



ADS-L
Online Automated
Dissolution Testing
Systems

Online Wirkstoff-
freigabe Prüfsysteme



ADS-L

Fully Automated Online Tablet Dissolution Systems

The ADS-L online dissolution systems combine the tablet dissolution apparatus with a powerful and fast-diode array spectrometer for rapid test results. The system is controlled by a specialized PC software controlling all instruments of the system and storing all test results. The system is fully integrated, the software comes pre-installed on the IPC built into the spectrometer. The systems increase productivity by allowing for unattended operation, increasing the reproducibility of results and by making data available quickly.

**The complete system is supplied by Pharma Test.
We offer full system responsibility.**

THE ADS-L ONLINE TABLET DISSOLUTION SYSTEMS CONSIST OF:

- > Pharma Test PTWS dissolution tester
- > TIDAS® L DAD UV/VIS spectrophotometer
- > 21 CFR Part 11 compliant WinDiss ARGUS dissolution Software (Windows 10 compatible)
- > A multi-channel pump

100%
USP / JP / EP
compliant



ADS-L 1420

Fully Automated Online Tablet Dissolution Testing System with 14+2 vessel Pharma Test dissolution tester
PTWS 1420 – dissolution tester also available with 6, 8, or 12 (+2) vessel available



THE PTWS SERIES OFFERS FLEXIBLE CHOICE OF TABLET DISSOLUTION TESTER!

- > 6, 8, 12 or 14 vessel arrangement
- > Automated lift drive with programmable positions
- > Options for automated sampling manifold, tablet drop magazine and individual vessel temperature sensors
- > Dual stirring speed option
- > Color touch screen user interface
- > Easy to clean and to set up

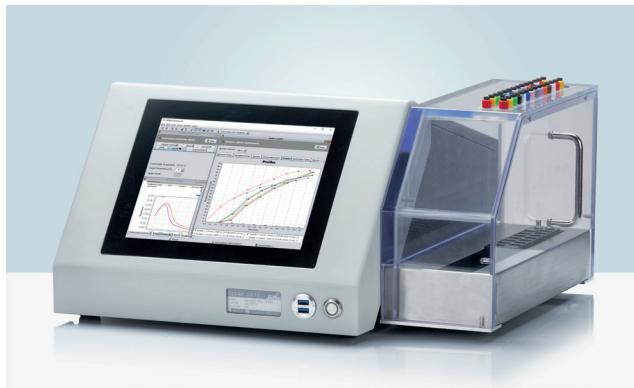
EXPANDED APPLICATIONS:

- > PT-DR Dispersion Releaser – A new dialysis-based apparatus to test nano- and microformulations
- > PTWS 820-MA Media Addition System – Perform automated media change by buffer addition (“half change”)
- > IDS-L Fiber Optic Dissolution System – In-Situ measurements directly in the testing vessels with optimized probe design (upcoming)



WinDiss ARGUS Dissolution Software is a scientific dissolution data management software for instrument control, data acquisition, data management, processing and reporting:

- > Ensure regulatory compliance to 21CFR Part 11
- > Connect multiple dissolution systems to one central database
- > Detailed audit trail for electronic records
- > Exchange data with LIMS or enterprise document management systems (EDMS)



The TIDAS® L Fiber Optic Diode-Array Spectrometer was developed with the requirements of tablet dissolution testing in mind!

- > 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
- > Diode-array technology enables multi-component analysis
- > Integrated PC running the WinDiss ARGUS dissolution Software

ADS-L

Vollautomatisches Online Wirkstofffreigabe Prüfsystem

Das ADS-L Wirkstofffreigabe Prüfsystem kombiniert ein Wirkstofffreigabe Prüfgerät mit einem leistungsstarken und schnellen Diodenarray Spektrometer für unmittelbar verfügbare Testergebnisse. Das gesamte System wird über eine spezielle PC Software gesteuert, die alle Komponenten des Systems kontrolliert und alle Ergebnisse dokumentiert und archiviert. Das System ist vollständig integriert, die Software ist auf dem in das Spektrometer eingebauten Industrie-PC vorinstalliert. Das System steigert die Produktivität indem es unbeaufsichtigten Betrieb ermöglicht, die Reproduzierbarkeit der Testergebnisse erhöht, sowie alle Informationen unverzüglich zur Verfügung stellt.

