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Usage

Booking in your name and online (*https://www.pasteur.fr/ppms/login/?pf=13*)

Laboratory equipment (gloves, pipettes, cones) is at your disposal free of charge.

Invoicing

You will be automatically invoiced every 4 months after booking on PPMS.

Quality control

1. QUBIT 4 Fluorometer

Description

Qubit doses nucleic acids in a sensitive and specific way accurately measures the concentration of nucleic acids, whether they are double-stranded DNA, single-stranded DNA, total RNA or microRNA, even in the presence of contaminants (Technology: Fluorescence)

Usage

For autonomous use, no training, follow the protocol next to the machine.

Invoicing

One hour of use is charged regardless of the type of use (prices are indicated on PPMS).

Contact

Biomics-Qubit@pasteur.fr

2. NanoDrop 8000

Description

The NanoDrop™ 8000 spectrophotometer takes full-spectrum UV-Vis absorbance measurements of up to eight nucleic acid samples simultaneously.

Usage

For autonomous use, no training, follow the protocol next to the machine.

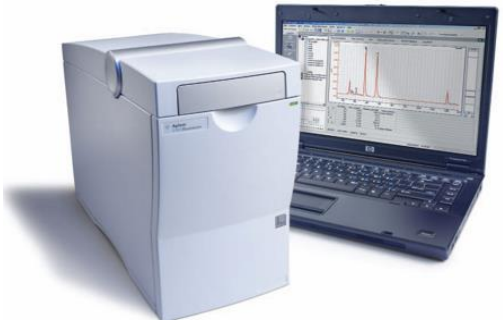
Invoicing

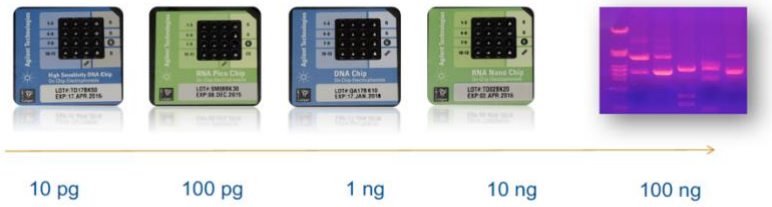
One hour of use is charged regardless of the type of use (prices are indicated on PPMS).

Contact

Biomics-Nanodrop@pasteur.fr

3. Bioanalyzer





DNA1000 / High sensitivity, RNA 6000 Nano / Pico, Small RNA

Description

The Bioanalyzer 2100 is dedicated to miniaturized electrophoresis in a network of microcapillary channels. DNA, RNA and even proteins can be analyzed on single-use chips called "Lab-On-a-Chips". Samples are deposited on specific chips depending on the type of sample.
Electrophoresis, managed by the 2100 Expert software, is fast and provides both qualitative and quantitative data on the samples.

Usage

For autonomous use it is necessary:

- Have followed and validated the online training (https://moocs.pasteur.fr)
- Equipment (**chips** and **kits**) are included

Invoicing

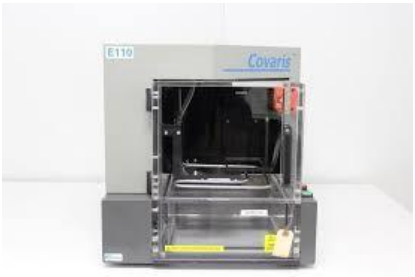
One hour of use is charged regardless of the type of use (prices are indicated on PPMS).
Tip: grouping the chips will therefore be cheaper for you per chip.

Contact

Biomics-Bioanalyzer@pasteur.fr

Libraries preparation

1. Covaris



Description

Covaris is recognized as the reference for DNA fragmentation. Adaptive Focused Acoustics technology (AFA™) allows precise control of the mechanical fragmentation of DNA. In addition, this process is isothermal, so it does not create bias or damage fragments.
Perfect solution for generating DNA fragments for use in building NGS libraries. Users can precisely choose the size of the DNA fragments: between 100 and 1500 bp with microTUBE and between 2 and 5 kb with miniTUBE.

Usage

For autonomous use it is necessary:

- Have followed and validated the online training (https://moocs.pasteur.fr)
- Have followed and validated the 1st use with one of the persons in charge
- Buy Covaris consumables (bar or plate) (https://portailha.pasteur.fr)

Invoicing

One hour of use is charged regardless of the type of use (prices are indicated on PPMS).

Contact

Biomics-Covaris@pasteur.fr

Sequencing

1. Guidelines to using sequencers

1- Obtaining authorization to use the sequencer

i. Following the online course available on the site https://moocs.pasteur.fr
ii. Answering the quizzes for each module and having 75% overall success rate
iii. First run supervised by a Biomics member

After validation of the above steps, you obtain access to the machine reservation on the PPMS site of the Institut Pasteur.

https://www.pasteur.fr/ppms/login/?pf=13.

