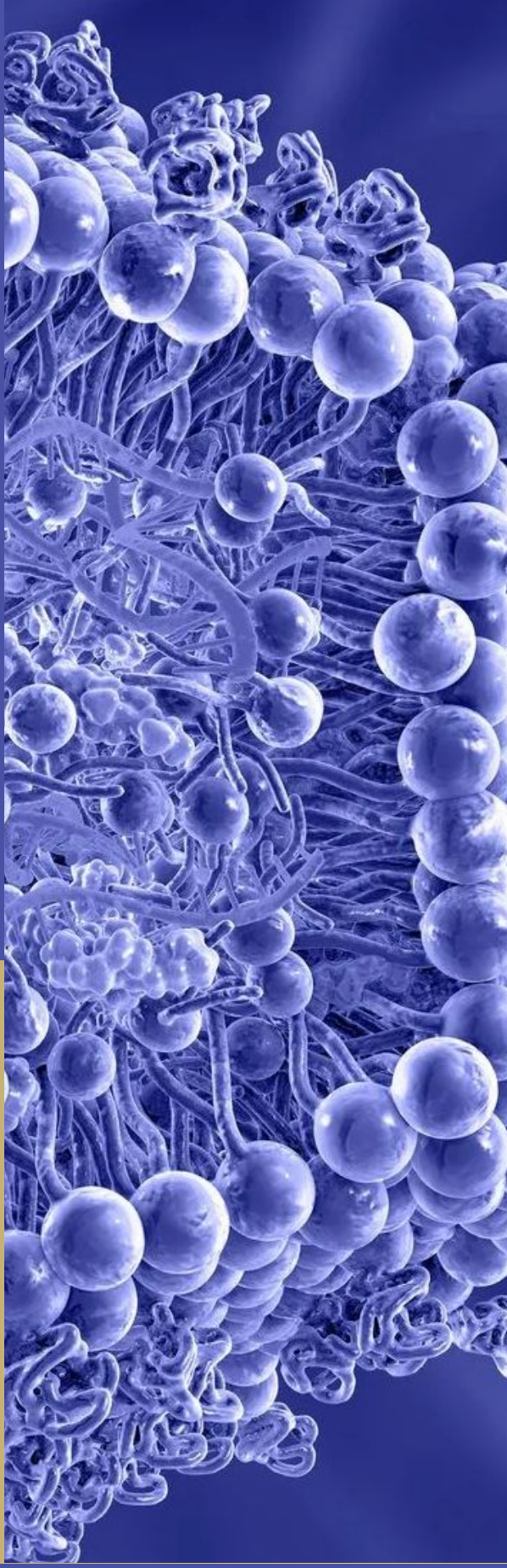
RheaVita

RheaLyo™ Use Case: Continuous Manufacturing of mRNA LNP



YOUR FORMULATION DESERVES THE BEST

- **Fast**
  Freeze-drying in a few hours
- **Stability at 37°C**
  Encapsulation efficiency retained
- **Guaranteed quality**
  RheaLyo PAT at single vial level
- **Continuous**
  Compatible with DIANT®Jet technology

Your formulation deserves the best

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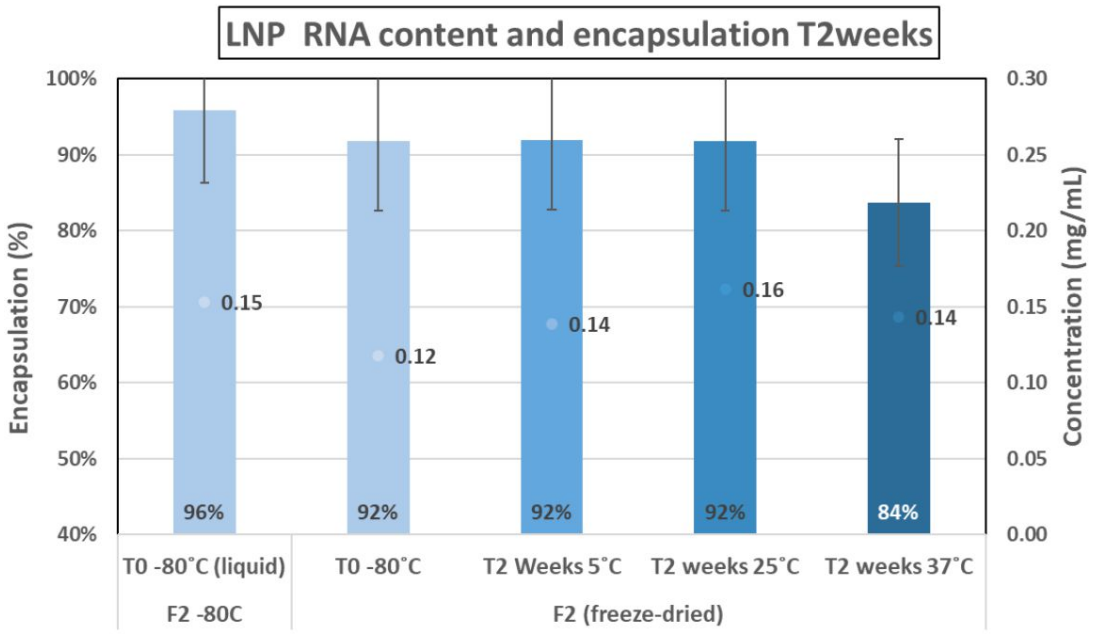
RheaLyo Use Case
Continuous Manufacturing of mRNA LNP

Key results

LNP-mRNA modalities present an interesting potential for continuous manufacturing approaches since the mixing process for LNP self-assembly is continuous by nature. Combining it with the RheaLyo continuous and controlled freeze-drying technique results in an end-to-end manufacturing solution for stable LNP-formulations.

Reference: Oral presentation by F. Peral (Sanofi) at 9th Annual CCP Summit (26-FEB-2025)



In this study 0.5 mL of a mRNA-LNP formulation was filled in 2R vials and spin freeze-dried on a RheaLyo Mono freeze-dryer. The long-term stability was evaluated by storing the samples at -80 °C, 5 °C, 25 °C and 37 °C comparing it to the non-freeze-dried product stored at -80 °C. RheaLyo settings: Cooling rate at 50 °C/min, drying at 8 Pa and controlling the product temperature at -32 °C.

CONTACT

RheaVita bv
Poortakkerstraat 9C
9051 Ghent, Belgium
sales@rheavita.com

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