**Das komplette System wird von Pharma Test geliefert.
Pharma Test bietet die vollständige Systemverantwortung.**

DIE ADS-L ONLINE WIRKSTOFF-FREIGABE PRÜFSYSTEME BESTEHEN AUS:

- > Pharma Test PTWS Wirkstofffreigabe Prüfgerät
- > TIDAS® L DAD UV/VIS Spektrometer
- > 21 CFR Part 11 konforme WinDiss ARGUS Wirkstofffreigabe Software (Windows 10 kompatibel)
- > Eine Mehrkanalpumpe

100%
USP / JP / EP
konform



ADS-L 1420

Vollautomatisches Wirkstofffreigabe Prüfsystem inklusive dem PTWS 1420 Wirkstofffreigabe Prüfgerät mit 14+2 Gefäßen – Prüfgeräte auch verfügbar mit 6, 8 oder 12 (+2) Gefäßen



DIE PTWS GERÄTESERIE ERMÖGLICHT EINE FLEXIBLE AUSWAHL AN WIRKSTOFFFREIGABE PRÜFGERÄTEN!

- > 6, 8, 12 oder 14 Prüfgläser
- > Aut. Lift mit programmierbare Arbeitspositionen
- > Optional automatisiertes Probenentnahmesystem, Tabletten-Einwurfmagazin sowie ein individuelles Medientemperatur Messsystem
- > Möglichkeit zwei versch. Rührgeschwindigkeiten zu fahren
- > Farbiger Touchscreen als Benutzeroberfläche
- > Einfach zu Reinigen und Aufzusetzen



ERWEITERTE ANWENDUNGSMÖGLICHKEITEN:

- > PT-DR Dispersion Releaser – eine neue Apparatur auf Basis der Dialysetechnik zur Prüfung von Nano- und Mikroformulierungen
- > PTWS 820-MA Medienergänzungssystem – Vollautomatischer Wechsel des Mediums durch Zugabe eines Puffers ("half change")
- > IDS-L faseroptisches Wirkstofffreigabe Prüfsystem – In-Situ Messung direkt in den Prüfgläsern mit einer speziell angefertigten Sonde (in Entwicklung)



Die WinDiss ARGUS Dissolution Software ist eine wissenschaftliche Wirkstofffreigabe Datenmanagement Software die eine komplette Geräteansteuerung, Datenerfassung, Datenverwaltung, Datenverarbeitung sowie Berichterstattung ermöglicht:

- > Ermöglicht die behördliche Konformität zu 21CFR Part 11
- > Verbindet mehrere Wirkstofffreigabe Prüfsysteme mit einer zentralen Datenbank
- > Ein detaillierter Audittrail zur Dokumentierung aller elektronischen Aufzeichnungen
- > Austausch der Daten mit LIMS oder dem Enterprise Dokumentenmanagement System (EDMS)



Das TIDAS® L faseroptische Diodenarray Spektrometer wurde entwickelt, um den Anforderungen der Wirkstofffreigabe Prüfung zu entsprechen!

