

REPORT**Ambient Air Quality in Aurangabad**

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Aurangabad is a commercial hub of the state of Maharashtra on account of its flourishing trade and commerce. Therefore, it is necessary as well as essential to assess the quality of air in selected areas.

Key Words: Ambient air quality, Aurangabad.

The city has undergone a phenomenal growth and development during the last two decades, due to the rapid industrialization and consequent urbanization which have intensified the pressure on the city's dwindling infrastructure. Therefore, to know the ambient air quality, the Government of Maharashtra has decided to monitor air quality in metropolitan cities.

Accordingly, the Maharashtra Pollution Control Board of Aurangabad monitored the air quality by using fully computerised mobile vans and higher volume sampler (HVS) at different traffic stations in Aurangabad city for different parameters, viz., CO, NO_x, SO_x and RSPM.

Firstly, the sampling sites were selected based on a local list of traffic congested areas provided by the Commissioner, Municipal Corporation, Aurangabad.

1. Ambient air quality monitoring (AAQM) is done by fully computerised AC mobile van (CO, SO₂, NO_x, SO_x, RSPM, THC, NH₃, WDIR, TEMP, etc.).
2. By using high volume sampler (HVS)—RSPM.
3. Sampling is done between 10 A.M. and 6.00 P.M. for 8 h.
4. Results obtained are compared with standards, prescribed for residential and rural areas and standards are specified by Central Pollution Control Board.

<i>Locations</i>	<i>Date</i>
1. Baba Petrol Pump	25/08/2000
2. C.B.S.	28/08/2000
3. Osmanpura	29/08/2000
4. Seven Hills	30/08/2000
5. Mukundwadi	05/09/2000
6. Kranti Chowk	07/09/2000
7. Paithan Gate (Silekhana)	16/09/2000
8. Near Airport, Jalna road, Chikalthana	20/09/2000

The RSPM, was sampled using a GF/A, Whatman filter paper, by gravimetric method¹. The collected samples were weighed according to the BIS procedures and

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calculations were made based on IS 5182, part 4, in order to obtain the final concentration of the RSPM².

The obtained results of the study have been compared with the time weighted and hour sampling standards prescribed by the Central Pollution Control Board³ as outlined in the Air Act, 1981, for the category, residential, rural and other areas.

1. SO₂ and NO_x values are within the limit for all the stations, as can be observed from Table-1.

TABLE-1
AMBIENT AIR QUALITY AT TRAFFIC JUNCTIONS IN AURANGABAD CITY
(period from 25/8/2000 to 20/9/2000)

Location	Parameters				
	Limit	2 mg/m ³ CO	80 µg/m ³ NO _x	80 µg/m ³ SO ₂	200 ppm SPM
Baba petrol Pump	Max.	3.49	115.52	15.20	280
	Min.	2.65	1.85	6.42	
	Avg.	3.23	59.79	9.86	
CBS	Max.	1.83	9.11	3.14	240
	Min.	1.29	2.11	2.11	
	Avg.	1.47	3.93	2.79	
Osmanpura	Max.	2.35	16.57	4.94	290
	Min.	1.68	11.45	2.94	
	Avg.	1.90	12.89	4.03	
Seven Hill	Max.	3.56	163.00	5.38	324
	Min.	0.00	0.00	0.00	
	Avg.	2.00	42.91	2.90	
Mukundwadi	Max.	3.14	37.15	3.74	310
	Min.	1.62	11.17	2.58	
	Avg.	2.07	20.71	3.32	
Kranti Chowk	Max.	2.61	33.27	2.67	296
	Min.	1.18	3.63	1.48	
	Avg.	1.15	11.73	2.12	
Paithan Gate (Silekhana)	Max.	1.80	32.68	5.67	340
	Min.	1.15	7.30	3.06	
	Avg.	1.33	14.74	3.92	
Near Airport (Chikalhana)	Max.	2.06	34.04	0.81	280
	Min.	1.14	4.89	0.00	
	Avg.	1.40	13.66	0.20	

2. CO values are on higher side than the prescribed standard at Baba Petrol Pump and Seven Hills for almost every hour.
3. At Osmanpura, average value is within the limits but exceeded the limit for two times.

4. Remaining stations show the values within the limit.
5. RSPM levels are on higher side than the prescribed standards (200 ppm) for all the stations.

Suggestions

The main object of monitoring of ambient air quality in Aurangabad city was to make the city clean and free from vehicular pollution caused due to increased stress on the city and to know the quality of the air.

Implemented

1. Ban on polythene bags production and removal of plastic bags lying on roadsides, gutters, drains, etc. (by AMC—Aurangabad Municipal Corporation).
2. To control and minimize the vehicular pollution levels, the RTO is checking the vehicles and issuing PUC (Pollution Under Control) certificates.
3. Collector's office staff is checking and monitoring fuel adulteration.
4. Air quality of the city is monitored periodically by the Maharashtra Pollution Control Board., Aurangabad.

To be Implemented

Municipal Corporation authorities should take remedial measures to control the pollution levels in the city.

For RSPM:

1. To improve road conditions, so that emission of dust may be reduced.
2. To plant trees along the roadsides (especially neem, pipal and banyan trees).
3. Trucks carrying offensive goods (sand, murum powder, saw-dust, bagasse, coal ash, etc.) should be covered with tarpaulins or any other covering material.
4. Fly-over bridges should be constructed at traffic junctions wherever possible to avoid the engines idling⁴.

For CO

1. To avoid adulteration of petrol.
2. To check the vehicles for PUC (Pollution Under Control certificates).
3. To ban rickshaws having local diesel engines on Jalna Road or at least on heavy traffic roads.
4. Modification of engines to improve fuel efficiency by converting to 4-stroke engines.

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