

SSAMI - SAFE SAMPLING AND MULTIPLE INDICATOR

A fast, robust, and easy-to-use solution for rapid threat identification, particularly in high pressure situations



TRAINING BOOKLET



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SSAMI - SAFE SAMPLING AND MULTIPLE INDICATOR

KEY BENEFITS & FEATURES

- » Sampling and sample preparation done directly
- » Runs 12 isolated threat assays simultaneously
- » Ergonomic/oversized design for easy use in PPE
- » Minimal time on target
- » Low training burden
- » No power, maintenance, or calibration required
- » No sample preparation (buffer on-board)
- » Light weight
- » Easy to decontaminate
- » Retains confirmatory testing sample
- » Integrated safe sample transfer mechanism

INTENDED USE

This device is intended for the initial screening of suspicious powders, liquids and surfaces for qualitative detection of select agents, including biowarfare agents, drugs of abuse, and explosives/explosives precursors. SSAMI devices are designed as single use with the capability to run two detectors.

BOX COMPONENTS

- 10 dual-packed foil pouches containing
- » One SSAMI Sampler
 - » One Detector and a 1-gram color indicating desiccant
 - » One Product Label
 - » One Quick Reference Instruction Label

PRECAUTIONS

THIS DEVICE WAS DESIGNED FOR ENVIRONMENTAL TESTING ONLY. IT IS NOT FOR DIAGNOSTIC USE. PLEASE READ ALL INSTRUCTIONS BEFORE USING THIS DEVICE.

DO NOT USE if one or more of the following apply:

- » The expiration date has been exceeded
- » The foil packaging has been damaged
- » The color indicating desiccant has turned pink

As with all screening devices, results must be confirmed by a certified laboratory before any official determination is made.

TESTS ON-BOARD

The SSAMI Detector has been designed to be outfitted with up to 12 tests including, but not limited to, biothreat agents, drugs of abuse, or explosives/explosives precursors. The target agents are marked on each test and listed on the label indicating the agent being tested.

A sample is introduced to the Detector by the Sampler. The tests are allowed to develop for 15 minutes. If the test has run correctly, a line will appear in the control line area (C). If the target of interest is present, a second line will be produced in the test line area (T).

FOIL POUCH COMPONENTS

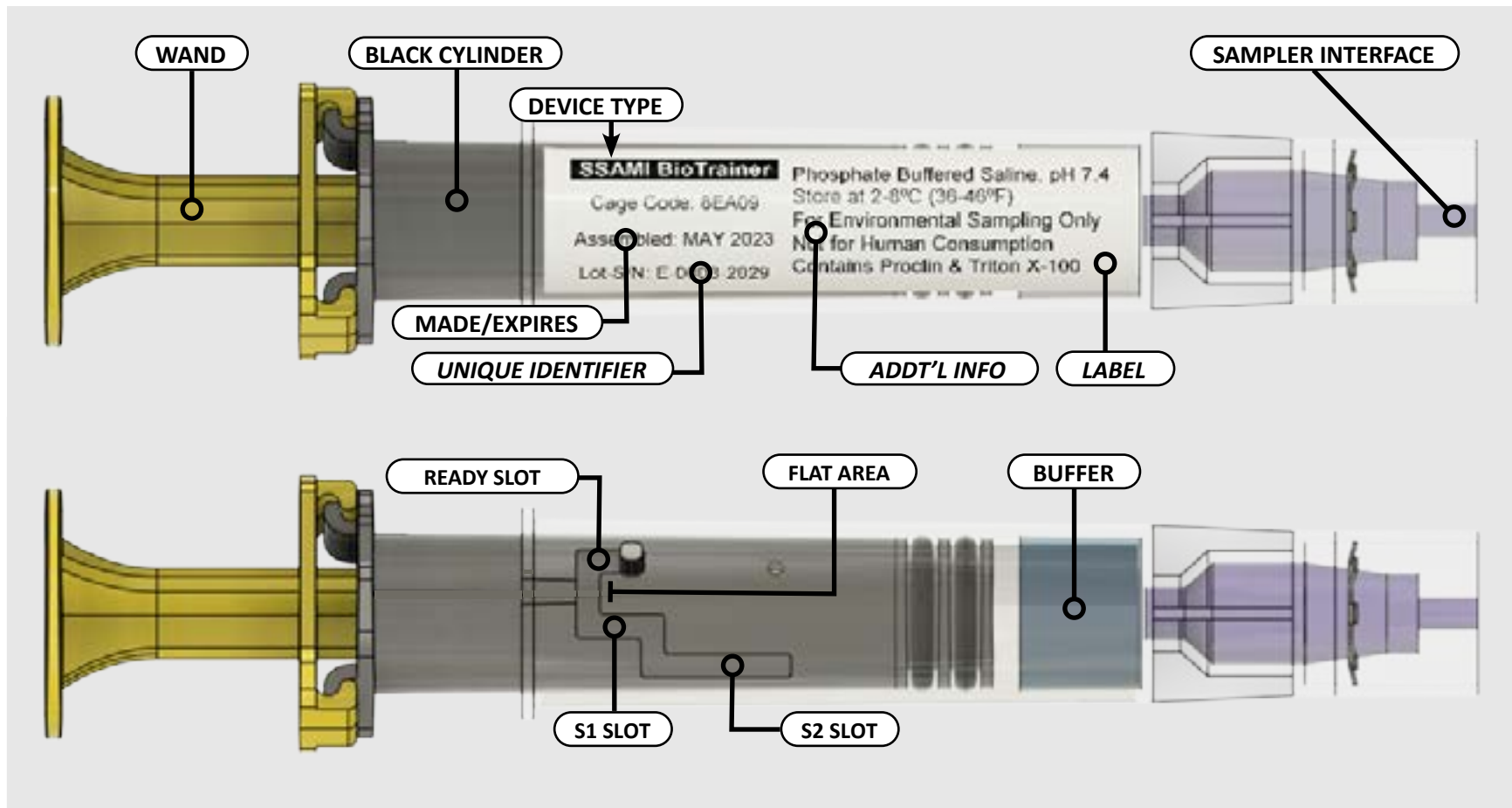
- » Military grade foil dual chamber pouch
- » The dual foil pouch separates wet items from dry items to maximize product life
- » One chamber with a resealable zipper compartment can be used as a primary container
- » The quick reference card is a label allowing usage review prior to opening the kit



