

Kelly et al. Figures

Different Incubation Assay Metrics Describe Different Aspects of Carbon Degradation

Contents

Main manuscript	1
Figure 1	1
Figure 2	2
Figure 3	3
Figure 4	4
Figure 5	5
Figure 6	5
Supplemental	6
Figure S1	6
Figure S2	7
Figure S3	8
Figure S4	9
Figure S5	10
Figure S6	11
Table S1	11
Table S2	11
Table S3	12
Table S4	12

Main manuscript

Figure 1

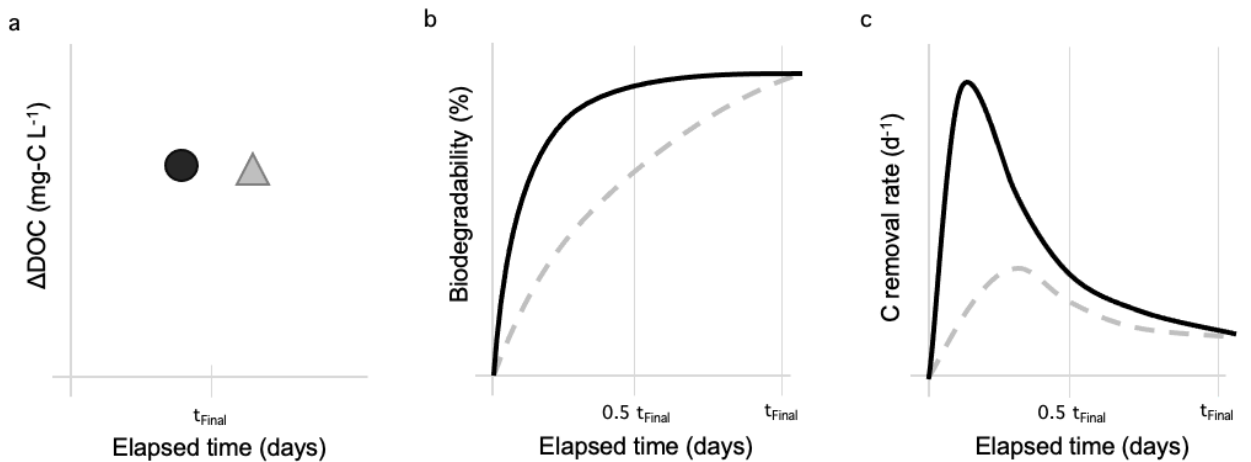


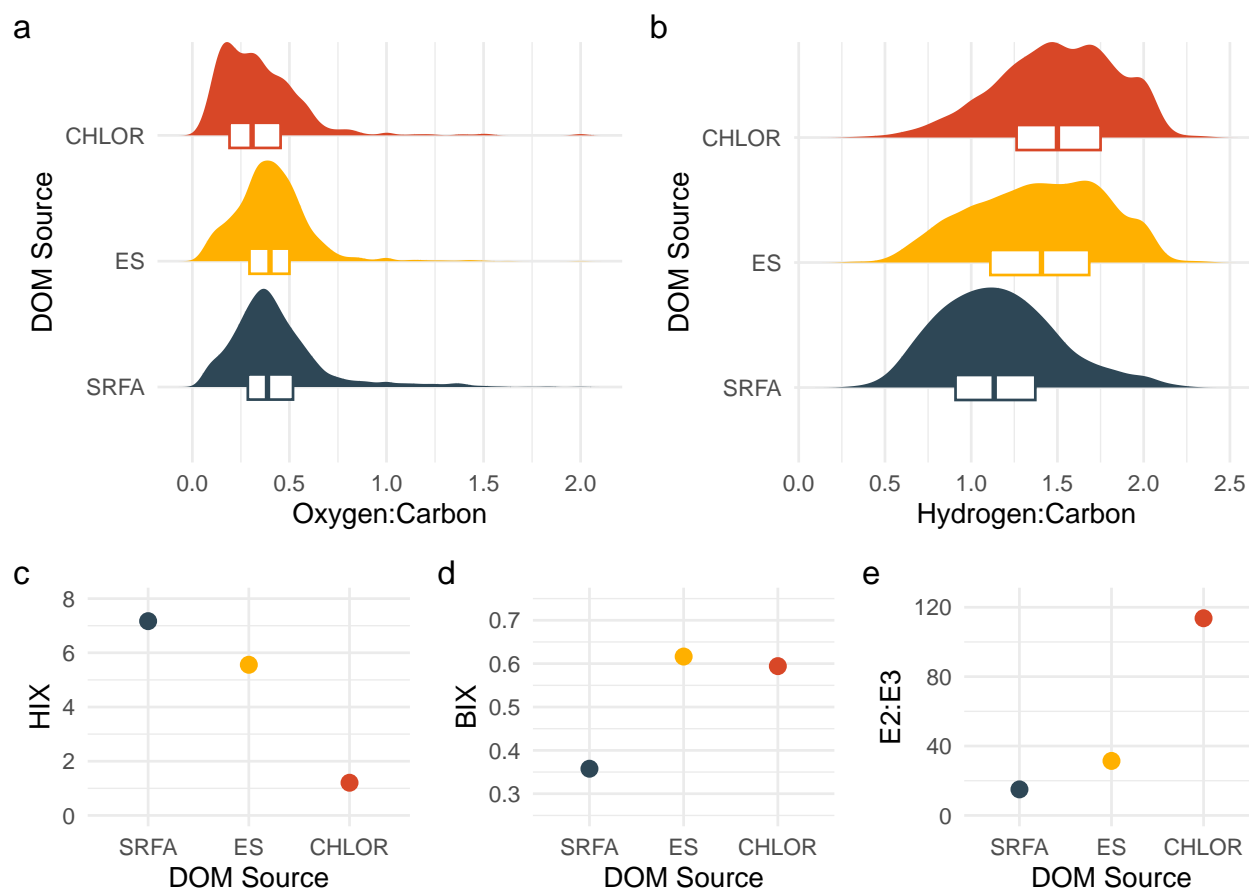
Figure 2

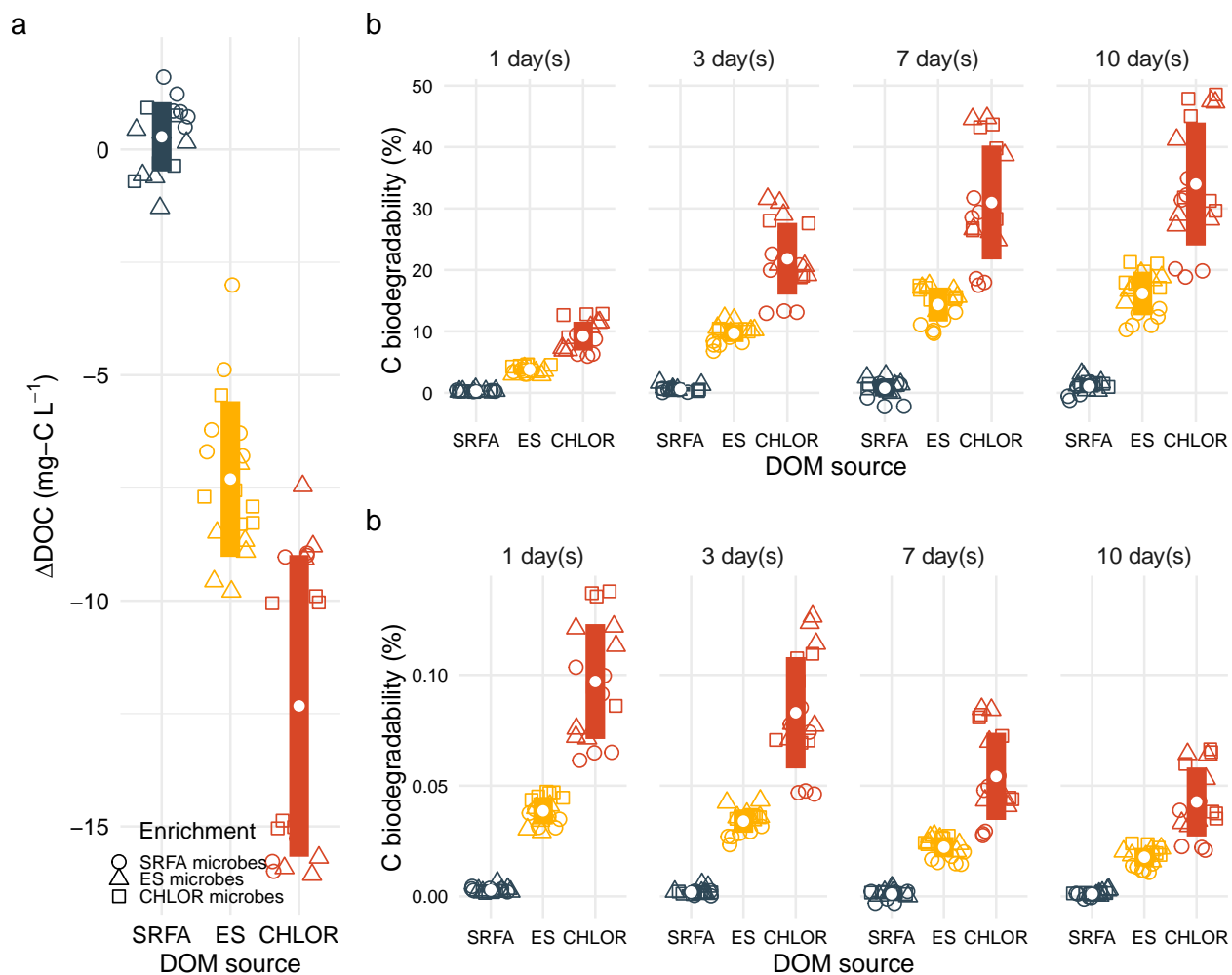
Figure 3

Figure 4

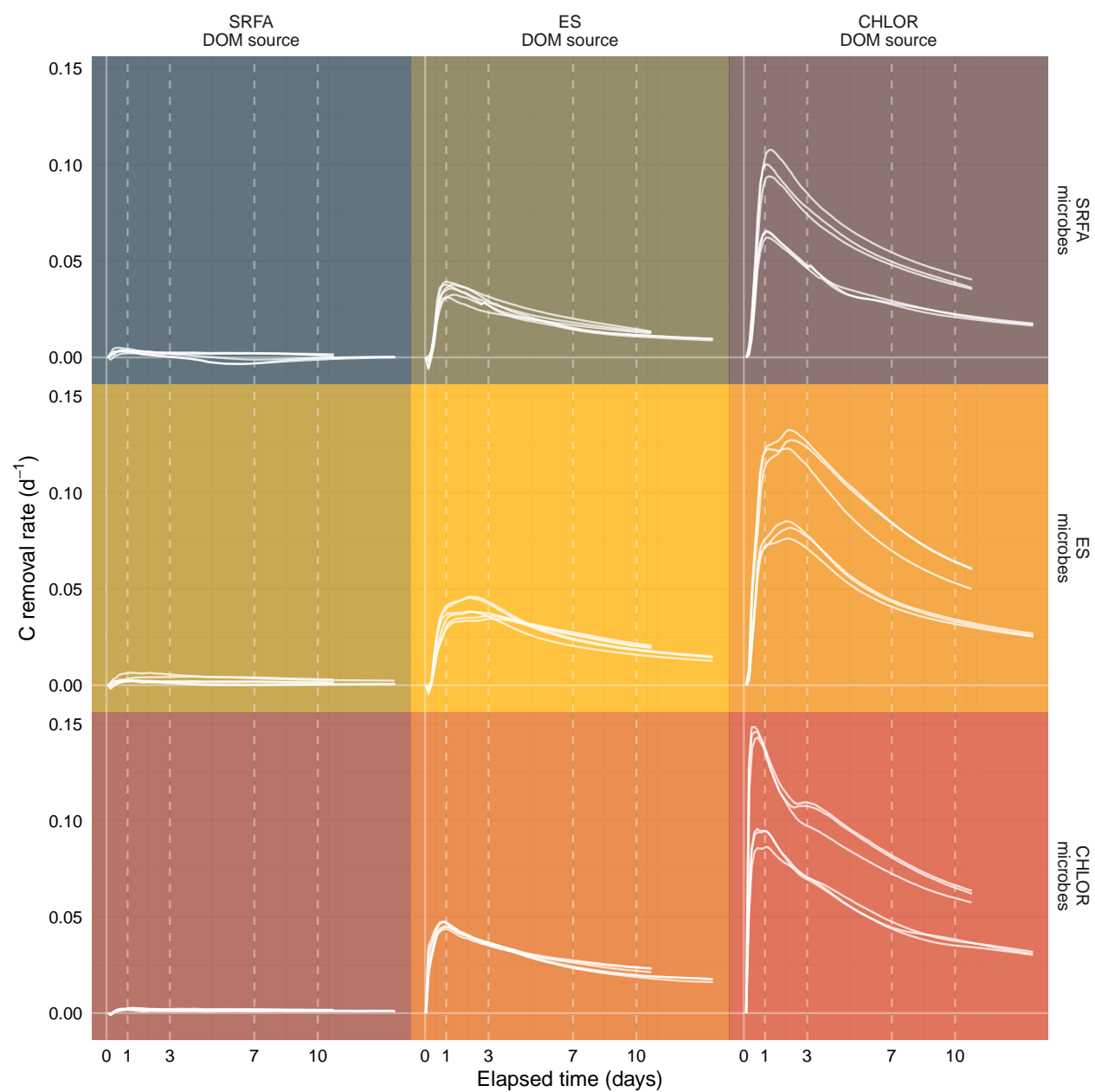


Figure 5

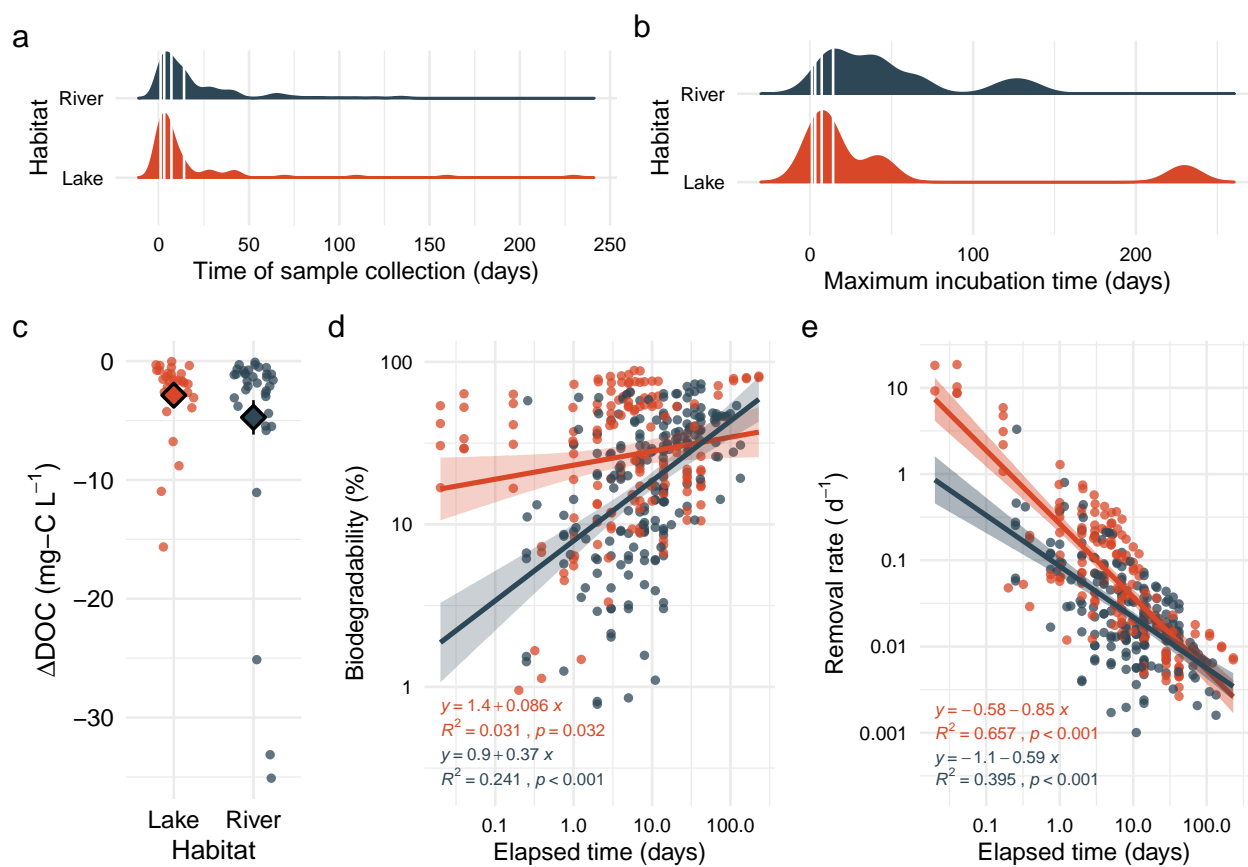


Figure 6

Study objective	C bioavailability		
	Total degradation	Relative degradation	Microbial activity
Degradation metric	ΔDOC	Biodegradability	C removal rate
	$\Delta\text{DOC} = \text{DOC}_F - \text{DOC}_0$	$\text{BD}\text{OC}_t = \frac{\text{DOC}_0 - \text{DOC}_t}{\text{DOC}_0} \times 100$	$k_t = -\frac{1}{t} \ln \frac{\text{DOC}_t}{\text{DOC}_0}$
Sampling strategy	Balanced sampling		Front-loaded sampling

