






Equipment List of Core Facilities

Category	Equipment	Specifications & Accessories	Photo	Location
Centrifuge	Microfuge 20R refrigerated micro centrifuge X 3	FA361.5 Fixed Angle Rotor Capable of 15,000 rpm equivalent to 20,124 xg Complete with 36 x 1.5/2.0ml fixed angle aluminium rotor with aerosol tight lid Variable speed, temperature and timer control Pulse facility.		ILab-1 696.10.14 Chemistry lab 696.10.23 Tissue Culture Lab 696.10.26
Centrifuge	Ambient micro centrifuge X 2	FA361.5 Fixed Angle Rotor Capable of 15,000 rpm equivalent to 20,124 xg Complete with 36 x 1.5/2.0ml fixed angle aluminium rotor with aerosol tight lid Variable speed, temperature and timer control Pulse facility.		ILab- 1 696.10.14 Chemistry lab 696.10.23



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<p>Centrifuge</p>	<p>Avanti J-15R Refrigerated benchtop general purpose centrifuge X 2</p>	<p>4 x 750 ml, 10 200 rpm, 11 420 xg. 1 2,482.00 2,482.00</p> <p>JS-4.750 Swinging Bucket Rotor, including buckets. 4 x 750ml, 4,750 rpm equivalent to 5,250 xg maximum.</p> <p>2 115.46 230.92 Bio-Certified Tube & Bottle Cover for the Buckets of the JS-4.750 Swinging Bucket Rotor (set of 2).</p> <p>1 569.22 569.22 Green Modular-Disk Adapter (set of 4) 14place, 15 ml conical tubes (max. diameter 18 mm). Maximum capacity in JS-4.750 rotor of 56 tubes.</p> <p>1 X 667.52 667.52 Adapter, 7 Hole for 50ml Conical Tubes, 29mm diameter x 120mm. Pack of 4. Maximum capacity in JS-4.750 rotor of 28 tubes.</p> <p>4 X 28.20 112.80 Sleeve, red, for 250 ml conical-tip tissue culture bottles, each.</p> <p>1 X 803.15 803.15 SX4750µ Microplate Carriers for JS-4.750 swinging bucket rotor, 4,450 rpm equivalent to 4,050 xg, set of 2. Each carrier will accommodate a stack of up to three 96 well microtitre plates or one deepwell plate.</p> <p>1 X 150.61 150.61 Biocertified Covers for JS-4.750 Microplate Carriers (set of 2)</p>		<p>Tissue culture lab 696.10.26</p> <p>ILab- 1 696.10.14</p>																
<p>Cell Counter (Benchtop)</p>	<p>LUNA-II Automated Cell Counter</p>	<p>Is an image-based cell counting device that features an innovative autofocus liquid lens and a proven counting algorithm, providing a fully automated solution for cell counting and viability analysis. The LUNA-II counting algorithm declusters clumpy cells and counts them individually with precision. Cells 3 to 60 µm in size at concentrations ranging from 5 X 10⁴ to 1 X 10⁷ cells/ml are easily analysed. Up to 300 unique protocols can be set and used. Automatically saves results as CSV files and has a built in USB port. Up to 1000 counts can be saved directly to the LUNA-II. Both reusable and disposable slides can be used with the LUNA-II.</p> <p>LUNA-II Automated Cell Counter Specifications:</p> <table border="0"> <tr> <td>Instrument Type</td> <td>Benchtop cell counter</td> </tr> <tr> <td>Dimensions (W x D x H)</td> <td>16 x 18 x 28 cm</td> </tr> <tr> <td>Weight</td> <td>1.6 kg (3.5 lb)</td> </tr> <tr> <td>Cell Concentration Range</td> <td>5 x 10⁴ - 1 x 10⁷ cells/mL</td> </tr> <tr> <td>Cell Diameter Range</td> <td>3 - 60 µm (range: 8-30µm)</td> </tr> <tr> <td>Cell Viability Range</td> <td>0 - 100%</td> </tr> <tr> <td>Image Resolution</td> <td>5 MP</td> </tr> <tr> <td>Image Type</td> <td>TIFF</td> </tr> </table>	Instrument Type	Benchtop cell counter	Dimensions (W x D x H)	16 x 18 x 28 cm	Weight	1.6 kg (3.5 lb)	Cell Concentration Range	5 x 10 ⁴ - 1 x 10 ⁷ cells/mL	Cell Diameter Range	3 - 60 µm (range: 8-30µm)	Cell Viability Range	0 - 100%	Image Resolution	5 MP	Image Type	TIFF		<p>Tissue culture lab 696.10.26</p>
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		<p>Processing Time 10s (m focusing) or 15s (a focusing) at ~ 1 X 10⁶ cell/mL</p> <p>LUNA Cell Counting Slide Specifications: Material Polystyrene Dimensions (W x D x H) 25 x 75 x 2.4 mm Chamber Depth 100 µm Chamber Volume 10 µL</p>		
Centrifuge	Avanti JXN-30 High-performance Centrifuge	<p>Single board computer controlled high performance, high throughput centrifuge. Maximum speed 30,000 rpm, g-force 110,000 x g. Maximum capacity of 4 litres.</p> <p>High-Torque Brushless Air Cooled Switch Reluctance (SR) drive shortens run times. Friction Reduction System (FRS): reliably reduces friction on the rotor surface and allows higher speeds, higher performance and more precise temperature control. Maximum heat dissipation into room under steady-state conditions is 1.5 kW (5120 Btu/h). Low work surface height and large rotor chamber for easier installation and unloading of rotors. Foot pedal for hands-free door operation, door swings up and out of the way for easy access to the rotor chamber. Large digital readouts on an all-colour screen make operation simpler.</p> <p>Power Requirements: 230v, 50Hz, Single Phase Electrical Supply with 32A Type C or D circuit breaker.</p> <p>JS-24.15 Swinging Bucket Rotor assembly. 6 x 15ml (16 x 96mm tubes), 24,000rpm (only in Avanti J-30I & JXN-30 Centrifuge), 110,500 xg maximum. Not including tubes/bottles.</p> <p>JS-24.38 Swinging Bucket Rotor assembly. 6 x 38ml (25 x 89mm tubes), 24,000rpm (only in Avanti J-30I & JXN-30 Centrifuge), 110,500 xg maximum. Not including tubes/bottles.</p> <p>1 X 3,719.00 3,719.00 JA-25.50 Fixed Angle Rotor with Single Locking Lid 8 x 50ml, 25,000rpm, 75,600xg maximum Not including Tubes/Bottles.</p> <p>1 X 5,574.00 5,574.00 J-Lite JLA-16.250 Fixed Angle Rotor with Single Locking Lid 6 x 250ml, 16,000rpm, 38,500xg maximum. Not including Tubes/Bottles.</p> <p>1 X 12,410.00 12,410.00 J-Lite JLA-9.1000 Rotor Package. 4 place Fixed Angle Rotor and Polycarbonate Bottles with Cap/Closures. 4 x 1 litre, 9,000rpm, 16,800xg maximum. This rotor incorporates removable canisters ensuring reduced weight and allowing easier rotor handling and cleaning. Includes rotor body and lid, removable canisters and 4 polycarbonate 1litre bottle assemblies.</p>		ILab-1 696.10.14

