

4.13 Pipette Adjustment (not available in EX12001, EX24001, EX35001)

Pipette adjustment checks the accuracy and precision values of pipettes by weight analysis. The balance has a built-in density reference table for water at temperatures between 10°C and 30°C. If other liquids are used for pipette calibration, enter the liquid’s density at current room temperature in g/cm³. Since all calculations are made within the balance, the atmospheric pressure is also required.

Pipette adjustment can be accomplished **manually** (with a key press after each step) or **automatically** (weights are automatically recorded when stable). Calculations made within the balance provide results of inaccuracy and imprecision. Up to 30 samples can be used.



The **PIPETTE ADJUSTMENT** Home screen

Main Display Line
Second Display Line

Reference Fields

Application Buttons

Functions



Application Icon

4.13.1 Pipette Adjustment – Manual (default)

Confirm the default values displayed are correct:
Nominal, Inaccuracy, Imprecision, Density, Atmospheric Pressure, Water Temperature, etc.

To edit the default values, touch the **Edit Settings** button.

The **Edit Settings** Screen.

Settings available: **Nominal Capacity, Water Temp, Inaccuracy, Atmospheric Press, Imprecision, Pipette Name, Pipette Number**

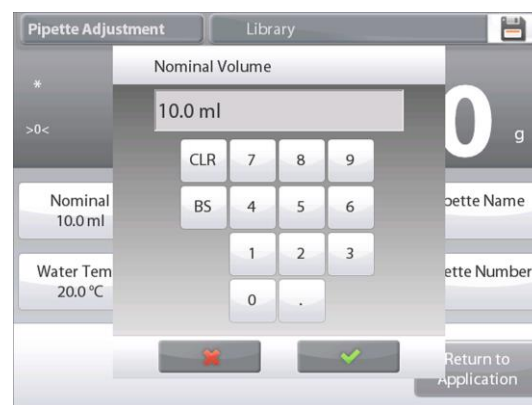
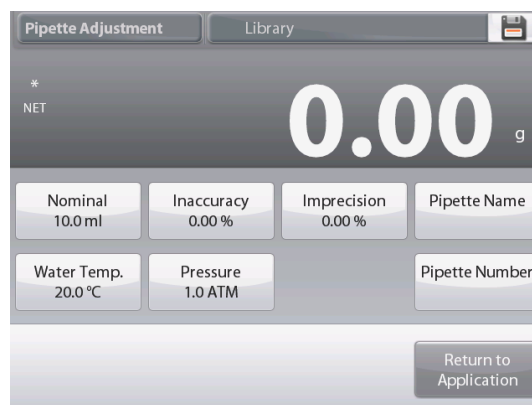
Functions Available: **Return to Application**

To adjust the pipette Nominal Capacity value, touch the **Nominal** button.

Enter the Nominal Capacity in the keyboard screen that appears, and press ✓.

The display returns to the previous screen with the new value highlighted.

Note: Capacity can be measured in *mL* or *uL*, depending on the Application Setup.



To adjust the water temperature, touch the **Water Temp** button.

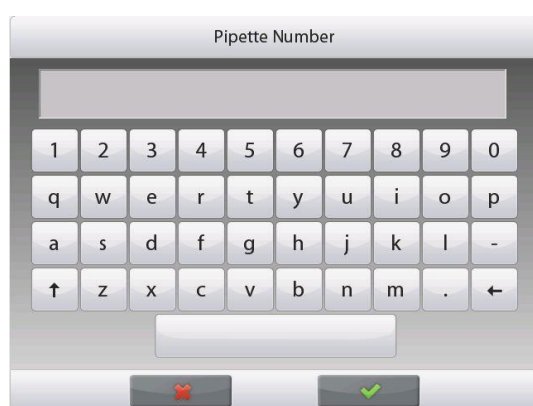
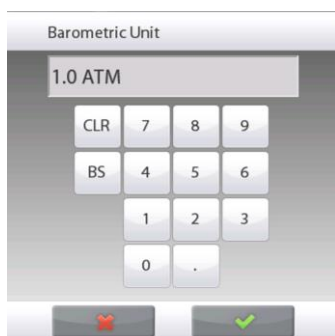
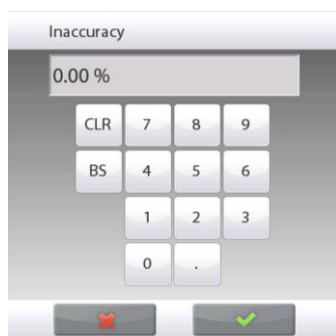
The balance calculates water density based on the water temperature value entered. Measure the actual water temperature using a precision thermometer.

A numeric input window is displayed.

Key in the desired temperature, then press ✓.

The display returns to the previous screen with the new value highlighted.

