



**ENVIRONMENTAL STATUS IN RESPECT OF WATER, AIR AND NOISE AT
M.B.B COLLEGE, AGARTALA, TRIPURA (W)**

1. OBJECTIVES

Tripura State Pollution Control Board has conducted a pollution monitoring programme regarding Air, Water and Noise quality at M.B.B College, Agartala, Tripura (W) during 12th - 13th March, 2024 to be a part of Environmental Audit of the college. Objectives of the monitoring programme are as follows-

- To study the drinking water quality status
- To conduct ambient Air Quality Monitoring
- To conduct ambient noise Monitoring

2. WATER QUALITY MONITORING

In order to assess the drinking water quality in M.B.B College, Agartala, Tripura (W) one drinking water sample was collected from a water purifier of the college in a pre-cleaned one litre polythene bottle for the analysis of different physical & chemical parameters. The analysis was carried out in the laboratory of Tripura State Pollution Control Board using the standard methods given in APHA, 2012 (*American Public Health Association*).

2. 1. RESULTS

The data Table of the water sample at M.B.B College, Agartala, Tripura (W) is shown in *Table-1*.

Table: 1: Analytical Result of Drinking Water Samples Collected from M.B.B College, Agartala, Tripura (W).

Sl. No	Parameters	S-1	Standards (BIS, 2012)	
			Acceptable limit	Permissible limit
1.	pH	6.84	6.5-8.5	6.5-8.5
2.	Conductivity (μ S/cm)	215	-	-
3.	Turbidity (NTU)	0.39	5	1
4.	Total Dissolved Solids (mg/l)	108	200	600
5.	Total Hardness (mg/l)	25.8	200	600
6.	Calcium (mg/L)	8.8	75	200
7.	Magnesium (mg/L)	4.3	30	100
8.	Chlorides (mg/l)	13.6	250	1000
9.	Iron (mg/L)	0.06	0.3	0.3
10.	Arsenic (mg/L)	BDL	0.01	0.05

*BDL= Below Detectable limit



2. 2. OBSERVATION

From the result table, it has been observed that, the analysed values of the said drinking water sample are within the prescribed standards limit of BIS, 2012 (*Bureau of Indian Standards*).

2. 3. CONCLUSION

The quality of water used in the Campus of M.B.B College, Agartala, Tripura (W) is good for drinking purposes.

3. AIR QUALITY MONITORING

To conduct the air quality monitoring, the station has been set up in the roof of the science building at the college premises. Logistic considerations as easy accessibility, security, availability of reliable power supply etc. were examined before finalizing the locations.

3. 1. DURATION AND FREQUENCY OF MONITORING

The air quality monitoring was carried out for 24-hour schedule at the monitoring station.

3. 2. SAMPLING & ANALYTICAL TECHNIQUES

The sampling procedures for measurement of PM-2.5, PM-10, NO₂ and SO₂ were according to the internationally accepted standard technique through use of Respirable Dust Sampler (RDS) with gaseous sampling attachments and PM-2.5 Sampler manufactured by M/s Environtech Instruments PVT. LTD., New Delhi has been used for sampling purposes.

3. 3. RESULTS

The detailed monitoring results of Particulate Matter (PM-10 & PM-2.5), Sulphur Dioxide (SO₂) and Oxides of Nitrogen (NO₂) are presented in *Table-2*.

Table-2: Ambient Air Quality Monitoring results of M.B.B College, Agartala, Tripura (W).

Pollutants	Time weighted Average	S-1	Standards (CPCB, 2009)
Particulate matter (PM ₁₀), µg/m ³	24 Hours	71.2	100
Particulate matter (PM _{2.5}), µg/m ³	24 Hours	35.6	60
Sulphur Dioxide (SO ₂), µg/m ³	24 Hours	8.56	80
Nitrogen Dioxide (NO ₂), µg/m ³	24 Hours	4.39	80



3.4. OBSERVATION

From the result table it is observed that ambient value of PM-10, PM-2.5, SO₂ and NO₂ of air within M.B.B College, Agartala, Tripura (W) are within the prescribed standard limit of CPCB (*Central Pollution Control Board, 2009*).

3.5. CONCLUSION

On the basis of air quality data, it has been concluded that the quality of air within the campus of M.B.B College, Agartala, Tripura (W) is good.

4. NOISE MONITORING

The present study is carried out to assess the equivalent noise level (Leq) around the college campus both in the day time and night time.

4.1. METHODS OF MEASUREMENT

Sound Level Meters (SLM) SL-4001 was used for monitoring of noise levels. The noise levels were monitored at least for 30 minutes at each location during monitoring.

4.2. RESULTS

The data table of noise levels of different locations of M.B.B College, Agartala, Tripura (W) are shown in *Table- 3*.

Table-3: Noise Levels in dB (A) at different locations of M.B.B College, Agartala, Tripura (W)

Sl No.	Locations (M.B.B College, Agartala, Tripura)	Day Time (6.00 a.m to 10.00 p.m)	Night Time (10.00 pm to 6.00 a.m)	Standard (Day time) Silent Zone	Standard (Day time) Silent Zone
		Leq dB (A)	Leq dB (A)		
1.	Near Administrative Building	53.8	38.4	50	40
2.	In front of Chemistry Building	51.2	39.6		
3.	In front of Main Gate of the college	55.8	40.1		

4. 3. OBSERVATIONS

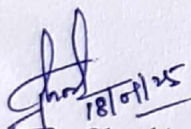
The noise monitoring was carried out at the 3 (three) locations in the college campus covering the administrative block, Chemistry building and in front of main gate during day time and night time. The summarized results of noise level are given in **Table-3**. From the measured noise level data, it was found that the ambient noise level inside the college campus of M.B.B College, Agartala, Tripura (W) during day time and one location during night time is slightly high but other locations were within the prescribed standard limit of CPCB for silent/sensitive zone.

5. OVERALL CONCLUSIONS

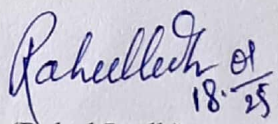
The Environmental Monitoring inside the campus of M.B.B College, Agartala, Tripura (W) revealed that the Environmental status in respect of water, air and noise of the college is decent and the campus is free from any kind of major pollutants.

6. Recommendations:

1. To maintain the good environment, greener belt has to be developed in the college campus by planting valuable trees especially medicinal plants, and seasonal blooming trees etc. which helps to increase the beautification of the campus and also will attract more birds.
2. Solar energy can be used as alternative energy source of the University campus.
3. The use of plastic products should be banned in the University campus.
4. A Green Monitoring team needs to be formed including some local interested people on urgent basis which will maintain the greenery of the campus.
5. Vermicomposting facility may be practiced, the product of which can be used as manure or fertilizer for plantation purpose.


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