

**APPENDIX - 5**  
**NATIONAL AMBIENT AIR QUALITY STANDARDS (NAAQS)**

Pollutants	Time-weighted average	Concentration in ambient air			Method of measurement
		Industrial Areas	Residential, Rural & other Areas	Sensitive Areas	
Sulphur Dioxide (SO <sub>2</sub> )	Annual Average*	80 µg/m <sup>3</sup>	60 µg/m <sup>3</sup>	15 µg/m <sup>3</sup>	- Improved West and Geake Method - Ultraviolet Fluorescence
	24 hours**	120 µg/m <sup>3</sup>	80 µg/m <sup>3</sup>	30 µg/m <sup>3</sup>	
Oxides of Nitrogen as (NO <sub>2</sub> )	Annual Average*	80 µg/m <sup>3</sup>	60 µg/m <sup>3</sup>	15 µg/m <sup>3</sup>	- Jacob & Hochheiser Modified (Na-Arsenite) Method
	24 hours**	120 µg/m <sup>3</sup>	80 µg/m <sup>3</sup>	30 µg/m <sup>3</sup>	- Gas Phase Chemi luminescence
Suspended Particulate Matter (SPM)	Annual Average*	360 µg/m <sup>3</sup>	140 µg/m <sup>3</sup>	70 µg/m <sup>3</sup>	- High Volume Sampling, (Average flow rate not less than 1.1 m <sup>3</sup> /minute).
	24 hours**	500 µg/m <sup>3</sup>	200 µg/m <sup>3</sup>	100 µg/m <sup>3</sup>	
Respirable Particulate Matter (RPM) (size less than 10 microns)	Annual Average*	120 µg/m <sup>3</sup>	60 µg/m <sup>3</sup>	50 µg/m <sup>3</sup>	- Respirable particulate matter sampler
	24 hours**	150 µg/m <sup>3</sup>	100 µg/m <sup>3</sup>	75 µg/m <sup>3</sup>	
Lead (Pb)	Annual Average*	1.0 µg/m <sup>3</sup>	0.75 µg/m <sup>3</sup>	0.50 µg/m <sup>3</sup>	- ASS Method after sampling using EPM 2000 or equivalent Filter paper
	24 hours**	1.5 µg/m <sup>3</sup>	1.00 µg/m <sup>3</sup>	0.75 µg/m <sup>3</sup>	
Ammonia1	Annual Average*	0.1 mg/ m <sup>3</sup>	0.1 mg/ m <sup>3</sup>	0.1 mg/m <sup>3</sup>	
	24 hours**	0.4 mg/ m <sup>3</sup>	0.4 mg/m <sup>3</sup>	0.4 mg/m <sup>3</sup>	
Carbon Monoxide (CO)	8 hours**	5.0 mg/m <sup>3</sup>	2.0 mg/m <sup>3</sup>	1.0 mg/ m <sup>3</sup>	- Non Dispersive Infra Red (NDIR)
	1 hour	10.0 mg/m <sup>3</sup>	4.0 mg/m <sup>3</sup>	2.0 mg/m <sup>3</sup>	Spectroscopy
*	Annual Arithmetic mean of minimum 104 measurements in a year taken twice a week 24 hourly at uniform interval.				
**	24 hourly/8 hourly values should be met 98% of the time in a year. However, 2% of the time, it may exceed but not on two consecutive days.				

**NOTE:**

1. National Ambient Air Quality Standard: The levels of air quality with an adequate margin of safety, to protect the public health,, vegetation and property.
2. Whenever and wherever two consecutive values exceeds the limit specified above for the respective category, it would be considered adequate reason to institute regular/continuous monitoring and further investigations.
3. The standards for H<sub>2</sub>S and CS<sub>2</sub> have been notified separately vide GSR No. 7, dated December 22, 1998 under Rayon Industry - for details please see Sl. No. 65 of this document.  
[S.O. 384(E), Air (Prevention & Control of Pollution) Act, 1981, dated April 11, 1994 ]  
[EPA Notification: GSR 176 (E), April 02, 1996]
4. 1. Included vide Notification SO. 955 (E), Air (Prevention & Control of Pollution) Act, 1981 dated October 14,1998)

**APPENDIX - 6**  
**National Ambient Noise Quality Standards**

Area Code	Category of Area/ Zone	Limit in dBA (Leq)*	
		Day Time	Night Time
(A)	Industrial area	75	70
(B)	Commercial area	65	55
(C)	Residential area	55	45
(D)	Silence Zone	50	40

- Note:
1. Day time shall mean from 6.00 a.m. to 10.00 p.m.
  2. Night time shall mean from 10.00 p.m. to 6.00 a.m.
  3. Silence zone is defined as an area comprising not less than 100 metres around hospitals, educational institutes and courts. The silence zones are zones which are declared as such by the competent authority.
  4. Mixed categories of areas may be declared as one of the four above mentioned categories by the competent authority.

\* dB(A) Leq denotes the time weighted average of the level of sound in decibels on scale A which is relatable to human hearing.

A "decibel" is a unit in which noise is measured.

"A", in dB(A) Leq, denotes the frequency weighting in the measurement of noise and corresponds to frequency response characteristics of the human ear.

Leq: It is an energy mean of the noise level over a specified period.