Considering the importance of DOM in the carbon cycle, its influence on the cycling of other elements and its potential increase in concentrations under the influence of climate change and other [anthropogenic factors](https://www.sciencedirect.com/topics/earth-and-planetary-sciences/anthropogenic-factor), it is particularly important to obtain accurate and rapid estimates of DOC in remote areas. Hence, this study has the five following objectives:

A submersible, portable multi-parameter UV–Vis probe (spectro::lyser, s::can Messtechnik GmbH, Austria) was used for the high-resolution spectroscopic measurements.

Using the manufacturer’s default global calibration, it is possible to simultaneously estimate the concentrations of [total organic carbon](https://www.sciencedirect.com/topics/earth-and-planetary-sciences/total-organic-carbon) (TOC), DOC and nitrate and the turbidity of the sample. In the global calibration, the DOC concentrations are calculated using multi-wavelength algorithms of a turbidity-compensated absorbance fingerprint. The details of the multi-wavelength algorithms are not provided by the manufacturer. According to [Langergraber et al. (2003)](https://www.sciencedirect.com/science/article/pii/S0022169414004247" \l "b0130) the algorithms were created based on the UV–Vis spectra and reference DOC values. The turbidity-compensated fingerprint is calculated based on the relationship between the wavelength and scattering intensity as a function of the particle diameter, as described by [Huber and Frost (1998)](https://www.sciencedirect.com/science/article/pii/S0022169414004247" \l "b0100) (cited by [Langergraber et al., 2003](https://www.sciencedirect.com/science/article/pii/S0022169414004247" \l "b0130)).