

Reims, July 25 2022



# CREAPHARM DEMONSTRATES UNPARALLELED PERFORMANCE OF -80°C NITROGEN TANK TECHNOLOGY

CREAPHARM BIOSERVICES has recently invested in -80°C nitrogen tanks to provide Biotechs and Research key players with a new solution to meet the challenges of ultra-low temperature storage.

#### Because -80°C mechanical freezers cannot meet every need...

Up to now, a biological product with a preservation temperature around -80°C is necessarily stored in a mechanical freezer, unless -196°C storage (nitrogen tank) is allowed.

With extensive experience in nitrogen technology management, CREAPHARM BIOSERVICES has recently invested in -80°C nitrogen tanks to bring new solutions to research institutes, biotech companies and pharmaceutical laboratories facing the new ultra-cold challenges.

"At the end of this qualification period, we can say with certainty that the MVE Vario -80° Nitrogen tank is the RIGHT solution for sensitive product with stringent temperature storage requirements"

Ludivine MIOSSEC, Chief Operating Officer of CREAPHARM BIOSERVICES

# CREAPHARM BIOSERVICES

Since 2020, the partner of choice for Pharma, Biotech and Institutionnal players providing highly-secure biobanking & biorepository solutions from ambient to -196°C.

- BIOSPECIMEN MANAGEMENT
- STORAGE & LOGISTICS
- CONSULTING & AUDIT
- TRAINING CENTER
- DISASTER PREPAREDNESS





Reims, July 25 2022

# In-depth qualification protocol conducted step by step (IQ, OQ, PQ)

- Equipment decontamination
- Subcontracted temperature mapping with the assistance of our partner DEXTRAN Metrology
  - 10 COFRAC calibrated temperature probes according to the respect of the established standards
  - Temperature recording every 1 to 2 minutes
- · Impact of door / lid opening measured
- · Impact of electricity / nitrogen supply failure measured



#### - 80°C MECHANICAL FREEZER

Cold produced continously
Setpoint at -80°C
Possible capacity: 576 cryoboxes 2mL

- Impact of 2min-door opening
  - > Immediate and significant thermal shock

Peak up to a max. of -36°C\* then 2hrs to return to stable curve  ${}^*T^{\circ}C$  at the hottest point

Impact of power failure (electricity)

> Rapid rise after power failure Time to reach -60°C = 2hrs15

Return to -70°C in 2hrs after restoration of electricity

2 hours to intervene



#### -80°C NITROGEN GAS TANK

Dry tank (no liquid nitrogen)
Setpoint at -80°C
with authorized variation down to -90°C
Possible capacity: 780 cryoboxes 2mL

- Impact of 15min-lid opening
  - > Constent temperature profile, unaffected by lid opening Peak up to -77°C\* then 1hrs30 to return to a stable curve \*T°C at the hottest point
- Impact of power failure (electricity/nitrogen)

> No immediate impact

After last cooling cycle, time to reach -60°C = 9hrs Return to -70°C in 1hrs30 after re-opening the nitrogen supply

9 to 36 hours to intervene

# Ready to meet the storage needs of the most sensitive products

The equipments received have been decontaminated, installed in the dedicated warehouse and

Everything is now ready to store the first samples in nitrogen tanks at -80°C, those with the most stringent temperature stability requirements



Reims, July 25 2022



### Comparison of -80°C technologies

CREAPHARM's objective is to provide each client with the right solution for their specific needs.

Based on recent investments, the newly -80°C nitrogen tank option brings high-performant solution to companies looking for very consistent temperature profiles during ultra-cold storage.

Both the mechanical freezer and nitrogen tank technologies have advantages.

How to choose?

CREAPHARM's cryopreservation experts guide their customers to select the best solution for their products, based on temperature stability requirement but not only: several factors such as samples category & volume to be stored, storage duration and access to nitrogen are also considered.

#### AN UNPARALLELED STRUCTURE

- A state-of-the-art plant, compliant with GMP requirements & a single platform by its wide capacity and its security level
- The first French private biobank (Centre of Biological Resources) certified ISO 9001, ISO 20387 & NF S96-900
- The first cryopreservation establishment that has been authorized by the French Public Health Agency (ANSM) for the storage of cell & tissue therapy under Article L.1243-2 of French Public Health Code (CSP) and in compliance with good practices. (LinBox site in Bailly-Romainvilliers - 77)





Nitrogen tanks (-80°C)

Up to 5 tanks 1 back-up



Mechanical freezers (-80°C)

Up to 5 ultra-low freezers 1 back-up



Cryogenic storage (-196°C)

Up to 25 tanks (2400L each)

3 back-up

#### Contact



Reims, July 25 2022



### CREAPHARM BIOSERVICES IS PART OF CREAPHARM GROUP

Partnering with CREAPHARM, Pharmas & Biotechs benefit from an expert support from the preclinical/clinical development to the market launch for Biobanking, Clinical supplies management and Contract packaging

CREAPHARM BIOSERVICES provides Biospecimen Management, Biobanking solutions (ambient to -196°C) and Training, Consulting & Audits.

CREAPHARM CLINICAL SUPPLIES/CREAPHARM INDUSTRY manage Packaging of both investigational and marketed health products.

Partners entrust CREAPHARM for its worldwide logistics and cold-chain management in clinical trials.

#### One challenge, one solution

The Project Management team provides health players with tailor-made services.

#### Quality, our common priority

With a 30-years experience and 5 state-of-the-art plants, CREAPHARM offers a unique service. In compliance with GMP/GDP & biobanking standards and proven processes, every project is handled with Quality as a top-priority.

#### Global Capability, Local Specialists

Settled in France and the USA, CREAPHARM has 40 partner depots worldwide.

#### High value-added pharmaceutical support

The CREAPHARM's pharmacists manage EU QP-release, even for the most innovative drugs.

# CREAPHARM GROUP

Since 1998, the privileged partner of biotech, pharmaceutical and cosmetic industries, from the Research and Development phases of their health or cosmetic products until their commercialization.

- CLINICAL SUPPLIES
- BIOSERVICES
- INDUSTRY
- COSMETICS

6 industrial sites (FR & USA)



TURNOVER 2020/21:33 M€