

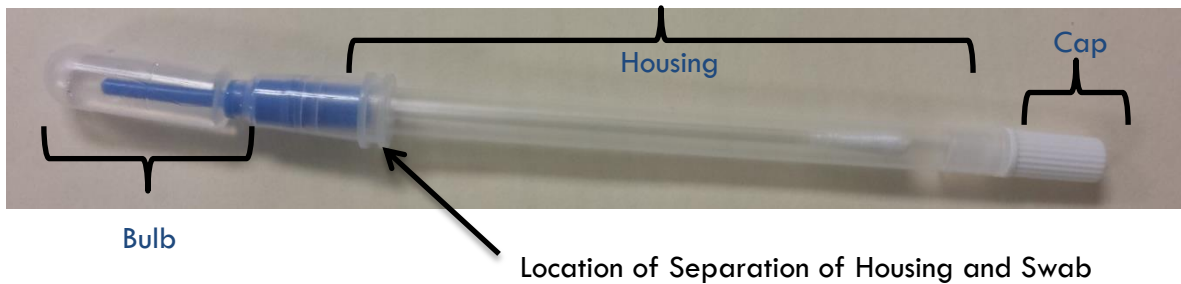
# T-COR 8™ BW C2T™ Multiplex 1 pXO1, pXO2, Vaccinia, IC Instructions

TC-8020-064

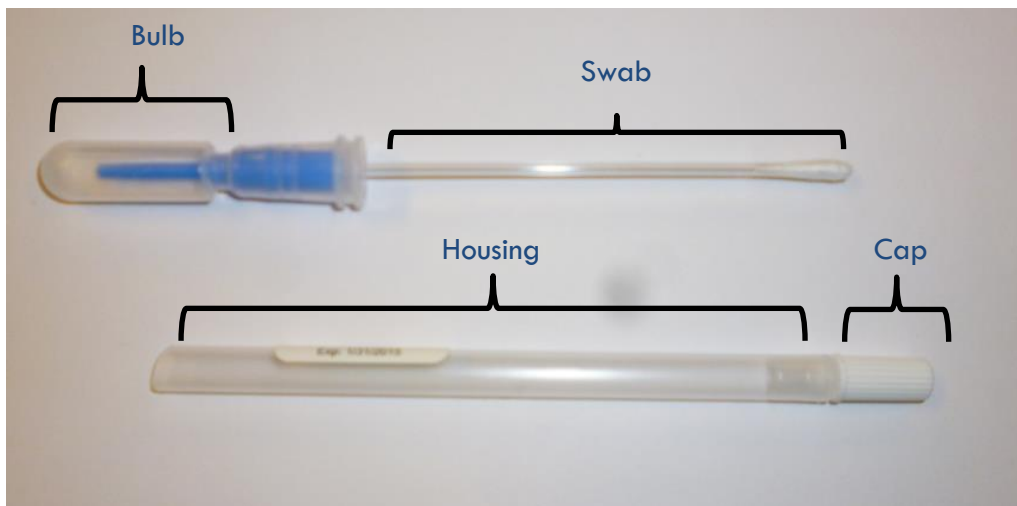
## Instrument Setup

1. Review all information in the Quick Start Guide, Hardware Manual and Software Manual prior to operating the T-COR 8™.
2. Plug in the Magnetic Mixer into the T-COR 8 via the USB ports before powering on the T-COR 8.
3. Power on the T-COR 8 as directed in the Quick Start Guide.
  - Available usernames are “user” and “admin” (no password required). Refer to the Software Manual for adding new users.
  - It is recommended that a password be added to the “admin” user account. See the Software Manual for details on changing a password.

