

Ashrae 241 Test Project Planning



Test Set-Up

4. Pressurize eSprayer to 65 psi
5. Place eSprayer on floor under or close to a Supply (NEVER) under a Return!
6. Place 4-C Air Sampler face in the opposite direction of the eSprayer at least 3-5 feet from the ground
7. Turn the Air Sampler Interval Knob to 241 ACH



Origin and Sample Point Placement

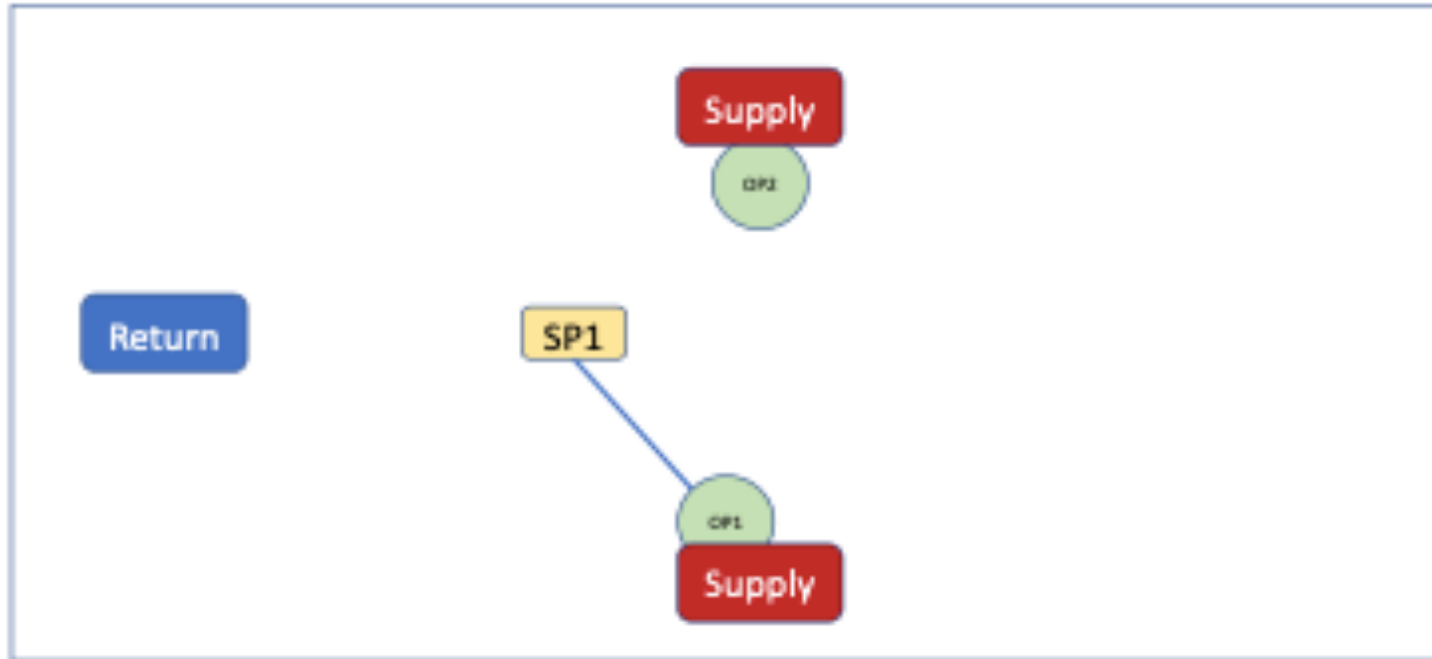
- **Origin Point Placement**

- Origin Point locations for (placement of the eSprayer) should be under or close to a HVAC Supply, if one is present in the test location
- eSprayer should be placed on the floor and not on desks, chairs, etc...
- **Caution:** If eSprayer is placed under a HVAC Return the DNA Tag will most likely be “sucked up” and result in a “invalid” test result

- **Sample Point Placement**

- Sample Point locations (placement of the 4-Channel Air-Sampler) should be under or close to a HVAC Return if one is present in the test location
 - The 4-Channel Air-Sampler placed opposite of the eSprayer and pointing (sample cassettes) in the direction of a HVAC Return
 - Air Samplers should be placed at least four-feet from the ground
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Positioning of eSprayer and Air Sampler



