IRIS NAVARRA HUB IRIS LAB EQUIPMENT CATALOGUE

LABORATORIES OF:

Synthetic Biology · Biotechnology · Genomic Sequencing

NAVARRA ⋮ NAFARROA
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IRIS
NAVARRA
POLO DE
INNOVACIÓN
DIGITAL

IRIS Lab EQUIPMENT

Synthetic Biology ·
Biotechnology ·
Genomic Sequencing ·

> INNOVATIVE, ADVANCED DIGITAL EQUIPMENT, SO THAT YOU CAN EXPERIMENT WITH IT AND ANALYSE ITS APPLICABILITY IN YOUR BUSINESS OR ACTIVITY

What is IRIS Lab?

IRIS Lab is the experimental laboratory of the IRIS Hub and provides a diverse state-of-the-art digital equipment units that the Hub makes available to companies, institutions and citizens, so that they can learn about it, experiment with it and discover how it can support their activities and in their business.

1

Who can order this equipment and how?

Any individual, institution or company can access this equipment by calling +34 628 231 232 or by emailing to hola@irisnavarra.com.

2

How much will it cost?

We offer a base rate for each piece of equipment. Every request includes a complimentary consulting process to size the service ad-hoc.

3

How long can I use it for?

The rental period depends on the specific piece of equipment, but it will always be long enough for you to get familiar with it, test it thoroughly, and evaluate it under real conditions.

4

Who services it?

If the equipment you want to use requires maintenance or periodic inspections, IRIS Navarra will generally manage the servicing.

5

What warranty does the equipment have?

Every equipment available at IRIS Lab includes a warranty that covers different costs for a defined period. If you have any questions, please contact us.

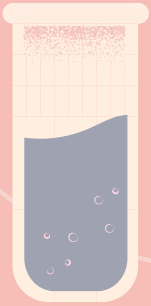
6

Training to use the equipment

Professional or supplier-provided support may be available. In some cases, the equipment can be used in self-service mode. The level of expertise required will depend on each piece of equipment.

IRIS LAB EQUIPMENT

Synthetic Biology



The IRIS LAB Synthetic Biology Laboratory is a unique technological innovation space in Navarra, which brings together state-of-the-art equipment for the design, manufacture and characterisation of biomolecules, microorganisms and advanced biological systems.

It is part of the IRIS Navarra Digital Innovation Hub ecosystem, and has been designed as an open, shared and flexible laboratory to promote the development of synthetic biology, biotechnology and bioengineering in Navarra.

This laboratory enables a complete synthetic biology workflow, from genetic manipulation to recombinant protein production, metabolite analysis, biomolecule purification, and microbial and cell culturing.

It is applicable to a range of disciplines including health, agri-food, sustainable energy and the environment, among others.

MORE INFORMATION

Visit our website and discover all the information about Synthetic Biology equipment.

Beckman CytoFLEX SRT Sorter

BASE RATE: 26,07 €/h

Bench-top cell sorter that combines CytoFLEX sensitivity with a simplified workflow to achieve sorting in under 30 minutes. Configurable with up to 4 lasers and 15 colours. Software-driven setup and calibration enables easy use for non-experts. Isolates cell populations with high purity, recovery, and viability into tubes or plates (up to 384 wells). Particularly suitable for rare subpopulations, cloning, and multi-omic applications involving post-sorting viable cells.

Beckman Biomek i7 automated liquid handler

BASE RATE: 24,57 €/h

Automated liquid handler for medium-high workload offering up to 45 cover positions and multiple pipetting configurations. Includes accessories for colony picking and streaking. Intuitive software simplifies programming and traceability, with automated methods that reduce hands-on time and variability.

DNA SCRIPT SYNTAX STX-200 Enzymatic DNA Synthesiser

BASE RATE: 23,09 €/h

Bench-top enzymatic DNA synthesiser providing synthesis, desalting, automatic quantification, and standardisation to deliver ready-to-use oligonucleotides up to 120 bases for molecular and synthetic biology workflows. Supports modifications (e.g., fluorophores, quenchers, biotin) and degenerate bases, enabling same-day design, production, and validation directly in the lab.

Biacore 1K Analyser

BASE RATE: 15,77 €/h

Real-time analysis of biomolecular interactions via surface plasmon resonance (SPR). Enables working with small sample volumes and measures multiple biomolecules with high sensitivity. Uses coated sensor chips to enable stable ligand immobilisation, facilitating accurate kinetics and affinity determination. Suitable for drug discovery and protein research.

Sartorius Ambr 250 modular bioreactor

BASE RATE: 14,83 €/h

Bench-top bioreactor platform for optimising cell and microbial culture processes up to 250 mL. It combines high precision, flexibility and ease of use accurately replicating production conditions at pilot and commercial scale. With automated control of pH, dissolved oxygen, stirring and feeding, it enables rapid, reproducible process development. Ideal for bioproduction, media optimisation and scale-up studies.

