

Subproject: First survey on marine litter in West Greenland

Actual field dates: 5. – 15. August 2016

Field site: Baffin Bay (From Nuuk to Thule)

Number of man-days in the field: 26

Summary:

The fieldwork went well. We collected 19 air samples for flow cytometry and ice nucleation analysis, 19 samples for molecular genetic analysis, and 9 samples for chemical analysis. We collected real-time data on bioaerosol concentrations with BIOTRAK Real-Time Viable Particle Counter. In addition 9 surface microlayer and 9 bulk surface seawater samples were collected for microbial and chemical analysis that will be aligned with atmospheric samples. Finally, three large volume seawater samples were collected for laboratory studies on marine emissions using a bubble bursting simulation chamber at the department of Chemistry, Aarhus University. These experiments will address the importance of marine emissions and sea surface microlayer on cloud and precipitation formation. We are currently evaluating the samples that were taken and further experiments are planned for 2017.

Photos:

Photo 1: Credit: Tina Santl-Temkiv

Caption: Ejnar Mikkelsen patrol vessel with our air sampling equipment mounted on the front deck.

Photo 2: Credit: Malin Alsved

Caption: Collecting sea surface microlayer by a glass plate from a small boat.

Photo 3: Credit: Malin Alsved

Caption: Air sampling and measuring equipment on the front deck of Ejnar Mikkelsen patrol vessel.

Participants:

AU: Tina Santl-Temkiv

Other : Malin Alsved

Acknowledgements:

Arctic Center (ARC) at Aarhus for co-funding logistic support.



Photo 1



Photo 2



Photo 3