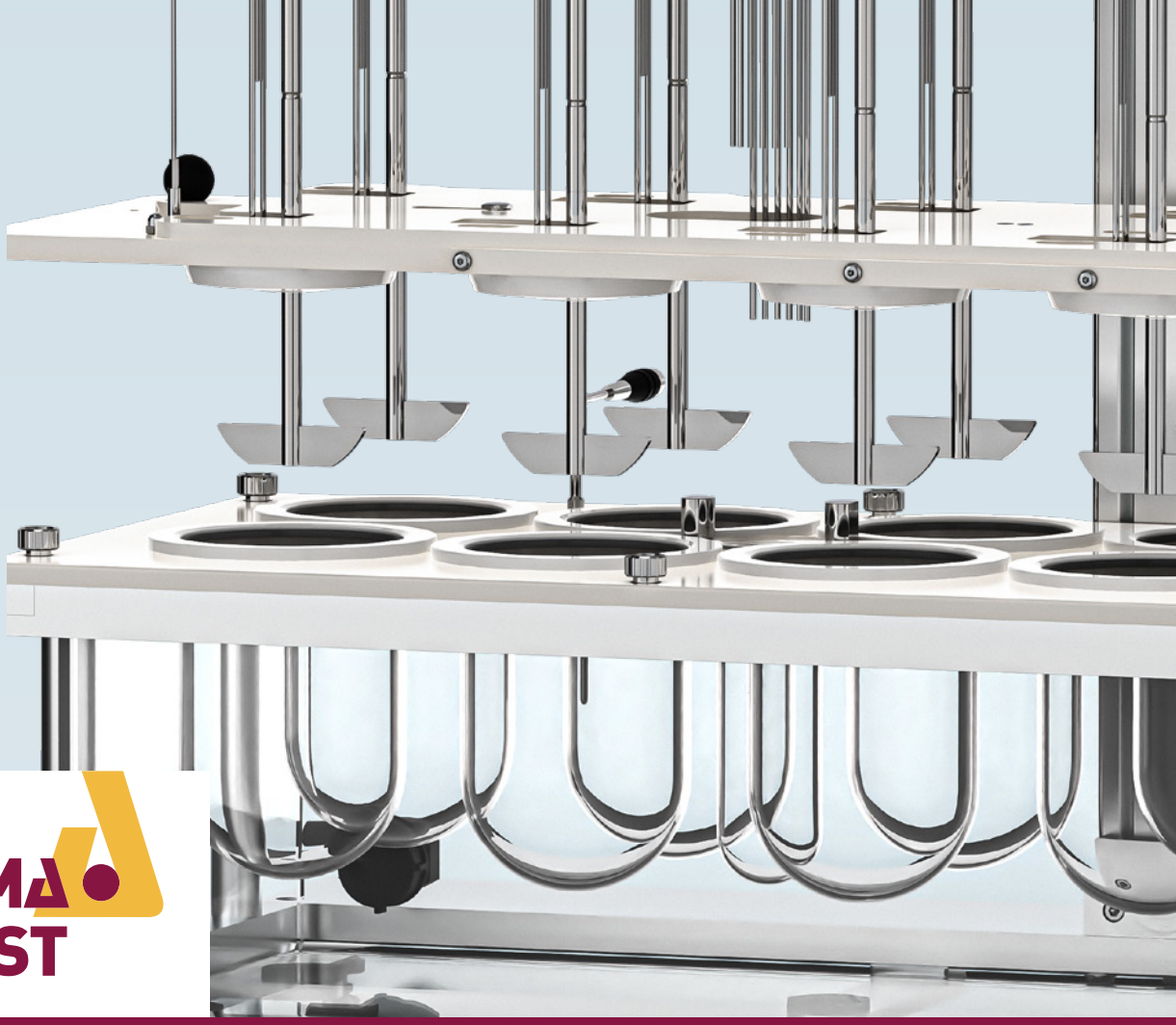


PHARMA TEST

Portfolio Overview

Dissolution Testing
Galenic Instruments

www.pharma-test.com

About Pharma Test

For over 45 years, Pharma Test has been a household name for the development and production of high-value dissolution testing systems for quality testing of tablets, capsules, suppositories, ampoules, bulk materials and other solid dosage formats. We offer a complete product range from manual instruments, offline systems with fraction collectors to online dissolution systems using 21 CFR Part 11 compliant software.

Unlike many startups that begin in garages, Pharma Test started in a small attic office, initially with just one employee. The main motivation was the desire to set new standards for testing important qualities during and after the manufacturing of pharmaceutical products.

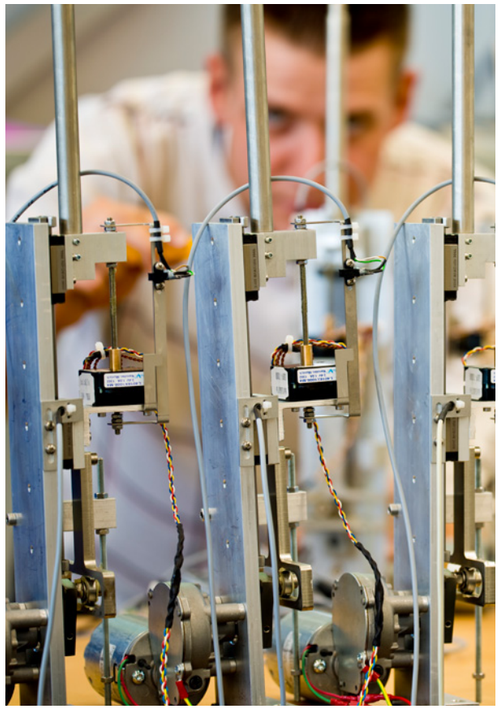
Pharma Test was established by Franz J. Fähler in 1979 in Hainburg, near Offenbach am Main, Germany. Drawing on his experience in sales within the drug quality control testing sector, Franz Fähler saw an opportunity in this expanding market. Today, the company is recognized globally as a leading provider of high-quality testing equipment for the pharmaceutical, food, and cosmetics industries.

In 1997, Pharma Test acquired Pharmag GmbH, a company located in Klipphausen near Dresden, Germany. Pharmag had operated during the GDR era, producing testing equipment for the pharmaceutical industry. Following German reunification, Pharmag became a key supplier of components and assembly services for Pharma Test's equipment.

Today, it remains the manufacturing site for all Pharma Test instruments.

MADE IN GERMANY

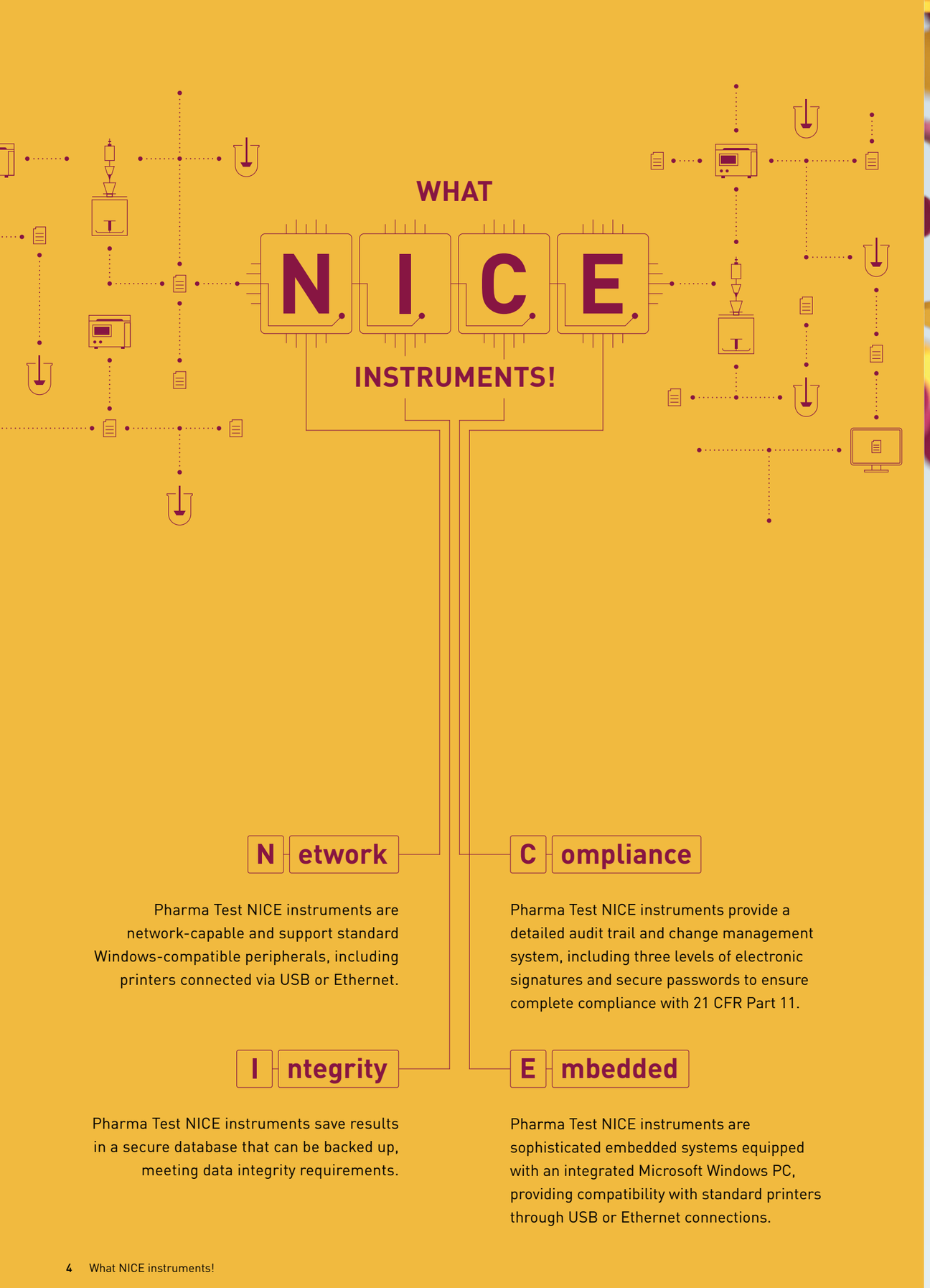
Franz Fähler held the position of CEO until 2011, at which point his son, Björn, succeeded him and guided the family-owned company into its second generation of leadership.



