

AIR QUALITY MONITORING @ 40 FEET HEIGHT – Report Date: 12.10.2022

(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: 11 -10-2022 to 12 -10-2022 from 9:00 a.m. to 9:00 a.m. Yesterday: 10 -10-2022 to 11 -10-2022 from 9:00 a.m. to 9:00 a.m.

L O C A T I O N	DAYALBAGH (TIME WEIGHTED AVERAGE DATA)											SANJAY PLACE (ARITHMETIC MEAN DATA)										
	AQI				Meteorological Parameters							AQI				Meteorological Parameters						
	PM _{2.5}		PM ₁₀		RH %	WS m/s	W D	T °C		SR W/ m ²	RF mm	PM _{2.5}		PM ₁₀		RH %	WS m/s	W D	T °C		SR W/ m ²	RF mm
	Today	Yesterday	Today	Yesterday				Max	Min			Today	Yesterday	Today	Yesterday				Max	Min		
4 / 97	84	59	40	23	86	2.2	NNE	31.6	23.0	116	0	87	70	54	27	80	0.6	WS W	31.9	24.3	6.7*	0
3 / 34	84	70	43	25	86	2.2	NNE	31.6	23.0	116	0											
Science Faculty	99	87	44	38	86	2.2	NNE	31.6	23.0	116	0											

Views of AQI Research Group: The concentrations of particulate matter have increased as there was no rain. However, the Air Quality Index still remains in *Moderate* category w.r.t. PM_{2.5} and in the *Good* category w.r.t. PM₁₀ at all sites of Dayalbagh.

At Science Faculty the Visibility Sensor has also been installed. The 24 hour average visibility was 5.4 km yesterday (10 -10-2022 to 11 -10-2022 from 9:00 a.m. to 9:00 a.m.) and 4.8 km today (11 -10-2022 to 12 -10-2022 from 9:00 a.m. to 9:00 a.m.).

The pollutant concentrations have increased at Sanjay Place also. The Air Quality index w.r.t. both PM_{2.5} and PM₁₀ are in the *Moderate* category. *SR value recorded here appear to be erroneous.

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