

# AIR QUALITY MONITORING @ 40 FEET HEIGHT – Report Date: 10.10.2022

## (BASED ON US-EPA AQI STANDARDS AND THE DAYALBAGH AQI COLOUR CODE)

Permissible Limits (24 Hour Mean): PM<sub>10</sub> = 150; PM<sub>2.5</sub> = 35, all units are in µg/m<sup>3</sup> Sampling Duration = 24 hrs (9:00 AM to 9:00 AM)

Today: 9 -10-2022 to 10 -10-2022 from 9:00 a.m. to 9:00 a.m. Yesterday: 8 -10-2022 to 9 -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 <sub>2.5</sub>		PM <sub>10</sub>		RH %	WS m/s	W D	T °C		SR W/ m²	RF mm	PM <sub>2.5</sub>		PM <sub>10</sub>		RH %	WS m/s	W D	T °C		SR W/ m²	RF m m
								Max	Min										Max	Min		
	Today	Yesterday	Today	Yesterday				Max	Min			Max	Min									
4 / 97	66	33	28	14	93	2.1	ESE	25.5	23.1	43	14	68*	50	21*	18	88	1.9	ESE	27	24.5	7.9	22.7
3 / 34	NA	38	NA	13	93	2.1	ESE	25.5	23.1	43	14											
Science Faculty	80	50	31	14	93	2.1	ESE	25.5	23.1	43	14											

**Views of AQI Research Group:** Particulate matter concentrations have increased probably due to high humidity raising the Air Quality Index values to the *Moderate* category w.r.t. to PM<sub>2.5</sub>. However, w.r.t. PM<sub>10</sub> the Air Quality Index remains in the *Good* category.

The device at Prem Nagar had malfunctioned due to power failure yesterday but has today been rectified.

\*Data for PM<sub>2.5</sub> and PM<sub>10</sub> for Sanjay Place was not available after midnight and the SR value also appear to be erroneous. The Air Quality Index values for Sanjay Place have been computed from the available values.

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<sub>2.5</sub> 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<sub>2.5</sub>); C<sub>low</sub> = Concentration Breakpoint ≤C; C<sub>high</sub> = Concentration Breakpoint ≥C; I<sub>low</sub> = Index Break point corresponding to C<sub>low</sub>; I<sub>high</sub> = Index Breakpoint corresponding to C<sub>high</sub>; \*Multiplication Sign