

Kelly et al. Figures

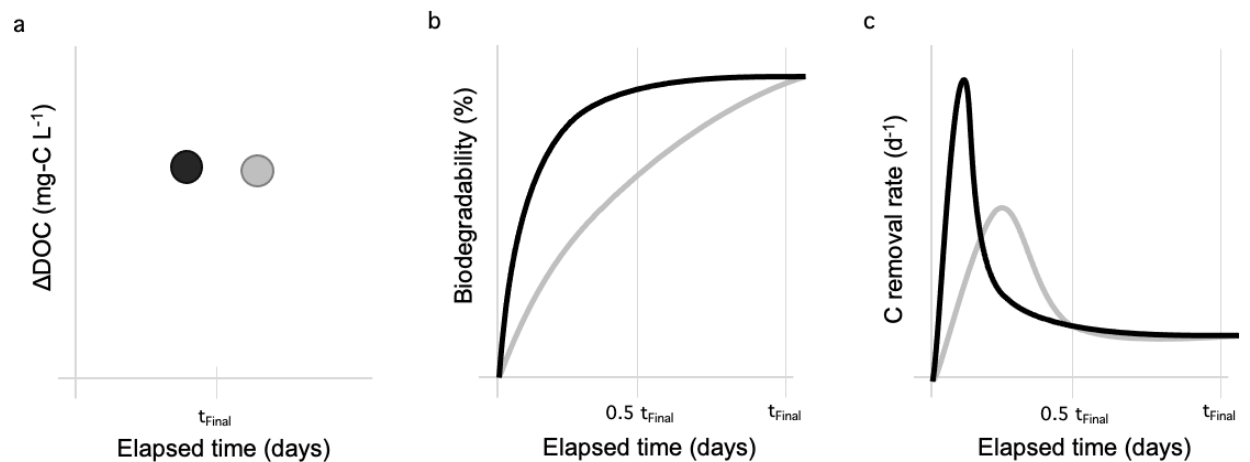
Different Incubation Assay Metrics Describe Different Aspects of Carbon Degradation

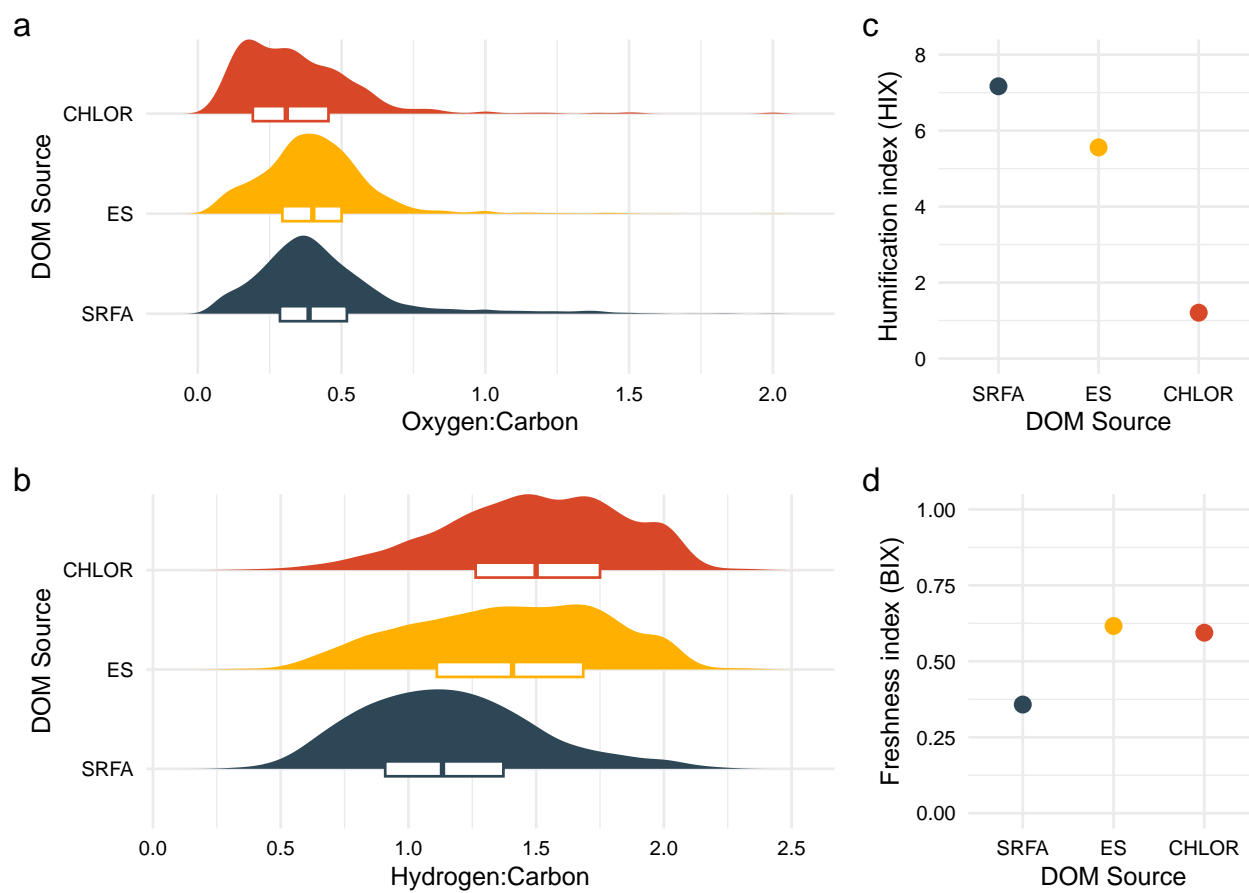
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Main manuscript