In 2016, Pharma Test Group acquired J&M Analytik AG, located in Essingen, near Stuttgart, Germany. J&M is an innovative manufacturer of spectrometer systems that use optical fibers and diode array detectors, to enhance its position in the growing field of optical technologies. Today, J&M's technology is featured in applications such as Pharma Test's automated online tablet dissolution testing systems.

Pharma Test provides equipment and automated systems through a global network of over 100 subsidiaries and distributors, all staffed by trained professionals for local service and maintenance. The company values lasting partnerships with stakeholders based on trust, reliability, transparency, and cooperation. Our foremost priority is to develop products with the quality that you would expect from the "Made in Germany" label .

THE GERMAN GRÜNDLICHKEIT



N etwork

Pharma Test NICE instruments are network-capable and support standard Windows-compatible peripherals, including printers connected via USB or Ethernet.

C ompliance

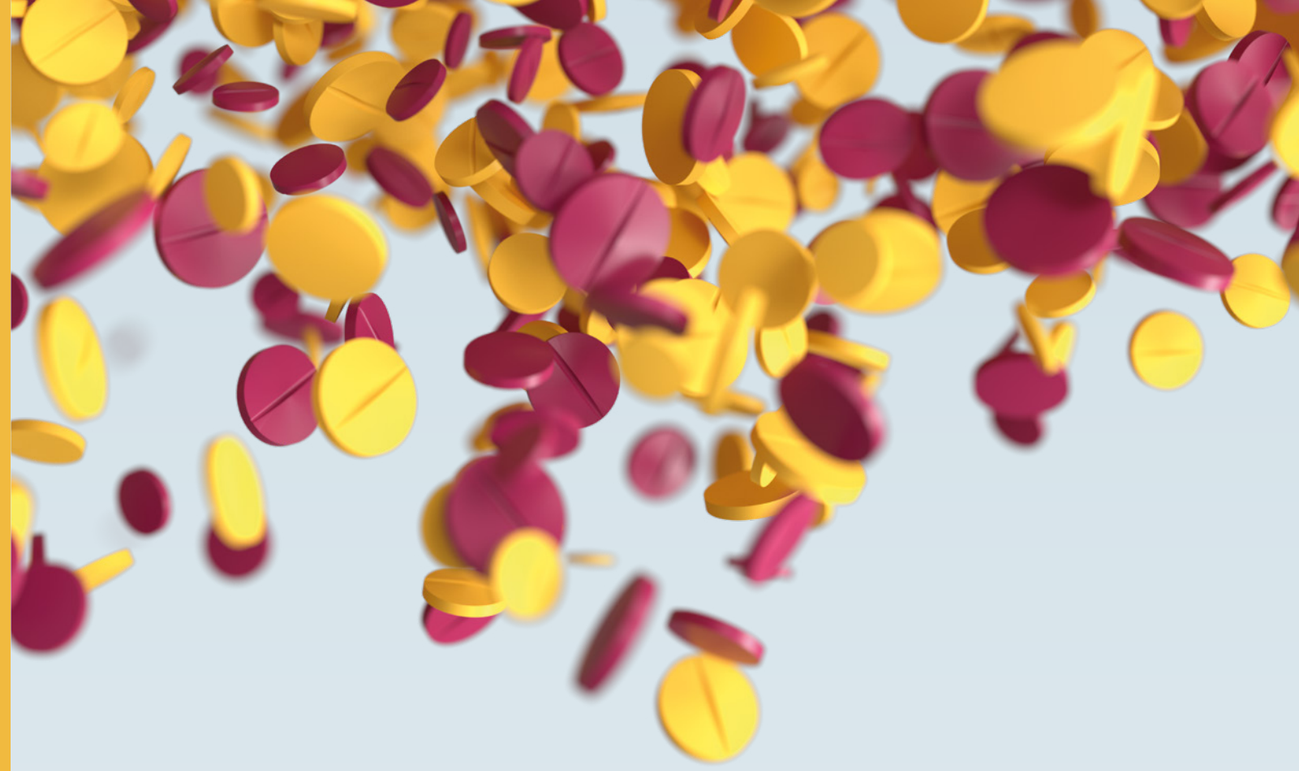
Pharma Test NICE instruments provide a detailed audit trail and change management system, including three levels of electronic signatures and secure passwords to ensure complete compliance with 21 CFR Part 11.

I ntegrity

Pharma Test NICE instruments save results in a secure database that can be backed up, meeting data integrity requirements.

E mbedded

Pharma Test NICE instruments are sophisticated embedded systems equipped with an integrated Microsoft Windows PC, providing compatibility with standard printers through USB or Ethernet connections.



The **Pharma Test NICE** instruments are not just nice – **they're exceptionally nice!**

These cleverly designed instruments, designed and made in Germany, bring a whole new level of "nice" to quality control in the pharmaceutical industry. They combine cutting-edge technology with user-friendly functionality.

Imagine your lab running smoothly with network-capable instruments that effortlessly connect to standard Windows-compatible peripherals, ensuring that everything is just right. The integrity of the NICE instruments offers peace of mind, securely storing data in a way that meets rigorous integrity standards. Compliance? Absolutely! With an impressive audit trail and electronic signature system that ticks all the boxes of 21 CFR Part 11, these instruments are the embodiment of thoroughness. And let's not forget their nifty embedded systems equipped with a Microsoft Windows PC, making them not only smart but also incredibly user-friendly. In short, when it comes to pharmaceutical testing, Pharma Test NICE instruments truly live up to their name – making your work not just easier, but notably more effective and, let's be honest, a little bit nicer!

PT-Node Network Adapter

PT-Node serves as an interface, enabling the simultaneous connection of up to two Pharma Test instruments to a network via either wired LAN or wireless Wi-Fi. This functionality allows users to print test results from the instrument through a web browser to any local or network printer. Additionally, test results can be transferred from the instruments to external systems within the same network. PT-Node is compatible with many Pharma Test instruments, with future support for additional devices in development.

IOT **Stay connected**
Internet of Things by Pharma Test

Connects up to two instruments simultaneously

Exports results to external systems in your network

Prints test reports and create PDFs via web browser

Contents

The Pharma Test product line is divided into two primary groups. The first, tablet dissolution testing, includes instruments like tablet dissolution testers, automation tools such as fraction collectors, pumps, spectrometers, software for managing dissolution data, and systems for preparing dissolution media. The second group, the galenic range, consists of equipment that assesses various physical characteristics—such as tablet hardness, ampoule breakage points, tablet and suppository disintegration and melting points, tablet friability, powder flowability and tapped density, as well as instruments for leak testing.

Dissolution Testing

Galenic Instruments

For more details, up to date information and news make sure to visit our website.

Dissolution samples can be collected manually or automated using a fraction collector

Tablet Dissolution Testing

Tablet dissolution testing is an essential quality control process within the pharmaceutical industry, designed to evaluate the rate and extent at which a tablet releases its active pharmaceutical ingredient (API) into solution under standardized conditions. This procedure provides valuable predictive information regarding drug absorption and efficacy within the body. Conducting dissolution tests is crucial for determining the performance of oral dosage forms and verifying that they deliver their APIs as intended. When executed properly, dissolution testing supports the optimization of formulations for improved therapeutic outcomes.

USP App. 2 paddles and USP App.1 baskets
for MonoShaft™ tool system

Tablet Dissolution Testers

The next generation Pharma Test x30 tablet dissolution testing instruments feature a modern graphical user interface, advanced user management features, and a fully integrated audit trail. These new systems set a new benchmark in usability and compliance.

The audit trail system records all events and changes within the instrument, providing a detailed account with both before and after information, fulfilling the regulatory requirements of 21 CFR Part 11. The audit trail can be filtered using criteria such as date & time, user, method and type of event.

