



SOLUTIONS FOR  
**IN-PROCESS**  
AND **PRODUCTION**  
CONTROL

# Your measurement tasks & results – in full compliance

**AS A PRODUCTION OPERATOR, YOU NEED TO CHECK FREQUENTLY IF THE PRODUCTS AND INTERMEDIATES ARE STILL WITHIN REQUIRED SPECIFICATIONS.**



**AS A PRODUCTION MANAGER, YOU NEED TO MAKE SURE THAT THE INSTRUMENTS USED ARE AVAILABLE FOR MEASUREMENTS AT ANY TIME.**



**AS A QUALITY ASSURANCE AND COMPLIANCE MANAGER, YOU NEED TO BE ABLE TO ACCESS RELEVANT MEASUREMENT DATA FROM EACH PRODUCTION STEP FOR CHECK, AND REVIEW TASKS.**



## YOUR CHALLENGE

Measurements need to be simple and quick to allow fast adaptations of production processes in case of out-of-spec products.

The space for in-process analysis is limited and conditions may be harsher than in actual QC laboratories (e. g. operators wearing protective gear, bad lighting). Plus, new instruments need to be up-and-running as quickly as possible.

Complete tracking of data and events for every step in the production cycle needs to be available quickly.

## OUR SOLUTION

We provide a highly intuitive instrument user interface, guided user workflows, and fast and easy handling features – plus software solutions for organizing the data and metadata.

Our instrument screens are easy to read, and can be controlled with gloves. The high manufacturing quality of Anton Paar instruments is guaranteed by producing all critical parts in-house. Pharma qualification documents and services as well as a global service network guarantee fast installation, regular maintenance, and repair if needed.

The combination of instrument features and AP Connect lab execution software allows full traceability of data and events. Stored data are conveniently managed and organized in one location. System audit trail, permission and user management (including electronic signature) ensure complete overview of actions performed.

## YOUR BENEFIT

Enjoy 100 % prevention of handling errors and save up to 80 % of your time thanks to quick measurements and easier cleaning compared to manual methods. Furthermore, benefit from immediate detection of out-of-spec values with customizable limits, stay organized, and rely on safe data storage with AP Connect Pharma.

Perform correct and simple measurements at any point in the production cycle. Benefit from virtually no instrument downtime due to lasting quality and quick service turn-around times. Rely on installation and qualification procedures that support you to get your instrument in full operational mode weeks or even months earlier compared to other suppliers.

Data can be analyzed for trends and are available for immediate action and documentation. Simple and efficient review possibilities for results and relevant metadata throughout the complete production life cycle according to GMP guidelines help to keep track of every step in the process.

# Anton Paar's solution portfolio



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

DENSITY  
REFRACTIVE INDEX  
OPTICAL ROTATION  
VISCOSITY  
CONSISTENCY

**GET THE BEST COMBINATION OF PARAMETERS AND SOFTWARE SOLUTIONS FOR  
IN-PROCESS AND PRODUCTION CONTROL**

Tight control of your product properties during each step of production is the key in gaining a competitive edge. Quickly detecting out-of-specification products and intermediates enables efficient and cost-effective production as well as high-quality medications.

**ANTON PAAR'S SOLUTIONS FOR KEY PHYSICAL PARAMETERS COMBINE SIMPLICITY OF  
MEASUREMENTS WITH AVAILABILITY OF DATA TO HELP YOU KEEP AN EYE ON WHAT  
GOES ON IN YOUR PLANT.**

FIND OUT MORE



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



