

## Chemical characteristics of surface snow in Dome Fuji route, Antarctica

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The sea salt components are transported from the coastal area to the inland area in Antarctica. On the other hand, there is a route transported directly from the stratosphere to the ice sheet in the inland region. The chemical characteristics in the surface snow are different according to the difference of these transportation routes. It is thought that the chemical species concentration in surface snow has changed because snow accumulation rate is much different between the coastal area and the inland area. In this study, we aimed to clarify chemical characteristics in the surface snow in Dome Fuji route, Antarctica. The samples were collected by the 47th and 48th Japanese Antarctic Research Expedition. They left the coastal area in October, 2006 and November, 2007 and arrived at Dome Fuji after about one month, respectively. They collected the surface snow every 10 km in about 1000 km trip. The samples were collected by scooped up the surface snow directly with pre-washed polypropylene bottle. The samples were taken to Japan without melting, and stored at -20 degree C until analysis. We analyzed the pH, electric conductivity, stable isotope of water (d18O, dD), and major anions and cations. The stable isotope of water has lowered by rising of the altitude of sampling site. The pH and the electric conductivity showed the mirror image relation. In the inland area, there was the site where pH was less than 5.0. It is suggested that the depositional environment was changed. At the site where the pH was low,  $\text{NO}_3^-$  concentration increased. It is thought that this is a cause of the surface snow acidification.