Emerging Environmental Contaminants: What's New

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Much has been achieved in the way of environmental protection over the last 30 years. However, as we learn more, new concerns arise (including potential adverse health effects, bioaccumulation, and widespread distribution). This presentation will discuss emerging environmental contaminants, including pharmaceuticals, perfluorooctanoic acid (PFOA) and other perfluorinated compounds, nanomaterials, drinking water disinfection by-products (DBPs), polybrominated diphenyl ether (PBDE) flame retardants, pesticide degradation/reaction products, perchlorate, hormones, algal toxins, sunscreens/UV filters, benzotriazoles, dioxane, naphthenic acids, and pathogens. In addition, a recent study of the finding of a new artificial sweetener, sucralose, in surface waters from 27 countries in Europe (up to ppb levels) will be discussed.

Some of the emerging contaminants (e.g., nitrosamines, PBDE flame retardants, and pesticide degradation products) are currently listed on the proposed Unregulated Contaminants Monitoring Rule (UCMR-2), which requires EPA to select five or more contaminants every five years to consider for regulation. Other emerging contaminants are listed on the 3rd draft Contaminant Candidate List (CCL-3), which identifies priority drinking water contaminants that might be regulated by the U.S. EPA at a future date. A new ambient water quality criteria is also currently under development that would establish criteria for emerging contaminants in environmental waters. The status and health/environmental issues of these emerging environmental contaminants will be discussed, as well as analytical methods used to measure them.