

## Labconco® FreeZone® Personal Benchtop Freeze Dry Systems

### Preserve your samples economically

- Save sensitive samples from solvent-induced degradation and structural change
- Easily prepare small sample and batch sizes
- Lyophilize to –84°C with cascade units
- PTFE-coated units available for corrosive solvents



Freeze dryer 03337-00 shown with drying chamber 03346-01 (see page 342)



#### REQUIRED System Components

- 1) Freeze dryer **page 341**
- 2) Drying chamber **page 342**
- 3) Vacuum pump **page 912–922**
- 4) Glassware **page 342**
- 5) Shell freezer **Online**

**1-Liter Freeze Dry Systems** feature robust refrigeration (to –50°C), sophisticated process monitoring, and spatially efficient design. Systems can remove 1 L of water in 24 hours; collector (ice) capacity is 1 L of water prior to defrosting.

**2.5-Liter Freeze Dry Systems** extend the capability of the 1-L units to enable removal of 2 L of water in 24 hours, with 2.5 L ice accumulation before defrosting is required. Download data via RS-232 connection. Alarms and programmed power-interruption protocols guard both your samples and your equipment.

**2.5-Liter Cascade Freeze Dry Systems** are designed for light sample loads or personal use. HCFC/CFC-free refrigeration ensures rapid, environmentally safe cooling. Two condensing modules cool the collector coil to –84°C (–119°F), ideal for samples with low eutectic points. All models feature an upright stainless steel collector coil.

**2.5-Liter FreeZone Plus Cascade Freeze Dry Systems** can handle samples with low eutectic points. Compact console cabinet's interior has room to accommodate a rotary vane vacuum pump. Upright stainless steel collector coil removes 1.8 liters of water in 24 hours and holds 2.5 liters of ice before defrosting is necessary.

### Teky's Tips



#### Methods of Freeze Drying

##### Manifold method

- Used for small sample volumes and products with high eutectic and collapse temperatures
- Prefrozen product is attached to the manifold and a vacuum is applied
- Manifold accommodates many samples—allowing for drying different products simultaneously

##### Batch method

- Ideal for larger quantities of similar products and vessels
- Allows for precise control of product temperature and maintenance of heat applied
- Provides stoppering of vials simultaneously, ensuring the same environment in each vial

##### Bulk method

- Typically used for stable products not highly sensitive to oxygen or moisture
- Drying takes place in a bulk pan and uses a single chamber
- Cannot seal product under controlled conditions

### Search

For our complete line of Freeze Dryers, go to...

[ColeParmer.com/Freezedryers](http://ColeParmer.com/Freezedryers)

ISO9001:2008  
CERTIFIED SUPPLIER



Sublimation rate	Ice capacity	Dimensions (W x H x D)	Power (VAC, Hz, A)	Shpg wt lb (kg)	Stainless steel interior		PTFE-coated interior	
					Catalog number	Price	Catalog number	Price
<b>1-L freeze dryers, –50°C (–58°F)</b>								
1 L H <sub>2</sub> O/day	1 L H <sub>2</sub> O	12" x 16 <sup>3</sup> / <sub>8</sub> " x 17 <sup>7</sup> / <sub>8</sub> " (30.5 x 42.5 x 45.4 cm)	115, 60, 14 220, 50, 7	85 (39)	<a href="#">GH-03337-00</a>		<a href="#">GH-03337-05</a>	
					<a href="#">GH-03337-10</a>		<a href="#">GH-03337-15</a>	
<b>2.5-L freeze dryers, –50°C (–58°F)</b>								
2 L H <sub>2</sub> O/day	2.5 L H <sub>2</sub> O	12 <sup>3</sup> / <sub>16</sub> " x 16 <sup>7</sup> / <sub>8</sub> " x 17 <sup>7</sup> / <sub>8</sub> " (32 x 42.9 x 45.4 cm)	115, 60, 14† 220, 50, 7	85 (39)	<a href="#">GH-03338-00</a>		<a href="#">GH-03338-05</a>	
					<a href="#">GH-03338-10</a>		<a href="#">GH-03338-15</a>	
<b>2.5-L Cascade freeze dryers, –84°C (–119°F)</b>								
2.2 L H <sub>2</sub> O/day	2.5 L H <sub>2</sub> O	15 <sup>1</sup> / <sub>8</sub> " x 16 <sup>7</sup> / <sub>8</sub> " x 23 <sup>3</sup> / <sub>16</sub> " (38.4 x 42.9 x 58.9 cm)	115, 60, 10† 220/240, 50, 5.1	129 (59)	<a href="#">GH-03339-10</a>		<a href="#">GH-03339-15</a>	
					<a href="#">GH-03339-20</a>		<a href="#">GH-03339-25</a>	
<b>2.5-L FreeZone Cascade Plus freeze dryers, –84°C (–119°F)</b>								
2.2 L H <sub>2</sub> O/day	2.5 L H <sub>2</sub> O	18 <sup>1</sup> / <sub>16</sub> " x 37 <sup>3</sup> / <sub>8</sub> " x 23 <sup>3</sup> / <sub>16</sub> " (47.2 x 95 x 60.2 cm)	115, 6, 16† 208/230, 60, 10 220/240, 50, 10	272 (123)	<a href="#">GH-03339-40</a>		<a href="#">GH-03339-45</a>	
					<a href="#">GH-03339-50</a>		<a href="#">GH-03339-55</a>	
					<a href="#">GH-03339-60</a>		<a href="#">GH-03339-65</a>	

†Includes a 20A plug