



## **Intercomparison of Oxygenated Volatile Organic Compound (OVOC) Measurements in the Atmosphere Simulation Chamber SAPHIR**

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Oxygenated volatile organic compounds (OVOC) are important players in tropospheric photochemistry. They are emitted from anthropogenic and natural sources but are also formed in the photochemical transformation of other VOCs.

An experiment was carried out to intercompare different methods for the measurement of OVOCs at ambient concentrations in SAPHIR, the atmosphere simulation chamber at the Research Centre Jülich, Germany. The experiment was part of the QA Integration Task of ACCENT, the European Network of Excellence. Twelve groups participated in this intercomparison using a variety of different instruments which ranged from standard techniques to newly developed methods. The intercomparison was conducted as a formal "blind" intercomparison with an independent referee.

The compounds intercompared in this experiment were formaldehyde, acetaldehyde, butanal, hexanal, methanol, ethanol, 1-propanol, 1-butanol, methacrolein, methyl vinyl ketone, acetic acid methyl ester, acetone, benzaldehyde, and 2-methyl-3-buten-2-ol. n-Butane and toluene were added as tracers for monitoring the dilution processes in SAPHIR and as reference compounds for gas chromatography. The compounds were measured at different concentration levels with mixing ratios from 1 to 10 ppb under dry and humid conditions and in the presence of ozone.

The results of this activity, which will help to improve the methods for the measurement of OVOCs in the atmosphere, will be presented and discussed.