Supplemental

Figure S1

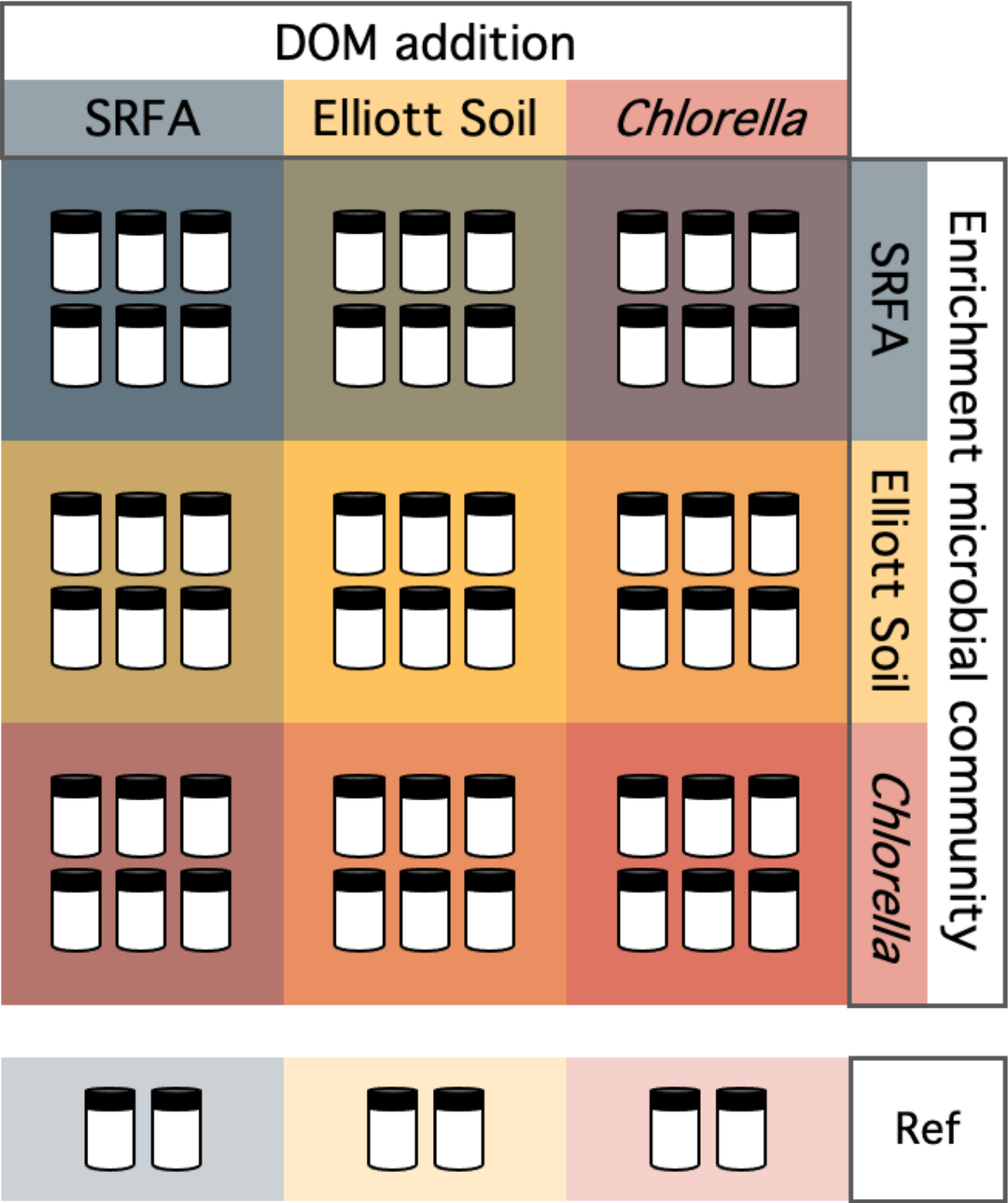


Figure S2

a

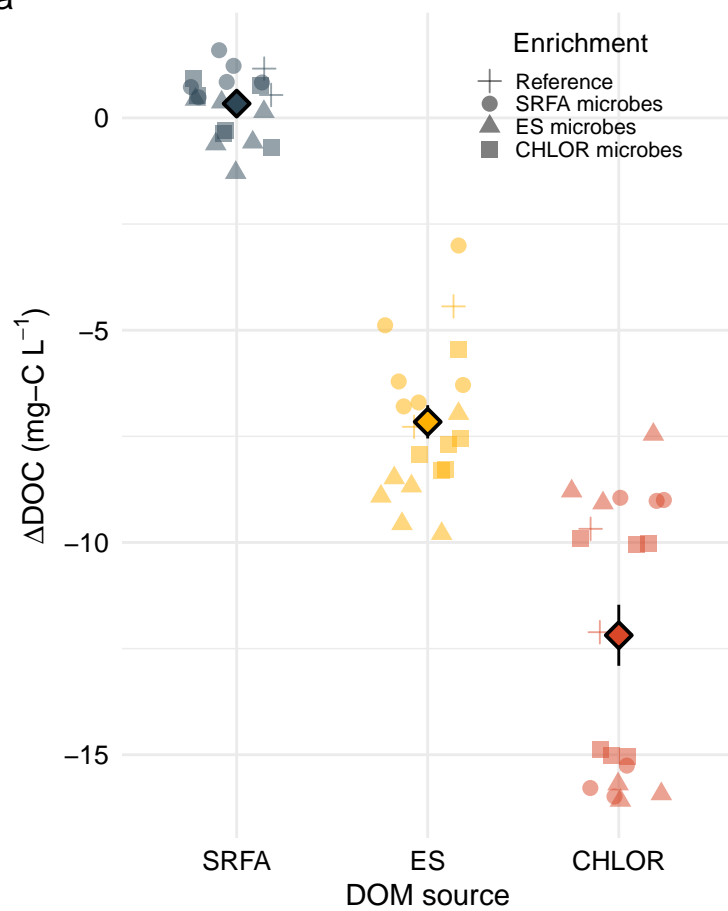


Figure S3

