

Table S1 | Relative abundance of individual PLFA biomarkers in response to long-term N addition at Alptal (Switzerland).

PLFA biomarker	Group	References	% of samples with relative abundance >=0.5 mol%	Used for NMDS ordination	Relative PLFA abundance (mol%)					
					Ah horizon		Bt horizon		Blr horizon	
					Control	N addition	Control	N addition	Control	N addition
2OH 12:0	Gram-negative	1,2	0		0.00 ± 0.00	0.00 ± 0.00	0.00 ± 0.00	0.00 ± 0.00	0.00 ± 0.00	0.00 ± 0.00
3OH 12:0	Gram-negative	1,2	100	•	5.21 ± 0.18	5.50 ± 0.37	3.60 ± 0.40	4.24 ± 0.37	2.11 ± 0.27	2.18 ± 0.30
14:0	Microbes	3,7	100	•	1.69 ± 0.07	1.67 ± 0.06	1.96 ± 0.08	1.78 ± 0.06	1.82 ± 0.06	1.65 ± 0.05
2OH 14:0	Gram-negative	1,2	0		0.03 ± 0.00	0.05 ± 0.00	0.01 ± 0.01	0.01 ± 0.01	0.01 ± 0.01	0.01 ± 0.01
3OH 14:0	Gram-negative	1,2	0		0.10 ± 0.03	0.07 ± 0.03	0.07 ± 0.03	0.03 ± 0.02	0.16 ± 0.03	0.09 ± 0.02
15:0	Bacteria	2,4	91	•	0.83 ± 0.04	0.89 ± 0.04	0.68 ± 0.04	0.81 ± 0.06	0.61 ± 0.04	0.60 ± 0.05
a15:0	Gram-positive	1,2,3,7	100	•	5.34 ± 0.49	5.13 ± 0.52	5.63 ± 0.41	5.75 ± 0.53	4.63 ± 0.19	4.57 ± 0.37
i15:0	Gram-positive	1,2,3,7	100	•	6.86 ± 0.20	7.09 ± 0.18	5.77 ± 0.41	6.13 ± 0.31	4.04 ± 0.36	3.97 ± 0.43
15:1ω5	Bacteria	1	100	•	1.58 ± 0.10	1.39 ± 0.07	3.35 ± 0.25	2.67 ± 0.21	3.52 ± 0.24	3.21 ± 0.13
16:0	Unspecific	2,7	100	•	20.34 ± 0.40	20.07 ± 0.28	26.29 ± 0.95	24.02 ± 1.03	31.00 ± 0.96	30.70 ± 1.27
i16:0	Gram-positive	1,2,3,7	100	•	2.85 ± 0.17	2.88 ± 0.16	2.13 ± 0.16	2.39 ± 0.20	1.49 ± 0.15	1.46 ± 0.13
2OH 16:0	Gram-negative	1,2	2		0.12 ± 0.01	0.10 ± 0.01	0.20 ± 0.04	0.13 ± 0.01	0.20 ± 0.01	0.15 ± 0.01
16:1ω9c	Gram-negative	1,2,3,7	99	•	7.18 ± 0.51	6.97 ± 0.91	5.45 ± 0.47	5.80 ± 0.54	3.88 ± 0.25	4.04 ± 0.45
17:0	Bacteria	1,3	88	•	0.94 ± 0.06	0.91 ± 0.05	0.79 ± 0.06	0.80 ± 0.07	0.71 ± 0.06	0.74 ± 0.07
cy17:0	Gram-negative	1,2,3,7	99	•	2.85 ± 0.29	2.85 ± 0.39	2.57 ± 0.24	3.06 ± 0.27	1.84 ± 0.17	2.04 ± 0.24
i17:0	Gram-positive	1,2,3,7	99	•	1.61 ± 0.06	1.39 ± 0.15	1.49 ± 0.08	1.56 ± 0.06	1.19 ± 0.08	1.26 ± 0.10
17:1ω7c	Bacteria	1,3	34		0.60 ± 0.08	0.99 ± 0.35	0.43 ± 0.06	0.51 ± 0.06	0.39 ± 0.05	0.33 ± 0.03
