

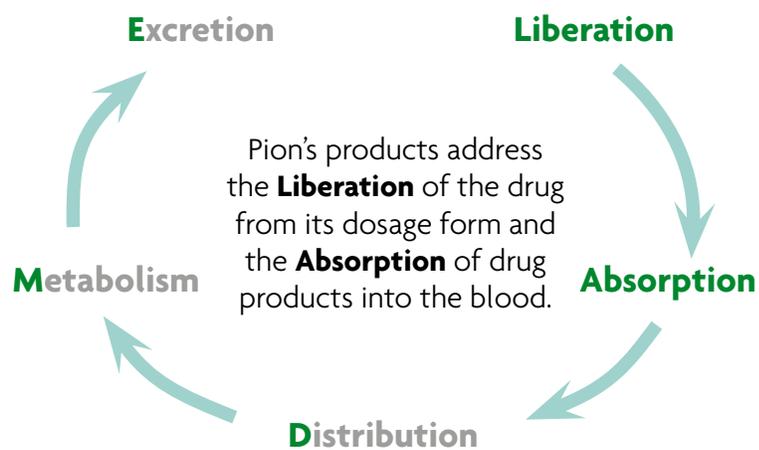


Solutions for Pharma

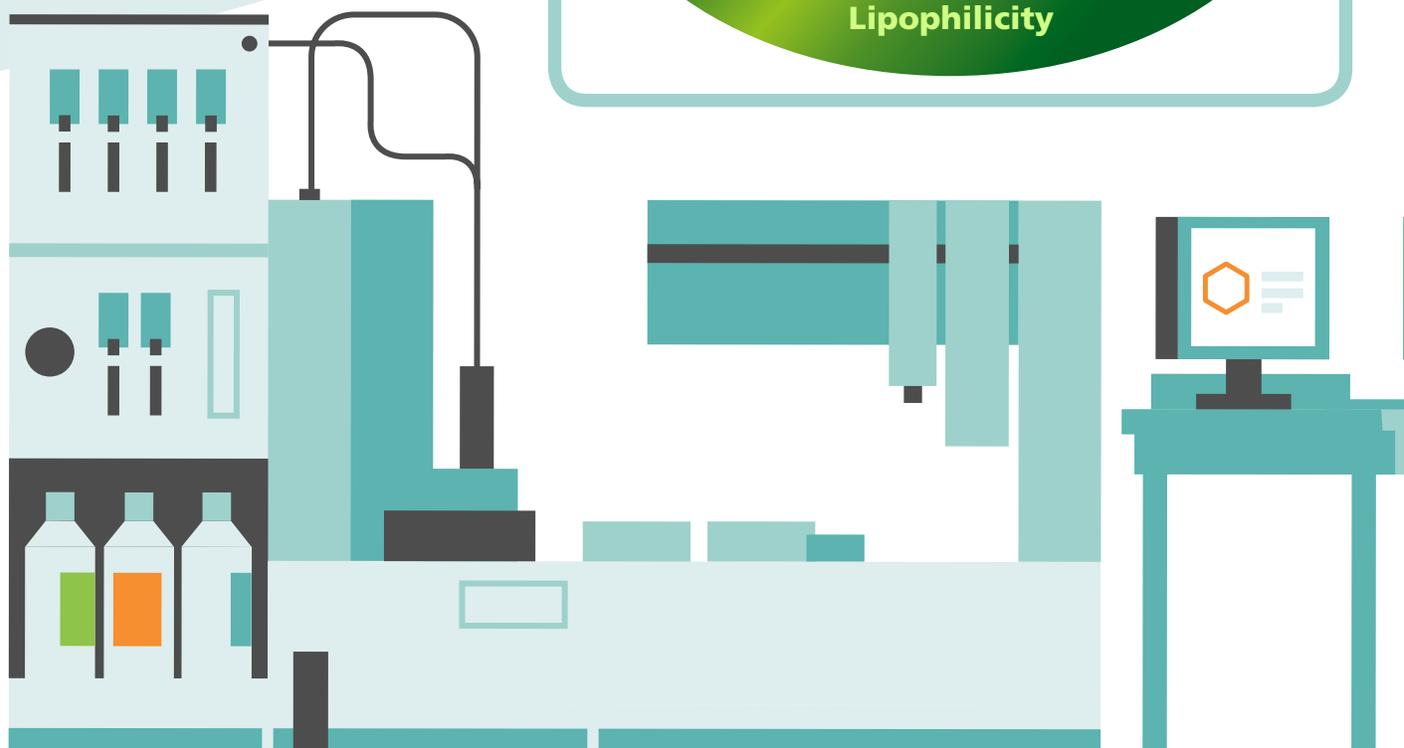
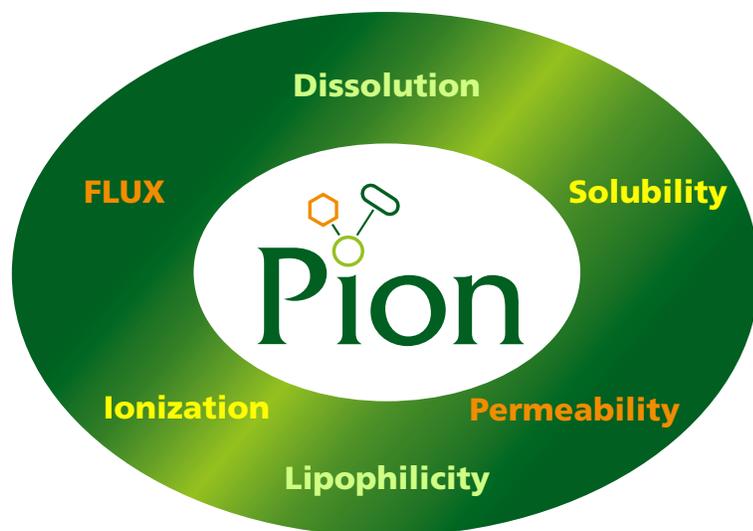


