XPR Microbalances

Valid results guaranteed
Safe operation
Efficient processes

Taking Weighing to New Limits
Follow the Green Light
Taking Weighing to New Limits
Follow the Green Light

Laboratory projects involving expensive, rare or toxic substances demand that only the smallest possible sample quantities are used. Not only do you have the challenge to prevent waste by weighing out just a few milligrams, but you also need to avoid out-of-specification results and costly reworking.

METTLER TOLEDO’s new XPR microbalances incorporate a range of innovative new technologies to deliver the highest accuracy in their class and to help make your micro-weighing tasks simpler, safer and more secure.

Valid results guaranteed
- Minimum weight as low as 30 μg
- Repeatability improved by 25%
- Continuous QA monitoring
- Balance ready StatusLight™

Safe operation
- Small space-saving footprint
- Two-terminal concept
- Touch-free operation
- Easy cleaning

Efficient processes
- User guidance
- Built-in results notepad
- Customized method library
- Direct data transfer
The XPR microbalance line takes the worry out of weighing in the micro-range with active quality assurance features that ensure you get valid results – every time.

www.mt.com/xpr-microbalances
Valid Results Guaranteed
Because Successful Analysis Starts Here

With precious samples available only in the smallest quantities, you need to get your analyses right first time to avoid wasting material, money and time. Industry-wide standards, such as those from the US Pharmacopeia or Euramet, put extra pressure on laboratories to deliver traceable and compliant results.

Thanks to unique design features, XPR balances deliver unmatched accuracy. In addition, built-in active quality assurance functions give you the peace of mind that your results are valid and meet all your requirements. With fully traceable, valid results you can be sure of satisfying your auditors too.

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**Patented cooling delivers top performance**
Heat from the electronics at the back of the XPR is removed via the patented Active Temperature Control (ATC™) system. The resulting increase in temperature stability enables the XPR to deliver an outstanding level of weighing performance.

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**Accuracy is the cornerstone of your success**
Even under challenging weighing conditions, XPR microbalances deliver a unique level of precision with exceptionally low minimum weights. The XPR6UD5 offers 0.5 μg readability with repeatability improved by 25%.

**Tolerance Profiles ensure traceable results**
By setting up Tolerance Profiles you can ensure weighing tasks meet defined quality requirements and regulations. In addition, as the same profile is used each time a specific task is carried out, you can be sure of consistent settings to guarantee traceable results.
Pharmaceutical research and development laboratories typically have just a very small amount of each active ingredient they are investigating, often no more than 50 – 100 mg. As there are many different analyses to be carried out, each substance must be used sparingly. Low minimum weights make the most of such limited and valuable substances.

The GWP Approved function actively monitors the balance status and ensures you always weigh within the safe weighing range. The on-screen icon is your reassurance of accurate, reproducible results. Ask us to activate GWP Approved in your balance.

Rely on GWP® for daily quality

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GWP® – The Highest Quality Standard in Weighing

- Reproducible analytical processes
- No rework or out of specification results
- Every audit passed easily.

www.mt.com/gwp-library
Safe Operation
Because Nothing is More Important

Around half of all microbalances are used to weigh out toxic or potentially hazardous substances, including active pharmaceutical ingredients. User safety guidelines demand that such applications take place in a protected environment, presenting further challenges for microbalance users.

Now, you can save space in your safety cabinet thanks to the XPR’s compact footprint and a main terminal which can be placed away from the balance. Simply setup your task using the modern capacitive touchscreen on the main terminal and carry it out using the basic functions on the smaller SmartView terminal.

Sensors reduce cross-contamination risk

SmartSens infrared sensors enable you to operate the draft shield doors with the wave of a hand. This touch-free balance operation reduces the risk of cross-contamination.

Two-terminal concept simplifies operation

The SmartView terminal is right where you need it as you carry out your weighing tasks. With on-screen user guidance, all the basic functions you need are at your fingertips: tare, zero, open door and accept weight result.