ÄKTA Avant 25 FPLC

BASE RATE: 9,77 €/h

Advanced liquid chromatography system designed for rapid, reproducible and scalable purification of biomolecules. Ideal for biotech and pharmaceutical R&D, it supports flow rates up to 25 mL/min and pressures up to 20 MPa, offering precise gradient control, multi-channel detection, and end-to-end automation to optimise workflows. Its software streamlines method design and validation for consistent results. Compact, versatile, and high-performance, it maximises efficiency and quality in the lab.

TECAN Spark multi-mode reader

BASE RATE: 5,54 €/h

Microplate reader designed to deliver accurate and reproducible results. It integrates absorbance, fluorescence (FI, TR-FRET, polarisation), luminescence and AlphaScreen supported by high-performance optics for quantification and counting assays, enzyme kinetics, binding studies, reporter assays and biomolecular interactions analysis. Compatible with a wide range of plates and tray formats.

ÄKTA Flux S tangential flow filtration system

BASE RATE: 4,82 €/h

Compact, semi-automated tangential flow filtration system for concentration, diafiltration, and clarification of biomolecules. Handles low working and hold-up volumes and supports both hollow-fibre and cassette filter modules. An ideal complement to chromatography in protein purification workflows, enabling smooth transition from research to process development.

LYNX 6000 High-Speed Centrifuge

BASE RATE: 4,20 €/h

High-speed centrifuge for demanding bioprocess separations. Equipped with 3 rotors: 6 × 250 mL / 30,000 × g, 14 × 50 mL / 33,000 × g, 8 × 50 mL / 100,000 × g; up to 6 L capacity (6 × 1,000 mL) depending on rotor. Temperature control ranges from -20 to +40 °C. Microprocessor control with custom acceleration/braking profiles and GLP/GMP and 21 CFR Part 11-compatible traceability options. Compatible with a wide range of bottle and tube rotors.

Telstar LyoQuest Freeze Dryer

BASE RATE: 1,77 €/h

Bench-top freeze dryer pairing a -85 °C condenser with a compact, high-performance design. Approx. 8 kg total ice-condensation capacity, external vacuum pump, automatic defrost, and PLC control with touch screen for recipe creation and pressure/temperature logging. Supports in-situ pre-freezing, reducing handling and overall process time.

Branson SFX250 Sonifier

Bench-top digital ultrasonicator for cell lysis and homogenisation, with time, energy, and temperature control modes, plus continuous or pulsed operation. Digital interface enables programme monitoring and method storage. Usable volume range 0.2–500 mL.

Constant Systems Cell Disruptor

Bench-top high-pressure cell disruptor for efficient lysis of bacteria, yeast, algae and mammalian cells offering reproducible results for preparations prior to protein purification, omics and functional analyses.

Bio-Rad Gene Pulse Xcell Electroporation System

Modular and versatile electroporation system for transfection of virtually any cell type. Generates exponential and square wave pulses and includes main unit plus *Capacitance Extender* (CE) and *Pulse Controller* (PC) modules and ShockPod cuvette chamber with pre-configured protocols and manual programming.

Bio-Rad ZOE fluorescence cell imaging system

All-in-one cell imaging system combining brightfield and multi-channel fluorescence with an integrated digital camera and touchscreen for viewing, capture, and overlays. Designed for routine cell culture: check confluence, viability, and fluorescent labels on plates or slides, generate multicolour overlays, and share results easily.

PHCbi IncuSafe Cell Culture Incubator

165 L CO_2 incubator. Provides a stable, rapid-recovery culture environment with thermal uniformity ±0.25 °C and ~95% RH humidity control.

SELECTA Incubat 80 bacteriological incubator

Bacteriological incubator with 80 L capacity for maintaining microbiological cultures.

Thermostatically controlled orbital shaking incubator

Microprocessor control for speed, time and temperature. With a shaking speed 30-300 rpm and temperature range -10°C to 60°C.

SafeMateEZ laminar flow cabinet for microbiological culture

Class II microbiological safety cabinet (laminar flow) for routine microbiology workflows.

Luna II automated cell counter

Automated cell counter for rapid and accurate cell counting and viability assessment.

SafeMateEZ Laminar-flow cabinet for mammalian cell culture

Class II biosafety cabinet (laminar flow) for mammalian cell culture.

IKA RET Hotplate stirrer

Hotplate with integrated magnetic stirrer (speed range 50–1700 rpm).

IKA KS-260 orbital shaker

Open orbital shaker for flasks, plates and tubes.

