

ALUMINUM DISTRIBUTIONS IN THE EURASIAN BASIN  
OF THE ARCTIC OCEAN

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## ABSTRACT

Samples collected from the ARKTIS IX/4 (1993) and Arctic Ocean Section (1994) cruises were analyzed for their aluminum (Al) content; these two data sets were then combined in an attempt to present a clearer picture of the Al distribution in the Arctic Ocean. The unique physical processes occurring in this semi-enclosed basin can be shown to influence the Al distributions, which vary significantly from those found in either the Pacific or Atlantic Oceans. Surface water Al concentrations in the Arctic can be attributed to sediment concentration in year-round ice cover. Limited and variable exchanges of water with other oceans, compounded by the variability of the Al content within this water, result in a scattered distribution of Al in the intermediate waters. The strong increase of Al in the deep waters of the Arctic is most likely due to an upward diffusing sediment pore water flux.