

AIR QUALITY MONITORING @ 40 FEET HEIGHT – Report Date: 7.12.2022

(BASED ON US-EPA AQI STANDARDS AND THE DAYALBAGH AQI COLOUR CODE)

Permissible Limits (24 Hour Mean): PM₁₀ = 150; PM_{2.5} = 35, all units are in µg/m³ Sampling Duration = 24 hrs (9:00 AM to 9:00 AM)

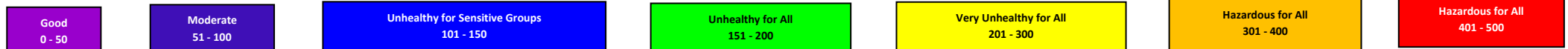
Today: 6-12-2022 to 7 -12-2022 from 9:00 a.m. to 9:00 a.m. **Yesterday:** 5 -12-2022 to 6-12-2022 from 9:00 a.m. to 9:00 a.m.

| L O C A T I O N | DAYALBAGH (TIME WEIGHTED AVERAGE DATA) | | | | | | | | | | | L O C A T I O N | SANJAY PLACE AND AVAS VIKAS (ARITHMETIC MEAN DATA) | | | | | | | | | | |
|--------------------------------------|---|-----------|------------------|-----------|---------------------------|--------|-----|------|------|---------------------|------|--------------------------------------|---|-----------|------------------|-----|---------------------------|--------|-----|-------|-----------|---------------------|------|
| | AQI | | | | Meteorological Parameters | | | | | | | | AQI | | | | Meteorological Parameters | | | | | | |
| | PM _{2.5} | | PM ₁₀ | | RH % | WS m/s | WD | T °C | | SR W/m ² | RF m | | PM _{2.5} | | PM ₁₀ | | RH % | WS m/s | WD | T °C | | SR W/m ² | RF m |
| | Today | Yesterday | Today | Yesterday | | | | Ma x | Min | | | | Today | Yesterday | Max | Min | | | | Today | Yesterday | | |
| 4 / 97 | 149 (3%↓) | 152 | 74 (16%↑) | 67 | 65 | 1.1 | WNW | 25.5 | 11.4 | 105 | 0 | Sanjay Place | 156 (19%↓) | 164 | 91 (23%↓) | 108 | 58 | 1.4 | WNW | 24.8 | 13.1 | 117 | 0 |
| 3 / 34 | 110 (2%↓) | 112 | 55 (3%↑) | 54 | 65 | 1.1 | WNW | 25.5 | 11.4 | 105 | 0 | Avas Vikas | 84 (22%↓) | 102 | 44 (21%↓) | 53 | 69 | 0.8 | NE | 25.3 | 11.1 | 69 | 0 |
| Science Faculty | 153 (6%↓) | 155 | 57 (1%↑) | 57 | 65 | 1.1 | WNW | 25.5 | 11.4 | 105 | 0 | | | | | | | | | | | | |

Views of AQI Research Group: Concentrations of PM_{2.5} have marginally decreased while PM₁₀ have marginally increased at all sites of Dayalbagh probably due to decrease in Relative Humidity and increase in Wind Speed. The Air Quality Index w.r.t. PM_{2.5} is in the *Unhealthy for Sensitive Groups* category at Prem Nagar and Vidhut Nagar and in the *Unhealthy for All* category at Science Faculty while w.r.t. PM₁₀ it remains in the *Moderate* category at all sites of Dayalbagh.

Concentrations of Particulate Matter have also decreased at Sanjay Place and Avas Vikas, Bodla. The Air Quality Index w.r.t. PM_{2.5} at Sanjay Place remains in the *Unhealthy for All* category while at Avas Vikas, Bodla it has changed to the *Moderate* category, w.r.t. PM₁₀ it has improved to the *Moderate* category at Sanjay Place and in the *Good* category at Avas Vikas, Bodla.

Values in parentheses indicate the percentage change in the pollutant concentrations with respect to yesterday. ↑ indicates increase while ↓ indicates decrease in pollutant concentrations. Percentage change has not been shown w.r.t. AQI values as the breakpoints for the different categories are not evenly distributed.



NOTE: 1 A continuing study conducted as part of Dayalbagh Sigma Six Qualities and Values Model implementation.

2 DEI is using United States Environmental Protection Agency (USEPA) methodology and online calculators to calculate AQI. For fair comparison with UPPCB Sanjay Place Weather Station readings, their PM_{2.5} concentration readings are fed in USEPA online calculator for AQI calculation.

3 Formula for AQI calculation for a Pollutant –

$$I = \frac{I_{high} - I_{low}}{C_{high} - C_{low}} * (C - C_{low}) + I_{low}$$

where: I = Air Quality Index; C = Pollutant Concentration (PM_{2.5}); C_{low} = Concentration Breakpoint ≤C; C_{high} = Concentration Breakpoint ≥C; I_{low} = Index Break point corresponding to C_{low}; I_{high} = Index Breakpoint corresponding to C_{high}; *Multiplication Sign