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<p>Real-Time PCR (QPCR)</p>	<p>CFX384 Touch Real-Time PCR Detection System</p>	<p>The CFX384 touch real-time PCR detection system is a powerful and precise real-time instrument in a 384 well format with reaction volume 1-30ul. The CFX384 touch system utilizes accurate temperature control and sensitive, 4-colour detection optics to deliver reliable and repeatable qpcr results for singleplex or multiplex reactions. Dimensions (WxDxH) cm 33 x 46 x 36, Weight Kg 21.</p>		<p>ILab-1 696.10.14</p>
<p>Centrifuge</p>	<p>Benchtop ultracentrifuge Optima MAX-XP</p>	<p>Ideally suited for protein and viral particle separations, the Optima MAX-XP features high speeds (up to 150,000 RPM), high gforce (up to 1,019,000 x g), quiet operation (<47dBA), interactive colour touch screen user interface and full backward compatibility with all of Beckman Coulter's library of TL and ML rotors with volume capabilities ranging up to 13.5 mL.</p> <p>MLA-55 Fixed-Angle Rotor Package. 8 x 13.5ml, 55,000rpm, equivalent to 287,000xg maximum. Includes Rotor, 4 boxes of OptiSeal Tubes 361623, 12 spacers 361670 (6 pkg. of 2), 1 OptiSeal Tube Rack 361642, 1 Tube Extraction Tool 361668, and 1 Spacer Removal Tool 338765.</p> <p>TLA-110 Fixed Angle Titanium Rotor Package. 8 x 5.1ml, 110,000 rpm, 657,000 xg maximum. Includes BioCertified Rotor, 1 box of 361621 OptiSeal Tubes, 8 each 361676 Floating Spacers, 854519 and 824412 O-ring, 348122 Tube Rack, 927208 Hemostats, 306812 Spinkote Lubricant, and 335148 Vacuum Grease.</p> <p>MLS-50 Swinging-Bucket Rotor Package. 4x5ml, 50,000rpm, 268,000xg Package includes Rotor, 1 box 326819 Polyallomer Tubes, 1 each 331313 Bucket Holder Rack, 927208 Hemostats, 824412 O-ring, 306812 Spinkote Lubricant, and 335148 Vacuum Grease.</p>		<p>ILab-2 696.10.22</p>



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<p>Fridge</p>	<p>Underbench fridge Liebherr Mediline LKUexv1610</p>	<p>Gross/Net Capacity: 141/130 Litres Temperature Settable Range: 3°C to +8°C Temperature Fluctuation (at +5°C): +1.6°C / -2.5°C (NF X 15-140 Test Procedure) Electronic Controller with Membrane Keypad Digital Temperature Control & Display Fan Assisted Cooling System Automatic Defrost (Off Cycle) Audible & Visual Temperature & Door Alarms Visual Power Failure Alarm when Mains Power Restored Max/Min Temperature Memory with Logging of up to 3 Alarm Conditions Additional Safety Thermostat Prevents Temperature Falling Below 2°C Lockable Self-Closing Solid Door White Painted Steel Exterior, White Plastic Interior 3 Adjustable Glass Shelves Internally Spark Free - Meets Requirements of EU Directive 94/9/EC (ATEX 95) Plugged Defrost Water Drain and Removable Internal Drip Tray Weight: 40kg</p>		<p>Chemistry lab 696.10.23</p>
<p>Fridge Upright</p>	<p>Upright fridge Liebherr GKv4310</p>	<p>Gross to net capacity: 434/406 litres. Temperature settable range 1°C to 15°C. Electronic Controller with Membrane Keypad</p> <p>Digital Temperature Control & Display Fan Assisted Cooling System Automatic Defrost (Off Cycle)</p> <p>Audible & Visual Temperature & Door Alarms Lockable Self-Closing Solid Door 5 Adjustable Plastic-Coated Wire Shelves (max 60kg/Shelf)</p> <p>Inherently of Low Spark Risk Weight: 74kg</p>		<p>Tissue culture lab 696.10.26</p>



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<p>Freezer Underbench</p>	<p>Underbench freezer -20°C Liebherr GGU1500</p>	<p>Gross/Net Capacity: 143/133 Litres Temperature Settable Range: -9°C to -26°C Electronic Controller</p> <p>Digital Temperature Control & Display Manual Defrost Audible & Visual Temperature & Door Alarms</p> <p>Audible & Visual Temperature & Door Alarms Lockable Solid Door 3 Fixed Wire Shelves with 3 Removable Solid Plastic Drawers & 1 Basket Weight 40kg</p>		<p>Tissue culture lab 696.10.26</p>
<p>Ultra Low Temperature Freezer</p>	<p>CryoCube F570h 'High Efficiency' Upright -86°C Freezer</p>	<p>Racks per shelf: 5 Racks per freezer: 25 Sample capacity: 20 000 to 40 000 (depending on the size) with 130mm Conventional Polyurethane Foam Insulation and Advanced Vacuor NT Vacuum Insulation Panel Technology Capacity: 570 Litres (20.0 ft3) Temp Settable Range: -50°C to -86°C</p> <p>Microprocessor Controller with Password Protected Membrane Keypad Digital Temperature Control & Display Manual Defrost Audio-Visual Alarms for: High/Low Temp, Power Failure, System Failure Visual Alarms for: Backup Battery Low, Blocked Filter, Fault Alert Battery Backup Maintains Temp Settings & Alarms During Power Outage Auto Restart After Power Outage with Non-Volatile Memory of Setpoints Lockable Outer Door with New Ergonomic Easy-to-Open Handle</p> <p>5 Insulated Inner Doors with Magnetic Catches 4 Adjustable Shelves giving 5 Compartments Ice-Free Automatic Vent Port to Avoid Vacuum Formation Two 20mm Access Ports Rapid Temp Pull-Down: Ambient to -85°C in 4.3hrs (Freezer Empty) Rapid Temp Recovery After Door Opening CFC/HCFC-Free Refrigerant & Insulation Weight: 296kg</p>		<p>Freezer room 696.20.26</p>


