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*Supplement of*

## **Distinctive effects of allochthonous and autochthonous organic matter on CDOM spectra in a tropical lake**

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Supplementary material

Fig. S1 - Least-squares means (plus the 95% confidence interval) for combination of nutrients and shade for the absorbance at 254 nm.

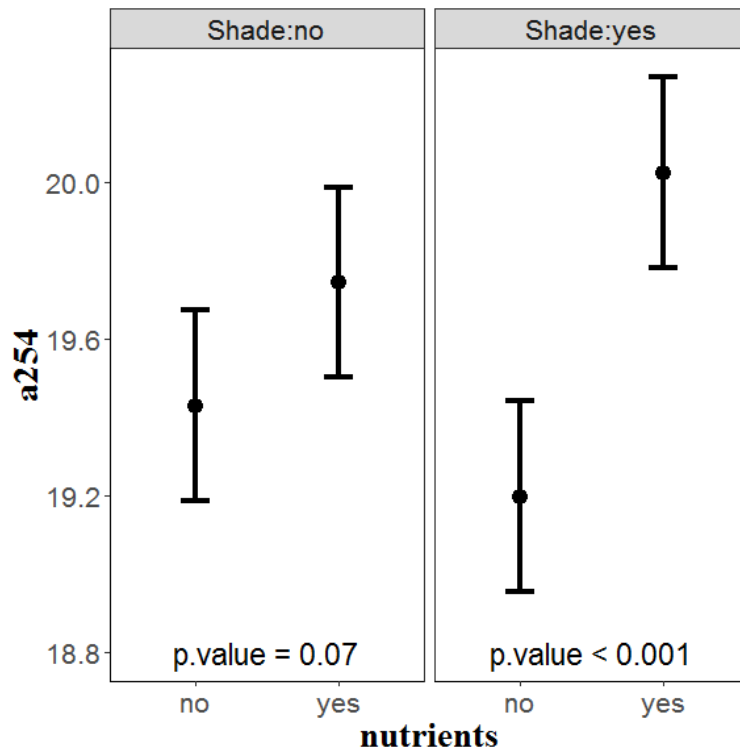


Fig. S2 - Least-squares means (plus the 95% confidence interval) for combination of nutrients and shade for the absorbance at 440 nm.

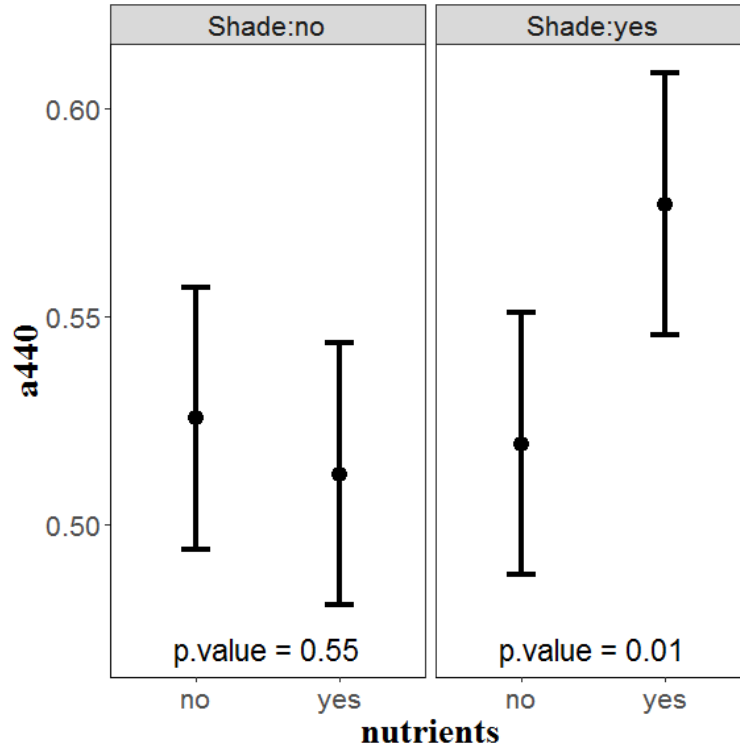


Table S1 – Mesocosms organized in six groups for figures.

