

THE GAS CHROMATOGRAPHIC REVOLUTION FOR ENVIRONMENTAL MONITORING

PyxisGC BTEX is the first and unique gas chromatograph "carrier gas free" for remote BTEX monitoring in ambient air. PyxisGC BTEX is manufactured by Pollution Analytical Equipment in compliance with EN14662-3:2015.

APPLICATIONS

- "Smart city" air quality monitoring
- Fence line monitoring
- Research Institutions

KEY FEATURES

- PID Detector
 - High sensitivity*
- MEMS Technology
 - Miniaturized*
- Carrier Gas Cylinders FREE
 - Low cost ownership*
- Cloud software for management/control
 - Remote real time monitoring*

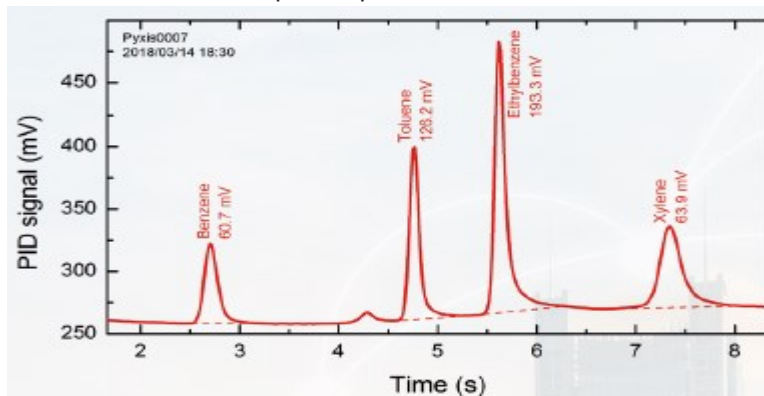


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CARRIER GAS FREE

PyxisGC BTEX uses ambient air as its carrier gas, so that cumbersome carrier gas cylinders are no longer required. This unique feature simplifies installations and eliminates the need for periodic visits to the installation site in order to replace gas cylinders.

Miniaturized Photoionization detector (PID) for the peaks quantification





REAL-TIME BTEX MONITOR FOR A SAFER ENVIRONMENT

BTEX (Benzene, Ethylbenzene, Toluene, Xylenes) are a group of volatile, harmful, and carcinogenic compounds, usually released in the atmosphere during industrial processes or vehicle fuel combustion. Outdoor and continuous monitor of such compounds is very important, gives a clear picture of the air quality, can be used to identify health and safety concerns, demonstrates compliance with local regulations and even assess if there is a leak in storage or processing infrastructure. Benzene concentration is regulated by European Air Quality Directive 2008/50EC, which sets the limit value (LV) at 1,5 ppb ($5 \mu\text{g} / \text{m}^3$) for the annual mean.

SMART CITY

THE AIR QUALITY MONITOR AROUND YOU

WHAT

A smart city is a designation given to a city that incorporates information and communication technologies (ICT) to enhance the quality and performance of urban services such as energy, utilities, and transportation, so to reduce resource consumption, wastage, and overall costs. In order to achieve this goal it is necessary to monitor the real-time environmental conditions, with a network of sensor nodes across relevant spots in a city, for identifying the sources of pollution and mitigate them.

HOW

PyxisGC BTEX can be implemented in the monitoring network and supply real-time information about the quality of the air related to BTEX concentration. This data can be used to get a clearer picture of air quality, with precise geolocalization, thus helping in the development of an environmental plan able to reduce the pollution impact on the population.

WHERE

- Schools, hospitals, museums, parks
- Street canyons, garages, tunnels, high-traffic areas
- Airports, stations, harbors

RANGE

0.05-40ppb for Benzene and Toluene; 0.25-00ppb for Ethylbenzene; 1-500ppb Xylenes

FENCE LINE

CONTINUOUS CONTROL AND FAST RESPONSE FOR EVERYDAY SAFETY

WHAT

Monitoring the potential escape of pollutant gases from industrial sites can be difficult to achieve due to changing weather conditions and the large size of many of sites. Fence line monitoring is the only way to ensure that proposed standards are being met and that neighboring communities are not being exposed to unintended emissions. This is a relatively new approach to control emissions from an industrial plant, in order to identify the source of potential problem.

HOW

PyxisGC BTEX can be installed in a network around industrial facilities and with our Cloud software it's possible to view the data in real time, from every smart device anywhere in the world. Reliable, real-time data can be used to create charts, tables, and other statistical analysis. The correct functioning of a plant can be continuously monitored and in case of emergency situations the threat will be quickly assessed and handled.

WHERE

- Oil & gas plants
- Iron and steel industries, foundries
- Harbors and airports
- Solvents, chemicals, or fuel depot
- Waste management areas, landfills

RANGE

0.1-80ppb for Benzene and Toluene; 0.50-200ppb for Ethylbenzene; 2-1000ppb Xylenes

ADVANTAGES

- Rugged construction, IP55 cabinet
- Carrier gas free
- Automatic analysis with auto check and autocalibration
- Remote control and Cloud software (Pollution Guardian) with real-time data
- Low maintenance cost and low energy consumption
- Easy relocation due to small size and weight



POLLUTION GUARDIAN, THE CLOUD SOLUTION FOR THE REMOTE DATA MANAGEMENT IN REAL TIME

PyxisGC BTEX is entirely matchable with the cloud service, "Pollution Guardian," for data monitoring and management. The Pollution Guardian software stores up and archives analysis data automatically, allowing real time and historical data viewing (with creation of charts, tables, graphs and other statistical analyses).

Pollution Guardian allows to set user-defined alarms on the data collected and to send notifications via SMS or email. In addition, push notifications on your smartphone is also available, thanks to the dedicated APP. Thanks to Pollution Guardian it is possible to manage the instrument. Remote diagnostics have never been so simple.

SPECIFICATIONS

Dimensions	420mm x 620mm x 210mm
Weight	Models: WOE 11,5 Kg / WCE (auto-calib) 13 Kg / WBE (UPS) 17,5 Kg / WEE (auto-calib+UPS) 19 Kg
Operating temperature	From -5°C to 50°C
Instrument control	Integrated PC board
Data storage	16 GB Internal Flash Memory (up to 7 years of continuous measurements)
Power input	12V CC max. 2,5A
Power consumption	Max. 25W
Carrier gas	Ambient Air, <10 sccm
Sampling	Sample Flow Rate 250 - 450 sccm
Detector	High-sensitivity PID - Photo Ionization Detector (10.6 eV)
Analyzed gases	Benzene, Toluene, Ethylbenzene, Xylenes (other gases on request)
Analytical range "Smart City" version	[0.5 – 80] µg/m ³ benzene with 10 min analysis cycles. (Range: 0.05-40ppb for Benzene and Toluene; 0.25-00ppb for Ethylbenzene; 1-500ppb Xylenes)
Analytical range "Fence Line" version	[1.0 – 160] µg/m ³ benzene with 10 min analysis cycles. (Range: 0.1-80ppb for Benzene and Toluene; 0.50-200ppb for Ethylbenzene; 2-1000ppb Xylenes)
Lower detection limit	<0,2 µg/m ³ (0.05ppb) of Benzene
Communication interfaces	Ethernet, Wi-Fi, 4G
Instrument control and data access	<ul style="list-style-type: none"> · Local WebServer, accessible with a common browser (IE, Firefox, Chrome) · MODBUS su TCP server · IoT service "Pollution Guardian"