

# SOCCOM MR19-04 I7S R/V Mirai POC

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## Sample collection

Near-surface samples from SOCCOM CTD stations were taken for POC & PON analysis. 1-2 L of samples were filtered with a vacuum pump through glass fiber filters (Whatman GF/F) having a diameter of 25 mm and a nominal pore size of 0.7  $\mu\text{m}$ . Filters were combusted before use. Filters were immediately stored in aluminum foil packages in a liquid nitrogen Dewar (-80 °C).

More information on the cruise are available at:

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

## Analysis description

A DOC adsorption blank, to account for contamination and dissolved organic carbon (DOC), 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 adsorption blank. The organic carbon and nitrogen from the DOC adsorption blank was removed from the concentration of the total filters to retrieve particulate organic carbon (POC).

All filters (including blanks) were acidified to get rid of inorganic carbon and nitrogen with HCl fumes and air-dried (60°C for 48 hours). They were analysed on 2020/07/30 by Tran Nguyen ([tbnguyen@ucsd.edu](mailto:tbnguyen@ucsd.edu)) at Lihini Aluwihare Laboratory following this protocol (<https://cce.lternet.edu/data/methods-manual/augmented-cruises/particulate-organic-carbon-nitrogen>). The instrument used was a Costech ECS 4010 CHNSO Analyzer last calibrated 2020/07/30 with Acetanilide as calibration standard and a performance of  $r^2=0.996$ . Detection limits were 2.5  $\mu\text{g C}$  and 1.5  $\mu\text{g N}$ .

## Abbreviations

PON: Particulate Organic Nitrogen

POC: Particulate Organic Carbon

DOC: Dissolved Organic Carbon