# Geochemical characteristics of concentrations of major and minor elements of main four rivers flowing through Akita plain

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## Abstract

The purpose of this study was to clarify the characteristics of chemical compositions of river water of Kamishinjyou, Asahi, Taihei and Iwami Rivers flowing through Akita Plain. Concentrations of major and minor elements and suspended materials with particle size over 0.45 μm in the water were measured using ion chromatography and the PIXE method. Major chemical concentrations increase by about two or three times from the upperstream region to the Sea of Japan coast in each river. These increases are thought to be caused sea salt. As for minor components, Si, Fe, Mn and Zn were defected, and Si and Fe concentrations were high in the downstream regions of Kamishinjyou and Taihei Rivers and low in Asahi River. In the main suspended materials with particle size over 0.45 μm, concentrations of Si were high in all three rivers and the concentrations of Al was high in the downstream region of Taihei River. The concentration was high in areas of siltstone and sandstone in the downstream region of kamishinjyou and Taihei Rivers. In Asahi River, there is a possibility that groundwater sprang up in the upperstream region.