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<p>Ice Machine</p>	<p>Ice flaking machine Hoshisaki</p>	<p>FM-150KE-50 Ice flaker pro 150KG Weight 57kg</p> <p>Automatic Flush Function: regular flushing to keep the ice making system clean</p> <p>One piece bin moulding: round corners are hygienic and easy to keep clean Integrated door handle design: easy to open and to clean</p> <p>Controller board with Operation Status Display: ensuring product durability</p>		<p>Chemistry lab 696.10.23</p>
<p>Cryogenic Storage - Vapour Phase Freezer</p>	<p>Statebourne Biosystem Archive 40 & Statebourne cryostor 240 st/st self-pressurising Dewar</p>	<p>Automatic liquid nitrogen refrigerator, Stores 44,200 x 2ml samples in vapour phase Rotating drum that is sealed from LN2</p> <p>Storage temperature of -180°C. Unique overflow protection system that prevents sample/LN2 contact Reservoir of 190 litres (2 weeks) External turning wheel to help locate samples (without getting hands cold)</p> <p>Automatic De-fog button to help see sample racks and save on LN2 Fitted with hot gas by pass so pipeline ready Fold down steps for easier access</p> <p>Off centre neck means vessel fills every 3 days # saving on LN2 Twin fill solenoids as standard for extra overflow protection Access for external temperature probe makes it easier for HTA storage</p> <p>Lockable lid with key Mid-range width at 1.22 metres wide so can go through wide doors Supply tank recommended # Cryostor 2400 supply tank</p>		<p>Freezer room 696.20.26</p>


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<p>Dry Ice box</p>	<p>Cardice storage container Type 160K</p>	<p>Constructed from Food-grade polyethylene with polyurethane insulation and low temperature seals. Storage loss- approx. 3-4%/ day. Dry ice capacity: 160kg pellets, 10 bags, 14 dry ice blocks.</p> <p>Fitted with drain plug. Single Cantilever Catch Set of Castors Supplied Loose Weight: 46kg</p>		<p>Freezer room 696.10.26</p>
<p>Bacterial Incubator shaker (Floor Standing) x2</p>	<p>New Brunswick Innova 44R Refrigerated Incubator Shaker.</p>	<p>Floor Standing/Stackable Model Speed Range: 25 to 400rpm (25 to 250rpm for 3 Stacked Units) with Soft Start Temperature Range: Ambient -20°C to 80°C Orbit: 25mm (Minimum Set Point is 4°C) Timed Shaking: 0.1 to 99.9 Hours Large Easy to Read Digital Display of Operating Parameters Audio-Visual Alarms for Speed (± 5rpm) and Temperature Variation ($\pm 1^\circ\text{C}$) Programmable Microprocessor Control Space Saving Door Glides up and Out of the way Slide Out Platform for Easy Sample Access Double Panel Thermal Glass Interior Chamber Light Superior Air Circulation System Multi-Function Reservoir Humidifies Chamber and Protects from Spills Rounded Corners and Built-in Drain for Easy Cleaning (6 litre Capacity) Speed Limiter Reduces Shaker Speed when Overloaded / Imbalanced Auto Shaker Cut-Out if Door Opened High Temperature Cut-Out Automatic Restart After Power Interrupt Heavy Duty Triple-Eccentric™ Counterbalanced Drive Weight: 259kg Sticky pads:</p>		<p>ILab-2 696.10.22</p>



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		<p>Max. Capacity: 93 x 50ml flasks, 39 x 125ml flasks, 30 x 250ml flasks, 24 x 500ml flasks, 14 x 1000ml flasks, 8 x 2000ml flasks, 6 x 4000ml flasks, 6 x 5000ml flasks</p> <p>1 x 500ml Erlenmeyer Clamp with Spring Retainer 1 x 1000ml Erlenmeyer Clamp with Spring Retainer 1 x 2000ml Erlenmeyer Clamp with Spring Retainer 1 x Large Test Tube Rack for Universal Platforms (e.g. 50ml conicals)</p>		
Bacterial Incubator shaker (bench top)	Thermos MaxQ Incubating orbital shaker	<p>Thermo MaxQ Incubating Orbital Shaker</p> <p>Shaking motion: Orbital Orbit (mm): 190 Speed range (min-1): 15 – 500 Temperature accuracy at 37 (°C): ± 0,1 weight: 35 kg</p> <p>1 x CLAMP UNIVERSAL PLATFORM 125ML FLASK 1 x CLAMP UNIVERSAL PLATFORM 250ML FLASK 1 x CLAMP UNIVERSAL PLATFORM 500ML FLASK 1 x CLAMP FOR UNIVERSAL PLATFORMS, MICROPLATE/DEEP WELL PLATE 1 x ADJ ANGLE TUBE RACK 72-13MM</p> <p>The shaker can be used in continuous mode or the timer set from 1 to 60 minutes. Holds up to four one litre flasks. Two temperature ranges, 5 °C above ambient to 80 °C or 5 °C below ambient to 80 °C. Heat turns off if temperature deviates ±1 °C of set point. Max load: 15.9kg.</p>		ILab- 1 696.10.14


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<p>CO2 Incubator</p>	<p>Binder CB160 CO2 Incubator Dual chamber stacked CO2 incubator X 4 Base on castors X 2 Stacking adapter X 2</p>	<p>Binder CB160 CO2 Incubator Capacity: 150 Litres with 180 °C Hot-Air Sterilisation Cycle VENTAIR™ Jacket System Sterilisable built-in CO2 sensor Drift-free infrared CO2 measurement system Seamless Deep-Drawn Stainless Steel Chamber with Integrated Interior Shelving System Patented Permady™ System for Condensation-Free, Humidity Maintenance Temperature Range: Ambient +7°C to 60°C Temperature Variation: ±0.3°C (at 37°C) Temperature Fluctuation: <±0.1°C CO2 Range: 0 to 20% and CO2 Setting Accuracy: 0.1% Patented CO2 Gas Mixing Head (No Fan in Chamber) Humidity: 90-95% by Natural Vaporisation 3 Perforated Stainless Steel Shelves (max 6) Shelf Dimensions: 495(w) x 444(d) mm Hose set for gas supply with 2 hose clamps and Tightly Closing Inner Glass Door Independent, Adjustable Temperature Safety Device (visual & acoustic alarms) Electronic Auto-Diagnosis System with Audio-visual Alarms Interior Dims: 600(h) x 500(w) x 500(d) mm External Dims: 920(h) x 680(w) x 715(d) mm (+54 mm for door handle and exhaust) and Weight: 107 kg</p>		<p>Tissue culture lab 696.10.26</p>
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<p>Autoclave (Benchtop 40 L)</p>	<p>Priorclave Benchtop 40 L round chamber Model PS/MID/C40</p>	<p>Autoclave capacity 40 litres chamber size 350mm diameter x 420mm chamber material polished 316 stainless steel loading format front operating range up to 138°C, 2.4 bar water tank capacity 3 litres Quick seal single-action door fitted with thermal and pressure locks to prevent opening at load temperature Above 80°C and pressures above 0.2 bar. Tactrol 2 microprocessor control with simple and fully variable setting of process time, temperature with graphic Indication of cycle status. Automatic timed free-steaming. Forced Air Cooling. Media Warming and Delayed Start functions keep autoclaved media at a usable temperature ready for Immediate use. Low water level sensor. Two stainless steel shelves. Takes 8x 1 Ltr Duran Bottles or 7x 1 Ltr Conical Flasks. Weight 70kg.</p>		<p>ILab - lab 696.10.14</p>
<p>Autoclave (Floor standing 153L)</p>	<p>Astell 153 L front loading round chamber MNS247C</p>	<p>153 litre front loading, floor standing circular section autoclave with manual vertically sliding door. Heaters in chamber as standard, electro polished stainless steel pressure vessel, 5 pre-set cycles, thermocouple entry port, USB interface as standard, over temperature cut-out, date printer, low water indicator, reservoir drain, automatic timed air purge system, pressure gauge, vent valve, castors and colour touch screen controller as standard.</p>		<p>Services Lab 696.10.24</p>