Figure 1



**Figure 2**

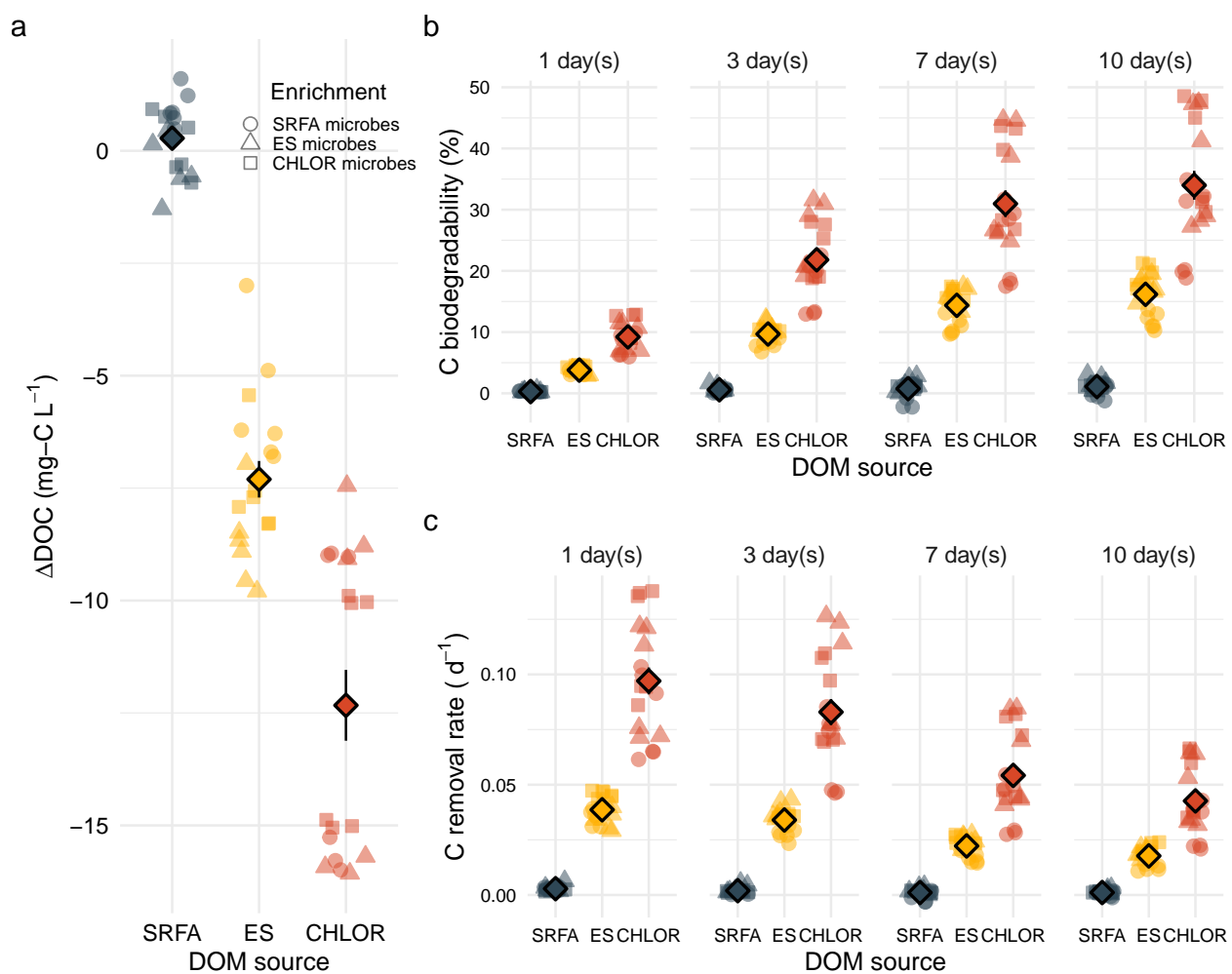
**Figure 3**

Figure 4

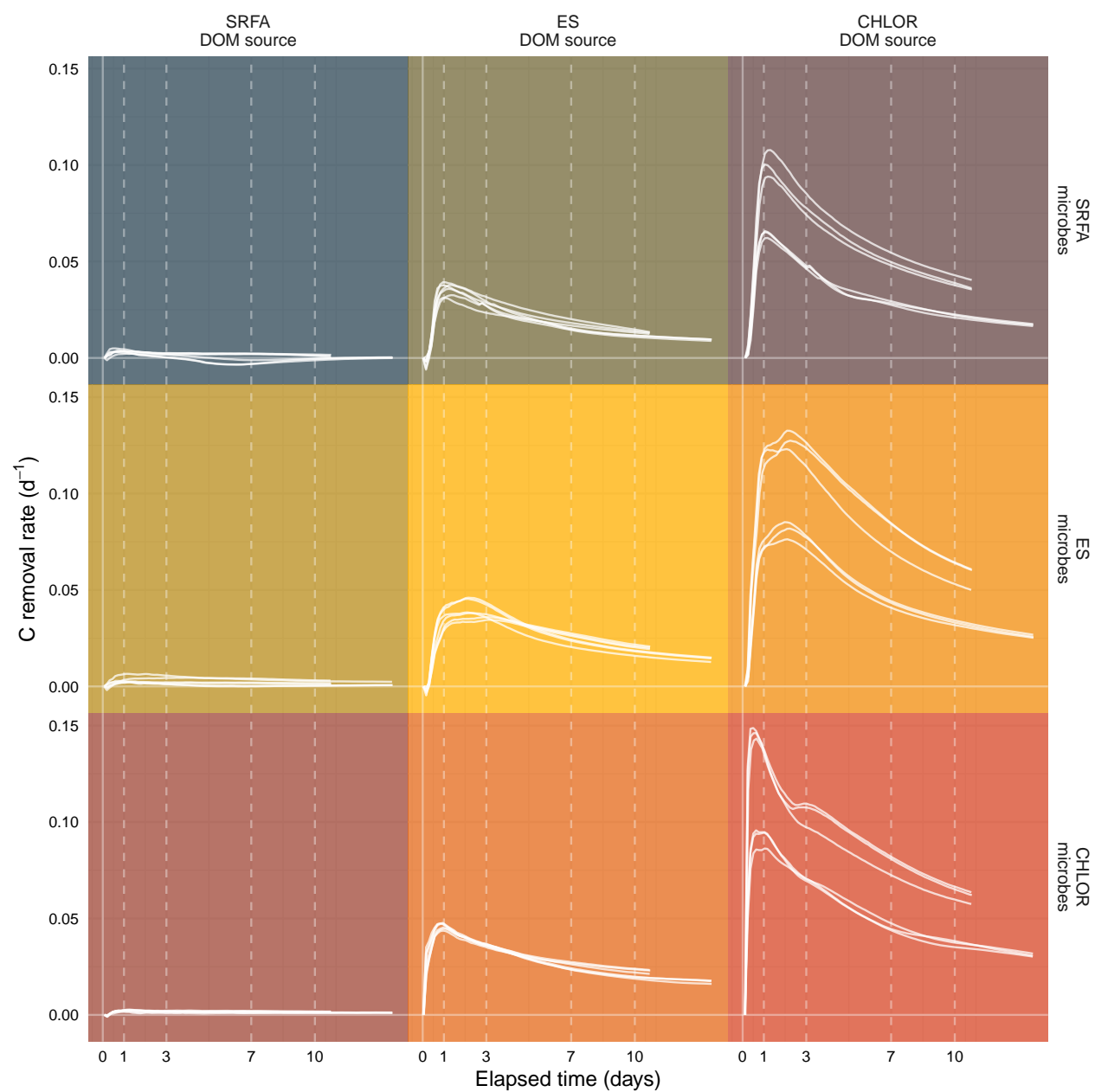


Figure 5

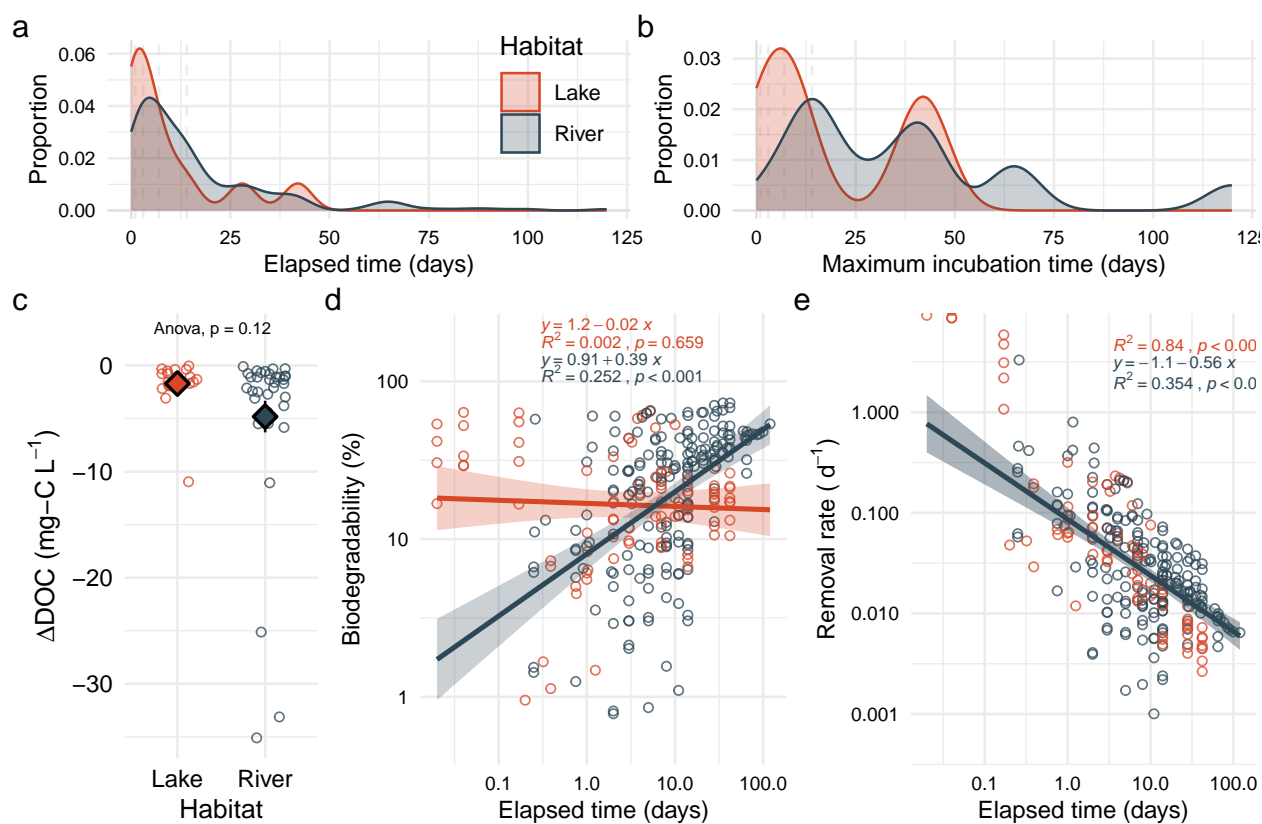


Figure 6

Study objective	C bioavailability	
	Total degradation	Relative degradation
Degradation metric	<b>ΔDOC</b> $\Delta\text{DOC} = \text{DOC}_F - \text{DOC}_0$	<b>Biodegradability</b> $\text{BDOC}_t = \frac{\text{DOC}_0 - \text{DOC}_t}{\text{DOC}_0} \times 100$
		<b>C removal rate</b> $k_t = -\frac{1}{t} \ln \frac{\text{DOC}_t}{\text{DOC}_0}$
Sampling strategy	Balanced sampling	
	Front-loaded sampling	
Sampling strategy	$t_0 \quad t_1 \quad t_2 \quad t_3 \quad t_4 \quad t_{\text{Final}}$	
	$t_0 \quad t_1 \quad t_2 \quad t_3 \quad t_4 \quad t_{\text{Final}}$	

