



## **Optimisation of a gas chromatographic method for ambient measurements of BVOCs : deployment during LANDEX 2017**

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Biogenic Volatile Organic Compounds (BVOCs), whose emissions depend on meteorological conditions and vegetation typology, dominate the global budget of VOCs. In addition, due to their high reactivity with atmospheric oxidants, BVOCs may significantly impact the oxidative capacity of the atmosphere and drive the formation of secondary pollutants such as ozone, Secondary Organic Aerosol (SOA) and peroxyacyl nitrates (PANs). Monitoring BVOCs is therefore crucial to better understand future changes in the chemical composition of the atmosphere, especially in a context of climate change. However, monitoring BVOCs is still challenging due to their relatively short lifetime, the complexity of their molecular structure, and the large number of isomers.

The optimization of a new Gas Chromatographic method for BVOC analysis will be presented. This method was developed to provide (i) a good separation of approximately 20 major BVOCs (pinenes, terpinenes, camphene, sabinene, carene, etc.) at a time resolution of 90 minutes, and (ii) an accurate quantification of their concentrations. The latter required the development of a method providing reliable standard mixtures as well as the identification of an adequate ozone scrubber. This new method was applied for the first time in a pine forest during the LANDEX field campaign (summer 2017) and the first ambient measurements will be presented.