

Evaluation of ODORiferous compounds and olfactory
nuisance through portable and compact
GasChromatography

odor-GC

COORDINATOR



PROJECT PARTNERS



BUSINESSES INVOLVED



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*Project made possible by European
Funds from the Emilia-Romagna Region*





www.odorgc.it



Odor-GC

PROJECT OBJECTIVES

The ODOR-GC project aims to develop an **innovative instrumental and modeling infrastructure** for the **rapid and integrated monitoring of odoriferous emissions and olfactory nuisances** generated by various types of sources: **farms, biogas plants, landfills, wastewater treatment plants, industrial plants.**

MONITORING REQUIREMENT

- increase of facilities in urbanized areas
- olfactory pollution
- unpredictability and discontinuity
- discomfort and protests
- environmental and health protection

ODOR-GC INSTRUMENT



reduced power consumption



compactness



economic efficiency

Starting from the **general-purpose platform Compact-GC**, developed and patented at the Bologna section of **IMM - Institute for Microelectronics and Microsystems of CNR**, the ODOR-GC instrument will be **optimized and validated.**

It falls under the category of **IOMS** and, utilizing **gas-chromatography analytical technique**, it is capable of **continuous measurements** and **qualitative analysis** of the gas mixture.

The analytical core is made with **miniaturized and low-power MEMS components**; this allows for **the detection of high-boiling compounds** and also the integration of the system into a **small-sized case** for **spot measurements.**

Another strength is the **associated web platform**, which integrates **measurement data** with **model-based meteorological data**; this enables the prediction of the **spread and trajectories of miasmas**, visualized in an intuitive geographic interface.