USP App. 2 baskets in different
mesh sizes and materials

Sinter filters with various pore sizes
for cannulas and sampling probes

PTWS Tablet Dissolution Testers

All PTWS instruments comply with USP, EP, and JP standards. They include a staggered stirrer start for easy manual sampling and automatically halt stirrer rotation when the instrument head is moved. The automated lifter can raise the instrument head at the end of a dissolution run. PTWS instruments feature the MonoShaft™ tool system and come equipped with a complete set of vessels and USP Apparatus 2 paddles.

A comprehensive selection of dissolution accessories is also offered. The vessels are secured with centering rings using a bayonet catch system. Certain models are available for use with 2-liter dissolution vessels as well.

PTWS 1230

12-Position Tablet Dissolution Tester

PTWS 1230 is a 12-position, tablet dissolution testing instrument allowing for a higher throughput of dissolution samples or offering the ideal choice for comparative studies, such as biowaivers.

- 12 vessel system for high throughput or for biowaiver applications
- EPE, ITM, TM and TMA installation options
- Gas pressure spring supported electronic lifter in the back of the instrument

Use baskets in case the sample is unsuitable for paddles, for example because it floats

Various types of dissolution vessels, clear and amber coloured for UV protection

PTWS 130D

6-Position Tablet Dissolution Tester

PTWS 130D is a 6-position, compact tablet dissolution testing instrument ideally suited for manual testing and whenever lab bench space is at a premium.

- Compact instrument for manual operation
- Excellent access to all six stirred vessels
- Centrally located electronic lifter to automatically move the head

PTWS 130S

6-Position Tablet Dissolution Tester

This variant model offers independent stirrer speed control for each of the six testing stations for R&D purposes and dissolution method development.

- Individual stirring speed control for R&D applications
- Excellent access to all six stirred vessels
- Centrally located electronic lifter to automatically move the head

PTWS 830

8-Position Tablet Dissolution Tester

PTWS 830 is an 8-position, tablet dissolution testing instrument ideally suited for many applications from manual sampling to automated online or offline systems.

- Compact instrument to use for manual or automated applications
- EPE, ITM, TM and TMA installation options available
- Centrally located electronic lifter to automatically move the head

PTWS D630

6+6 Position Tablet Dissolution Tester

PTWS D630 is a variant instrument of PTWS 1230, allowing for separate control of the stirrer speed on the front and back row of stirrers.

- Independent stirring speed control for front and back row of stirrers
- EPE, ITM, TM and TMA installation options available
- Gas pressure spring supported electronic lifter in the back of the instrument

PTWS 1420

14+2 Position Dual Drive Tablet Dissolution Tester

PTWS 1420 is a dissolution tester with a “dual drive” system, offering 14 main positions plus 2 extra vessels for media refilling or reference standards. It allows separate control of the stirrer speed on the left and right sides.

14 stirred positions - ideal for biowaiver tests

EPE, ITM and TMA installation options available

Dual drive configuration with two stirring speed settings

The instruments can be equipped with a variety of installation options (depending on the actual model):

TM and TMA Tablet Drop Magazines

The manual or automated tablet drop magazines ensure the simultaneous drop of all samples into the vessels at the start of the test.

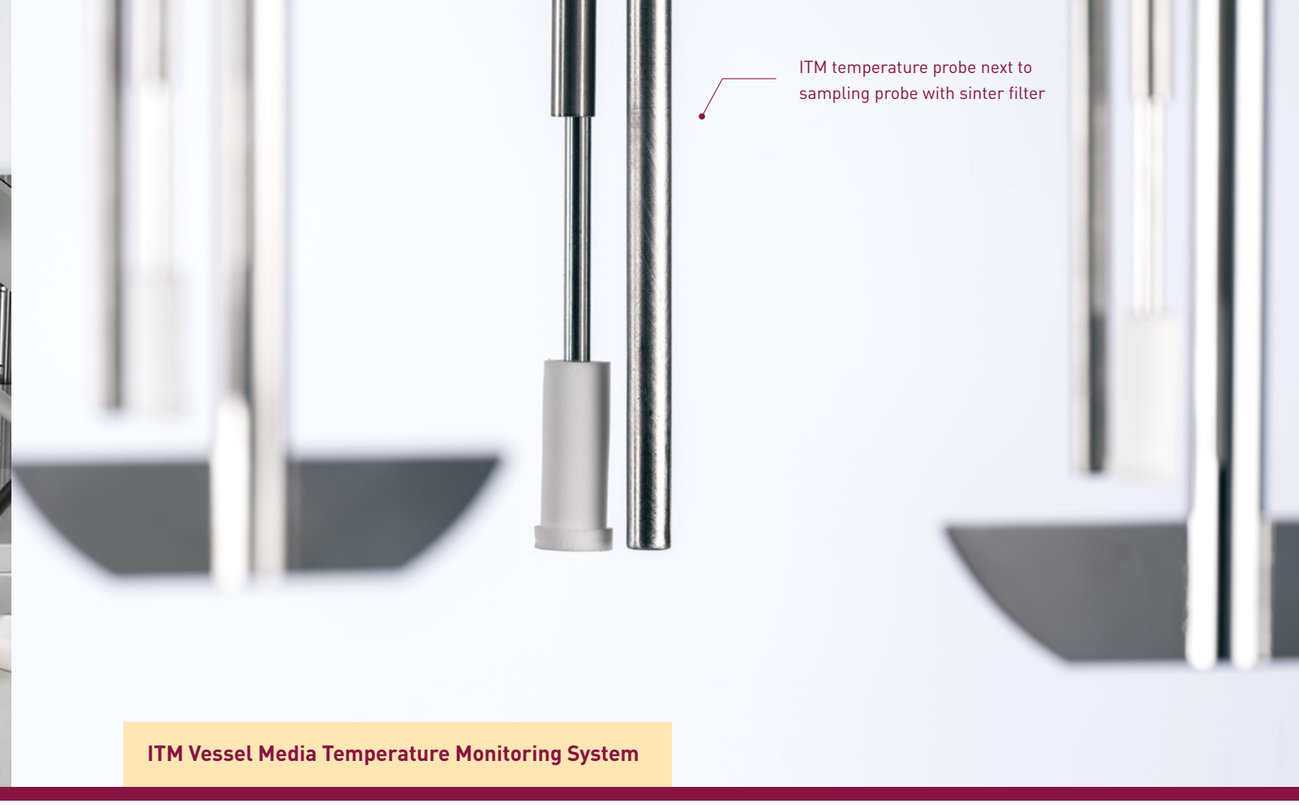
Attach a cleaning beaker to the magnet holder to flush the system

A tablet drop magazine ensures simultaneous dropping of all samples

The automated sampling manifold contains the sampling probes and tubing lines

EPE Automated Sampling System

This system enables automated and precise sample collection throughout the dissolution test. The sampling probes are automatically moved into the vessels during the sampling intervals.



ITM temperature probe next to sampling probe with sinter filter

ITM Vessel Media Temperature Monitoring System

By monitoring vessel media temperatures at each sampling event, this system ensures that temperature conditions remain within required specifications during sampling and prior to the start of the test.

Dissolution Tester
Model Comparison

	Stirred vessels	Additional vessels	Stirrer speed settings	Installation options (EPE, TM, ITM)	2 liter vessel version	Integrated printer	User & method management	Audit trail
PTWS 130D	6	0	Common speed	No	Available	No	Yes, unlimited	Yes
PTWS 130S	6	0	6 speed settings	No	Available	No	Yes, unlimited	Yes
PTWS 830	8	0	Common speed	Yes	Available	No	Yes, unlimited	Yes
PTWS 1230	12	2 (250 ml)	Common speed	Yes	Not available	Yes	Yes, unlimited	Yes
PTWS D630	12	2 (250 ml)	2 speed settings	Yes	Not available	Yes	Yes, unlimited	Yes
PTWS 1420	14	2 (1 liter)	2 speed settings	Yes	Not available	Yes	Yes, 4 users & unlimited methods	No

The PT-DR Dispersion Releaser
for Nano- and Micro Formulations

The PT-DR Dispersion Releaser is a dialysis-based device used to test the release of nanomedicines, micro formulations, and semi-solid dosage forms in a standard dissolution tester. It features a sample holder cell as the donor compartment, surrounded by a dialysis membrane, and is agitated by a paddle stirrer connected to USP Apparatus 2.

