



MEHROTRA Biotech

ADVANCE TECHNOLOGIES EFFECTIVE SOLUTION





WHAT WE DO?

Mehrotra Biotech Pvt Ltd has been established with an aim to contribute to the enhancement of medical-hospital, pharmaceutical, biotechnological, and general laboratory services through the provision of high-quality innovative solutions, ensuring an improved quality of life and well-being for society at large.

Our primary objective is to deliver customized solutions that precisely align with the unique requirements of our customers. To achieve this, our dedicated functions including engineering, R&D, manufacturing, and customer service are focused on each technology within Mehrotra Biotech's area of expertise:

- We offer solutions and equipment for clean air technology, encompassing both horizontal and vertical laminar flow cabinets, biological safety cabinets, and laminar flow systems.
- Our portfolio includes solutions and equipment for advanced sterilization utilizing Autoclaves, Ovens, and incubators.
- We specialize in solutions and equipment employing biological containment technology, such as containment isolators and sterile isolators.
- Additionally, we provide solutions and equipment utilizing freeze drying and vacuum drying technology, ranging from laboratory freeze dryers to GMP freeze dryers.

By offering these comprehensive solutions, we aim to continually improve and advance the various sectors we serve, ensuring the highest standards of quality, safety, and efficiency in medical and laboratory practices.

“Our aim is to provide tailor-made solutions in strict accordance to the needs of customers.”



OUR MISSION

Our mission is to empower individuals and communities through innovative solutions and exceptional service. We are committed to providing high-quality products and services that address the needs of our customers and contribute to advancements in scientific and medical research. Guided by our core values of integrity, collaboration, and social responsibility, we strive to make a positive impact on society, while prioritizing environmental sustainability and community healthcare. Through our dedication to excellence and the expertise of our team, we aim to be a trusted partner in shaping a healthier and more prosperous future for all.

OUR VISION

Our vision is to be a leading innovator and catalyst for positive change, creating solutions that transform lives and shape a better future. With a commitment to excellence, creativity, and social impact, we strive to revolutionize Biomedical research & Pharmaceutical industry through cut-edge design, forward-thinking strategies, and meaningful collaborations.

VACUUM FREEZE DRYER

Freeze-drying is a drying technique that utilizes the principle of sublimation. It involves rapidly freezing the material to be dried at low temperatures and then, under the right vacuum conditions, allowing the frozen water molecules to directly sublime into water vapor and escape. The material remains in a low-temperature (frozen) state throughout the drying process, with ice crystals evenly distributed throughout. The sublimation process does not lead to concentration due to dehydration, thus avoiding side effects such as foaming and oxidation caused by water vapor. The dried material retains a porous, sponge-like structure with virtually unchanged volume and dissolves easily in water to revert to its original state. This process minimizes the denaturation of the material in terms of physicochemical and biological properties to the greatest extent possible.

Application Fields



Control System

✓ One-click operation for speed and simplicity

A 5.4-inch LCD touch screen displays important parameters simultaneously, with numerical values color-coded to correspond to their respective statuses, making it clear at a glance.

✓ Thermal electromagnetic overcurrent short circuit protection

Ensures safer and more stable equipment operation.

✓ Proactive reminders

Equipment maintenance time, vacuum pump oil change time, and ambient temperature monitoring alerts.

✓ Make freeze-drying more scientific

Optional co-crystallization point detection devices and endpoint judgment detection systems can be equipped.



Drying Chamber



✓ Detachable drying chamber

Significantly reduces the probability of damage caused by the overall chamber weight being too heavy.

✓ The upper cover is made of anodized aluminum with corrosion-resistant

High-transparency acrylic drying chamber, which has good thermal radiation conduction and reserved 6/12 external valve interfaces.

✓ 316L Stainless T-Frame

24 independent exhaust ports, individually controlled, suitable for multiple users, and improve usage efficiency.

Cold Trap & Condenser Coils

✓ Large opening and passage design

Gases can quickly pass through the condenser coils to be captured. The condenser coils are placed inside the cold trap, increasing the condensation area and effectively preventing external dew formation.

✓ Standard equipment with Teflon anti-corrosion coating

316L stainless steel, fully equipped with Teflon anti-corrosion coating, capable of freeze-drying organic solvents and various corrosive samples.



Sample Shelves



✓ Taking and Placing in Layers, More Convenient

Each shelf can be placed and taken freely without manual work. The height of each shelf can be adjusted freely.

✓ Special Hole Position for Centrifuge Tubes

Conductive to the drying of samples in centrifuge tube containers.

✓ Freeze-Drying Organic Solvent

316L stainless steel stackable sample shelves, capable of freeze-drying organic solvent and various corrosive solvents.

Refrigeration System

Secop compressor;

Copper plate heat exchanger, which increases heat dissipation to the largest area;

Unique refrigeration technology, the temperature of the cold trap can be lowered from ambient temperature to below -80°C within 2 minutes;

Class A temperature sensor with high temperature accuracy and low error rate;

The multiple detection and alarm system can promptly alert when the refrigeration system pressure is too high or in case of refrigeration failure, and take corresponding measures.



Vacuum System



✓ Pirani Vacuum Sensor

With automatic temperature compensation control unit, Pirani vacuum sensor is capable of precise detection in low-temperature environments.

