

## Challenge Testing Configuration Recommendations

We start with a back flow preventer on our house plumbing. (Not in the photo)

The house water feeds into a manifold (white tubing setup) which supplies the water to the system. In the photo, the water is feeding in from the left. It is most effective to have an inlet from the pump at the beginning of your manifold to supply the surrogate chemistry. The inlet feeding contaminant is labeled in the photo as "Inlet". The white manifold tubing is  $\frac{3}{4}$ " PVC and the black tubing is  $\frac{1}{4}$ " tubing.

The surrogate chemistry is fed into the manifold by a pump. The pump we recommend is a Fluid Metering Inc. QG20 with RH1 pump and a RHQ adapter. Total price is approximately \$950.00. Phone number for Fluid Metering Inc. 1-516-922-6050. The pump is pictured in the second photo below.

The injection chemistry is fed at about 20 mL/min. into the manifold. The WDMPsc controls the incoming flow at about 500 mL/min. The concentration of the injection chemistry should be adjusted appropriately per the compound.

This is a very simple system. We have learned that a more complex and elaborate system is harder to control, and therefore does not work as well. This also minimizes the volumes of injection chemicals needed to test the system performance.



