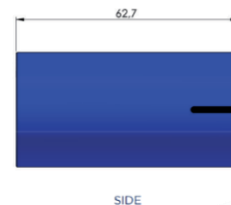


Indoor Air Quality and Cooking Appliances Field Study: Overview of Measurement Equipment

The below information outlines the equipment used in CLASP’s Gas Cooking Field Testing Study. For more information, please contact clasp.europe@clasp.ngo.

NO₂ microsensor – continuous (1 minute) measurements

- Continuous measurement
- Very small, only 55 gr.
- [Cairsens® NO₂ | Micro-sensors | Ambient | ENVEA](#)
- Up to 20 days of 1 minute data storage
- measurement range 0 – 0.25 ppm = 0 - 250 ppb
- Detection limit: 0.005 ppm = 5 ppb
- WHO yearly AQG value of 5 ppb
- Typical indoor concentrations are 40 - 150 ppb (ref. Fortmann et al 2001)



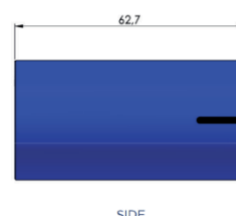
NO₂ Diffusion Tubes – Passive Measurement

- Passive samplers
- For use indoors and outdoors
- 2 – 4 weeks average
- Provided [by Gradko](#), who also delivers results and analysis



CO microsensor – continuous (1 minute) measurements

- Continuous measurement
- Very small, only 55 gr.
- [Cairsens® CO | Micro-sensors | Ambient | ENVEA](#)
- Up to 20 days of 1 minute data storage
- measurement range 0 – 20 ppm
- Detection limit: 0.05 ppm
- WHO 24 h AQG 4 mg/m³ = 3.4 ppm



Air Quality Sensor – AirVisual Pro

- Measures PM2.5, CO₂, temperature and relative humidity
- Real-time measurements
- Measured Parameters:
PM_{2.5} (Fine Dust):
0-1,000 µg/m³ ±10 µg/m³ / or ±10%
CO₂ - 400–10000 ppm



iButton – DS1922-L

- Stove Usage Monitoring Sensor to detect hob and oven use - tracks time and temperature to identify when household is cooking
- 2 placed on the hob and 1 on the gas oven
- Provided by Analog Devices – details [here](#)



The above equipment was sent to participating households in a solid aluminium foam-filled case, pictured below.

