

# AIR QUALITY MONITORING @ 40 FEET HEIGHT – Report Date: 14.12.2022

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

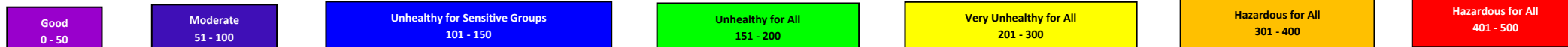
Permissible Limits (24 Hour Mean): PM<sub>10</sub> = 150; PM<sub>2.5</sub> = 35, all units are in µg/m<sup>3</sup> Sampling Duration = 24 hrs (9:00 AM to 9:00 AM)

**Today:** 13-12-2022 to 14 -12-2022 from 9:00 a.m. to 9:00 a.m. **Yesterday:** 12 -12-2022 to 13-12-2022 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 <sub>2.5</sub>		PM <sub>10</sub>		RH %	WS m/s	WD	T °C		SR W/m²	RF m m		PM <sub>2.5</sub>		PM <sub>10</sub>		RH %	WS m/s	W D	T °C		SR W/ m²	RF m m
								Ma x	Min											Max	Min		
	Today	Yesterday	Today	Yesterday								Today	Yesterday	Today	Yesterday								
4 / 97	87 (6%↓)	91	46 (7%↓)	50	57	1.6	WNW	27.6	12.3	141	0	Sanjay Place	91 (22%↓)	112	63 (16%↓)	70	51	4.2	WNW	27.4	13.7	138	0
3 / 34	66 (17%↓)	74	25 (13%↓)	29	57	1.6	WNW	27.6	12.3	141	0		Avas Vikas	78 (28%↓)	99	46 (25 %↓)	57	58	1.1	ENE	27.0	11.9	68
Science Faculty	80 (21%↓)	95	29 (16%↓)	34	57	1.6	WNW	27.6	12.3	141	0												

**Views of AQI Research Group:** Concentrations of Particulate matter have further decreased at all sites of Dayalbagh due to decrease in Relative Humidity, increase in Wind Speed and greater Solar insolation favouring dispersion of pollutants. The Air Quality Index w.r.t. PM<sub>2.5</sub> remains in the *Moderate* category while w.r.t. PM<sub>10</sub> 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<sub>2.5</sub> at Sanjay Place has improved to the *Moderate* category and at Avas Vikas, Bodla remains in the *Moderate* category, while w.r.t. PM<sub>10</sub> it remains in the *Moderate* category at Sanjay Place and has improved to the *Good* category at Avas Vikas.

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<sub>2.5</sub> 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<sub>2.5</sub>); C<sub>low</sub> = Concentration Breakpoint ≤C; C<sub>high</sub> = Concentration Breakpoint ≥C; I<sub>low</sub> = Index Break point corresponding to C<sub>low</sub>; I<sub>high</sub> = Index Breakpoint corresponding to C<sub>high</sub>; \*Multiplication Sign