Tests the release of nanomedicines and micro formulations

Can be used in any Pharma Test dissolution tester

Offers reproducible test results for these new delivery systems

Samples can be collected from both compartments of the dispersion releaser

ALGEX Magenta
Water Bath Preservative

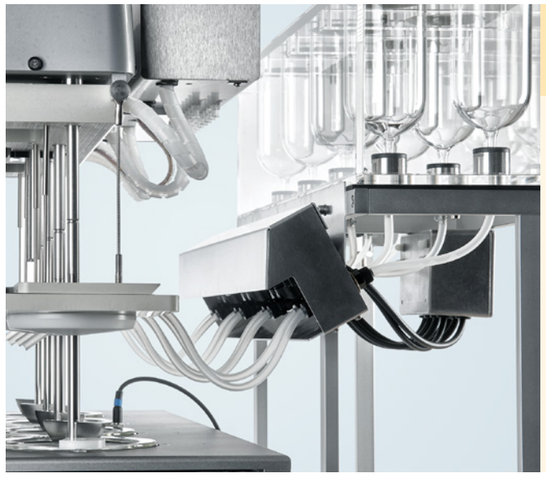
The ALGEX Magenta water bath protection (concentrate) prevents the build-up of algae, bacteria and germs. It has a long-lasting effect of up to 3 months. A color indicator helps to remind when it is time to renew the solution.

- One bottle contains 250 ml of concentrate which equals 83,33 l of solution
- ALGEX Magenta can be purchased individually per bottle or as a set of 15 bottles at a discounted rate

Dissolution Media Preparation and Handling

The preparation of dissolution media is an essential procedure within the pharmaceutical industry for conducting dissolution testing. Commonly used media include purified water, buffer solutions such as phosphate buffer and hydrochloric acid, as well as simulated gastric and intestinal fluids. Accurate dissolution media preparation is vital for achieving reliable and reproducible results, which are integral to drug development and quality control processes.

> Proper formulation of the media ensures that testing conditions closely simulate the in vivo environment, thereby providing valid data for assessing a drug's performance and bioavailability.



PTWS 830-MA
Media Addition System

The PTWS 830-MA media addition station, combined with the PTWS 830 tablet dissolution tester, enables automated half changes of media for delayed release dosage forms.

- Perform automated media change by buffer addition ("half change") according to USP <701>, EP <2.9.3> and CP <931>
- Very fast buffer adding corresponding to a pump flowrate of 500ml/min
- Includes additional heating system to preheat buffer within USP tolerances

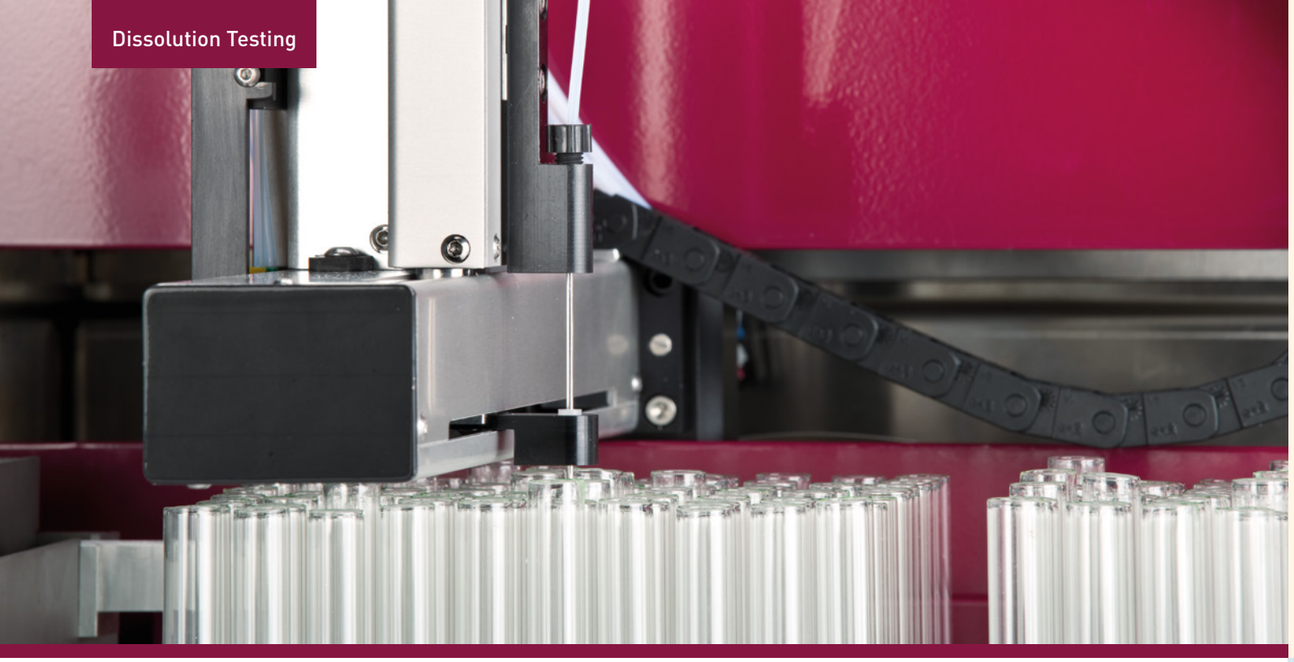
PT-DDS4
Media Preperator

The PT-DDS4 Media Preperator is an efficient lab tool for degassing, heating, and accurate dosing of dissolution media. Effective media degassing is one of the most important requirements for a successful tablet dissolution test.

Prepares up to
25 liters of pre-heated and
deaerated medium

Media degassing is one
of the most influential factors
on USP suitability tests

Deaeration by vacuum
is the most efficient media
preparation process



Automated Dissolution Testing Systems

Pharma Test PTWS instruments are compatible with a range of automated dissolution testing systems. Offline configurations utilize autosampler and pumps to gather samples for subsequent analysis, such as by HPLC. In contrast, online automated systems employ a spectrometer equipped with a multicell changer within a closed-loop setup to facilitate real-time sample analysis.

> Proper formulation of the media ensures that testing conditions closely simulate the in vivo environment, thereby providing valid data for assessing a drug's performance and bioavailability.

DSR-M
Dissolution Sampling Robot

The flexible, modular design of the DSR-M allows sampling, auto media refill, dilution and transfer into HPLC vials for 6 to 12 station dissolution baths.

- Features integrated valve-free piston pumps for high precision
- Modular design to allow auto media refill, dilution and transfer into HPLC vials for 6 to 14 position dissolution testers
- Up to 20 sampling cycles (up to 10 cycles with dilution)

Offline Automated Systems
with Autosampler

An offline automated dissolution system comprises a dissolution bath, a pump, and an autosampler. This configuration streamlines the sampling process, which is typically the most labor-intensive phase of dissolution testing, particularly for sustained release formulations.

DFC
Offline Automated Dissolution Testing System

The flexible, modular design of the DSR-M allows sampling, auto media refill, dilution and transfer into HPLC vials for 6 to 14 station dissolution testers using precise piston pumps. Another solution is the use of the fraction collector PTFC in combination with SP syringe pumps. These systems do not require any external PC software to control them.

100%
USP / JP / EP compliant

Automates sampling, the most labor-intensive stage of a dissolution test

Automated sampling reduces human (non-systematic) errors

Offers unattended operation after start of dissolution run

Online Automated Systems (Closed Loop)

Online systems provide automated sampling, measurement, and result calculation. In contrast to offline systems, where samples are withdrawn from dissolution vessels and subsequently stored for transfer or additional preparation (such as dilution), these online systems circulate samples in a closed loop through the spectrometer's cuvettes. The entire solution is supplied by Pharma Test, which assumes full responsibility for the system.

ADS-L
Fully Automated Online Tablet Dissolution Systems

The ADS-L online dissolution systems integrate tablet dissolution apparatus with an advanced, fast-diode array spectrometer to deliver rapid test results. System control is managed via the ARGUS Dissolution software that oversees all instruments and securely stores test data. The fully integrated solution features preinstalled software on the IPC within the spectrometer. These systems enhance productivity by enabling unattended operation, improving result reproducibility, and providing swift access to data.

100%
USP / JP / EP compliant

Very short sampling time-intervals with full spectral information

No media loss due to closed loop design

Complete online dissolution system with spectrometer and integrated PC

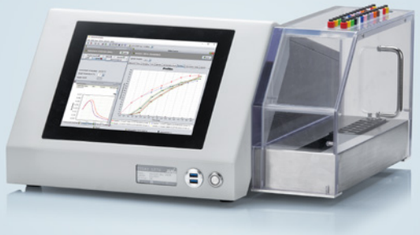
ARGUS Dissolution Software

For more advanced dissolution systems, such as online dissolution setups, a PC software is utilized for control. The ARGUS Dissolution software provides complete flexibility in scheduling sampling and measurement times, allowing adjustments to match the release profiles of the samples being tested. Additionally, the software delivers reliable reporting and robust data management features. It also supports networked operation and enables exporting data to LIMS systems.

The ARGUS Dissolution Software is a scientific dissolution data management software for instrument control, data acquisition, data management, processing and reporting – designed by users for users. ARGUS Dissolution is compatible to almost all dissolution systems in the laboratory. Just one software needs to be trained and qualified.

Whether you perform dissolution tests occasionally or several times each day ARGUS Dissolution will make you more productive in running tests and analyzing results.

- Connect multiple dissolution test laboratories to one central database
- Detailed audit trail for electronic records
- Supports electronic signatures



TIDAS® L
Fiber Optic Diode-Array Spectrometer

The TIDAS® L UV/VIS spectrometer by J&M features an integrated multi cuvette changer and the ARGUS Dissolution software running on an integrated Windows PC. The diode- array technology enables multi-component analysis.

