

# Volatle Organic Compounds

VOCs



## Where are they found?

Volatle Organic Compounds (VOCs) can be produced by fuel combustion (wood, coal, gasoline etc.) such as mobile sources and industries. It can be released to the atmosphere due to gasoline, paint, and solvents evaporation from above ground storage tanks. Another of the most important emission sources is biogenic, by vegetation natural release.

## Why are they harmful?

Many VOCs are toxic and can cause cancer, mutations, and/or other serious health problems. One of the most harmful compounds is the benzene, which can cause leukaemia. Some of them contribute to ozone formation with associated health effects, environmental and climate effects. Also, contribute to the formation of CO<sub>2</sub> and secondary organic aerosols that can warm and cool the atmosphere, respectively.



## VOCs cartridge

K-VOCs-A-01

The Volatile Organic Compounds Cartridge has a built-in photoionization (PID) sensor provided with a 10.6 eV light energy source to measure accurately the 100s of VOCs commonly found in indoor and outdoor environments. Its cutting-edge design avoids any undesirable humidity effect, giving 10,000 hours continuous operation, and, together with temperature and pressure correction algorithm, allows accurate measurements from 1 ppb to 10 ppm.

## Technical characteristics

| Type            | Unit measure            | Measurement range <sup>(1)</sup> | Resolution <sup>(2)</sup> | Operating temp. range <sup>(3)</sup> | RH range <sup>(4)</sup> | Operating life <sup>(5)</sup> | LOD (Limit of detection) <sup>(11)</sup> |
|-----------------|-------------------------|----------------------------------|---------------------------|--------------------------------------|-------------------------|-------------------------------|--|
| Photoionization | µg/m <sup>3</sup> , ppb | 1-10,000 ppb                     | 1 ppb                     | -20 to 60 °C                         | 0 to 99 %RH             | 10,000 hours                  | 1 ppb                                    |

\* See notes on page 25