4-Tear Notches (2 on each side)

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SAMPLER FEATURES

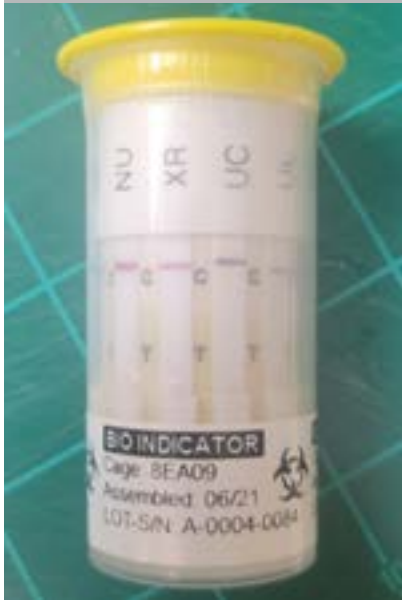


NOTE: Sampler's color must match the Detector's color.

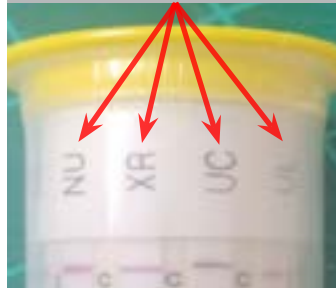
COLOR	DEVICE TYPE
Yellow	Biothreat
Blue	Trainer
Purple	Drugs of Abuse
Orange	Explosive/Explosive Precursor

DETECTOR FEATURES

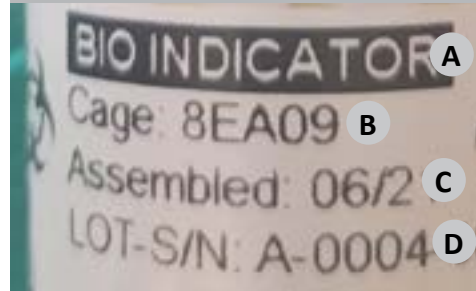
SSAMI DETECTOR



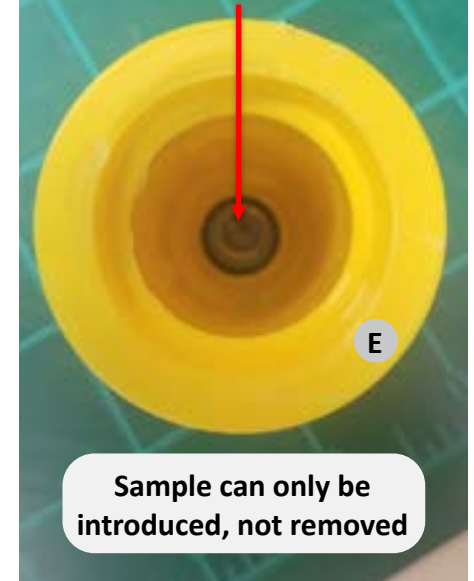
TEST IDENTIFIER



MANUFACTURING INFORMATION



SAMPLE INLET
Female Luer Check Valve



Legend:

