Are you sure your pipettes are still accurate?

*The pipette is not included.
Simple tests save you great costs!

With a balance, software, and accessories all in one carrying case, A&D’s pipette accuracy tester provides everything you need for easy verification of the accuracies of your pipettes.

* The pipette is not included.

- Compliance with ISO8655 or any other specifications based on the "gravimetric method"*  
- Select from three models covering a wide volumetric range  
- Easy test and data management using special WinCT-Pipette software  
- Standard liquid thermometer and evaporation trap to ensure as precise measurements as possible  
- Includes a calibration weight and tweezers for the balance

* See the last page
**Evaporation Trap**

One of the difficulties in weighing a small quantity of liquid (e.g. 50 μL or less) is controlling the environment to minimize errors due to loss of evaporation. The evaporation trap maintains high humidity inside and prevents evaporation of the test liquid. It is no longer necessary to set up and adjust the humidity of an entire room.

**Carrying Case**

The pipette accuracy tester comes packed neatly in a portable carrying case, which is useful when performing on-site tests at distant places.

**WinCT-Pipette**

**Setting Specifications**
Enter the pipette volume and accuracy and repeatability specifications

**Measured Values**
Displays the mass values transmitted from the balance and the volumetric values obtained using the Z (conversion) factor

**Measurement Results**
Displays the test results and judgment results

**Printing Image**
For recording purposes, test results can be output to a printer and printed in an A4 or letter-size report format.

**As a Training Kit...**
It is a known fact that human factors often contribute more to erroneous measurements than the pipette accuracy itself. By visualizing the dispensed volumes and repeatability, pipette accuracy testers can be used as a good training tool for a novice to become a skilled pipette user.
Specifications

Weighing Capacity
Minimum Weighing Value
Linearity
Repeatability (Standard Deviation)
Dimensions

AC Adaptor
Power Consumption
Carrying Case Dimensions
Weight (With All Accessories in a Case)

*1 When the balance weighing pan is used.
*2 The AD-4212B-PT is equipped with a smart range function. The minimum weighing value will switch to 0.01 mg or 0.1 mg automatically when the mass value exceeds 5.1 g or 31 g respectively but can be reset to 0.001 mg by pressing the RE-ZERO (tare) key.
*3 The standard accessories for the AD-4212B-PT / AD-4212A-PT / FX-300i-PT are different from those for the AD-4212B / AD-4212A / FX-300.

AD-4212B-PT
110 g / 31 g / 5.1 g
0.1 mg / 0.01 mg / 0.001 mg
±0.2 mg / ±0.05 mg / ±0.05 mg
0.1 mg / 0.05 mg / 0.015 mg
Approx. 7.6 kg

AD-4212A-PT
110 g
0.1 mg
±0.3 mg
0.15 mg
Approx. 7.2 kg

FX-300i-PT
320 g
1 mg
±2 mg
1 mg
Approx. 6.4 kg

Standard Accessories

- Instruction manual
- Balance including the weighing pan unit, breeze break, AC adaptor and AC adaptor ID label
- Calibration weight with a pair of tweezers
- Evaporation trap
- Liquid thermometer
- USB communications kit (USB converter, RS-232C cable, Instruction manual)
- WinCT-Pipette (CD-ROM)
- Carrying case with a shoulder belt and a key

AC Adaptor
Please confirm that the AC adaptor type is correct for your local voltage and power receptacle type.
Approx. 11VA (supplied to the AC adaptor)

Carrying Case Dimensions
470 (W) x 150 (D) x 355 (H) mm

Weight (With All Accessories in a Case)
Approx. 7.6 kg

Pipette Specifications in accordance with ISO8655

<table>
<thead>
<tr>
<th>Pipette Nominal Volume (μL)</th>
<th>ISO8655 Requirements (Gravimetric Method)</th>
<th>Balance Minimum Weighing Value</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Accuracy (Systematic Error)</td>
<td>%</td>
</tr>
<tr>
<td>1</td>
<td>5.0</td>
<td>0.05</td>
</tr>
<tr>
<td>2</td>
<td>4.0</td>
<td>0.08</td>
</tr>
<tr>
<td>5</td>
<td>2.5</td>
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<tr>
<td>50</td>
<td>1.0</td>
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</tr>
<tr>
<td>100</td>
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<td>0.8</td>
</tr>
<tr>
<td>200</td>
<td>0.8</td>
<td>1.6</td>
</tr>
<tr>
<td>500</td>
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<td>4.0</td>
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<tr>
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<td>8.0</td>
</tr>
<tr>
<td>2000</td>
<td>0.8</td>
<td>16</td>
</tr>
<tr>
<td>5000</td>
<td>0.8</td>
<td>40</td>
</tr>
<tr>
<td>10000</td>
<td>0.6</td>
<td>60</td>
</tr>
</tbody>
</table>

*4 The maximum volume selectable for variable volume pipettes
*5 The AD-4212B-PT can be used for the pipette volume range from 1 μL to 1000 μL.
*6 The minimum weighing value, 1mg, corresponds to approximately 1 μL. If a pipette volume is 1000 μL, a test can be performed with a resolution of 0.1%. If 200 μL, 0.5%.

Note: Make sure that the measurement environment is free from vibration, drafts and air from air conditioners.

Gravimetric Method

The gravimetric method is the most common way of knowing the performance of variable-volume pipettes, in which pipette volume is determined based on the mass value of distilled water dispensed from the pipette.