### Chlorophyll-a

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#### Onboard Sampling and Filtering

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Chlorophyll-*a* samples were collected from 6 depths in the upper 100m of the water column at most rosette stations in the North Pacific along the transect between Victoria and Dutch Harbor. Sampling was not performed at stations if chlorophyll was already being collected by Diana Varela (UVic) in conjunction with primary productivity measurements at these stations; and sampling from the rosette was not continued after Dutch Harbor as other groups (Cooper, Frey) were also collecting chlorophylls. Only single samples were collected at each depth with one replicate per cast.

Intensive underway chlorophyll sampling was also carried out in between stations along the North Pacific transect and from Dutch Harbor to the first DBO section on the SLIP line. A total of 36 loop chl samples were collected for calibration of the underway Seapoint fluorometer and for comparison to HPLC Tchl a (total chl a) measurements collected at the same time.

All samples were collected in brown Nalgene LDPE bottles with a calibrated volume of 304 ml. Each bottle was rinsed three times with sample water then filled to the very top and capped. Samples were filtered immediately after collection under low pressure (7 psi) onto 25 mm GF/F filters (Whatman GF/F, nominal pore size 0.7µm). Filters were then folded in half in a 90mm grade 1filter paper (Whatman, GE Healthcare), wrapped in aluminum foil, labelled and stored at -80°C in the hold for later analysis onshore at IOS once ship returns from the Arctic. Chlorophyll filtration logs were not kept as all samples had 304 ml filtered and there were no spills or other comments to note. All filtrations were performed by Nina Nemcek on the HPLC filtration rig using the standard 25mm Millipore filtration cups.

**The rest to be updated with 2017analysis information when run at IOS:**

#### Onshore Analysis at IOS (to be updated by IOS analysis)