- Certified optical fibers and optimized measuring cells ensure reliable measurement results
- Multi-cell changer supports up to 14 cuvettes
- Option to connect two fiber optic probes

Feeders separate samples before sending them to the hardness tester

Galenic Instruments

Our selection of galenic instruments encompasses all devices required for assessing the physical parameters of solid dosage forms, as well as solutions designed to evaluate properties of powders and granules. In the context of pharmacy and pharmacology, these instruments are integral to the discipline concerned with the preparation and formulation of medications (galenic preparations), detailing the processes by which active pharmaceutical ingredients are incorporated into various dosage forms such as tablets, ointments, and suspensions.

Tablet Hardness Testing

Tablet hardness testing is an essential quality control procedure within the pharmaceutical sector, utilized to evaluate the mechanical integrity of tablets prior to packaging and distribution. Tablet hardness significantly impacts handling, packaging, as well as disintegration and dissolution characteristics. Rigorous verification ensures manufacturers meet regulatory requirements and maintain product consistency. A tablet hardness tester operates by gradually applying force to a tablet until it fractures. The acceptable range for tablet hardness is formulation-dependent and varies according to its intended purpose. Routine calibration of hardness testing equipment is necessary to ensure ongoing accuracy. All Pharma Test tablet hardness testing instruments are compliant with the most recent USP and EP Pharmacopeia standards.

Pharma Test provides portable devices for rapid assessment, along with automated systems featuring integrated balances and batch feeder capabilities.

Various models are available for measuring hardness exclusively, as well as instruments capable of determining additional parameters including thickness, width, diameter, and weight.

All instruments provide detailed reports and allow batch number entry.

PTB-311E

4-in-1 Tablet Hardness Tester

This 4-in-1 tablet hardness testing instrument now includes both a password protection feature and width measurement capability.

- Automated re-start feature to speed up testing
- Password protected date/time & important settings
- Easy-to-read display for all four parameters

PTB 111E

Tablet Hardness Tester

This tablet hardness tester is compact and features an easy-to-read display. It also allows users to enter batch numbers.

- Automated re-start feature to speed up testing
- Password protected date/time & important settings
- Includes program to test soft gel capsules

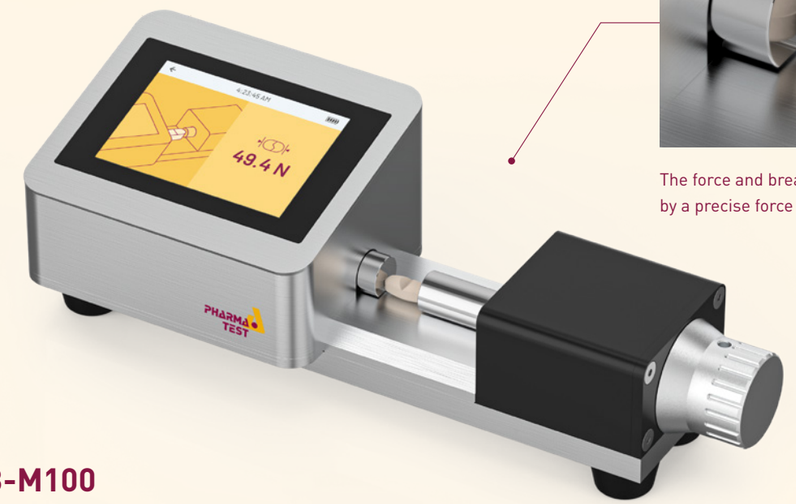
PTB 111EP

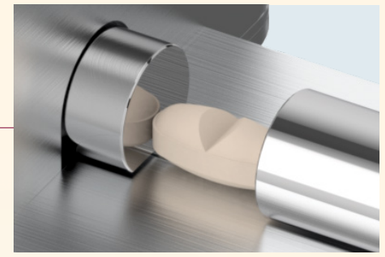
Tablet Hardness Tester

This version of the PTB 111E model features a built-in report printer for streamlined documentation.

- Automated re-start feature to speed up testing
- Password protected date/time & important settings
- Integrated printer

The carousel features
20 sample chambers





The force and break point are measured
by a precise force sensor

PTB-M100

Portable Hardness Tester

Portable, manual hardness testing instrument with intuitive touchscreen operation. The instrument is powered by a rechargeable battery using a standard USB-C charger.

- Compact, portable and easy to use instrument
- Password protected date/time & important settings
- Uses the same high-quality force sensor as other Pharma Test hardness testers

PTB 500 NICE

5-in-1 Tablet Hardness Tester

This 5-in-1 tablet tester features an integrated audit trail, result database, and electronic signatures to ensure complete 21 CFR Part 11 compliance. Equipped with a 20-sample carousel, it measures hardness, diameter or length, thickness, width, and weight using its built-in balance.

- Equipped with 20-sample carousel and integrated analytical balance
- Full 21 CFR Part 11 compliance including audit trail and electronic signatures
- Supports USB and network printers

PTB 330

5-in-1 Tablet Hardness Tester

This compact 5-in-1 tablet tester measures hardness, diameter or length, thickness, width, and weight with an external balance. It features a 7" color touchscreen for operation.

- Features an intuitive, user-friendly modern graphical touch screen interface
- Integrated user & method management
- Supports network printers

PTB 430

Tablet Hardness Tester with Carousel

This 5-in-1 tablet tester features a 20-sample carousel to accurately measure hardness, diameter or length, thickness, width, and, optionally, weight via an integrated balance.

- Features an intuitive, user-friendly modern graphical touch screen interface
- Integrated user & method management
- Supports network printers

WHT 4

4-in-1 Tablet Hardness Tester

This 4-in-1 tablet tester features a 20-sample carousel and alignment flaps, allowing precise measurement of hardness, diameter or length, thickness, and weight with its integrated balance. It supports single or multi-batch feeders and operates via the WHT32 software on a built-in PC.

Measures weight, thickness, diameter and hardness fully automatically

Option to connect single or multi batch feeder

Integrated system including touch screen PC and WHT32 software

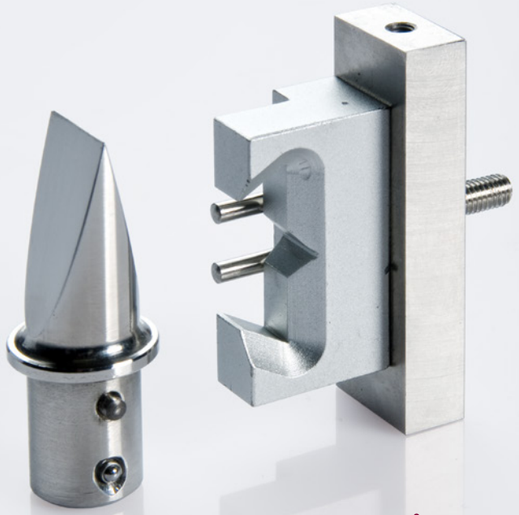
WHT 4 features automated sample alignment using the unique flap system

PTB digiCAL

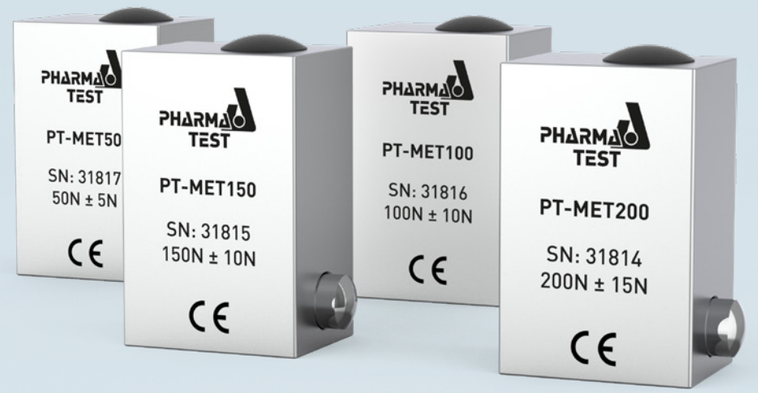
Calibrator

A portable, battery powered calibration device that automatically calibrates and adjusts Pharma Test hardness testers across their entire testing range, without needing reference weights.

- Performs instrument calibration and adjustments without relying on weights
- Supports three-point calibration up to 1,000N
- Portable, battery powered instrument



Evaluates the tensile strength of oblongs utilizing specialized inserts



PT-MET
Mechanical Tablets

Mechanical tablets designed for routine calibration of Pharma Test tablet hardness testing instruments. Simulate the breaking of a tablet at defined conditions with this checking device.

