

3000 Series

Lab Freeze Dryer



EPCC / PRODUCTS / APPLICATION / SOFTWARE / ACCESSORIES / CONSUMABLES / SERVICES

Analytical Technologies Limited

An ISO 9001 Certified Company

www.analyticalgroup.net

Introduction:

Freeze dryer is widely used in medicine, pharmacy, biology research, chemical industry and food production, etc. After freeze drying process, a long term preservation for material is much easier. They can be restored to original state and maintain their chemical and biological characteristics after being watered.

Small samples can be pre-frozen directly inside the cold trap, suitable for laboratory use, meeting most routine freeze-drying needs. Suitable for freeze-drying liquids, pastes, and solids, among other substances.

Typically used for laboratory and small-scale production.

Has a smaller processing capacity.

Usually compact and suitable for small laboratories.

Used for quickly processing small batches of samples or products.

Provides high temperature and pressure control, suitable for research and development work.



Features:

- Complies with GLP requirements
- Well-sealed drying chamber
- Comprehensive protection features
- 7-inch LCD touchscreen
- Rapid cold trap defrost
- Pre-freezing of small sample quantities in the cold trap
- Top-brand compressor and vacuum pump
- Record and display the freeze-drying curve in real time. Data can be exported by USB flash drive.
- Adjustable vacuum pump. startup temperature
- Uniform ice trapping in the cold trap
- Early warning of operation state: prompt information such as over-high ambient temperature, oil change of vacuum pump, instrument running time, sensor failure, compressor and vacuum pump running time, etc.

- low power consumption, fast response and high storage efficiency.

Flexible Configuration of Drying Equipment:



Suitable for bulk materials



Stoppering Suitable for vials



Multi manifold standard can a Suitable for bulk and flasks. It be combined with concentrator to achieve the dual purposes of freeze-drying and concentration



Multi manifold stopperinga Suitable for vials and flasks. It can be combined with concentrator to achieve the dual purposes of freeze-drying and concentration



Ampoule T-Rack Suitable for ampoule loading materials



Flask T-Rack Suitable for oval and wide-mouth bottles Available in 8-hole, 10-hole, and 12-hole racks.

Technical Superiority: 3010/ 3012/3018



- Cold trap temperature: -60 °C/-85 C/-110°C.
- The volatile organic solvent is captured by deep low temperature cold trap to prevent the corrosion of organic solvent to the freeze dryer. It is effective for freeze - drying products containing a large number of high-concentration organic solvents, and can handle organic solvent solutions with concentrations below 95%.
- The Songyuan Huaxing refrigeration technology team has successfully overcome technical barriers in domestic freeze- dryer cold trap temperatures through repeated experiments and adjustments. They have pioneered lowering the cold trap temperature of laboratory freeze dryers to -110°C, enabling continuous operation for 7 days to meet the freeze-drying requirements of various materials.

Sample Preparation Laboratory-scale Freeze Dryer:

Freeze Dryer has compact structure and simple operation. The whole system comes standard with Cold trap electric defrost. Suitable for laboratory sample preparation, a small number of samples can be pre-frozen directly in the cold trap, which can meet the requirements of routine freeze-drying in most laboratories.



Features:

- Oil Mist Filtration System
- Vacuum Pump Anti-Back-flow Device
- International Brand Pump Vacuum
- Remote Monitoring

Specification	Unit	Standard	Stoppering				
Freeze-drying area	m ²	0.12	0.08				
Cold trap temperature	°C	<-60 (no-load), optional-85 C, <-110C (no-load)					
Vacuum degree	Pa	<1 (no-load)					
Ice Capacity	kg/24h	3-4		3-4		6	
Material tray	mm	Φ200	Φ180	Φ200	Φ180	Φ240/Φ240	Φ200
Layers of tray	piece	4	3	4	3	4/6	3
Tray spacing	mm	70		70		70	
Power(-60°C)	W	970		970		1400	
Weight(-60°C)	kg	41		62		105	
Dimension of overall(-60°C)	mm	615x450x370		580x500x720		630x580x970	
Dimension of overall(-850C)	mm	850x680x405		770x550x720		810x580x950	
Diameter of drying chamber	mm	Φ260x430	Φ260x490	Φ260x430	Φ260x490	Φ300x445	Φ300x540
Diameter of cold trap	mm						
Capacity (vials)	Piece	-	Φ12mm: 492 Φ16mm: 297 Φ22mm: 147	-	Φ12mm: 492 Φ16mm: 297 Φ22mm: 147	-	Φ12mm: 615 Φ16mm: 345 Φ22mm: 183
Defrosting		Electric defrosting					
Power		Single-phase 3-wire, 220V 50Hz					