Supplemental

Figure S1

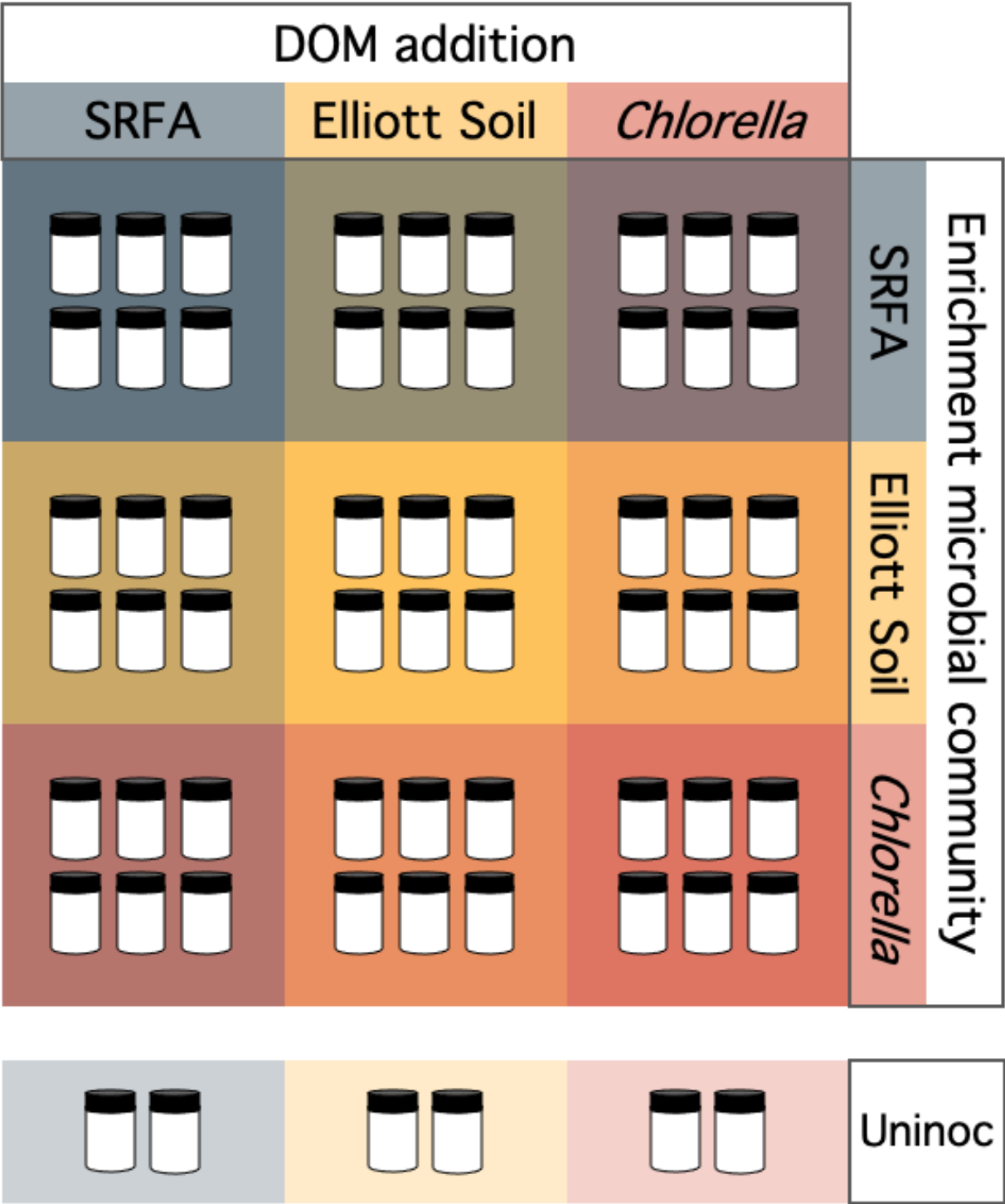


Figure S2

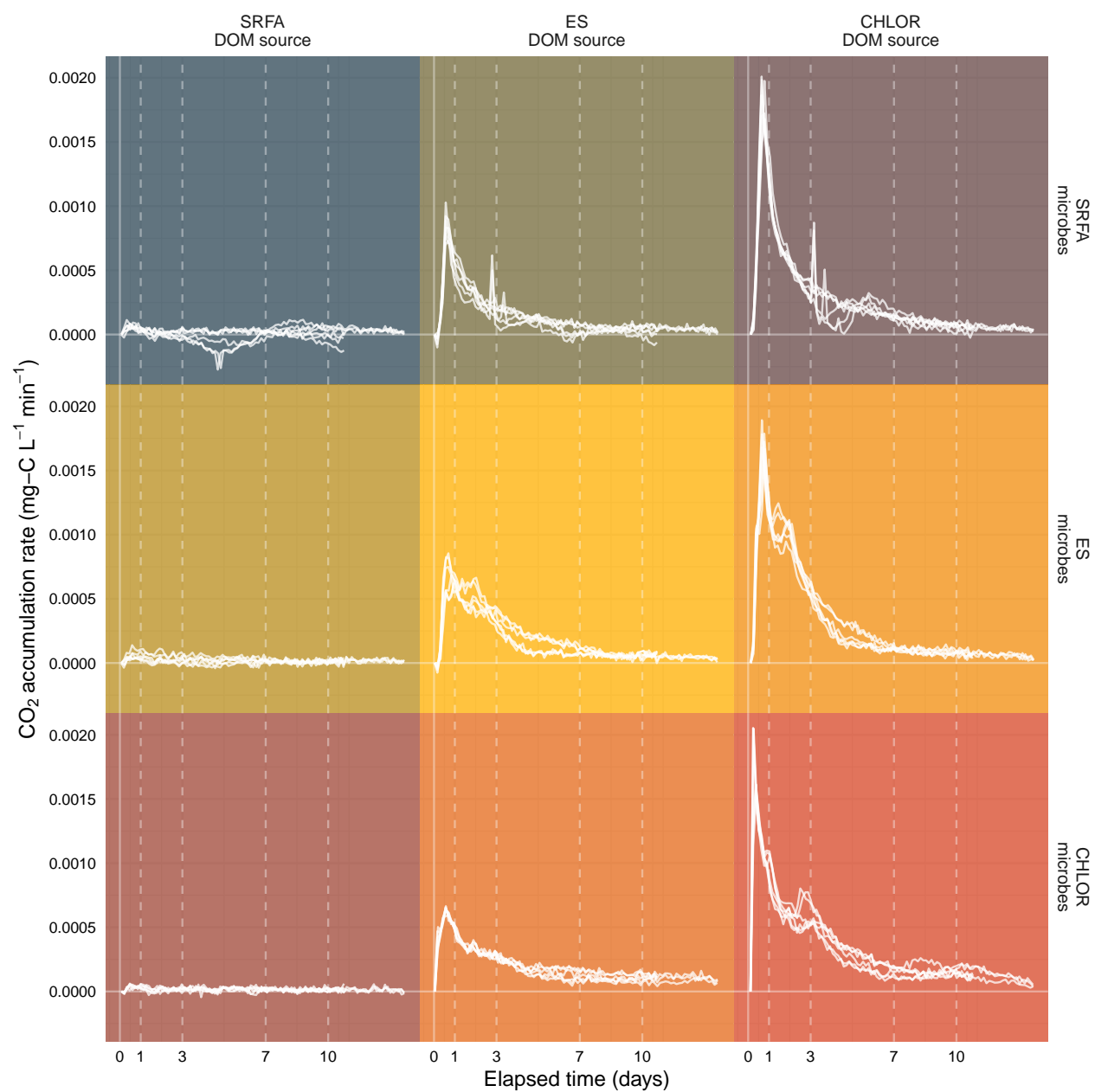
