MASTER Project: Assessing Microplastics on the South North Atlantic Transect (SoNoAT)

Code: Master Project
Faculty: Aalborg University (AAU)
Job type: Full time
Location: Aalborg, Denmark

In the department of Civil Engineering, section of Water and Environment (Aalborg University, AAU) we are looking for a Master student (Analytical Chemistry/Water Chemistry/Environmental Pollution).

Assessing Microplastics on the South North Atlantic Transect (SoNoAT)

Plastics represent the most rapidly growing form of anthropogenic litter entering and accumulating in our oceans, and is therefore a growing threat for humans and nature. Most plastic types are poorly degradable in the marine environment but become brittle and subsequently break down in small particles, so called microplastics. Consequently, marine plastic litter of unknown age and origin can be found in marine waters all over the globe. Considering that every plastic item in the ocean will be fragmented over time and that, additionally, every year approximately eight million tons of plastic litter enter the ocean the following assumptions can be made. 1. A general increase in microplastic abundance in our oceans over time is likely and 2. with decreasing size, there will be an increase in particle abundance. Samples were taken in June 2019 on board of the RV Polarstern along the SoNoAT. This study aim to provide insights on the abundance, distribution, and composition of microplastics on the SoNoAT, which includes open waters, regions of upwelling and varying water masses. Therefore, collected microplastic samples will undergo sample preparation including enzymatic treatment, density separation and afterwards will be characterized using focal plane array (FPA) micro Fourier transform infrared spectroscopy (µFT– IR).

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