BACTERIOLOGICAL AND CHLORINE TESTING

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Why is BACT Testing and Chlorine Testing important?

• We want to make sure we have safe water

Or

• We have to do it according to regulations!
BACT/Chlorine Testing

How does it let us know our water is safe?

With a BACT sample we are checking for the presence of Indicator Organisms--Total Coliforms

With a Chlorine test we are ensuring we have safe levels of disinfectant--both in the plant and in the distribution system
The regulations made me do it?

40 CFR 141.21 (National Primary Drinking Water Standards) requires BACT testing for all Public Water Systems.

40 CFR 141.31 requires MOR’s to be submitted within 10 days--These include reporting of daily chlorine residuals.
Typical BACT Bottle, Form, and Mailer
Total Volume = 120 mL
Allows for 100 mL of sample
Plus 1” air space

Sodium Thiosulfate
(to remove Cl₂)
Bacteriological Sampling Procedure

Inspect sample location (leaky or dirty faucet)
Remove aerator (if able)
Let water run (need fresh water)
Test pH
Test Cl₂
Adjust flow (pen diameter)
Carefully fill bottle (100 mL/1” air space)
Complete form
Package
Deliver ASAP to assure within 30 hours.
Sometimes we may need to collect a RAW water sample
From lab raw water tap
Directly from source (River, Lake, etc.)
• Don’t take from surface. Need to get from below surface layer.
Typical Chlorine Test Kit – Color Wheel
Typical Chlorine Test Kit – Digital Unit
Typical pH Testing Equipment

Color Change

Digital
DPD Method (Diethyl-p-Phenylenediamine)
Other Needed Items

- Ice Packs
- Wipes
- Pen
Questions