



Simultaneous and continuous measurements of dissolved CO₂, CH₄, N₂O and CO in rivers using Fourier-Transform-InfraRed (FTIR) spectrometry

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We have coupled a Fourier-Transform InfraRed (FTIR) trace gas analyser to an equilibrator, which allows the simultaneous and continuous measurement of dissolved CO₂, CH₄, N₂O and CO in water. The FTIR-technique has a high precision over a wide range of concentrations, making it very suitable for the measurement of these gases in freshwater systems. We have employed this measurement system on a commercial river barge on the Elbe river (Czech Republic, Germany) and on a fisher boat in the coastal area of Sarawak (Malaysia). In addition we have performed stationary continuous measurements at a small river in Northern Germany over the duration of 3 months. The presentation will outline the advantages and disadvantages of the FTIR-technique for freshwater measurements and will present results from the measurement campaigns.