Groups	Treatments in the group							
	control	OM	OMNUT	OMSH	OMNUTSH	NUT	NUTSH	SH
OM addition		X	X	X	X			
without OM addition	X					X	X	X
NUT addition			X		X	X	X	
without NUT addition	X	X		X				X
with SH				X	X		X	X
full light	X	X	X			X		

OM = organic matter    NUT = nutrients    SH = shade

Table S2 - Absolute values and relative changes (average of the two replicates) of all the parameters measured during 12 days of experiment.

Treatment	Days	DOC (mg L <sup>-1</sup> )	a254 (m <sup>-1</sup> )	a440 (m <sup>-1</sup> )	SUVA <sub>254</sub> (m <sup>2</sup> mg <sup>-1</sup> C)	S275-295 (nm <sup>-1</sup> )	S350-400 (nm <sup>-1</sup> )	S250-450 (nm <sup>-1</sup> )	<i>S<sub>R</sub></i>	Chl- <i>a</i> (µg L <sup>-1</sup> )	TSM (mg L <sup>-1</sup> )
control	0	8.44	17.38	0.46	2.064	0.025	0.019	0.021	1.336	1.87	1.27
	3	7.76	16.88	0.38	2.176	0.026	0.020	0.022	1.338	3.74	1.87
	6	8.01	17.24	0.38	2.152	0.026	0.020	0.022	1.318	2.67	1.41
	9	7.66	17.30	0.36	2.258	0.027	0.021	0.022	1.317	1.60	1.21
	12	8.37	17.25	0.39	2.064	0.027	0.020	0.022	1.343	2.67	1.61
	<i>relative change (%)</i>	<i>-0.81</i>	<i>-0.73</i>	<i>-15.00</i>	<i>-0.02</i>	<i>5.75</i>	<i>5.21</i>	<i>3.45</i>	<i>0.50</i>	<i>42.86</i>	<i>26.88</i>
NUT	0	7.98	17.38	0.45	2.180	0.025	0.019	0.021	1.279	4.54	1.12
	3	7.97	17.55	0.41	2.202	0.025	0.020	0.021	1.268	10.42	2.15
	6	8.69	17.64	0.40	2.029	0.026	0.019	0.021	1.348	10.16	2.73
	9	8.36	17.68	0.30	2.116	0.026	0.020	0.022	1.294	9.62	2.62
	12	7.90	17.46	0.37	2.211	0.027	0.021	0.021	1.300	23.79	3.60
	<i>relative change (%)</i>	<i>-1.00</i>	<i>0.46</i>	<i>-17.95</i>	<i>1.43</i>	<i>7.90</i>	<i>6.27</i>	<i>1.76</i>	<i>1.64</i>	<i>423.53</i>	<i>220.62</i>
SH	0	7.83	16.67	0.40	2.131	0.025	0.020	0.021	1.253	2.41	1.19
	3	7.73	17.00	0.36	2.200	0.026	0.021	0.021	1.246	2.14	0.78
	6	8.06	17.58	0.54	2.180	0.024	0.019	0.021	1.287	2.41	1.71
	9	7.53	17.18	0.37	2.283	0.026	0.021	0.022	1.286	2.41	1.61
	12	8.05	16.57	0.38	2.058	0.026	0.020	0.022	1.277	3.47	1.64
	<i>relative change (%)</i>	<i>2.79</i>	<i>-0.62</i>	<i>-5.71</i>	<i>-3.43</i>	<i>3.61</i>	<i>1.65</i>	<i>2.15</i>	<i>1.89</i>	<i>44.44</i>	<i>37.89</i>
NUTSH	0	7.65	17.01	0.40	2.226	0.025	0.020	0.021	1.235	3.21	1.42
	3	7.64	17.30	0.41	2.266	0.026	0.020	0.021	1.306	10.96	1.84
	6	8.29	17.91	0.47	2.161	0.025	0.019	0.021	1.308	10.42	2.65