New design concept makes cleaning easy

The newly designed draft shield provides easy access to the weighing pan. There are no edges and corners where sample material could become trapped. All parts can be removed, cleaned and replaced in a few simple steps.
User safety is critical in compound analysis laboratories. Exposure to potential drug candidates must be avoided and investigations are therefore carried out within a protected environment. Often, this means weighing out just a few milligrams of the drug compound under challenging conditions.

Compact footprint saves valuable space

The XPR has the smallest footprint of any microbalance on the market and has the added convenience of being able to place the main terminal wherever it is most easily accessible – even outside your safety cabinet.

Download our free guide: 10 Steps to Successful Micro-weighing.

www.mt.com/microweighing-guide
Efficient Processes
Because Time and Money Matter

Business demands for high sample throughput, as well as accurate and reliable results to deliver to customers, place increasing pressure on microbalance users. XPR balances can support you to complete your tasks efficiently without compromising on accuracy or safety.

The modern capacitive touchscreen with its user-friendly interface allows you to ‘swipe’ through settings and start methods. Data entry for tasks and settings is fast and easy. Your own task methods can be stored and quickly accessed, saving you time and providing higher process security.

As you carry out your tasks, all parameters are automatically recorded on the built-in results notepad. You can choose a simple or expanded list and even add your own comments. Simply transfer to a PC or print it out to complete your documentation.

To ensure consistent processes, store regularly used task methods in your own method library. Simply touch the method name to access all the details and then start the method. Also suitable for methods which include several samples or a test series.

The new capacitive touchscreen enables you to ‘swipe’ through your tasks as well as use multiple fingers to type in data. The screen is operable even through thick chemically resistant gloves, such as those in glove boxes.

Results notepad simplifies documentation

Method library ensures consistent processes

New touchscreen works like your smartphone
Laboratory Checklist

Lean LAB Checklist

Optimizing Workplaces and Workflows

The successful implementation of ‘Lean Manufacturing’ in several fields has inspired many businesses to adopt this model in laboratories as well. Laboratories have different challenges compared to manufacturing environments; while most of the key principles of traditional Lean still apply, there are many unique points to be adopted in laboratories.

The aim of this checklist is to give you an easy approach to help you develop your lab into a Lean LAB. Answering the simple checklist questions will give you:

a) an overview of your current status and
b) where it might be worth taking actions to improve your lab.

For each section, we have added some helpful tips on how to improve that particular aspect of your lab.

Lean LAB - fields of improvement

1. Housekeeping
2. Value stream mapping
3. Workload
4. Laboratory workflow
5. Performance management
6. Equipment
7. Skills of laboratory personnel
8. Laboratory chemicals / auxiliary material
9. CIP activities

To be successful, service providers and testing laboratories must deliver accurate results on time and in accordance with customers’ specific quality standards. Efficiency is key to keeping internal processing costs down and external customers happy.

You no longer need to record results by hand or spend time typing-in data. Simply transfer task parameters and results to a PC or software application via USB. Transcription errors are completely eliminated and the integrity of your data is preserved.

Direct data transfer saves time

Direct data transfer

saves time

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Download our free checklist to learn how to optimize your laboratory workflows.

www.mt.com/lab-smart-weighing
We document the installation and qualification of your balance in accordance with the relevant industry regulations. Operator training right after installation leads to improved productivity.

Installation

Balance calibration is at the core of accurate weighing results. Each calibration certificate declares the balance’s minimum weight and measurement uncertainty – essential information for reliable weighing processes.

Calibration

Accurate micro-weighing is about more than just the balance itself. METTLER TOLEDO Sales and Service team can help you select, install and calibrate your balances in accordance with our globally recognized Good Weighing Practice™, GWP®. Our expertise means you can enjoy excellent performance, maximum uptime and full compliance with the norms and standards relevant to your industry.

Evaluation and selection

Our GWP® Recommendation service helps you select the right balance according to your specific process and quality requirements. Documentary evidence is provided to show that the selected balance meets metrological, environmental and regulatory requirements.

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Global Reach – Local Presence! A team of 5,000 specialists represent METTLER TOLEDO Sales and Service in more than 140 countries worldwide.

