



## **Intercomparison of two Comparative Reactivity Method instruments in the Mediterranean basin during summer 2013**

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The Comparative Reactivity Method (CRM) has been widely adopted in recent field studies to measure the total OH reactivity of ambient air, showing a good applicability and fast response. In a CRM experiment, the competition for hydroxyl radicals between pyrrole, the reagent molecule, and trace gases in ambient air is monitored in a glass reactor coupled to a Proton Transfer Reaction- Mass Spectrometer (PTR-MS). Modulations of pyrrole concentration when successively sampling ambient air and zero air are used to compute the total ambient OH reactivity.

Here, we present the results of one of the first field intercomparisons of two CRM instruments built in different laboratories, and deployed at a remote site in the Mediterranean basin, under the framework of the project ChArMEx (Chemistry of Aerosols in a Mediterranean Experiment). To assess the performance of the two systems we ran tests with gas standards and adopted the same data processing, including: corrections for RH changes, kinetic regime and dilution in the reactor.

The two CRMs measured continuously side by side during five days, sampling ambient air (OH reactivity  $< 5 \text{ s}^{-1}$ ) and air from a plant enclosure (OH reactivity up to  $300 \text{ s}^{-1}$ ).

We will present an intercomparison of these results and discuss the differences observed between the two instruments.