Pion is a science-based company providing innovative technology, solutions, support and scientific expertise to the drug development industry.

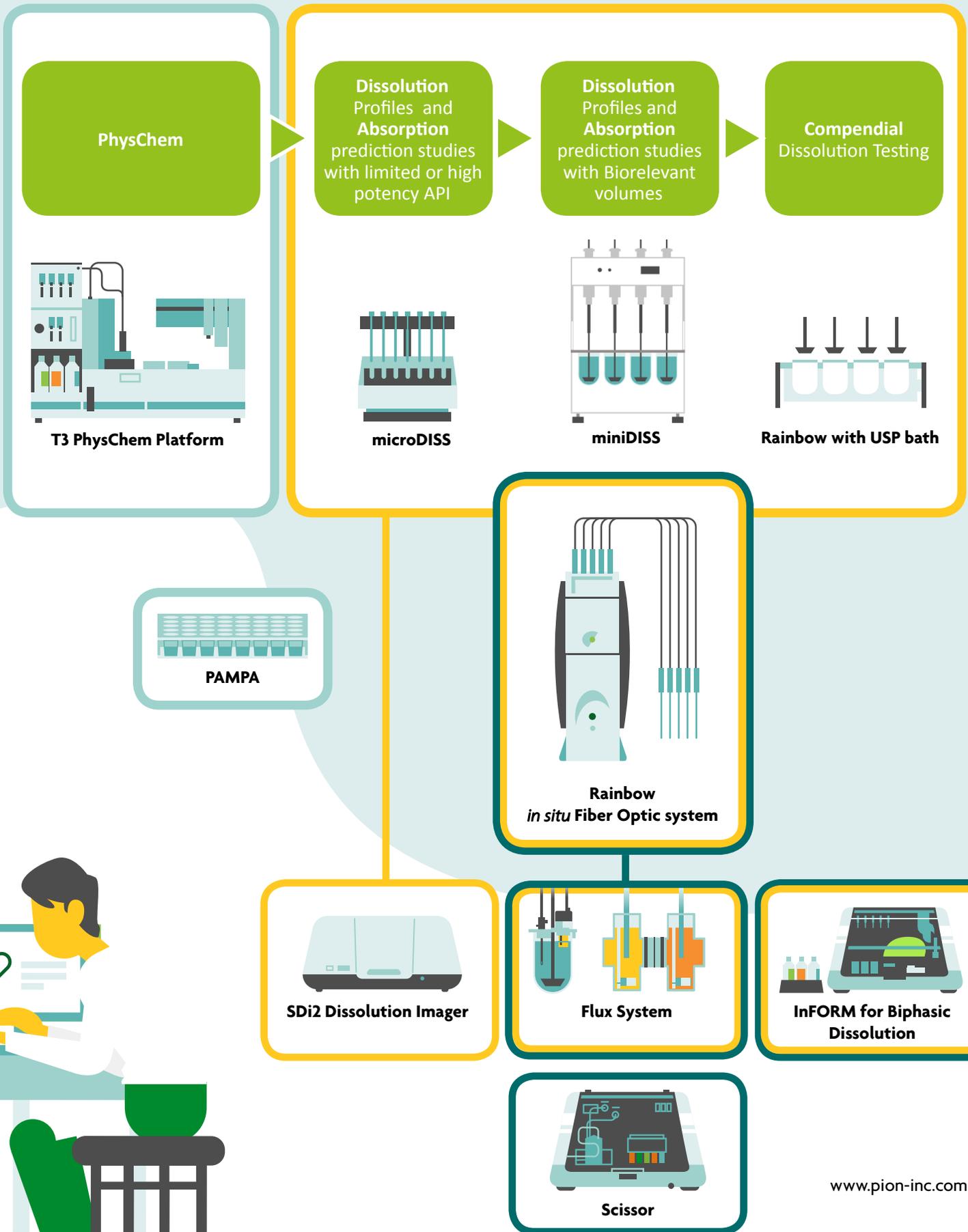
Our solutions enable pharmaceutical scientists to make efficient, early phase screening of drug compounds and provide critical data for the development of products that make a difference to people's lives.



