

AIR QUALITY MONITORING @ 40 FEET HEIGHT – Report Date: 13.12.2022

(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)

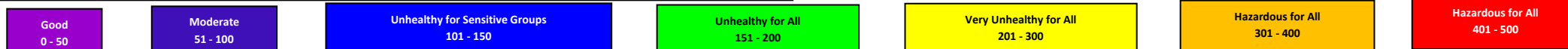
Today: 12-12-2022 to 13 -12-2022 from 9:00 a.m. to 9:00 a.m. **Yesterday:** 11 -12-2022 to 12-12-2022 from 9:00 a.m. to 9:00 a.m.

| 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 m | | PM _{2.5} | | PM ₁₀ | | RH % | WS m/s | W D | T °C | | SR W/ m ² | RF m m |
| | Today | Yesterday | Today | Yesterday | | | | Ma x | Min | | | | Today | Yesterday | Today | Yesterday | | | | Max | Min | | |
| 4 / 97 | 91 (20%↓) | 110 | 50 (13%↓) | 54 | 61 | 0.9 | WNW | 28.5 | 12.7 | 127 | 0 | Sanjay Place | 112 (27%↓) | 149 | 70 (17%↓) | 80 | 53 | 2.9 | SW | 27.8 | 14.5 | 130 | 0 |
| 3 / 34 | 74 (36%↓) | 102 | 29 (34%↓) | 44 | 61 | 0.9 | WNW | 28.5 | 12.7 | 127 | 0 | Avas Vikas | 99 (36%↓) | 149 | 57 (28%↓) | 70 | 57 | 0.8 | ENE | 29.9 | 14.2 | 67 | 0 |
| Science Faculty | 95 (32%↓) | 134 | 34 (30%↓) | 49 | 61 | 0.9 | WNW | 28.5 | 12.7 | 127 | 0 | | | | | | | | | | | | |

Views of AQI Research Group: Concentrations of Particulate matter have further decreased at all sites of Dayalbagh due to decrease in Relative Humidity and meteorological conditions favouring dispersion of pollutants. The Air Quality Index w.r.t. PM_{2.5} has improved to the *Moderate* category while w.r.t. PM₁₀ it is in the *Good* 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 the *Unhealthy for Sensitive Groups* category and at Avas Vikas, Bodla has improved to the *Moderate* category, while w.r.t. PM₁₀ it remains in the *Moderate* category at both the sites.

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