

CO₂



MEASUREMENT

A FIRST STEP TO

#CleanAir

Acquisition and Utilization

of CO₂ measurement devices to enhance air quality & health protection in indoor environments



Technoline
WL1025

Hama

Aranet4Home

Newentor

Birdie

CO₂ measuring devices indicate indoor air quality.

#ClearAir

Clean air, like clean water, is essential to human health and well-being.

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WHY CO₂ MEASUREMENT?

Today, we recognize the significance of air quality for **well-being, performance, and health protection**.

The concentration of CO₂ outdoors is 420 ppm (parts per million). The CO₂ level indoors serves as an **optimal indicator of air quality**:

- it indicates the ratio of **exhaled air to fresh air**,
- **correlates with fine dust, organic compounds, viruses, ...**
- higher levels of CO₂ increase **survival & transmission of viruses**.

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CO₂ MEASUREMENT INSTRUMENTS

The **effectiveness** of ventilation can be assessed **using a CO₂ meter**. The device must be equipped with a high-quality **NDIR sensor**.

- Installation indoors approx. **1.2 - 1.5 meter** above the floor,
- at least **1 m** away from people, doors and windows.

3

LOCATION: MOBILE OR STATIONARY?

Devices vary significantly in their **energy management capabilities**.

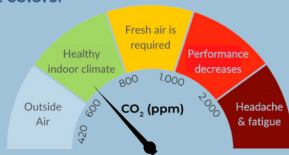
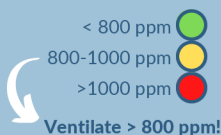
- Most displays and sensors consume increased energy, leading to the predominant use of devices with wire.
- Mobile devices need **rechargeable batteries, energy-efficient sensors, elnk displays**, and similar technologies.
- A **power bank** may also serve as a power source.

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DATA LOGGER, LIMITS, AND APPS

Additional potential features that certain devices may possess:

- **Data loggers** are capable of recording and exporting data.
- **Connection:** WLAN or Bluetooth, smart home integration.
- **Smartphone app:** values, configuration, remote access, ...
- **Adjustable** threshold values & visual or auditory signals.
- Limit values as **traffic light colors**:



5

CO₂ SENSOR MAINTENANCE

Calibration prevents "drift" of measured values.

A (rechargeable) battery comes in handy when calibrating outside.

Automatic calibration: the device takes the lowest value of a certain period as 400-420 ppm, so put it out regularly (see manual).

Manual calibration: conduct every few weeks in outdoor air – recommended if provided by your device.

ADDITIONAL INFORMATION

<https://www.igoe.at/saubere-luft/#CO2>



If you have any questions, write us! hello@igoe.at