

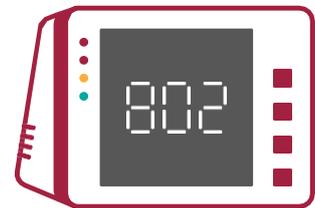
# Using carbon dioxide (CO<sub>2</sub>) monitors to identify poor ventilation

## CO<sub>2</sub> monitors can help identify poor ventilation

- People breathe out CO<sub>2</sub>. If CO<sub>2</sub> builds-up in a space it can show that ventilation needs improving
- CO<sub>2</sub> monitors don't measure levels of COVID-19 but using them can help you identify poorly ventilated areas
- They are not useful in all situations, for example in very large spaces or rooms with only one or two people

## Types of monitor to use

- The most appropriate portable devices to use are non-dispersive infrared (NDIR) CO<sub>2</sub> monitors



## How to use a CO<sub>2</sub> monitor

- Follow the manufacturer's instructions to understand how to use your portable monitor correctly
- Place monitors at head height and away from windows, doors, or air supply openings
- Position them at least 50cm away from people as their exhaled breath contains CO<sub>2</sub>, any closer could give misleading measurements

## How to get accurate measurements

- In larger spaces more than one sampling location will usually be required
- Take several measurements throughout the day, when the room is occupied, to represent changes in use of the room
- Record your measurement, these numbers will help you decide if an area is poorly ventilated

## Understanding the numbers

- The amount of CO<sub>2</sub> in the air is measured in parts per million (ppm)
- A consistent CO<sub>2</sub> value below 800ppm is likely to indicate that an indoor space is well ventilated
- Where there is continuous talking, singing, or high levels of physical activity, indoors keeping CO<sub>2</sub> levels below 800ppm is recommended
- CO<sub>2</sub> levels consistently higher than 1500ppm in an occupied room indicate poor ventilation and you should take action
- It is important to remember that CO<sub>2</sub> measurements are only a broad guide to ventilation rather than 'safe levels'

## Next steps

The measurements you have taken should help you [assess the risk of poor ventilation](#) and identify areas in your workplace where you need to take action.

## Find out more

[Ventilation during the coronavirus \(COVID-19\) pandemic](#)

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