- A. Identifies the Detector type
- B. Identifies the manufacturer
- C. Identifies when it was made or when it expires
- D. Unique lot and serial number
- E. Color provides quick Detector type identification and must match the Sampler's color

COLOR	DEVICE TYPE
Yellow	Biothreat
Blue	Trainer
Purple	Drugs of Abuse
Orange	Explosive/Explosive Precursor

SOLID MATERIAL SAMPLING

1. Ensure the appropriate PERSONAL PROTECTIVE EQUIPMENT (PPE) is donned to serve the situation.
2. Each SSAMI Kit is foil packaged. To open, tear the foil pouch using the tear notch at either end.
3. Remove the contents and inspect them (please see the photo inset below) to ensure that the serial numbers match, the devices have not expired, and the desiccant sachet in the Detector foil compartment is blue/purple. If it is PINK, the kit **SHOULD NOT BE USED**. It is normal for the Sampler foil compartment to contain moisture. This does not compromise performance.



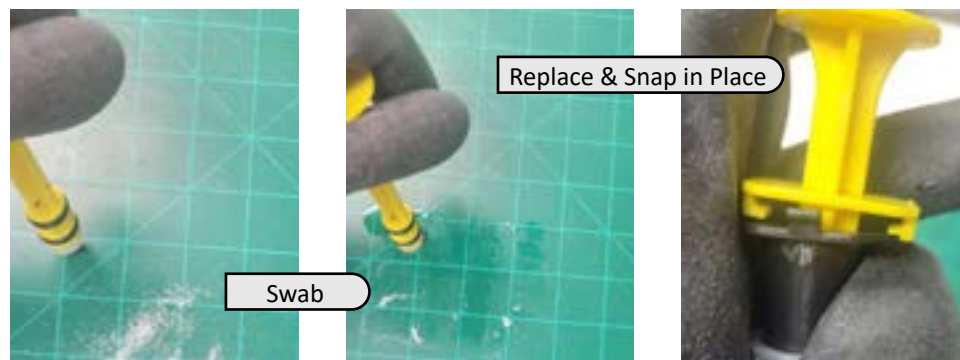
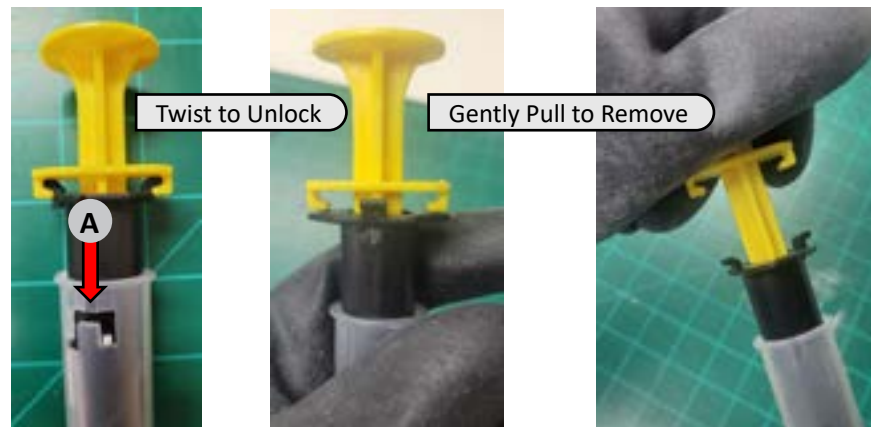
- » Verify the contents are correct
- » Ensure that the Lot & Serial Numbers match
- » Be sure that the indicator desiccant is **NOT** pink

4. Grasp the Sampler in your non-dominant hand around the clear cover (NOT THE BLACK CYLINDER).
5. Grasp the large circular area of the Wand with your dominant hand.
6. Remove the WAND by rotating 90 degrees then gently pull the Wand from the black cylinder. During this process, the WHITE guide pin will move to the top of the Ready Slot of the guide track.
7. Sample the surface containing the solid sample using the sponge as per your organization's standard operating procedure.
8. Replace the Wand and align the locking tabs directly over the notches on the black cylinder.
9. Using a slight rocking motion, push the Wand until it SNAPS into place. The sponge is now compressed, ejecting the sponge's buffer

along with the collected sample into the lower liquid chamber. The White pin will move within the guide track. This movement is part of a pressure relief system. It is best practice to **INVERT THE SAMPLER** one time to thoroughly mix the resulting solution.

