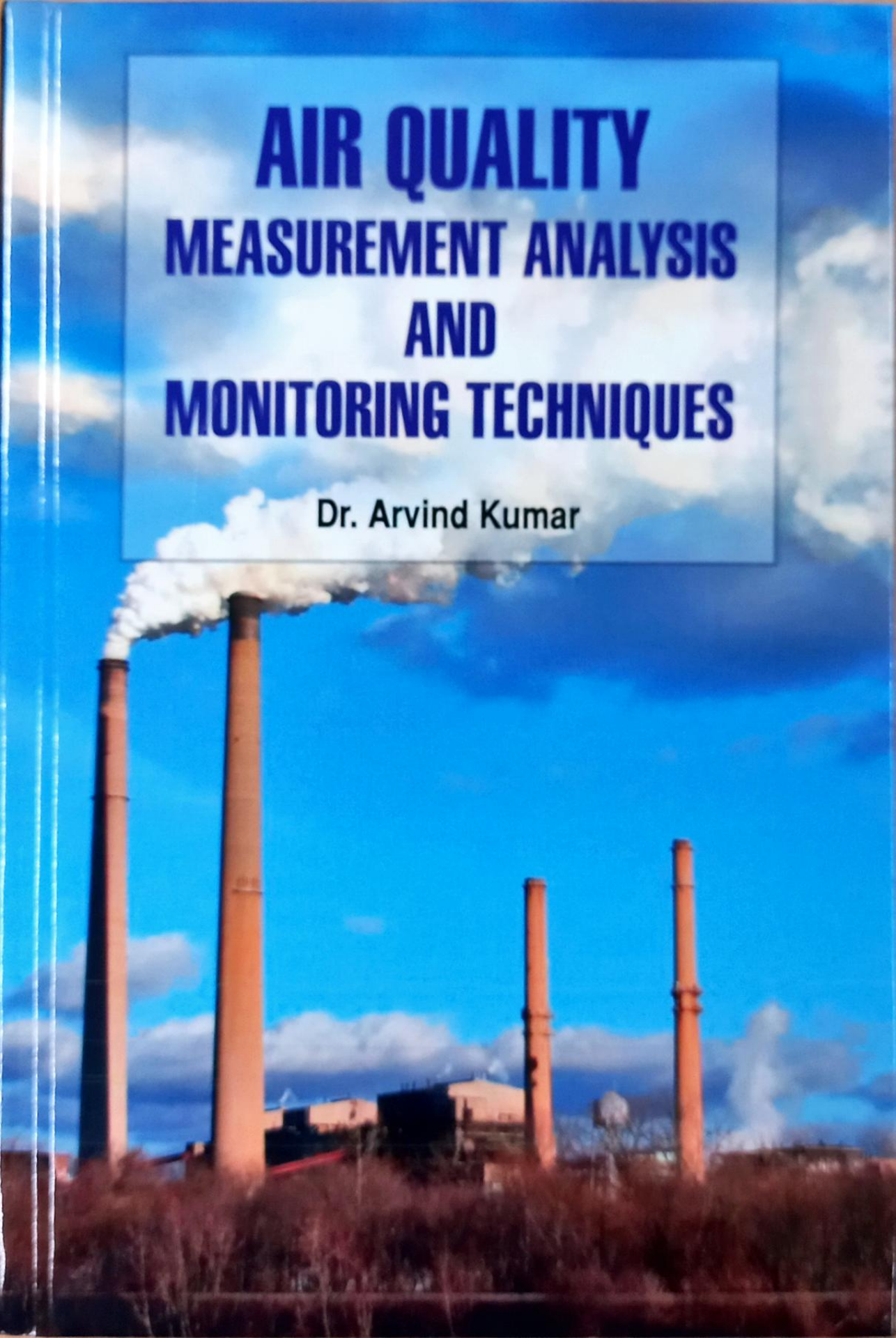


# **AIR QUALITY MEASUREMENT ANALYSIS AND MONITORING TECHNIQUES**

Dr. Arvind Kumar



# **Air Quality Measurement Analysis and Monitoring Techniques**

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Dr. Arvind Kumar

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# Contents

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|                                                        |           |
|--------------------------------------------------------|-----------|
| <i>Preface</i> .....                                   | v-vi      |
| <b>1. Air Quality Standards</b> .....                  | <b>1</b>  |
| Sulphur Dioxide .....                                  | 1         |
| Carbon Monoxide .....                                  | 1         |
| Nitrogen Oxide .....                                   | 2         |
| Air Pollution Effects .....                            | 3         |
| Prevention and Control of Air Pollution .....          | 9         |
| Meteorology and Air Quality .....                      | 13        |
| Atmospheric Stability and Instability .....            | 13        |
| Emission Standard .....                                | 18        |
| <b>2. Natural Air Pollution</b> .....                  | <b>24</b> |
| Top-ten Gases in Air Pollution .....                   | 25        |
| Industrial Plants and Factories .....                  | 29        |
| Agricultural Effects .....                             | 31        |
| Indoor Air Pollution .....                             | 34        |
| Indoor Air Pollution in Developing Nations .....       | 37        |
| Sources and Effects of Common Air Pollutants .....     | 44        |
| Air Pollution in Developing Countries .....            | 47        |
| Regional Air Pollution .....                           | 51        |
| <b>3. Air Quality Regulations</b> .....                | <b>57</b> |
| Introduction.....                                      | 57        |
| <b>4. Monitoring Air Pollution</b> .....               | <b>68</b> |
| Ozone Monitoring .....                                 | 70        |
| Ambient Air Monitoring .....                           | 72        |
| Environmental Pollution, Its Sources and Effects ..... | 77        |
| <b>5. The Atmosphere</b> .....                         | <b>83</b> |
| Urban Atmospheres .....                                | 83        |
| Origin of the Oceans and Atmosphere .....              | 83        |
| Atmospheric Instability .....                          | 87        |

