

# Air Quality Report & Certification

## **Prem Tinsulanonda International School**

Test Date: Monday February 1st - Friday February 5th 2021

School ID: 2722



**Prem Tinsulanonda**  
Certified Clean Air School

Test date: FEB01-FEB05 2021  
Test report: [airgradient.com/2722](https://www.airgradient.com/2722)

- Independent, **3rd party assessment** of the school-wide air quality of Prem Tinsulanonda International School
- Estimating **student exposure** to  $PM_{2.5}$  across indoor locations
- Utilization of resources and **prioritisation of investments** towards a clean air school
- Ensure safe and **healthy indoor environments** for students, teachers and staff
- Compliance with **WHO Air Quality Targets**
- Indicate **areas of improvements** in order to achieve long-term fulfillment WHO air quality targets
- Certify Prem's **achievements in clean air** and focus on students health and wellbeing

- The rationale for the AirGradient certification targets are based on the **World Health Organization** and governmental policies and the latest evidence-based research, with a **focus on children and learning environments**.
- These are laid out in the World Health Organisation's "**Air Quality Guidelines**":  
<https://www.who.int/airpollution/guidelines/en/>
- Intermediate **interim targets** may be required based on the current building infrastructure and pollutions reduction equipment limitations. Such interim targets will function to highlight areas where additional attention and resources may have to be engaged to achieve guideline compliance.

## WHO Air Quality Guideline & Interim Targets

<b>AQG</b> (Air Quality Guideline)		<b>IT-3</b> (Interim Target 3)	<b>IT-2</b> (Interim Target 2)	<b>IT-1</b> (Interim Target 1)
<b>10 <math>\mu\text{g}/\text{m}^3</math></b>		<b>15 <math>\mu\text{g}/\text{m}^3</math></b>	<b>25 <math>\mu\text{g}/\text{m}^3</math></b>	<b>35 <math>\mu\text{g}/\text{m}^3</math></b>

- Monitoring of **57 indoor** and **4 outdoor** locations with the AirGradient air quality monitoring platform.
- Measurements taken approx. every 120 seconds from Monday **1st February 2021** 00:00 to Friday **5th February 2021** 23:59.
- Measurement types collected: **PM<sub>2.5</sub>**, CO<sub>2</sub> (indoors only), Temperature and Humidity.
- This report focuses on **PM<sub>2.5</sub> only** and does not consider any other factors such as CO<sub>2</sub>, temperature or humidity.
- AirGradient follows WHO conventions to report **PM<sub>2.5</sub>** in **µg/m<sup>3</sup>**.
  
- **Passing Criteria:** Weighted average of classrooms (60%), sports facilities (20%) and common areas (20%) need to fulfill the **WHO guideline of below 10 µg/m<sup>3</sup> PM<sub>2.5</sub>**.
- WHO **Interim Targets** (IT-1, IT-2, IT-3) function to highlight areas where **additional resources** may have to be engaged to achieve Guideline compliance.

- Out of the **45 classrooms** being monitored, **43 were within the WHO standard of below 10  $\mu\text{g}/\text{m}^3$  PM<sub>2.5</sub>**.
- On average the classrooms had a **PM<sub>2.5</sub> level of 2.91  $\mu\text{g}/\text{m}^3$**  compared to an outside average of **42.0  $\mu\text{g}/\text{m}^3$** .
- **Indoor sports facilities** (gym, fitness room and blue mat area) had a **PM<sub>2.5</sub> level of 5.8  $\mu\text{g}/\text{m}^3$**  thus also **meeting WHO standards**.
- **Other indoor areas** (specialist classrooms and common areas) had large variations in air quality and **partially met WHO standards**.
- **PPS rooms outperformed** non-PPS rooms significantly: **PPS locations at 3.42  $\mu\text{g}/\text{m}^3$  PM<sub>2.5</sub>** compared to **non-PPS locations 21.33  $\mu\text{g}/\text{m}^3$  PM<sub>2.5</sub>**.
- It is recommended that the school **investigates issues** in some of the lower performing rooms in order to **ensure WHO compliance** on periods with high outside air pollution.
- Next air quality certification scheduled for **February 28th 2021** to renew the certificate.

Weighted average across classrooms, common areas and sport facilities:

**5.96  $\mu\text{g}/\text{m}^3$  PM<sub>2.5</sub>**

Passing Criteria: WHO standard of  $<10 \mu\text{g}/\text{m}^3$ .

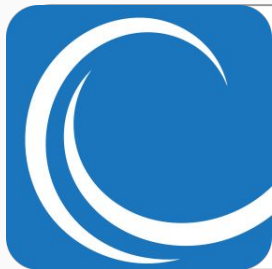
**AirGradient Clean Air School Certification Passed**



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## School Name

Air Quality Monitoring

Xx rooms monitored  
Details: [airgradient.com/xxx](https://airgradient.com/xxx)

### Level 1:

AQ Monitoring 24/7, Integration with School Policy, Regular AQ reviews



## School Name

Certified Spaces (SPACE NAME)

Test date: XXXxx-XXXxx 2021  
Test report: [airgradient.com/xxx](https://airgradient.com/xxx)

### Level 2:

Monitoring and Certification of specific spaces inside the school (e.g. EY, Sports Hall)



## School Name

Certified Clean Air School

Test date: XXXxx-XXXxx 2021  
Test report: [airgradient.com/xxx](https://airgradient.com/xxx)

### Level 3:

Monitoring and Certification of all main classrooms and common areas



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