10. Move the PIN to the FLAT AREA between the Ready Slot and the Sample 1 (S1) slot (Labeled A in the figure below).
11. The user can either run the sample now for presumptive identification or run it later if desired.

NOTE: The system is designed to still work properly even if a tab breaks while snapping the parts together. This is a safety feature to prevent failure if the parts are misaligned during processing.



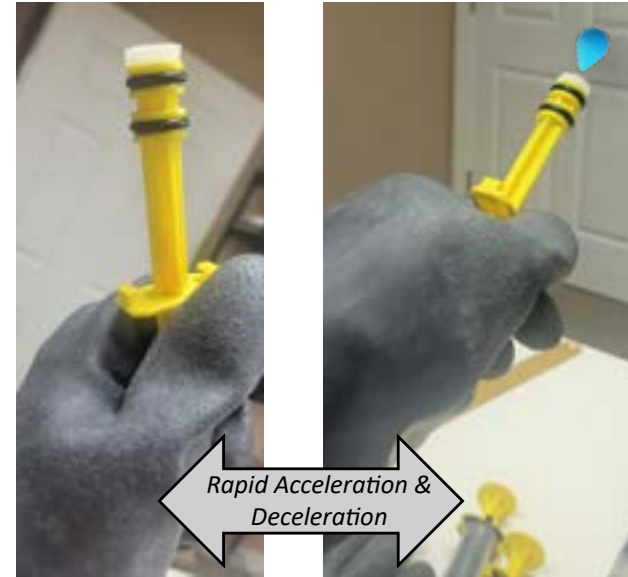
NOTE: Only a small amount of powder is required for testing
<approximately the size of a match head>

LIQUID SAMPLING

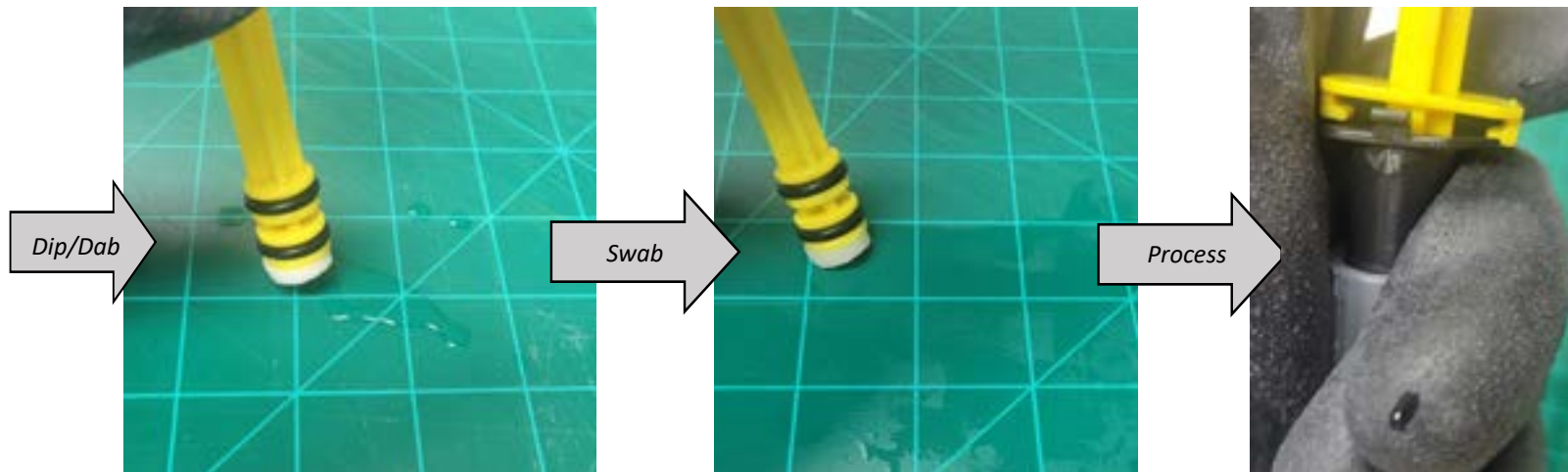
Collecting a liquid sample is almost identical to collecting a solid surface sample, **EXCEPT THE WAND'S SPONGE MUST FIRST BE PREPARED** to receive the liquid. This is accomplished as described below:

