Protein Cleanup v1.0
Quick Start Guide

This guide is intended for users who have been trained in the proper use of the AssayMAP Bravo Platform and understand the safety guidelines in the Bravo Automated Liquid Handling Platform Safety and Installation Guide. The procedures in this guide require the Protein Sample Prep Workbench and VWorks Automation Control software. See the user guide to verify the required software versions.

Step 1. Design your run

Use the Reagent Volume Calculator for Protein Cleanup v1.0 to:
- Determine reagent volume preparation requirements
- Make labware selections

For in-depth assay development guidelines, see the Protein Cleanup v1.0 User Guide in the Literature Library of the Protein Sample Prep Workbench.

Step 2. Prepare reagent and sample plates

Fill the reagent and sample plates immediately before run time to minimize reagent evaporation.

CAUTION A small volume excess is required in all labware types to ensure proper volume transfer. Use the Protein Cleanup v1.0 Volume Calculator to automatically include excess volume, or to look up recommended values for each allowable labware type.

Step 3. Start up the system

To start up the system:
1. Check the levels of the wash station source and waste carboys, and fill or empty as required.
2. Turn on the AssayMAP Bravo Platform, Pump Module, and the Peltier Thermal Station Controller, if included.
3. Start the Protein Sample Prep Workbench, and open the Utility Library.
4. Open the System Startup/Shutdown utility.
5. Click Run Startup to initialize the AssayMAP Bravo Platform and accessories.

WARNING When you initialize the Bravo Platform, the head and tie bar can move. To prevent injury, keep clear of the device while it is in motion.

6. During the Startup protocol, verify that all the wash station chimneys have liquid flowing through them.

Step 4. Run the application

To run the application:
1. Run the Cartridge Transfer v1.0 utility to set up the cartridges.
2 Open the **Protein Cleanup v1.0** App.

3 Under **Application Settings**, select the settings appropriate for your run. For help, see “Application Settings” on page 3.

   **WARNING** The probes of the Bravo 96AM Head are sharp and can scratch you if they brush across your hand. A probe scratch can expose you to any contaminants remaining on the probes. Be careful to avoid touching the probes.

4 Place filled reagent plates at the assigned deck locations, as shown in the **Deck Layout** of the App interface.

   ![Deck Layout](image)

   **CAUTION** Improperly seated labware can cause a hardware collision, resulting in equipment damage. Ensure that all labware are properly seated within the alignment features of their respective platepads.

5 In the **Labware Table** of the App interface, select the labware that is required for your run.

   **CAUTION** Incorrect labware selections can cause a hardware collision, resulting in equipment damage. Ensure that the selections in the Labware Table exactly match the physical labware present on the Bravo deck.

6 Click **Run Protein Cleanup** to start the run.

### Step 5. Clean up after each run

**To clean up after the run:**

1. Remove used labware from the deck, and clean up any spills.
2. Discard the organic waste and leftover reagents appropriately.
3. **Optional.** To conduct stringent washing of the syringes, run the **Syringe Wash** utility.

### Step 6. Shut down at end of day

**To shut down at the end of the day:**

1. Open the **System Startup/Shutdown** utility.
2. Remove everything from the deck except the 96AM Wash Station (deck location 1) and the 96AM Cartridge & Tip Seating Station (deck location 2), and then click **Run Shutdown**.
3 After the Shutdown protocol has completed, turn off the power at the AssayMAP Bravo Platform and the accessories.

4 Close the Protein Sample Prep Workbench software.

**Application Settings**

The following tables provide an overview of the Application Settings section in the Protein Cleanup v1.0 App.

### Table: Application Settings overview

<table>
<thead>
<tr>
<th>Setting</th>
<th>Description</th>
<th>Default value (range)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of Full Column of Cartridges</td>
<td>Specifies the number of full columns of cartridges in the 96AM Cartridge &amp; Tip Seating Station (deck location 2).</td>
<td>1 (1–12)</td>
</tr>
<tr>
<td>Initial Syringe Wash</td>
<td>Washes syringes at the wash station (deck location 1).</td>
<td>– (µL)</td>
</tr>
<tr>
<td>Prime</td>
<td>Aspirates Priming Buffer (deck location 5) into the syringes, and then dispenses it through the cartridges into the Organic Waste (deck location 3).</td>
<td>100 (0–250) 300 (0.5–500) 1 (0–10)</td>
</tr>
<tr>
<td>Equilibrate</td>
<td>Aspirates Equilibration Buffer (deck location 8) into the syringes, and then dispenses it through the cartridges into the Organic Waste (deck location 3).</td>
<td>50 (0–250) 10 (0.5–500) 1 (0–10)</td>
</tr>
<tr>
<td>Load Sample</td>
<td>Aspirates samples (deck location 4) into the syringes, and then dispenses them through the cartridges into the Organic Waste (deck location 3) or into the Flow Through Collection (deck location 7).</td>
<td>100 (0–1000) 5 (0.5–500) 3 (0–10)</td>
</tr>
<tr>
<td>Steps</td>
<td>Description</td>
<td>Volume (µL)</td>
</tr>
<tr>
<td>-------------------------</td>
<td>-----------------------------------------------------------------------------</td>
<td>-------------</td>
</tr>
<tr>
<td>Collect Flow Through</td>
<td>If selected, collects the sample flow-through at the Flow Through Collection (deck location 7). If not selected, discards the sample flow-through into the Organic Waste (deck location 3).</td>
<td>–</td>
</tr>
<tr>
<td>Cup Wash</td>
<td>Rinses the cartridge cups with Cartridge Wash Buffer (deck location 8), and then discards the liquid into the Organic Waste (deck location 3).</td>
<td>25 (0–100)</td>
</tr>
<tr>
<td>Internal Cartridge Wash</td>
<td>Aspirates the Cartridge Wash Buffer (deck location 8) into the syringes, and then dispenses it through the cartridges into the Organic Waste (deck location 3) or into the Flow Through Collection (deck location 7).</td>
<td>50 (0–250)</td>
</tr>
<tr>
<td>Collect Flow Through</td>
<td>If selected, collects the Internal Cartridge Wash flow-through at the Flow Through Collection (deck location 7). If not selected, discards the Internal Cartridge Wash flow-through into the Organic Waste (deck location 3).</td>
<td>–</td>
</tr>
<tr>
<td>Stringent Syringe Wash</td>
<td>Aspirates the Syringe Wash Buffer (deck location 5) into the syringes, and then dispenses it into the Organic Waste (deck location 3).</td>
<td>50 (0–250)</td>
</tr>
<tr>
<td>Elute</td>
<td>Aspirates the Elution Buffer (deck location 6) into the syringes, and then dispenses it through the cartridges into the Eluate Collection (deck location 9).</td>
<td>20 (0–250)</td>
</tr>
<tr>
<td>Eluate Discard</td>
<td>If selected, a specified initial volume of the Eluate will be discarded at the Organic Waste (deck location 3), or collected in the Flow Through Collection (deck location 7).</td>
<td>0 (0–25)</td>
</tr>
<tr>
<td>Add to Flow Through</td>
<td>If selected, collects the Eluate Discard at the Flow Through Collection (deck location 7). If not selected, discards the Eluate Discard into the Organic Waste (deck location 3).</td>
<td>–</td>
</tr>
<tr>
<td>Existing Collection Volume</td>
<td>Specifies the volume of liquid initially present in the Eluate Collection plate (deck location 9).</td>
<td>0 (0–300)</td>
</tr>
<tr>
<td>Final Syringe Wash</td>
<td>Washes the syringes at the wash station (deck location 1).</td>
<td>–</td>
</tr>
</tbody>
</table>

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