3018- FLASK TYPE FREEZE DRYER

The Flask Type Freeze Dryer offers a cold trap temperature of $<-85^{\circ}\text{C}$ (optional $<-60^{\circ}\text{C}$, $\leq-110^{\circ}\text{C}$), suitable for various applications. It can be equipped with multiple specifications of hanging bottle T-Rack, with customization available for special requirements. This equipment is ideal for preserving bacteria, fungi, peptides, microbial strains, and other samples, offering advantages such as long preservation periods, minimal variation, and wide applicability.

Key Features:



- Specifically designed for biopharmaceuticals, peptides, and synthetic freeze-drying needs.
- Stainless steel T-Rack use special welding techniques to ensure no leakage.
- Internal pipeline structure of T-Rack can be customized with independent channels.
- Three-way valve allows for the removal or installation of freeze-drying bottles without stopping the machine as needed.
- Songyuan Huaxing freeze-dry-specific vacuum pump ensures rapid, stable, and safe operation.
- 7-inch industrial touchscreen records and displays freeze-drying curves and data in real time.

- Complies with FDA and updated GMP requirements; freeze-drying data can be exported via USB.
- Complies with FDA and updated GMP requirements; freeze-drying data can be exported via USB.
- Nitrogen gas filling valve for inert gas filling.
- Cold trap electric defrosting with safe voltage significantly enhances defrosting efficiency.
- Optional multi-functional low-temperature centrifuge for combined use.

Performance Parameters:

- Cold trap temperature: -85°C (no-load), optional $<-110^{\circ}\text{C}$
- Vacuum degree: 1Pa (no-load)
- Eggplant shaped flask: 100/250/500/1000ml
- Wide mouth flask: 600/1200ml
- Defrosting: Electric defrost
- T-Rack Material: SUS 304 stainless steel. Upgradable SUS 316L. The trap can be coated for corrosion resistance.

MULTIFUNCTIONAL EXPERIMENTAL FREEZE DRYER

The whole system comes standard with high-performance freeze-drying special vacuum pump, intelligent control system, electric defrosting, oil mist filter, and automatic air intake/drainage function.

The modular design and flexible combination of the whole machine provide rich matching functions according to the usage scenarios, and are committed to meeting the diverse needs of different customers.

Multifunctional Module:

- Automatic Defrost
- Vacuum regulating system
- Language Switching
- Manual or Automatic Operation Mode
- POST
- Cold trap material AISI 316L stainless steel
- Automatic Pulse Pressure Relief



Application Scenarios:

The hood-type freeze dryer plays a critical role in various industries and applications by transforming liquid samples into dry powder or solid, achieving long-term preservation, transport, and rehydration goals. This technology is significant for improving product stability and reducing storage and transportation costs.

Laboratory Research: Used in research laboratories for drying and preserving samples such as cells, bacteria, enzymes, and biological specimens, aiding in long-term preservation and maintaining sample activity.

Pharmaceuticals: Employed for preparing pharmaceutical products like drugs, vaccines, antibodies, enzymes, and biologics that require extended stable storage there by extending shelf life through freeze-drying.

Chemical Industry: Utilized in chemical synthesis and research for preparing chemicals, reagents, and catalysts, avoiding decomposition reactions under high temperature or pressure.

Biotechnology: Applied in biotechnology research and production for preparing proteins, DNA RNA, and other biological molecules the need distribution and storage without the need for a cold chain

Lab-3010 ADVANCED SAMPLE PREPARATION FREEZE DRYER

- Automatic defrosting function, with options for electric or hot gas defrosting to enhance efficiency.
- Automatic air intake/drainage functions with safety interlock technology to prevent vacuum system failures.
- long-term stable operation, Songyuan Huaxing freeze-dry-specific vacuum pump ensures.
- Oil mist filter significantly reduces pump oil consumption and indoor environmental pollution.
- Vacuum pump protection function with adjustable start based on cold trap temperature.
- Compressor protection function effectively prevents compressor overload
- User interface available in English, with automatic screen lock during long periods of inactivity.
- Flexible switching of vacuum units (Pa, mBar, etc.).
- Calibration capability for time, temperature, vacuum pressure, and other parameters to ensure accuracy.
- System maintenance reminders and alarm functions for enhanced operational safety.



