

CO₂ Meter



Model shown above may differ from the one in this pack.

Why use CO₂ meters?

Air quality is taonga and is essential to human health and wellbeing. While outdoor air quality will always influence indoor air quality levels, the vast amount of our daily overexposure to carbon dioxide (CO₂) unwittingly occurs in poorly ventilated indoor environments.

A person inhales around 14,000 litres of air a day, and the pollutants in the air can adversely affect not only our health, but the health of our environment. Given that New Zealanders spend 70% of their day indoors, creating environments with ample airflow is integral to achieving optimal health, sleep, and productivity. CO₂ is a gas consisting of one part carbon and two parts oxygen. It is odourless, colourless, and tasteless gas, and too much exposure can result in negative health effects.

Discover how your indoor environments measure up to know where improvements or changes need to be implemented.

CO₂: reading is in parts per million (ppm). The green, yellow/orange, red coloured bars/quadrants correlate to the ppm reading. When the air detector meter reads over 1000ppm it will alert with audio (loud beep) and visual (flashing screen) alarms to indicate that ventilation is required.

Temperature: reading is in degrees Celsius (°C) or Fahrenheit (°F). Both models can display the temperature in both °C or °F, the default setting is °C. On the Aranet4 the temperature setting is located underneath the batteries (see User Manual).

Relative Humidity: reading is in percentage (%)

Important usage notes

- The CO₂ meters are for domestic home and office use only and are not suitable for use in industrial or commercial environments.
- The CO₂ meter should ideally be placed clear of any obstacles surrounding its sides, and approximately 2 meters away from windows, inhabitants, or open flames (ideally on a stable tabletop). Do not expose to extreme heat, cold, moisture or dust.
- CO₂ meters cannot indicate of the presence of COVID-19.

Please return your CO₂ monitor directly to a librarian to avoid damage in the returns chute.

Further information

For further information, please visit wcl.govt.nz/co2-meters or scan the below QR code.

We'd also love your feedback! Visit our CO₂ meter information page to find our online feedback form.



How to read this meter

Significant long-term health effects are not generally expected below 5000ppm.

	Carbon Dioxide CO₂ in parts per million (ppm)		
	Level	Health effect	Action
Good indoor air quality (displays green)	Below 1000ppm	Maintains your healthy levels.	Use intermittent ventilation when reaching approximately 800ppm and higher.
Tolerable indoor air quality (displays yellow/orange)	1000 – 1400ppm	Mild health effects, brain cognitive function decreases by 15%.	Routinely ventilate, consider reducing capacity, or altering room usage.
Unhealthy indoor air quality (displays red)	More than 1400ppm	Moderate short term health effects, brain cognitive function decreases by 50%.	Immediately and consistently ventilate, and/or run air filtration system.

	Temperature (Degrees Celsius °C)	
	Range	Risk
Good indoor air quality	18 - 24°C	Safe, ideal range for general population
Tolerable indoor air quality	16 - 18°C and 25 - 30°C	Minimal-risk indoor ranges for general population. May negatively affect vulnerable populations *
Unhealthy indoor air quality	Below 16°C	Minimum recommended indoor range. Increased negative health risks for general population.

	Relative Humidity - percentage (%)	
	Range	Risk
Good indoor air quality	40-60%	Ideal indoor relative humidity.
Tolerable indoor air quality	30% - 40% and 60% - 70%	Tolerable indoor relative humidity, may affect people with allergies.
Unhealthy indoor air quality	Below 30%	Dry skin, itchy eyes, nasal passage and throat irritation, increased allergy symptoms, increased vulnerability to infection, dehydration
	Above 70%	Mould, dustmite & bacterial breeding increases, respiratory disease risks increase, increased allergy symptoms, dehydration

*Health impacts adversely affect vulnerable populations such as young children, elderly, and people with pre-existing respiratory conditions.