✓ CKD High Vacuum Electromagnetic Control Valve

Low heat generation, light noise and long-lasting durability.

✓ Stainless Steel Flexible Vacuum Tube

Will never aging and resistant to all types of corrosion.

✓ Fully Automatic Pressure Relief and Drainage

Completely eliminate damage to samples and sensors caused by unstable manual pressure relief airflow.

Conversion Table Vapour Pressure Above Ice
Ice temperature(°C) = pressure (mbar)

°C	mbar	°C	mbar	°C	mbar	°C	mbar
0	6.110	-20	1.030	-40	0.120	-60	0.011
-1	5.620	-21	0.940	-41	0.110	-61	0.009
-2	5.170	-22	0.850	-42	0.100	-62	0.008
-3	4.760	-23	0.770	-43	0.090	-63	0.007
-4	4.370	-24	0.700	-44	0.080	-64	0.006
-5	4.020	-25	0.630	-45	0.070	-65	0.0054
-6	3.690	-26	0.570	-46	0.060	-66	0.0047
-7	3.380	-27	0.520	-47	0.055	-67	0.0041
-8	3.010	-28	0.470	-48	0.050	-68	0.0035
-9	2.840	-29	0.420	-49	0.045	-69	0.003
-10	2.560	-30	0.370	-50	0.040	-70	0.0026
-11	2.380	-31	0.340	-51	0.035	-71	0.0023
-12	2.170	-32	0.310	-52	0.030	-72	0.0019
-13	1.980	-33	0.280	-53	0.025	-73	0.0017
-14	1.810	-34	0.250	-54	0.024	-74	0.0014
-15	1.650	-35	0.220	-55	0.021	-75	0.0012
-16	1.510	-36	0.200	-56	0.018	-76	0.0010
-17	1.370	-37	0.180	-57	0.016	-77	
-18	1.250	-38	0.160	-58	0.014	-78	
-19	1.140	-39	0.140	-59	0.012	-79	

Laboratory Freeze Dryer H Series



Laboratory square chamber front opening model, integrated freeze dryer, with a large drying area and easy operation.

Model No	MBFD-H 7006	MBFD-H 9006	MBFD-H 9009
Ice condenser capacity	6kg	6kg	9kg
Ice condenser temperature	-70℃	-90℃	-90℃
Cold trap volume	12L	15L	
Freeze dried chamber	Square cavity/front door opening/door opening angle up to 180 degrees		
Sample shelf	<ul style="list-style-type: none">• Stainless steel template partition• Electric heating/optional		
Vacuum pump	Extreme vacuum 5*10 ⁻³ mbar with a pumping capacity of 8m³/h optional pump of various types		
Oil mist filter	Standard configuration		
Vacuum pump connection pipe	Single forming stainless steel flexible pipe DN16 ISO-KF		
Anti-corrosive treatment	Cold trap, condensing coil/all equipped with PTFE anti-corrosion treatment as standard. Freeze-drying organic solvents.		
External valve	8pieces		
Eutectic point detection system	Support/Optional		
Data output analysis	Support/Optional		
Power	0.95kw	1.65kw	
Size	700*580*1600mm		
Voltage	220V, 50/60Hz		

OUR CLIENTS

Government Institutions

- Central Drug Research Institute, Lucknow.
- Central Institute of Medicinal and Aromatic Plants, Lucknow.
- Indian Veterinary Research Institute, Bareilly.
- Indian Institute of Toxicology Research, Lucknow.
- Institute of Nuclear Medicine and Allied Sciences, Delhi.
- HPCL, Bangalore.
- King George Medical University, Lucknow.
- Sanjay Gandhi Post Graduate Institute of Medical Sciences, Bareilly.
- Post Graduate Institute of Medical and Research, Chandigarh.
- All India Institute of Medical Sciences New Delhi
- AIIMS RISHIKESH
- NBRI Lucknow
- National Institute of Virology, Pune
- FIND Delhi
- Karnataka Medical Supplies Corporation.
- Regional Forensic Science Lab New Delhi
- Institute Of Food Security, Food Corporation Of India, Haryana
- AIIMS Raipur
- CSIR- Bhartiya Petroleum Sansthan, Dehradun
- AIIMS Bhubneshwar
- AIIMS Raebareilly
- Gujarat Forensic Science University
- IIT Ropar
- IIT BHU
- IIT Kanpur
- Banaras Hindu University
- HPCL-Mittal Energy Limited
- Maharashtra Pollution Control Board
- Darbanga Medical College
- Many More.....

Private Institutions

- Dr, Reddy's Laboratories Hyderabad.
- NATCO Pharma, Hyderabad.
- Syngene International Bangalore
- FDC India Mumbai
- Bharat Serum
- CADILA
- CIPLA
- Sysmax Laboratories Mumbai
- Reliance Life Science Mumbai
- LVPEI Hyderabad
- MSN Laboratories Hyderabad
- Larsen and Toubro Limited
- Siemens Healthcare
- Avaca Pharma
- Glochem Industries
- Pinnacle Lifescience
- Raghav Lifesciences Hyderabad
- Abro Pharma
- Sun Pharma
- Gland Pharma Hyderabad
- Macleods Pharma
- Pannacea
- Lupin Limited
- Meyer Organics
- Sucantis
- Many More.....





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