

SOCCOM IN2016_V01 HEOBI POC

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Sample collection

Near-surface samples from SOCCOM CTD stations were taken for POC analysis. Clean transfer from the niskins (<210 µm to remove zooplankton) to a closed dedicated filtration rig. The samples were size fractionated in: total POC and POC<20 µm. 20% of the filter area was removed for biogenic silica digest. Volume filtered varied from 1 to 2 L to achieve maximum loading without blockage. Filters used were GF/F 25 mm diameter.

More information on the cruise are available at:

<https://socom.princeton.edu/content/shipboard-data-reports>

Analysis description

A DOC/DON adsorption blank, to account for contamination and dissolved organic carbon (DOC) and nitrogen (DON), was taken during sampling by stacking two filters in the filtration funnels and filtering the sample as normal. The upper filter will be the total (dissolved and particulate) organic carbon and nitrogen sample and the bottom filter will be the DOC/DON adsorption blank. The organic carbon and nitrogen from the DOC/DON adsorption blank was removed from the concentration of the total filters to retrieve particulate organic carbon (POC) and nitrogen (PON).

All samples (including blanks) were acidified to get rid of inorganic carbon and nitrogen.

Analysis were performed by Dr Thomas Rodemann at the Central Science Laboratory, University of Tasmania, using a Thermo Finnigan EA 1112 Series Flash Elemental Analyser, following the method described at:

<http://www.utas.edu.au/research/central-science-laboratory/facilities/elemental-analyser>

Abbreviations

DOC: Dissolved Organic Carbon

DON: Dissolved Organic Nitrogen

POC: Particulate Organic Carbon

PON: Particulate Organic Nitrogen