- > Zertifizierte Faseroptiken sowie optimierte Messzellen ermöglichen belastbare Testergebnisse
- > Der Mehrfach-Küvettenwechsler für bis zu 14 Küvetten
- > Zusätzlicher Anschluss von zwei Faseroptiken möglich
- > Die Diodenarray Technologie ermöglicht eine Mehrkomponenten Analyse
- > Der integrierte PC führt die WinDISS ARGUS Dissolution Software aus

40 Years of Pharma Test!

(1979-2019)



**Pharma Test has turned 40 in 2019!
Over 40 years of technical innovations,
customer orientation, service, reliability
and partnerships. Global Player. Driven
to keep on evolving and to making a
difference.**

**Pharma Test ist 2019 40 Jahre alt geworden!
Über 40 Jahre technische Innovationen,
Kundenorientierung, Service, Zuverlässigkeit
und Partnerschaften. Global Player.
Angetrieben, sich weiterzuentwickeln
und einen Unterschied zu machen.**

40 Years of Pharma Test!

Pharma Test was founded by Franz J. Fähler in 1979 in Hainburg, in the district of Offenbach in the center of Germany. Through his previous sales activities in the drug quality control testing industry he recognized the potential in this growing market. The company is now worldwide a leader in high quality testing equipment used in the pharmaceutical, food and cosmetics industries.

Not in a garage, but in the attic of a townhouse Pharma Test was built out of nowhere and at the beginning with a single manpower. The initial driving force behind this committed endeavor was the quest to create a new hallmark for testing quality-relevant properties during and after the manufacture of pharmaceutical products.



Franz J. Fähler at a product presentation in the early eighties

MILESTONES AND GROWTH

As its first product, Pharma Test launched a dissolution testing instrument for the analytical control of tablets. The device was one of the first models with an automated lift drive to raise and lower the head of the machine. The product range was gradually expanded to include galenic instruments for the physical testing of tablets and other solid dosage forms, powders and granules. In 1997 Pharma Test acquired the company Pharmag GmbH in Klipphausen near Dresden. This company already existed in GDR times and manufactured testing equipment for the pharmaceutical industry there. After the German reunification, Pharmag became an important supplier of parts and assembly services for the equipment manufactured by Pharma Test. In addition to the manufacturing and the supply of equipment and parts, Pharmag today sells its own product line, a pilot plant

system for the formulation and small batch production of pharmaceutical and cosmetic products.

In 2016, J & M Analytik AG, a manufacturer and developer of UV/VIS/NIR as well as Rahman spectrometers and systems based on optical fibers and diode array detectors, was acquired by the Pharma Test Group.

STRONG DISTRIBUTION NETWORK

All of the equipment and automated systems are offered to customers through a strong network of subsidiaries and distributors with over 100 partnering companies around the world. Each with qualified and trained staff to offer service and maintenance locally. Pharma Test values good, longstanding relationships with our partners and all our stakeholders which is based on trust, reliability, transparency and cooperation.

GENERATION CHANGE

Today Franz J. Fähler remains in the company as Chairman of the Board (COB). His son Björn Fähler has been a member of the Executive Board since 2009 and is now successfully leading as CEO of the company through its second generation. His goal is to further develop the company group and to future-proof it.

CONTINUOUS FURTHER DEVELOPMENT OF THE PRODUCT RANGE

Today's product portfolio ranges from simple, manual testers for the physical testing of tablets, capsules, suppositories, bulk solids and other products, to fully automated analytical testing systems for determining drug content using UV/VIS and NIR spectroscopy. Pharma Test always strives to offer new solutions. For example, a new apparatus for testing nano-dosage forms called the Dispersion Releaser is being developed in cooperation with the Fraunhofer Institute for Molecular Biology and Applied Ecology IME and the Goethe University Frankfurt/Main. Pharma Test continues to evolve its products and product range to meet ever-changing customer needs.



CEO, Björn Fähler at Analytica Vietnam 2019 accepting a reward for Pharma Test for participating at the 10th anniversary of the exhibition Vorstand Björn Fähler nimmt einen Preis für Pharma Test entgegen bei der Analytica Vietnam 2019 für die Teilnahme zum 10. Messejubiläum



Sponsorship project “Dispersion Releaser” together with Fraunhofer IME and Goethe University Frankfurt
(image: courtesy of HA Hessen Agentur GmbH - Jan Michael Hosan) Förderprojekt “Dispersion Releaser” zusammen mit dem Fraunhofer IME und der Goethe-Universität Frankfurt (Bild: mit freundlicher Genehmigung der HA Hessen Agentur GmbH - Jan Michael Hosan)

