Quick Start Your Cycle Development With 7 Vials

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

Email: Lyo123@SPScientific.com | 800-523-2327
Performance Features & Benefits

| Small shelf area, cylindrical inner chamber configuration | • 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 | • 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 | • Enables easy, clear access to chamber  
• Ability to load chamber from top and attach sensors |
| SP Quality & Value | • 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 | • 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