

Degradation of Microcystin, MIB, and Geosmin in Drinking Water by Irradiation

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Harmful algae blooms (HABs) are becoming more frequent and are growing in size and toxicity worldwide due to increasing nutrient pollution, increasing storm intensities (runoff) and rising temperatures. In an EPA national assessment of US lakes, about one third of the lakes tested, including lakes used as drinking water supplies, contained toxins producing cyanobacteria. Cyanobacteria, also known as blue-green algae, are one of the most common types of algae found in freshwater HABs. A subset of these bloom-forming cyanobacteria, including the common cyanobacteria *microcystis aeruginosa*, produce extremely harmful toxins called microcystins, with microcystin LR variant the most abundant. This presentation will discuss the degradation of microcystin LR and the taste and odor compounds MIB, and geosmin in lake and drinking water.