40 Jahre Pharma Test

Pharma Test wurde 1979 in Hainburg, im Kreis Offenbach, von Franz J. Fähler gegründet. Durch seine vorige Vertriebstätigkeit in der Branche für Prüfgeräte zur Qualitätskontrolle von Arzneimitteln erkannte er das Potential in diesem wachsenden Markt. Inzwischen ist das Unternehmen ein weltweit führender Anbieter von hochwertigen Testgeräten für die pharmazeutische, Lebensmittel- und Kosmetikindustrie.

Nicht in einer Garage, aber auf dem Dachboden eines Reihenhauses, wurde Pharma Test aus dem Nichts und zu Beginn mit einer einzelnen Manpower aufgebaut. Triebkraft für dieses engagierte Unterfangen war das Bestreben ein neues Markenzeichen für die Prüfung qualitäts-relevanter Eigenschaften, während und nach der Herstellung von pharmazeutischen Produkten, zuschaffen.



Franz J. Fähler bei einer Produktpräsentation Anfang der achtziger Jahre

MEILENSTEINE UND WACHSTUM

Als erstes Produkt brachte Pharma Test ein Wirkstoff-Freigabeprüfergerät zur analytischen Kontrolle von Tabletten auf den Markt. Das Gerät war einer der ersten Typen mit einem automatischen Antrieb, um den Gerätekopf zu heben und zu senken. Die Produktpalette wurde schrittweise um galenische Instrumente zur physikalischen Prüfung von Tabletten und anderen festen Darreichungsformen, Pulvern und Granulaten erweitert. 1997 wurde das Unternehmen Pharmag GmbH aus der Nähe von Dresden übernommen. Bereits zu DDR Zeiten stellte das Unternehmen Prüfgeräte für die pharmazeutische Industrie her. Neben der Herstellung und Zulieferung von Geräten und Teilen vertreibt Pharmag heute eine eigene Produktlinie, ein Pilot-Plant System zur Formulierung und Kleinchargenfertigung von pharmazeutischen Produkten.

2016 wurde die J&M Analytik AG, ein Hersteller und Entwickler von optischen Messgeräten und Systemen auf Basis von Lichtleitern und Dioden-Array Detektoren, in den Firmenverbund der Pharma Test Gruppe übernommen.

STARKES VERTRIEBSNETZWERK

Alle Geräte und automatisierten Systeme werden den Kunden über ein starkes Netzwerk von Tochterunternehmen und Distributoren mit über 100 Partnerunternehmen auf der ganzen Welt angeboten. Jedes mit qualifiziertem und geschultem Personal, um Service und Wartung vor Ort anzubieten. Pharma Test schätzt gute, langjährige Beziehungen zu unseren Partnern und allen unseren Stakeholdern, die auf Vertrauen, Zuverlässigkeit, Transparenz und Zusammenarbeit beruhen.

GENERATIONSWECHSEL

Seit 2009 ist Björn Fähler Mitglied des Vorstands und führt inzwischen in zweiter Generation das Unternehmen erfolgreich weiter. Sein Ziel ist es die Unternehmensgruppe weiterzuentwickeln und zukunftssicher aufzustellen.

FORTLAUFENDE WEITERENTWICKLUNG DES PRODUKTSPEKTRUMS

Das heutige Produkt-Portfolio reicht von einfachen, manuell zu bedienenden Prüfgeräten für die physikalische Prüfung von Tabletten, Kapseln, Suppositorien, Schüttgütern und anderen Produkten bis hin zu vollautomatischen analytischen Prüfsystemen zur Bestimmung des Wirkstoffgehalts mittel UV/VIS und NIR Spektroskopie. Dabei ist Pharma Test stets bestrebt neue Lösungen anzubieten. So wird derzeit ein neuer Apparat zur Prüfung von Nano-Darreichungsformen in Zusammenarbeit mit dem Fraunhofer-Institut für Molekularbiologie und angewandte Ökologie IME und der Goethe Universität Frankfurt/Main entwickelt.

