Lipid Profiling of *Synechococcus* sp. PCC7002 and Two Related Strains by HPLC Coupled to ESI-(Ion Trap)-MS/MS

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Z. Naturforsch. **66 c**, 149–158 (2011); received August 11/December 9, 2010

The lipid profiles of *Synechococcus* sp. PCC7002 and two related 16S rDNA (99% identity) strains were established by a new method of high-performance liquid chromatography coupled to electrospray-mass spectrometry (HPLC-MS). Lipids were analysed in the positive and negative ionization mode, and fragmentation patterns are reported. No differences in the lipid profile between the three strains could be observed, but the relative content of some species differed. Major lipid species were found to be 1-octadecatrienoyl-2-hexadecanoyl-3-(6'-sulfo-$\breve{U}$-D-quinovosyl)-*sn*-glycerol [SQDG (18:3/16:0)] and 1-octadecatrienoyl-2-hexadecenoyl-3-*b*-D-monogalactosyl-*sn*-glycerol [MGDG (18:3/16:1)]. Ten species of SQDG, six species of PG (phosphatidyl-glycerol), seven species of MGDG, and two species of DGDG (digalactosyl-diacyl-glycerol) were detected. A PG species (*m/z* 761) containing hydroxylinolenic acid or oxophytodienoic acid acyl ester ($C_{18}H_{32}O_3$), and SQDG species containing C17:1 and C17:3 fatty acyl esters are reported for the first time in cyanobacteria. The method also allowed the separation of two pairs of closely related isobaric MGDG species (*m/z* 770 and *m/z* 772 in positive ionization).

Key words: Synechococcus, Glycerolipids, HPLC-(ESI)-MS/MS