

Radhasoami Dayal Ki Daya Radhasoami Sahai

AIR QUALITY MONITORING @ 40 FEET HEIGHT – Report Date: 7.9.2022 (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 = 48 hrs (6:00 AM to 6:00 AM)

L O C A T I O N	Date Today: Septem ber 7 – 6 Yesterd ay Septem ber 6 – 5	Duration M = Daytime (6 am – 6 pm) E = Night time (6 pm – 6 am)	DAYALBAGH (TIME WEIGHTED AVERAGE DATA)									Date Today: Septem ber 7 – 6 Yesterd ay Septem ber 6 – 5	Duration M = Daytime (6 am – 6 pm) E = Night time (6 pm – 6 am)	SANJAY PLACE (ARITHMETIC MEAN DATA)									
			AQI		Meteorological Parameters									AQI		Meteorological Parameters							
			PM _{2.5}	PM ₁₀	RH %	WS m/s	WD	T °C		SR W/ m ²	RF mm			P M _{2.5}	PM ₁₀	RH %	WS m/s	WD	T °C		SR W/ m ²	R F m m	
Ma x	Min	Ma x						Min															
4 / 97	Today	E	53	31	68	0.4	E	36.0	27.8	05	0	Today	E	91	66	62	0.7	N	36.4	30.8	8.0	0	
		M	33	27	49	1.0	NNE	41.7	28.0	311	0												
	Yesterd ay	E	38	30	61	0.5	NE	35.4	28.0	2.7	0		M	82	65	52	2.0	E	39.8	29.6	371	0	
		M	25	19	48	1.4	N	40.4	27.9	382	0												
3 / 34	Today	E	72	27	68	0.4	E	36.0	27.8	05	0	Yesterd ay	E	76	64	59	1.5	NNE	36.3	29.8	7.6	0	
		M	59	21	49	1.0	NNE	41.7	28.0	311	0												
	Yesterd ay	E	57	22	61	0.5	NE	35.4	28.0	2.7	0		M	57	55	51	2.5	E	38.7	30.7	449	0	
		M	50	17	48	1.4	N	40.4	27.9	382	0												
Scien ce Facul ty	Today	E	142	63	68	0.4	E	36.0	27.8	05	0	Yesterd ay	M	57	55	51	2.5	E	38.7	30.7	449	0	
		M	74	27	49	1.0	NNE	41.7	28.0	311	0												
	Yesterd ay	E	72	26	61	0.5	NE	35.4	28.0	2.7	0		M	57	55	51	2.5	E	38.7	30.7	449	0	
		M	61	21	48	1.4	N	40.4	27.9	382	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			

Views of AQI Research Group: The meteorological conditions (low Relative humidity, higher Wind Speed and higher Temperature) during the daytime (M), favour dispersal of pollutants hence, Air Quality Index during the daytime is better than nighttime (E). Hourly inspection of the data shows a marked increase in levels of PM_{2.5} and PM₁₀ at Science Faculty from 2:00 to 6:00 am.

The Air Quality Index at the Dayalbagh sites is better than Sanjay Place.

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