OUR **PORTFOLIO**

UNSER PRODUKTANGEBOT



Portfolio Overview
Tablet Dissolution
Testing





Tablet Dissolution Testing

For over 40 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.

Our foremost priority is to develop products with the quality that you would expect from the “Made in Germany” label – “The German Gründlichkeit”.



Tablet Dissolution Testing Instruments

A dissolution test is a means of identifying and proving the availability of active pharmaceutical ingredient (API) in their delivered form. A dissolution test reflects the availability of active substance and allows the prediction of the time for complete release of the material from the dosage form. All Pharma Test tablet dissolution testing instruments are fully USP, EP and JP compliant. They use our MonoShaft™ tool system and include a full set of vessel and USP Apparatus 2 paddles. A full range of dissolution accessories is also available.



PTWS 120D

6-Station Tablet Dissolution Bath

- > 6 stirred positions, excellent access to all vessels
- > Centrally located electronic lift drive to raise and lower the head
- > Large color touch screen user interface



PTWS 120S

6-Station Individual Speed Control
Dissolution Bath

- > Individual speed control for all 6 stirred positions
- > Centrally located electronic lift drive to raise and lower the head
- > Large color touch screen user interface



PTWS 820D

8-Station Tablet Dissolution Bath

- > 8 stirred positions, excellent access to all vessels
- > Centrally located electronic lift drive to raise and lower the head
- > Large color touch screen user interface



PTWS 620

6+2 Station Tablet Dissolution Bath

- > 8 stirred positions, 6+2 configuration
- > Rigid motorized lift drive to raise and lower the head
- > Large color touch screen user interface



PTWS 1220

6+6 Station Tablet Dissolution Bath

- > 12 stirred positions, 6+6 configuration: ideal for Biowaiver tests
- > Rigid motorized lift drive to raise and lower the head
- > Large color touch screen user interface



PTWS D620

6+6 Dual Drive Dissolution Bath

- > 12 stirred positions, individual speed control for both rows
- > Rigid motorized lift drive to raise and lower the head
- > Large color touch screen user interface



PTWS 4000

4-Liter Pool Test Dissolution Bath

- > 6 stirred positions for 4 liter vessels in a unique format
- > Also supports 1 and 2 liter vessels
- > Motorized lift drive to raise and lower the head