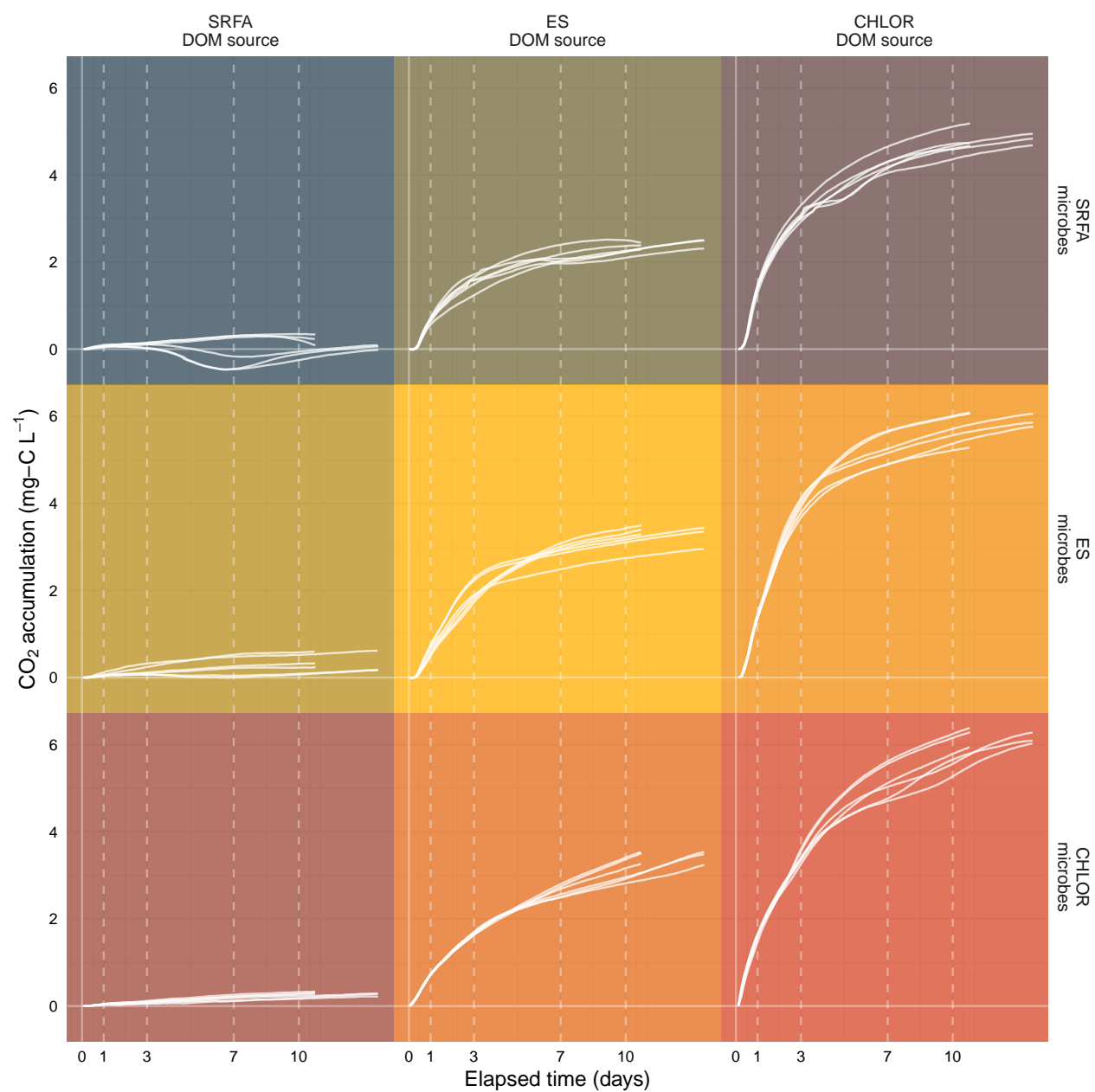
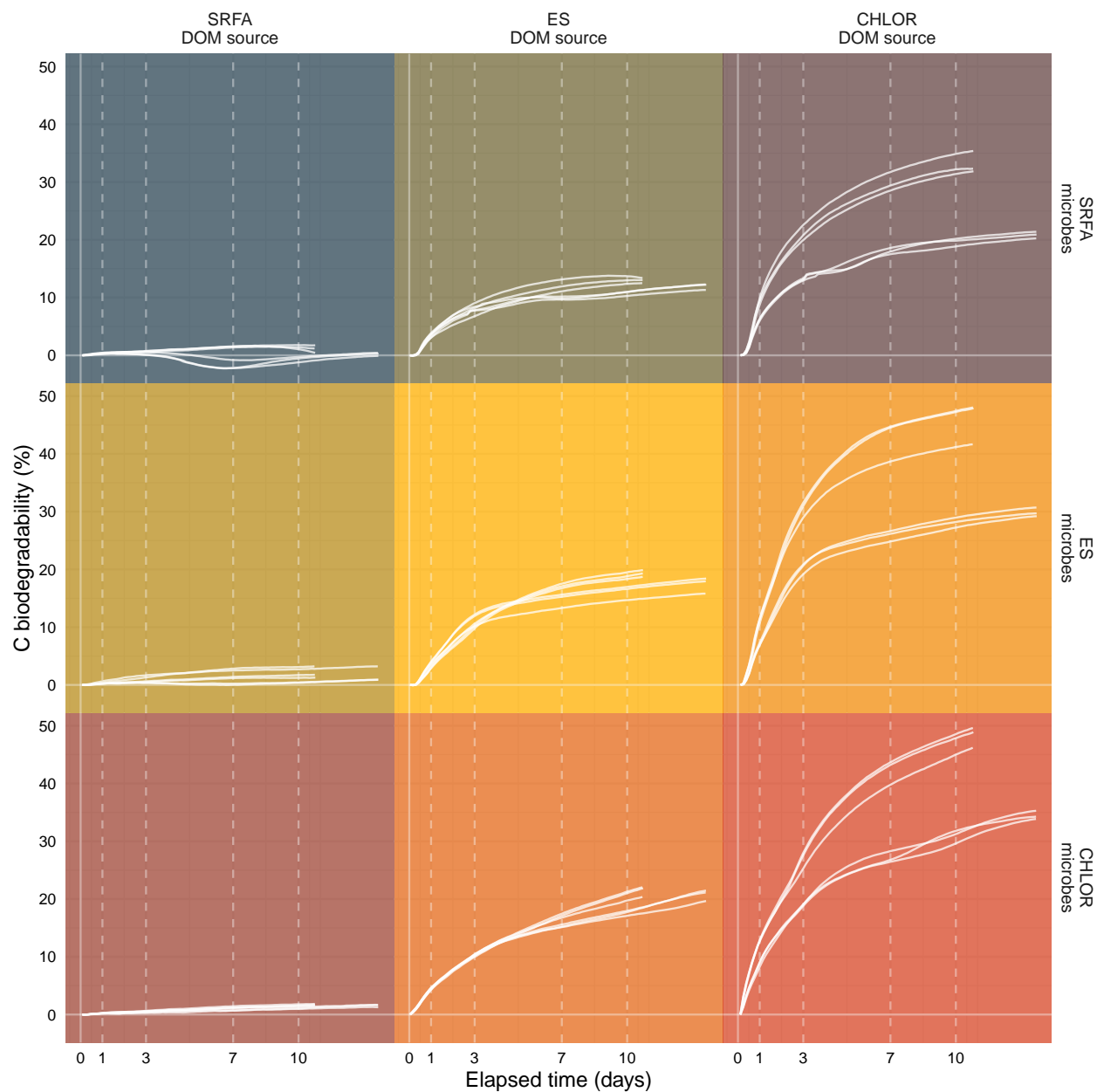


Figure S3





**Figure S4****Table S1**

	Df	Sum Sq	Mean Sq	F value	Pr(>F)
DOMSource	2	1450.747	725.374	150.737	0.000
Enrichment	2	17.882	8.941	1.858	0.168
DOMSource:Enrichment	4	16.040	4.010	0.833	0.511
Residuals	45	216.548	4.812	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