

# AIR QUALITY MONITORING @ 40 FEET HEIGHT – Report Date: 25.10.2022

## (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: 24 -10-2022 to 25 -10-2022 from 9:00 a.m. to 9:00 a.m. Yesterday: 23 -10-2022 to 24 -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	WD	T °C		SR W/ m <sup>2</sup>	RF mm	PM <sub>2.5</sub>		PM <sub>10</sub>		R H %	WS m/s	WD	T °C		SR W/ m <sup>2</sup>	R F m m
	Today	Yesterday	Today	Yesterday				Max	Min			Today	Yesterday	Today	Yesterday				Ma x	Min		
4 / 97	158	160	99	113	57	1.0	WN W	33.6	18.7	145	0											
3 / 34	160	158	96	107	57	1.0	WN W	33.6	18.7	145	0	232	197	132**	148	51	0.2	N	33.9	20.3	7* (99)	0
Science Faculty	172	167	115	135	57	1.0	WN W	33.6	18.7	145	0											

**Views of AQI Research Group:** Despite firecracker activity witnessed around Dayalbagh, the PM<sub>2.5</sub> levels changed slightly while PM<sub>10</sub> levels decreased at all Dayalbagh sites probably due to pre-emptive measures taken by water spraying between 8-10 pm. The Air Quality Index w.r.t. PM<sub>2.5</sub> remains in the *Unhealthy for All* category while, w.r.t. PM<sub>10</sub> it has changed to the *Moderate* category at Vidyt Nagar and Prem Nagar and remains in the *Unhealthy for Sensitive Groups* category at Science Faculty.

The pollutant concentrations have increased at Sanjay Place also, the Air Quality index has changed to *Very Unhealthy for All* category w.r.t. PM<sub>2.5</sub>, and remains in the *Unhealthy for Sensitive Groups* category w.r.t. PM<sub>10</sub>. \*SR value recorded at Sanjay Place appears to be erroneous. Value in parentheses is the SR value of Avas Vikas, Bodla, Agra. \*\*PM<sub>10</sub> values for Sanjay Place are available intermittently (Today's mean is of 19 hours data).

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 –

$$I = \frac{I_{high} - I_{low}}{C_{high} - C_{low}} * (C - C_{low}) + I_{low}$$

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