

Radhasoami Dayal Ki Daya Radhasoami Sahai

AIR QUALITY MONITORING @ 40 FEET HEIGHT – Report Date: 2.6.2022

(BASED ON WHO GUIDELINES - 2021)

Permissible Limits (24 Hour Mean): $PM_{10} = 45$; $PM_{2.5} = 15$, all units are in $\mu g/m^3$

	<div>Date</div> <div>Today: June 2 – 1</div> <div>Yesterday</div> <div>June 1 – May 31</div>	DAYALBAGH (TIME WEIGHTED AVERAGE DATA)									<div>Date</div> <div>Today: June 2 – 1</div> <div>Yesterday</div> <div>June 1 – May 31</div>	SANJAY PLACE (ARITHMETIC MEAN DATA)								
		Concentration (µg/m³)		Meteorological Parameters								Concentration (µg/m³)		Meteorological Parameters						
		PM _{2.5}	PM ₁₀	RH %	WS m/s	WD	T °C		SR W/m²	RF mm		PM _{2.5}	PM ₁₀	RH %	WS m/s	WD	T °C		SR W/m²	RF mm
							Max	Min									Max	Min		
4 / 97	Today	14↑↑	89↑	36	2.9	SSE	45.2	30.4	168	0	Today	57↑	247↑	33	2.6	SSE	47	33.2	229	0
	Yesterday	27	145	47	3.4	SE	41.6	29.0	153	0										
3 / 34	Today	18↑↑	51↑	36	2.9	SSE	44.6	30.2	174	0	Yesterday	88	358	42	2.7	SE	43.7	32	216	0
	Yesterday	35	84	50	3.4	SE	41.4	28.4	169	0										
Science Faculty	Today	15↑↑	50↑	36	2.9	SSE	44.6	30.2	173	0										
	Yesterday	35	88	52	3.4	SE	40.6	27.7	162	0										

Within WHO 2021 Limits

Beyond WHO 2021 Limits

Views of AQI Research Group: In comparison to yesterday, concentrations of both $PM_{2.5}$ and PM_{10} have decreased significantly at all locations of Dayalbagh. $PM_{2.5}$ concentrations are within the WHO permissible limits at Vidyut Nagar and Science Faculty and marginally beyond the WHO permissible limits at Prem Nagar. PM_{10} concentrations are beyond the WHO permissible limits at all the three locations.

The concentrations of $PM_{2.5}$ and PM_{10} at Sanjay Place have also decreased as compared to yesterday, but still remain beyond the WHO permissible limits.

All defaulters of WHO Norms should take immediate corrective actions to achieve requisite compliance of WHO 2021 Limits within a week or two at the most. (Further details may be acquired by contacting P.B. Arsh Dhir in the matter).

Since WHO (World Health Organization) Guidelines only provide a single value for permissible $PM_{2.5}$ and PM_{10} pollutant concentrations and do not provide concentration bands for the different Air Quality Index (AQI) categories ranging from **Good** to **Hazardous for All**, as does the US EPA (United States Environmental Protection Agency), the Report 2 annexed based on US EPA norms may be referred to, for Air Quality Index (AQI) categories.

Communicated by Dr. Anita Lakhani, Associate Professor, Department of Chemistry, Faculty of Science, Dayalbagh Educational Institute, Dayalbagh, Agra.

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AIR QUALITY MONITORING @ 40 FEET HEIGHT – Report Date: 2.6.2022 (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)

	Date	DAYALBAGH (TIME WEIGHTED AVERAGE DATA)									Date	SANJAY PLACE (ARITHMETIC MEAN DATA)								
	Today:	Air Quality Index			Meteorological Parameters						Today:	AQI			Meteorological Parameters					
	June 2 – 1	PM _{2.5}	PM ₁₀	RH %	WS m/s	WD	T °C		SR W/m ²	RF mm	June 2 – 1	PM _{2.5}	PM ₁₀	RH %	WS m/s	WD	T °C		SR W/m ²	RF mm
	Yesterday						Max	Min			Yesterday						Max	Min		
June 1 – May 31										June 1 – May 31										
4 / 97	Today	55	68	36	2.9	SSE	45.2	30.4	168	0	Today	152	147	33	2.6	SSE	47	33.2	229	0
	Yesterday	82	96	47	3.4	SE	41.6	29.0	153	0										
3 / 34	Today	63	47	36	2.9	SSE	44.6	30.2	174	0	Yesterday	168	205	42	2.7	SE	43.7	32	216	0
	Yesterday	99	65	50	3.4	SE	41.4	28.4	169	0										
Science Faculty	Today	57	46	36	2.9	SSE	44.6	30.2	173	0										
	Yesterday	99	67	52	3.4	SE	40.6	27.7	162	0										

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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Views of AQI Research Group: In comparison to yesterday, concentrations of both PM_{2.5} and PM₁₀ have decreased significantly at all locations of Dayalbagh. The Air Quality Index w.r.t. PM_{2.5} is in the *Moderate* category at all locations of Dayalbagh while w.r.t. PM₁₀ it has improved from *Moderate* to *Good* category at Prem Nagar and Science Faculty and remains in the *Moderate* category at Vidyut Nagar.

PM_{2.5} and PM₁₀ concentrations at Sanjay Place have also decreased significantly compared to yesterday. The Air Quality Index is in the *Unhealthy for All* category w.r.t. PM_{2.5} and has improved from *Very Unhealthy for All* to *Very Unhealthy for Sensitive Groups* category w.r.t. PM₁₀.

All defaulters of WHO Norms should take immediate corrective actions to achieve requisite compliance of WHO 2021 Limits within a week or two at the most. (Further details may be acquired by contacting P.B. Arsh Dhir in the matter).
Perused By Way of Information Only.
Subject To Legalise/Legalese/"Laws of the Land".

Friday, 03-06-2022, 03:58 AM
Received, Thursday, 02-06-2022, 12:35 PM

NOTE: 1 A continuous 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 –

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

where, I = Air Quality Index, C=Pollutant Concentration (PM_{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}

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