

AIR QUALITY MONITORING @ 40 FEET HEIGHT – Report Date: 6.12.2022

(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: 5-12-2022 to 6 -12-2022 from 9:00 a.m. to 9:00 a.m. **Yesterday:** 4 -12-2022 to 5-12-2022 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/m²	RF mm		PM _{2.5}		PM ₁₀		RH %	WS m/s	WD	T °C		SR W/m²	RF mm
								Ma x	Min											Max	Min		
	Today	Yesterday	Today	Yesterday										Today	Yesterday	Today	Yesterday						
4 / 97	152 (28%↓)	163	67 (25%↓)	81	72	0.5	WNW	26.7	11.0	111	0	Sanjay Place	164 (38%↓)	190	108 (33%↓)	150	61	1.5	NW	25.3	13.2	109	0
3 / 34	112 (30%↓)	152	54 (24%↓)	64	72	0.5	WNW	26.7	11.0	111	0	Avas Vikas	102 (34%↓)	149	53 (32%↓)	68	71	0.6	ENE	26.2	11.9	60	0
Science Faculty	155 (18%↓)	163	57 (26%↓)	81	72	0.5	WNW	26.7	11.0	111	0												

Views of AQI Research Group: Concentrations of Particulate Matter have appreciably decreased at all sites of Dayalbagh probably due to decrease in Relative Humidity and slight increase in Wind Speed. The Air Quality Index w.r.t. PM_{2.5} is in the *Unhealthy for All* category at Vidyut Nagar and Science Faculty and has improved to *Unhealthy for Sensitive Groups* category at Prem Nagar, 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 remains in the *Unhealthy for Sensitive Groups* category, w.r.t. PM₁₀ 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
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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