

Carbon dioxide

Where is it found?

CO₂ is a result of normal cell function when it is breathed out of the body. Besides, it is an essential element in photosynthesis, the process by which plants make food and energy. Levels of atmospheric CO₂ have increased since the Industrial Revolution. The primary causes are deforestation and the burning of fossil fuels such as coal, for electricity, heat production and for transportation (cars, ships, planes, etc.). It could also be formed, as a secondary pollutant, by CO oxidation.

Why is it harmful?

Carbon dioxide (CO₂) is the fourth most abundant gas in the Earth's atmosphere being the main Greenhouse gas. It is an odourless, colourless, and non-toxic gas although its emission is an environmental global problem, being the main gas pollutant contributing to the climate change. Besides, it is a contributor of the acid rain, oceans acidification and could displace oxygen (O₂) and nitrogen (N₂). CO₂ is removed from the atmosphere when it is absorbed by plants and algae as part of the biological carbon cycle.

CO₂ cartridge

K-CO2-B-01

The Carbon Dioxide Cartridge has a built-in non-dispersive infrared sensor (NDIR) ideal to measure from low to high concentrations that can be found in the atmosphere. Besides, it includes an automatic baseline calibration to maintain the long-term stability with no effect of humidity, temperature and pressure, which are corrected in the algorithm.



Technical specifications

Type	NDIR	Response time ⁽⁹⁾	< 30 sec
Unit of measurement	mg/m ³ , ppm	Typical accuracy (MAE) ⁽¹⁰⁾	± 30 ppm
Measurement range ⁽¹⁾	0 - 5,000 ppm		
Resolution ⁽²⁾	1 ppm		
Operating temperature range ⁽³⁾	-20 to 50 °C		
Operating RH range ⁽⁴⁾	0 to 99 %RH		
Recommended RH range ⁽⁴⁾	0 to 95 %RH		
Operating life ⁽⁵⁾	> 7 years		

* See notes on page 28