

Table S1. Results of the main test of PERMANOVA: values of the Pseudo-F variables and relative p-values. Significant p-values are indicated in bold. Pseudo-F's subscripts indicate the degrees of freedom. *: car: carotenoids extracts; poly: polyphenolic extracts.

Parameter	Pseudo-F _{9,11}	p-Value
Extracts		
<i>Carotenoids</i>		
Neoxanthin	1.14	0.3707
Loroxanthin	65.18	0.0051
Violaxanthin	7.76	0.0087
Antheraxanthin	9.52	0.0115
Zeaxanthin	209.46	0.0039
Lutein	4.88	0.0287
Cis-lutein	0.53	0.6083
α -carotene	5.12	0.0411
β -carotene	16.52	0.0062
<i>Chlorophylls</i>		
Chlorophyll a	0.22	0.8406
Chlorophyll b	1.03	0.4058
Chlorophyll a+b	0.09	0.9022
Chlorophyll a/b	19.61	0.0277
<i>Polyphenols</i>		
Gallic acid	134.16	0.0003
Chlorogenic acid	13.68	0.0006
Coumaric acid	54.19	0.0004
<i>Antioxydant properties*</i>		
DPPH car	216.88	0.0034
DPPH poly	137.28	0.0001
ORAC car	1034.5	0.0004
ORAC poly	8.17	0.0092
	Pseudo-F_{6,8}	p-value
Cultures		
<i>Biomass analysis</i>		
Chlorophyll a	0.75	0.6721
Chlorophyll b	64.28	0.0075
Chlorophyll a+b	94.08	0.0288
Dry Weight	200.16	0.0184
Total carotenoids	194.74	0.0023
<i>JIP test parameters</i>		
Mo	346.1	0.003
V _J	910.1	0.0036
F _v /F _m	4379.8	0.0039
ψ_o	704.43	0.0039
φ_{Eo}	650.68	0.0038