



Instrumentation – Germany

Liquid Chromatography

HPLC Devices (Agilent / Waters / VWR)	77
HPLC Detectors	91
Ultraviolet (UV)	
Photodiode Array (PDA)	
Diode Array (DAD)	
Fluorescence (FLD)	
Charged Aerosol (CAD)	
Refractive Index (RI)	
Multiple Wavelength (MW)	
Evaporative Light Scattering Detector (ELSD)	
Amino Acid Analyzer / HPLC Device	1
HPLC Detectors	2
Diode Array (DAD)	
Fluorescence (FLD)	
UPLC / UHPLC Devices (Agilent / Waters)	26
UPLC/UHPLC Detectors	22
VWD G7114A	
PDA	
PDA+FLD	
DAD	

Gas Chromatography

GC Devices (Agilent / Perkin Elmer)	76
GC Detector (FID)	18

ION Chromatography

IC Devices (Dionex)	2
---------------------	---

Thin Layer Chromatography

TLC Devices (CAMAG)	4
---------------------	---

Capillary Electrophoresis

Pharmaceutical Analysis System, PA800 Plus (Beckman Coulter)	14
Protein Analysis, iCE3 (Protein Simple)	2

Elemental Analysis

Atomic Absorption Spectrometer (Thermo Fisher Scientific, Perkin Elmer)	2
Quicksilver Analyzer , M-6100 (Cetac)	1
iCAP Q ICP-MS (Thermo Fisher Scientific)	1

Spectrophotometry / Spectroscopy

Colorimeter (Dr. Lange)	1
FTIR Spectrometer (Thermo Fisher)	1
FT-NIR Spectrometer (Bruker)	3
HPLC/NMR Spectrometer (Bruker)	1
NMR Spectrometer (Bruker)	1
Polarimeter (Perkin Elmer)	1
UV/VIS Spectrophotometer (Agilent, SoloVPE, Thermo Fisher, Perkin Elmer, VWR)	12



Dissolution Tester

Dissolution Tester (ERWEKA, Sotax, RIGGTEK, VanKel, Hansen Research) 49

Mass Spectrometry

GC/MS (Agilent) 3

GC/HRMS (Thermo Fisher) 2

HPLC (Accela, Agilent) 3

Particle Characterization

FT-IR Microscope (Bruker) 1

FT-IR/Raman Spectrometer (Bruker) 1

Liquid Viewer (Adelphi Manufact. Apollo II) 2

Microscope (Olympus CX31 LBSF) 1

Particle Size Distribution (Malvern Panalytical, Sympatec) 5

Raman Microscope (Bruker) 1

Scanning Electron Microscope (Thermo Fisher) 1

Sub Visible Particle Counter (PAMAS, CX31 LBSF) 2

Turbidimeter (Hach 2100AN) 2

X-Ray Powder Diffraction (Malvern Panalytical) 1

Aerosol Characterization

Next Generation Impactor (Copley Scientific) 2

Andersen Cascaden Impactor (Copley Scientific) 1

Fast Screening Impactor (Copley Scientific) 1

Breath Simulator (Copley Scientific) 1

Spraytec (Malvern Panalytical) 1

Thermoanalytic Methods

Differential Scanning Calorimetry (DSC) 1

Dynamic Vapor Sorption Analyzer (DVS) 1

Thermogravimetric Analysis (TGA) 1

Wet Chemistry

Automatic Polarimeter (Krüss) 1

Capillary Viscosimeter (LAUDA) 1

Densitometer (Anton Paar) 1

Digestion Apparatus for Kjehldal (Behr) 1

Distillation Device (Behr) 1

Electronic Titrators (Metrohm) 2

Fluorometer (Kontron Instruments) 1

Kjeldahl Nitrogen Determination Device (Behr) 1

Melting Point Apparatus (Krüss) 1

Melting Point Apparatus (Schropp) 1

Refractometer (Krüss) 1

Rotational Viscosimeters (Brookfield) 3

Seven Multi, Conductivity and pH Meter (Mettler Toledo) 1

Texture Analyser (Stable Micro Systems) 1

TLC Visualizer / Automatic TLC Sampler (CAMAG) 1

Volumetric Titrator (Karl Fisher) 1



Microbiology

Autoclave (SHP Steriltechnik Laboklav 160 MSL)	3
Autoclave, Mediaprep 30 (Systec)	1
Clean Room Benches (Enviroco, BDA, Heraeus, Thermo Fisher)	7
Clean Room Cabinet, Class A in B (ISO 100 in 10000)	1
Eddy Jets 2 (IUL Instruments)	2
Endoscan-System including Tecan Sunrise™ Photometric Plate Reader and Biotek Microtec Plate Reader	2
Laser Particle Counters Met One HHPC 2+ and Lighthouse	2
Microplate Reader (BioTek, ELx808IU)	1
Millipore Steritest™ Systems for Membrane Filtration	1
Platereader Infinite F200 Pro und M200 Pro (Tecan)	2
Quantitative PCR (Applied Biosystems 7500 Fast)	2
Sievers M9 TOC Analyzer (GE Analytical Instruments)	1
Sievers TOC Analyzer 900 Laboratory with Autosampler	2
Spectrophotometer, V-1200 visible (VWR)	1
Spiralplater, Eddy Jet (IUL Instruments)	2
Thermal PCR Cycler (Bio-Rad, C1000 Touch Thermal Cycler)	2
Thermoblocks for Gel-clot-LAL Endotoxin Analyses	2
Vacuum Filtration Devices (Sartorius)	2
Washer Disinfectors	3

