# Method for Dimethylsulfide Analysis

The method described in the document “Method 1996 to 1999 for Dimethylsulfide Analysis.DOC” by Wendy Richardson was used for the ten Cruises from August 1996 to February 1999.

The method described below was provided by Michael Arychuck. The exact starting date is unknown by Mike said that this method was used for at least the last 10 years, probably more (June 2013).

Samples are loaded into a stripper and purged with UHP Nitrogen for 10 minutes at ~100mL/min. The DMS is extracted from the water and absorbed onto a Tenax TA trap kept at -80oC. The trap is subsequently desorbed at 100oC (with a dewar containing boiling water) onto a Chromasorb 330 column which elutes onto a Flame Photometric Detector (FPD). All samples are run as soon as possible after being collected. A four to six level calibration table is used for calculating the concentrations of DMS. Standards are prepared in water and run under the same conditions, as the samples. A calibration curve is valid for 12 hours. If analysis exceeds 12 hours, a continuing calibration standard is run to ensure the calibration curve is still within acceptable limits. System blanks and duplicates are run approximately every 13 samples to ensure the system remains free of contamination and has acceptable reproducibility. Stripping efficiency is evaluated at the beginning of each cruise to ensure acceptable values (typically 94-98%).

**Reference:**

C. S. WONG, S. E. WONG, W. A. RICHARDSON, G. E. SMITH, M. D. ARYCHUK, J. S. PAGE, 2005. Temporal and spatial distribution of dimethylsulfide in the subarctic northeast Pacific Ocean: a high-nutrient–low-chlorophyll region. Tellus B [57,](/doi/10.1111/teb.2005.57.issue-4/issuetoc) 317–331