Good Weighing Practice™
METTLER TOLEDO developed GWP® (Good Weighing Practice™) as a standardized scientific methodology for the secure selection, operation and calibration of weighing equipment. GWP® is applicable to all weighing equipment from any manufacturer.

* The registered trademark GWP is a trademark of METTLER TOLEDO in the European Community, US, China and 11 further countries.

Routine operation

GWP® Verification provides clear guidance for performance verification of your balance to save you time and money. Included is an optimal routine testing and calibration schedule, specifications of the required test weights, and the ideal maintenance plan.

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www.mt.com/service
XPR Microbalances
Technical Specifications
## XPR Microbalances Technical Specifications

<table>
<thead>
<tr>
<th>XPR2U</th>
<th>XPR6U</th>
<th>XPR6UD5</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Maximum capacity</strong></td>
<td>2.1 g</td>
<td>6.1 g</td>
</tr>
<tr>
<td><strong>Readability</strong></td>
<td>0.0001 mg</td>
<td>0.0001 mg</td>
</tr>
<tr>
<td><strong>Repeatability</strong> (5% load)</td>
<td>0.00015 mg</td>
<td>0.00015 mg</td>
</tr>
<tr>
<td><strong>Settling time</strong>*</td>
<td>&lt; 10 s</td>
<td>&lt; 15 s</td>
</tr>
<tr>
<td><strong>Minimum weight</strong> (5% load, k=2, U=1.0%)</td>
<td>0.03 mg</td>
<td>0.03 mg</td>
</tr>
<tr>
<td><strong>USP minimum weight</strong> (5% load, k=2, U=0.10%)</td>
<td>0.3 mg</td>
<td>0.3 mg</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>XPR10</th>
<th>XPR2</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Maximum capacity</strong></td>
<td>10.1 g</td>
</tr>
<tr>
<td><strong>Readability</strong></td>
<td>0.001 mg</td>
</tr>
<tr>
<td><strong>Repeatability</strong> (5% load)</td>
<td>0.0004 mg</td>
</tr>
<tr>
<td><strong>Settling time</strong>*</td>
<td>&lt; 8 s</td>
</tr>
<tr>
<td><strong>Minimum weight</strong> (5% load, k=2, U=1.0%)</td>
<td>0.082 mg</td>
</tr>
<tr>
<td><strong>USP minimum weight</strong> (5% load, k=2, U=0.10%)</td>
<td>0.82 mg</td>
</tr>
</tbody>
</table>

* = typical value

## Features

### Accurate Results
- Active Temperature Control system (ATC™)
- Magnetic Force Restoration weighing sensor with high resolution
- MinWeigh warning function

### Efficient Operation
- Storage of methods
- Built-in results notepad
- Capacitive colored touchscreen with gesture control, glove compatible

### Quality Assurance
- GWP Approved built-in quality assurance monitoring
- Tolerance Profiles
- Password protection
- User management
- Change history
- Adjustment and routine test history
- Balance ready StatusLight™
- LevelControl: Level warning with graphical levelling guide
- Temperature and time programmable proFACT

### Seamless Process
- Efficient operation via SmartView terminal
- Storage of SOPs in method library (including sample series and tolerances)
- Multiple ports for easy connectivity and data export: 4 x USB, 1 x LAN

### Sustainable Value
- Compact design with small footprint
- Optimized draft shield for easy cleaning
- Overload protection
Small Details. Big Difference.  
Accessories and Options

METTLER TOLEDO balances can be customized with accessories and peripheral devices to meet the needs of virtually any application. Our carefully designed accessories make your work easier and more convenient. You benefit further from improved efficiency and productivity.

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Protect results from static

To help to address one of the major challenges in micro-weighing, the freestanding ionizer removes electrostatic charges on samples and containers.

Fast filter determination

Mount this filter kit on your micro-balance in seconds for accurate and convenient determination of particulate matter on filters.

