













Macro Ovations can be used with a wide variety of serological pipets. In order to achieve optimum accuracy for a particular brand of pipets, it may be necessary to adjust the Ovation's calibration.





Before beginning the calibration procedure, install the Sero-adapter (5mL model only). Record the current calibration factor as follows:

1. Simultaneously press and hold   (about 3 seconds) until **TON** appears on the display. Press and release  until **FACTR** appears.
2. The number displayed is the calibration factor when using Ovation pipette tips. Record this value.

## *To set the calibration factor for use with serological pipets:*

1. In the P1, P2 or PDB liquid handling function, For optimum performance over the entire pipetting range, verify and calibrate the pipette using the maximum volume setting. For a specific liquid at one volume, verify and calibrate at that volume.
2. Aspirate water or the liquid to be used with the serological pipet. Using the graduations on the pipet and the meniscus of the liquid, or by weight or graduated cylinder, determine the volume aspirated. Dispense the liquid. Repeat aspiration and volume determination at least 3 more times. Average the results.
3. Simultaneously press and hold   (about 3 seconds) until **TON** appears on the display. Press and release  until **CAL** appears..
4. Press  once, and **TARG** will appear. Volume on display should be set to the volume used in Step 1. Use  and  to adjust volume, if needed.
5. Press and release  and **MEAS** will appear. Use  or  to adjust displayed value to the average volume dispensed in step 2 (ex. 4950µl).

continued ➔

6. Press  again. The new calibration factor is displayed. Record this value. This is the calibration factor to be used with this liquid and this brand of serological pipets.
7. Press  and the Ovation Macro Pipette will automatically store this factor.
8. Verify accuracy of volume delivery by aspirating liquid and confirming that volume in serological pipet matches the volume displayed on the LCD.
9. In the event that a minor adjustment is needed, or to return to original factor, go to **FACTR** and use  or  to make the change.
10. Record final factor value and enter it into pipette whenever serological pipets are used.

For more detailed information on calibration, refer to the Operator's Manual available in the Ovation documentation library at [www.vistalab.com](http://www.vistalab.com) under the support tab.