

Case History

Integration in industrial monitoring

Place: Brindisi

Installation: 2020

Instrument: PyxisGC BTEX

Customer: ARPA Puglia



INTRODUCTION

One of the challenges related to the technological innovation of the environmental sector is to design technologies and instruments that contribute more and more to a **sustainable development with the least possible impact on the environment and health**. Over the years, in the environmental controls field, the instrumentation used for air quality monitoring has evolved to outline the most suitable analytical methods and techniques for the determination of various airborne pollutants. In the specific case of two instrument comparison, object of this Case History, two highly toxic or carcinogenic pollutants of a predominantly industrial origin were taken into consideration: **Benzene and Toluene**.

REQUEST

Continuing the collaboration with **ARPA Puglia**, it was decided to carry out parallel monitoring on an **industrial site perimeter** rather than in an urban centre, in order to compare instrumental responses in a more dynamic and relevant context in terms of concentrations.

SOLUTION

The analytical technique used to determine the compounds is the **on-site automated gas chromatography**, as reported in the technical standard **UNI EN 14662-3:2015**. Pollution Analytical Equipment has developed a **tool that complies with the required characteristics of the standard**, focusing on **miniaturization** and implementation of an effective and at the same time reliable system; a combination difficult to achieve with previous technologies.



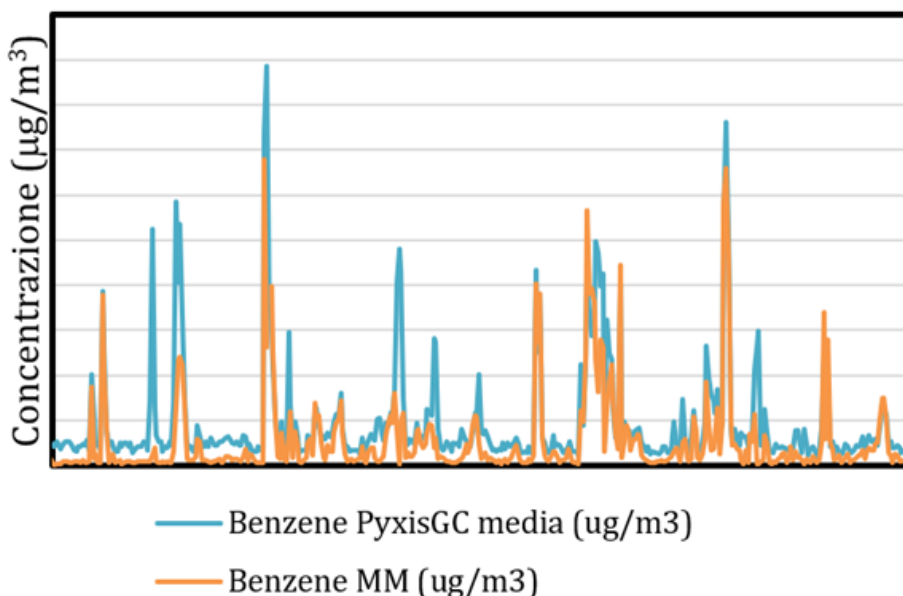
A **mobile laboratory** for air quality monitoring, equipped with a chromatograph for the **BTEX** quantification, has been placed in the chosen site; the mobile laboratory is supplied to ARPA Puglia CRA that takes care of the management and validation of the data produced. The **PyxisGC** was placed on the mobile laboratory roof on the 1st of July 2020. The test compares the trends in benzene and toluene concentrations recorded by PyxisGC and Chromatotec GC 866 installed in the mobile laboratory of ARPA Puglia

CONCLUSIONS

Residue analysis shows that PyxisGC provides a data that is on average higher than the one of Chromatotec. In conclusion we can assert that even in this application scenario, the PyxisGC BTEX has guaranteed a **good analytical performance**, while enhancing the **extreme compactness and ease of use**.



Benzene



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