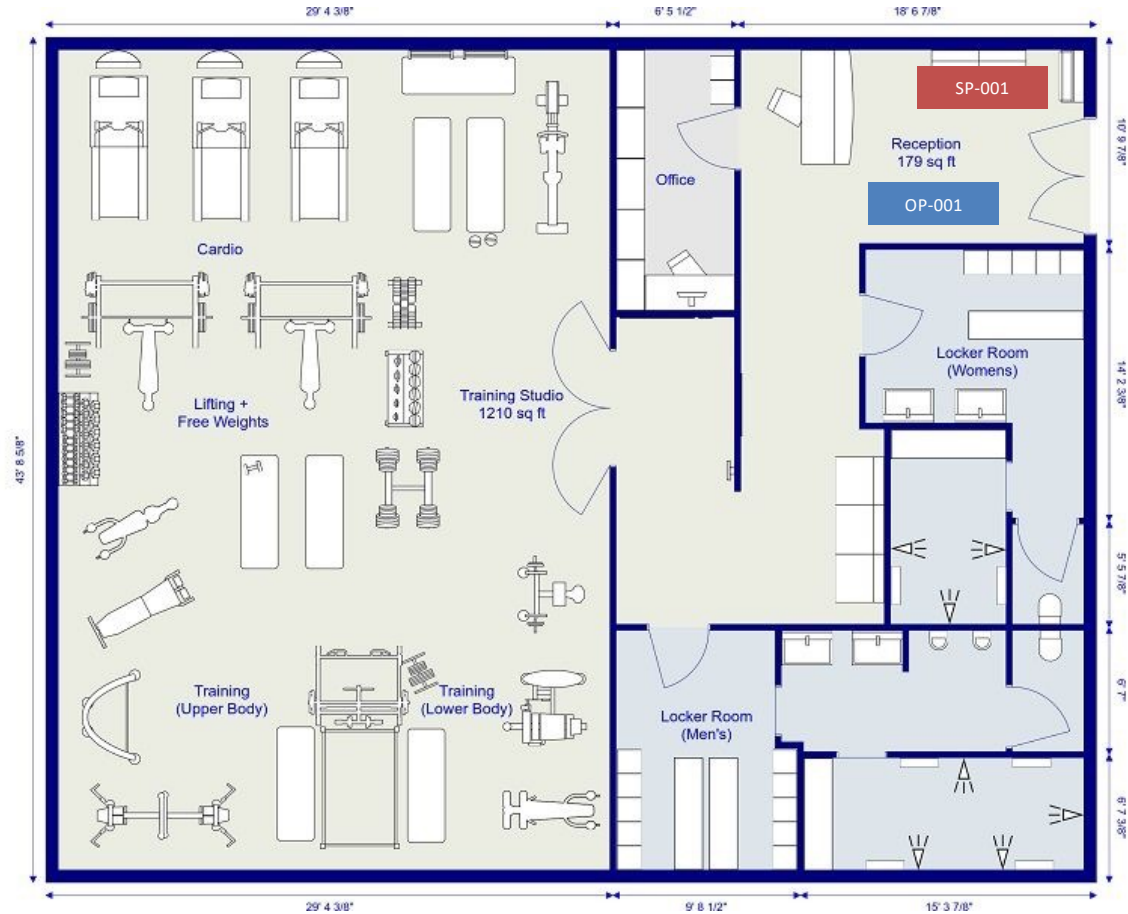
Manage Origin Points (OPs) and Sample Points (SPs)

