Nitric oxide

Where is it found?

Nitric oxide (NO) is emitted from automotive engines and the burning of coal, oil, diesel fuel, and natural gas, specially from electric power plants. It is also emitted by cigarettes, gas stoves, wood burning, and silos that contain silage.

Why is it harmful?

NO is a colorless toxic gas originated by the oxidation of nitrogen. It contributes to climate change and its inhalation affects human health. When it reacts with sunlight or other chemicals, it forms nitrogen dioxide (NO_2) and tropospheric ozone (O_3), leading to photochemical smog and acid rain.

The inhalation of high levels of nitric oxide can cause respiratory problems, particularly in vulnerable groups, such as asthmatics, and it affects to cardiovascular and immune systems.

NO cartridge

The NO cartridge has a built-in electrochemical sensor ideal for measuring very low ppb concentrations in ambient air, up to several ppm found near pollution sources (vehicles, industries…). This cartridge is very accurate and stable, it has a good temperature correction algorithm and can easily work beyond two years under non-extreme environments.

The cartridge can suffer from a small zero drift (some ppb) over time, which can be easily corrected remotely with the Kunak Calibration Tool available on Kunak Cloud Software.

Type	Electrochemical
Unit of measurement	µg/m³, ppb
Measurement range (1)	0 - 5,000 ppb
Resolution (2)	1 ppb
Operating temp. range (3)	-30 to 45ºC
Operating RH range (4)	0 to 99 %RH
Recommended RH range (4)	15 to 85 %RH
Operating life (5)	> 24 months
Guarantee range (6)	20 ppm

Limit of Detection (LOD) (7)	2 ppb
Repeatability (8)	4 ppb
Response time (9)	< 30 sec
Typical accuracy (11) (12)	± 4 ppb
Typical precision R^2 (10)	> 0.9
Typical slope (10)	0.9 - 1.12
Typical intercept (a) (10)	-2 ppb ≤ a ≤ +2 ppb
DQO - Typical U(exp) (13)	< 20%
Typical Intra-model variability (14)	< 1 ppb

* See notes on page 24