

## Enhancement Field of Work: Proteins Sample Management

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## HISTORY OF IMPLEMENTATION: PROTEIN SAMPLE MANAGEMENT

## PROTEIN INITIAL DISTRIBUTION PROCESS

## Defined workflow for new recombinant Antibodies & Nanobodies®

- **Supporting protein analytic process**
- **Ensuring protein batch availability for global project teams**

## Local service

- Best possible support from project teams on site
- Creation of protein orders during initial implementation, no order in order system necessary
- Delivery of samples within 24 hours after reception

## ORDER FULFILLMENT

## Processing of global protein requests

- **Source or custom concentration**
- **Tubes / Vials**
- **Plates**

## Recipient

- **Support of global and local project teams**
- **External partners (CRO)**

## Shipment

- **Export (Europe, North America, Asia)**
- **Central recipient and distributor for protein shipments**

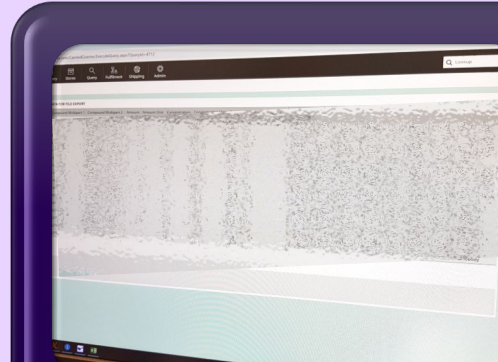
**AUTOMATED PROCESSING | Tecan Freedom EVO**



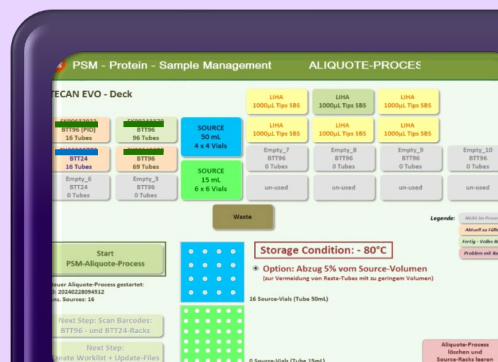
## PROTEIN ALIQUOT WORKFLOW



**Engineered Antibodies & Nanobodies® are handed over in 15mL or 50mL blue cap tubes**



## Source tube registration of proteins to be implemented by using the new created database view

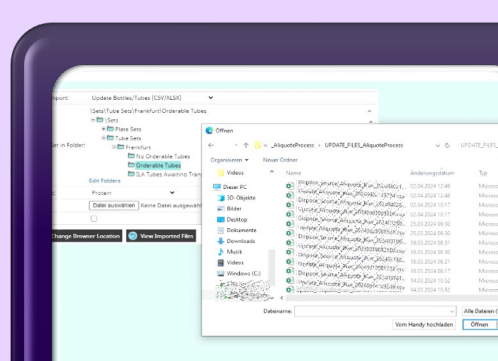


## Aliquot-Process Tool:

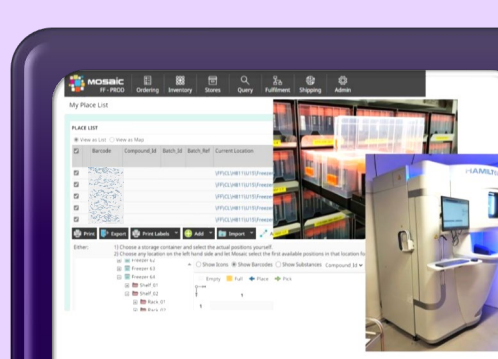
- Include source tubes into a new run
- Create run, regarding requested aliquot schema
- Assignment of required destination tubes
- Create worklist and method file for Tecan Freedom EVO



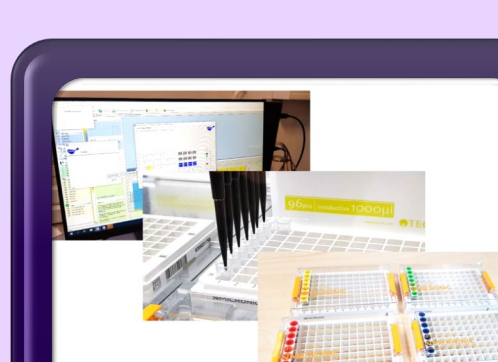
**Run process on the Tecan EVO, transfer protein solution into 1mL and 7.8mL barcoded tubes**