Technical Specification:

		Lab-3010			
Specification	Unit	Standard	Stoppering	Manifold Standard	Manifold Stoppering
Freeze-drying area	m	012			
Cold trap temperature	C	<-60 (no-load), option -85, -110 (no-load)			
Vacuum degree	Pa	<1 (no-load)			
Ice Capacity	kg/24h	3-4		3-4	
Material tray	mm	Φ200	Φ180	Φ200	Φ180
Layers of tray	Piece	4	3	4	3
Tray spacing	mm	70		70	
Power(-60°C)	w	970		970	
Weight(-60°C)	kg	41		62	
Dimension of Overall(-60°C)	mm	610x430x360		610x430x360	
Diameter of drying chamber	mm	Φ260×430	Φ-260x490	Φ260×430	Φ-260x490
Diameter of cold trap	mm	Φ215×140		Φ215×240	
Capacity (vials)	Piece Piece Piece	Φ12mm: 492 Φ16mm: 297 Φ22mm: 147		Φ12mm: 492 Φ16mm: 297 Φ22mm: 147	
Defrosting		Electric defrosting			
Power		Single-phase 3-wire, 220V 50Hz			

BENCHTOP FOOD FREEZE DRYER

Perfectly preserve all your favorite foods with minimal effort. Easily create a more delicious, healthier, and diverse home food supply than other food preservation methods. With a small food freeze dryer, you can control the quality, taste, and natural goodness of your stored food. Plus, your food storage costs will be much lower.



Emergency Rescue Food

Freeze-dried food for emergency reserves. Nutrient-rich, easily digestible, and quickly restores energy and stamina, providing a balanced nutritional source.

Outdoor Food

Freeze-drying technology preserves nutrients and flavors, offering lightweight and flavorful meals for outdoor adventures

Healthy Lifestyle

Freeze-dried vegetables and food retain the product's color, aroma, taste, shape, and the nutritional components of natural, green, and safe convenient nutrition

Healthy Lifestyle

Freeze-dried meat and poultry are an innovative choice for pet food. The freeze-dried ingredients are rich in high-quality protein and vitamins, promoting your pet's healthy weight and good digestive function

Advantageous Features:

- Adjustable single-feed volume, consuming about 0.8-2 kWh/hour. Simply press one button to complete the entire freeze-drying process
- Integrated Chamber and Trap Design
- This design shortens the sublimation pathway for rapid water vapor removal, reducing drying time
- System Safety Lock
- Prevents accidental modification of system status and process parameters, avoiding freeze-drying failures or equipment damage
- Post-Sales Technical Support
- Our experienced technical team provides support via phone and remote assistance, and on-site service is available when needed

Performance Parameters:

- Freeze-drying area(m²): 0.1/0.4/0.6/1.0/1.5/2/2.8/3/4.15
- Cold trap temperature: -60°C (No-load)
- Ultimate vacuum: 5Pa (No-load)
- Shelf spacing options: 35mm/37mm/50mm/40mm/50mm
- Power: AC220V, 50Hz/380V, 50Hz
- Control System: Manual + Automatic (The system has multiple builtin freeze-drying processes)



ELECTRIC-HEATING FREEZE DRYER

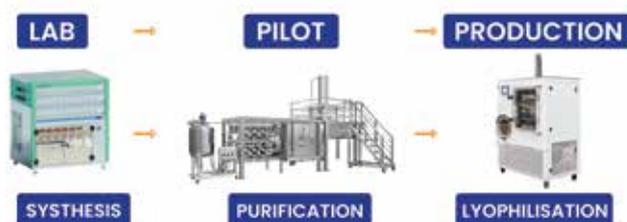
This series of in-situ freeze dryers prevents material contamination and automates the drying sublimation process. All units feature shelf heating and programmable functions, with flexible manual + automatic control modes to regulate heating rates



Technical Specification:

Specification	Unit	3010FD	3010FD	3030FD	3050FD
		Standard	Stoppering	Standard	Standard
Freeze-drying area	m ²	0.2	0.1	0.4	0.6
Cold trap temperature	°C	-60 (no-load, optional-80°C (no-load))			
Vacuum degree	Pa	5 (no-load)			
Shelf temperature range	°C	50-170 (no-load), optional-70-+70			
Ice Capacity	kg/24h	<6		<8	<10
Material tray	mm	395x265	395x265	335x295	335x295
Layers of tray	Piece	4	1	4	6
Shelf dimension	mm	400x270	400x270	340x300	340x300
Shelf spacing	mm	70		70	50
Power -60°C	w	2000		2000	4500
Weight	kg	210		280	450
Dimension of Overall	mm	725x600x1270		773x750x1472	795x895x1535
Capacity for materials (10mm thickness)	L	4	1	4	6
Sealing method	-	-	Manual	-	-
Capacity (vials)	Piece Piece Piece	Φ12mm: 777 Φ16mm: 434 Φ22mm: 220			
Defrosting		Natural defrosting (optional electric defrosting)			
Power		Single-phase 3-wire, 220V 50Hz		Three-phase 5-wire, 380V 50Hz	

