Supplementary material III-S3

PLFA biomakers used to identify soil microbes functional groups

Fatty acid	Lipid fraction	Predominant origin	REF
i15:0	PLFA	Gram-positive bacteria	Zelles (1997, 1999)
a15:0	PLFA	Gram-positive bacteria	Zelles (1997, 1999)
i16:0	PLFA	Gram-positive bacteria	Zelles (1997, 1999)
i17:0	PLFA	Gram-positive bacteria	Zelles (1997, 1999)
16:1n7	PLFA	Bacteria widespread	Guckert et al. (1991), Zelles (1999) Zelles
16:1n-5	PLFA	General bacteria	Nichols et al. (1986), Zelles (1997)
cy17:0	PLFA	Gram-negative bacteria	Zelles (1997, 1999)
18:1n9	PLFA	Fungi (saprophytic, EM)	Bååth (2003), Vestal and White (1989), Zelles (1999), Harwood and Russell (1984), Ruess et al. (2007) Chen
cy19:0	PLFA	Gram-negative bacteria	Zelles (1997, 1999)
18:2n6c	PLFA	Fungi (saprophytic, EM)	Frostegård and Bååth (1996), Zelles (1999)
20:1	PLFA	AM fungi (Gigaspora)	Sakamoto et al. (2004)

Cited literature

Baath, E., & Anderson, T. H. (2003). Comparison of soil fungal/bacterial ratios in a pH gradient using physiological and PLFA-based techniques. Soil Biology and Biochemistry, 35(7), 955-963.

Frostegard, A., & Baath, E. (1996). The use of phospholipid fatty acid analysis to estimate bacterial and fungal biomass in soil. Biology and Fertility of soils, 22(1-2), 59-65.

Guckert, J. B., Ringelberg, D. B., White, D. C., Hanson, R. S., & Bratina, B. J. (1991). Membrane fatty acids as phenotypic markers in the polyphasic taxonomy of methylotrophs within the Proteobacteria. Microbiology, 137(11), 2631-2641.

Harwood, J. L., & Russell, N. J. (1984). Distribution of lipids. In Lipids in plants and microbes (pp. 35-70). Springer, Dordrecht.

Nichols, P. D., Antworth, C. P., Parsons, J., White, D. C., Henson, J. M., & Wilson, J. T. (1987). Detection of a microbial consortium, including type II methanotrophs, by use of phospholipid fatty acids in an aerobic halogenated hydrocarbon-degrading soil column enriched with natural gas. Environmental Toxicology and Chemistry: An International Journal, 6(2), 89-97.

Ruess, L., & Chamberlain, P. M. (2010). The fat that matters: soil food web analysis using fatty acids and their carbon stable isotope signature. Soil Biology and Biochemistry, 42(11), 1898-1910.

Sakamoto, K., Iijima, T., & Higuchi, R. (2004). Use of specific phospholipid fatty acids for identifying and quantifying the external hyphae of the arbuscular mycorrhizal fungus Gigaspora rosea. Soil Biology and Biochemistry, 36(11), 1827-1834.

Vestal, J. R., & White, D. C. (1989). Lipid analysis in microbial ecology. Bioscience, 39(8), 535-541.

Zelles, L., Palojaervi, A., Kandeler, E., Von Luetzow, M., Winter, K., & Bai, Q. Y. (1997). Changes in soil microbial properties and phospholipid fatty acid fractions after chloroform fumigation. Soil Biology and Biochemistry, 29(9-10), 1325-1336.

Zelles, L. (1999). Fatty acid patterns of phospholipids and lipopolysaccharides in the characterisation of microbial communities in soil: a review. Biology and fertility of soils, 29(2), 111-129.