

Table S1. Concentrations of nitrogen (N), carbon (C), ^{13}C and ^{15}N , and C:N ratio in humic acid-like substances (HA), fulvic acid-like substances (FS), non-extractable organic matter (NEOM) and particulate organic matter (POM) for organic (O; Oe and Oa horizons), organo-mineral (A; A horizons) and mineral (ENDO; AB, Bw, BC, C and C_R horizons) layers.

		N %	C %	^{13}C ‰	^{15}N ‰	C:N
Humic Distrudepts						
O	POM	1.086	27.683	-28.191	-2.560	25.480
	HA	1.087	14.682	-27.304	-1.346	13.507
	FS	0.494	6.937	-25.217	-0.829	14.039
	NEOM	11.827	287.701	-27.797	-2.709	24.325
A	POM	0.089	1.908	-27.840	-0.786	21.418
	HA	0.981	12.465	-27.034	-0.675	12.711
	FS	0.543	7.399	-25.295	-0.352	13.619
	NEOM	4.077	113.334	-27.811	-0.047	27.796
ENDO	POM	0.006	0.285	-27.424	0.273	47.499
	HA	0.271	2.918	-25.467	4.991	10.778
	FS	0.255	5.546	-25.242	3.350	21.715
	NEOM	1.091	20.581	-26.279	5.308	18.872
Humic Lithic Distrudepts						
O	POM	1.220	30.647	-27.480	-1.267	25.112
	HA	0.490	6.490	-26.779	-0.625	13.254
	FS	0.178	2.676	-24.542	-0.416	15.032
	NEOM	15.880	359.759	-27.142	-2.282	22.655
A	POM	0.057	1.811	-28.132	-2.296	31.500
	HA	0.646	7.883	-27.400	-1.514	12.204
	FS	0.739	7.144	-25.823	-0.879	9.666
	NEOM	2.726	68.981	-27.739	-1.867	25.306
ENDO	POM	0.018	0.871	-28.514	2.443	48.934
	HA	0.235	2.822	-26.185	4.034	11.999
	FS	0.163	3.734	-25.970	1.948	22.960
	NEOM	0.704	23.740	-27.281	3.676	33.725
Typic Distrudepts						
O	POM	1.750	43.672	-28.473	-3.381	24.951
	HA	0.541	6.838	-28.561	-2.552	12.633
	FS	0.146	4.735	-25.704	2.699	32.529
	NEOM	8.799	239.689	-28.763	-2.949	27.240
A	POM	0.152	4.339	-28.445	-1.777	28.583
	HA	0.803	9.612	-27.190	-0.036	11.977
	FS	0.350	5.812	-26.102	0.314	16.603
	NEOM	2.409	63.524	-27.696	-0.406	26.370
ENDO	POM	0.007	0.408	-28.040	0.347	61.344
	HA	0.169	1.780	-25.434	5.148	10.547
	FS	0.155	3.130	-25.224	4.436	20.159
	NEOM	0.455	11.985	-26.862	4.189	26.333