Pipette Performance

Performance You Can Trust
Tools to Optimize Your Daily Work

Get Better Results
- Build team expertise
- Verify pipette accuracy
- Optimize regular service
Whether your objective is to be first to publish or first to market, the accuracy and repeatability of your experiments is critical to your success.

Assuring the performance of your pipettes and the people who use them could be your biggest step toward minimizing risk and improving the reliability and repeatability of your data.

Perhaps it is because they are so ubiquitous in the lab, or that their cost relative to most other types of equipment is so low, but too many labs do surprisingly little to assure the accuracy and ongoing performance of their pipettes. Yet pipetting is – often by far – the most common activity performed, and liquid handling is a component of most, if not every experiment.

Prevention… it’s cheaper than failure!

Experiment failure is disappointing, especially when you consider the money wasted on lost labor, re-agents and other supplies. Preventing failures is an investment, not an expense.
Rework is expensive

You have too much at stake to allow your equipment let you down. Time is money, and few things are as frustrating as approaching the end of a lengthy experiment or process, only to discover an as-found failure or that your results are wrong. For complex workflows, it can take days, or even weeks, to determine where the error or errors were introduced. Then start over.

METTLER TOLEDO has the tools and expertise to help you take a more holistic look at your people and processes. We can help you to identify immediate steps to improve lab performance, as well as longer term strategies to systematize and sustain higher levels of performance over the long haul.
Good Hands = Great Results
Build Your Team’s Pipetting Expertise

How many people in your lab have been trained to pipette and are experts in the principles of liquid handling? Chances are, not many.

In the 40+ years that METTER TOLEDO engineers have been working with researchers around the world to improve pipettes and pipetting performance, one thing is clear: no matter how accurate and precise a pipette, in the hands of an unskilled user performance suffers.

GPP – it’s “Good Pipetting Practice”

You can improve the quality and consistency of the data your lab generates with Good Pipetting Practice – METTLER TOLEDO’s comprehensive, systematic approach to maximizing pipetting accuracy and repeatability. Apply the principles of GPP in your lab and everyone on your team will:

- Understand the array of liquid handling instruments and options available
- Know how to optimize their workflow for each of the liquid handling steps involved
- Gain the range of pipetting skills necessary to produce reliable, reproducible data
- Appreciate how ergonomics can influence data production and their own well being
- Recognize the risk associated with out-of-calibration pipettes and the role of quick checks vs. professional service.
Put the power of GPP to work in your lab

**Take our GPP Risk Check**

Boost the accuracy and reproducibility of your data by understanding workflow-related risks and how to mitigate them. Our quick GPP Risk Check shows you where risks lie in your work and workflows.

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**Host a free GPP seminar**

METTLER TOLEDO offers many free in-lab seminars. Topics include:

- A GPP Overview
- Pipette Evaluation & Selection
- Pipetting Techniques
- Pipetting Ergonomics
- Calibration & Routine Operation

**Request a GPP consultation**

METTLER TOLEDO can help assess your lab’s unique pipetting risks and offer insights into which GPP seminars and products can improve your applications, workflows and workplace.
Quick Check
Performance Testing in Your Lab

Why wait for your next service to make sure a pipette is working properly? METTLER TOLEDO offers a range of in-lab solutions to quickly check pipette performance.

Periodically assessing whether or not pipettes are performing within tolerances is an excellent way to assure data integrity and reduce your overall risk. The accuracy of most pipettes can be easily verified using a gravimetric balance – the method of choice for pipette performance testing.

Turn a conventional balance into a pipette testing station by simply mounting an evaporation trap onto the measuring tray. For a more systematic approach, METTLER TOLEDO offers onboard applications or its standalone Calibry™ software to guide users through the testing procedure and record each pipette’s test dates and results.

The right balance solution for your lab

The right equipment

Minimal evaporation

Secure tracking

The XPE balances are ideal for checking pipettes:
• Built-in PipetteCheck software
• Wide measurement range: 10 µL – 10 mL
• Repetitive results
• Ready to use
• Step-by-step guidance
• Calculates results automatically

Minimizing evaporation is essential for achieving reproducible results. METTLER TOLEDO evaporation traps set up in seconds and come in a wide range of volumes – from 10 µL to 10 mL

RFID EasyScan on XPE balance enables secure and simple tracking of each pipette’s condition
• Hold an RFID-tagged pipette against EasyScan
• See the next test date on the balance
• If a test is due, press the icon on the balance and begin
Performance testing and training

Whether you are looking to test or improve your own pipetting abilities, or train a new pipette user, METTLER TOLEDO XPE and XSE analytical balances have an onboard Training Module that guides users through pipetting skills and can track individual performance (if desired).