1. Open the foil pack, inspect its contents, and remove the Wand as described on pages 9 and 10.
2. Expel the Wand's buffer (harmless) by performing five (5) rapid overhand air baton strikes. This will forcefully expel almost all the liquid from the sponge, allowing a liquid sample to be easily absorbed.
3. Dip/dab/swab the sponge into the liquid to be sampled until it is saturated.
4. Replace the Wand and process the sample as detailed on pages 9 and 10.
5. The user can either run the sample now for presumptive identification or run it later if desired.

PREPARING FOR LIQUID COLLECTION



COLLECTING AND PROCESSING THE LIQUID SAMPLE



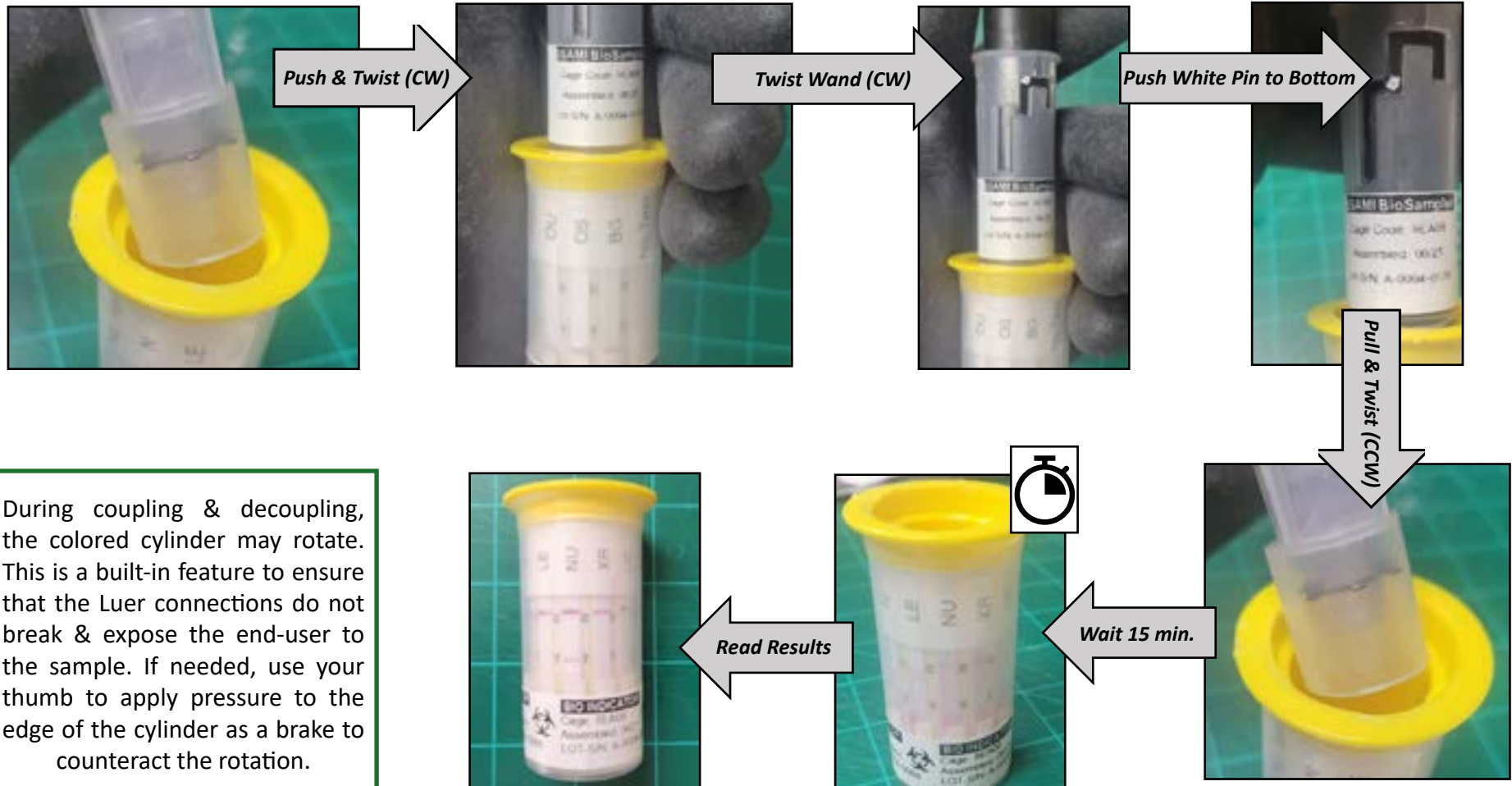
TRANSFERRING AND RUNNING THE SAMPLE

1. If the Guide Pin (white feature) has not been moved to the Flat Area between the Ready Slot and the Sample 1 (S1) slot, do so now by guiding the pin to that location using a combination of pulling and twisting of the Wand.
2. Couple the Sampler to the Detector by inserting the Sampler into the Detector until the Detector bottoms out.
3. Twist the Sampler clockwise (CW) until it feels snug.
4. Confirm proper coupling by **gently** pulling back on the Sampler and/or the Detector. If the Wand and Detector remain connected, the de-

vices are properly coupled.

5. While holding the coupled parts vertically with the Detector closest to the ground, maneuver the pin to the Sample 1 (S1) slot.
6. Push the Wand down to the first stop to deliver the first fraction of the processed sample (Aliquot) to the Detector.