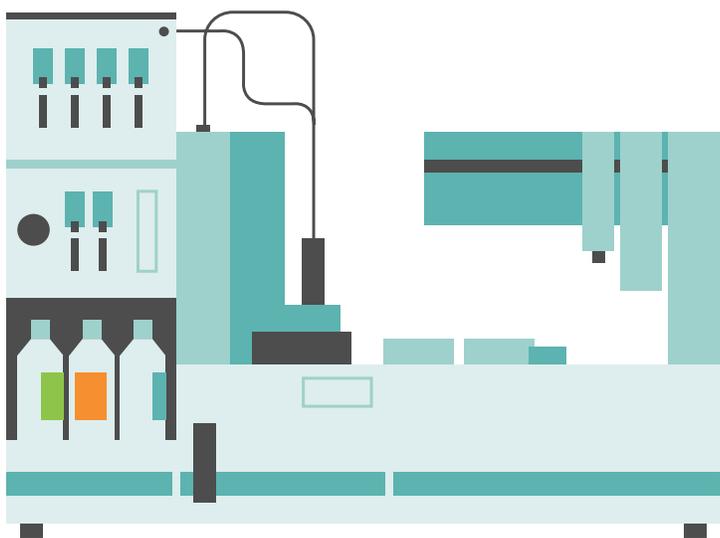
Our innovative instrumentation and software based solutions are based on our expertise in the areas of:



Drug Discovery ▶ Pre-Formulation ▶ Formulation ▶ Production



Instrumentation for Lead Optimization

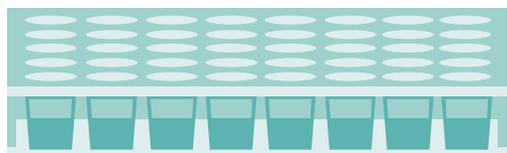


T3 PhysChem Platform

The T3 measures pKa, log P, log D and solubility of ionizable, small molecule drugs using sub-milligram quantities of sample.

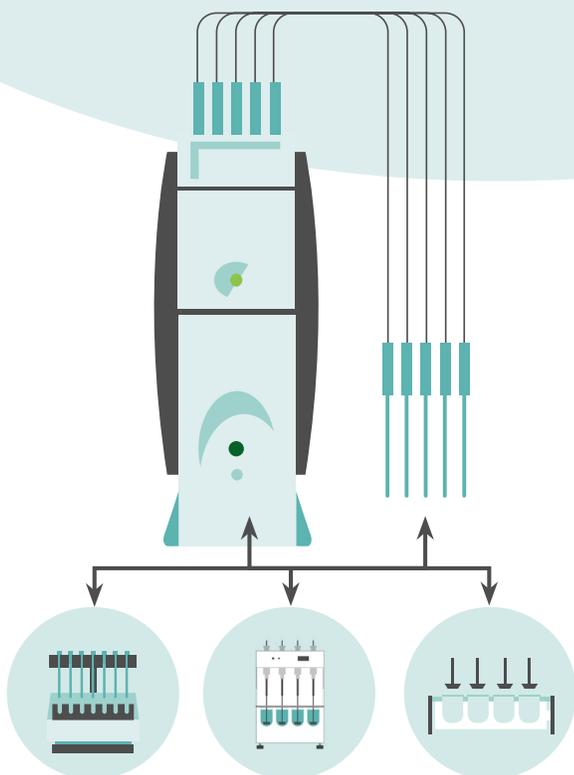
PAMPA

Pion's high throughput PAMPA platform is used in permeability studies of the skin, blood brain barrier, and the gastrointestinal tract.



Dissolution

Pion offers a wide range of Dissolution Monitoring systems tailored for the requirements of early phase compound screening through manufacturing QC testing.

