

Distribution of cell membrane lipids of Crenarchaeota in the Arctic Ocean

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Marine microbes, especially Archaea and Bacteria, are large and essential components of food webs and elemental cycles in the ocean. However, from recent studies using various culture-independent techniques, no clear picture has yet emerged as to whether Archaea or Bacteria are more abundant in the Arctic Ocean ecosystem. Here, we show that in the water column in the Arctic Ocean of lipids of archaeal membrane lipids (GDGTs), biomarkers, for the Crenarchaeote.

Because of GDGTs abundance are very low in the water column, we need large volume filtration about ~400 L.

Sampling carried out filtration of ~400 L seawater with quartz filter collected various depth in the Arctic Ocean. And then, we extracted intact polar lipid including GDGTs, and measured GDGTs abundance with LC/MS.