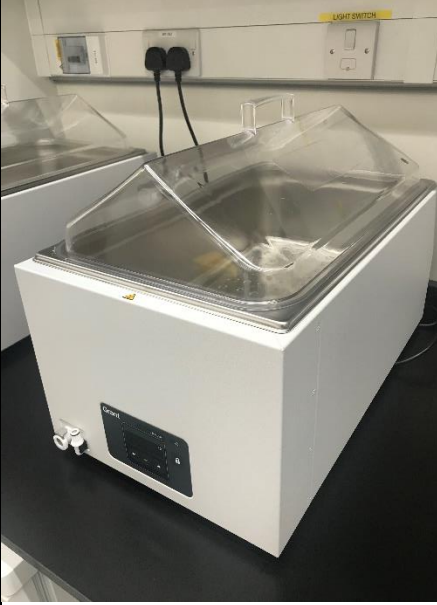
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<p>Microbiological Class II Safety Cabinet (MSC)</p>	<p>Labogene Scanlaf Mars 1200 'Runner' X3</p>	<p>Microprocessor Controlled with Membrane Keypad Digital Display at Operator Eye Level with Alpha Numeric Display for: Laminar Air Flow Speed Date & Time Hour Counter for Cabinet Life UV Light Run Hours (UV Light Installed) HEPA Filter Run Hours Date of Last HEPA Filter Change Audible & Visual Alarms for: Exhaust Flow Rate Out of Pre-Set Range Laminar Airflow Rate Out of Pre-Set Range Failure of Motor Blowers Front Window Positioning Incorrect Filter Change Required V-Shaped Air Inflow Grill for Unrestricted Controlled Air Inflow Digital Blower Control for Precise Airflow Setting Two Down Flow Blowers to Reduce Noise Levels & Create Even Airflow Downflow Air Velocity: 0.28 m/sec \pm0.01 m/sec In Flow Air Velocity: 0.45 m/sec Exhaust Flow Rate: 389 m³/hr Ergonomic Design with 9° Sloping Front Push Button Electrically Operated Sliding Glass Front Window Standard Opening: 200mm Max Front Opening: 580mm Front Window Closes for Decontamination Hardened Glass Side Windows each with 3 x 22mm dia Holes for Valves Trough Spill Capacity: >20 litres Smooth Surface Working Chamber with Rounded Corners White Polyester Coated Steel Inner Back Wall Powder-Coated Mild Steel Exterior Construction Laminator for Excellent Air Flow & Glare-Free Light Distribution Noise Level: <47 dB(A) (<37 dB(A) in Eco-Save Mode) Dimmable Lighting from 0 to 2,000 Lux Slim Low Roofed Design All Servicing & Adjustment Procedures Easily Made from Front of Cabinet Working Chamber Dimensions: 700(h) x 1,200(w) x 480(d) mm Overall External Dimensions: 1,322(h) x 1,304(w) x 797(d) mm Height on 800mm Stand: 2,075mm (Adjustable by Levelling Feet to ~2,100mm) Weight: 192kg Supplied with:</p>		<p>Tissue culture lab 696.10.26</p>
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		<p>9000020023 x 2, Electric Socket (1 on LHS & 1 on RHS) 9001020864, LED Dimmable Light (Reduces Power Consumption to 92W) 300007 x 4, AISI 304 Stainless Solid Work Surface with V-Shaped Angled Inflow 9000020107, UV-Light Mounted in Front Top of Cabinet 9001040012, Support Stand to give 800mm Work Surface 9001020133, Double Exhaust HEPA Filter</p>		
Drying Cabinet	Drying cabinet LTE scientific (545 L)	<p>Fine filter reduces the amount of particulate contamination entering the cabinet, thereby ensuring a cleaner environment for freshly washed items. Temperature is thermostatically controlled and protected by an over-temperature cut-out device. Heaters are situated at the bottom of the cabinets below a perforated base plate, and vent through the top. Temperature is controlled via a regulator. Number of adjustable shelves is 4.</p> <p>The unit is fitted with hinged, toughed glass door, case is single skinned and fabricated from rust proofed steel, a temperature controlled (maximum 65°C) and mains switch are provided on the front of the cabinet base, together with a heater lamp (fully sheathed), shelves are provided and the positions of which are adjustable.</p>		Services lab 696.10.24