- Quick check of the hardness testing station
- Each tablet is serialized with a calibration certificate
- Available with four different nominal hardness values (50, 100, 150, 200N)

Hardness Tester
Model Comparison

	Parameters	Max. Hardness ranges	Weight measurements	Sample Introduction	Integrated printer	User & method management	Audit trail
PTB-M100	1, Hardness	300N, 500N	—	Individual	No	No, password protection for settings	No
PTB 111E	1, Hardness	300N, 500N, 800N	—	Individual	No	No, password protection for settings	No
PTB 111EP	1, Hardness	300N, 500N, 800N	—	Individual	Yes	No, password protection for settings	No
PTB 311E	4, Hardness, Thickness, Width, Diameter	300N, 500N, 800N	—	Individual	No	No, password protection for settings	No
PTB 330	5, Hardness, Thickness, Width, Diameter, Weight	300N, 500N, 1,000N	External balance	Individual	Yes	Yes, 100 users	No
PTB 430	5, Hardness, Thickness, Width, Diameter, Weight	300N, 500N, 1,000N	Internal balance	Carousel	Yes	Yes, 100 users, 100 methods	No
PTB 500 NICE	5, Hardness, Thickness, Width, Diameter, Weight	300N, 500N, 1,000N	Internal balance	Carousel	Yes	Yes, unlimited	Yes
WHT 4	4, Hardness, Thickness, Diameter, Weight	300N, 500N, 1,000N	Internal balance	Carousel & feeder	No	Yes, unlimited	Yes

Adjustable supports
are compatible with most
standard ampoule shapes

Ampoule Testing

Ampoules are commonly used to deliver liquid medications, making quality control of these glass containers essential. Proper testing helps prevent glass particles from contaminating the drug solution when ampoules are opened and ensures the containers remain sterile, leak-proof, and resistant to breakage during handling and storage. Conducting breakpoint tests enables manufacturers to verify the reliability and safety of their products, helping them meet strict pharmaceutical regulations.

Our solution fully complies with DIN/ISO 9187 standards and allows at-line testing of empty ampoule hardness during production.

PTBA 211E

Ampoule Breakpoint Tester

The PTBA 211E ampoule breakpoint tester is designed to assess the break point of ampoules, ensuring quality control during the manufacturing of empty ampoules and prior to the filling process.

Easy-to-read display showing number of tests and breakpoint result

Secured and illuminated testing station

Exchangeable supports for various ampoule sizes available

Tablet Disintegration Testing

Tablet disintegration testing is a vital quality control process in the pharmaceutical field, designed to assess how rapidly and efficiently a tablet breaks down into smaller particles when placed in a specific liquid medium, typically simulating gastric or intestinal fluids. This evaluation determines how well the tablet can release its active ingredients for absorption in the body.

Disintegration tests are important for predicting how quickly a drug becomes available for absorption, which is essential for the medication's effectiveness. They also help identify formulation problems that could impact drug release.The procedure uses a tablet disintegration tester, which features a set of baskets with tubes that move up and down within a vessel containing the medium.

All Pharma Test tablet and capsule disintegration testers meet current USP and EP Pharmacopeia standards, accommodating both standard A-type baskets with six tubes and B-type baskets with three tubes for larger samples.

Also available is the unique PT-ODF basket to test oro-dispersible samples. These instruments have powder-coated stainless-steel housings, ensuring resistance to disintegration media.

PTZ 100 & PTZ 300
Manual Disintegration Tester

Single and triple station tablet disintegration testers with integrated printer and temperature probe to monitor medium temperatures. Access to the instrument is protected by a login with username and password.

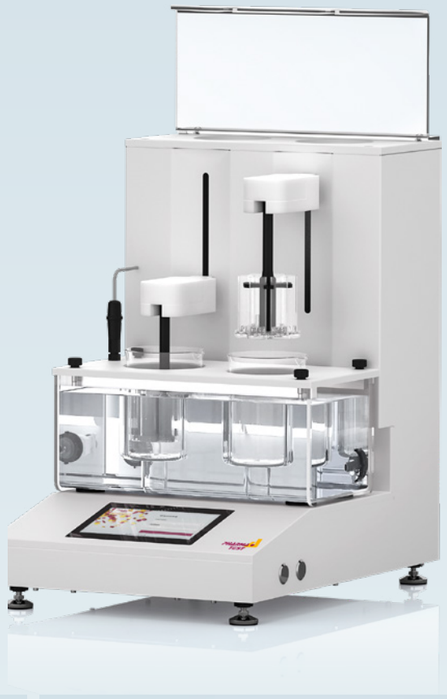
Cost effective, manual disintegration testers

Available with one or three testing stations

Integrated user & method management

PTZ NICE 200

Fully Automated Disintegration Tester



This automated tablet disintegration tester comes in single or double station models and complies with 21 CFR Part 11, offering a built-in database, audit trail, and electronic signatures.

- Full 21 CFR Part 11 compliance including audit trail and electronic signatures
- One or two testing stations, with independent operation
- Automated disintegration time detection for each sample

PTZ NICE 400

Fully Automated Disintegration Tester

This automated tablet disintegration tester comes in three or four station models and complies with 21 CFR Part 11, offering a built-in database, audit trail, and electronic signatures.

- Full 21 CFR Part 11 compliance including audit trail and electronic signatures
- Three or four testing stations, with independent operation
- Automated disintegration time detection for each sample

PTZ AUTO 230

Semi-Automated Disintegration Tester

This semi-automated tablet disintegration tester is available in single or double station models, featuring a 7-inch color touch-screen for easy operation and compatibility with network printers.

- Intuitive, user-friendly modern graphical touch screen interface
- Integrated user & method management
- One or two testing stations with independent operation

PTZ AUTO 230EZ

Fully Automated Disintegration Tester

This fully automated tablet disintegration tester is available in single or double station models, featuring a 7-inch color touch-screen for easy operation and compatibility with network printers.

- Fully automated disintegration time detection for each sample
- Integrated user & method management
- One or two testing stations with independent operation

PTZ AUTO 430

Semi-Automated Disintegration Tester

This semi-automated tablet disintegration tester is available in three or four station models, featuring a 7-inch color touchscreen for easy operation and compatibility with network printers.

- Intuitive, user-friendly modern graphical touch screen interface
- Integrated user & method management
- Three or four testing stations with independent operation

PTZ AUTO 430EZ

Fully Automated Disintegration Tester

This fully automated tablet disintegration tester is available in three or four station models, featuring a 7-inch color touchscreen for easy operation and compatibility with network printers.

- Fully automated disintegration time detection for each sample
- Integrated user & method management
- Three or four testing stations with independent operation

3-position "B" basket for larger samples and standard 6-position "A" basket

PT-ODF
Basket Add-on

The PT-ODF disintegration basket add-on is a unique device to test the disintegration times of oro-dispersible films. Test six samples per basket (PT-ODF6) or three larger samples (PT-ODF3)

- Compatible with all Pharma Test PTZ instruments
- Fully automated instruments enable disintegration time detection

Tablet Disintegration Tester
Model Comparison

	Vessels	Basket movement	End point detection	User Interface	Integrated printer	User & method management	Audit trail
PTZ 100	1	Common drive	Manual	LCD and click wheel	Yes	Yes, 100 users, 100 methods	No
PTZ 300	3	Common drive	Manual	LCD and click wheel	Yes	Yes, 100 users, 100 methods	No
PTZ AUTO 230	1 or 2	Independent	Manual	Touch screen	Yes	Yes, 100 users, 100 methods	No
PTZ AUTO 430	3 or 4	Independent	Manual	Touch screen	Yes	Yes, 100 users, 100 methods	No
PTZ AUTO 230 EZ	1 or 2	Independent	Automated for each sample	Touch screen	Yes	Yes, 100 users, 100 methods	No
PTZ AUTO 430EZ	3 or 4	Independent	Automated for each sample	Touch screen	Yes	Yes, 100 users, 100 methods	No
PTZ 200 NICE	1 or 2	Independent	Automated for each sample	Touch screen	Yes	Yes, unlimited	Yes
PTZ 400 NICE	3 or 4	Independent	Automated for each sample	Touch screen	Yes	Yes, unlimited	Yes

Suppository Testing

Suppository testing is essential to guarantee the quality and effectiveness of these dosage forms. Designed for insertion into the rectum, vagina, or urethra, suppositories must be carefully tested to ensure they safely and efficiently deliver the active pharmaceutical ingredient (API). The European Pharmacopeia outlines procedures for measuring both the disintegration time and the softening time of suppositories.

Disintegration time is assessed by placing samples in rotating baskets within a heated water bath, while softening time refers to how long it takes for a suppository to melt at a specific temperature, indicating the firmness of its base. The instruments used to evaluate the quality of suppositories, pessaries, and creams typically include devices for testing disintegration and penetration.

Suppository Tester
Model Comparison

	Parameters	Stand alone instrument	End point detection
PTS 3E	Disintegration time	Yes	Manual
SPT-6	Penetration time	No, PTZ disintegration tester required	Automated when used with fully automated PTZ instrument
PTSW-0	Dissolution	No, PTWS dissolution tester required	Depending on configuration of dissolution system

SPT-6
Suppository penetration test assembly

Suppository penetration test assembly to be used together with a Pharma Test PTZ disintegration tester. With this versatile system the PTZ instrument remains suitable for standard tablet disintegration testing.

