

Interactive comment on “A laboratory experiment of intact polar lipid degradation in sandy sediments” by J. Logemann et al.

J. Logemann et al.

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Dear Dr. Schippers,

many thanks for your pleasant comment. We understand that the determination of degradation rates for intact polar lipids in natural systems is very desirable.

Schouten et al. (2010) calculated degradation rates (k') based on values determined by Harvey et al. (1986) and plotted these values in a double logarithmic plot. We have evaluated our data and found that the degradation rates (k') of ester-bound IPLs in our experiment fit nicely between k' values for phosphatidylethanolamine glycerol ester lipids (aerobic) and those of diphytanyl glycerol diether lipids (aerobic). The degradation rates (k') of ether-bound IPLs are in the same range as the rates calculated for

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diphytanyl glycerol diether lipids (anaerobic) by Schouten et al. But our calculation is biased by the scattering of the determined peak area ratios. Therefore, we refrained from discussing these data in the manuscript.

However, if the referees like to have these values included in the manuscript we would be happy to add these calculations.

Interactive comment on Biogeosciences Discuss., 8, 3289, 2011.

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