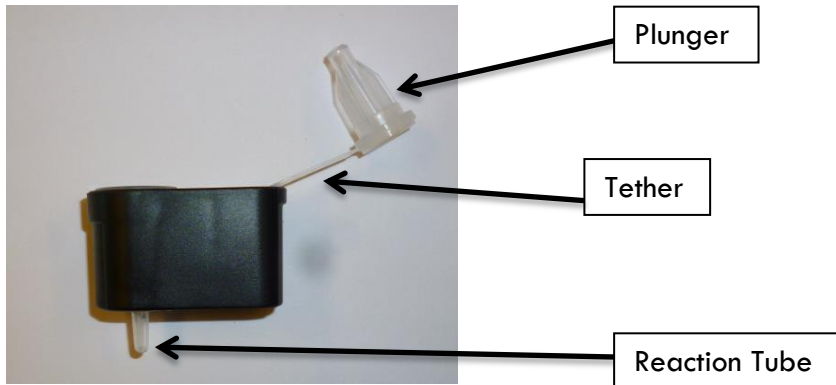
## Sample Processing Device



## Disassembled Sample Processing Device



## C2T Cartridge



## Sample & Reaction Preparation

1. If using the Sample Processing Device:
  - a. Carefully remove the swab from the Sample Processing Device by pulling housing away from the bulb. Ensure that the swab does not touch any surfaces.
  - b. Swab the desired area or sample.
    - i. Use a sweeping motion to ensure the area was thoroughly swabbed.
    - ii. Use one swab per area or sample.
  - c. Return the swab into the housing. (Do not remove the cap.)
  - d. Snap the bulb at the top of the device. (Do not remove the cap.)
  - e. Squeeze the bulb to move the fluid into the housing. (Do not remove the cap.)
  - f. Open each assay pouch containing the C2T cartridge and place each cartridge on the C2T rack.
  - g. Un-screw the cap on the bottom of the Sample Processing Device.
  - h. Squeezing the housing and/or bulb, dispense 5 drops from the Sample Processing Device into each C2T cartridge. Dispensing more than 5 drops will not affect the performance of the C2T cartridge.
  - i. Re-screw the cap on the bottom of the Sample Processing Device and retain until the end of the test.
2. If NOT using the Sample Processing Device:
  - a. Open each assay pouch containing the C2T cartridge and place each cartridge on the C2T rack.
  - b. Use a micropipette to add 100 $\mu$ L of sample into the C2T cartridge.
  - c. Carefully pick up the open cartridge from the C2T rack. Hold cartridge upright and carefully but firmly tap the reaction tube of the open cartridge on a hard surface a few times. This will remove bubbles from the cartridge and will improve load. Place open cartridge back on the C2T rack.
3. Closing the C2T cartridge:

**NOTE:** This action moves the sample onto the reaction tube of the cartridge.

  - a. The cartridge must be on the C2T rack to ensure proper closure of the cartridge.
  - b. Align the plunger with the corresponding cartridge cavity opening.
  - c. Firmly press down on the plunger until the plunger is flush with the cartridge.
  - d. Confirm that the cartridge is fully closed by visually inspecting the plunger/cartridge at eye level. If the plunger is elevated from the cartridge, push on the plunger again to firmly close the cartridge.

## Experimental & Run Setup

1. For complete instructions, refer to the Software Manual, Guided Workflow Section.
2. After signing in to the T-COR 8, go to the Menu button and select “New Run.”
3. Select the “Barcode” button, located under Guided Setup. The barcode scanner will illuminate on the right hand side of the T-COR 8.



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**WARNING: Laser Radiation: Class 2 Laser Product.** Do not stare into barcode beam. Never direct a laser at other people, highly reflective surfaces, or any other object not intended for designated use.

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4. Hold the barcode on the cartridge approximately 3 inches away from scanner, centering the crosshair to the middle of the barcode.
5. Follow the instructions on the screen to properly mix and load the sample.
  - a. Remove the cartridge from the rack and place it in the mixer and press **[Mix]** to start mixing.
  - b. When Mixing is completed, press **[Next]**.
  - c. Open the well indicated. Press **[Yes]** to confirm visual of the blue light in the reaction well.
  - d. Remove the cartridge from the mixer.
  - e. Visually confirm that the reaction tube meets the following requirements:
    1. Contains mix that is blue in color and NOT clear.
      - The blue color indicates that the magnetic mixer worked properly and the mix in the reaction tube mixed successfully.
    2. Contains volume that fills more than 50% of the reaction tube.
      - Cartridges that fail to meet this requirement should be discarded.
    3. No air bubbles are present at the bottom or side of the tube.
  - f. If the cartridge meets the above requirements, proceed to place cartridge into the well indicated, and press **[Next]**.
  - g. If desired, name the sample by pressing in the gray box marked Sample or by pressing on the Barcode button. Press **[Next]** to continue with the setup.
  - h. Press **[Add well]** to load the next cartridge.
  - i. The barcode scanner will illuminate on the right hand side of the instrument. Hold the barcode located on the cartridge approximately 3 inches away from the scanner, centering the crosshair to the middle of the barcode.
  - j. Repeat steps “a” through “i” for the remaining samples.
  - k. After all the cartridges have been loaded, press **[Start Run]**.
  - l. If desired, enter a Run Name. Press **[Start Run]** to begin the run.
6. When a run is complete, analyze samples (follow Steps in Run Analysis Section).
7. After analysis is complete, dispose of the used T-COR 8 cartridges properly.

## Run Analysis

1. Use the table button, to determine the results of the run. The instrument will identify the run as either:

- a. Not Detected
  - b. Invalid (The sample should be re-tested.)
  - c. Detected (each target detected will be listed)
    - i. To confirm results of a detected sample, re-test the sample.
2. Due to space constraints, some assays are abbreviated in the table/protocol. See table below for assays and abbreviations.

<b>Assay Name</b>	<b>Abbreviations Used</b>
<i>B. anthracis</i>	Anthrax, Ax pXO1, Ax pXO2*
<i>Vaccinia</i>	Vac

\*pXO1 and pXO2 refer to the *B. anthracis* gene.

3. Additional analysis can be performed, refer to the T-COR 8 Software Manual for guidance.

### **IMPORTANT:**

1. When analyzing the run, please note the thermal cycling protocol has 10 cycles hidden from view. Therefore, a sample with a Ct of 25 is actually a Ct of 35.

### **Technical Assistance**

If technical assistance is needed, please contact Tetracore at 240-268-5400.