

**PROCESO SELECTIVO PARA INGRESO, POR EL SISTEMA GENERAL DE ACCESO LIBRE, EN LA ESCALA DE
TECNÓLOGOS DE LOS ORGANISMOS PÚBLICOS DE INVESTIGACIÓN**

ÁREA: «A2-VIDA» ESPECIALIDAD: «V1- “TÉCNICAS INSTRUMENTALES TRANSVERSALES

EN CIENCIAS DE LA VIDA” OPI: «INSTITUTO DE SALUD CARLOS III»

FASE OPOSICIÓN-SEGUNDA PARTE

SUPUESTO PRÁCTICO Nº1

You have recently been appointed as the technologist responsible for an instrumental unit within a biomedical research support facility. The unit is currently experiencing:

- increased analytical demand
- partially obsolete equipment
- lack of some standardized operating procedures
- limited data traceability

Select one of the following technical areas:

- a) Chromatography
- b) Mass spectrometry for omics applications
- c) Molecular biology techniques and next-generation sequencing
- d) Microscopy

Develop a technical proposal addressing the following aspects:

I. Infrastructure and Instrumentation

Provide a general evaluation of the current status of the unit and propose **priority improvements**, supported by appropriate scientific justification.

II. Standardization and Quality

Propose basic procedures required to:

- improve reproducibility
- ensure sample and data traceability
- optimize service performance

Include examples of appropriate quality control measures.

III. Innovation and Service Valorization

Propose **two or three concrete actions** that could:

- improve the visibility of the unit
- promote collaboration with research groups
- optimize the use of available equipment

SUPUESTO PRÁCTICO N°2

A biomedical research center is organizing a shared instrumental platform to support projects in:

- infectious diseases
- chronic diseases
- other life science research areas

The platform will provide support in:

- sample quality control
- chromatography
- mass spectrometry
- PCR/qPCR
- electrophoresis
- basic analytical data management

You have been appointed as the technologist responsible for proposing the initial organizational model of this platform.

I. Organization of the Platform

Describe a simple proposal for:

- the structure of the unit
- basic distribution of technical staff
- coordination between instrumental techniques

II. Operational Model

Propose basic procedures for:

- sample reception
- analysis planning
- delivery of results

Include how communication with users could be improved.

III. Initial Service Evaluation

Propose simple indicators to evaluate:

- service quality
- operational efficiency
- equipment utilization

Explain how these indicators could help justify in the future:

- acquisition of new equipment
- reorganization of technical workload

Finally, describe three priority actions that could improve service performance during the first months without increasing the current workforce.