Origin Points

OP-001: Reception

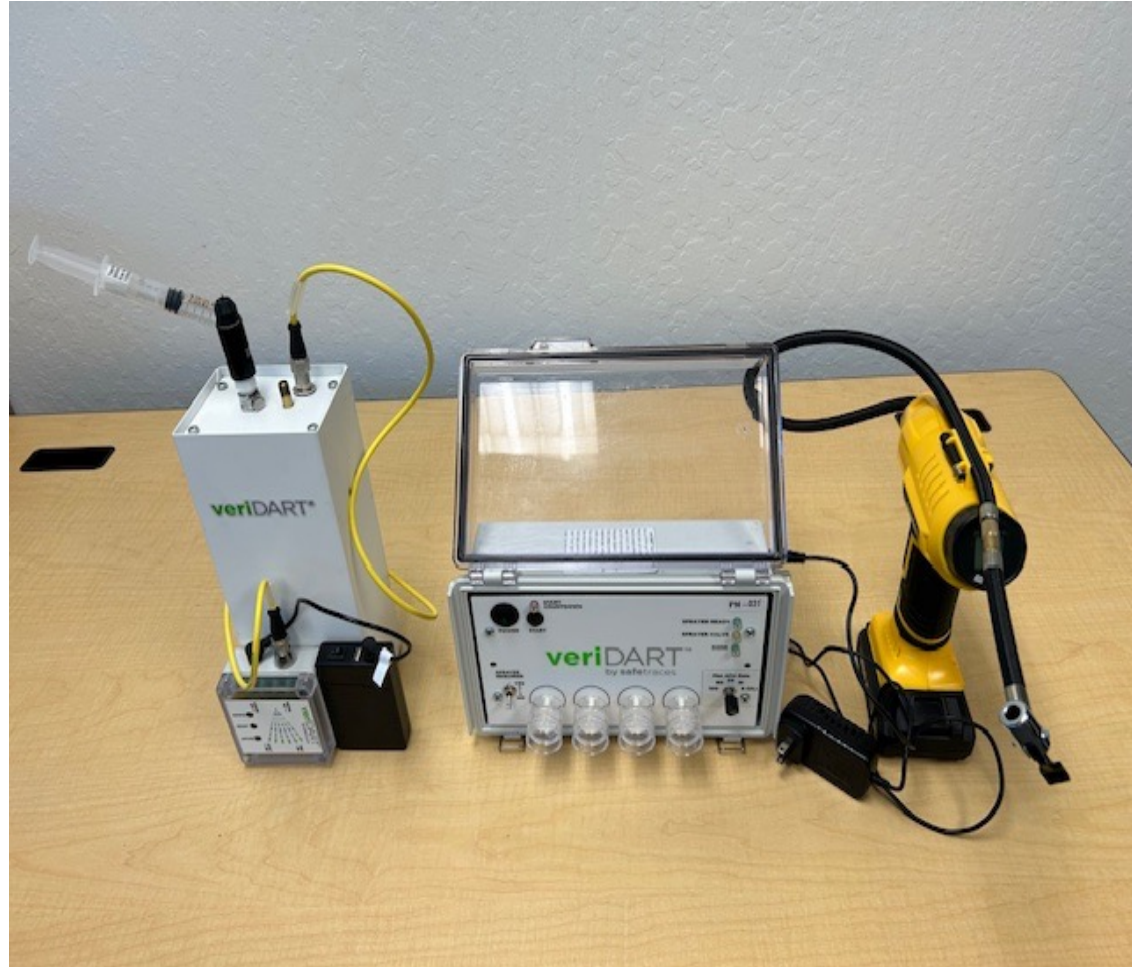
Sample Points

SP-001: Reception