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<p>Water Bath</p>	<p>Grant Water bath (unstirred, 18 L) X 6</p>	<p>Grant JB Nova 18 Unstirred water bath, capacity 18 litres, Temperature Range: Ambient +5°C to 95°C Temperature Stability: $\pm 0.5^\circ\text{C}$ (at 70°C) Digital Temperature Control Temperature Display & Setting Resolution: 0.5°C Set and Forget Technology # Fast Heat-Up & Accurate Temp Control Fixed Thermal Cut-Out Advanced Dry Start/Run Protection Single Point User Calibration Lockable Control Panel Stainless Steel Tank with Painted Steel Outer Casing Polycarbonate transparent lid Unobstructed Work Area Drain Tap H:277mm; D:590mm; W:335mm Weight: 9kg</p>		<p>ILab- 2 696.10.22</p> <p>ILab- 1 696.10.14</p> <p>Tissue culture lab 696.10.26</p>
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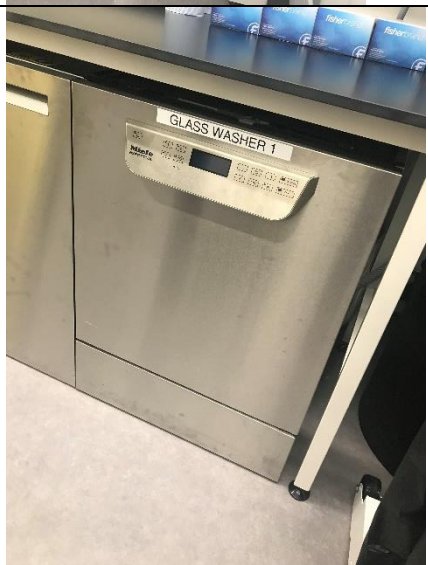
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<p>Optical (light) Microscope</p>	<p>Microscope Motic AE2000 Trinocular inverted with Tablet camera moticam</p>	<p>Motic's AE2000 Inverted Microscope is designed for routine live cell inspection with an easy and flexible set up, ideal for University, routine-clinical, and lab environments. The model's main applications offer superior image quality when viewing cell cultures in microbiology, living organisms and tissue culture samples.</p> <p>The newly designed Binocular Ergo tubes with 360° swivelling "butterfly" design offers the most comfortable observation position, especially useful for prolonged sample viewing. The auto on/off function of the power supply extends the lifespan of the sample and light bulb and at the same time saves energy. Another added feature, a modular interchangeable illumination concept, allows for the easy transition from Halogen to LED to fulfil a wide-range of customer viewing expectations. The improved phase contrast quality of the model makes the instrument suitable for a greater range of applications that demand precision optics.</p> <p>Biotech set with attachable stage, well plate holder (128x86mm), petri dish holder (54mm), slide holder (26x76 mm) and 4x(0,10), 10x(0,25), 20x(0,30), and 40x(0,50) objectives (magnification). Phase ring Ph0 for 4x objective and phase ring Ph1. Digital set with full HD moticam 1080 BMH, 0,5x C-mount adaptor. LED set with 6 V/3 W module. Tablet Camera moticam, BTU8, 5 MP, display: 20 cm (8"), memory: micro SD card, CMOS, Software: Image Plus 3.0.</p>		<p>Tissue culture lab 696.10.26</p>
<p>Gel Documentation System</p>	<p>G:BOX Chemi XRQ (Syngene)</p>	<p>G: BOX Chemi XRQ gel documentation system with high resolution, cooled camera and application controlled GeneSys software for fluorescence and chemiluminescence applications.</p> <p>For a laboratory that needs hassle-free chemiluminescent detection, as well as routine gel documentation, using the G: BOX Chemi XRQ's powerful GeneSys software to switch between applications is simplicity itself. Place your chemi blot in, and the system's cooled camera captures images with a sensitivity equal to film or slide in your gels to generate quality pictures of your DNA and proteins anytime you want.</p> <p>Featuring a standard darkroom and a 4 million pixel image resolution, the G: BOX Chemi XRQ camera is cooled to provide a low signal to noise ratio with perfect background. Motor driven 7 position filter wheel with UV filter to extend applications. Use with UV transilluminator for DNA imaging – use converter screen for visible light applications such as protein gels.</p> <p>HI-LED lighting options cover the full spectrum of high intensity blue, green, red and infra-red resulting in faster exposure times and publication quality images.</p>		<p>Innovation lab 2 696.10.22</p>


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		<p>The system is controlled by GeneSys application driven image capture software and comes complete with unlimited copies of GeneTools analysis software.</p> <p>Single wavelength slide-out UV transilluminators (20x20cm; 302nm) 230V, 50Hz + runners, for use with G:BOX systems Mediumwave - with runners (no cover) 6 tubes</p> <p>Visible light converter, Size 30.5x33cm, for use with G:BOX systems 525nm Filter (range 516-539m) For use in 7 position filter wheel systems 605 nM filter for Multiplexing, for 7 position filter wheel. 705 nM Filter for Multiplexing, for 7 position filter wheel. Filter for Licor multiplexing 800nm (range 890-876nm). For GBOX Chemi systems +10/-10 nm. HILED Lighting option covering Red, Green, Blue and Infra-Red for Multiplex applications. Csl-uvps22 UV Transparent cutting platform. UV-Blue light converter screen (alter the 302nm UV wavelength to 460-470nm preventing damage to skin and eyes while visualising gels, i.e. converts to blue light). Desk top PC</p>		
<p>Spectrophotometer</p>	<p>UV/Visible spectrophotometer (Biochrom WPA Biowave DNA)</p>	<p>Spectrophotometer which is a simple-to-use UV/Visible instrument with a CCD array detector (1024 pixels). It has no moving parts, which is the basis of the rapid scanning operating system. This instrument is ideal for measurements in the visible and ultraviolet wavelength region of the electromagnetic spectrum (wavelength range of 190 (UV/VIS) to 900nm, 5nm bandwidth, scanning (220-230nm), beam format single, cell holders 1).</p> <p>Pre-programmed methods for DNA, RNA, proteins and cell density Low volume capability with 10µL min. quartz cells not provided. The system is compatible with both Quartz and disposable low volume UV cuvettes (not provided).</p> <p>The instrument can be used as a standalone or results may be exported. Results can be printed directly using an (optional) integrated high quality graphical printer for a permanent record. Export options include via a USB connection to a suitable PC running Print Via Computer (PVC) software (optional) for advanced reporting and data storage.</p>		<p>ILab-1 696.10.14</p>

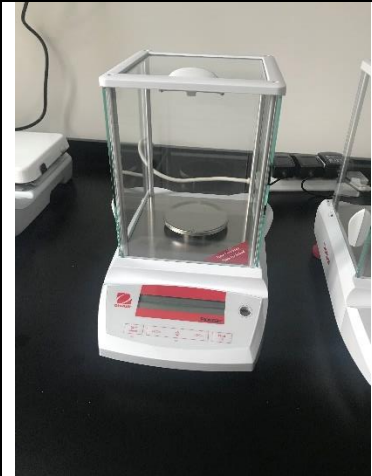

Equipment List of Core Facilities

<p>Aspirator System</p>	<p>Vacuum Aspiration system Vacuubrand BVC Professional X3</p>	<p>Vacuubrand BVC Professional Vacuum Aspiration System With Chemistry Diaphragm Pump - ME 1C Self-closing Quick Couplings Non-contact Liquid Level Sensor Disinfection Routine Automatically On/Off Switching of the Pump Adjustable Suction Power Touch Panel Control Polypropylene Collection Bottle, 4 Litres Sterile Filter, 0.2 µm Dimensions (L x W x H), approx. 410 x 194 x 448 mm Weight, approx. 7.3 kg</p>		<p>Tissue culture lab 696.10.26</p>
<p>Glass Washer</p>	<p>Glass washer Miele</p>	<p>PG8583 Cd Stainless Steel, Miele Glass Washer/Compact Disinfector, Adp For Unpressurised Demin Water. De-Cs7-85, Stainless Steel Lid, Width 900Mm, Depth 700Mm For Pg8583Cd. A 150 Lower Basket For Modules. A 300 Module For Lab Glassware 2X4. A 301 Module For Lab Glassware 3X6. A 102 Upper Basket, Open Front Vertical Clearance 205Mm. Ak12, Half Insert For Beakers, Flasks And Wide-Mouthed Glassware. A 151 Lower Basket, Open Front. Miele™ Insert ½. E109 Half Insert For 21 Beakers Up To 250MI, 21 X 3 Holders.</p>		<p>Services lab 696.10.24</p>


