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Ambient air quality of Jamshedpur City: A study with reference to SO₂, NO₂, RSPM and SPM contents

Balram Ambade^{1*}, Sampad Ghosh and Basant Shubhankar²

1. Department of Chemistry, National Institute of Technology, Jamshedpur, Jharkhand-831014, INDIA

2. Department of Chemistry, Faculty of Basic Science, Mewar University, Chittorgarh, INDIA

Email: bambade.chem@nitjsr.ac.in

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ABSTRACT

In this study, attempts were made to characterize the air quality of urban- industrial site of Jamshedpur. The city has a problem with the air pollution mostly caused by anthropogenic activities and partly by natural origin activities. For this purpose, daily deposits of sulphur dioxide (SO₂), nitrogen dioxide (NO₂), respirable suspended particulate matter (RSPM) and suspended particulate matters (SPM). In 2008, aerosol fractions were collected during winter sampling periods. The mean mass of SO₂, NO₂, RSPM and SPM are 39.58±8.8µg m⁻³, 55.22±10.0µg m⁻³, 184.38±7.5µg m⁻³, and 247.80±12.2 µg m⁻³ respectively, which is substantially higher than Indian National Ambient Air Quality Standard (NAAQS) and US National Ambient Air Quality Standard (US-NAAQS). This study was conducted as the first step of polluted gaseous assessment in order to point out main air pollution sources and suggest a remedy strategy specific for this region.

Keywords: Urban-industrial, SO₂, NO₂, Daily deposit, winter, Remedy strategy.