COMPLETE DOWN STREAM PROCESS (DSP) SOLUTIONS



HPLC Servicing, Validation, Trainings and Preventive Maintenance :

HPLC Servicing :HPLC Servicing : We have team of service engineers who can attend to any make of HPLC promptly @the most affordable cost.

Trainings :We also take up preventive Maintenance to reduce downtime of HPLC's Trainings.

AMC's/CMC :AMC's/CMC :We offer user training both in-House and at customer sites on HPLC principles, operations, trouble-shooting.

Validations :Validations :We have protocols for carrying out periodic Validations as per GLP/GMP/USFDA norms.

Instruments :Instruments :We offer instruments/Renting Services Modules like pumps,detector etc. on Rent.



About Analytical Technologies

Analytical Technologies is synonymous for offering technologies for doing analysis and is the Fastest Growing Global Brand having presence in at least 96 countries across the global. Analytical Technologies Limited is an ISO:9001 Certified Company engaged in Designing, Manufacturing, Marketing & providing Services for the Analytical, Chromatography, Spectroscopy, Bio Technology, Bio Medical, Clinical Diagnostics, Material Science & General Laboratory Instrumentation. Analytical Technologies, India has across the Country operations with at least 4 Regional Offices, 6 Branch Offices & Service Centers. Distributors & Channel partners worldwide.

Our Products & Technologies



LCMS



Automated Prep-Flash Chromatography system



Maldi TOF



Optima Gas Chromatograph



Flash Chromatograph



DAC Column



GCMS 3068



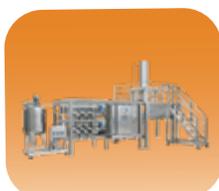
UHPLC



HPTLC



Ion Chromatograph



Production HPLC



Helium Mass Spectrometer Leak Detector



Column



DLS



Water purification system

▶▶▶ Regulatory compliances



▶▶▶ Corporate Social Responsibility

ANALYTICAL FOUNDATION is a Nonprofit Organization (NGO) for the purpose of:



Analytical Foundation

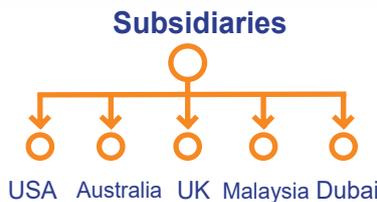
1. Research & Innovation **Scientist's awards & International Conference visit sponsorship / QC Professional Awards:** Quality life is possible by innovation only and the innovation is possible by research only, hence **ANALYTICAL FOUNDATION** is committed to identify such personallities for their contributions across various field of Science and Technology and awarding them yearly. To participate for award, send us your details of research /testing/ publication at info@analyticalfoundation.org

2. Improving quality of life by offering **YOGA Training courses, Work shops / Seminars** etc.

3. **ANALYTICAL FOUNDATION** aims to DETOXIFY human minds, souls and body by means of Yoga, Meditation, Ayurveda, Naturecure, Health Care, Ara, Events, Camps etc.

▶▶ A portion of profit of **ANALYTICAL GROUP** Company's goes into **ANALYTICAL FOUNDATION** for the aboce noble cause.

▶▶▶ Reach us @



Note : Company reserves rights to add/delete/modify the contents / technical specifications of the catalogue without prior notice

HPLC Solutions	MultipleLabs	Infinite Multiplelabs LLP	Analytical Bio-Med	Analytical Foundation (Trust)
----------------	--------------	---------------------------	--------------------	-------------------------------

Corporate & Regd. Office:
Analytical House, # E67 & E68,
Ravi Park, Vasna Road, Baroda,
Gujarat 390 015. INDIA

T: +91 265 2253620
+91 265 2252839
+91 265 2252370
F: +91 265 2254395

E :- info@analyticalgroup.net
info@hplctechnologies.com
info@multiplelabs.com

W:- www.analyticalgroup.net
www.hplctechnologies.com
www.multiplelabs.com

Sales & Support Offices:
across the country :
Distributors & Channel
partners World Wide
USA| UK| Australia| Dubai| Malaysia