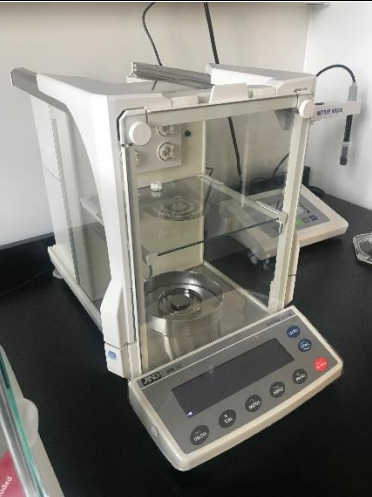
Equipment List of Core Facilities

Thermal Cycler	Eppendorf Master cycler Nexus Gradient	The Master cycler® nexus can handle all kinds of PCR consumables, from low volume up to 0.5 ml PCR tubes and all common PCR plates fit.			
		Block accuracy (°C)	±0,2		
		Block homogeneity (°C)	20 - 72 ≤ ±0,3, 95 ≤ ±0,4		
		Temperature range (°C)	4...99		
		Lid temperature range (°C)	37...110		
		Gradient temperature range (°C)	30...99	-	30...99
		Gradient span (max/min) (°C)	1...20	-	1...20
		Sample capacity	96×0,2 ml PCR tubes, 1 PCR plate 8×12 or up to 71×0,5 ml PCR tubes		
		Weight (kg)	10.9		
					
ILab-1 696.10.14					



Equipment List of Core Facilities

<p>Analytical Balance</p>	<p>Ohaus Fine Balance</p>	<p>Ohaus Pioneer PA124C Analytical Balance Calibrated with Internal Weigh Capacity: 120g Readability: 0.1mg Pan Diameter: 90mm Square Draught Shield Square draught shield with three removable sliding doors, easy to dismantle and clean</p>		<p>Chemistry lab 696.10.23</p>
<p>Analytical Balance</p>	<p>Ohaus Fine Balance</p>	<p>Ohaus Pioneer PA224C Analytical Balance Calibrated with Internal Weight Capacity: 220g Readability: 0.1mg Pan Diameter: 90mm Square Draught Shield Square draught shield with three removable sliding doors, easy to dismantle and clean</p>		<p>Chemistry lab 696.10.23</p>


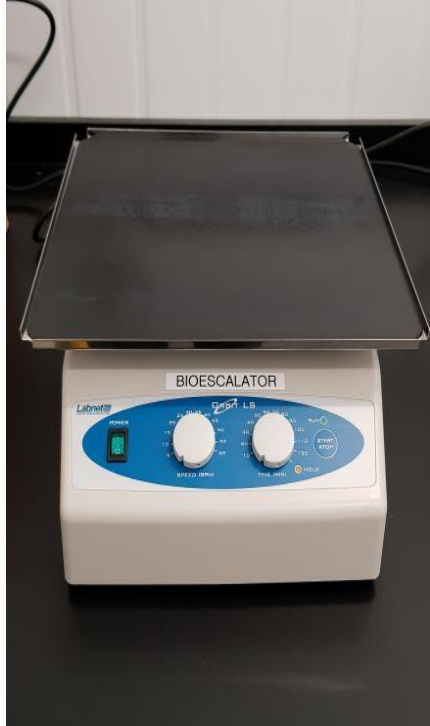
Equipment List of Core Facilities

<p>Precision Balance</p>	<p>Ohaus Top pan Balance</p>	<p>Ohaus Pioneer PR4202 Precision Balance Application: Basic weighing, parts counting, percent weighing Capacity: 4200g Readability: 0.01g Linearity: 0.02g Pan Diameter: 180mm Calibration: internal Communication: RS232 connectivity for easy data transfer Stabilization time: 1 second Units: gram, kilogram, ounce, pound, carat, pennyweight, ounce troy, newton and grain Dimensions: 201 x 317 mm (W x D), Weight: 3.5kg.</p>		<p>Chemistry lab 696.10.23</p>
<p>Micro-analytical Balance</p>	<p>A&D BM-20 Analytical Balance</p>	<p>A&D Instruments BM-20 Micro Analytical Balance Capacity: 22 g Readability: 0.001 mg Pan Diameter: 25mm Anti-Static Draught Shield Built-In Ionizer Fully Automatic Calibration with Internal Weight</p>		<p>Chemistry lab 696.10.23</p>



Equipment List of Core Facilities

<p>Ph Meter</p>	<p>Five Easy F20 pH meter x2</p>	<p>Five Easy F20 pH Bench Meter Standard Kit pH - range 0,00...+14,00 pH - resolution 0,01 pH - accuracy $\pm 0,01$ pH - calibration Linear, max. 3 points (4 pre-defined buffer groups) mV - range ± 2000 mV - resolution 1 mV - accuracy ± 1 Temperature range ($^{\circ}\text{C}$) 0...+100 Temperature resolution ($^{\circ}\text{C}$) 0,1 Temperature accuracy ($^{\circ}\text{C}$) $\pm 0,5$ Display Segmented LCD Power supply 100 - 240 V; 50 - 60 Hz Weight (kg) 0,63 plus plastic LE438 3-in-1 pH electrode and 2 ea x 4.01, 7.00 and 9.21 buffer sachets</p>		<p>ILab-1 696.10.14</p> <p>Chemistry lab 696.10.23</p>
<p>Hotplate stirrer</p>	<p>Hotplate/stirrer x2</p>	<p>CERAMIC HOT PLATE STIRRER HSC, 400$^{\circ}\text{C}$, 1300 RPM, 15 L</p> <p>Hot plate stirrer with a white ceramic heating plate which The HSC features a run off groove which provides protection from liquid spills, the square shaped ceramic heating plate resists acids, bases and solvents.is easy to clean.</p>		<p>ILab-1 696.10.14</p> <p>Chemistry lab 696.10.23</p>


