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# Distribution characteristics and influencing factors of MIB and GSM in drinking water reservoirs

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MIB(2-methylisoborneol) and GSM(geosmin) are two typical taste and odor compounds related to poor organoleptics in drinking water. MIB and GSM in three drinking water reservoirs, Biliuhe Reservoir, Dongfeng Reservoir and Tanghe Reservoir which are located in Liaoning Province were investigated. The results indicated that during winter ice-covered period, the concentration of MIB and GSM in three reservoirs decreased in order of Dongfeng reservoir > Biliuhe Reservoir > Tanghe Reservoir. In Biliuhe Reservoir, the concentration of surface MIB and GSM in the shallow regions was slightly higher in spring ice-melt period than that in winter. Surface MIB and GSM presented higher concentrations in the shallow regions than deep regions. During the ice-covered period, most sample sites exhibited higher MIB concentration in the bottom layer than surface layer, implying that sediments might be a possible source of taste and odor compounds. In addition, there was no remarkable relationship between MIB/GSM and algae density. However, MIB was positively correlated to TN and $NO_3$—N and significantly correlated to TP. This suggested phosphorous, the limiting nutrient, was an important factor that influenced the growth of algaes and their release of the taste and odor compounds.