

## Cubis<sup>®</sup> Pharma Balance – for Preparing Calibration Standards Without the Need for Transferring Samples



# Weigh the Smallest Sample Quantities into Heavy Containers – All Without Any Transfer

Pharmaceutical laboratories often request a micro balance that permits large-volume flasks to be tared and used directly to weigh the smallest sample quantities closely approximating the optimal minimum weight according to USP Chapter 41, near the starting point of a balance's operating range. This requirement also reflects one of the most common applications in a pharmaceutical laboratory: preparing calibration standards for HPLC analysis. During preparation, compound quantities in the range of the balance's minimum weight are frequently weighed in relatively heavy flasks and a specific volume of a solvent is then added to the flask to obtain an accurate calibration standard.

The new Cubis® MSA116P pharma balance is a very special model of high-capacity Cubis® micro balances and has been designed to weigh the smallest samples directly into large laboratory containers. This procedure eliminates critical process parameters entailing the risk of inaccuracy, such as quantitative transfer of samples.

## A New Way of Thinking for Preparing Calibration Standards

Neither the maximum weighing capacity nor the readability defines this balance, but rather the flask volumes you would like to use and the minimum sample quantity you need to attain. Just as our MSA66S sets the world record in resolution with 60 million divisions in the range of high-capacity Cubis® micro balances, the new Sartorius MSA116P pharma balance likewise achieves a record: It accommodates vessel volumes of up to 250 mL while achieving an optimal minimum weight of only 1.64 mg in compliance with USP Chapter 41.

Based on the high weighing capacity of the Sartorius pharma balance, you will no longer need to transfer your samples using weigh boats or paper. This not only saves time, but also eliminates the risk of sample loss during transfer when using significantly reduced, expensive samples or those only available in the smallest quantities.

## The following standard equipment will ease your daily work:

- Intelligent Dosing Q-App, YAPP16
- Adjustable sample holder
- Large weighing pans









# Optimal Position of the Sample Holder at All Times for Safe and Ergonomic Weighing

With an adjustable sample holder and a large, 50 mm diameter titanium weighing pan, the MSA116P is perfectly prepared to accommodate nearly any standard shape of laboratory vessel. Even an extra-large 90 mm diameter weighing pan is optionally available. The sample holder supplied as a standard feature ensures optimal positioning of volumetric flasks, enabling you to dose even the smallest quantities of powder ergonomically at all times. You can also conveniently dose samples into large, long-necked containers after the top draft shield element automatically opens.



An adjustable titanium sample holder comes standard with the Cubis<sup>®</sup> pharma balance. This holder can be quickly positioned to accommodate different container sizes, such as long-necked flasks or HPLC bottles, for ergonomic dosing.



The extended space on our large 50 mm YWP09 weighing pan is ideal for vessels requiring a larger support area to prevent them from tipping over. To accommodate even larger containers, the YWP10 titanium weighing pan with a 90 mm diameter is available as an option.

## Overview of Dimensions and Weights of Long-Necked Flasks (Dimensions and weights can vary, depending on the flask manufacturer.)

### Use of a Sample Holder and a Weighing Pan

The optimal minimum weight according to USP Chapter 41 is 1.64 mg<sup>1</sup>.

Volume mL	Neck Diameter mm	Flask Diameter mm	Base Diameter mm	Height mm	Weight g	
1	7	14	9	57	5	Sample holder for flexibility, YSH02
2	8	16	11	57	6	
5	10	21	14	75	11	
10	10	28	20	90	17	Standard weighing pan, YWP09 Ø= 50 mm
25	11	38	26	100	23	
50	13	48	32	140	32	
100	16	60	40	170	57	Optional weighing pan YWP10 Ø=90 mm
200	19	75	50	210	80	
250	19	80	55	220	100	

<sup>1</sup> According to USP (United States Pharmacopeia) Chapter 41, the operating range of a balance is defined as starting from 820 d and extending up to maximum weighing capacity. The optimal minimum weight is therefore 820 d. Depending on the installation location and the environmental conditions, this value for the minimum weight can typically be higher.



# YAPP16 Dosing Q-App for Pharma Applications

## Q-App Included at No Extra Charge for Automated Preparation of Standard Solutions

Standards of defined concentrations are used to determine the concentration of unknown samples. Such standards need to be prepared accurately in order to minimize errors during analysis of unknown samples. However, it is next to impossible to weigh a solid sample so precisely that you can use a predefined volume of solvent. With the new YAPP16 Dosing Q-App software installed, your Cubis® pharma balance converts into an automated system for gravimetric monitoring of all measured values.

The Dosing Q-App automatically adjusts the volume of the solvent to the weight of your compound and determines the verified final concentration of your standard solution based on the weight of solvent actually added. Time-consuming and error-prone manual preparation of standards using volumetric determination is now a thing of the past.

The Dosing Q-App provides an interface to the Thermo Fisher Chromeleon™ software\*, permitting fully traceable documentation of all analytical data, including the details of your standards prepared.

## Visit the Sartorius Q-App Center for a Free Trial

You can easily download any standard Q-App from the Q-App Center, transfer it from an SD card directly to a Cubis® MSA laboratory balance, then try it out for 30 days free of charge. If you are happy with the features and convinced of the benefits, simply enter your personal details and the serial number of your Cubis® to purchase the Q-App. In just a few minutes, you will receive your unique activation code.

Please select Task:

Task

YAPP01 UserCal

User defined calibration

YAPP14 NTP

NTP Server Time Synchronization

YAPP16

Stock Solution Dosing

Weighing

Sort.

Edit

Start

Easy activation of the Q-App.

Stock Solution Dosing

Administrator

Processing sample

10/07/2017 18:32:14

Max: 220 g

d = 0.00001 g

+

0.98483

Min

Set

Max

IsoCAL

0.86195g

1.01406g

1.16617g

Please pipette in the solvent (1.014057 ml).

Confirm with [OK]

Abort

OK

Weighing compounds and dosing solvents for preparing stock solutions using the YAPP16 Q-App.

Stock Solution Dosing

Administrator

Result

11/01/2018 08:57:44

Sample:

TEST SAMPLE

Total volume required:

10.0000 ml

Verified volume:

10.012 ml

Compounds: Target / Measured concentration

TEST COMPOUND 1

10.0 / 9.7 mg/ml

TEST COMPOUND 2

20.0 / 20.0 mg/ml

Reject

Accept

Results for stock solution preparation using the YAPP16 Q-App.

\* Dionex™ Chromeleon™ 7.2 Chromatography Data System (CDS) software is a trade mark of Thermo Scientific™