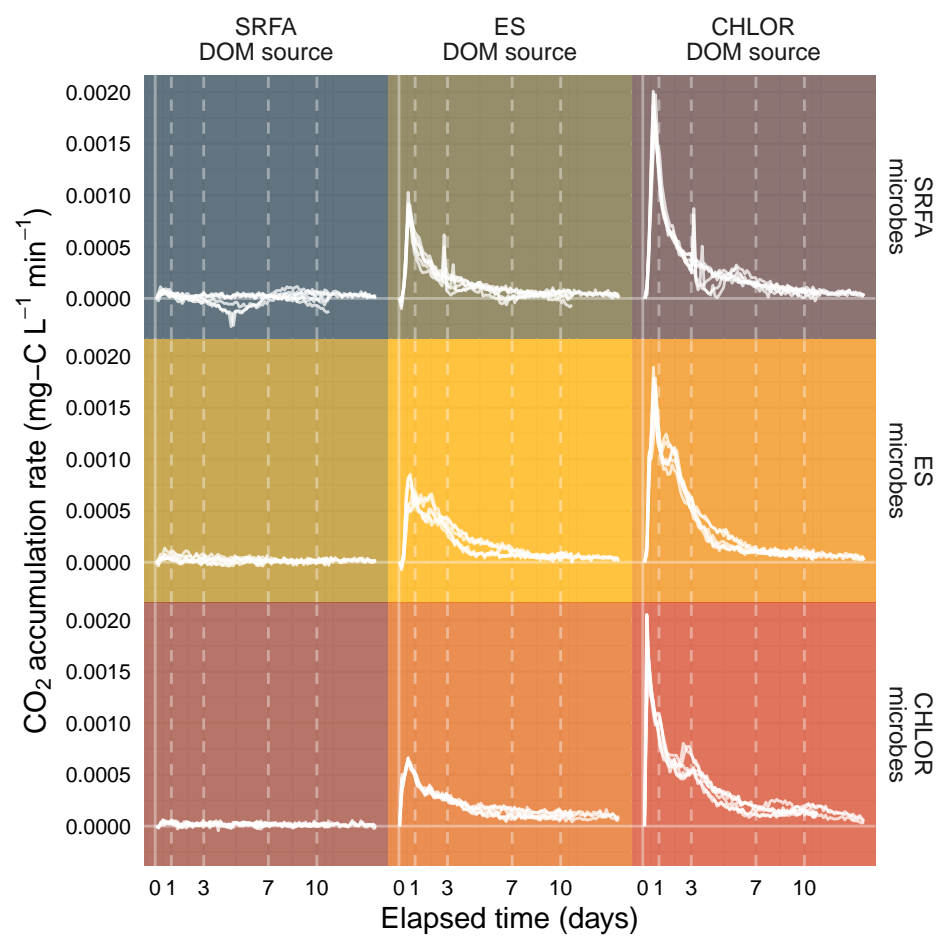


Figure S4

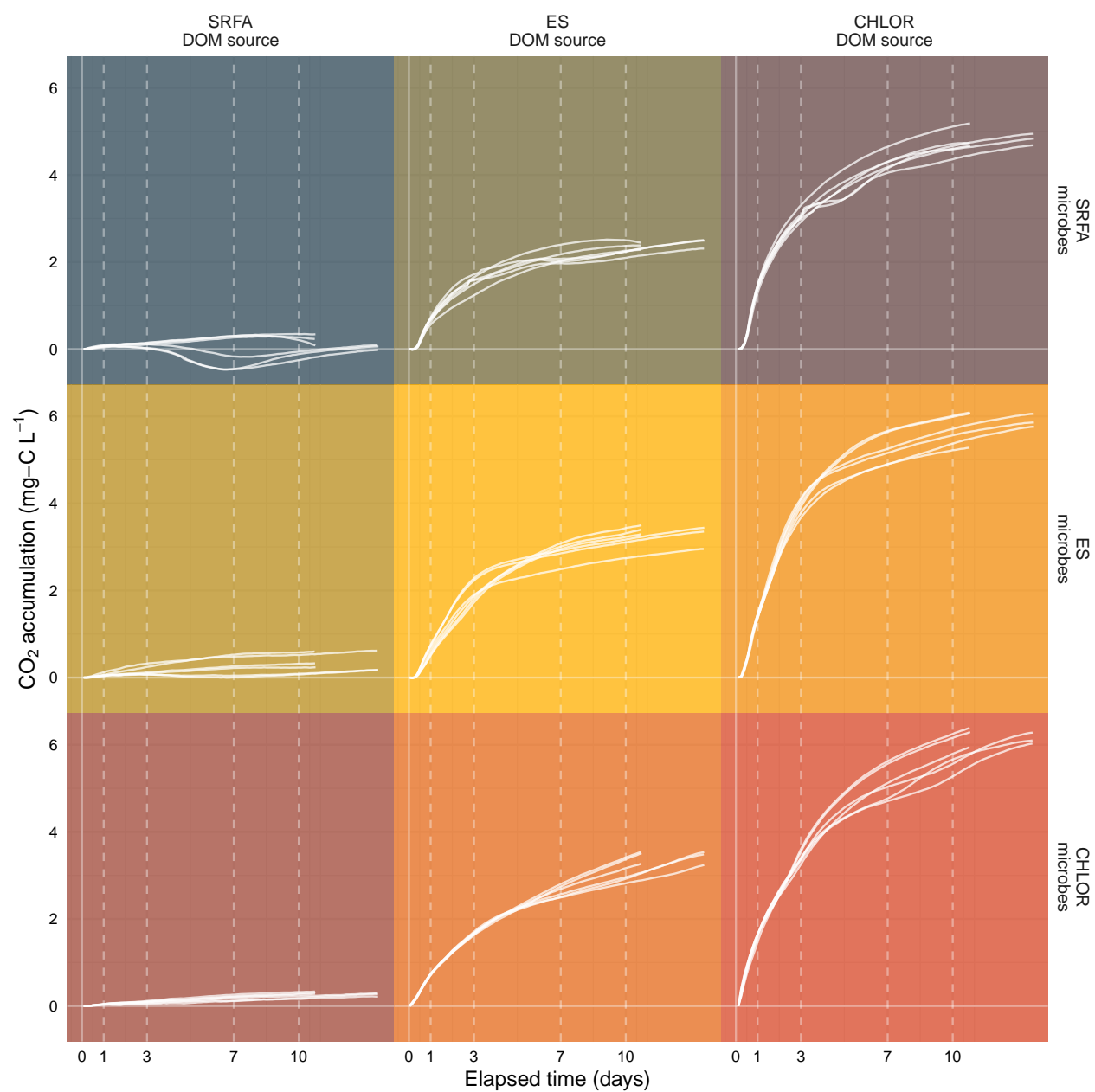


Figure S5

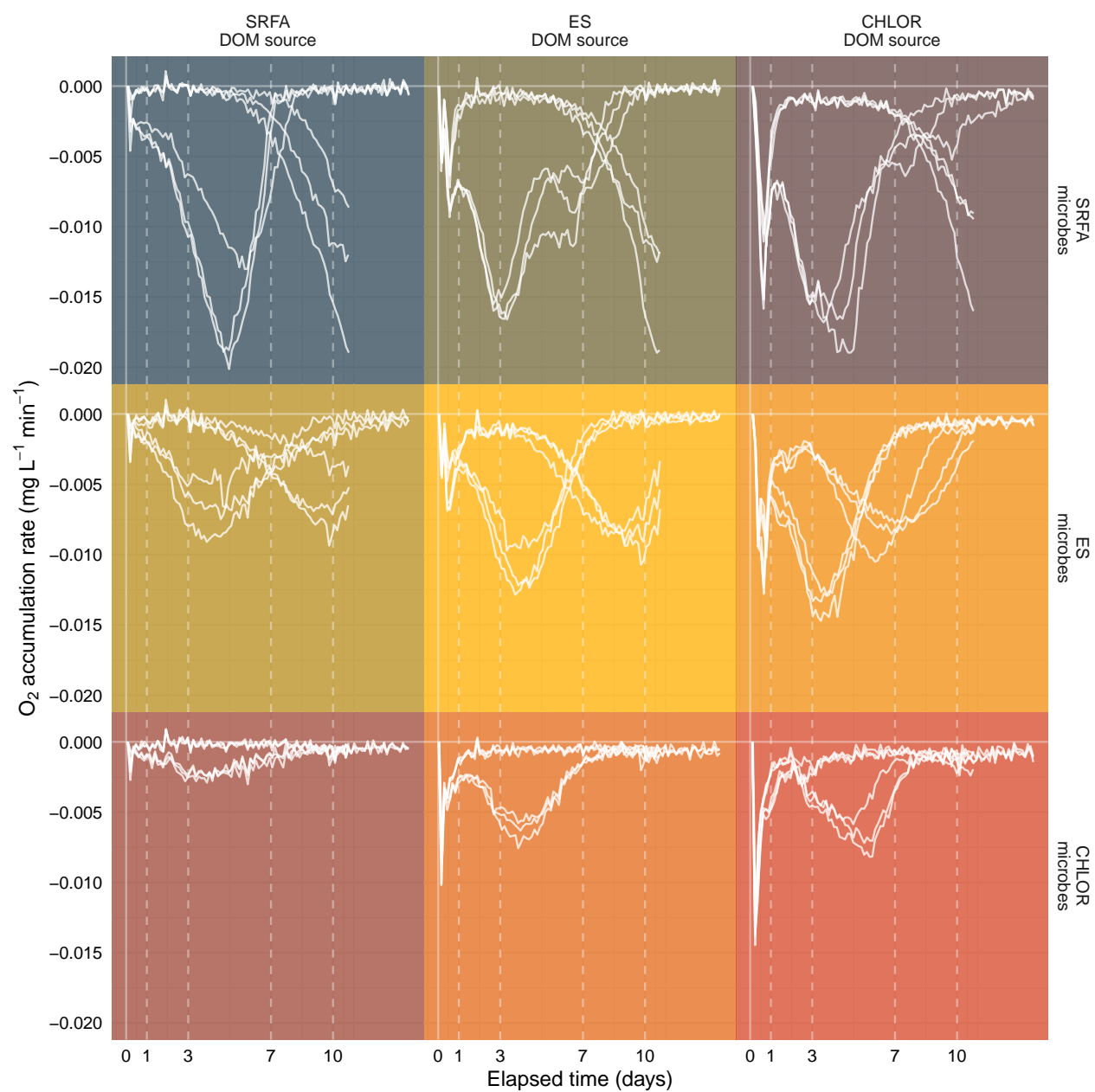


