

Industrial Pre-Treatment Sampling

Introduction

Industrial users are permitted to discharge into the collection system as long as the discharge complies with the US EPA's National Pretreatment Program requirements identified for Publicly Owned Treatment Works (POTW). By reducing or eliminating waste at the industries ("source reduction"), fewer toxic pollutants are discharged to and treated by the POTWs, providing benefits to both the POTWs and the industrial users.

The discharge permit will dictate the permissible limits of typical industrial pollutants and pollutants specific to the industry. Compliance monitoring by the WWTP and/or self-monitoring by the industry will be prescribed in the permit. Monitoring frequency is another permit parameter and varies by industry and region.

- The national pretreatment program is a component of the NPDES Permitting Program
- Process Wastewater Discharges
- Non-Process Wastewater Discharges (ie. Cooling water)
- Industrial Stormwater Program (ie. Surface runoff from refinery)



Tools for Industrial Pre-Treatment Sampling

Background

In addition to Hach portable instruments like HQD and Sension+, an automatic sampler is an important part of any Pre-Treatment program.

Why an Automatic Sampler is necessary

An automatic sampler is a valuable tool used to collect unbiased representative samples essential to:

- Characterize wastewater and its impact on receiving bodies
- Comply with government discharge requirements
- Process billing
- Process control

Typical Permit Parameters

- pH
- Conductivity
- DO
- Fats, Oil & Grease (FOG)
- Petroleum
- Total Suspended Solids (TSS)
- Biological Oxygen on Demand (BOD)
- Total Phosphorus
- Total Nitrogen
- Volume of Flow
- Copper, Lead, Mercury, Silver, Zinc
- And More

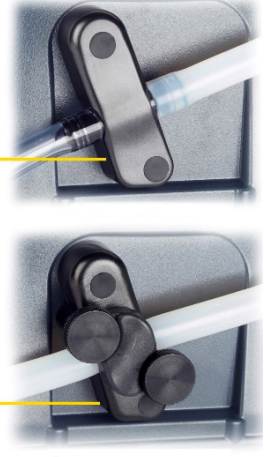
Tools for Industrial Pre-Treatment Sampling



Continuous wave Doppler Area Velocity Sensor and pHD sensors shown on AS950 portable sampler



Standard Liquid Detector



Optional Non-Contact Liquid Detector

Hach AS950 Automatic Sampler

In 1999 Hach absorbed automatic sampler manufacturer American Sigma. Today with over three decades of automatic sampling experience the Hach AS950 automatic sampler brings features that are a must for anyone performing pre-treatment sampling.

Headache free simplified programming courtesy of the menu driven prompts and full color display reduces if not eliminates programming mistakes that can lead to missed samples and costly redo's of sampling events.

Programming flexibility like dual programming modes allow for

The non-contact liquid detector options is recommended for portable sampler base applications

two programs to be run in parallel or series. One example might be a flow proportional sampling routine and an setpoint sampling routine for pH upsets.

Optional integral flow or pH sensors simplify flow weighted sampling and setpoint/upset sampling by combining sampling, flow, and water quality parameters in one easy to use controller.

Transfer programs or logged data via USB stick.

Create reports of sample history including time collected, sample volume, and outcome (success/fail). Incorporate parameters like flow, pH, or temperature and present them in one click reports with our free desktop software application.

Where to locate samplers and why

By POTW (Public Owned Treatment Works):

1. Influent and effluent of WWTP to comply mandates of NPDES permit with
2. Upstream in collection system to characterize industrial waste discharges
3. Where industrial waste discharges into muni collection system (Indirect Discharger) to bill the industrial discharger to treat their waste.

By Industrial Indirect Discharger:

1. Where industrial waste discharges into muni collection system to verify correct billing by POTW.

Tools for Industrial Pre-Treatment Sampling

Available features and options

Portable

Available Options:

- Standard, Compact or Composite Bottle Tray
- Single Composite or multiple bottled discrete w/distribution arm
- Various sizes of glass and poly bottles
- Power supply or rechargeable battery
- Plug and play sensor ports
- Rain Gauge

Refrigerated

Available Options:

- Single composite or multiple bottle discrete w/distribution arm
- Various sizes of glass and poly bottles
- Battery back-up
- Plug and play sensor ports

All Weather Refrigerated (AWR)

Available Options:

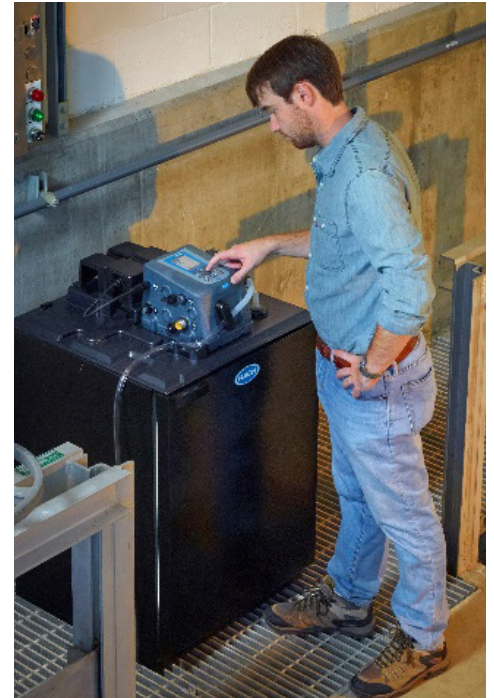
- Single composite or multiple bottle discrete w/distribution arm
- Various sizes of glass and poly bottles
- Battery back-up
- Controller heater
- Plug and play sensor ports



Rugged base and NEMA 4X, 6, IP68 watertight controller.



AS950 Portable Sampler - lightweight, yet rugged



AS950 Refrigerated Sampler

For more information on Hach's family of sampling products, visit hach.com/samplers

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