	0.00	1.6	8.00	59.4
51	2.0	0.14	3	15.3	3900	1.71	1.63	0.09	3.1	7.72	70.2
52	1.0	0.09	98	17.0	3820	1.07	0.99	0.08	4.2	7.86	342.0
53	1.5	0.45	112	65.0	6800	5.58	4.17	1.41	1.3	7.73	147.8
54	1.5	0.14	98	56.5	4380	1.48	1.34	0.15	9.7	7.65	79.2
55	1.0	0.18	104	69.0	4840	1.78	1.66	0.13	9.0	7.83	90.3
56	0.5	0.07	3	10.3	9120	1.09	0.68	0.42	5.8	8.40	125.5
57	1.0	0.11	3	7.8	11540	4.18	0.84	3.34	3.6	7.86	1241.0
58	1	0.08	2	6.9	9740	3.08	0.54	2.54	5.7	8.38	177.5
59	0.5	0.06	9	13.5	3980	0.69	0.69	0.00	2.6	9.05	236.0
60	0.5	0.86	2	5.0	3300	0.45	0.32	0.14	5.3	9.58	30.4
61	1.5	0.09	6	46.5	5360	1.51	1.02	0.49	5.5	9.44	91.5
62	0.5	0.24	30	92.5	7860	2.66	2.40	0.25	8.9	8.82	424.0
63	2.0	0.06	1	5.9	8320	1.64	0.51	1.12	5.7	8.38	146.0

NO<sub>3</sub>-N, P, Fe, and Ca represent nitrate-nitrogen, phosphorus, iron, and calcium (mg kg<sup>-1</sup>). TN, TC, OC, IC, and SOM represent total nitrogen, total carbon, organic carbon, inorganic carbon, and soil organic matter (%). pH is in standard units and electrical conductivity (EC) is in  $\mu\text{S cm}^{-1}$ .