

TRAINING ACTIVITIES OF ECOTECH

BACKGROUND

Training courses are intended to develop confidence and competence among various groups who are handling air pollution monitoring instruments not only to fulfill the regulatory and accreditation agencies requirements but also to enhance skill of the participant for their effective air pollution management in their organization. Training course are designed for field and laboratory staff involved with air pollution measurements and management. The course has a strong component on hands-on operation of air pollution monitoring equipment and analysis of collected samples as per standard method and regulatory requirement. A strong component in this course will be to clear doubts and confusion arise while undertaking the air pollution monitoring as per latest standards and notified test methods. In the training demonstration are done on various kind of instruments and lab facilities required for representative sample collection besides other aspects of the subject are also covered in the programs organized by us.

Ecotech, a group of professionals committed to the cause of environment protection, who pioneered the development of indigenous instruments for monitoring air-pollution (Ambient, Source Emission, Meteorology and Noise) in India and setup NABL accredit calibration lab Ecotech team have decades experience of monitoring of air pollution all over the country and abroad in various industrial sectors including community air and indoor/ work zone.

Ecotech has representation at BIS and other regulation committees. Ecotech team also undertakes audits of labs as assessors appointed by NABL. Thus we have enough experience and exposure for imparting training of personnel in this field. Our team has good exposure and understanding of monitoring requirement in India can train participants on the subject by giving hands on training.

Ecotech felt the importance of such training as an effort by sharing knowledge and experience with various stake holders for generation of reliable data. Our team have already organized several training programmes in different parts of the country. We have the competence and experience to effectively organize the training at our place and also at customer place.

Besides in-house Ecotech professionals, requisite experts from Pollution Control Boards, Universities and Academic institutions and consultants, are invited as faculty for their effective inputs for benefit of participant in specific area of training.

Who can Participate

Middle level scientist and engineers working with Pollution Control Board, Consultants & Industries who have been designated for tasks related to Air Pollution Monitoring in their respective organizations, are eligible to participate in this course. Science or engineering background in academics is essentially required to understand training contents completely.

Subject Covered

1. Introduction

- 1.1 Basics of Air Pollution
- 1.2 Sources of Air Pollution
- 1.3 Definition of terms, units and their conversion
- 1.4 Chemical properties and material balance concepts

- 2. Air Quality Measurement Instrumentation required to meet air quality standard**
 - 2.1 Sampling for PM_{2.5} & PM₁₀ Dust
 - 2.2 Sampling techniques and analysis of Gaseous Pollutants SO₂, NO_x, NH₃, & Ozone
 - 2.3 Sampling Techniques & Analysis of Benzene and CO.
- 3. Stack emission monitoring procedure and tips for reliable measurements of SO₂, NO_x, CO and Particulates from chimney**
- 4. Laboratory Tips for preparation for reliable sampling and analysis of sampled pollutants**
 - 4.1 Laboratory Preparation & Gravimetric Analysis of filters for PM₁₀ & PM_{2.5} particulates
 - 4.2 Latest analysis Methods of SO₂, NO_x, CO, NH₃, O₃, & Benzene
- 5. Meteorology**
 - 5.1 Basics of Meteorology
 - 5.2 Windrose diagram Preparation
 - 5.3 Mathematical dispersion Modelling to predict incremental concentration of air pollutants
- 6. Quality Assurance and Calibration**
 - 6.1 Precautions required during sampling and analysis
 - 6.2 Calibration of air pollution monitoring instruments to meet requirement of intermediate checks for NABL accredited lab as IS/ISO/IEC 17025:2005
 - 6.3 Tips for Uncertainty Calculation
- 7. Data Compilation Presentation and report preparation**
- 8. Recent Development in Air Pollution Monitoring Instrumentation in India to meet regulatory requirements.**
- 9. Tips how to setup a lab and obtain accreditation as per guidelines given in IS/ISO/IEC/17025:2005 or as per other standard guidelines requirements**

Ecotech also organize one to one training on long term basis (15 days to 1 month duration) such training are done at our premises only. We study the gaps and try to fill them up through practical and hands on exercises planned for specific trainee for his overall improvement on the subject.

Certificate are issued to successful trainee after through evaluation done from day today basis by test/ discussions and performance on assigned jobs as a whole.

Ecotech also planning to run certificate course on regular basis in 3-4 batch per year of 25 students where fresher's scientist and engineer can participate for nominal fees. In such training focus remain on practical and laboratory work beside field monitoring for practical exposure of the participants

For Ecotech Instruments