On geochemical and isotopic characteristics of shallow urban groundwater in Shinagawa district, central Tokyo, Japan

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Water chemistry of shallow groundwater in the highly-populated Shinagawa district, central Tokyo, Japan, is discussed with special reference to its nitrate, sulfate and chloride concentrations. As a result of the water chemistry analysis, shallow groundwater proved to be characterized by a high nitrate, sulfate, and chloride concentrations. The enriched δ¹⁵N and δ¹⁸O values of nitrate and δ³⁴S values of sulfate suggest leaking sewers is a potential source of nitrate and sulfate ions in shallow groundwater.

Keywords: Tokyo, megacity, shallow groundwater, groundwater pollution, isotope, hydrochemical process