



Sorbent tube sampling and automated thermal desorption system linked with ECD/MS/IRMS for halocarbon analysis.

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A development and deployment of a new analytical system, presampling system-ATD-GC-ECD/MS has been established to monitor a suite of halogenated compounds found in the atmosphere at trace concentrations. The instrument has been used to monitor urban background emission flux levels in Bristol, UK as well as some remote areas, Yellowstone volcano Area, USA and @Bristol wild walk, UK. The sorbent tube sampling system has also been established for large volume of sample collection which has been recognised as a small, easily portable and relatively inexpensive. Automated Thermal Desorption (ATD) provides cryogen-free operation, reducing operating cost, minimizes sample losses by checking the system flow path for leaks and also preserves sample integrity by sealing sample tubes before and after desorption. Break through in sampling and artefact formation during analysis was minimized by choosing the appropriate sorbent tubes. The carbon isotope ratio of some halocarbons has also been estimated by using ATD-GC-IRMS system followed by sorbent tube sampling.