

HIGHER NATIONAL DIPLOMA IN BIOANALYSES IN A CONTROL LABORATORY

We train rigorous, versatile and operational technicians for your quality control, R&D or biological analyses laboratories,

THEIR PROFILE

Experts in biological analyses, they can be operational in

- Quality control (pharmaceutical, cosmetic, food, environment laboratories)
- Research (molecular biology, microbiology, biochemistry laboratories)
- The biotech industry (development of methods, validation of processes)
- The medical sector (clinical tests, diagnoses)
- The public sector (public health issues, health safety, customs)

Ready to answer your needs to

- complete your teams as technicians trained in quality standards (ISO 17025, GMP, GLP) and good handling practices
- Optimize your processes / protocols/ procedures : they master analysis techniques, validation methods and equipment management
- Guarantee the reliability of results : scientific rigor, traceability, critical interpretation of data
- Adapt to innovations : skills in bio-informatic, automatization and AI applied to analyses

Their assets

- Quickly operative : 50% of their courses are lab practices
- Versatile : they can adapt to various sectors (health, the industry, the environment)
- Rigorous and ethical approach : they are aware of the importance of quality, traceability and safety in data management
- Innovative : computer skills (lab management software, AI for data analysis)

THEIR KEY SKILLS

Operational management of the lab

- Planning analyses, managing stock (reagents, material) and equipment
- Applying quality procedures (iso 9001, iso 17025) and participating to audits
- Routine maintenance of equipment
- Respecting hse norms (handling of hazardous products, dasri management)
- Respecting good lab practices and hygiene rules

Technical expertise in analyses

- Molecular biology: DNA/RNA extraction and purification, PCR (qpcr, RT-PCR), electrophoresis, sequencing
- Microbiology and cell culture: ATB, cell count, sterility (autoclave, BSC)
- Biochemistry: enzymatic assays, CG/HPLC, spectrophotometry, titration, purity control
- Quality control: validation of methods, standard management, interpretation of results (detection limits, repeatability)

Expertise and optimization of methods

- Comparing techniques (PCR vs sequencing) and choosing the most suitable
- Automatizing analyses (use of liquid handling stations, softwares like QUALIMS)
- Analyzing results with bioinformatic tools
- Writing up technical reports and presenting conclusions to the team

Communication and team work

- Professional writing: protocols, technical sheet, audit reports (APA norms), quality documents (validation files, operating procedures)
- Technical English: reading scientific publications, exchanging with international suppliers
- Training and supervising: training a new technician, taking part in project meeting

EXAMPLES OF MISSIONS GIVEN DURING THE INTERNSHIP

- **Validation of an analytical method** : validating an assay protocol with HPLC for a pharmaceutical active ingredient (ICH Q2 norm)
- **Microbiological control** : detecting pathogens (Listeria, Salmonella) by PCR in real time and comparing with traditional methods
- **Optimization of protocols** : reducing the cost of reagents by optimizing volumes in ELISA tests or DNA extractions
- **Management of a quality project** : participating to an internal audit (checking procedures, sample traceability) and proposing improvements

COURSES

General classes

	Hours/2 years
General knowledge and communication	120 h
English	120 h
Math	120 h
Physics and Chemistry	150 h

Professional classes

Operational management of a research lab	240 h
Analyses in a quality control lab	480 h
Lab expertise to optimize methods of bioanalyses	300 h
Collaboration with professional partners	300 h

Internships

2 x 8 weeks

LYCÉE SAINT LOUIS
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