



SAFE BIOSOLIDS & TREATED WATER QUALITY MASTERCLASS: HANDS-ON TRAINING ON THE SCIENCE, STANDARDS AND REUSE READINESS

Dates: 18th-21st August, 2026

Last date for registration:
31st July, 2026

Location: **Anil Agrawal Environment Training Institute (AAETI), Nimli, Rajasthan**

Language:
English

ABOUT THE TRAINING:

This **advanced laboratory training on scientific understanding of the quality of treated water and biosolids reuse for Non Sewered Sanitation (NSS) professionals** is a specialised capacity building programme designed to strengthen scientific competencies in faecal sludge and biosolids analysis. As non-sewered sanitation systems become increasingly vital for public health and environmental sustainability across India and the Global South, the effective implementation of safe and sustainable waste treatment practices has shifted the focus towards the safe treatment and resource recovery or reuse of biosolids and treated water. This has created a demand for highly skilled workforce capable of rigorous quality control. This training responds to that need by equipping participants with the analytical skills required to ensure that treated biosolids are safe for agricultural or industrial reuse.

Delivered by domain experts and research scientists from CSE's **Environment Monitoring Laboratory (EML)**, the course provides deep technical exposure to the physico chemical and microbiological parameters essential for evaluating raw faecal sludge, treated biosolids, and used/recycled water. Participants learn how to assess contaminant levels, pathogen reduction, nutrient profiles, and water quality indicators—ensuring compliance with discharge norms and safe reuse standards.

A core strength of the programme is its emphasis on **hands on laboratory immersion**. Trainees spend substantial time conducting live experiments, operating advanced analytical instruments, troubleshooting procedures, and mastering standardised testing protocols—reflecting the emphasis on “immersive, experiential learning” and practical skill building. This approach ensures participants gain not just procedural familiarity but a strong command of scientific workflows.

Beyond laboratory techniques, the training builds the ability to **interpret analytical data and translate it into operational improvements** for treatment plants. Participants learn how to diagnose process gaps, evaluate treatment performance, and recommend targeted corrective actions based on evidence. This strengthens monitoring systems and enhances the overall efficiency and safety of NSS and FSTP operations.

Hosted at CSE's sustainable residential campus in Nimli, Rajasthan, the programme offers a focused environment for engineers, researchers, and sanitation professionals to advance their technical expertise and contribute to safer, more sustainable waste management systems.

COURSE FEE AND FACILITIES

Eligible candidates will be provided with scholarship for this training by CSE. This support will also cover the cost of stay, including all meals

BENEFITS

- Interactive lectures from experts working in NSS
- A certification on successful completion of training

TRANSPORTATION

- Participants shall only be provided ground transport for Delhi to AAETI (training venue) and back to Delhi.
- Participants need to bear the cost of their travel to reach Delhi and back to their hometown

COURSE COORDINATOR

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WHAT YOU WILL LEARN

- **Non-sewered sanitation:** Approaches and technologies
- Faecal sludge (FS) and biosolid sample collection, storage and transportation
- **Handling FS:** Safety measures to be taken to handle faecal sludge and biosolids
- Physio-chemical and biological analysis of biosolids
- Analytical skills on the interpretation of quality parameters of biosolids and treated water
- Laboratory skills on handling sophisticated instruments
- GLP on equipment calibration and methodology validation.
- Good laboratory practices

METHODOLOGY

Highly interactive hands-on training:

- Interactive input presentations
- Analysis of physico-chemical parameters (pH, electrical conductivity and moisture content)
- Analysis of microbial parameters (Faecal coliform, *E. coli* and *Salmonella*) by MPN method
- Enumeration of Helminth eggs in biosolids by AmBic/ZnSO4 method
- Heavy metal analysis of biosolids using ICP-OES
- Quality analysis of biosolids using CHN analyzer (Carbon: Nitrogen ratio)
- NPK analysis of biosolids using CHN analyser and ICP-OES
- Calorific value estimation of biosolids by bomb calorimeter
- Analytical equipment calibration (pH meter, Micropipette, Glassware's, Centrifuge, Balance, ICP-OES etc.) and methodology validation
- Individual and Group Assignments

WHO CAN APPLY

- Working professionals in the WASH / NSS / FSM / Waste Management Sector
- Managers or technicians in the Govt. and Pvt. Water testing laboratories

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