PT-DT70

6+1 Station Tablet Dissolution Bath

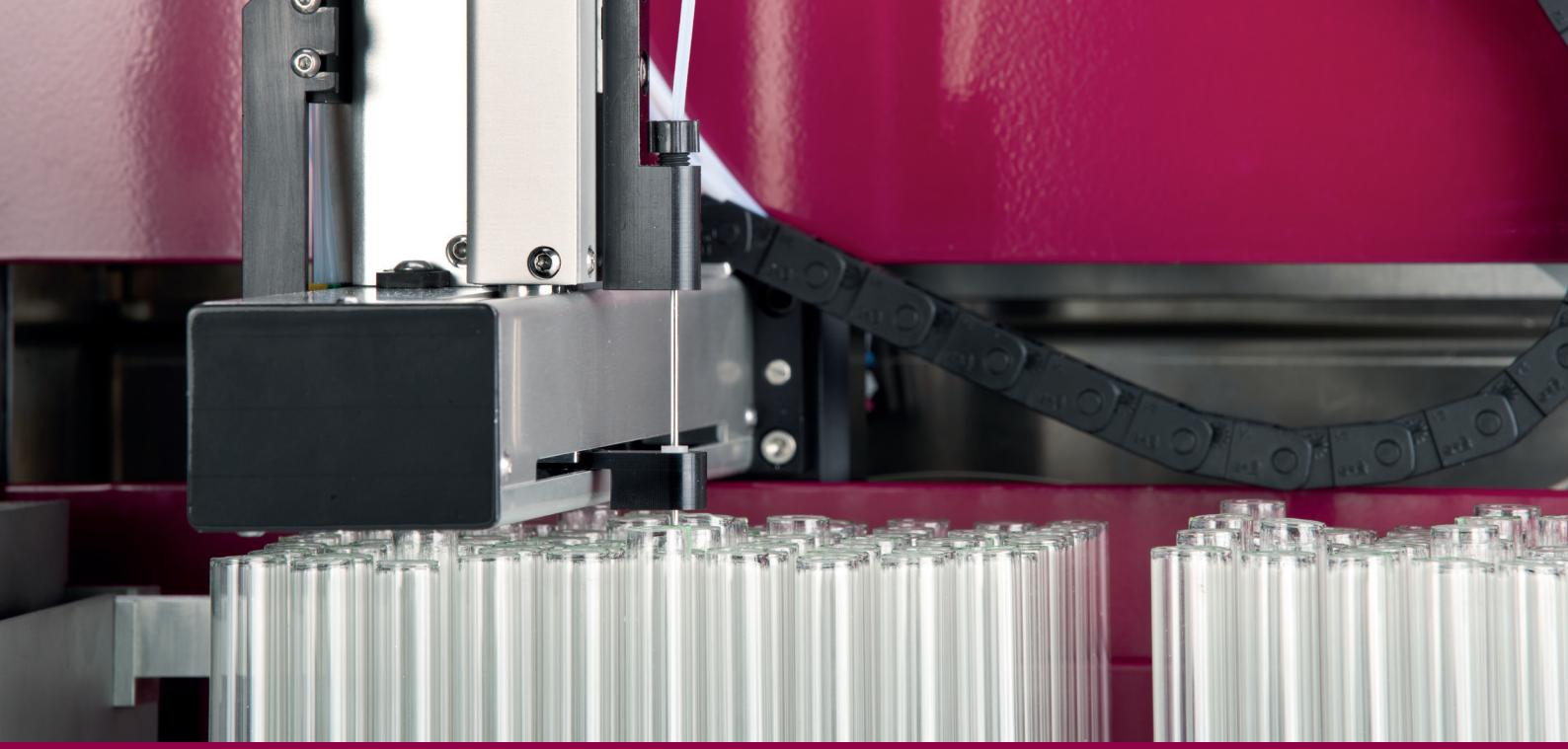
- > 7 stirred positions
- > Low head design with pneumatic flip-back lift
- > Tablet drop directly through chutes in instrument head



PT-DDS4

Media Preparation System

- > 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 medium preparation process



Automated Dissolution Testing Systems

An offline automated dissolution system includes a dissolution bath, a pump and a fraction collector. They automate sampling which is the most labor intense stage of a dissolution test, especially for sustained release products. Online systems automate sampling, measuring, and result calculation. Unlike the offline systems where samples are removed from the dissolution vessels and stored either for transfer to a measurement system or for further preparation (e.g. dilution), the samples here are circulated in a closed loop. The TIDAS® L UV/VIS spectrophotometer with multi cell changer by J&M and the WinDiss ARGUS PC control software is included as part of this system set-up.



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 12 station dissolution baths
- > Up to 20 sampling cycles (10 cycles with dilution)



DFC | Offline Automated Dissolution Testing Systems

The DFC offline automated dissolution testing systems include a dissolution bath, a pump and a fraction collector which will collect the sampled dissolution media.

- > Automates sampling, the most labour intensive stage of a dissolution test
- > Automated sampling reduces human (non-systematic) errors
- > Offers unattended operation after start of dissolution run



ADS-L | Online Automated Dissolution Testing Systems

The online ADS systems are so called “closed loop” dissolution systems. Sampling, measuring, and result calculation are automated.