18:0	Unspecific	2,5,7	99	•	11.07 ± 0.37	9.26 ± 0.98	18.73 ± 1.28	15.64 ± 1.36	25.10 ± 1.37	24.81 ± 1.84
18:1ω9c	Unspecific	1,2,4,7	100	•	7.55 ± 0.51	7.83 ± 0.36	3.43 ± 0.52	5.48 ± 0.53	2.67 ± 0.38	2.63 ± 0.28
18:1ω9t	Unspecific	5,6		•	1.62 ± 0.07	1.77 ± 0.12	1.21 ± 0.14	1.56 ± 0.12	0.73 ± 0.12	0.78 ± 0.13
18:2ω6,9c	Fungi	1,2,3,7	100	•	3.05 ± 0.25	3.65 ± 0.33	1.75 ± 0.21	2.11 ± 0.22	1.66 ± 0.13	1.92 ± 0.24
18:2ω6,9t	Fungi	1,2,5		•	1.84 ± 0.08	2.05 ± 0.09	1.14 ± 0.18	1.46 ± 0.13	0.68 ± 0.09	0.71 ± 0.08
18:3ω3	Eukaryotes	1,2,3,4	96	•	8.02 ± 0.75	8.25 ± 0.66	5.34 ± 0.84	5.59 ± 0.94	4.02 ± 0.55	4.37 ± 0.56
cy19:0	Gram-negative	1,2,3	7		0.22 ± 0.04	0.32 ± 0.08	0.08 ± 0.03	0.21 ± 0.06	0.15 ± 0.03	0.20 ± 0.05
20:0	Unspecific	5,6,7	100	•	1.54 ± 0.09	1.59 ± 0.10	1.45 ± 0.11	1.47 ± 0.07	1.42 ± 0.05	1.38 ± 0.07
20:1ω9c	Microbes	3	31		0.38 ± 0.09	0.32 ± 0.07	0.43 ± 0.07	0.42 ± 0.08	0.35 ± 0.06	0.44 ± 0.07
20:2ω6	Protozoa	3	0		0.25 ± 0.03	0.27 ± 0.03	0.16 ± 0.03	0.16 ± 0.02	0.12 ± 0.01	0.11 ± 0.02
20:3ω6	Protozoa	4	0		0.08 ± 0.01	0.11 ± 0.01	0.04 ± 0.01	0.06 ± 0.01	0.05 ± 0.01	0.06 ± 0.01
20:4ω6	Eukaryotes	2,4,6,7	15		0.42 ± 0.05	0.53 ± 0.09	0.31 ± 0.03	0.33 ± 0.04	0.22 ± 0.01	0.25 ± 0.02
20:5ω3	Eukaryotes	2,4,6,7	100	•	3.25 ± 0.14	3.27 ± 0.16	3.19 ± 0.28	3.21 ± 0.16	3.30 ± 0.12	3.19 ± 0.24
21:0	Eukaryotes	1,7	0		0.01 ± 0.00	0.02 ± 0.01	0.00 ± 0.00	0.00 ± 0.00	0.00 ± 0.00	0.00 ± 0.00
22:0	Eukaryotes	1,7	6		0.40 ± 0.08	0.38 ± 0.09	0.09 ± 0.01	0.12 ± 0.02	0.06 ± 0.02	0.05 ± 0.01
22:1ω9c	Gram-negative	2	0		0.09 ± 0.01	0.02 ± 0.01	0.03 ± 0.01	0.00 ± 0.00	0.06 ± 0.02	0.00 ± 0.00
22:6ω3	Eukaryotes	2,6	0		0.02 ± 0.01	0.02 ± 0.01	0.00 ± 0.00	0.00 ± 0.00	0.00 ± 0.00	0.00 ± 0.00
23:0	Eukaryotes	1,7	96	•	0.85 ± 0.05	0.99 ± 0.09	1.10 ± 0.15	1.17 ± 0.08	0.81 ± 0.08	0.93 ± 0.11
24:0	Eukaryotes	1,7	100	•	1.22 ± 0.07	1.39 ± 0.13	1.08 ± 0.09	1.28 ± 0.14	1.00 ± 0.07	1.16 ± 0.13
Total PLFAs				mol%	100.00	100.00	100.00	100.00	100.00	100.00
				nmol g⁻¹ soil	6.05 ± 0.56	6.75 ± 0.68	1.87 ± 0.17	2.36 ± 0.18	1.44 ± 0.19	1.45 ± 0.09