

Nitrogen dioxide



Where is it found?

The major source of NO₂ is combustion of fossil fuels: coal, oil and gas. Most of the NO₂ in cities is derived from motor vehicle's exhausts. Other sources of NO₂ are petrol and metal refining, electricity generation from coal-fired power stations, other manufacturing industries and food processing.

Why is it harmful?

Nitrogen dioxide (NO₂) is a pollutant criterion that contributes to the formation of photochemical smog, which has significant impact on human health. Breathing increased levels of NO₂ inflames the lining of the lungs and reduces immunity to lung infections. The result is wheezing, coughing, colds, flu and bronchitis, as well as more frequent and intense asthma attacks.

NO₂ cartridge

K-NO2-A-01

The Nitrogen Dioxide Cartridge has a built-in electrochemical sensor which has **no interference with Ozone** thanks to its embedded O₃ filter, making the cartridge ideal to measure the concentrations found in the atmosphere, from very low levels in clean environments to high concentrations in polluted areas of cities or industries. However, the cartridge can be affected by fast humidity transients reducing its accuracy during these events.



Technical specifications

Type	Electrochemical	Limit of Detection (LOD) ⁽⁷⁾	2 ppb
Unit of measurement	µg/m ³ , ppb	Repeatability ⁽⁸⁾	4 ppb
Measurement range ⁽¹⁾	0 - 5,000 ppb	Response time ⁽⁹⁾	< 60 sec
Resolution ⁽²⁾	1 ppb	Typical accuracy (MAE) ⁽¹⁰⁾	± 5 ppb
Operating temperature range ⁽³⁾	-30 to 40 °C	Typical precision R ² ⁽¹⁰⁾	> 0.85
Operating RH range ⁽⁴⁾	0 to 99 %RH	Typical slope ⁽¹⁰⁾	0.78 - 1.29
Recommended RH range ⁽⁴⁾	15 to 85 %RH	Typical intercept (a) ⁽¹⁰⁾	-4 ppb ≤ a ≤ +4 ppb
Operating life ⁽⁵⁾	> 24 months	DQO - Typical U(exp) ⁽¹¹⁾	< 25%
Guarantee range ⁽⁶⁾	20 ppm	Typical Intra-model variability ⁽¹²⁾	< 1 ppb