



**SOLUTIONS FOR  
RESEARCH AND  
DEVELOPMENT**



# Your measurement tasks & results - in full compliance

AS A LAB/FORMULATION SCIENTIST, YOU HAVE TO ANALYZE A VARIETY OF DIFFERENT SAMPLES AND MIXTURES TO FIND THE CORRECT ONE FOR PRODUCTION.



## YOUR CHALLENGE

In R&D, there is a great variety of delicate samples. Measurements and final results need to be flexible and reliable. Challenges range from difficult filling and cleaning due to viscosity and consistency to low available sample volume due to precious substances involved.

## OUR SOLUTION

Technologically sophisticated instruments with optional sample changers for automation allow safe, consistent, and repeatable sample handling. Anton Paar offers modular measurement setups and carefully designed measurement cells as well as sample recovery possibilities with proven quality.

## YOUR BENEFIT

A broad range of samples and products can be analyzed quickly. Multi-parameter systems also offer possible re-use of samples for further analysis.

AS R&D LAB MANAGER, YOU NEED TO MAKE SURE THAT OPTIMIZED PROCEDURES, SETTINGS, AND THE REFERENCES DERIVED ARE TRANSFERABLE TO LATER PRODUCTION STAGES AND SAVED FOR INTELLECTUAL PROPERTY PURPOSES.



Throughout the development and formulation stage for a new product, many different mixtures with different properties are measured. It can be challenging to store all this information safely and avoid a mismatch of methods, products, and results.

Configurable and customizable methods, products, and dashboards enable quick and traceable access to settings for measurements. AP Connect Pharma saves all relevant information and metadata for each measurement.

There is no need to worry about losing product development data for later reference. Measurement conditions and settings for different products are easily accessible and replicable. This leads to a more stringent and focused development process in the long run.

# Anton Paar's solution portfolio



RESULTS	PARAMETERS MEASURED	MONOGRAPHS	INSTRUMENTS	TYPICAL SAMPLES
Concentration, purity	Density/Specific gravity	USP 841 Pharm.Eu. 2.2.5 JP 2.56 ChP 2020 (Vol IV) 0601	DMA 4101 4501 5001(*) DMA 501 1001 Density meters	Liquid formulations & injectables Medically used buffers and sugar solutions (saline, Ringer's solution, dextrose for injections) Antibiotic solutions
Concentration, purity, substance identification	Specific optical rotation	USP 781 Pharm.Eu. 2.2.7 JP 2.49 ChP 2020 (Vol IV) 0621	MCP 5100 5300 5500(*) MCP 150 Polarimeters	Small molecular APIs in liquid formulation Medically used sugars & syrups
Concentration, purity, substance identification	Refractive index	USP 831 Pharm. Eu. 2.2.6 JP 2.45 ChP 2020 (Vol IV) 0622	AbbeMAT 350 550(*) AbbeMAT 300 500 Refractometers	General anesthetics Organic liquid chemicals & liquid excipients (glycerol, siloxanes ...) Medically used natural oils
Viscosity, consistency	Dynamic viscosity	USP 912 Pharm.Eu. 2.2.8 ChP 2020 (Vol IV) 0633	ViscoQC 300(*) Rotational viscometer	Gel, cremes, ointments Syrup base & syrups Medically used thickeners (gum arabic, xanthan, alginin, methylcellulose)
Viscosity, (Polymer molar mass)	Dynamic & kinematic viscosity	USP 913 Pharm.Eu. 2.2.49	Lovis 2000 ME (module in master instrument)(*) Rolling-ball viscometer	Collagen, hyaluronic acid, polysaccharides & biopolymers Vaccines & injectables
Consistency, resistance & hardness of semisolids	Penetration	USP 915 Pharm.Eu. 2.2.9 ChP 2020 (Vol IV) 0983	PNR 12 Penetrometer	Suppositories Gel, cremes, ointments Paraffins, waxes, petroleum jelly

## ADDED SERVICES

**Pharma Qualification Packages & Qualification Services individually available for each instrument, complying to e.g. USP 1058, GAMP 5, GMP, EU GMP Annex 15 and 21 CFR Part 11(1) 3-year instrument warranty**

## AP CONNECT - YOUR WAY TO A PAPERLESS LAB

**Connect and collect, plug and play. All your lab data in a single hub – just a click away. Choose AP Connect – the lab execution software that connects your instruments, communicates measurement information and metadata, ensures compliance, and simplifies reporting.**

(\*) ... compatible as system solution with AP Connect Pharma

(1) ... exact scope depending on instrument & features

# Solutions for research and development

DENSITY  
REFRACTIVE INDEX  
OPTICAL ROTATION  
VISCOSITY  
CONSISTENCY

## GET THE BEST COMBINATION OF PARAMETERS AND SOFTWARE SOLUTIONS FOR RESEARCH AND DEVELOPMENT

Innovation has always been at the heart of the pharmaceutical industry. Different challenges arise with the need for a new pharmaceutical's detailed characterization, and the search for the perfect formulation that can be applied later in production.

**ANTON PAAR'S SOLUTIONS FOR KEY PHYSICAL PARAMETERS IN YOUR LAB HELP YOU TO FIND THE RIGHT BALANCE BETWEEN FLEXIBILITY IN ANALYZING A GREAT VARIETY OF SAMPLE TYPES AND THE STRINGENT REGULATIONS YOU HAVE TO FOLLOW. ALL RELEVANT RESULTS MUST BE STORED TO SUPPORT YOU IN YOUR DECISIONS ABOUT YOUR NEXT PRODUCT'S COMPONENTS.**

FIND OUT MORE



[www.anton-paar.com/apc](http://www.anton-paar.com/apc)





