



## 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 CO<sub>2</sub> 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](http://airvisual.com)*

Want your air quality data to follow you everywhere?

Get the app!



*[airvisual.com/app](http://airvisual.com/app)*

## PM2.5

### WHAT IS IT?

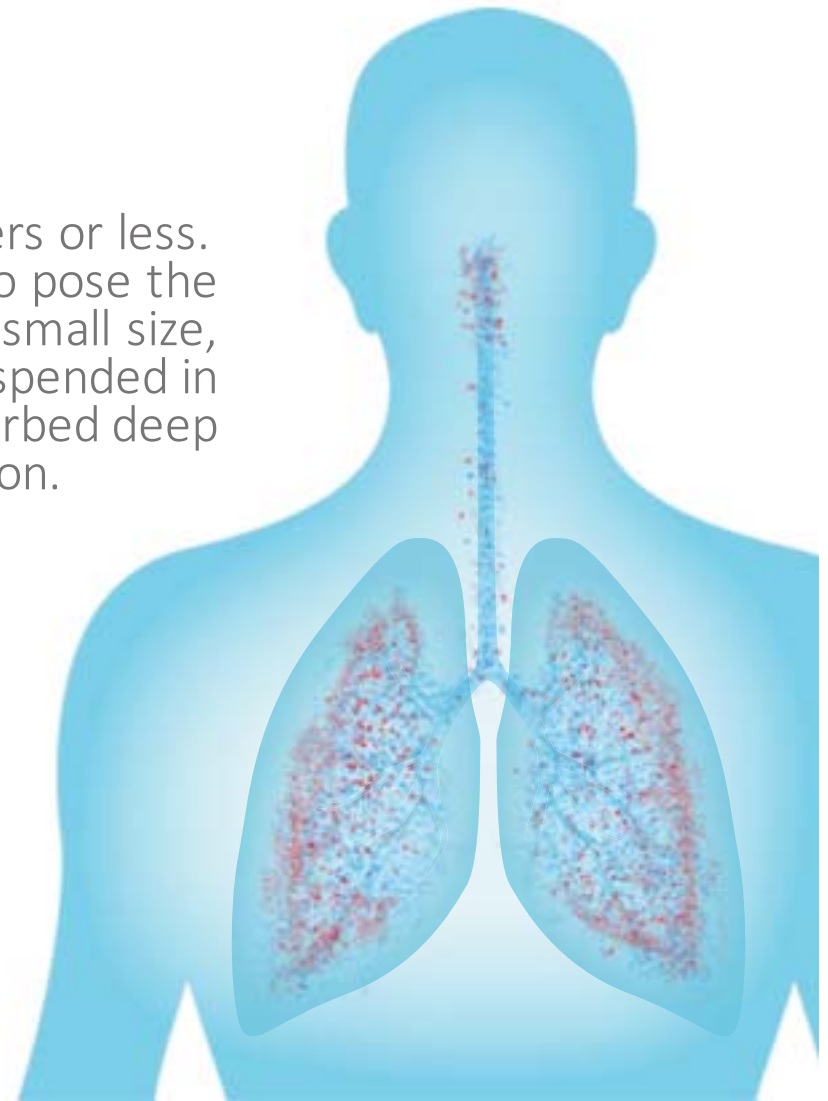
PM2.5 particles are 2.5 micrometers or less. Of all air pollutants, it is believed to pose the greatest health threat. Due to its small size, it has the ability to both remain suspended in the air for long periods and be absorbed deep into the bloodstream upon inhalation.

### 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 (CO<sub>2</sub>)

**WHAT IS IT?** CO<sub>2</sub> (Carbon Dioxide) is a colorless, odorless gas used by plants to get energy.

**SOURCES** In addition to breathing, CO<sub>2</sub> emission finds its sources in fossil fuel (like coal), gas and oil burning.  
Inside, CO<sub>2</sub> 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 CO<sub>2</sub> mixed with high humidity are at risk for mold causing allergies (watery, itchy and red eyes, coughing and wheezing).



## Confinement Reading- The CO<sub>2</sub> Gauge

On the screen dedicated to your indoor air quality, the following gauge indicates the CO<sub>2</sub> 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 CO<sub>2</sub>. 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. CO<sub>2</sub> levels are indicated by the changing color of the fan as well as the ppm score.



### **Good**

CO<sub>2</sub> is less than 700 ppm  
*Outdoor environment level*



### **Moderate**

CO<sub>2</sub> from 700 to 1,000 ppm  
*Recommended level of CO<sub>2</sub> in indoor areas*



### **High**

CO<sub>2</sub> from 1,000 to 1,500 ppm  
*Recommended maximum level of CO<sub>2</sub> in indoor areas*



### **Unhealthy**

CO<sub>2</sub> from 1,500 to 2,500 ppm  
*Symptoms of fatigue and concentration reduction*



### **Very Unhealthy**

CO<sub>2</sub> from 2,500 to 5,000 ppm  
*Headaches can occur*



### **Hazardous**

CO<sub>2</sub> 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



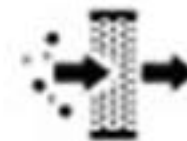
Enjoy your outdoor activities



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.