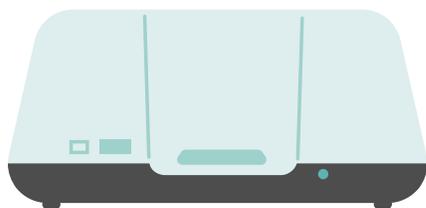


The Rainbow Dynamic Dissolution Monitor is an *in-situ* fiber optic UV-vis spectrometer and the industry best practice to generate real time concentration data.

Equipped with 8 independent fiber optic channels it provides data acquisition of the entire UV Spectra (200-720 nm) at intervals as fast as 2 seconds.

Dissolution Monitors

	microDISS	miniDISS	Rainbow with USP I/II bath
Size of vessel	12 mm and 25 mm diameter vials	100, 150, 200, 250 mL vessels	1L vessel
Media volume, typical	1-22 mL	40-200 mL	400-900 mL



SDi2 Dissolution Imager

The SDi2 generates a high-resolution video of the surface of a solid dose form during dissolution while simultaneously measuring the concentration. Dissolution media changes can be programmed to allow modeling of gastric to intestinal transitions.

The SDi2 provides the dissolution profile, intrinsic dissolution and a video file.

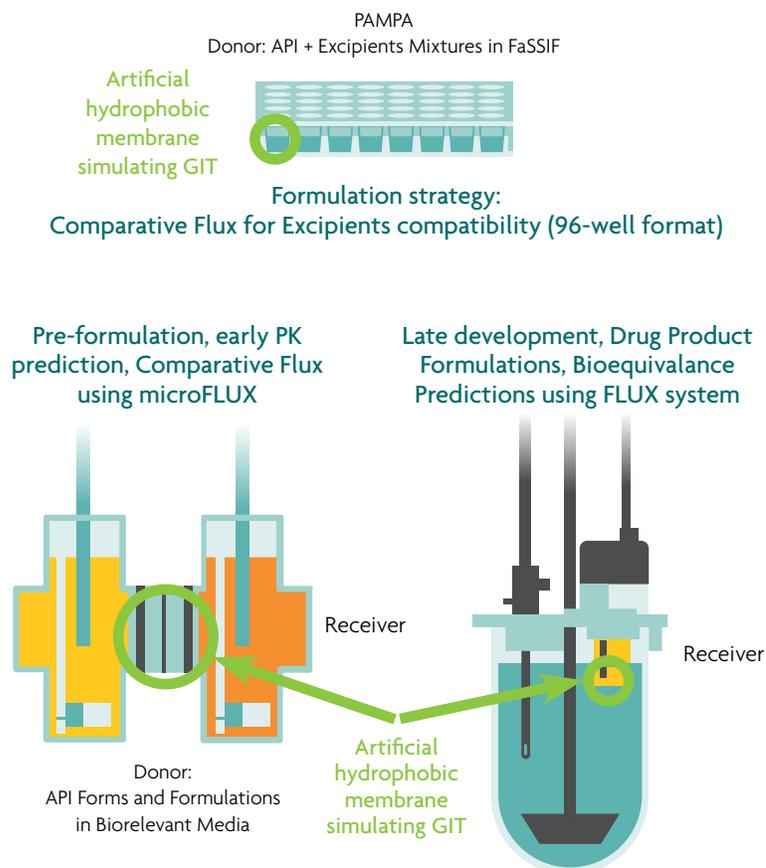
Instrumentation that supports an Absorption Driven Drug Formulation approach

Due to the complex interplay between solubility and permeability there are many cases where dissolution experiments alone cannot correctly predict the in vivo response to drug products. Simultaneously measuring concentration on both sides of a bio-mimetic membrane improves the assessment of the absorption potential and provides more realistic IVIVC modeling.

The addition of a stirred absorption chamber to the USP I/II apparatus that functions as a 'receiver' chamber with the MacroFLUX and BioFLUX systems. The USP vessel serves as a "donor" compartment and provides the media volume needed to test finished dosage forms under sink conditions. The donor media is selected to mimic the absorption site along the gastrointestinal tract, and the Acceptor Sink Buffer (pH of 7.4) used in the receiver vessel mimics blood chemistry.

FLUX systems are also available for the microDISS Profiler using media volumes of just 15 mL for the donor and receiver chambers and for the miniDISS system which has a biorelevant 250 mL volume vessel.