- > Automates sampling, measuring, and result calculation
- > No media loss due to closed loop design
- > Includes TIDAS® L UV/VIS spectrophotometer by J&M and WinDiss ARGUS PC software



Portfolio Overview
Galenic Instruments



Tablet Hardness Testing Instruments

Tablet hardness testing is used to test the breaking point and structural integrity of a tablet prior to storage, transportation, and handling before usage. All Pharma Test tablet hardness testing instruments meet the latest requirements of the USP and EP Pharmacopeia.



PTB 420 Auto

"4-in-1" Hardness Tester with Integrated Balance and Feeder

- > Measures thickness, diameter, hardness and weight via integrated analytical balance
- > Touch-less measurement of sample thickness
- > Tests up to 25 samples fully automatically by using the integrated sample feeder



PTB 111E

Hardness Tester

- > Measures tablet hardness
- > Automated re-start feature to speed up the testing sequence
- > Time and date are printed on the reports

PTB 111EP

Hardness Tester with Integrated Printer

- > Measures tablet hardness and document results via an integrated printer
- > Automated re-start feature to speed up the testing sequence
- > Time and date are printed on the reports



PTB 311E

"3-in-1" Hardness Tester

- > Measures tablet thickness, diameter and hardness
- > Automated re-start feature to speed up the testing sequence
- > Time and date are printed on the reports



PTB 420

"4-in-1" Hardness Tester with Balance Connection

- > Measures thickness, diameter, hardness and weight (via connected external balance)
- > Touch-less measurement of sample thickness
- > Tests up to 10 samples fully automatically by using a tablet magazine (optional)



PTB 302

Hardness Tester with Integrated Printer

- > Measures tablet hardness and document results via integrated printer
- > Automated re-start feature to speed up the testing sequence
- > Stainless steel housing and simple operation ideally suited to a production environment



PTB-M

Portable Hardness Tester

- > Compact, portable instrument to measure tablet hardness
- > Features the same high quality force sensor as other Pharma Test hardness testers
- > Operated by 9V battery or using supplied power adapter



WHT 3ME

Fully-Automated Tablet Hardness Testing System

- > Measures weight, thickness, diameter and hardness of tablets in a fully automated self-contained system
- > Multi and single batch feeders available
- > WHT32 software included with full 21 CFR part 11 compliance (optional)



PTBA 211E

Ampoule Breakpoint Tester

- > Fully DIN/ISO 9187 compliant test of ampoule hardness
- > Exchangeable supports to allow testing of 1-30ml ampoules
- > Automated re-start feature to speed up the testing sequence



PT-MT3

Magnetic Test Tablet

- > A dynamic validation option for tablet hardness testing instruments
- > Tablet simulator to qualify break point detection, load cell linearity and force increase
- > A test finger held in place by an electro-magnet acts as a "re-breakable" and "re-settable" tablet



Tablet Disintegration Testing Instruments

Tablet disintegration testing instruments are widely used in the pharmaceutical industry to evaluate the disintegration characteristics of formulations and the quality control of different dosage forms. All Pharma Test tablet and capsule disintegration testers are fully compliant with the current USP and EP Pharmacopeia and support both A-type and B-type baskets for regular or larger samples. The PT-ODF (pictured above) is a special basket to test the disintegration of orally dispersible films.



PTZ-S and DIST
Manual Disintegration Testers



PTZ AUTO
Semi-Automated Disintegration Testers



PTZ AUTO EZ
Fully-Automated Disintegration Testers

- > Cost-effective, manual disintegration testing instruments
- > Models with one (PTZ-S) and three (DIST 3) test stations available
- > Instrument body made from GMP compliant stainless steel

- > Independent movement of all stations and time log function
 - > Models with one, two, three and four test stations available
 - > Instrument body made from GMP compliant stainless steel
- > Fully-automated individual disintegration time detection
 - > Models with one, two, three and four test stations available
 - > Instrument body made from GMP compliant stainless steel



Friability Testing Instruments

Friability testing is used to test the durability of tablets during packing processes and transit. This involves repeatedly dropping a sample of tablets over a fixed time, using a rotating drum with a baffle. The result is inspected for broken tablets, and the percentage of tablet mass lost through chipping. All Pharma Test friability testers are fully compliant to the current USP and EP Pharmacopeia and come with friability („Roche“) drums included in the standard scope of supply. Abrasion drums as well as an anti-static coating are available as options. All PTF instruments support operation at a 10 degree angle to test larger samples by use of collapsible feet.



