



Specialized
biology research

The best
analysis

CHILL Laboratories for Microbiology and Molecular Biology

How to analyze the antimicrobial properties of materials like coatings, textiles, and preservatives? With classic microbiology or by using molecular assays? At CHILL we can do both. In the CHILL Microbiology Laboratory we are experienced in analysing antimicrobial properties of a large range of materials. We are fully equipped for and have experience in the performance of a range of standardized microbiology experiments. In addition, we have also designed customer made assays.

How to develop a molecular diagnostic assay? In the CHILL Molecular Biology Laboratory we have all the facilities for designing various molecular diagnostic, real time PCR assays and for isolating DNA and RNA from diverse (complex) matrices. CHILL has experience in the development of PCR assays for identification and quantification of microorganisms. And in developing genetic biomarker assays for cancer diagnostics (HRM or probe based genotyping assays).

Chemelot 
**Innovation and
Learning Labs**

Shake incubator

Type	New Brunswick Scientific, Innova 42
Item number	S142CJ801072
Temperature range	4 °C (max. 20 °C below room temp.) - 80 °C
Capacity	250 ml and 500 ml bottles 15 ml and 50 ml falcontubes Shelf
Mode	Programmable
Mixing	Shaking 25 - 400 rpm

Incubator

Type	New Brunswick Scientific, Galaxy 170R
Item number	C017EF701376
Temperature range	4 °C above room temp. - 50 °C
Capacity	4 shelves
Mode	Relative humidity: 0-99% CO ₂ control: 0,2 - 20%

Colony counter

Type	Stuart, SC6+
Item number	R570001512
Capacity	Petridishes diameter ≤ 90cm



Microscope

Type	Motic, BA210
Item number	1110009913
Optic lenses	4x lens 10x lens 40x lens 100x oil immersion lens

Camera

Type	Motic, Moticom 3.0
Item number	14044279 1100600100621
Capacity	3.0 megapixel

Autoclave

Type	Certoclav, Multi Control
Item number	MC2079 V11
Temperature range	10 °C above room temp. - 140 °C
Capacity	12L / 18L 9 kg with max. 3L water
Mode	Short time operation (90 min.) Long time operation (unlimited)

Laminar flow cabinet

Type	Scanlaf Mars Pro Cytosafe class 2
Item number	12130004



Real time PCR

Type	Roche LightCycler 480	
Item number	29184	
Detection (wavelengths / dyes)	440/488 nm	LightCycler Cyaan 500
	465/510 nm	Sybr. Green I Resolight Fluos/FAM
	498/580 nm	Fluos/FAM
	533/580 nm	Vic Hex Yellow 555 Joe
	533/610 nm	LightCycler Red 610
	498/610 nm	LightCycler Red 610
	498/640 nm	LightCycler Red 640
	618/660 nm	Cy5 Cy5.5 LightCycler Red 705
	498/660 nm	Cy5 Cy5.5 LightCycler Red 705
Capacity	10 - 100 µl volumes in - 96 wells plate - 12 x 8-tube strips	
Application	Absolute quantification Relative quantification Tm calling Endpoint genotyping High Resolution Melting Genescanning	
Ramprate	Heating 4,4 °C/s Cooling 2,2 °C/s	
Duration	00:00:01 - 12:00:00	
Temperature range	37 °C - 99 °C	
Mode	Annealing	Standard Touchdown
	Acquisition	Single Continuous 1 - 100 readings/ °C None
	Analysis	None Quantification Melting curves Color compensation
Extra	Barcode scanner	



