Application Highlight

Vial and Flask Holders for Cubis® Balances

Ergonomic sample weighing directly into variously shaped vials and flasks. No more headaches.

Product Information

Cubis® Vial- and Flask Holders are specially designed weighing pans which enable ergonomic sample weighing directly into conical tubes, vessels and round bottomed flasks, greatly simplifying the processes for sample and solution preparation.

The usage of Cubis® Vial- and Flask Holders during these weighing workflows not only improve general usability, but results in quicker stabilization time and/or significantly better repeatability.

Key benefits

- Straightforward sample preparation
- Convenient usage
- Improved repeatability via preventing magnetic effects
- High weighing accuracy
- High quality, non-corrosive titanium material
- Software guided workflows with QApps
Applications

Buffer-, stock solutions and standard preparations are one of the most commonly occurring weighing processes in many testing, QC, analytical and research laboratories of the pharma, biopharma, chemistry and life sciences industries. Conical Tubes (15 mL and 50 mL) are one of the most wide-spread formats of vials used in every laboratory, whereas round bottomed flasks (e.g. Florence Flask, Kjeldal Flask) are typically used in QC, analytical and chemical laboratories for separation, titration and other analytical processes.

Because of their special form it is difficult if not impossible to place these flasks directly on a flat weighing pan. However, when it comes to stock solution, buffer- or analytical standard preparation the quality of the results has the ultimate importance. Therefore the usage of special weighing pans designed to hold these type of flasks whilst not compromising weighing accuracy is essential.

Sartorius offers several design variants of vial holders for Cubis high capacity micro balances, semi-micro and analytical balances to support the ergonomic weighing during your particular weighing workflows. Made of titanium, not only the highest material quality is guaranteed, but notably the repeatability is not compromised because of its non-magnetic properties.

Performance

Sartorius conducted a repeatability test and test on stabilization time and quantified the balance performance. For the tests, 15 mL centrifuge tube was used and the results between the vial holder and the standard weighing pan were compared. Measurements were repeated 3 times with each weighing pan.

Results: Stabilization time and repeatability tests
Tests were performed on a Cubis® High Capacity Micro Balance. Performance of the YSH22 vial holder (Fig. 1a) was compared to the corresponding standard weighing pan using a supporting flask to hold the centrifuge tube (Fig. 1b). Measurements without a supporting flask on a standard pan (Fig. 1c) could not be executed because the tube was rolling away. As shown in Figure 2 and Figure 3, the stabilization time of the balance was 20% faster and the repeatability got 40% better using the vial holder YSH22 to weigh a conically shaped tube.

![Fig. 1a (Cubis® High Capacity Micro Balance with YSH22 Vial Holder)](image1a)
![Fig. 1b (Cubis® High Capacity Micro Balance standard weighing pan and a supporting flask)](image1b)
![Fig. 1c (Cubis® High Capacity Micro Balance standard weighing pan)](image1c)

![Fig.2 (Stabilization time, Repeatability)](image2)
Technical Specifications

Technical specifications indicated in the Cubis® and Cubis® II datasheet will remain unchanged after the standard weighing pan is replaced with the following vial- and titration vessel holders: YSH22, YSH23, YSH37, YSH47

Materials of Construction

The Cubis® Vial- and Titration Vessel Holders are made of Titanium (3.7165). For the assembly, other materials are used as well.

The Cubis® Sample Holders may be cleaned with 70% IPA, Ethanol or water.

Recommended operating temperatures: 10° - 30° Celsius (50° - 86° Fahrenheit)

Ordering Information

<table>
<thead>
<tr>
<th>Order Code</th>
<th>Description</th>
<th>Cubis® Weighing Modules (Compatibility)</th>
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</thead>
<tbody>
<tr>
<td>YSH22</td>
<td>Vial Holder for conical-, centrifuge-, round bottom- and test tubes up to 40 mL volume</td>
<td>Cubis® High Capacity Micro Balances Models: MS* 36S</td>
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<tr>
<td>YSH23</td>
<td>Vial Holder for conical-, centrifuge-, round bottom- and test tubes up to 40 mL volume</td>
<td>Cubis® II Semi-Micro and Analytical Balances Models: MC* 225S</td>
</tr>
<tr>
<td>YSH37</td>
<td>Holder for titration vessels, round bottom flasks and test tubes with diameter up to 50 mm</td>
<td>Cubis® II Semi-Micro and Analytical Balances Models: MC* 225S</td>
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<tr>
<td>YSH47</td>
<td>Holder for titration vessels, round bottom flasks and test tubes with diameter up to 50 mm</td>
<td>Cubis® High Capacity Micro Balances Models: MS* 36S</td>
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(please check availability!)