2- Booking conditions

a. Reservation by name on PPMS, any abuse will be punished by a ban on access
b. Duration in 2-hour periods, hourly cost displayed on PPMS

Sequencing kits	Reads	Gb	portailHA	PPMS slot	Total
ISeq100 kit (300 cycles)	4M	1.2	20021534	10	20h
MiniSeq Mid Output Kit (300 cycles)	8M	2.4	15073757	9	18h
MiniSeq High Output kit (75 cycles)	25M	1.9	15073752	4	8h
MiniSeq High Output kit (150 cycles)		3.8	15073753	7	14h
MiniSeq High Output kit (300 cycles)		7.5	15073755	13	26h
NextSeq 500 Mid Output kit (150 cycles)	130M	20	20024904	8	16h
NextSeq 500 Mid Output kit (300 cycles)		39	20024905	14	28h
NextSeq 500 High Output kit (75 cycles)	400M	30	20024906	6	12h
NextSeq 500 High Output kit (150 cycles)		60	20024907	10	20h
NextSeq 500 High Output kit (300 cycles)		120	20024908	15	30h
NextSeq 2000 P1 Reagents (300 cycles)	100M	30	*coming soon*	10	20h
NextSeq 2000 P2 Reagents (100 cycles)	400M	40	20043738	7	14h
NextSeq 2000 P2 Reagents (200 cycles)		80	20046812	11	22h
NextSeq 2000 P2 Reagents (300 cycles)		120	20046813	15	30h
NextSeq 2000 P3 Reagents (50 cycles)	1200M	60	20046810	6	12h
NextSeq 2000 P3 Reagents (100 cycles)		120	20040559	10	20h
NextSeq 2000 P3 Reagents (200 cycles)		240	20040560	17	34h
NextSeq 2000 P3 Reagents (300 cycles)		360	20040561	24	48h

c. In the event of failure to respect the time slots, a penalty is applied if the cancellation is made less than 24 hours before and the time slots are not resumed

3- Reagents and Equipment

a. The sequencing reagents required for the run must be purchased by the user.
b. Small equipment (pipettes, tips, gloves...) is available in the sequencer room
c. Waste management must follow the indications displayed in the sequencer room

4- Commitments of the Biomics platform

a. Provide the necessary advice and expertise for the autonomous use of the sequencer.
b. Provide technical assistance when needed.
c. Ensuring sustainability through technical and technological watch and continuous training.
d. Implement annual maintenance of the sequencer.
e. Ensure the transfer of data generated by the sequencer.

5- Commitments of the user

a. Respect the reservation schedule.
b. Preserve the integrity of the equipment and warn those responsible of any problems.
c. Comply with the operating rules according to the information received during the training.
d. Observe the instructions for use of the equipment and the health and safety rules
e. The user is fully responsible for his run - from preparation of the libraries, purchase of sequencing reagents, launch and quality control of the run
f. The user can load, with the pool (equi-molarity), the PhiX control at 1% (10% to 50% if low diversity). In case of malfunction, only runs with PhiX will be supported by Illumina

2. Iseq100

Description

The ISeq 100 is a low output NGS sequencer using the same types of libraries as the other Illumina sequencers. It is particularly suitable for WGS (bacteria, viruses) or as a control quality before NovaSeq 6000.

Usage

For autonomous use it is necessary:

- Have followed and validated the online training (https://moocs.pasteur.fr)
- Buy a ISeq100 kit (portailha.pasteur.fr)

Data recovery: enter your **email in the name of your run**, automatic sending.
Help (demultiplex): *https://biomics.pasteur.fr/drylab/category/help-desk.html*

Invoicing

One hour of use is charged regardless of the type of use (prices are indicated on PPMS).

Contact

Biomics-Iseq@pasteur.fr

3. MiniSeq

Description

The MiniSeq is a low throughput NGS sequencer using the same types of libraries as other Illumina sequencers. Its multiple cassettes make it flexible.

Usage

For autonomous use it is necessary:

- Have followed and validated the online training (https://moocs.pasteur.fr)
- Have followed and validated the 1st use with one of the persons in charge
- Buy a MiniSeq kit (portailha.pasteur.fr)

Data recovery: enter your **email in the name of your run**, automatic sending.
Help (demultiplex): *https://biomics.pasteur.fr/drylab/category/help-desk.html*

Invoicing

One hour of use is charged regardless of the type of use (prices are indicated on PPMS).

