

AIR QUALITY MONITORING @ 40 FEET HEIGHT – Report Date: 11.12.2022

(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: 10-12-2022 to 11 -12-2022 from 9:00 a.m. to 9:00 a.m. **Yesterday:** 9 -12-2022 to 10-12-2022 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	W D	T °C		SR W/m²	RF mm	
								Ma x	Min											Max	Min			
	Today	Yesterday	Today	Yesterday									Today	Yesterday	Today	Yesterday								
4 / 97	163 (2%↓)	164	83 (7%↓)	87	74	0.4	WNW	27.9	11.5	114	0	Sanjay Place	187 (11%↓)	192	150 (12%↓)	167	66	1.2	WNW	26.7	14.3	112	0	
3 / 34	153 (9%↑)	151	65 (3%↑)	63	74	0.4	WNW	27.9	11.5	114	0		Avas Vikas	183 (12%↑)	176	115 (1%↓)	117	85	0.5	NE	28.1	12.2	62	0
Science Faculty	162 (3%↓)	165	62 (10%↓)	66	74	0.4	WNW	27.9	11.5	114	0													

Views of AQI Research Group: Concentrations of Particulate matter have marginally changed at all sites of Dayalbagh due to stagnant atmospheric conditions associated with change in Wind Direction and low Wind Speed. The Air Quality Index w.r.t. PM_{2.5} remains in the *Unhealthy for All* category while w.r.t. PM₁₀ it remains in the *Moderate* Category at all sites of Dayalbagh. Concentrations of Particulate Matter have also marginally changed at Sanjay Place and Avas Vikas, Bodla. The Air Quality Index w.r.t. PM_{2.5} at Sanjay Place and Avas Vikas, Bodla remains in the *Unhealthy for All* category, while w.r.t. PM₁₀ it is in the *Unhealthy for Sensitive Groups* 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.

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 –

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

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