- Automated measurement of suppository softening time when using with a fully automated PTZ instrument
- Test six samples simultaneously

PTS 3E
Suppository and pessary disintegration tester

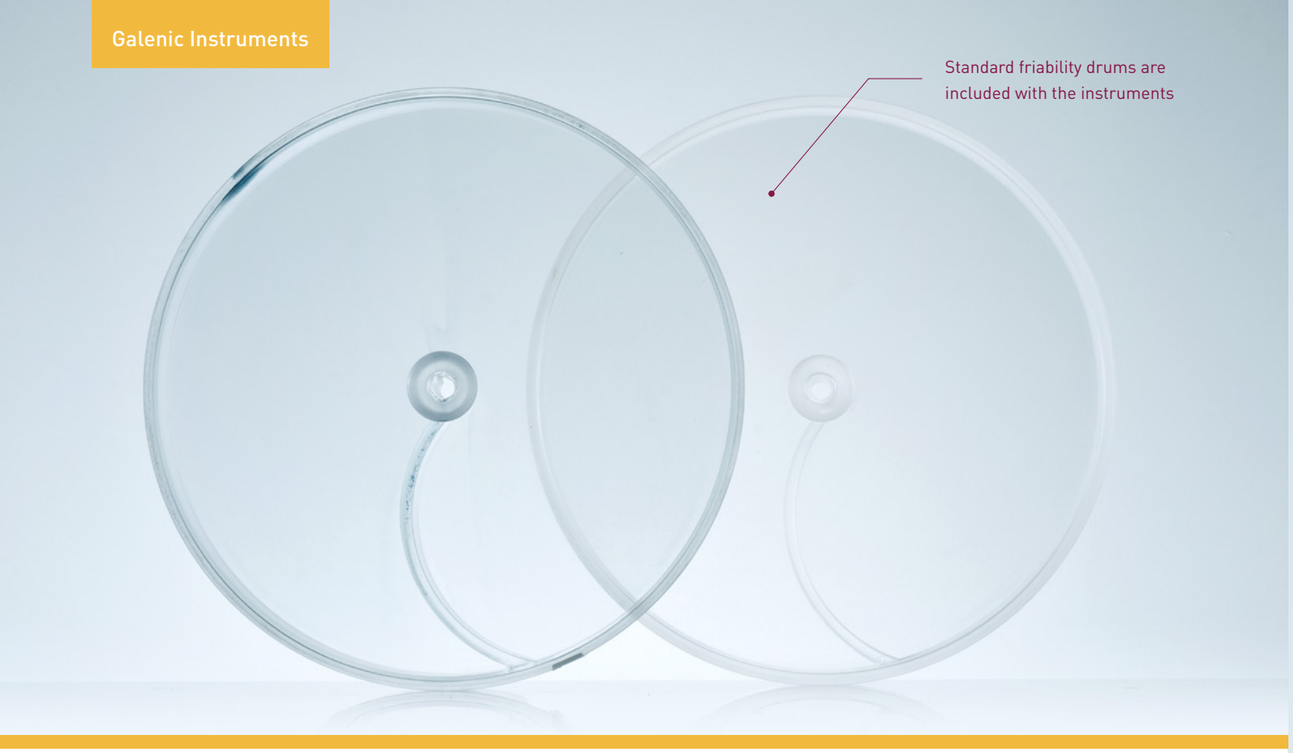
Suppository and pessary disintegration tester for manual measurement of disintegration time.

- Test three samples simultaneously
- Removable bath, sample holder and test baskets for easy cleaning
- Tubular heater and powerful circulation pump system for even temperature distribution

PTSW-0
Suppository dissolution test cell

Suppository dissolution test cell for drug release testing from hydrophobic carrier preparations.

- Compatible with all Pharma Test PTWS instruments
- Adjustable rotation with low speeds enabled by reduction gear
- Easy to operate, set-up and remove for cleaning



Tablet Friability Testing

Friability testing assesses the robustness of tablets throughout packaging and transportation processes. This method measures a tablet's ability to withstand mechanical stress experienced during handling, packing, and shipment. The procedure involves calculating the percentage of weight loss after subjecting a representative sample to defined cycles of rotation and impact within a friabilator, where tablets are repeatedly dropped in a rotating drum equipped with a baffle for a predetermined period.

Test results include evaluating tablet breakage and documenting the proportion of mass lost due to chipping. This assessment ensures that tablets maintain their integrity during storage and distribution, which is critical for dosage consistency and patient safety. Friability testing is an integral part of both formulation development and regulatory compliance.

All Pharma Test friability testers meet the latest USP, EP, and JP Pharmacopeia standards and include friability ("Roche") drums as part of their standard package. Optional abrasion drums and friability drums with anti-static coating are also available.

All PTF instruments support operation at a 10° angle to test larger samples by using collapsible feet (optional).

PTF 130

Single Drum Friability Tester

This single drum tablet friability instrument features a 7-inch color touchscreen for easy operation and compatibility with network printers.

- Single drum instrument with integrated printer
- Variable rotation speed, can be locked to 25 rpm
- Automated sample discharge, incl. waste containers

PTF 230

Double Drum Friability Tester

This double drum tablet friability instrument features a 7-inch color touchscreen for easy operation and compatibility with network printers.

- Double drum instrument with integrated printer
- Variable rotation speed, can be locked to 25 rpm
- Automated sample discharge, incl. waste containers

PTF 330

Triple Drum Friability Tester

This three drum tablet friability instrument features a 7-inch color touchscreen for easy operation and compatibility with network printers.

- Three drum instrument with integrated printer
- Variable rotation speed, can be locked to 25 rpm
- Automated sample discharge, incl. waste containers

Pharma Test PTF instruments offer automated sample discharge

PTF 630

Six Drum Friability Tester

This six drum tablet friability instrument features a 7-inch color touchscreen for easy operation and compatibility with network printers.

- Six drum instrument with integrated printer
- Variable rotation speed, can be locked to 25 rpm
- Automated sample discharge, incl. waste containers

Tablet Friability Tester

Model Comparison

	Drums	Operation modes	Rotation speed	User interface	Integrated printer	User & method management
PTF 130	1	Time, rotations	Variable, 15-100 rpm	Touch screen	Yes	Yes, 100 users, 100 methods
PTF 230	2	Time, rotations	Variable, 15-100 rpm	Touch screen	Yes	Yes, 100 users, 100 methods
PTF 330	3	Time, rotations	Variable, 15-100 rpm	Touch screen	Yes	Yes, 100 users, 100 methods
PTF 630	6	Time, rotations	Variable, 15-100 rpm	Touch screen	Yes	Yes, 100 users, 100 methods

Powder Testing

Powders are integral to numerous industries, with their bulk properties influenced by the methods of preparation, treatment, and storage. Comprehensive powder testing is vital in the development and manufacture of pharmaceutical and food products. By systematically assessing both the physical and chemical characteristics of powders, manufacturers can verify product performance, stability, and compliance with safety and efficacy standards. An in-depth knowledge of powder attributes is essential for ensuring the overall quality and reliability of the final product

The Pharma Test portfolio includes advanced instruments designed to measure not only bulk density but also tap density and flowability.

Additionally, our solutions incorporate flowability assessment alongside NIR (near-infrared) spectroscopy, offering a thorough analysis to provide extensive insight into powder properties.

NICE

PTG-S6 NICE
Automated Powder Tester

Automated powder flow analyzer to measure flow-time, angle of repose, flowability, cone density and cone volume of powders and granules in compliance with the EP <2.9.36>, EP <2.9.16>, USP <1174> Pharmacopoeia and ISO 4324 standards.

Optical powder cone measurement without any moving parts

Full 21 CFR Part 11 compliance incl. audit trail and electronic signatures

Integrated balance, stirrer and dust protection

PT-TD430
Tapped Density Tester

Measure the tapped (also known as "tamped") density and apparent density of powders, granules, pigments, and similar materials according to current standards: USP <616> methods 1 and 2, EP <2.9.34>, DIN EN ISO 787-11, ASTM B527, and ASTM D7481.18.

- Two testing positions supporting 3mm and 14mm tapping height and 250/300 taps per minute
- Automatically calculates Hausner flowability and Carr compressibility
- Connect a balance to determine sample weight (optional)

PT-SV110
Scott Volumeter

Measures the bulk density of powders in line with standards including ISO 3923-2, EP <2.9.34.1>, USP <616, Method II>, and ASTM 32990.

- Applicable to metal powders, compounds, pigments
- Sturdy design using sliding profiles that can be locked
- Instrument comes ready to use, only an analytical balance is needed in addition

PTG-M100
Manual Powder Tester

Manual powder flowability, angle of repose and flow-time tester, compliant with EP <2.9.36>, EP <2.9.16>, USP <1174>, and ISO 4324 standards.

