

AIR QUALITY MONITORING @ 40 FEET HEIGHT – Report Date: 5.11.2022

(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: 4-11-2022 to 5-11-2022 from 9:00 a.m. to 9:00 a.m. Yesterday: 3-11-2022 to 2-11-2022 from 9:00 a.m. to 9:00 a.m.

| L O C A T I O N | DAYALBAGH (TIME WEIGHTED AVERAGE DATA) | | | | | | | | | | | SANJAY PLACE (ARITHMETIC MEAN DATA) | | | | | | | | | | |
|--------------------------------------|---|-----------|------------------|-----------|---------------------------|--------|-----|------|------|----------|-------|--|-----------|------------------|-----------|---------------------------|--------|-----|------|------|----------|---------|
| | AQI | | | | Meteorological Parameters | | | | | | | AQI | | | | Meteorological Parameters | | | | | | |
| | PM _{2.5} | | PM ₁₀ | | RH % | WS m/s | WD | T °C | | SR W/ m² | RF mm | PM _{2.5} | | PM ₁₀ | | R H % | WS m/s | W D | T °C | | SR W/ m² | R F m m |
| | | | | | | | | Max | Min | | | | | | | | | | Max | Min | | |
| | Today | Yesterday | Today | Yesterday | | | | | | | | Today | Yesterday | Today | Yesterday | | | | | | | |
| 4 / 97 | 193 | 204 | 130 | 141 | 62 | 0.8 | SSE | 37.1 | 20.9 | 106 | 0 | 158 | 175 | 121 | 157 | 59 | 0.3 | SE | 36.0 | 21.5 | 126 | 0 |
| 3 / 34 | 197 | 263 | 131 | 148 | 62 | 0.8 | SSE | 37.1 | 20.9 | 106 | 0 | | | | | | | | | | | |
| Science Faculty | 240 | 263 | 144 | 148 | 62 | 0.8 | SSE | 37.1 | 20.9 | 106 | 0 | | | | | | | | | | | |

Views of AQI Research Group: Concentrations of Particulate matter have decreased in comparison to yesterday due to slight improvement in meteorological conditions and change in Wind Direction from WNW to SSE. The Air Quality Index w.r.t. PM_{2.5} has improved to *Unhealthy for All* category at Vidyut Nagar and Prem Nagar although at Science Faculty it remains in *Very Unhealthy for All* category while, w.r.t. PM₁₀ it remains in the *Unhealthy for Sensitive Groups* category at all sites of Dayalbagh.

At Sanjay Place concentrations of particulate matter have decreased, but the Air Quality Index w.r.t. to both PM_{2.5} and PM₁₀ remains in the *Unhealthy for All* category.

Good
0 - 50

Moderate
51 - 100

Unhealthy for Sensitive Groups
101 - 150

Unhealthy for All
151 - 200

Very Unhealthy for All
201 - 300

Hazardous for All
301 - 400

Hazardous for All
401 - 500

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 –

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

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