Radhasoami Dayal Ki Daya Radhasoami Sahai

AIR QUALITY MONITORING @ 40 FEET HEIGHT – Report Date: 11.9.2022
(BASED ON US-EPA AQI STANDARDS AND THE DAYALBAGH AQI COLOUR CODE)

Permissible Limits (24 Hour Mean): PM_{10} = 150; $PM_{2.5}$ = 35, all units are in µg/m^3 Sampling Duration = 48 hrs (6:00 AM to 6:00 AM)

LOCATION	Date	Duration M = Daytime (6 am – 6 pm) E = Night time (6 pm – 6 am)	DAYALBAGH (TIME WEIGHTED AVERAGE DATA) AQI $PM_{2.5}$	AQI PM_{10}	Meteorological Parameters RH %	WS m/s	WD	T °C Max	T °C Min	SR W/m^2	RF mm
4 / 97	Today	E	66	33	76	1.1	SE	32.0	28.1	05	0
		M	74	34	62	1.6	SE	38.5	29.0	316	0
	Yesterday	E	89	50	76	0.9	SE	31.8	21.8	05	0
		M	95	45	60	1.5	SE	39.7	29.3	295	0
3 / 34	Today	E	87	37	76	1.1	SE	32.0	28.1	05	0
		M	95	39	62	1.6	SE	38.5	29.0	316	0
	Yesterday	E	110	52	76	0.9	SE	31.8	21.8	05	0
		M	124	51	60	1.5	SE	39.7	29.3	295	0
Science Faculty	Today	E	95	43	76	1.1	SE	32.0	28.1	05	0
		M	105	45	62	1.6	SE	38.5	29.0	316	0
	Yesterday	E	181	79	76	0.9	SE	31.8	21.8	05	0
		M	158	78	60	1.5	SE	39.7	29.3	295	0

Date	Duration M = Daytime (6 am – 6 pm) E = Night time (6 pm – 6 am)	SANJAY PLACE (ARITHMETIC MEAN DATA) AQI $PM_{2.5}$	AQI PM_{10}	Meteorological Parameters RH %	WS m/s	WD	T °C Max	T °C Min	SR W/m^2	RF mm
Today: September 11 – 10 Yesterday September 10 – 9	E	107	56	72	2.2	E	34.0	29.7	07	0
	M	110	56	61	1.5	E	38.7	30	362	0
Today: September 11 – 10 Yesterday September 10 – 9	E	127	58	72	0.6	ENE	33.7	29.9	08	0
	M	147	65	61	1.5	E	39.1	30.5	361	0

Good	Moderate	Unhealthy for Sensitive Groups	Unhealthy for All	Very Unhealthy for All	Hazardous for All	Hazardous for All
0 - 50	51 - 100	101 - 150	151 - 200	201 - 300	301 - 400	401 - 500

Views of AQI Research Group: A reduction in particulate matter concentrations appears to have occurred due to dispersion. However, as the concentrations were high at Science Faculty, the dispersion and settling of particles appears to be taking a longer time. Further, as the festive activities and celebrations related to Ganesha Chaturthi are over, the Air Quality Index appears to have improved as this pollution generating activity is over.

At Sanjay Place also the concentrations of particulate matter have marginally decreased.

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

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