7. Allow the tests to develop for fifteen (15) minutes. During this time the operator may decouple the Sampler from the Detector by pulling on the Sampler while rotating it counterclockwise (CCW).

NOTE: The Sampler can now be used to run a follow-up test (page 21) or be sent to a laboratory for confirmatory testing.



During coupling & decoupling, the colored cylinder may rotate. This is a built-in feature to ensure that the Luer connections do not break & expose the end-user to the sample. If needed, use your thumb to apply pressure to the edge of the cylinder as a brake to counteract the rotation.

SAMPLER FEEDBACK

**READY TO SAMPLE
READY TO PROCESS**



Pin in READY track near the bottom. It adjusts based on the internal/external pressure difference

Full diluent chamber



SAMPLE PROCESSED



Pin in READY track near the top. The Wand's tabs are locked onto the Black Cylinder

Full diluent chamber



**ALIQUOT 1
(PAGES 13-14)**



Pin in S1 TRANSFER track at the bottom.

Plunger has moved down & an air pocket has formed within the chamber



**ALIQUOT 2
(PAGE 21)**



Pin in S2 TRANSFER track at the bottom.

Plunger at the bottom of the chamber



INTERPRETATION

Each test strip has a control line near the “C” and a test line near the “T”.

POSITIVE (two lines)

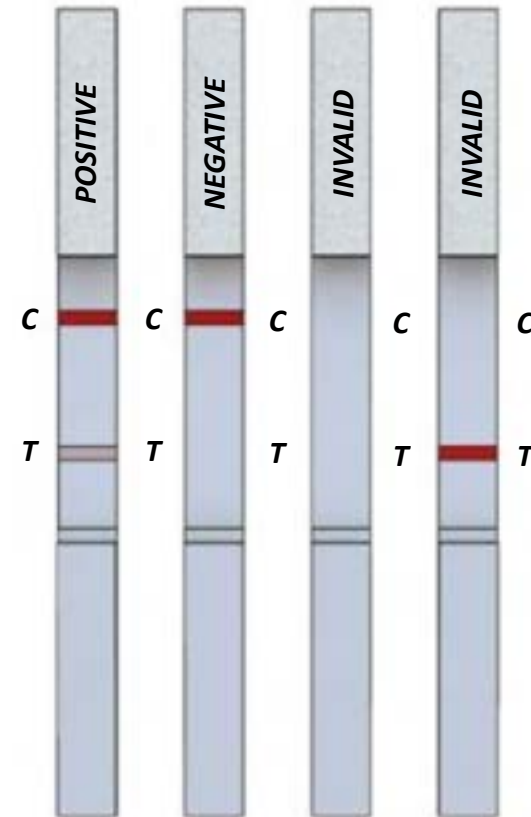
- » The appearance of both the test line and the control line should be interpreted as positive. A test should be interpreted as positive even if the test line is lighter/darker than the control line, incomplete over the width of the test strip, or uneven in color.

