

Quick Start Your Cycle Development With 7 Vials

LyoCapsule™ Freeze Dryer



SP LyoCapsule™ simulates large R&D freeze dryers so you can screen formulations for freeze drying feasibility, understand critical product attributes and define product and process design space even with limited/expensive materials.

LyoCapsule's small freeze drying chamber has a cylindrical inner chamber and utilizes wall temperature control to assure that edge vials dry under the same conditions as the center vial.

- Accommodates up to seven (7) 20cc vials;
Can process 2 cc to 20 cc vials
- Screen formulations for freeze drying feasibility without the use of large quantities of API
 - High value and small quantity API
 - Biosimilars
 - ADC's
 - Proteins
- Determination of process robustness
- Ensure that critical formulation collapse temperature is not exceeded during primary drying
- Define proper shelf temperature and pressure selection for effective sublimation process
- Plan process scale-up and troubleshoot issues often encountered in large commercial freeze dryers

Now Accepting Orders



Performance Features & Benefits

Small shelf area, cylindrical inner chamber configuration	<ul style="list-style-type: none">• Develop cycles with small amount of active pharmaceutical ingredients (API)• Run up to (7) 20cc (15R) vials• Saves overhead costs of running a larger unit; Less preparation and less processing time• Makes it viable to reconstitute and reuse vials
Controlled wall temperature	<ul style="list-style-type: none">• Control Kv of edge vials to be the same as center vial, so that they freeze dry under the same conditions• Simulate conditions in larger R&D Freeze Dryers to troubleshoot or transfer cycles
Inner chamber with shelf slides in and out of unit on rails	<ul style="list-style-type: none">• Enables easy, clear access to chamber• Ability to load chamber from top and attach sensors
SP Quality & Value	<ul style="list-style-type: none">• Shelf temperature uniformity of +/-1C• Stainless steel door• All shelves, product and condenser chambers are stainless steel 316L materials• Includes 100 LPM vacuum pump with oil mist eliminator• Hot gas defrost
Technologies	<ul style="list-style-type: none">• LyoS™ Software: System performance capability comparable to LyoStar3• SMART™ Freeze Dryer Technology (Testing in progress*)• Optional non-invasive Tunable Diode Laser Absorption Spectroscopy (TDLAS) process analytical technology (PAT) tool for critical product parameters

LyoCapsule Technical Specifications

Built for Performance

System Overview

- CFC free refrigerant
- Allen Bradley PLC controller
- Pirani/Capacitance Manometer and Barometric Endpoint control software
- Auto backfill and stoppering
- Desktop computer with SP Scientific LyoS™ software for ease of use
- Equipped with SMART™ Freeze Drying Technology*; TDLAS compatible

Package includes pneumatic stoppering, capacitance manometer gauges in product chamber and condenser, pneumatic isolation valve, vacuum pump, oil mist eliminator, silicone gaskets and 6 product sensors.

Dimensions:

Unit: 36" X 27.4" X 61.2"

Chamber: 8.5" X 7.2" X 12.2"; Inner Chamber: 4" diameter with controlled wall temperature

