

Chemical dynamics of stream water in the snowmelt season, Japanese Alps.

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The Japanese Alps is covered with the snowfall in winter. The source of chemical constituents in the snowmelt water is from the winter precipitation and dry deposition. These chemical constituents remain unchanged in snowpack until the snow melt season. The stream water quality of snowmelt season is important for thinking about the Material Circulation at the snowfall region. The purpose of this research is to clarify the features of the chemical dynamics of stream water in the snowmelt season without artificial influences in the Japanese Alps.

The study site was the east slope of Japanese Alps. The altitude of the experimental site is around 1470m to 3026m. The stream water was periodically collected by using an automatic sampler. After filtering the sample, the pH and electric conductivity were measured. Concentration of major ions (Na^+ , NH_4^+ , K^+ , Mg^{2+} , Ca^{2+} , Cl^- , NO_3^- , SO_4^{2-}) were measured with an ion chromatograph. In addition, HCO_3^- concentration was measured using the sulphuric acid titration method. The pH and electric conductivity of stream water were decreased with the runoff increased and increased with runoff decreased.