Contact

Biomics-Miniseq@pasteur.fr

4. NextSeq 500

Description

The NextSeq 500 is a medium throughput NGS sequencer using the same types of libraries as other Illumina sequencers. Its multiple cassettes make it very flexible (virus -> human).

Usage

For autonomous use it is necessary:

- Have followed and validated the online training (https://moocs.pasteur.fr)
- Have followed and validated the 1st use with one of the persons in charge
- Buy a NextSeq 500 kit (portailha.pasteur.fr)

Data recovery: enter your **email in the name of your run**, automatic sending.
Help (demultiplex): *https://biomics.pasteur.fr/drylab/category/help-desk.html*

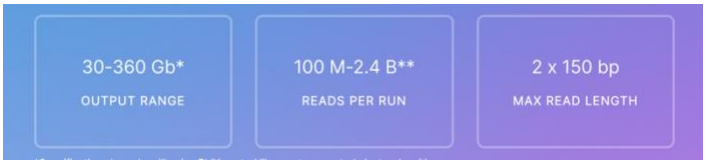
Invoicing

One hour of use is charged regardless of the type of use (prices are indicated on PPMS).

Contact

Biomics-Nextseq@pasteur.fr

5. NextSeq 2000



Description

The NextSeq 2000 is a medium throughput NGS sequencer using the same types of libraries as other Illumina sequencers. Its multiple cassettes make it very flexible (virus -> human).

Usage

For autonomous use it is necessary:

- Have followed and validated the online training (https://moocs.pasteur.fr)
- Have followed and validated the 1st use with one of the persons in charge
- Buy a NextSeq 2000 kit (portailha.pasteur.fr)

Data recovery: enter your **email in the name of your run**, automatic sending.
Help (demultiplex): *https://biomics.pasteur.fr/drylab/category/help-desk.html*

Invoicing

One hour of use is charged regardless of the type of use (prices are indicated on PPMS).

Contact

Biomics-Nextseq@pasteur.fr

6. NovaSeq 6000

(Minimum of 12 h/ 120 Gb)
Library drop off only

Description

The NovaSeq 6000 is a High throughput NGS sequencer using the same types of libraries as other Illumina sequencers. Sequencing (only PE150, ≥ 400M reads) is outsourced to Novogene UK, Biomics manages user libraries up to data delivery.

Usage

One sequencing format : PE 150 per 10 Gb step (eg. 400M reads = 120 Gb)
(Recommended) test your libraries with an ISeq100 run to validate clustering
Processing UK, Delay : 4-6 week from libraries sending (only Monday or Tuesday)
After PPMS booking, a Biomics member will contact you.

For Full service (Lib+Seq) contact **thomas.damagnez@novogene-europe.com**
DNA or RNA samples could be processed outside Europe, you are responsible for the legal authorizations (MOT, Human…)

Invoicing

One hour of use is charged per 10 Gb of sequence regardless of the type of use (prices are indicated on PPMS).

Contact

Biomics-Novaseq@pasteur.fr

Novogene_Shipment Instruction (via PPMS)

1-Samples preparation (library)

Library concentration : ≥ 0.5 ng/uL (concentration quantified by Qubit)
Insert size = sum of (insert eg. 350-500 bp + adapters eg. 120 bp)
Main peak present, no multiple peaks, no adapter conta., no primer dimers.
Library volume requirement (PE150 only, S4 flowcell):

Data Amount	Volume Requirement*
< 20 G	≥ 15μL
30G<X≤100G	≥ 25 μL
100G < X<400G	≥ 50 μL
Lane sequence	≥100ul（per lane，and add 10ul one more lane）

*High concentration samples should be diluted before delivery

2-Send to Biomics "Novogene_Library_Sample_Information_form" (Excel file send by email after booking)

Complete

- Library information and preparation method
- Sample informations:

species, library type, library name, index, concentration, volume, insert size

3-Shipping instructions

For library, Novogene accepts 1.5ml or 2ml DNase- / RNase-free microcentrifuge tubes. 96-well plates, PCR stripe tubes are NOT acceptable containers.

Please seal the opening of the tube with layers of Parafilm and place the sample tubes in a container such as a 50-ml tube or a box with interior racks/holders.

Write on box or tube :

- Name and project number/date/type of samples (ex: 50 DNA libraries, 1 pool 10 libraries). Information on « Sample Information Form » matches the labels on the tubes. Don't use any special caracters for sample name.

NB. To obtain the requested quantity, Novogene can propose us an additional sequencing that adds 2 weeks. We will contact you before making the decision

7. Gridion (coming soon)

Description

The Gridion is a High throughput Long read sequencer

Usage

Invoicing

Responsibles

Contact