IRIS LAB EQUIPMENT

Biotechnology

The development of new drugs, advanced therapies, recombinant proteins, biosensors, vaccines or functional ingredients increasingly requires versatile, efficient technology platforms that integrate everything from genetic analysis and manipulation to production under controlled conditions.

The IRIS LAB Biotechnology Laboratory offers this environment, making an advanced infrastructure available to companies, research centres and universities to drive innovation in health, food and sustainability.

The laboratory supports end-to-end biomanufacturing workflows—from DNA synthesis to the culture of genetically modified cells and microorganisms—delivering high value-added products.

MORE INFORMATION

Visit our website and discover all the information about Synthetic Biology equipment.

Hamilton MICROLAB STAR Liquid handler

BASE RATE: 17,34 €/h

High-precision liquid-handling system for automated workflows. Configured with an 8-channel arm and a 96-head for plate formats. Includes an integrated thermal cycler for on-deck PCR. Compatible with multiple NGS library-prep kits and a wide range of molecular biology procedures.

UHPLC-QTOF-MS/MS chromatography system

Metabolomics analysis platform for identification and quantification of cellular metabolites using ultra-performance LC coupled to quadrupole time-of-flight mass spectrometry. Located at the University of Navarra under an independent access model.

Fisher QuantStudio 5 Real-Time PCR System (384-wells)

BASE RATE: 2,79 €/h

High-throughput real-time PCR system. It allows the analysis of up to 384 reactions simultaneously for gene expression, genotyping and quantification studies. It enables streamlined experimental design, remote monitoring, and data analysis, with high sensitivity and reproducibility.

Eppendorf ThermoMixer C and ThermoStat C

Thermoblocks with Thermal cap and adapters for 0.5mL and 1.5mL tubes, *deep well* 500 plates, 96 and 384-well PCR plates.

Shared equipment with Genomic Sequencing

Eppendorf Thermal Cycler Mastercycler X40

Compact high-performance thermal cycler compatible with 0.1/0.2 mL tubes and 96-well plates.

Bio-Rad Thermal Cycler C1000 Touch

Compact high-performance thermal cycler compatible with 0.1/0.2 mL tubes and 96-well plates.

Telstar Bio II Advance Plus biological safety cabinet

Class II biological safety (laminar-flow) cabinet for molecular biology workflows.

IRIS LAB EQUIPMENT

Genomic Sequencing

Next-generation sequencing technologies have revolutionised biology and medicine, enabling in-depth understanding of the human genome, the microbiome, and a vast diversity of organisms.

IRIS Lab offers companies, research centres, and universities a state-of-the-art genomic sequencing laboratory to drive everything from advanced diagnostics to cutting-edge research in biotechnology, health, food, and the environment.

Integrated within the IRIS Hub's Synthetic Biology Laboratory, this infrastructure enables comprehensive genomic, transcriptomic, and metagenomic analyses using both long-read and high-accuracy short-read technologies, delivering an end-to-end solution from sample preparation through to bioinformatic analysis.

MORE INFORMATION

Visit our website and discover all the information about Synthetic Biology equipment.

Illumina Novaseq X Plus Sequencer

BASE RATE: 137,86 €/h

Illumina's most advanced high-throughput NGS sequencer, featuring two flowcells that can operate independently or in parallel. Designed for population-scale genomics and clinical research projects requiring large volumes of data at a low cost per sample. Capable of generating over 26,000 human genomes per year, with read lengths of up to 2 × 150 bp. Fully integrated with Illumina DRAGEN and Illumina Connected Analytics platforms.

Illumina MiSeq i100 Sequencer

BASE RATE: 10,62 €/h

Fast-response and high-quality bench-top NGS sequencer for small to medium-scale projects. Versatile platform offering up to 2×500 pb, 10-200 million PE readings per run and an output range of 1.5-30 Gb at ~4-15.5 h. Ideal for amplicons (16S/ITS), microbial genomes, targeted panels and genomic libraries QC. It maintains Illumina precision with short cycle times, allowing to go from the library to the data all on the same day.

Oxford Nanopore Promethion2 Sequencer

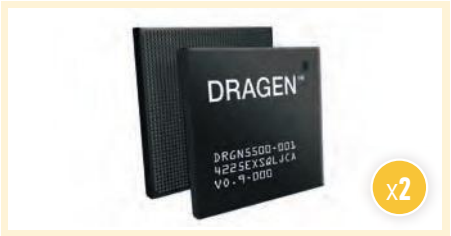
BASE RATE: 14,14 €/h

Bench-top sequencer featuring two PromethION flowcells that can operate independently or in parallel. Designed to generate long reads in real time, with integrated base-calling and analysis, it offers a self-sufficient solution for large-scale genomics, metagenomics and direct epigenetics projects—including native methylation detection without the need for bisulphite conversion.