Molecular Biology/Cell Biology/Virology

Automated Liquid Handling System (Hamilton)	1
Bioanalyzer (Agilent)	1
Biosafe Nitrogen Systems for Cell Bank Storage (Messer Apollo 200, Adur, Chromo-S 100)	2
Cytomics FC500 MPL Flow Cytometer (Beckman Coulter)	1
DNA-Workstation L020-C (Kisker)	1
Electrophoresis (Invitrogen)	4
Electrophoresis Power Set (Lonza)	1
Fluorescence Reader (Molecular Devices Gemini XPS)	1
GE Biacore 3000	3
GE Biacore T200	2
Gel colour (Amersham Biosciences)	1
Digital Imager / Chemi Doc MP (Bio-Rad)	1
Electrophoresis System (Thermo Fisher)	2
Guava easyCyte 8HT Benchtop Flow Cytometer (Merck)	1
Light Cycler for Real-Time PCR (Roche 480 II-1 Instrument (96-well version))	1
Luminometer (Molecular Devices SpectraMax L)	1
Microplate Reader (Tecan Infinite)	2
Microplate Spectrophotometer (BioTek Instruments)	1
Microplate Washer (BioTek 405)	4
MSD Quickplex	1
Multi-Mode Microplate Reader (BioTek Instruments, Molecular Devices)	3
Octet RED384 System	1
Orion Star A111 pH Meter (Thermo Scientific)	1
Orion Star™ A212 Conductivity Meter (Thermo Scientific™)	1
PCR 7500 (Applied Biosystem)	1
PCR Workstation Pro (PiqLab)	3
QUINTIX3102 Top-loading Balances (Sartorius)	2
Thermo Cycler for PCR (Eppendorf)	1
UV/Vis Spectrophotometer (NANODROP ONE)	1
ViCell XR (Beckman Coulter)	1


Stability Storage

5 °C	12,23 m ³
25 °C / 40% r.h.	1,57 m ³
25 °C / 60% r.h.	46,44 m ³
30 °C / 35% r.h.	2,09 m ³
30 °C / 75% r.h.	18,19 m ³
40 °C / <=25% r.h.	0,44 m ³
40 °C / 75% r.h.	5,37 m ³
50 °C	0,09 m ³
-20 °C	2,79 m ³
-40 °C	0,47 m ³
<= -60 °C	2,46 m ³
-60 °C	1,69 m ³
-80 °C	1,98 m ³
circulating air	0,40 m ³
Temperature: -20°C up to 60°C / Humidity: 35% up to 75%	0,05 m ³

Miscellaneous

Advanced Instruments Osmometer 3320	1
Autoclave	1
Bank Shear Tester	1
Beckman Coulter HIAC 9703+	1
Breaking Strength/Hardness Tester	3
Centrifuge	3
Density Meter	3
Differential Scanning Calorimetry	1
Disintegration Tester	1
Friability Tester	1
HACH Turbidimeter TL2350	1
Incubator	4
Kjeldahl Apparatus	1
Laminar Flow Boxes	5
Osmometer	2
Peel Adhesion Tester	1
Platwasher	1
Probe Tack Tester	1
Refractometer	3
Rotational Viscometer	1
Rheometer	1
Safety Cabinet	2
Storage Tank - Liquid Nitrogen	1
Suntester	1
Thermo Scientific Orion Star A211 pH Meter	1
Thermo Scientific Orion 8103BN Semi-Micro pH Electrode	1
Volumetric / Coulometric Karl Fischer Systems	14
Water Activity Measurement	1
Water Bath	1
X-ray Tomography	1


Miscellaneous

Advanced Instruments Osmometer 3320	1
Autoclave	1
Bank Shear Tester	1
Beckman Coulter HIAC 9703+	1
Breaking Strength/Hardness Tester	3
Centrifuge	3
Density Meter	3
Differential Scanning Calorimetry	1
Disintegration Tester	1
Friability Tester	1
HACH Turbidimeter TL2350	1
Incubator	4
Kjeldahl Apparatus	1
Laminar Flow Boxes	5
Osmometer	2
Peel Adhesion Tester	1
Platewasher	1
Probe Tack Tester	1
Refractometer	3
Rotational Viscometer	1
Rheometer	1
Safety Cabinet	2
Storage Tank - Liquid Nitrogen	1
Suntester	1
Thermo Scientific Orion Star A211 pH Meter	1
Thermo Scientific Orion 8103BN Semi-Micro pH Electrode	1
Volumetric / Coulometric Karl Fischer Systems	14
Water Activity Measurement	1
Water Bath	1
X-ray Tomography	1

Comprehensive GMP Testing Services

Method Development & Validation • Release Testing • Raw Materials Testing
 Cell Banking Services • Virology Services • Facility & Process Validation
 Chemistry • Biochemistry • Molecular & Cell Biology • Microbiology
 Stability Testing & Storage • Primary & Secondary Package Testing

Flexible Service Models

Fee For Service (FFS)
 Full-Time-Equivalent (FTE)
 Professional Scientific
 Services® (PSS)

Global Facilities

Australia	Denmark	India	Japan	Spain	UK
Belgium	France	Ireland	Netherlands	Sweden	US
Canada	Germany	Italy	New Zealand	Switzerland	