Continue to enter the required information following the above procedure:



Pipette Inaccuracy, via the **Inaccuracy** button

Barometric Pressure, via the **Barometric Pressure** button

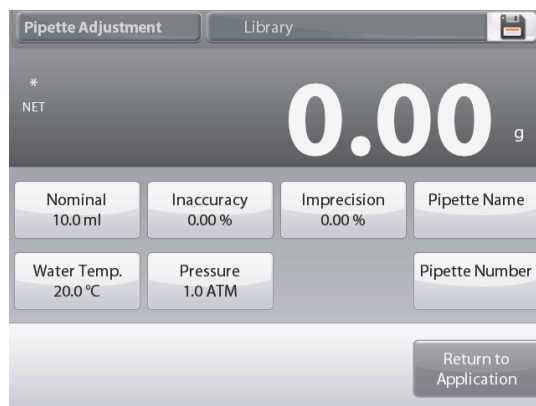
Pipette Imprecision, via the **Imprecision** button

Pipette Name, via the **Pipette Name** button

Pipette Number, via the **Pipette number** button

When finished, press **Return to Application**.

The Application home screen appears, and you can begin the Pipette Adjustment process.



4.13.2 Begin Pipette Adjustment Process



Touch **Begin Pipette Adjustment**. Follow the screen instructions, to **Place container on the pan**. Then **Press Tare**.



Step 1 – Dispense the First Sample

Follow the screen instructions, then press **Accept** to store the first sample weight (liquid).



Continue to follow the screen instructions by dispensing samples and pressing **Accept** to store each sample weight (liquid).

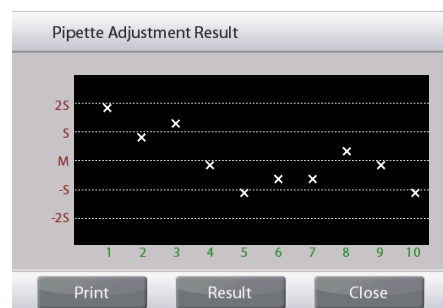
The default number of samples is 10.

It can be changed in Setup, from 2 to 30 samples.



Once all the sample weights have been dispensed, the **Results** screen is automatically displayed.

Press **Graph** to see results plotted. Press **Result** to return to the result screen. Press **Close** to return to the Pipette Adjustment home screen.



Note: To view either the results or graph screens again from the home screen, press the **View Result** button. To start a new Pipette Adjustment process, press **Begin Pipette Adjustment**.

4.13.3 Application Setup

The Application can be customized for various user preferences.

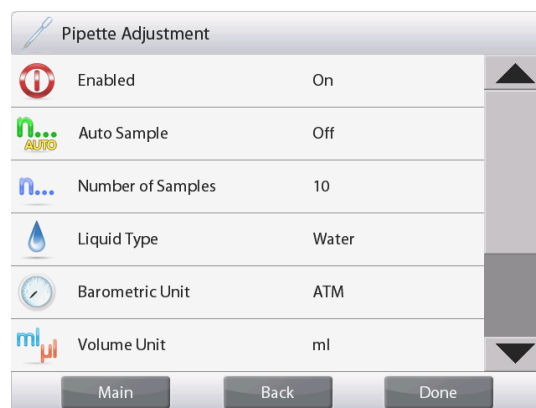
Touch the **Setup** Icon (wrench) to enter the **Application Setup** from the home screen.



The **Setup Menu** appears.

Select the list item to view or change the setting as desired.

To return to the Application home screen, touch **Done**.



The Pipette Adjustment Application Setups (defaults in Bold)

Item	Available Settings	Comments
Enabled	On , Off	Turns Application on/off
Auto Sample Mode	On, Off	To select the mode of operation
Number of Samples	2 – 30 (default 10)	To select the number of samples
Liquid Type	Water , Other	Liquid used during measurements
Unit of Pressure	ATM , inHg, KPa, mbar, mmHg, PSIA	To select Atmospheric Pressure unit
Volume Unit (Pipette capacity unit)	ml , μ l	Nominal capacity unit
Secondary Unit	On, Off	To show the Second Display line
Lock Settings	On, Off	Press to lock the current setting(s) so they cannot be changed.
Reference fields		
Nominal Volume	On , Off	Nominal capacity displayed
Inaccuracy	On , Off	Inaccuracy value displayed
Imprecision	On , Off	Imprecision value displayed
Liquid Density	On , Off	Liquid density value displayed
Pressure	On , Off	Barometric Pressure value displayed
Water Temperature	On , Off	Water temperature is displayed
Print Options		See Printing Section.
Nominal Volume	On , Off	
Inaccuracy	On , Off	
Imprecision	On , Off	
Liquid Density	On , Off	
Pressure	On , Off	
Water Temperature	On , Off	