

富士北麓の湧水と硝酸イオンの起源の検討 Source of spring water and nitrate in northern foot of Mt.Fuji

中村 高志^{1*}; 長谷川 達也²; 山本 真也²; 内山 高²
NAKAMURA, Takashi^{1*}; HASEGAWA, Tatsuya²; YAMAMOTO, Shinya²; UCHIYAMA, Takashi²

¹ 山梨大学・国際流域環境研究センター, ² 山梨県環境科学研究所

¹ICRE, University of Yamanashi, ²Yamanashi institute of environmental Sciences

Water chemistry of spring water in Northern foot of Mt. Fuji is discussed with special reference to its source of water and nitrate. Monthly spring water and river water samples were collected from 8 springs and 7 locations of the 3 rivers, from June 2013 to January 2014. Land use of the study area are urban located about <1000m, forest distributed >1000m and forest limit is about 2500m. The oxygen isotope range of all spring water samples shows temporal variation (>1.0 permil), which suggests the possibility of the water changes of groundwater water recharge elevation. The nitrate-nitrogen concentration ranges from 0.2 to 1.8 mg/L and from 0.1 to 2.2 mg/L in river water and spring water samples respectively. Similarly, nitrate-nitrogen isotope values ranges from 2.7 to 9.9 permil and 1.4 to 10.4 permil in river water samples and spring water samples respectively. Although nitrate concentration was low, nitrogen isotope values overlaps with forest soil nitrogen and sewage or manure nitrogen. This trend suggests that the recharge elevation of the spring water might spread across a wide area. This presentation will discuss about recharge processes of the spring water including temporal variation of the isotopic values and water quality.

キーワード: 富士山, 湧水, 水の水素・酸素安定同位体, 硝酸イオンの窒素・酸素安定同位体

Keywords: Mt.Fuji, spring water, oxygen and hydrogen isotopes in water, nitrogen and oxygen isotopes in nitrate