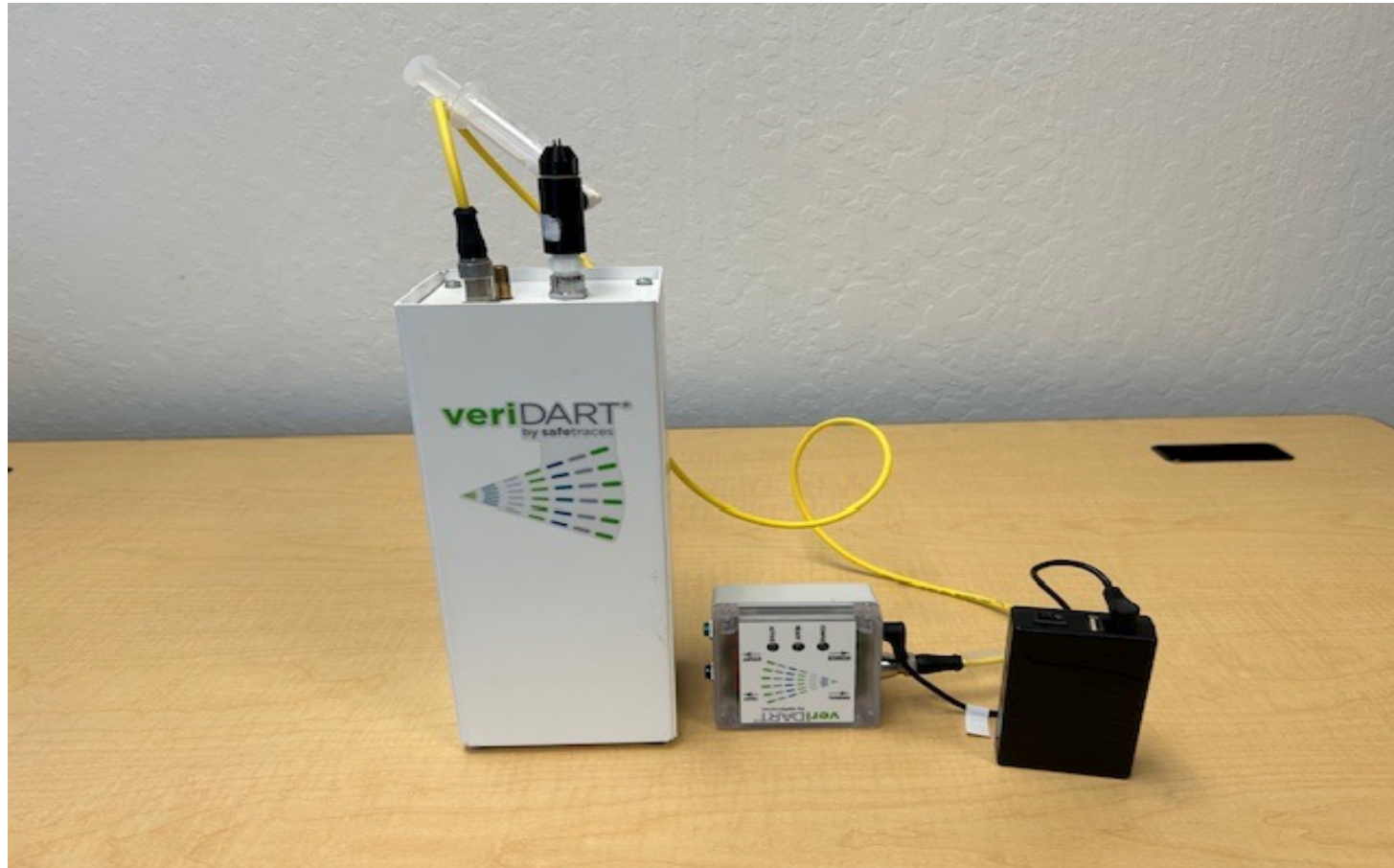


Equipment Used for Ashrae 241 Test

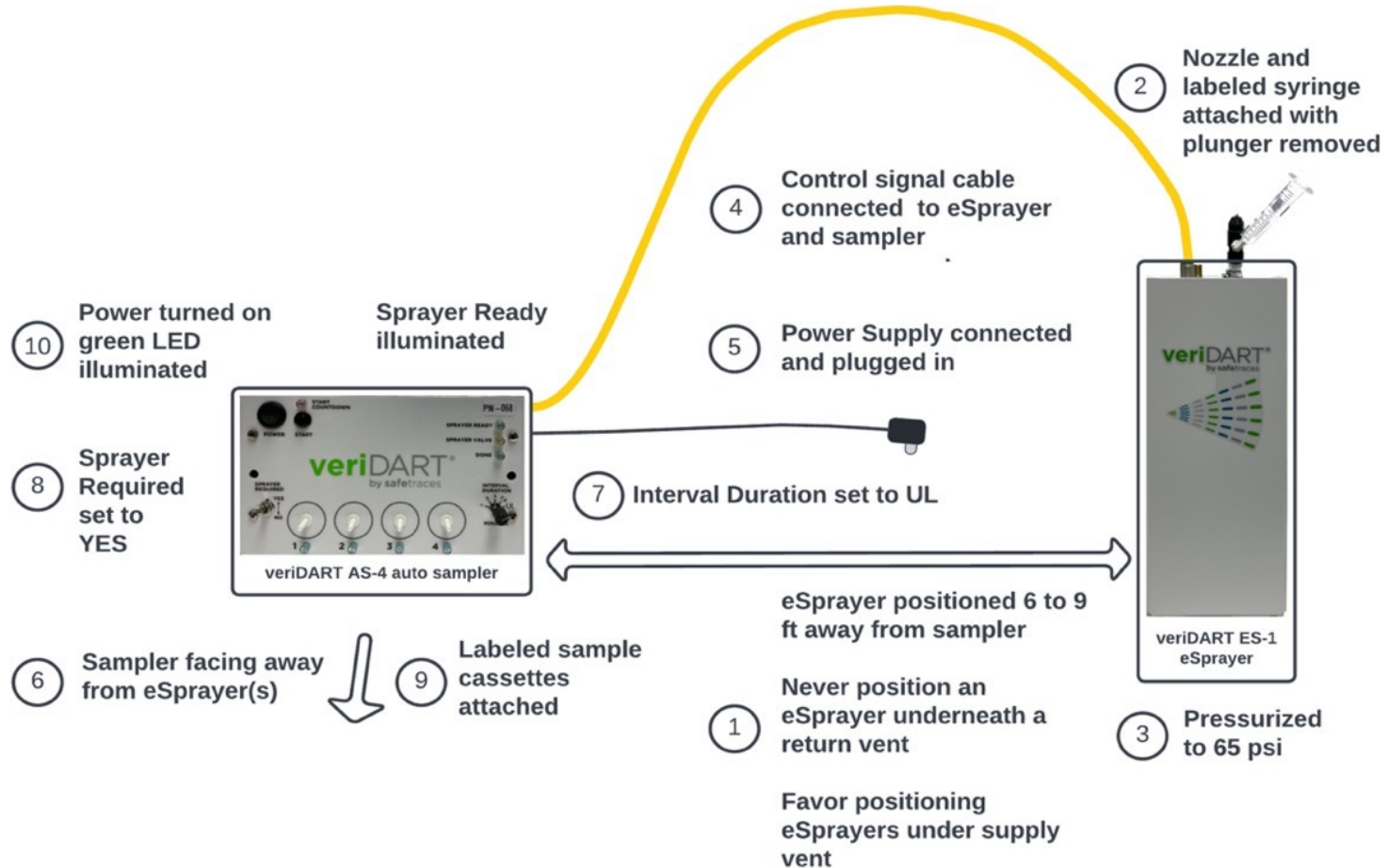
- eSprayer
- Yellow Cable Cord
- Wireless Module
- Lithium Battery
- Battery Cable
- Nozzle
- Syringe
- Power Cord
- Air Compressor
- 4-Channel Air Sampler



