Traces: Finding and measuring trace elements and environmental contaminants

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Trace element and trace organic analysis by various spectroscopic techniques (GC-MS, ICP-AES, ICP-MS...) require the development of techniques of extraction, preconcentration, and sometimes derivitization that can be particularly challenging for the analyst. Analytes at low concentrations can be difficult to quantitatively extract, preserve, and determine. In this presentation, I shall discuss techniques, methods, and devices that we have developed in the determination of arsenic and gold and in the area of persistent organic pollutants, such as flame retardants, dioxins and furans, and polynuclear aromatic hydrocarbons.