

SUPPLEMENTARY MATERIAL

Supplementary Table S1 Mass spectral analysis of the major polar glycerolipid classes isolated from lipid extract of *Nannochloropsis gaditana*. Lipid classes were purified by thin layer chromatography and each class was introduced by direct infusion (ESI-MS/MS) to a mass spectrometer (LTQ-XL, Thermo Scientific). 20 spectra were collected in full MS and species that gave a spectra intensity above 5% of the spectra intensity of the predominant molecular species were selected and analysed in MS². Identification of individual molecular species in lipid classes was performed by precursor or neutral loss analyses according to (1). Molecular species are expressed in total acylcarbon:total double bound.

Lipid	Detected molecular species
MGDG	C34:4 ; C34:5 ; C36:5 ; C36:6 ; C40:9 ; C40:10
DGDG	C32:0 ; C32:1 ; C32:2 ; C34:4 ; C34:5 ; C34:6 ; C36:4 ; C36:5 ; C36:6
SQDG	C30:2 ; C32:0 ; C32:3 ; C32:5 ; C34:1 ; C34:2 ; C34:3 ; C34:4 ; C36:5 ; C36:6
PC	C32:0 ; C32:1 ; C32:2 ; C34:4 ; C34:5 ; C36:5 ; C36:6

References

1. Li-Beisson, Y., B. Shorrosh, F. Beisson, M. X. Andersson, V. Arondel, P. D. Bates, S. Baud, D. Bird, A. Debono, T. P. Durrett, R. B. Franke, I. A. Graham, K. Katayama, A. A. Kelly, T. Larson, J. E. Markham, M. Miquel, I. Molina, I. Nishida, O. Rowland, L. Samuels, K. M. Schmid, H. Wada, R. Welti, C. Xu, R. Zallot, and J. Ohlrogge. 2010. Acyl-lipid metabolism. *Arabidopsis*. Book 8:e0133. doi:10.1199/tab.0133 [doi].