By pressing the Training icon on the home screen, the balance:
- Provides step-by-step guidance
- Registers air and water temperature
- Performs calculations automatically
- Displays pass/fail results onscreen

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As the world’s leading pipette and balance manufacturer and service provider, METTLER TOLEDO is uniquely equipped to maintain the accuracy and reliability of your pipettes.

Like every precision instrument, pipettes require regular maintenance and calibration to perform their best. Our global network of ISO 17025-accredited labs are equipped with state-of-the-art precision microbalances, certified service experts and sophisticated temperature, humidity and vibration control systems.

Preventive Maintenance = Consistent Performance

Pipettes contain many parts and, like all things mechanical, nothing lasts forever. In fact, 95% of all pipette failures relate to sealing system wear. With regular preventive maintenance you can significantly reduce your risk of pipette failure.

Seals can leak after being exposed to damaging piston surfaces or sample contamination.

Shaft ends wear over time, especially if high force is applied when mounting tips.

Piston surfaces can deteriorate over time, leading to premature seal failure and pipette inaccuracy.
Trust the world’s leading pipette service provider

METTLER TOLEDO’s global network of service facilities are staffed and equipped to provide the highest level of quality repair and calibration. All METTLE TOLEDO service centers adhere to the following standards:

- **Continuously stable environment**
  A dedicated facility where temperature and humidity are monitored and controlled, and balances are mounted to stable, vibration-dampering platforms.

- **High performance balances**
  State-of-the-art balances integrated with workflow management software to record and distribute the appropriate pipette calibration data.

- **Experienced technicians**
  Personnel who are skilled at reproducibly generating high quality data at the most sensitive levels required and are periodically tested to continuously assure they can perform the most rigorous pipetting requirements.

- **Available parts inventory**
  Immediate access to replacement parts to minimize turn-around time for pipette repair and calibration.

- **Processes and procedures**
  Workflows and checks that can be verified to reproducibly produce a correctly calibrated pipette.
Our Calibration Services
For Sustainable Results and Saving Costs

Like all precision instruments, pipettes require regular maintenance and calibration to perform at their best.

A regular program of service and calibration is a proven way to minimize risk and assure optimal performance. Your METTLER TOLEDO sales representative can suggest a customized service program that is optimized for your unique applications and risk tolerance.

METTLER TOLEDO maintains a global network of ISO 17025-accredited labs equipped with state-of-the-art precision microbalances, certified service experts and sophisticated systems of temperature, humidity and vibration control.
METTLER TOLEDO is the leading manufacturer of balances and weighing systems. Our MCP balance allows every channel to be calibrated individually, yet simultaneously, in accordance with ISO 8655 guidelines.

METTLER TOLEDO calibration labs rigorously control temperature, humidity, vibration and air drafts – paramount to achieving accurate and precise calibration results.

ISO/IEC 17025 accreditation, an internationally-recognized standard for calibration laboratories, assures compliance with strict standards that include temperature, humidity and vibration controlled environments.

METTLER TOLEDO is the leading manufacturer of balances and weighing systems. Our MCP balance allows every channel to be calibrated individually, yet simultaneously, in accordance with ISO 8655 guidelines.

Strict Standards

Precision micro balances

Controlled environment
You can expect more from us

With decades of laboratory weighing experience, METTLER TOLEDO offers you a wide range of online learning resources. Use our expertise to enhance your liquid handling know-how.

Precision pipettes and tips

It’s no wonder Rainin-brand pipettes and tips by METTLER TOLEDO are the choice of leading laboratories worldwide. Extremely precise and built to last, Rainin pipettes offer exceptional comfort and ergonomics.

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White papers, webinars & videos

Our extensive library of white papers, webinars and videos contains a wealth of technical and technique information, all at no charge.

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Good Pipetting Practice

How you pipette directly affects the success and repeatability of your experiments. Visit our GPP landing page for technique and risk assessment tools to enhance your workflow.

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For more information