





# Greenchem for Effluent Treatment Plants

Modern, Reliable and Lab-Grade Solutions for Every Stage of Effluent Treatment

### Introduction

Effluent Treatment Plants (ETPs) play a vital role in ensuring that industrial wastewater is treated responsibly before discharge, making environmental care part of everyday operations.

At Borosil Scientific Limited (BSL), we enable industries to adopt science-driven, efficient and responsible practices through cutting-edge analytical solutions aligned with the principles of Green Chemistry. Our commitment lies in protecting water resources, reducing environmental impact, and helping industries achieve Zero Liquid Discharge (ZLD) with confidence through our trusted technology and service ecosystem.

With the GreenChem campaign, we're not just offering solutions; we're supporting a movement. Let's make regulation seamless, monitoring meaningful, and sustainability second nature.

## Why GreenChem

## Environmental Impact



- Cleaner Discharge, Cleaner Waters: Reliable analysis ensures safe effluent discharge.
- Water Reuse Made Easy:
   Precision tools support in-plant recycling and freshwater savings.
- Protecting Soil & Biodiversity:
   Prevents harmful contamination of land and aquatic ecosystems.

## Social & National Impact



- Safer Workplaces & Healthier Communities
- Support National Goals: Jal Shakti, NAPCC, Smart Cities, and Swachh Bharat

## Compl & Mon



- Meet CPCB with Ease
- Enable Real for pH, DO,
- Make ZLD a for MSMEs



## **Matters for ETPs**

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## Operational & Cost Benefits



- / SPCB Norms
- -Time Alerts COD Reality Even
- Boost Treatment Efficiency
- Avoid Penalties with Early Detection
- Upgrade MSME Infrastructure Affordably

# Data-Driven Decision Making



- Digital Records for Audits & ESG
- Build Your
   Environmental Baseline
   with Confidence

## **Mapping the Stages of Water Recovery**

01

#### **Preliminary Treatment**

Remove large solids and assess influent pH

03

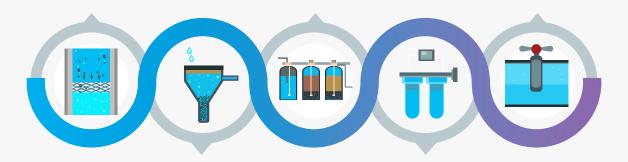
## Secondary (Biological) Treatment

Biodegrade organic content

05

#### Sludge Treatment

Dewater sludge, prepare for disposal/compost (Moisture/ Nitrogen estimation)



02

#### **Primary Treatment**

Settle solids, separate oils, measure initial COD/ BOD

04

#### **Tertiary Treatment**

Remove nutrients, control color, confirm water quality by UV Vis/Electrochemistry

## The Borosil Scientific Advantage

60+ years

### Scientific Legacy

60+ years of trust in lab glassware and analytical instruments across India's top research labs and industries.



9001



#### **Certified Quality**

ISO 9001 systems, CE-marked models, NABL-traceable calibration, and compliance with CPCB/SPCB standards.



### **One-Stop Analytical Partner**

Complete range: Kjeldahl, UV-Vis, pH/DO/TDS meters, COD kits, and lab consumables, everything under one roof.



#### Nationwide Support

Pan-India service, method validation, IQ/OQ documentation, training, and AMC services.



#### **Trusted by Authorities**

Approved by CPCB, State Boards, Jal Nigam, NTPC, NHAI, CETPs, and key infrastructure projects.



#### Future-Ready Innovation

Built for ZLD, ESG compliance, digital labs, and smart plant integration.

## **Integrated Analytical Solutions for Every Stage of ETP**



### **pH** Meter

### **Advantages**

Quick and accurate pH measurement along with ORP

Essential for process control.

Available with Auto temperature compensation (ATC) and Digital High Sensor (DHS) electrodes.

#### Role in ETP

- Monitors pH in all stages (influent to final discharge)
- Maintains pH for biological treatment efficiency

## **Conductivity Meter**

#### **Advantages**

Simple operation and real-time ionic content analysis and hence salinity and TDS.

#### **Role in ETP**

- Tracks total dissolved solids (TDS) in influent/effluent
- Assesses removal of salts and ionic pollutants





## Dissolved Oxygen Meter

#### **Advantages**

Critical for biological treatment control

Realtime DO monitoring using high precise optical emission technology.

#### **Role in ETP**

- Ensures proper oxygen levels for aerobic digestion
- Monitors efficiency of aeration tanks





## Open and close reflux COD Analyzer

#### **Advantages**

Rapid and reliable estimation of chemical oxygen demand Reduces manual testing time

#### **Role in ETP**

- Validates organic pollutant removal
- Used in primary and tertiary treatment for pollution load monitoring



## Kjeldahl System

#### **Advantages**

Accurate nitrogen analysis in complex samples

Recognized reference method

#### **Role in ETP**

- Determines organic nitrogen in wastewater and sludge
- Indicates organic nitrogen load in the effluent which contributes to TKN values in wastewater.







## Quanta Pro UV-Vis Spectrophotometer

#### **Advantages**

High sensitivity & accuracy

Wide range of analyte detection

Fast, non-destructive testing

Inbuilt water analysis methods

#### **Role in ETP**

- Detects nitrates, phosphates, iron, chromium, sulphate, bromine, etc. in tertiary treatment as per ROHS, BIS,ISO etc.
- COD estimation via UV absorbance.

## General utility products



### Water Bath & Sonicator

Delivers powerful, even ultrasonic heating to break down compounds and prep ETP samples reliably.





### **Filtration Products**

Filtration is key in ETPs, our products ensure durable, chemical-resistant, and reliable performance.





## Volumetric Glassware

Used in ETP testing for precise, repeatable solution prep with high chemical resistance.





## Rapid moisture analyser

Evaluates drying efficiency by measuring moisture in sludge, aiding solid waste handling.



## **Heating Mantles**

Provides safe, uniform, flame-free heating for sensitive ETP lab reactions.







## **Bottle Top Dispenser**

Patented Dispenser for safe, precise ETP dosing with easy DIY calibration.





## **Magnetic Hotplate Stirrer**

Ensures uniform heating and mixing of ETP samples with precise temp and stirring control.





## The Borosil Scientific Advantage

At Borosil Scientific, we believe that sustainable industry begins with accountable science. Our commitment to enabling Green Chemistry practices for Effluent Treatment Plants goes beyond products, it's about empowering industries with reliable data, compliant technologies, and end-to-end support. As environmental standards evolve, BSL stands with you as a future-ready partner, driving innovation, trust, and transformation, one drop at a time...

## **Contact Us Today**



explore@borosil.com



www.borosilscientific.com

## Service & Support



lab.support @borosil.com



1800-224-551



## **BOROSIL** Scientific

#### Registered and corporte office:

1101, Crescenzo, G-Block, Opp. MCA Club, Bandra Kurla Complex, Bandra (E) Mumbai - 400 051. India.

#### Manufacturing unit:

Plot No. 7, Sr. No. 234, 235 & 245, Indialand Global Industrial Park, Hinjewadi Phase 1, Pune 411057. T:+91 20 66779000











