

BioTek 50/TS Microplate Washer Protocol

CREATE / DUPLICATE A PROTOCOL:

1. Refer to the protocol instructions supplied with the assay kit for specific details including number of washes, wash dispense volume, soak time, etc.
 2. Select **Protocol** from the main menu.
 3. Select a protocol to duplicate or select **Create**.
- NOTE:** Before creating a new protocol, view the existing saved assay protocols to see if one matches your plate washing specifications.
4. Name your protocol using the format: date (year.month.day)_Analyte_Manufacturer
 5. Add steps to the procedure that reflect the protocol instructions. Press **Add** and then select the type of action to perform.
 - a) **Soak/Shake:** Program the amount of time for the plate to soak/shake.
 - b) **Aspirate:** Removes a user-specified volume from the wells and carries to the waste chamber.
 - c) **Dispense:** dispenses a user-specified volume of wash buffer into the wells.
 - d) **Prompt:** displays a user-created text alert on the screen and makes a sound at this step.
 - e) **OR Wash (A combination of options A – C):** Dispenses user-specified volume of wash buffer and also aspirates. Any number of cycles can be set for repeated washes with the same dispense and aspirate volumes. A soak/shake time between the dispense and aspirate steps can also be set.
 6. Double check the number of steps, cycles, volumes, and aspiration steps. Press **Save**.

PERFORMING THE WASH:

7. Fill the container with the wash buffer supplied with your kit; diluted as per manufacturer's instructions.
- NOTE:** If you are running a magnetic bead assay (Luminex), make sure the black magnetic base is in place. Remember to remove it when you are done.
8. Prime the system.
 - a. Press **Quick** at the Main Menu.
 - b. Press **Prime**.
 - c. Press **System**, then **Start**.
 - d. Also prime the manifold by pressing **Manifold** and **Start**.
 - e. Prime the manifold a second time, then remove the long collection tray behind the microplate holder.
Confirm that eight distinct drops of wash solution were dispensed into the collection tray.
 9. Select your saved protocol from the Main Menu. Place your plate on the plate holder and press **Start**.
- NOTE:** During your first wash cycle, verify that each tube is aspirating and dispensing properly. If all channels are working, each well in a row will have the intended dispense volume after dispensing (a full well is 350 μ L) and will decrease by the same volume after aspirating. If the aspirate volume matches the dispense volume, wells will be empty after the aspirate step.
10. After your final wash, disconnect your wash buffer container and reconnect to a container filled with DI water. Run a Day Rinse – 3 times.
 - a. Press **Maintenance** at the Main Menu.
 - b. Press **DAY_RINSE**.
 - c. Press **Start**. Repeat three times.
 11. Turn off the plate washer, DI water will still be in the tubing and in the manifold.