- Cone height measurement for angle of repose via included digital height gauge
- Affordable alternative to automated solutions like PTG-S6 NICE

Powder Tester
Model Comparison

	Paramter	User interface	Integrated printer	User & method management	Audit Trail
PT-SV110	Bulk density	Manual instrument	No	No	No
PT-TD430	Tapped and apparent density	Touch screen	Yes	Yes, 100 users, 100 methods	No
PTG-M100	Angle of repose, flow-time, flowability	Manual instrument	No	No	No
PTG-S6	Angle of repose, flow-time, flowability, cone density, cone volume	Touch screen	Yes	Yes, unlimited	Yes

Leak Testing

Leak testing plays an important role in quality control across multiple industries, especially pharmaceuticals. It helps verify that containers like blister packs, vials, ampoules, and syringes are sealed securely to prevent unwanted substances, such as air or moisture, from passing through. The food industry also uses leak testing to confirm that items – such as sweet packets, pre-packed ready-to-eat foods, confectionery packaging, noodles, and sauces – are airtight. This process is vital for preserving product integrity, sterility, and effectiveness.

PT-LT100

Vacuum Leak Tester

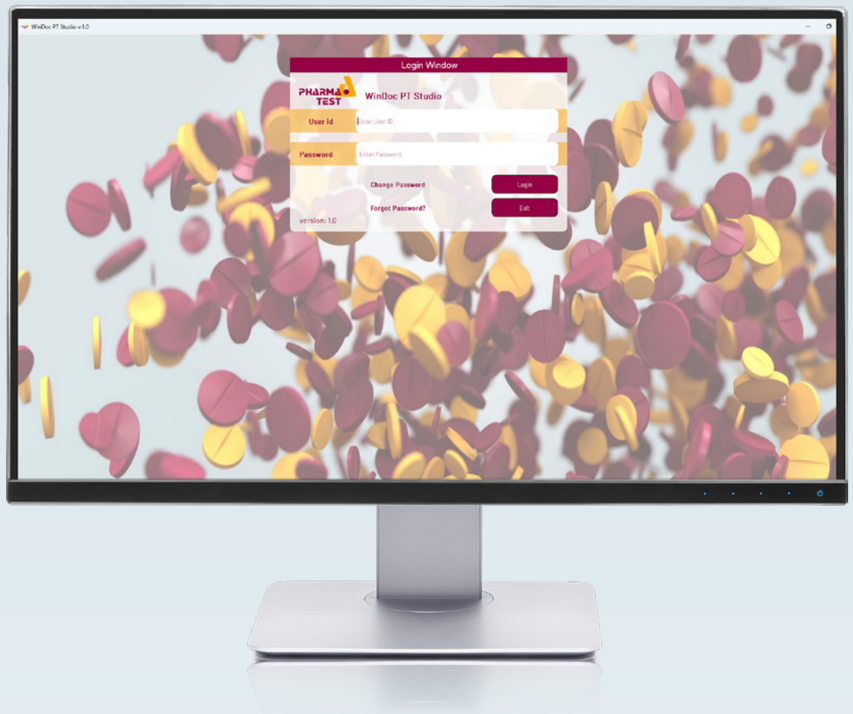
Vacuum leak testing in compliance with USP <1146> to test the integrity of blister packs, bottles and other containers.

- Adjustable vacuum level and holding time
- Method and user management system
- Integrated protocol printer

WinDoc PT-Studio

Software

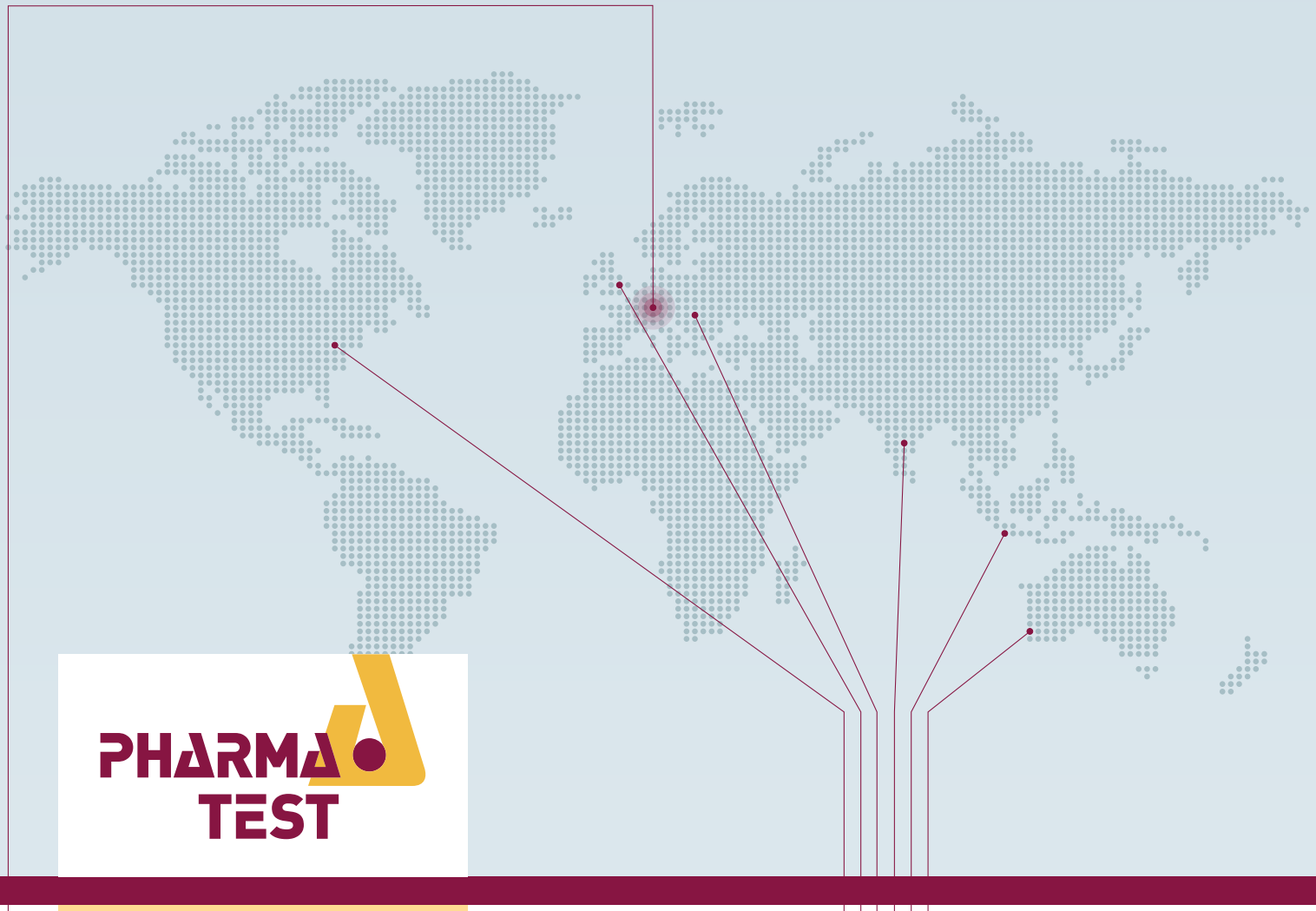
PT-Studio is a Windows-based software for Pharma Test instruments, fully compliant with 21 CFR Part 11. It offers audit trails, electronic signatures, and user management to ensure data integrity and support efficient pharmaceutical testing. Designed for regulated environments, the platform streamlines workflow and validation. The software is compatible with many Pharma Test PTB hardness testers



Manages user accounts, permissions and security settings

Three-level electronic signature system for all test reports

Support for more Pharma Test models in preparation



PHARMA TEST

Pharma Test Apparatebau AG
Siemensstr. 5
63512 HAINBURG
GERMANY

T +49 6182 9532-600
F +49 6182 9532-650

info@pharma-test.de
www.pharma-test.com

Pharma Test USA
(Vortex Sales Group LLC)
11010 Lake Grove Blvd., Suite 100-296
MORRISVILLE, NC 27560 / USA
T +1 800 260 0575
sales@vortexsg.com
www.vortexsg.com

Pharma Test Ltd
12 Bell Mead
SAWBRIDGEWORTH, HERTFORDSHIRE
CM21 9ES / UNITED KINGDOM
T +44 1279 316813
info@pharma-test.co.uk
www.pharma-test.co.uk

Pharma Test Trade KFT
Pálinkás A. u. 3/A D ép. 501.
1118 Budapest / HUNGARY
T +36 30 2037182
m.radikovics@pharma-test.hu
www.pharma-test.hu

Pharma Test Australia
(Chromatech Scientific Pty Ltd)
29 Osprey Drive
AU 6164 YANGEBUP / AUSTRALIA
info@chromatechscientific.com
www.chromatechscientific.com
www.pharma-test.com.au

PT. Pharma Test Indonesia
Rukan Crown Blok A no. 8, Green Lake City
TANGERANG, 15147 / INDONESIA
T +62 21 5431 8816
hans@pharma-test-indo.com
www.pharma-test-indo.com

Pharma Test Instruments India Pvt Ltd
Door No 6-1484/P & 1485/P, 1st Floor
Puppla Pride Building, Pragathi Nagar
500090 HYDERABAD / INDIA
T +91 40 6545 9800
c.neelam@pharma-test.in
www.pharma-test.in

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Current as of March 2026