

Case History

Industrial monitoring for Smart Cities

Place: High environmental risk areas in Syracuse

Urban area of Catania.

Installation: 2021

Instrument: PyxisGC BTEX

Customer: ARPA Sicilia



INTRODUCTION

In recent years, **ARPA Sicilia** has recorded the same annual average of benzene concentration in urban areas. As far as industrial areas are concerned, especially the one of AERCA in Syracuse (Sicily), it has been detected a very high average concentration of this pollutant.

Moreover, in a monitoring station placed in the industrial area of Augusta - Augusta-Marcellino, which is not included in the evaluation program (Programma di Valutazione- PdV), in 2020 ARPA Sicilia detected an annual average benzene concentration equivalent to 9.8 $\mu\text{g}/\text{m}^3$, therefore higher than threshold value (5 $\mu\text{g}/\text{m}^3$).

REQUEST

To safeguard the citizens living near Augusta industrial centre, given the **cancerous nature of benzene** and the detection of very high hourly average concentrations (more than 400 $\mu\text{g}/\text{m}^3$), ARPA Sicilia is about to carry out a series of widespread **monitoring activities focused on this pollutant, especially in the most delicate urban areas, like schools.**

To develop this project it is necessary to have a reliable instrument able to be easily installed in different scenarios.



SOLUTION

Pollution Analytical Equipment has worked together with ARPA Sicilia for an on-site “validation” test of **Pyxis GC BTEX**, because the instrument features make it possible to carry out a successful and efficient monitoring in line with the goals previously set.

The test was developed during the summer months (June, July, August), including an **intercomparison between three Pyxis GC BTEX and three continuous BTEX analyser (Chromatotec)**, certified according to Italian law D.Lgs. 155/2010, installed in fixed stations of the air quality network of ARPA Sicilia.

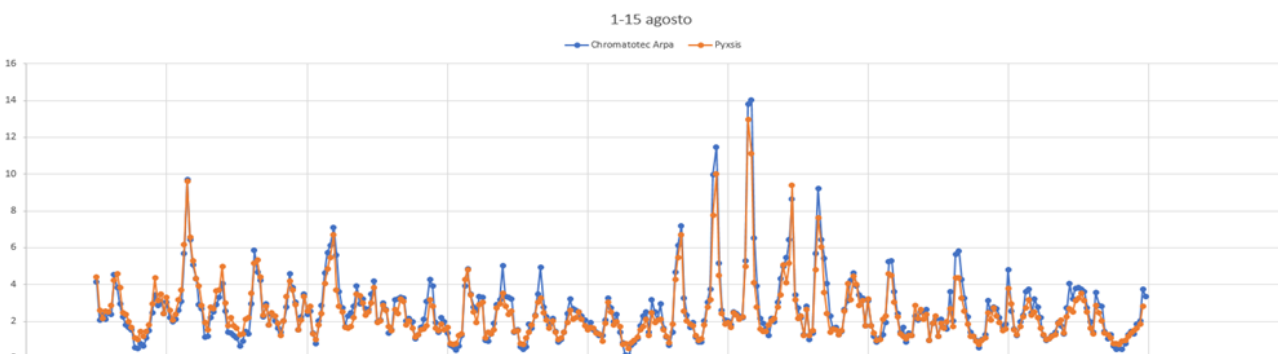
Test areas were located in places with different pressures, in order to evaluate Pyxis GC BTEX performances in different operating conditions.



CONCLUSIONS

ARPA Sicilia was completely satisfied with the technological solution offered by Pollution Analytical Equipment for monitoring benzene.

Through the comparison between data collected by the fixed station of ARPA and at the same time by Pyxis GC BTEX, installed outside the stations themselves, it was possible to determine with **high reliability the benzene quantity in air**.



Following this validation activity, ARPA Sicilia will use **Pyxis GC BTEX for monitoring campaigns in specific sites**, such as schools, primarily in the AERCA of Syracuse.

POLLUTION S.r.l.

Via Guizzardi, 52 - 40054 Budrio (Bologna)
Tel. +39 051 6931840 | Fax +39 051 6931818
pollution@pollution.it

www.pollution.it



Management System
ISO 9001:2015
www.tuv.com
ID 9108648180



OI-EN0392-0