Illumina DRAGEN servers

BASE RATE: 5,15 €/h

On-premise platform with FPGA acceleration for ultra-fast NGS secondary analysis (germline, somatic, RNA, methylation), ideal for storing data locally.



Agilent TapeStation 4200

BASE RATE: 4,84 €/h

Automated system for assessing nucleic acid quality and integrity. Enables pre-processing QC of samples and post-library QC for NGS. Suitable for rapid, precise, and reproducible evaluation of DNA and RNA, analysing up to 96 samples simultaneously with simple preparation.

Qubit Flex Fluorimeter

Bench-top fluorimeter for high-precision quantification of DNA, RNA, and protein. Reads up to 8 samples simultaneously, reducing assay variability. Touchscreen interface with intuitive software for quick assay selection and execution, delivering results in seconds. High accuracy from as little as 1 µL of sample. Easy data export via USB.

Covaris ML230 Focused ultrasonicator

BASE RATE: 12,14 €/h

Focused ultrasonicator with AFA (Adaptive Focused Acoustics) to fragment nucleic acids reproducibly and under tight control for NGS library preparation. Also enables efficient extraction and purification of nucleic acids from FFPE samples with high quality. Software supports method storage per application. With interchangeable racks/tubes, processes up to 8 samples simultaneously in an automated workflow.

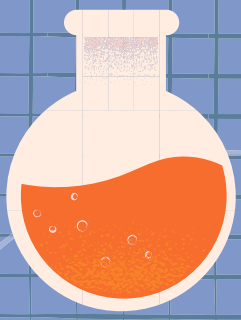
BT

The Genomic Sequencing laboratory also uses advanced equipment described in the Biotechnology section, including:

- Hamilton MICROLAB STAR robot
- Thermo Fisher QuantStudio 5 Real-Time PCR System (384 wells)
- Eppendorf Mastercycler X40 Thermal Cycler
- Bio-Rad C1000 Touch Thermal Cycler
- Telstar Bio II Advance Plus Biological Safety Cabinet

IRIS LAB EQUIPMENT

General use



Eppendorf 5430R Refrigerated Microcentrifuge

Compact and versatile bench-top refrigerated microcentrifuge: supports rotors for 1.5/2 mL microtubes (up to 48 positions), PCR strips, microplates and 15/50 mL conical tubes. It reaches 17,500 rpm / 30,130 ×g with thermal control from -11 to +40 °C.

PHCBI Freezers -80°C

Ultra-low temperature freezer (-80 °C) for long-term preservation of biological samples (DNA/RNA, proteins, cell lines, critical reagents). Compatible with standard cryogenic racks and boxes, it facilitates traceability and inventory, minimises thermal variability and ensures the integrity of samples in molecular and synthetic biology laboratories.

Eppendorf 5430 Microcentrifuge

Compact bench-top microcentrifuge with rotors for 1.5/2.0 mL microtubes (up to 48 positions), PCR strips, microplates, and 15/50 mL conical tubes. Reaches 17,500 rpm / 30,130 × g.

Eppendorf Concentrator Plus

Combines vacuum concentration, centrifugation (up to 1,400 rpm), and desiccation for fast, gentle concentration of DNA/RNA, nucleotides, proteins, and other liquid samples. Supports fixed-angle rotors for up to 48 × 1.5/2.0 mL tubes or 6 × 15/50 mL tubes, and a swinging-bucket rotor for PCR plates.

Eppendorf 5810 Refrigerated Centrifuge

Bench-top refrigerated centrifuge with high capacity: speed up to 20.913 ×g, thermal control -9 to +40 °C. It supports tubes from 0.2 to 750 mL and plates (max. 4 × 750 mL), with a wide range of rotors.

Infrico LAB CARE refrigerator

1,200-litre laboratory refrigerator for reagent and sample storage and cold procedures, providing stable, uniform temperature control for routine lab use.

Refrigeration equipment / Freezers

Freezers (-20 ºC), refrigerators and combined units for laboratory use.

Dusher Tuttnauer 3850 EL-D 65L Autoclave

Front-loading bench-top autoclave for routine laboratory sterilisation, with 316L stainless steel chamber and multicolour control panel with up to 30 programs. It offers an operating temperature range of 105-138 ºC.

Ultrapure water production systems

Ice production system

Hach Sension+ PH31 pH meter

Bench-top pH meter with magnetic stirrer.

Precisterm 5L Thermostatic bath

5-litre thermostatic bath with 5–110 °C temperature range for incubations, enzymatic digestions, and routine assays.

Sartorius Entris II 420 Precision balance

Precision balance with 0.001 g readability for reagent preparation and quality control.

Tray photometer DiluPhotometer OD600

Photometer for monitoring bacterial growth and harvesting at the optimal viability, with absorbance measurement at 600 nm. Wide detection range (0-4A).

IRIS NAVARRA

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Let's talk

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Get to know us!