

Supplementary Materials: Evaluation of Microbial Load, Formation of Odorous Metabolites and Lipid Stability during Wet Preservation of *Nannochloropsis gaditana* Concentrates

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Table S1. Factorial ANOVA analysis results for samples without added acetic acid in storage experiment 2.

		Lipid Level	FFA Level	Chlorophyll Level
temperature (T)	F-value	5.79	0.83	8.19
	P-value	0.029*	0.376	0.011*
closing type	F-value	51.88	5.13	50.23
	P-value	0.000*	0.038*	0.000*
storage time	F-value	4.12	30.19	0.44
	P-value	0.059	0.000*	0.518
T x closing type	F-value	10.99	4.4	3.22
	P-value	0.004*	0.052	0.092
T x storage time	F-value	1.77	52.99	0.02
	P-value	0.202	0.000*	0.899
closing type x storage time	F-value	5.01	0.27	1.64
	P-value	0.040*	0.61	0.219
T x closing type x storage time	F-value	1.75	4.07	0.3
	P-value	0.204	0.061	0.593

*factors for which P-value < 0.05, are considered to have a significant effect

Table S2. Factorial ANOVA analysis results for samples with added acetic acid in storage experiment 2.

		Lipid Level	FFA Level	Chlorophyll Level
acid addition	F-value	39.45	94.81	128.6
	P-value	0.000*	0.000*	0.000*
storage time	F-value	0.01	81.26	57
	P-value	0.944	0.000*	0.000*
acid addition x storage time	F-value	21.22	70.97	99.7
	P-value	0.002*	0.000*	0.000*

*factors for which P-value < 0.05, are considered to have a significant effect

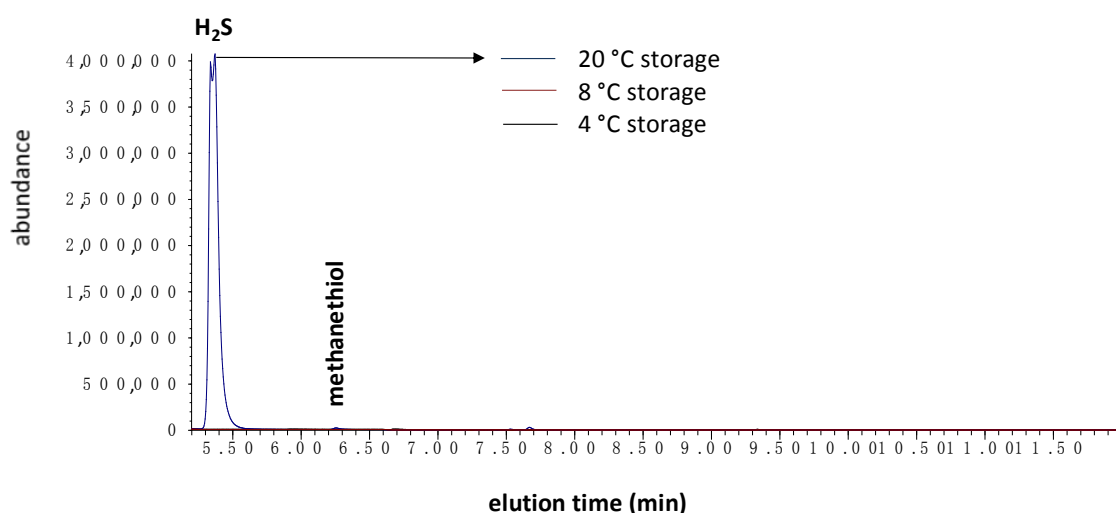


Figure S1. GC-MS analysis of the headspace of algae stored in closed recipients for 14 days. A clear H_2S signal ($t_r = 5.34$ min) was observed after 20 °C storage (upper trace) but not after 4 °C or 8 °C storage (bottom traces). In addition, methanethiol ($t_r = 6.25$ min) was identified in the 20 °C storage headspace ($t_r = 6.26$ min) but its peak was small and was not present in the 4 °C and 8 °C storage chromatograms.

