



Air Quality Guide

Welcome to the Air Quality Community

The AirVisual Node is a smart air quality monitor that displays immediate and accurate PM2.5 readings for both indoors and outdoor, as well as CO₂ readings, to help you create healthier and more productive environments.

AirVisual helps people, worldwide, survive and thrive in polluted environments. We are a global team hailing from 6 countries in 4 continents, dedicating our work to 1 overarching goal: *empower everyone to breathe clean, healthy air.*

Learn more: airvisual.com

Want your air quality data to follow you everywhere?

Get the app!



airvisual.com/app

PM2.5

WHAT IS IT?

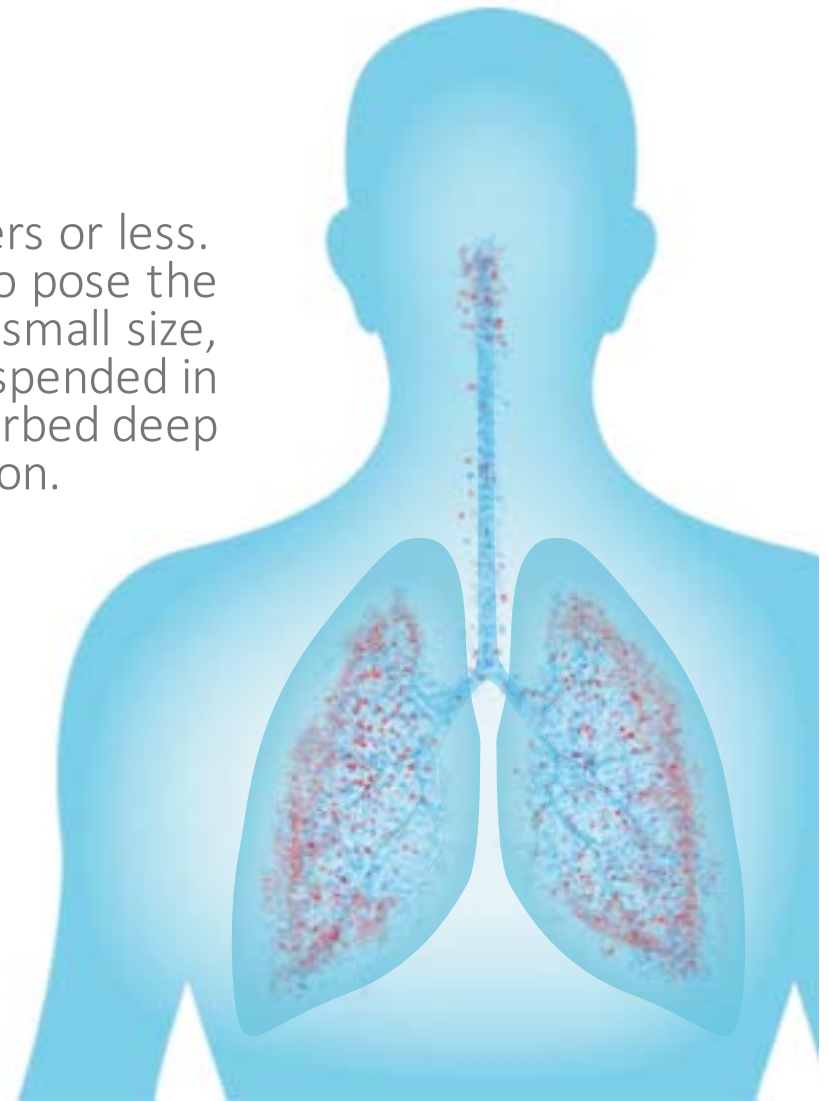
PM2.5 particles are 2.5 micrometers or less. Of all air pollutants, it is believed to pose the greatest health threat. Due to its small size, it has the ability to both remain suspended in the air for long periods and be absorbed deep into the bloodstream upon inhalation.

SOURCES

Outdoor: motors, wood burning, industries generating combustion.
Indoor: Poor isolation, cooking stove use, fireplace, etc.

HEALTH IMPACT

From coughing and irritation feeling to respiratory illnesses (like asthma, bronchitis) & cardiovascular effects.



Air Quality Index (AQI)

AQI is a system for reporting the severity of air quality levels in relatable terms to the public. The index ranges from 0 to 500, where higher index values indicate higher levels of air pollution and higher potential for adverse health effects.

American AQI and Chinese AQI	
Function used	Overall AQI is generated from six different pollutants (ground level ozone, PM2.5, PM10, carbon monoxide, sulfur dioxide and nitrogen dioxide)
Range value of PM2.5	PM2.5 range is not determined the same: America uses a stricter system.
Result in the readings	American method yields higher AQI than the Chinese one

AQI Readings- Icon Index



Good

US AQI from 0 to 50
No health implications.



Moderate

US AQI from 51 to 100
Hypersensitive individuals should reduce exercise.



Unhealthy for Sensitive Groups

US AQI from 101 to 150
People with breathing or heart issues may feel irritations.



Unhealthy

US AQI from 150 to 200
Harmful for the SG, unpleasant for healthy people.



Very Unhealthy

US AQI from 200 to 300
Everyone can be affected. SG's endurance will be lower.



Hazardous

US AQI from 301
Everyone should avoid outdoor activities.

Confinement (CO₂)

WHAT IS IT? CO₂ (Carbon Dioxide) is a colorless, odorless gas used by plants to get energy.

SOURCES In addition to breathing, CO₂ emission finds its sources in fossil fuel (like coal), gas and oil burning.
Inside, CO₂ levels increase when you seal your house for a long period.

HEALTH IMPACT Stagnant air may cause headaches, fatigue and dizziness. High concentration for a long period may cause fainting for some people. High levels of CO₂ mixed with high humidity are at risk for mold causing allergies (watery, itchy and red eyes, coughing and wheezing).



Confinement Reading- The CO₂ Gauge

On the screen dedicated to your indoor air quality, the following gauge indicates the CO₂ levels in your room.

The more the gauge fills itself, the darker its color will get to indicate you to ventilate the room and get fresh air.

The number inside the gauge is PPM (Parts Per Million) and is the unit of concentration for CO₂. The Node measures from 400 up to 10,000 ppm



Confinement Reading- Icon Index

The confinement icon (a fan), is present on every screen's top left corner. CO₂ levels are indicated by the changing color of the fan as well as the ppm score.



Good

CO₂ is less than 700 ppm
Outdoor environment level



Moderate

CO₂ from 700 to 1,000 ppm
Recommended level of CO₂ in indoor areas



High

CO₂ from 1,000 to 1,500 ppm
Recommended maximum level of CO₂ in indoor areas



Unhealthy

CO₂ from 1,500 to 2,500 ppm
Symptoms of fatigue and concentration reduction



Very Unhealthy

CO₂ from 2,500 to 5,000 ppm
Headaches can occur



Hazardous

CO₂ from 5,000 to 10,000 ppm
From nausea to breathing difficulties and fainting

Icons index- Recommendations Icons



Open your windows to bring in fresh, clean air



Close your windows



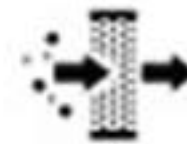
Enjoy your outdoor activities



Avoid outdoor activities



Wear a mask when you go outside



Run an air purifier to lower your indoor pollution

Icons index- Device Status



Connected to Wi-Fi



Not connected to Wi-Fi



Connected to Wi-Fi but not to the server



Battery status, unplugged



Battery status, plugged



Battery charging

FCC Notice

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:

(1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

NOTE 1: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

NOTE 2: Any changes or modifications to this unit not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.