Real time PCR

Type	Roche LightCycler 96	
Item number	10173	
Detection (wavelengths / dyes)	470/514 nm	Sybr. Green I Resolight FAM
	533/572 nm	Vic Hex Yellow 555
	577/620 nm	LightCycler Red 610 Texas Red
	645/697 nm	Cy5
Capacity	10 - 100 µl volumes in - 96 wells plate - 12 x 8-tube strips	
Application	Absolute quantification Endpoint SNP genotyping Relative quantification Qualitative detection Tm calling High Resolution Melting	
Ramprate	Heating 4,4 °C/s Cooling 2,2 °C/s	
Duration	1 - 7200 sec.	
Temperature range	37 °C - 98 °C	
Mode	Annealing	Standard Gradient (range max. 20 °C) Touchdown
	Acquisition	Single Continuous 1 - 25 readings/ °C None
	Analysis	None Quantification Melting curves Color compensation
Extra	Barcode scanner	
Note	It is not possible to combine Sybr. Green I or Resolight with any dye of another channel	



PCR

Type	BioRad T100 Thermal Cycler
Item number	621BR24545
Capacity	0,2 ml individual tubes 12x 8-tube strips / 8x 12-tube strips 96 wells plate
Ramprate	Heating 4 °C/s Cooling 4 °C/s
Temperature range	4 - 100 °C
Mode	Standard Gradient (range max. 25 °C)

PCR workstations

Type	Erlab, Captair Bio DNA 321S
Item number	21997-14
Application	UV radiance enclosure For sample protection against cross-contamination

Type	Erlab, Captair Bio DNA
Item number	20375-13
Application	UV radiance enclosure For sample protection against cross-contamination

BioDrop

Type	Isogen BioDrop
Item number	BD1012
Bandwidth	Detection limit: - Cuvet 125: 7 ng/μl - Druppel: 1 ng/μl
Absorbance range	Cuvet 125: 10.000 ng/μl Druppel: 2.500 ng/μl
Path length	Cuvet 125: 0,125 mm Druppel: 0,5 mm
Input	Cuvet 125 Druppel
Software	DNA, RNA, oligo, direct UV and colorimetric protein methods, dye labelling efficiency, Tm calculation

Geldoc system

Type	BioRad Geldoc 2000
Item number	755 / 00300
Lamp	302 nm UV
Camera	8-bit CCD camera



Spectrophotometer

Type	GE Healthcare Ultrospec 7000
Item number	121704
Wavelength	190-1100 nm
Lamp	Xenon
Bandwidth	2,0 nm
Absorbance range	-4 A tot 4 A
Path length	1-100 nm
Input	Cuvettes Tubes

Centrifuges

Type	Eppendorf 5810R A-4-62
Item number	5811BP568182 LL062 26821
Temperature range	-9°C – 40 °C
Capacity	4x MTP
Max. load	4x 1,1 kg
RPM	4000 rpm
RCF_{max}	3.200 x g

Type	Eppendorf 5427R FA-45-30-11
Item number	5409BQ701478 ML041
Temperature range	-11°C - 40 °C
Capacity	12 x 0,5 ml eppendorf tubes 30 x 1,5/2,0 ml eppendorf tubes
Max. load	30x 3,75 gram
RPM	14.000 rpm
RCF_{max}	20.800 x g

Type	Eppendorf Minispin Plus F45-12-11
Item number	5453CG169811 LL069 28205
Capacity	12 x 0,5 ml eppendorf tubes 30 x 1,5/2,0 ml eppendorf tubes
Max. load	12x 4 gram
RPM	14.500 rpm
RCF_{max}	14.000 x g



Centrifuges

Type	Eppendorf 5810R A-4-62 FA-45-6-30
Item number	5811CP270989 ML024 29099 0000001720
Temperature range	-9 °C - 40 °C
Capacity	36x 15ml falcon tubes/ 16x 50ml falcon tubes 6x 50ml falcon tubes
Max. load	4x 620 gram (per adapter) 6x 75 gram (per tube)
RPM	4.000rpm 12.100rpm
RCF_{max}	3.200 x g 20.130 x g

pH meter

Type	Mettler Toledo, Five Easy
Item number	B323422646
pH range	0,00 - 14,00
Temperature range	0 - 100 °C
Calibration	2 point calibration

Standard laboratory equipment

Pipettes (including electrical pipettes)

Vortexes

Balances

Thermomixer

Fridges 4°C

Freezers -20°C

Microwave

Power supplies

Computers

Printers

