

AIR QUALITY MONITORING @ 40 FEET HEIGHT – Report Date: 3.12.2022

(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: 2-12-2022 to 3 -12-2022 from 9:00 a.m. to 9:00 a.m. **Yesterday:** 1 -12-2022 to 2-12-2022 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/m ²	R F m m		PM _{2.5}		PM ₁₀		RH %	WS m/s	W D	T °C		SR W/ m ²	RF m m
								Ma x	Min											Max	Min		
	Today	Yesterday	Today	Yesterday								Today	Yesterday	Today	Yesterday								
4 / 97	149 (0%)	149	65 (9%↑)	62	71	0.2	WSW	29.2	10.8	109	0	Sanja y Place	178 (13%↑)	172	132 (7%↑)	125	63	0.7	SE	27.2	13.4	111	0
3 / 34	127 (8%↓)	137	56 (4%↓)	57	71	0.2	WSW	29.2	10.8	109	0		Avas Vikas	134 (19%↑)	115	64 (22%↑)	57	74	0.3	ENE	28.5	12.0	63
Science Faculty	153 (7%↑)	149	61 (8%↓)	62	71	0.2	WSW	29.2	10.8	109	0												

Views of AQI Research Group: Concentrations of PM_{2.5} have marginally changed at all sites of Dayalbagh. The Air Quality Index w.r.t. PM_{2.5} remains in the *Unhealthy for Sensitive Groups* category at Vidyut Nagar and Prem Nagar and has changed to the *Unhealthy for All* category at Science Faculty while w.r.t. PM₁₀ it remains in the *Moderate* category at all sites of Dayalbagh.

At Sanjay Place and Avas Vikas, Bodla the concentrations have increased, yet the Air Quality Index w.r.t PM_{2.5} remains in the *Unhealthy for All* category at Sanjay Place and in *Unhealthy for Sensitive Groups* category at Avas Vikas, Bodla while 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