Dissolved Inorganic Phosphate (DIP) turnover time measurements

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Dissolved Inorganic Phosphate Turnover time (T_{DIP}) was measured twice in 50-ml samples incubated with 185 kBq (5 µCi) carrier-free $^{33}PO_4$ (Amersham BF1003) in polycarbonate vials using an on-deck incubator. Incubations (4-5 h) were stopped by a 100-µl addition of 10 mM non-radioactive KH_2PO_4 (cold chase). Filtrations were performed in less than 1 h on 0.2 µm (25 mm diameter) Millipore polycarbonate filters. Radioactivity on filters (cpm) was measured by scintillation liquid counting and T_{DIP} was calculated from the equation:

$$T_{DIP} = -t/\ln[1-(R_f-R_b)/R_t]$$

where R_f, R_b, and R_t is the radioactivity of the filter, the blank (fixed with ca 100 µl of 2 g L^{-1} $HgCl_2$), and the total tracer added to the sample, respectively.

Detailed protocol in Thingstad et al. (1993) & Moutin et al. (2002)

Thingstad, T. F., E.F. Skjoldal & R.A. Bohne, 1993: Phosphorus cycling and algal-bacterial competition in Sandsfjord, western Norway. *Marine Ecology Progress Series*, **99,** 239-259.

Moutin, T., T.F. Thingstad, F. Van Wambeke, D. Marie, G. Slawyk, P. Raimbault & H. Claustre, 2002: Does competition for nano-molar phosphate supply explain the predominance of the cyanobacterium Synechococcus? *Limnology and Oceanography*, **47,** 1562-1567.