### Import/Update of created destination tubes

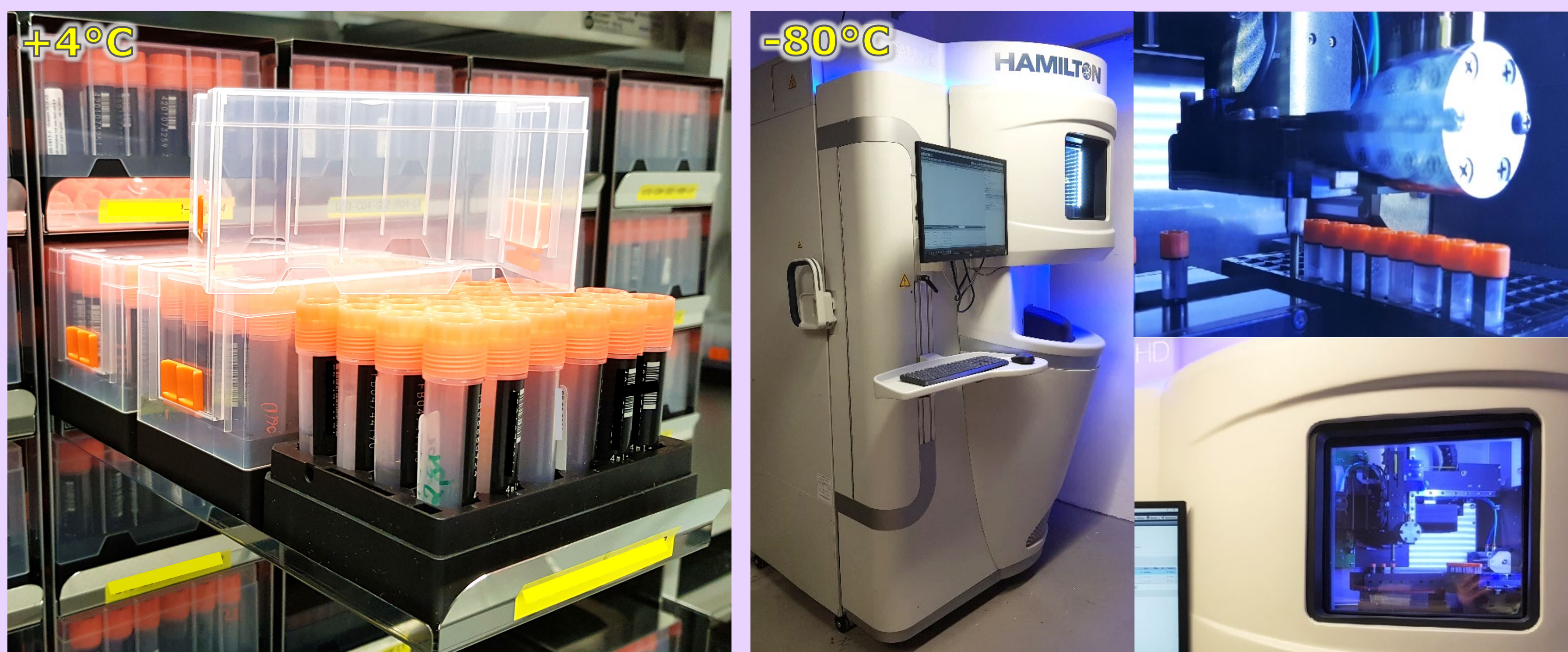


**Store aliquots into storage unit (-80°C, +4°C)**



## Processing of follow-up workflow (Protein Initial Distribution Process)

## STORAGE CONDITIONS



## Conclusions

The Sample Management Group has taken on the key role in the implementation and distribution of the proteins.

What has been started three years ago with around 3,000 different antibodies and a few exclusively manual work steps has now been developed into a flexible and fully automated and custom oriented process. In the beginning, the focus was on processing protein orders, today, new protein batches are implemented daily, stored at variant temperatures and made them available to project teams worldwide for testing. The number of proteins in inventory has been more than doubled, the number of tubes quadrupled.

### ***Benefits of the Transfer Protein-Aliquot-Process to Sample Management Group***

- Save investments costs by using existing equipment
- Free resources for protein engineering projects
- Higher workload on existing devices
- Highly appreciated partner and fulfilling a key role in the implementation and distribution of proteins

**REFERENCES**    Photos:

**REFERENCES**: Photos:  
 – Internal photo stock of Sanofi-Aventis Deutschland GmbH, R&D IDD In vitro Biology + Cell & Sample Technologies  
 – Format 96 rack: [https://www.azenta.com/sites/default/files/product-images/tube-adapter-tubes\\_teaser.png?tok=Bz\\_7Cm19](https://www.azenta.com/sites/default/files/product-images/tube-adapter-tubes_teaser.png?tok=Bz_7Cm19)  
 – Format 24 rack: [https://www.azenta.com/sites/default/files/product-images/consumables-instruments/sample-blocks-solutions/sample-tri-tubes-zkzed/7pm6l-tri-tube-af-f66-9302\\_in\\_24\\_format\\_rack\\_1.jpg](https://www.azenta.com/sites/default/files/product-images/consumables-instruments/sample-blocks-solutions/sample-tri-tubes-zkzed/7pm6l-tri-tube-af-f66-9302_in_24_format_rack_1.jpg)  
 – Eppendorf tubes: <https://www.carlroth.com/media/KYNI1000Wx1000HContextContentBWfZGqfGIwYdICw3WOtU4OHxpBwfNz2S9gGvntFYdWcyQyVWMyadY3IzkedMzXNDM2MzKzIN2AuaBnf63Q3ThmZTm2FnmHTotBM2TGMOG5DE0E2JFHnjdJMTNiN14ZGIZmDOzn2024Mzu2Mza1OdkxmYmZzyynIzN1uN>

**SLAS Europe 2024, 27-29 May 2024 in Barcelona, Spain**

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