PTF 10E / PTF 20E
Tablet Friability Testers



PTF 100 / PTF 200
Tablet Friability Testers



PTF 300 / PTF 600
Tablet Friability Testers

- > Available as single and double drum versions with fixed rotation speed at 25 rpm
- > Instrument body made from GMP compliant stainless steel
- > Easy to use and cost-effective instrument

- > Available as one and two drum versions
- > Variable rotation speed setting from 10-70 rpm
- > Automated sample discharge, analytical balance connection and optionally available integrated printer

- > Available as three and six drum versions
- > Variable rotation speed setting from 10-70 rpm
- > Automated sample discharge, analytical balance connection and integrated printer (included)



Suppository Testing Instruments

The European Pharmacopoeia describes methods to test the disintegration time and softening time of suppositories. Disintegration time is measured by placing the samples into rotating baskets inside a heated water bath. The softening time is the time in which the suppository melts at a certain temperature. This is an indication for the hardness of the base. This range of instruments to test the quality of suppositories and pessaries includes disintegration and penetration testers.



PTS 3E

Suppository Disintegration Tester



SPT-6

Suppository Softening (Penetration) Time Tester

- > Fully EP <2.9.2> compliant testing of 3 samples at the same time
- > Tests disintegration of suppositories and pessaries
- > Instrument body made from GMP compliant stainless steel

- > Tests six samples at the same time
- > To be connected to a PTZ-S, DIST 3 or PTZ AUTO (EZ) instrument
- > Fully automated detection of suppository softening time (with PTZ AUTO EZ units)

Powder Testing Instruments

Powders are used in many industries today and the bulk properties of a powder are dependent upon the preparation, treatment, and storage of a sample. Since small disturbances of bulk powders result in a changed bulk density, it is often very difficult to measure with good reproducibility. The Pharma Test powder testing product portfolio includes instruments to not only measure bulk density but also tapped density and flowability. Pharma Test also offers added benefits by combining flowability measurement with NIR (near-infrared) spectroscopy to give as much in-depth information about your powders as possible.



PT-TD300

Tapped Density Tester



PT-SV100

Scott Volumeter

- > Determines bulk density of powders to improve product quality during the production process
- > Fully USP, EP, ISO and ASTM compliant with noise reduction hood available as an option
- > Supports 3 and 14mm tapping height, as well as frequency of 250 and 300 per minute

- > Easy to use instrument to determine apparent density
- > Applicable to powders including metal powders, compounds and pigments
- > Instrument comes ready to use, only an analytical balance is needed in addition to the basic unit



PTG-S5

Powder Characterization Instrument



PTG-NIR

Powder Analysis System

- > Measures the flow behaviour of powders to reduce process costs and maintain batch-to-batch quality
- > Determines flow-time, cone angle, flowability, cone density and cone volume
- > Integrated analytical balance cell, dust protection bonnet and printer

- > All features of the standard PTG-S5 instrument combined with J&M NIR spectroscopy
- > The integrated diode array NIR spectrometer allows measurements directly in the powder cone
- > Performs quantitative analyses to determine moisture or content information



Leak Testing Instruments

The leak testing apparatus is used in the pharmaceutical industry to check the integrity of tablet strips, blister packs and small bottles. It also finds application in the food industry where it can be effectively used to check the air-tightness of sweet packets, ready-to-eat pre-packed foods, confectionery packaging, packs of noodles, sauces to name just a few.



PT-LT
Leak Tester

- > Tests the integrity of tablet strips, blister packs and bottles
- > Operation based on vacuum
- > Different sizes of desiccators available to accommodate broad sample size range

THE GERMAN GRÜNDLICHKEIT



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