AIR QUALITY MONITORING @ 40 FEET HEIGHT – Report Date: 27.12.2022
(BASED ON US-EPA AQI STANDARDS AND THE DAYALBAGH AQI COLOUR CODE)

Permissible Limits (24 Hour Mean): PM_{10} = 150; $PM_{2.5}$ = 35, all units are in $\mu g/m^3$ Sampling Duration = 24 hrs (9:00 AM to 9:00 AM)
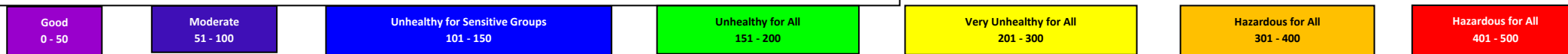
Today: 26-12-2022 to 27-12-2022 from 9:00 a.m. to 9:00 a.m. **Yesterday:** 25-12-2022 to 26-12-2022 from 9:00 a.m. to 9:00 a.m.

LOCATION	DAYALBAGH (TIME WEIGHTED AVERAGE DATA)											LOCATION	SANJAY PLACE AND AVAS VIKAS (ARITHMETIC MEAN DATA)										
	AQI				Meteorological Parameters								AQI				Meteorological Parameters						
	PM2.5		PM10		RH %	WS m/s	WD	T °C		SR W/m²	RF mm		PM2.5		PM10		RH %	WS m/s	WD	T °C		SR W/m²	RF mm
	Today	Yesterday	Today	Yesterday				Max	Min				Today	Yesterday	Today	Yesterday				Max	Min		
4 / 97	160 (58%↑)	127	93 (69%↑)	64	77	1.0	W	17.7	8.3	61	0	Sanjay Place	152 (26%↑)	127	83 (30%↑)	69	85	2.6	ENE	14.5	6.8	21	0
3 / 34	151 (55%↑)	102	74 (67%↑)	54	77	1.0	W	17.7	8.3	61	0	Avas Vikas	155* (21%↑)	144	73* (25%↑)	63	96	0.8	E	17.4	8.4	56	0
Science Faculty	158 (44%↑)	127	66 (60%↑)	49	77	1.0	W	17.7	8.3	61	0												

Views of AQI Research Group: At the Dayalbagh sites, concentrations of Particulate matter have substantially increased due to stagnant meteorological conditions associated with increase in Relative Humidity, decrease in Temperature and fog conditions which also reduced the average visibility. Average Visibility yesterday was 1.8 Kms, it dropped to 0.8 Kms today. The Air Quality Index w.r.t. $PM_{2.5}$ changed to the *Unhealthy for All* category while w.r.t. PM_{10} it remains in the *Moderate* category at all sites of Dayalbagh.

* Concentrations of Particulate matter were not available between 6:00 pm yesterday to 1:00 am today. Concentrations of Particulate matter have increased at Sanjay Place and Avas Vikas, Bodla also. The Air Quality Index w.r.t $PM_{2.5}$ at both these sites is also in the *Unhealthy for All* category while w.r.t PM_{10} it remains in the *Moderate* category.

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 $PM_{2.5}$ 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

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