NEGATIVE (control line only)

- » The appearance of only the control line on a test strip is indicative of a negative result.

INVALID (no control line)

- » A test strip with no control line, regardless of any other reactivity on the test strip, is considered invalid. The sample should be retested using a new SSAMI Kit.



TROUBLESHOOTING

DETECTOR

FAILURE TO RUN: If tests do not appear to have run within 15 minutes (no visible control lines), check that all instructions were carried out correctly, including inspecting the Luer area of the Detector for sample that may not have transferred due to a loose coupling. If tests still have not run after an additional 15 minutes, then repeat testing with another SSAMI Kit, ensuring that all instructions are carried out fully and in the correct order.

FOGGING: Condensation may occur on the inside of the body of the Detector depending on local weather conditions. This does not affect the test results.

SAMPLER

TAB BREAKS: If a locking tab breaks off the Wand when reinserting the Wand after sampling, continue with the one-tab locking feature. The Sampler will still function with one locking tab.

PIN BREAKS: The guidance track was not used to move the pin. If this occurs, the Sampler should not be used as the system's integrity has been compromised. Place the Sampler into the zippered pouch and dispose of properly. A new SSAMI Sampler will need to be used to collect a new sample.

SPONGE SHEARS OFF: Only slight pressure (force) is required to collect a sample. The Sponge may shear off the Wand if excessive pressure (force) is used. Should this occur, a new SSAMI Sampler will need to be used. Place the Sampler and Sponge into the zippered pouch and dispose of properly.

COUPLING/DECOUPLING

CANNOT CONNECT: Inspect the Detector and Sampler Luer lock features for anything that may be blocking this process. If a foreign body is found, remove it and proceed. If no blockage is found, attempt to repeat the coupling/decoupling procedure.

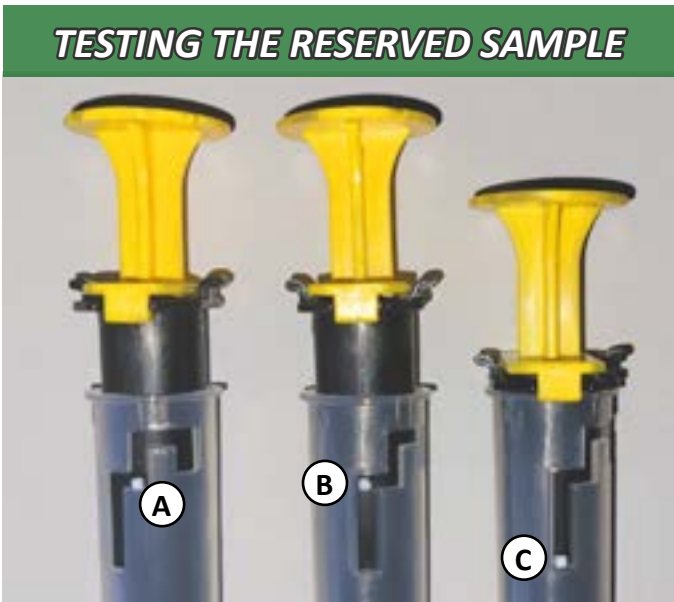
CANNOT DISCONNECT: To prevent a device failure, the Female Luer lock feature on the detector is designed to spin if the coupling event produces an over-torque situation. At times, this may make decoupling difficult. The devices can still be separated by holding the top of the Detector cylinder and slowly turning the Sampler counterclockwise while pulling the Sampler up slightly to put pressure on the Luer and installed toothed washer to produce resistance while turning.

FOLLOW-UP TESTING

NOTES

It is best practice to confirm a presumptive positive result by running a second SSAMI Detector. If the second Detector is also positive for a threat agent, the sampled material is considered presumed positive for that material. The sequence of events detailed below along with the Photo inset describe this process.

To perform a follow-up/second test, take the SSAMI Sampler from the presumptive positive test and couple it to a new Detector as described on Pages 13 and 14. Once the Sampler and Detector have been confirmed to be locked together, rotate the Wand currently at the bottom of S1 (Label A) counterclockwise to the top of the S2 Slot (Label B). Then, in a smooth motion, push the wand until the White Pin bottoms out within the S2 slot (Label C). This delivers the second fraction of the processed sample (Aliquot 2) to the new Detector. Decouple the Sampler from the Detector and interpret the new results after a 15-minute wait time.





SSAMI VIDEO DEMO