

# AIR QUALITY MONITORING @ 40 FEET HEIGHT – Report Date: 4.12.2022

## (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:** 3-12-2022 to 4 -12-2022 from 9:00 a.m. to 9:00 a.m. **Yesterday:** 2 -12-2022 to 3-12-2022 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>					T °C						PM <sub>2.5</sub>		PM <sub>10</sub>					T °C			
								Ma x	Min												Max	Min		
	Today	Yesterday	Today	Yesterday	RH %	WS m/s	WD			SR W/m²	RF m m		Today	Yesterday	Today	Yesterday	RH %	WS m/s	W D			SR W/ m²	RF m m	
4 / 97	152 (5%↑)	149	71 (12%↑)	65	73	0.2	NW	27.5	10.8	111	0	Sanjay Place	178 (0%)	178	128 (7%↓)	132	63	0.7	SE	27.2	13.4	111	0	
3 / 34	127 (0%)	127	56 (1%↓)	57	73	0.2	NW	27.5	10.8	111	0													
Science Faculty	155 (7%↑)	153	65 (10%↑)	62	73	0.2	NW	27.5	10.8	111	0	Avas Vikas	105* (2.4%↓)	134	57 (18%↓)	64	74	0.3	ENE	28.5	12.0	63	0	

**Views of AQI Research Group:** Concentrations of PM<sub>2.5</sub> have changed at all sites of Dayalbagh probably due to change in Wind Direcion. The Air Quality Index w.r.t. PM<sub>2.5</sub> remains in the *Unhealthy for Sensitive Groups* category at Prem Nagar and is in the *Unhealthy for All* category at Vidyut Nagar and Science Faculty while w.r.t. PM<sub>10</sub> it remains in the *Moderate* category at all sites of Dayalbagh.

\*At Avas Vikas, Bodla PM<sub>2.5</sub> concentrations are available only till 2:00 am today morning. The Air Quality Index w.r.t PM<sub>2.5</sub> at Sanjay Place remains in the *Unhealthy for All* category while at Avas Vikas, Bodla on the basis of available values it remains in the *Unhealthy for Sensitive Groups* category, w.r.t. PM<sub>10</sub> it remains in the *Unhealthy for Sensitive Groups* category at Sanjay Place and in *Moderate* 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.

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<sub>2.5</sub> concentration readings are fed in USEPA online calculator for AQI calculation.

3 Formula for AQI calculation for a Pollutant –

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

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