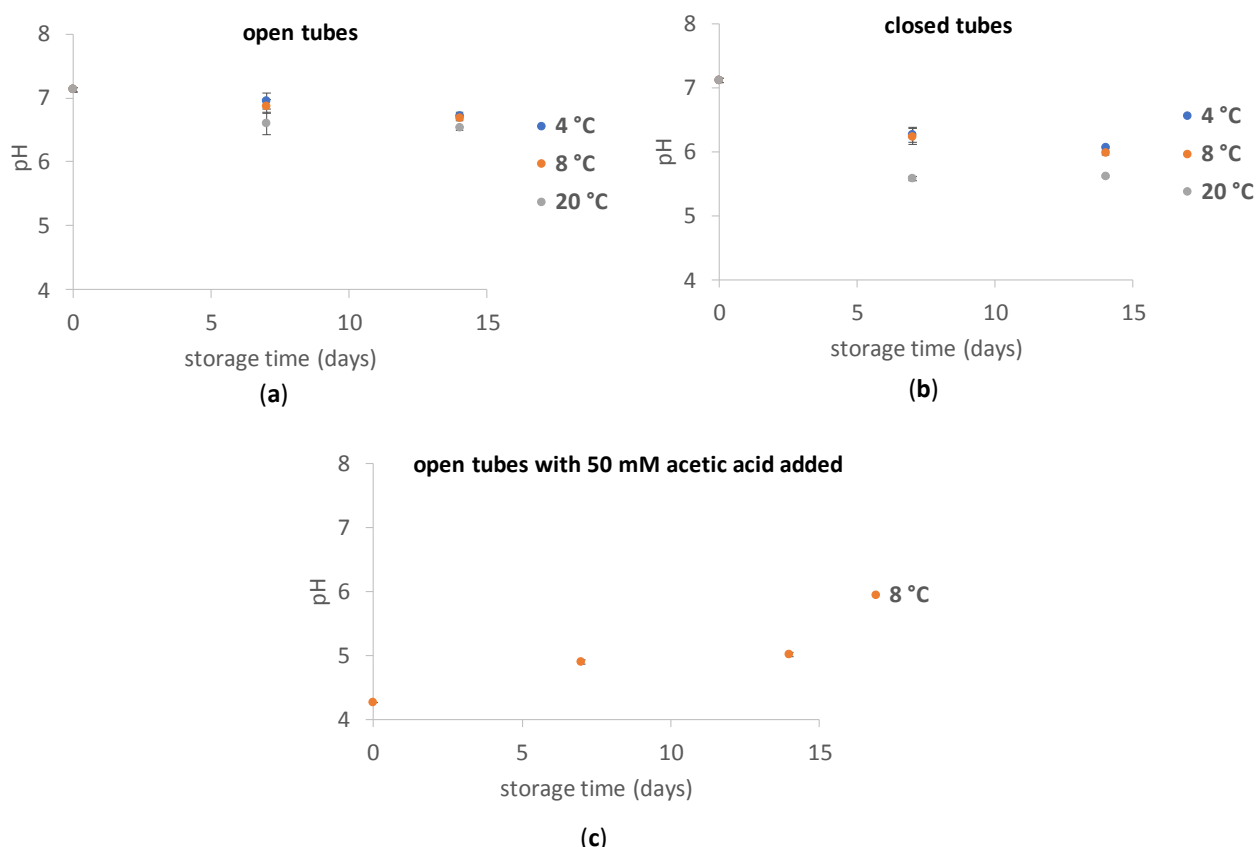


Figure S2. pH values of algae concentrates of the first storage experiment. (a) pH of algae concentrates stored in open tubes. (b) pH of algae concentrates stored in closed tubes. (c) pH of algae concentrates stored in open tubes with added acetic acid (50 mM). Error bars represent standard deviations.

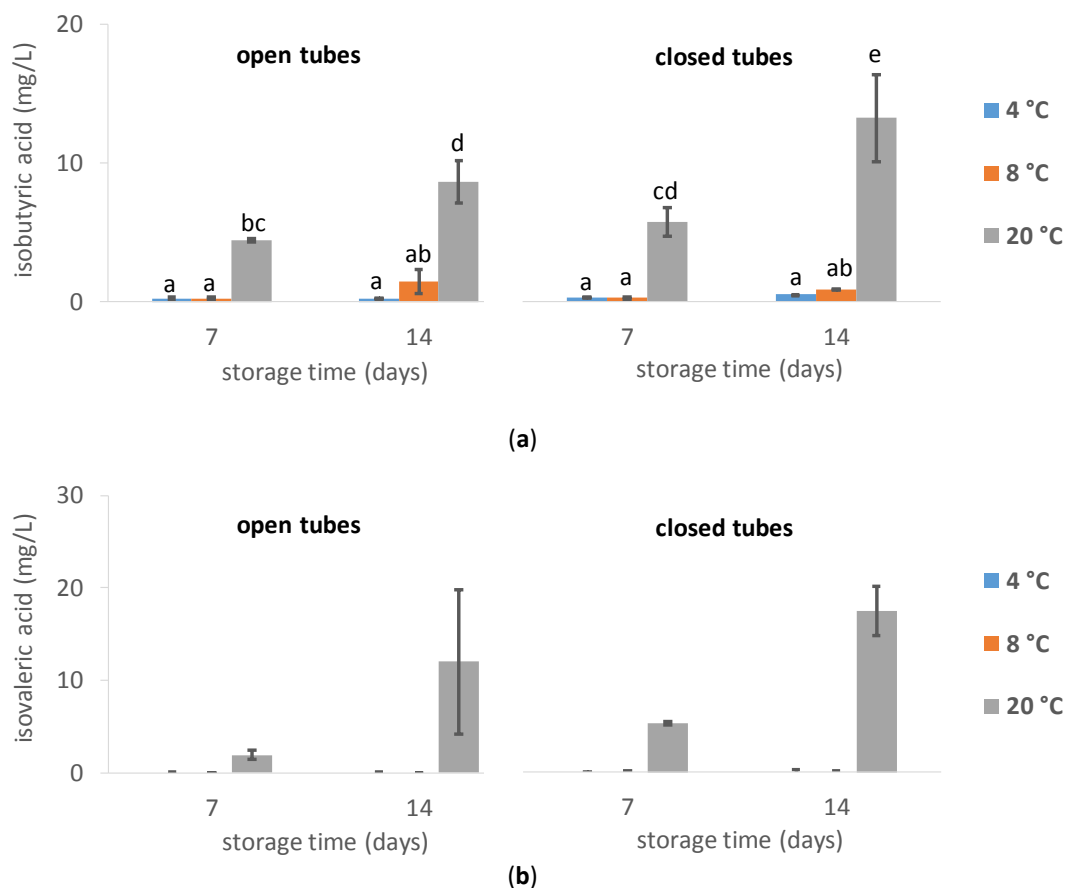


Figure S3. (a) Isobutyric concentrations and (b) isovaleric acid concentrations in algae concentrates without added acetic acid. Error bars represent standard deviations. Lowercase letters (a, b, c, d, e) denote significant differences. Values within one panel that are not labelled by the same letter are significantly different. Because there was no significant interaction between the effect of preservation time, temperature and closing type on isovaleric concentrations ($P = 0.42$), no post-hoc analysis was performed and no letter labels were added for isovaleric acid.