

[Home](#) > [Journal](#) > [Earth & Environmental Sciences](#) > [JEP](#)
[Indexing](#) | [View Papers](#) | [Aims & Scope](#) | [Editorial Board](#) | [Guideline](#) | [Article Processing Charges](#)
[JEP](#) > Vol.2 No.5, July 2011



Air Quality Status of Respirable Particulate Levels at Selected Traffic Junctions along the Section of Lateral Highway in Hyderabad

PDF (Size: 783KB) PP. 662-667 DOI : 10.4236/jep.2011.25076

Author(s)

Manda Karunakar Reddy, Mareddy Sumathi

ABSTRACT

The aerodynamic diameter of an air borne particle is the key property in determining its respiratory deposition. The study aim to assess $PM_{2.5}$ level and its size distribution at 5 traffic junctions located along the lateral highway connected to NH-202. A cascade impactor has been used to measure the size function range of $PM_{2.5}$ apart from PM_{10} of atmospheric dust particles in air being $PM_{2.5}$ is concern with respect to effect on human health and is able to tend deeply into the respiratory tract reaching the lungs. It is observed that weight % of $PM_{2.5}$ values are in the range of 40% - 60% of PM_{10} and few values of $PM_{2.5}$ are exceeding the standards prescribed by CPCB. It is concluded that free flow of traffic is main concern and maintenance of road should be carried out during low traffic hours.

KEYWORDS

 $PM_{2.5}$, Air Borne Particle, Traffic, Respirable Dust, Particle Size

Cite this paper

M. Reddy and M. Sumathi, "Air Quality Status of Respirable Particulate Levels at Selected Traffic Junctions along the Section of Lateral Highway in Hyderabad," *Journal of Environmental Protection*, Vol. 2 No. 5, 2011, pp. 662-667. doi: 10.4236/jep.2011.25076.

References

- [1] P. J. Sturm, et al., " Road Side Measurement of Particulate Matter Size Distribution," Atmospheric Environment, Vol. 37, No. 37, 2003, pp. 5273-5281. doi:10.1016/j.atmosenv.2003.05.006
- [2] " What Is $PM_{2.5}$?" 4 July 2008. <http://www.epa.gov/region4/sesd/pm25/p2.htm#5>
- [3] Animeshkumar, K. M. Phadke, D. S. Tajne, A. L. Aggarwal and M. Z. Hassan, " A Sampling Technique for Monitoring the Respirable Suspended Particulates in Air," Indian Journal of Environmental Health, Vol. 39 No. 4, 1997, pp. 299-307.
- [4] M. K. Reddy, " Assessment of Particle Size from Selected Industrial Emission Sources," Indian Journal of Environmental Health, Vol. 29, No. 1, 1987, pp. 39-44.
- [5] " Where does $PM_{2.5}$ Come from?" 4 July 2008. http://www.health.state.ny.us/environmental/indoors/air/pmq_a.htm
- [6] WHO, " WHO Guide Lines for Air Quality," 1999.
- [7] U.S Department of Labor, Occupational Safety & Health Administration, Chapter 1. <http://www.OSHA.gov>
- [8] R. Agarwal, R. Prasad and A. Alabh, " Need for a New Fine Particulate Standard for Ambient Air Quality," Indian Journal of Air Pollution Control, Vol. 2, No. 1, April 2002.
- [9] L. Ramakrishna, D. V. S. Murthy and T. Swaminathan, " Fine Particulate Matter Profile in Ambient Air of Chennai City," Proceedings of Indo-US Workshop on Modeling of Transport of Air Pollutants, 11-

- [Open Special Issues](#)
- [Published Special Issues](#)
- [Special Issues Guideline](#)

[JEP Subscription](#)
[Most popular papers in JEP](#)
[About JEP News](#)
[Frequently Asked Questions](#)
[Recommend to Peers](#)
[Recommend to Library](#)
[Contact Us](#)

Downloads:	301,517
------------	---------

Visits:	673,800
---------	---------

[Sponsors, Associates, and Links >>](#)

- [The International Conference on Pollution and Treatment Technology \(PTT 2013\)](#)

- [10] R. Kumar and A. E. Joseph, " Air Pollution Concentrations of PM2.5, PM10 and NOx at Ambient and Kerbsite and Their Correlation in Metro City—Mumbai," Environmental Monitoring and Assessment, Vol. 119, No. 1-3, 2006, pp. 191-199. doi:10.1007/s10661-005-9022-7
- [11] USEPA, " Review of the National Ambient Air Quality Standards for Particulate Matter, Policy Assessment of Scientific and Technical Information-June 2001,"
- [12] " National Ambient Air Quality Standards," 14 June 2011.
http://cpcb.nic.in/National_Ambient_Air_Quality_Standards.php
- [13] " PM Standard Revision -2006 Sub-Head: Back Ground," 14 June 2011.
<http://www.epa.gov/oar/particlepollution/naaqsrev2006.html>