

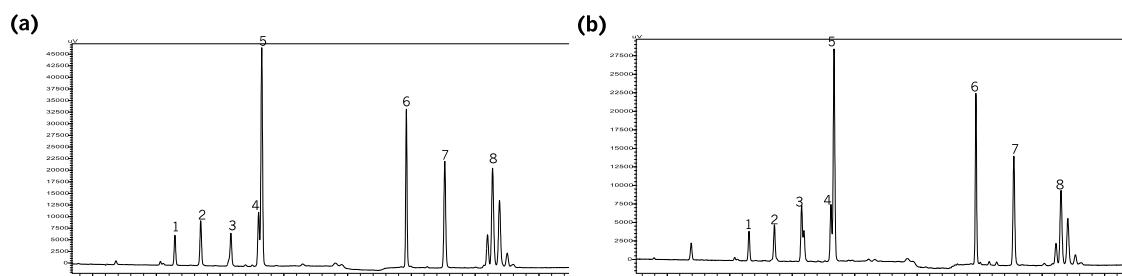
### Supplementary material

**Table S1-** Different levels of the significant factors tested in the CCRD

Factors	Units	Experimental values- Coded level				
		- $\alpha$	-1	0	+1	+ $\alpha$
<b>N content</b>	mmol.L <sup>-1</sup>	5	7.5	10	12.5	15
<b>P content</b>	mmol.L <sup>-1</sup>	0	0.15	0.1	0.15	0.2
<b>Salinity</b>	PSU	6	35	62	89	116
<b>Aeration rate</b>	mL.min <sup>-1</sup>	500	600	700	800	900

**Table S2-** Different levels of the significant factors tested in the CCD

Factors	Units	Experimental values- Coded level		
		-1	0	+1
<b>N content</b>	mmol.L <sup>-1</sup>	2	4	6
<b>P content</b>	mmol.L <sup>-1</sup>	0.2	0.3	0.4



1- Neoxanthin 2- Violaxanthin 3- Antheraxanthin 4- Zeaxanthin 5- Lutein 6- Chlorophyll b 7- Chlorophyll a 8-  $\beta$ -carotene

**Figure S1:** Profile of the major pigments detected in *D. salina* under the optimal (a) and standard (b) conditions (HPLC chromatogram).