

# airTOXIC<sup>BTX</sup> PID

a GC/PID for automatic monitoring of BTEX.  
In air, water or soil

Approved and installed by US EPA

BENZENE

TOLUENE

ETHYLBENZENE

XYLENES  
(O,M,P)

IAA

1,3  
BUTADIENE



Model: A73022



Model: A73022 Exp

## Environment Monitoring:

BTEX: 5 or 7 compounds  
Non urban areas  
Urban areas  
Fence line refinery  
Indoor air  
Outdoor air

## Process:

Industrial Hygiene  
Fence line



**Certified**

EN 14662-3  
EN 15267-1  
EN 15267-2

**Compliant with EN 14662: No interferences with BENZENE**

**Pattern Approval Certificate of the Measuring Instruments of PR China**

Ranges available:  
0.032 - 3250 µg /m<sup>3</sup>  
0 - 1000 ppb



2010-C212



Chromatotec® is specialized in VOC, Sulfur and permanent gases analysis at trace and ultra trace levels (ppm, ppb, ppt).  
Please visit our website for more details.

Updated: April 2021

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a GC/PID for automatic monitoring of BTEX  
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## Principle:

This instrument uses a port valve with a single absorbent trap, and a 30 meter metallic 0.28 mm ID column.

Minimum detection level as low as 10 ppt for Benzene or 1,3-Butadiene (A76022) in ambient air.

Miniaturization, sensitivity, mobility and flexibility are its main features.

Everything from the sample port up to the data storage is integrated in a 19"-rack 5U.

Programmed gradient temperature up to 202°C for the column oven and pressure/flow control of the carrier gas.

Linearity on area with  $R^2 > 0.995$

European range:  $0.45$  to  $45 \mu\text{g}/\text{m}^3 = 0.1$  to  $14.5$  ppb.

Before delivery the analyser is tested for one week by our quality control department.

Photo ionisation detector (PID), 10,6 eV lamp.

Self-cleaning of the lamp ensures high stability.

Bi-directional RS-232 C to transfer data and results to the internal computer.

Vistachrom software enables the user to view and store data on an industrial computer. It provides user friendly utilities to recalculate, calibrate and export data and to configure the measurement.

The software allows the calculation of retention time, area, mass or concentration profiles, in any measuring unit.

LCD DISPLAY

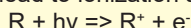
Results output: different communication protocols available

CALIB included in A73022/-B MCERTS with Benzene Permeation tube

Automatic validation and autocalibration

## Theory:

Photoionization is initiated by the absorption of short wavelength ultraviolet light by a molecule. This can lead to ionization as follows:



If the ionization potential of R is less than or equal to the energy of the photon,  $h\nu$ , then the species are ionized.

The detector consists of a sealed interchangeable ultraviolet lamp that emits a selected energy line.

Lamps with energies of 8.3, 9.5, 10.6 and 11.7 eV are available.

PID is linear.

## Options:

- Exp cabinet option hazardous area ATEX zone 1, zone 2 or CSA Class 1 Division 2 T3
- MODBUS RTU
- Internal Multipoint calibration with CALIB and / or cylinder
- Nitrogen generator up to 300 ml/min
- Modem support and remote control
- 4 or 8 analog outputs 4-20 mA or 0-10 V
- 1,3-Butadiene (A76022 or A73022-B)
- Purge module to extract VOC from water for online BTEX analysis
- Naphthalene in option

## Product technical specifications:

### BTEX analysis: up to 8 compounds:

Benzene, Toluene, Ethylbenzene, Xylenes: Ortho, meta, para cyclohexane, styrene

1,3-Butadiene in option, IAA in option

### Lower detection limit (LDL) in automatic mode:

- $\leq 0.01$  ppb =  $0.0325 \mu\text{g}/\text{m}^3$

### Detection range and linearity: BENZENE

- 3.25 to  $3250 \mu\text{g}/\text{m}^3 = 0-1000$  ppb
- 0.32 to  $325 \mu\text{g}/\text{m}^3 = 0-100$  ppb
- 0.032 to  $32.5 \mu\text{g}/\text{m}^3 = 0-10$  ppb

### Relative standard variation: PRECISION

- Better than 0.3 % over 48h (Retention Time)
- Better than 2 % over 48 h on 1 ppb (Concentration)

### Results on LCD:

- Data storage
- 4 or 8 x 4-20 mA or 0/10 V output in option
- MODBUS RTU / JBUS or Bayern Hessen protocol

### Cycle time:

- 15, 20 or 30 min (A73022)
- 30 min (A73022-B)
- 20 min (A76022)

### Gas supply:

- Nitrogen: 4 ml/min (inlet 3 bars; 1/8" swagelok)
- Air or nitrogen for CALIB: 50 ml/min continuously and 180 ml/min in CALIB method
- **Detector cleaning: 3 ml/min**
- 15ml/min, Sample inlet (vacuum pump) 1/4" swagelok
- Pneumatic valve 90ml/commutation

### Gas supply for Exp cabinet:

- If air used for dilution: 30l/min in continue
- If nitrogen used for dilution: 500 l to purge the cabinet and  $< 0.5$  l/min in continue to maintain overpressure

### Sample volume:

- 20 to 400 ml or more (programmable)

### Operation Temperature:

- Room with air conditioning: 10 to 35°C

### Computerized Electronic:

- 4 USB Connecting Port
- Two RS-232 ports
- Display: 10" TFT Color LCD
- Software: Windows 7 embedded

### Power supply:

- main: 230V / 50Hz or 115V / 60 Hz
- battery: 24V (option)

### Electrical consumption:

- Average: 150 VA, Peak 360 VA

### Dimensions and weight:

- Rack 19" version: Height 222mm, Width 482mm, Depth 600mm, Net weight 22kg
- Exp version: Height 800mm, Width 600mm, Depth 300mm, Net weight 40kg

### To order:

airTOXIC BTX inbuilt computer / Calibration & airmoCOM XXX001 included - 5U

airTOXIC BTX inbuilt computer / airmoCOM XXX001 included - 5U

airTOXIC VOC - inbuilt computer - 5U

### Model:

A73022

A73022 Cylinder

A77022

Chromatotec® is continuously improving its products, therefore these specifications are subject to change without notice

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