

A b s t r a c t

T i t l e	Contribution of geosmin and 2-MIB to odor of treated wastewater and river water
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[summary] <p>Odor of treated wastewater is perceived by surrounding people. Though water quality issue is mainly discussed with the focus of biochemical indicators such as such as BOD, sensory indicators including odor are getting more and more important.</p> <p>The treated wastewater has a peculiar odor though the compounds responsible for the odor have not been identified. Geosmin and 2-MIB are typical compounds causing offensive musty odor substances and have been attracting attention in the field of drinking water. However, there are few researches on the concentration of these compounds in the effluents.</p> <p>In this study, treated wastewater was sampled at Hachioji wastewater treatment plant (WTP), Tamagawa-Joryu WTP and Nishikimachi WTP. Water samples were also taken at the Tama river. Treated wastewater after advanced treatment was taken at Tamagawajyousui and at Negawa. Geosmin and 2-MIB were measured by a sensitive method of SPME-GC-MS at a low concentration range. The contribution of these compounds to the odor of the water samples was estimated.</p> <p>In the cases of treated wastewater, the concentrations of 2-MIB were in the range of 5.4ng/L to 16ng/L, while the concentrations of geosmin were in the range of 4.1ng/L to 34ng/L. In the cases of treated wastewater after the advanced treatment, the concentrations of 2-MIB were in the range of 0.11ng/L to 11ng/L, while the concentration of geosimin were in the range of 0.14ng/L to 8.9ng/L. The removal of these compounds was observed in the advanced treatment processes. The estimated contribution of these compounds to the total odor was considered to be less than 3%.</p>	