|                                                         |            |
|---------------------------------------------------------|------------|
| Lapse Rates and Atmospheric Stability .....             | 92         |
| Troposphere and Stratosphere .....                      | 100        |
| Types of Structure in the Atmosphere .....              | 113        |
| <b>6. Sources of Air Pollution and Its Effects.....</b> | <b>136</b> |
| Pollutants .....                                        | 144        |
| Sources of Air Pollution in Industry .....              | 146        |
| Primary Pollutants .....                                | 152        |
| Air Pollution Chemistry .....                           | 153        |
| Photochemical Smog .....                                | 158        |
| <b>7. Impacts of Acid Rain .....</b>                    | <b>161</b> |
| Acid Deposition .....                                   | 164        |
| Prevention Methods .....                                | 166        |
| Acid Deposition .....                                   | 167        |
| Measuring Acid Rain .....                               | 174        |
| <b>8. Gaseous Pollutants .....</b>                      | <b>183</b> |
| Introduction .....                                      | 183        |
| Sizes and Sources of Particulate Matter .....           | 184        |
| Nitrogen Oxides .....                                   | 185        |
| Particulate Pollutants .....                            | 187        |
| <b>9. Applying Pollution Control Technologies .....</b> | <b>198</b> |
| Waste Management and Pollution Control .....            | 200        |
| Impact of Man's Activities in Pollutants .....          | 207        |
| Contaminated Wetlands .....                             | 208        |
| Human Impact on the Natural Environment .....           | 210        |
| <b>10. Air Quality and Human Health .....</b>           | <b>215</b> |
| Human Health .....                                      | 215        |
| Indoor Air Pollution .....                              | 216        |
| Tornadoes and Waterspouts .....                         | 218        |
| <b>11. Air Pollution Monitoring .....</b>               | <b>231</b> |
| Role of Software in Pollution and                       |            |
| Emissions Monitoring and Control .....                  | 239        |
| Pollution Through Agricultural Wastes .....             | 244        |
| Chemical Pollutants .....                               | 247        |
| Transboundary Pollution .....                           | 252        |
| <b>12. Air Quality Modelling .....</b>                  | <b>278</b> |
| Natural Cleaning Process of Atmosphere .....            | 290        |
| Atmospheric Dispersion Modeling .....                   | 293        |
| <b>Bibliography .....</b>                               | <b>299</b> |
| <b>Index .....</b>                                      | <b>301</b> |

# AIR QUALITY MEASUREMENT ANALYSIS AND MONITORING TECHNIQUES

Air quality measurement, analysis and monitoring are therefore essential for controlling air quality degradation and measuring the degree of damage. Air quality is monitored by measuring the air pollutant concentrations using specialized equipment and methods. High quality air pollution data is needed by air regulators and managers to implement the National Ambient Air Quality Standards and develop effective preventive and mitigation strategies to protect air quality. Understanding what is in the air near sources of pollution such as industrial applications, oil and gas production facilities, coal-fired power plants and highways is critical to safeguard public health and the environment from six common air pollutants and other hazardous air pollutants. Air pollution occurs when the air contains gases, dust, fumes or odour in harmful amount. That is, amounts which could be harmful to the health or comfort of humans and animals or which could cause damage to plants and materials. The substances that cause air pollution are called pollutants. Pollutants that are pumped into our atmosphere and directly pollute the air are called primary pollutants. Primary pollutant examples include carbon monoxide from car exhausts and sulfur dioxide from the combustion of coal. The book also contains revised discussions on public policy concerns, with a focus on air quality standards for ozone depletion and global warming, and the health effects of particulate air pollutants.

**Contents:** 1. Air Quality Standards, 2. Natural Air Pollution, 3. Air Quality Regulations, 4. Monitoring Air Pollution, 5. The Atmosphere, 6. Sources of Air Pollution and Its Effects, 7. Impacts of Acid Rain, 8. Gaseous Pollutants, 9. Applying Pollution Control Technologies, 10. Air Quality and Human Health, 11. Air Pollution Monitoring, 12. Air Quality Modelling.

## About the Author



**Dr. Arvind Kumar** got his Ph.D Degree in Biotechnology from the C.C.S. University U.P., India. He has worked on several positions at the other university: Chief Scientist in R&D Patanjali Ayurved, Haridwar; Officer on Special Duty/Chief Scientist State Forensic Officer cum (Director) in-charge, State Forensic Science Laboratory in Port Blair, A&N Islands and Forensic Scientist in District Mobile Forensic Science Laboratory Haridwar, Uttarakhand. Dr. Arvind Kumar having specialized in diverse fields, such as, Plant Biotechnologist (Development of formulation for Anti Cancers and Anti HIV drugs from Plant Lectins and Plant Toxins). He has written four books and numerous research papers and popular articles in national and international journals and magazines. Dr. Arvind Kumar has also received the three awards, such as, (1) Received Best Scientific paper by Directorate of Forensic Science, Ministry of Home Affairs, Government of India for year 2004. "For the development of technique for the detection of plant toxins"; (2) Received Best Scientific paper by Directorate of Forensic Science, Ministry of Home Affairs, and Government of India for year 2005. "For the in-vivo study of the plant lectins"; and (3) Nominated for the Emerging Young Forensic Scientist Award in 57th Annual meeting of AAFS at New Orleans, USA. "For the development of new complimentary technique for the determination of Toxins and Alkaloids from plant".



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