	9	8.24	17.78	0.40	2.159	0.026	0.020	0.021	1.277	9.09	2.29
	12	8.20	17.46	0.45	2.132	0.026	0.020	0.021	1.294	22.45	2.54
	<i>relative change (%)</i>	<i>7.16</i>	<i>2.64</i>	<i>11.43</i>	<i>-4.25</i>	<i>3.21</i>	<i>-1.43</i>	<i>-0.63</i>	<i>4.71</i>	<i>600.00</i>	<i>79.25</i>
OM	0	8.56	21.25	0.64	2.482	0.022	0.019	0.019	1.167	2.67	1.26
	3	8.72	22.38	0.75	2.567	0.022	0.018	0.019	1.202	5.08	2.43
	6	8.72	21.42	0.66	2.457	0.023	0.019	0.019	1.238	3.47	1.87
	9	8.82	22.39	0.68	2.539	0.023	0.019	0.019	1.212	9.36	2.18
	12	8.38	20.84	0.55	2.487	0.024	0.020	0.020	1.222	5.88	2.45
	<i>relative change (%)</i>	<i>-2.12</i>	<i>-1.90</i>	<i>-14.29</i>	<i>0.20</i>	<i>10.58</i>	<i>5.54</i>	<i>7.95</i>	<i>4.77</i>	<i>120.00</i>	<i>93.89</i>
OMNUT	0	8.56	21.67	0.68	2.532	0.022	0.019	0.018	1.146	3.21	3.22
	3	8.30	22.19	0.74	2.675	0.022	0.018	0.019	1.213	13.90	3.00
	6	9.16	22.77	0.67	2.486	0.023	0.019	0.019	1.204	14.17	3.66
	9	9.33	22.23	0.58	2.383	0.023	0.020	0.020	1.196	12.56	4.14
	12	8.48	20.90	0.53	2.464	0.025	0.020	0.020	1.218	14.43	3.81
	<i>relative change (%)</i>	<i>-0.89</i>	<i>-3.56</i>	<i>-22.03</i>	<i>-2.70</i>	<i>12.85</i>	<i>6.22</i>	<i>8.74</i>	<i>6.33</i>	<i>350.00</i>	<i>18.36</i>
OMSH	0	8.61	20.95	0.63	2.432	0.022	0.019	0.019	1.158	3.21	1.30
	3	8.24	21.54	0.71	2.614	0.022	0.019	0.019	1.185	6.42	2.02
	6	8.61	21.46	0.71	2.494	0.023	0.018	0.019	1.263	3.21	2.15
	9	8.54	21.30	0.45	2.494	0.023	0.019	0.019	1.196	12.30	2.61
	12	8.26	21.73	0.63	2.616	0.023	0.019	0.019	1.202	8.02	2.32
	<i>relative change (%)</i>	<i>-4.12</i>	<i>3.74</i>	<i>0.00</i>	<i>7.58</i>	<i>5.16</i>	<i>1.29</i>	<i>3.59</i>	<i>3.82</i>	<i>150.00</i>	<i>78.98</i>
OMNUTSH	0	8.64	21.90	0.70	2.536	0.022	0.019	0.018	1.139	4.81	1.27
	3	8.26	22.93	0.77	2.775	0.022	0.018	0.019	1.177	13.63	2.68
	6	8.75	22.81	0.82	2.606	0.022	0.018	0.018	1.221	16.31	3.89
	9	9.02	22.26	0.68	2.467	0.022	0.019	0.019	1.134	14.43	3.86
	12	8.27	22.91	0.66	2.773	0.023	0.019	0.019	1.185	16.04	6.47
	<i>relative change (%)</i>	<i>-4.31</i>	<i>4.63</i>	<i>-6.56</i>	<i>9.32</i>	<i>7.03</i>	<i>2.86</i>	<i>5.16</i>	<i>4.06</i>	<i>233.33</i>	<i>408.49</i>

Negative values in relative changes indicate decrease and positive indicate increase compared to initial values [relative changes = -1\*(1 - end/start) x 100]