Figure S6

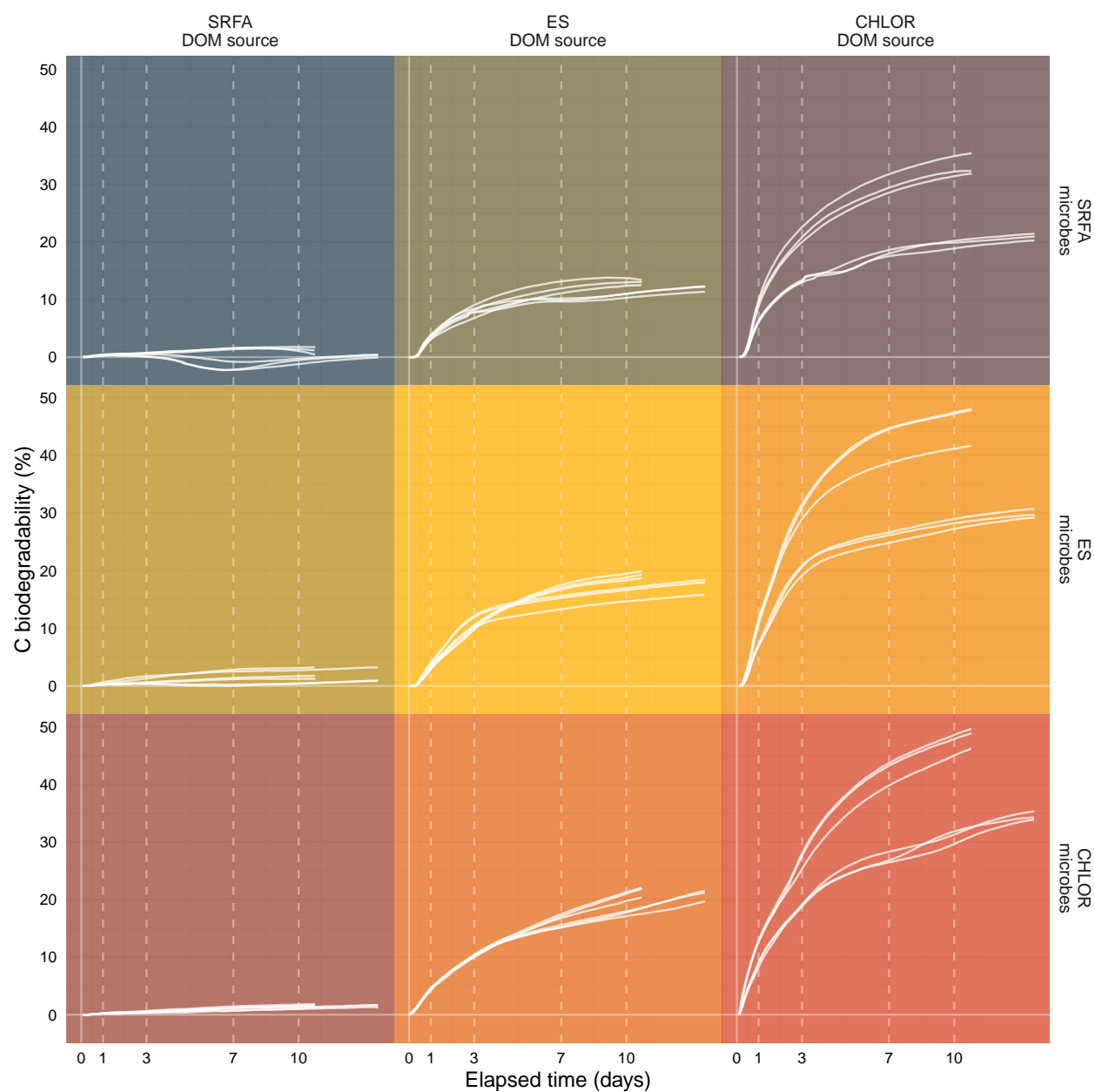


Table S1

	Df	Sum Sq	Mean Sq	F value	Pr(>F)
DOMSource	2	1588.662	794.331	170.421	0.000
Enrichment	3	25.021	8.340	1.789	0.162
DOMSource:Enrichment	6	16.949	2.825	0.606	0.724
Residuals	48	223.727	4.661	NA	NA