Equipment List of Core Facilities

<p>Rotating wheel</p>	<p>Rotating wheel Bibby-Stuart</p>	<p>Bibby-Stuart SB3 Blood Tube Rotator Biocote® Protected permanent effective microbial protection End-Over-End (360°) or Rolling Action Mixing Digital Timer and Speed Display Variable Speed: 2 to 40 rpm Timer: 1 to 999 minutes Adjustable Mixing Angle Spill Tray Suitable for use in Incubators (60°) & Cold Rooms (4°) Dimensions: 230(h) x 200(w) x 270(d) mm Weight: 3.2kg SB3/1, Rotator Disc for 40 x 10-11.5mm diameter Tubes (eg Microtubes)</p> <p>Rotators give gentle but effective mixing. An integral tray catches any spillages from tubes being rotated. The optional dual holder accessory enables two tube holders to be used simultaneously.</p>		<p>Cold room 696.10.25</p>
<p>Platform Shaker</p>	<p>Orbit LS Analogue Shaker with platform Labnet</p>	<p>The orbit LS low speed lab shaker is a high quality, general-purpose laboratory shaker with economical analogue control. 19mm orbit for blotting, gel staining and general mixing Maximum load 5 kg Safe for cold room and incubator use Variable speed range 3 to 60 rpm Timer 20-120min step, Hold function Platform dimension WxL 30 x 30cm useable area Dimensions WxLxH 30 x 34 x 16cm Electronic time and speed control, shaker orbit 19 mm (3/4 inch) Weight 6.6kg</p>		<p>Cold room 696.10.25</p>



Equipment List of Core Facilities

<p>Nanophotometer NP80</p>	<p>Implen Nanophotometer® NP80 Touch UV/Vis spectrophotometer</p>	<p>Implen Nanophotometer® NP80</p> <p>Touch UV/Vis spectrophotometer for Nano Volume and standard cuvette applications. Coloured touch screen, scan range 200–900nm detection range Nano volume 1-16,500 ng/µl dsDNA, 0.03-478 mg/ml BSA, detection range cuvette 0.1-130ng/ul dsDNA, 0.003-3.7 mg/ml BSA, photometric range (10mm) 0.02-330 A Integrated low vibration Vortexer, built-in cuvette, Interfaces: HDMI, 2 x USB A, USB B, Ethernet; Optional control via Windows PC, MAC, tablet & smart phone (Android & iOS) Including power supply, USB cable, dust cover, software & manual</p>		<p>ILab-1 696.10.14</p>
<p>Water Purification System</p>	<p>Duo 30 Type 2 Water (Deionised water) and Type 1 Ultrapure water</p>	<p>DUO30-UF-R - Duo Type 2 and Type 1 Water system with remote dispenser for Type 1 Water. Remote- Remote Dispense for Type 2 water (touch screen). Tank- 30L Reservoir with tank air filter and Tap on front to take off Type 2 quality water. Note: Type 1 and type 2 water can be dispensed at the same time.</p> <p>Type 2 (Deionised) DI Water quality general laboratory grade water 1-15 MΩ-cm. Type 1 Water is Ultrapure water 18.2 MΩ-cm water quality.</p> <p>Type 2 water (deionised) DI water is suitable for: General laboratory applications requiring higher ionic purity; Buffer make up; Media production; Sample dilution and reagent preparation; General chemistry; Spectrophotometry; Protein electrophoresis; Glassware washing & rinsing.</p> <p>Type 1 water (ultrapure water) is suitable for: General analysis; Standard buffer; Atomic absorption spectroscopy (AAS); Gas chromatography (GC); Ion chromatography (IC); Inductively Coupled Plasma Mass Spectroscopy (ICP-MS); Flow cytometry; Cell and tissue culture; Pyrogen sensitive applications; Micro and molecular biology; Polymerase chain reaction (PCR); High-performance liquid chromatography (HPLC)</p>		<p>Chemistry Lab 696.10.23</p> <p>Services Lab 696.10.24</p>



Equipment List of Core Facilities

<p>Ducted Fume Cupboard with flammable and Acid storage units underneath</p>	<p>1200mm wide Ducted Fume Cupboard with flammable and acid storage under units</p>	<p>1200mm wide Fume Cupboard - 1200mm wide Bench Type VAV Fume Cupboards, Automatic Sash Controllers, and Firetrace Fire Suppression Systems (CO₂). Within the support frame structure is epoxy polyester powder coated mild steel double door storage cupboard, fitted with hinged, ventilated, lockable doors and an adjustable internal shelf. Fitted to the base of the storage cupboard is a leak-proof mild steel drip tray. The unit is fitted with a 50mm diameter flexible hose which would run up the side of the fume cupboard and connect into the fishtail transformation section.</p> <p>Fume cupboard one come with Storage of acid and Fume cupboard two come with Storage of flammables 30 minutes.</p> <p>The following services are be fitted on the side cheeks adjacent to the sash opening:- Cold Water; Light Switch; 13A Double Switch Sockets c/w neon indicators; Data Back Box c/w containment to high level; RCD 1; VAV Controller; ON/OFF Key switch; LED Indicator (to indicate when extract fan is operational).</p>		<p>Chemistry Lab 696.10.23</p>
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Equipment List of Core Facilities

<p>Vortex</p>	<p>Vortex Mixer (VWR VV3)</p>	<p>VWR VV3 Vortex Mixer Orbital Diameter: 4 mm Speed Range: 500 to 2500 rpm Max. Capacity: 250 ml Motor Input/Output: 58/10 W Overall Dimensions: 136 (h) x 127 (w) x 149 (d) mm Weight: 4.5 kg</p>		<p>ILab-1 696.10.14</p>
<p>Fluorescent Cell Imager</p>	<p>ZOE™ Fluorescent Cell Imager (Bio-Rad)</p>	<p>The ZOE™ fluorescence imaging system combines the ease of use of a personal tablet with the power of an inverted microscope. An Android-based platform, the ZOE™ Cell Imager uses an intuitive touch-screen interface to control the brightfield, three fluorescence channels, and the integrated digital camera. The ZOE™ Fluorescent Cell Imager is a complete digital imaging system, allowing users to view samples, capture and store images, and create multicolor overlays. Thanks to the built-in light shield, the ZOE™ Cell Imager does not require a darkroom for fluorescence imaging.</p> <p>Specifications: Imaging channels – Brightfield channel and 3 fluorescent channels (blue, green, and red). Light source – Blue channel: UV LED; Green channel: Green channel: blue LED; Red channel: Green LED; Brightfield channel: multiple green LEDs. User interface – 10.1 in. colour (26cm) touch-screen LCD monitor. Focusing mechanism - Course and fine, manual adjustments. Camera – Monochrome camera, 12 bit CMOS, 5 megapixels. Data format – JPEG, TIFF, or RAW image files. Image merge – Images from up to 4 channels can be overlaid. Data storage 16 GB internal memory. Data export – 2 USB Ports and 1 HDMI Port. Objective – 20x. Numerical aperture – 0.40. Display magnification – Standard 175cmx; Zoom 700x. Compatible with Flasks: T25, T175, or T225; Multiwall plates: 6, 12, 24, 48, 96 or 384 –well microplates; Dishes: 35, 60, or 100 mm; Slides: Chamber slides or standard glass microscopy slides. Weight – 9 kg (19.7 lb).</p>		<p>Tissue culture lab 696.10.26</p>


