

Deposition analysis of non sea-salt sulfate and nitrate along to the northwest winter monsoon in Hokuriku district by a snow boring core and bulk samples

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Abstract

The depositions of non sea-salt sulfate and nitrate of both the Asian Continent and domestic origin were evaluated in the Hokuriku district, central Japan. Evaluation periods were from December 1, 1999 to March 17, 2000.

Observations were done by using bulk samplers in a plain area and by using a snow boring core on the high mountain area. Depositions of non sea-salt sulfate in the studying area (1000 km²) were 2.743×10^6 kg and contributions of non sea-salt sulfate of the Asian Continent origin were 1.402×10^6 kg. Depositions of nitrate in the studying area (1000 km²) were 1.204×10^6 kg and contributions of nitrate of the Asian Continent origin were 0.257×10^6 kg.

However, it was considered that acid rain constituents in precipitation at the high mountain area had a different origin from those in precipitation in the plain area, because the ratio of both non sea-salt sulfate and nitrate of the Asian Continent origin to sea-salt sulfate in precipitation at the high mountain was very different from those in precipitation at the plain area.