

# Protein Science - PEL-00005 Operation of the Cedex HiRes

## Purpose

To describe the procedure for operation of the Cedex HiRes for eukaryotic cell counting.

## Materials and Equipment

- Cedex HiRes automated cell counter
- Cedex HiRes Cups
- P1000 pipette tips
- Trypan blue
- Cedex Detergent
- Cedex Cleaning Solution
- Innova 44 incubator shaker
- Biological safety cabinet
- Serological pipette
- P1000 pipette

## Procedures

### A. Preparation

1. Turn on the computer and the Cedex HiRes instrument.
2. Enter username: Win-Admin and password: Win-Admin into the computer.
3. Check to make sure the Cedex server has automatically started (look in the taskbar).
4. If the Cedex server has not started, double-click the Cedex server icon on the desktop. Otherwise, proceed to step A.5.
5. Once the computer has logged in, double-click on the Cedex client program.
6. Enter username: \_\_\_\_\_ and password: \_\_\_\_\_.
7. The Cedex client will open and initiate automatic hardware startup. Once the “hardware setup complete” notification is sent, click on the Hardware Management (HWM) icon.

8. Click “Prime” to prime the liquid handling system.
9. Once priming has been completed, the system is ready for counting.

### B. Loading Samples

1. Aliquot 300  $\mu$ L into a new disposable Cedex Cup and place the cup into any unused position between 2 and 20 on the top of the Cedex HiRes.
2. Repeat step B.1 for as many samples as needed, up to position 20 (19 total samples possible).

### C. Performing Cell Count

1. Click on the Multirun icon.
2. In the position you have placed your sample, select the corresponding container (Cell Line Name, Ras Expression, Ras LSD, Amp Virus).
3. Under the sample name, enter the date (YYMMDD), followed by a description of the sample.
4. Ensure “Cell Type” is set to Sf9.
5. Repeat steps C.1–C.4 for all samples to be counted.
6. Double-click on “Edit” for all samples and make sure it has switched to “active.”
7. Ensure all samples and entered data match, then click “Start.”
8. The Cedex will count all samples marked as active, taking ~4 minutes and 30 seconds per sample.
9. Once a sample is completed, it will appear in the results list at the bottom of the screen
10. Double-click on the samples in the results section to see detailed information about them.
11. To view cell size shift, click on histograms in the detailed sample information.

**D. System Cleaning and Shutdown**

If the system is to be idle for more than one hour or before system shutdown, perform an intensive clean to ensure the counting chamber remains in good condition.

1. Click on the Cleaning icon.
2. Select "Intensive Clean." The system will perform cleaning for ~30 minutes.
3. Once the system has been cleaned and is ready to be shut down, click on the HWM icon.
4. Select "Liquid Shutdown."
5. Once liquid shutdown is complete, select "Hardware Shutdown."
6. Once hardware shutdown is complete, close the Cedex client and Cedex server.
7. Shut down the computer and turn off the Cedex instrument.