

Job Title: Lyophilisation and Purification Suites
Company: Peptide Manufacturer
Location: Leinster, Ireland
Duration: 4 Months
Objectives: - Develop layouts and PFD's - Recommend location options within site - Generate a preliminary project schedule and costing - Prepare a feasibility report as a basis for developing the project rationale and justification

Our client, a major peptide manufacturer in Leinster, wished to determine how a proposed new Lyophilisation and Purification Suite would fit with their existing site operations. They engaged **Prochem** to complete a 4 month long concept study for the new Suites with the following agreed deliverables:

- Feasibility Report (incl. containment and utility studies)
- Process Flow Diagrams
- Main Equipment List
- Agreed layouts with associated material / personnel and waste flows
- +/- 30% Cost Estimate
- Programme through to end of OQ
- 3D model of facility layout

The proposed new Suites involved a range of equipment, including:

- Lyophiliser (with a 10 m² Heat Transfer Area)
- Blender
- Liquid Handling System
- CIP capability
- Containment Systems
- Parts Washer

Key elements of the study included:

- Understanding of the process elements, generation of PFD's, which in turn determined utility and space requirements.
- Determination of optimum material flow
- Material and Personnel flow from synthesis to warehousing
- Gowning Philosophy and requirements
- Containment powder handling post – lyophilisation based on OEL of 20µg/m³
- Powder blending post lyophilisation
- Interconnectivity between buildings - underground links and bridges were assessed
- Identifying a roadmap for future expansion if required

This project was completed using a multi-step design approach combining interactive reviews, achieved through a series of four facilitated workshops where input from all stakeholders was incorporated.

Using this approach ensured complete and open communication between all parties allowing the design process to progress smoothly and on schedule.

Prochem's client has used the concept study output to develop a project justification for developing the Suites.

Get In Touch

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