Equipment List of Core Facilities

<p>Microplate Thermo Shaker</p>	<p>Thermoshaker with Lid (Grant bio PHMP-4)</p>	<p>Compact, dual heating microplate thermoshaker, for use with standard footprint microplates with 4 to 384 wells; unit accommodates four microplates providing incubation to 60 or 100 °C. The dual heating, from both the platform and heated lid, provides a controlled microenvironment and ensures excellent uniformity and reproducibility. The heated lid also minimizes evaporation. The powerful yet quiet motor produces regulated and reproducible rotation throughout the speed range, giving uniform amplitude across the shaking platform.</p> <p>Mixing and incubation phase are combined and reaction process times are reduced. Integral timer, 1 min to 96 h, with audible alarm and automatic switch-off. Can be used at 4 to 40 °C (80% relative humidity, non-condensing), in an incubator or cold room</p> <p>Specifications: Temp. range – Ambient +5...60°C; Orbit – 2,0mm; Speed 250-1200 rpm; Speed setting resolution 10 rpm; Weight – 7 kg; Display – 2 linex16 character LCD; Heat-up time – Ambient...37°C: 12 Min.</p>		<p>ILab-1 696.10.14</p>
<p>Microplate Reader</p>	<p>BMG-Labtech FLUOstar Omega</p>	<p>Plate reader BMG Labtech FLUOstar Omega for absorbance, fluorescence and luminescence, minimum wavelength 220nm, maximum wavelength 1000nm, for 96 (Luminescence) to 384 (Fluorescence) well plates, heated, shaking, and scanning. Includes Fluorescence, FRET, Standard Time-Resolved Fluorescence (TRF), with 8 filters of users' choice.</p> <p>Absorbance - UV/Vis Scanning Spectrometer (220-1000nm) - Includes reference Optic & ultra-fast UV/VIS Spectrometer. The spectrometer allows measurements of multiple wavelengths or any spectrum from a sample in <1s per well.</p> <p>High Performance Luminescence - utilising the combination optic fluorescence emission channel for up to 96 well plate format.</p> <p>Temperature Control - 45°C. Top Optics: for 96 (Luminescence) to 384 (Fluorescence). Bottom Optics: Quartz Fibre UV/Vis Range 240-1000nm Fujitsu Lifebook Laptop (F5VHY93). Software: Revision – 5.70 E2, control software-5.70, firmware -1.52, MARS data analysis 3.42 R5.</p> <p>MARS Data Reduction Software - Unlimited user Windows® compatible - FDA 21 CFR Compliant.</p>		<p>ILab-1 696.10.14</p>

Equipment List of Core Facilities

<p>Bacterial Incubator (56L)</p>	<p>IL 56 Prime</p>	<p>INCU-Line® general incubators are designed to cultivate organisms at homogeneous temperatures. They have a temperature range of 5 °C above ambient to 100 °C and can, for instance, be used for microbiological tests, germ count determination and ageing/heated storage.</p> <ul style="list-style-type: none"> • Multi-functional microprocessor controller with 4,3" full colour touch screen • Five user program memory • Five-segment temperature-time profile, quick change of set temperature and set time during a running program • Scheduled program start (set of date and time) and loop function up to 255 times or endless • Adjustable hold at set point time for temperature from 1 min to 366 days or continuous operation • Adjustable ramp times (days/hours/minutes) • Over temperature protection class 3.1 • Automatic air flap control (0% - closed, 100% - open, adjustable in increments of 1%) <p>Incubator with natural convection feature a stainless steel (DIN 1.4016) inner chamber and a powder coated sheet exterior with lockable solid door and internal glass door for a stable atmosphere. All models have a 30 mm Ø access port, real time clock, USB interface (in front panel) to download data onto USB stick and LAN interface. The internal memory stores up to 10000 data records (stored for a maximum 6 months). The range has an auto-diagnostic function, power failure control system, temperature sensor fail alarm, open door alarm and audible and visual temperature alarms.</p> <ul style="list-style-type: none"> • Temperature range (°C) - Ambient +5...100 • Temperature fluctuation (time) (°C) - ±0,2 at 37 °C • Temperature variation (spatial) (°C) - ±0,7 at 37 °C • Capacity (l) – 56 • Max. load per shelf (kg) – 25kg • Convection type - Natural convection • Shelves supplied (max.) - 2 (5) • Weight (kg)- 54kg 		<p>Ilab-1 10.14</p>
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Equipment List of Core Facilities

<p>Corning LSE Digital Dry Bath Heater, Dual Block.</p>	<p>LSE block heater</p>	<p>The Corning Digital Dry Bath Heater in dual block configuration and provide a broad temperature range up to 150°C, which makes them useful for a variety of applications in molecular biology, histology, clinical, environmental, and industrial laboratories. They have been designed to incorporate the best combination of features including block capacity, dual displays, and an external temperature probe that gives life science researchers the confidence and efficiency they need when working with precious samples.</p> <ul style="list-style-type: none"> • Dual block capacity to maximize sample processing • Dual display allows for easy monitoring of temperature and time • USB connectivity enables traceability of data • Moulded block chamber provides excellent temperature uniformity • Temperature range – Ambient +5°C to 150°C • Temperature display resolution – 0.1°C 4 digit LED • Temperature uniformity - +/- 0.2°C (at 37°C in block) • Temperature accuracy - +/- 0.3°C • Timer 1 to 99 hours 59 minutes or continuous in 1 minute increments • Single Block, 24 x 1.5 mL Tubes • Single Block, 20 x 2.0ML Tubes • Dimensions (w x d x h, mm) 210 x 290 x120 • Weight: 7.0 Lbs 	 <p>A photograph of the Corning LSE Digital Dry Bath Heater. The device is a white, rectangular unit with a clear plastic block chamber on top. The front panel features two green LED displays: the left one shows '37.0' and the right one shows '00:36'. Below the displays are several control buttons, including a power button and directional arrows. A metal probe is lying on the surface next to the device.</p>	<p>Ilab-2 10.22</p>
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