

# Case History

## Detection of Traffic- Related Air Pollution

Place: Highway 401 (North America)

Installation: 2020

Instrument: PyxisGC BTEX

Customer: Smart Cities

### INTRODUCTION

One of the main air pollution sources is related to **vehicle traffic** and is emitted by vehicle exhausts, fuel evaporation and various sources such as brakes, tyres and road dust. Moreover, traffic-related air pollution generates substances that undergo chemical-physical transformation processes that lead to the formation of **secondary pollutants** in the atmosphere: new chemical species which are often more toxic and of a wider range than the original compounds. Traffic-related air pollution can be detected up to 250 metres from a main road.

### REQUEST

In 2020 Pollution Analytical equipment carried out continuous monitoring of BTEX levels in **highly trafficked areas**. In order to perform this analysis, it was decided to install a **PyxisGC BTEX** unit at Highway 401 (the busiest in North America) in order to perform a comparison with other analytical methods.



## SOLUTION

PyxisGC is a reliable and easy to install tool, suitable for monitoring BTEX in sensitive places, in urban centers and in industrial perimeter areas, serving **Smart Cities**. Therefore, it is considered a qualified tool for the type of analysis that was necessary to carry out.

The PyxisGC BTEX was installed near **Highway 401** and operated for about twenty days. After this first phase of testing, the unit was moved to a critical fence-line, near oil refineries.

## CONCLUSIONS

During the first phase of testing the tool worked perfectly, with **100% data availability**. In addition to this, it produced a very **high correlation** with a high quality BTEX GC based on the FID method.

In the second phase, the unit performed optimally, proving to be **a perfect ally in critical applications**, ensuring a place in future applications related to traffick emission monitoring, thanks to its simplicity of installation and reliability.

### POLLUTION S.r.l.

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