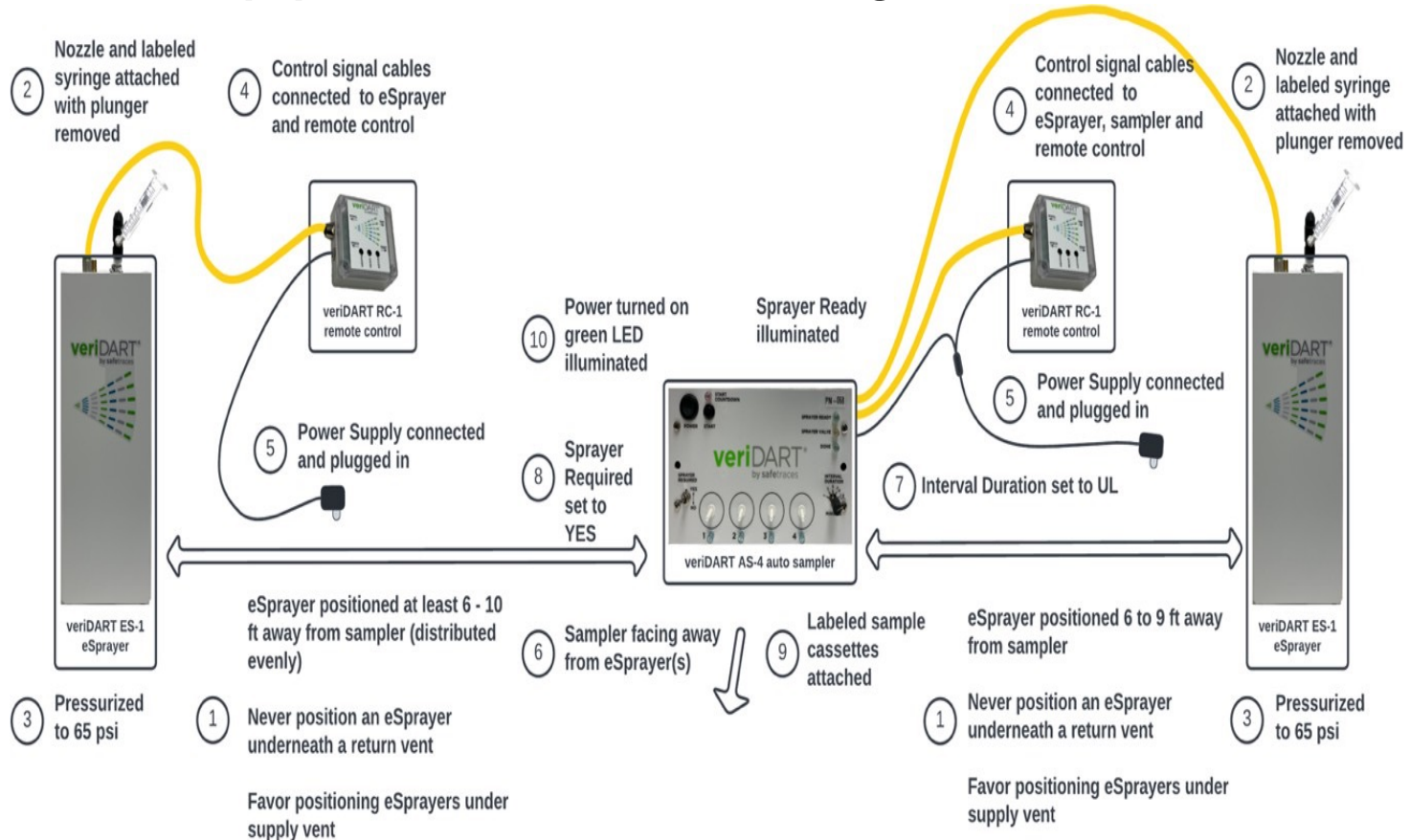
Alternative Equipment Set-Up for Tag Release of any Test



Equipment Connections for Small Ashrae 241 Test



Equipment Connections for Large Ashrae 241 Test



Best Practice: After set-up Run a mock test to ensure proper set-up and readiness.

- ❑ When using the Wireless Module ALWAYS start the test by pressing the “Start” button on the module, NOT on the Auto-Air Sampler.
- ❑ **Caution:** DO NOT USE TAGS FOR THE MOCK TEST!!

Example Ashrae 241 Test Set-Up



Best Practices

- Get a cart to help carry the equipment
 - After measuring the “area” verify the amount of equipment needed to complete the testing (see slide 3)
 - If the ceiling height is greater than 12 ft add 1-OP for each additional 12 ft. For example, if the ceiling height is 24 ft add two addition OPs
 - Verify the 4-Channel air-sampler interval setting (ACH) selection is on 241 ACH
 - Verify the locations of HVAC supply and returns for equipment positioning
 - Do not pre-label the sample cassettes
 - Make sure the sample cassettes are snugly attached to the air sampler
 - Listen for the “click” sound of the “nozzle” when attaching to the eSprayer
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Best Practices

- Wear gloves when handling Tags
 - Make sure the “plunger” is removed from the syringe
 - Remove pelican, unused equipment, supplies, etc. before starting the test
 - If you have to “redo” a test for any reason, use a different Tag
 - After the test verify the “Done” green light is visible
 - Verify the sample number label on each sample cassette are in the correct order before removing from the air sampler
 - Document all changes on the “Project Configuration” form
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Ashrae 241 Test Results Visualization

Test Location	Hourly Aerosol Removal Rate	eACH	Pass (>= 5 eACH)
Café/Break Room	99.95 %	7.26	Pass

RESULTS

- Hourly Aerosol Removal Rate: Pass is 99% or greater
- eACH: CDC guideline is 5 eACH each or greater