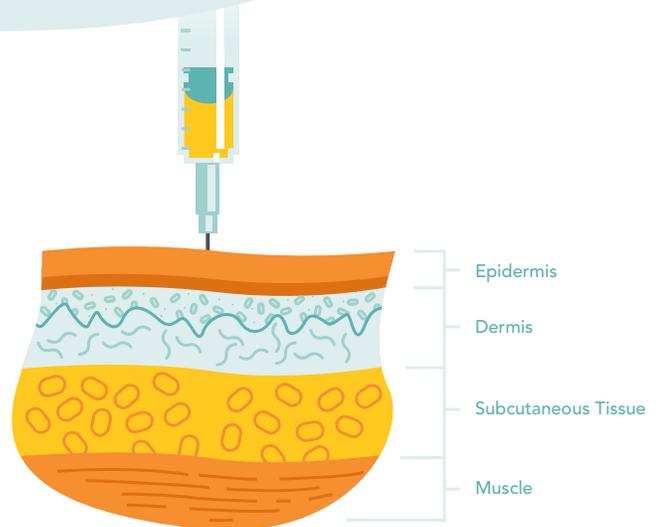
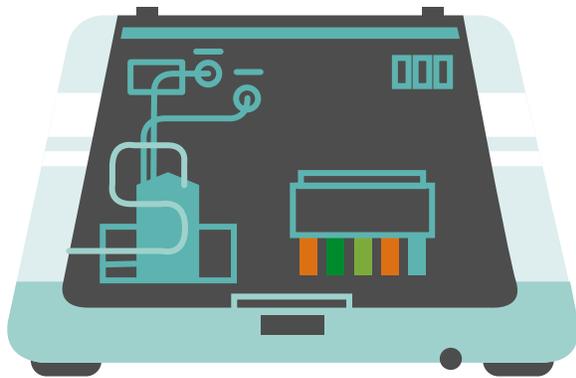
Pion's high throughput Double Sink PAMPA platform examines the effect of excipients on the solubility and permeability of APIs in a single assay which provides an early assessment of excipient influenced and pH dependent GIT absorption.



Innovative approaches to instrumentation

The Scissor assesses the risk and performance of subcutaneously administered drugs including biologics, peptides and small molecule. It simulates the stress conditions and environmental transitions that a drug experiences when injected subcutaneously.

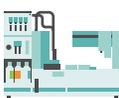
It allows investigation of the API with the extracellular matrix, monitors the pH change upon injection, identifies optimal excipient conditions and generates time-release concentration profiles.



inForm is a fully automated system for dissolution monitoring such as biphasic dissolution studies, absorption prediction, solubility-pH profiles, controlled supersaturation and precipitation studies.



Instrument & Services by Application

Equipment	microDISS Profiler	miniDISS Profiler	Rainbow	inForm	T3 PhysChem	PAMPA	Scissor	SDi2	Pion Analytical Services
Application									
Absorption	with microFLUX	with miniFLUX	with MacroFLUX	✓		✓	✓		✓
Solubility	✓	✓		✓	✓	✓			✓
Permeability						✓			✓
Subcutaneous							✓		✓
Ionization					✓				✓
logP/logD					✓				✓
GI Dissolution	✓	✓	✓	✓				✓	✓
Biorelevant	✓	✓	✓	✓	✓	✓	✓	✓	✓
Microscale Dissolution	✓	✓		✓				✓	✓
Compendial Dissolution			✓						✓
Biphasic Dissolution	✓	✓	✓	✓					✓
Intrinsic Dissolution	✓			✓				✓	✓
Surface Imaging								✓	✓

AuPRO and DissoPRO Software

AuPRO™ - Standard configuration is a comprehensive data collection and method refinement software.

AuPRO - Advanced configuration provides additional capability for combination drug products, nanoparticle concentration monitoring, intrinsic solubility, real time flux calculations, and determination of particle size based on dissolution curve analysis.

DissoPRO™ is a secure, traceable software package that allows Pion's fiber optic users to develop and run dissolution methods in a 21 CFR Part 11 compliant framework. It allows you to effortlessly save and transfer fiber optic methods from your development lab to your QC/Compliant lab.

Service and Support

Pion offers comprehensive product support and service including instrument Installation & Basic Training, Preventative Maintenance and Extended Warranty programs, calibration, repair and training at your site or at Pion's facility near Boston, MA.

Distributore per l'Italia:

 **ALFATEST**
strumentazione scientifica

alfatest@alfatest.it
06 87465556/7

www.alfatest.it
www.alfatestbio.it
www.alfatestlab.com


Pion

Pion Inc. | 10 Cook St. | Billerica, MA 01821 | USA | +1-978-528-2020 | sales@pion-inc.com | www.pion-inc.com

Contact sales@pion-inc.com