

Interactive comment on “Comprehensive two-dimensional gas chromatography (GCxGC) measurements of volatile organic compounds in the atmosphere” by X. Xu et al.

P. Ciccioli

ciccioli@iia.mlib.cnr.it

Received and published: 31 March 2003

The author present an original method, already known in gas chromatography as GCxGC, to identify VOC present in air.

The description of the system and the results obtained are clearly presented.

The only strong criticism I have is about the statement , not confirmed by the existing literature, that their method is much superior than GC-MS. The author intentionally avoid to cite literature showing that conventional GC-MS allows to identify and quantify more than 650 components in a single sample. If the authors do not want to go back to the earlier literature, I suggest them to read chapter 21 of the Environmental Monitoring

Full Screen / Esc

Print Version

Interactive Discussion

Discussion Paper

Handbook (F. R. Burden, Ian Mc Kelvie, U. Forstner and A. Guenther Edrs., Mc Graw-Hill, 2002 New York) which is entirely dedicated to: Sampling of atmospheric volatile organic compounds (VOCs) with sorbent tubes and their analysis by GC-MS. In this chapter is clearly shown that conventional GC-MS techniques allow to identify up to 650 VOC in air through selected ion detection combined with the knowledge of the relative retention indices on a DB-% column.

They ignore, again, the existing literature when they present the list of compounds they have identified in air. In chapter 5 of the book entitled Reactive hydrocarbons in the atmosphere. Edited by C.N. Hewitt, Academic Press, San Diego, USA, 1999 pp. 159-207, is indeed reported an exhaustive list (more than 350 compounds) that have been detected in urban, suburban, forest-rural and remote sites.

This literature, together with the one cited in these books, show that the compounds detected by the authors by GCxGC have been already found by many scientists since 1992 using GC-MS.

Since the work done is quite honest, I do not see why the authors try to promote their work trying to ignore what has been successfully achieved in the last 30 years.

Interactive comment on Atmos. Chem. Phys. Discuss., 3, 1139, 2003.

[Full Screen / Esc](#)[Print Version](#)[Interactive Discussion](#)[Discussion Paper](#)