Table S2

DOMSource	Enrichment	initialDOC	finalDOC	1	3	7	10
SRFA	CTRL	20.38 (1.33)	21.23 (0.89)	0.02 (0.01)	0.01 (0.04)	0.06 (0.13)	0.08 (0.16)
SRFA	SRFA	20.23 (0.88)	21.18 (0.63)	0.07 (0.02)	0.09 (0.06)	-0.04 (0.37)	0.07 (0.24)
SRFA	ES	18.9 (0.42)	18.65 (0.64)	0.06 (0.03)	0.15 (0.1)	0.26 (0.22)	0.3 (0.21)
SRFA	CHLOR	17.56 (0.74)	17.7 (0.21)	0.04 (0.01)	0.09 (0.03)	0.18 (0.06)	0.24 (0.06)
ES	CTRL	19.36 (0.89)	13.5 (1.12)	0.09 (0.24)	0.48 (0.61)	1.16 (0.45)	1.39 (0.43)
ES	SRFA	19.32 (1.52)	13.68 (2.1)	0.66 (0.06)	1.55 (0.17)	2.11 (0.16)	2.28 (0.14)
ES	ES	18.13 (0.77)	9.4 (1.15)	0.63 (0.1)	1.96 (0.23)	2.88 (0.21)	3.16 (0.24)
ES	CHLOR	16.26 (0.31)	8.73 (1.14)	0.73 (0.01)	1.67 (0.03)	2.63 (0.13)	3.11 (0.25)
CHLOR	CTRL	17.7 (3.85)	6.81 (2.13)	0.37 (0.58)	2.06 (0.79)	3.13 (1.25)	3.36 (1.43)
CHLOR	SRFA	18.89 (5.99)	6.55 (1.01)	1.4 (0.07)	3.06 (0.13)	4.27 (0.21)	4.67 (0.25)
CHLOR	ES	16.2 (4.99)	4.03 (0.6)	1.4 (0.05)	3.93 (0.17)	5.25 (0.34)	5.64 (0.32)
CHLOR	CHLOR	15.34 (3.49)	2.85 (0.08)	1.6 (0.07)	3.42 (0.13)	5.14 (0.39)	5.78 (0.37)

Table S3

Log accumulation rate

	Df	Sum Sq	Mean Sq	F value	Pr(>F)
DOMSource	2	15.381	7.691	342.127	0.000
Enrichment	2	0.532	0.266	11.824	0.000
Time_d	1	10.185	10.185	453.078	0.000
DOMSource:Enrichment	4	0.093	0.023	1.032	0.392
DOMSource:Time_d	2	2.633	1.316	58.556	0.000
Enrichment:Time_d	2	0.250	0.125	5.558	0.004
DOMSource:Enrichment:Time_d	4	0.031	0.008	0.350	0.844
Residuals	198	4.451	0.022	NA	NA

Log total CO2 accumulation

	Df	Sum Sq	Mean Sq	F value	Pr(>F)
DOMSource	2	485.775	242.888	1593.015	0.000
Enrichment	2	8.384	4.192	27.493	0.000
Time_d	1	125.709	125.709	824.483	0.000
DOMSource:Enrichment	4	2.498	0.624	4.095	0.003
DOMSource:Time_d	2	68.780	34.390	225.551	0.000
Enrichment:Time_d	2	3.131	1.565	10.267	0.000
DOMSource:Enrichment:Time_d	4	0.610	0.153	1.000	0.408
Residuals	198	30.189	0.152	NA	NA

Table S4

Log biodegradability

	Df	Sum Sq	Mean Sq	F value	Pr(>F)
DOMSource	2	31.044	15.522	737.092	0.000
Enrichment	2	0.816	0.408	19.365	0.000
Time_d	1	3.085	3.085	146.493	0.000
DOMSource:Enrichment	4	0.031	0.008	0.368	0.831
DOMSource:Time_d	2	1.052	0.526	24.980	0.000

	Df	Sum Sq	Mean Sq	F value	Pr(>F)
Enrichment:Time_d	2	0.174	0.087	4.132	0.017
DOMSource:Enrichment:Time_d	4	0.069	0.017	0.821	0.513
Residuals	198	4.170	0.021	NA	NA

Log C removal

	Df	Sum Sq	Mean Sq	F value	Pr(>F)
DOMSource	2	49.072	24.536	1296.460	0.000
Enrichment	2	0.935	0.467	24.701	0.000
Time_d	1	2.587	2.587	136.682	0.000
DOMSource:Enrichment	4	0.047	0.012	0.618	0.650
DOMSource:Time_d	2	0.200	0.100	5.277	0.006
Enrichment:Time_d	2	0.151	0.075	3.977	0.020
DOMSource:Enrichment:Time_d	4	0.062	0.016	0.824	0.511
Residuals	198	3.747	0.019	NA	NA