Easy documentation

Results, process data, labels: Generate fast, high quality printouts on paper, self-adhesive labels and continuous self-adhesive paper (including barcodes).
**Description of selected key accessories**

<table>
<thead>
<tr>
<th>Antistatic solutions</th>
<th>Part No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>AntiStatic Kit Microbalance: Includes one stand and one Compact Electrode</td>
<td>30215452</td>
</tr>
<tr>
<td>Compact Electrode: Optional second electrode for AntiStatic Kit Microbalance</td>
<td>30300921</td>
</tr>
<tr>
<td>Universal Antistatic Kit: U-shaped electrode and power supply unit</td>
<td>11107767</td>
</tr>
<tr>
<td>U-shaped Electrode: Optional second U-shaped electrode* for the Universal Antistatic Kit</td>
<td>11107764</td>
</tr>
<tr>
<td>*Requires additional power supply unit</td>
<td>11107766</td>
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<table>
<thead>
<tr>
<th>Filter Kit</th>
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<tbody>
<tr>
<td>Filter Kit: Suitable for 47 and 70 mm filters, includes tweezers</td>
<td>30300922</td>
</tr>
<tr>
<td>Filter Pan: Suitable for 50 mm filters</td>
<td>211214</td>
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<tr>
<th>Printers</th>
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<tbody>
<tr>
<td>P-56RUE: Thermal direct printer, RS232, USB, Ethernet, optional BT</td>
<td>30094673</td>
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<tr>
<td>RS-P42: Dot matrix printer, RS232</td>
<td>229265</td>
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<tr>
<th>Sensors and switches</th>
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<tbody>
<tr>
<td>ErgoSens: Infrared sensor for touch-free remote operation (USB connection)</td>
<td>30300915</td>
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<tr>
<td>Footswitch: Switch for remote operation (USB connection)</td>
<td>30312558</td>
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<tr>
<th>Special sample holder</th>
<th></th>
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<tbody>
<tr>
<td>Special Weighing Pan: Suitable for small, tubular samples; includes holder, pan and wind-ring</td>
<td>30113498</td>
</tr>
<tr>
<td>Special Weighing Pan Set: Set of 10 Special Weighing Pans</td>
<td>30215425</td>
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<tr>
<th>Essential weighing tools</th>
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<tr>
<td>Spatula Set Micro: Set of 2 stainless steel spatulas</td>
<td>30064490</td>
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<tr>
<th>Cables and interfaces</th>
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<tbody>
<tr>
<td>USB-RS232 Converter: Connects peripheral devices to the balance via RS232</td>
<td>64088427</td>
</tr>
<tr>
<td>Terminal cable: Length 4.5 m</td>
<td>30300920</td>
</tr>
</tbody>
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**Footswitch keeps hands free**

Open or close the draft shield door with a tap of your foot and keep your hands free to carry out your weighing task.

**Special sample holder**

This flexible holder is perfect for ensuring that tubular shaped samples can be placed securely on the balance (e.g. stents).

**Tools for micro-samples**

Our spatulas and tweezers have been specially designed for micro-weighing tasks.

→ [www.mt.com/lab-accessories](http://www.mt.com/lab-accessories)
Benefit From Our Weighing Expertise

With decades of experience in laboratory weighing, METTLER TOLEDO can offer you a wide range of online learning resources. Take advantage of our expertise to enhance your weighing know-how and make the most of your balance. Check out the documentation on our internet page for a range of relevant materials.

Laboratory Expertise
Valuable know-how is at your fingertips on our competence pages. Learn about:
- USP Revisions
- Electrostatic Influences
- Calibrating Your Weighing Device

[www.mt.com/lab-expertise](http://www.mt.com/lab-expertise)

eLearning
Online training is a cost effective way to train new employees and fulfill GLP/GMP/ISO re-training requirements. Get going with:
- USP Compliance
- Lab Balances – External Influences and Cleaning

[www.mt.com/lab-elearning](http://www.mt.com/lab-elearning)

On-demand Webinars
Learn directly from our weighing experts and guest speakers. It’s easy to register.
For starters, we recommend:
- Minimizing Out-of-Specification Errors
- Good Weighing Practice
- Calibration of Laboratory Instruments

[www.mt.com/webinars](http://www.mt.com/webinars)

For more information