

Mobile Measurement of NO₂

(PAS - Photoacoustic Spectroscopy)



The TRACE-GAS NO₂ analyzer in a case combines reliability, fast response and easy handling in one instrument. Developed for a continuous, mobile measurement of NO₂ in ambient air.

+ mobile use

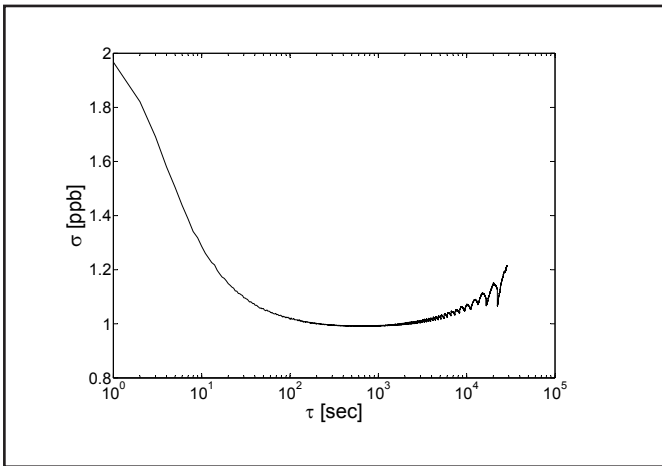
+ direct measurement method

+ continuous measurement

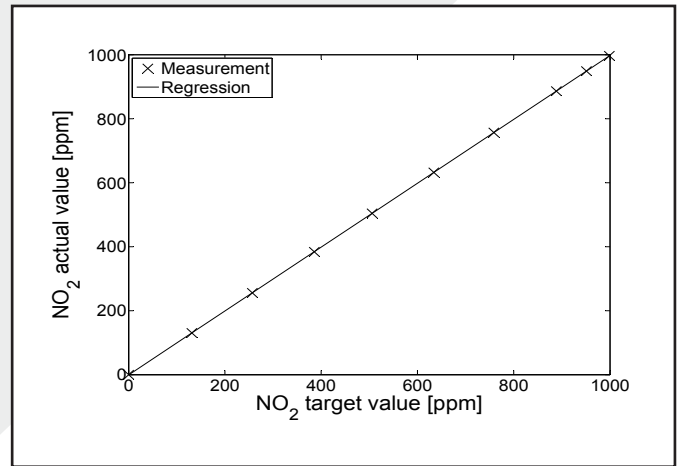
Fields of application e.g.

- immission in ambient air
- site selection of measuring stations
- detection of nitrogen oxide sources
- building of measuring networks

Performance of the PAS-NO₂:



Allan-Variance



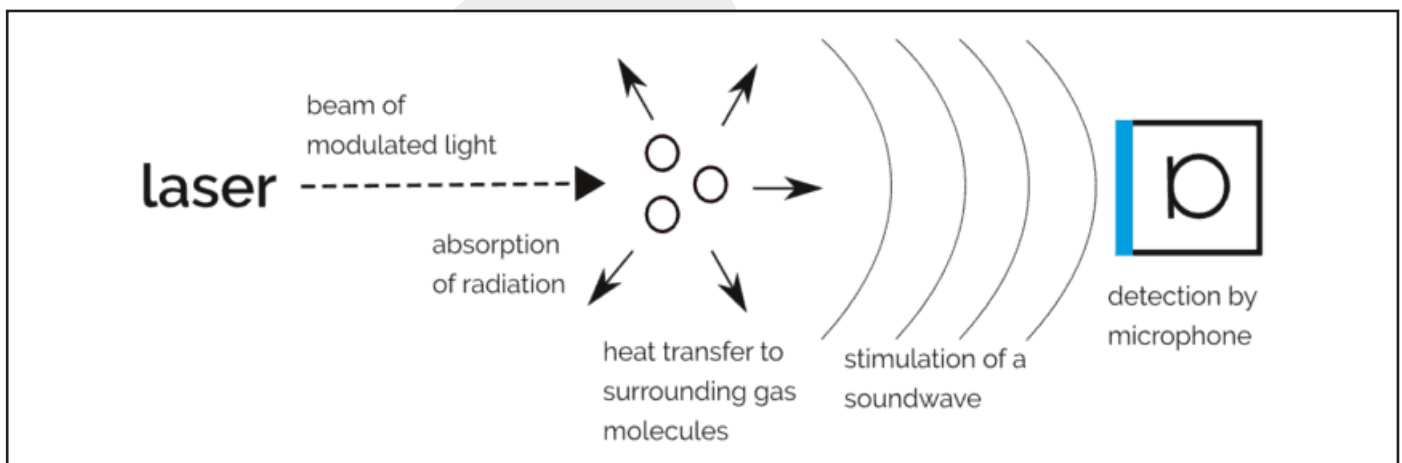
Linearity

PAS-Sensor (NO₂)

direct NO₂ measurement

The PAS-NO₂ sensor is an almost drift-free sensor for the direct detection of nitrogen dioxide (NO₂) based on the measurement principle of photoacoustics. Due to the innovative evaluation method, large measuring ranges can be realized with an extremely small detection limit. This makes it ideal for ambient air immission measurements. The compact design allows a fast, cost-effective and continuous measurement.

Measuring principle of the PAS (NO₂) - PhotoAcoustic Sensor





Mobile measurement of the local NO₂ value

Options

- > battery charger
- > radio/ WLAN Modul
- > SD card for internal data logger

Technical data

Ambient temperature	5...35 °C (non condensing)
Inlet pressure	800...1,200 mbar
Gas flow	< 1.5 l/min
Communication	Modbus TCP/IP / WLAN / radio
Dimensions (LxWxH)	39 cm (with battery 47 cm) x 16.5 cm x 39 cm
Supply voltage	Li-Ion battery (10.4 Ah)
User interface (option)	7" LCD (capacitive touch)

Specifications

Measuring component	NO ₂ (nitrogen dioxide)
Measuring range (FS)	0 - 1,000 µg/m ³
Limit of detection (LOD)¹ @ t₁₀-t₉₀ ≤ 30 s	≤ 0.5 µg/m ³
Linearity (greater of)	≤ ± 0.5 % MB or ≤ ± 1 % MV ²
Zero drift	≤ 0.5 µg/m ³ in 10 h
Span drift	≤ ± 1 % MB in 10 h

¹specified for constant ambient temperature, flow and inlet pressure

²measuring value

KNESTEL

Technologie & Elektronik GmbH
Osterwalder Str. 12
87496 Hopferbach

 +49 (0) 83 72 - 70 80

 sales@trace-gas.com