

AIR QUALITY MONITORING @ 40 FEET HEIGHT – Report Date: 21.12.2022

(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)

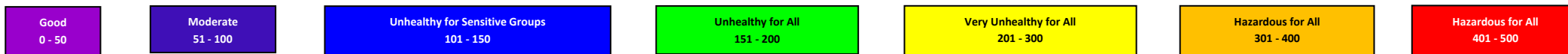
Today: 20-12-2022 to 21 -12-2022 from 9:00 a.m. to 9:00 a.m. **Yesterday:** 19 -12-2022 to 20-12-2022 from 9:00 a.m. to 9:00 a.m.

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	RF m m		PM _{2.5}		PM ₁₀		RH %	WS m/s	W D	T °C		SR W/ m ²	RF m m
	Today	Yesterday	Today	Yesterday				Ma x	Min				Today	Yesterday	Today	Yesterday				Max	Min		
4 / 97	157 (9%↓)	160	71 (20%↓)	83	76	0.4	WNW	25.6	9.6	111	0	Sanjay Place	166 (0%)	166	117 (13%↑)	106	67	0.9	SE	24.0	11.8	24	0
3 / 34	154 (3%↓)	155	65 (1%↑)	64	76	0.4	WNW	25.6	9.6	111	0	Avas Vikas	174 (3%↓)	176	95 (13%↓)	106	76	0.5	ESE	25.2	11.5	60	0
Science Faculty	158 (0%)	158	62 (2%↑)	61	76	0.4	WNW	25.6	9.6	111	0												

Views of AQI Research Group: Concentrations of Particulate matter have slightly changed at all sites of Dayalbagh probably due to stable and stagnant meteorological conditions. 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.

A visibility meter has been installed at roof of Science Faculty. Average Visibility yesterday was 1.2 Kms, it improved to 1.3 Kms today. Concentrations of PM₁₀ have increased at Sanjay Place while both sized particulate matter have decreased at Avas Vikas, Bodla. The Air Quality Index w.r.t PM_{2.5} at both these sites remains in the *Unhealthy for All* category while w.r.t PM₁₀ it remains in the *Unhealthy for Sensitive Groups* category at sanjay Place and has improved to the *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.



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