



Sampling Instructions for the SYBR-AER with UV Disinfection

With the SYBR-AER being an SBR (Sequential Batch Reactor) the question arises as to the proper protocol for sampling the SYBR-AER system, particularly those that incorporate disinfection and/or re-aeration. These instructions address these questions by providing an approach that, if followed, should yield data that accurately reflect the performance of the treatment system.

Sampling is part of a process for documenting successful system operation. Sampling is a team effort that includes the homeowner, manufacturer's local representative, regulators and laboratory staff.

The SYBR-AER is programmed to discharge between 3 - 4 a.m. which is not practical for taking a sample. So the control panel has a built in sample mode.

When it is time to take a sample notify the homeowner and schedule a date and time to collect the sample.

Have the homeowner on the selected date and time go out to the control panel and turn the sample mode switch ON in the panel. This will shut the blower off without sounding the alarm, and it will turn the UV light on.

After a minimum of 3 hours (maximum 5 hours) settling time from the scheduled activation time you can collect the sample.

Collect the sample by opening the sample port and unscrewing the spray head in the sample port..

Since the system is utilizing UV disinfection the pump flow has already been adjusted down slow enough to collect a free-flowing sample. Go to the control panel and turn on the manual pump run switch which will turn the pump on. Allow piping to flush for at least 30 seconds before collecting a sample.

Collect CBOD, TSS, and ammonia first then sterilize the piping before collecting fecal coliform or E. Coli samples. Sterilize piping by wiping the pipe down with bleach.



Once the sample has been collected turn off the manual pump run switch. Screw the spray head back on the pipe in the sample port. Turn pump back on let any trapped air bleed out of the line, once it is spraying consistently back in the box take your Dissolved Oxygen reading.

Once you have taken a reading put the lid back on the sample port. Turn the manual pump run switch off then turn the sample mode switch off. This will put the SYBR-AER back into it's normal operating program.

Sampling Tips

- Understand and follow all applicable OSHA and safety standards. Wear protective gear, including gloves and eye protection. Keep hands below shoulders. Disinfect after sampling.
- Calibrate instruments. Different approaches can be used to take measurements. Be sure that electronic instruments are properly calibrated. Chemicals should be "fresh" and appropriate for the measurements to be undertaken.
- Collect samples from cleared, piping or appurtenances. Remove items that may have been deposited and do not reflect effluent as it is discharged from the system.
- Collect only free-flowing samples.
- Sterilize piping and appurtenances before collecting fecal coliform or E. Coli samples. Bacterial samples are the most sensitive of all samples. Extreme care must be exercised in collecting bacterial samples as contamination can easily occur.
- Keep notes related to sampling events and note items that may have a bearing on the results. Record the time the unit was put into settling mode and what time the sample was collected.