BioLAB

PRODUCT CATALOG

COLD TRAP BATH

CE ISO9001 CERTIFIED

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COLD TRAP BATH BGI2C1 BGI2C2

COLD TRAP BATH

In vacuum applications,a cold trap is a device that condenses all vapors(except the permanent gases) into a liquid or solid. The main purpose is to prevent vapors being produced by an experiment from entering the vacuum pump where they would condense and contaminate it. Clod traps can also cool surfaces or baffles to prevent oil vapors flowing from a pump into a chamber. In such a case,a baffle or section of pipe containing a number of cooled vanes, will be attached to the inlet of an existing pumping system.

Improve pump working efficiency:
1. The low temperature of the cold trap can condense the water vapor directly in the cold
trap, thus greatly improving the working efficiency of the vacuum pump.
Protect vacuum pump:
1. Pumps that use oil either as their working fluid (diffusion pumps), or as their lubricant (mechanical rotary pumps), are often the sources of contamination in vacuum systems.
Placing a cold trap at the mouth of such a pump greatly lowers the risk that oil vapors will
back stream into the cavity.
LCD PID controller:

SPECIFICATIONS

Model	BGI2C1	BGI2C2
Old Model	BBCT-2501	BBCT-2502
Collection methods	Immersion of Glass Condenser	
Collection amount	Max. 0.5Kg	Max. 0.4Kg
Lowest temp	-40°C	-80°C
Safety function	Delayed Start of Compressor, Leakage, Overcurrent, Overvoltage Protection	
Refrigerating capacity	Air Cooling 150W R404A	Air Cooling 55W R404A, R23
Cover Interface material	Import PC	
Tank Interior dimension (mm)	ϕ220mmx180mm	
Capacity (L)	5L	
PC capping diameter	ϕ50.3mm 3 holes	
Condenser diameter	ϕ10mm (Match the Diaphragm Pump)	
Interior dimension WxDxH (mm)	315x500x570	500x600x640
Power	850W	1300W
Electrical requirement	220V/50Hz	
Alt Name	Cold Trap Bath	

FEATURES

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back stream into the cavity.

LCD PID controller:
1. P.I.D temperature controller provides accurate and reliable temperature control.
2. Large LCD display screen and interface provides for user-friendly operation.

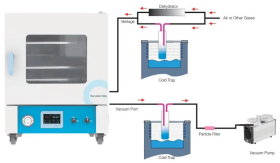
Energy conservation and environmental protection:
1. Non-freon refrigeration improve cooling efficiency, lower noise, longer life time ensures the stability for long time running.

Safety:
Temperature deviation alarm.
Compressor over current, over heat, over load protection.

Design with
3 glass trap installation.
Upside opened a glass trap.
Easy internal observation with PC Transparent Cover.
Drain valve for easy discharge of collected liquid.
S304 internal bath can be used to do water or ethanol cooling experiments. If equipped with glass condenser, it also can be used to deal with acid or organic solvents.

Option:
1. RS 485 connector and USB connector can connect computer to save the data.

Cold Trap Diagram:



COLD TRAP BATH BET1C1 BET1C2 BET1C3

COLD TRAPS

Methods & Principles:

Common methods for sample evaporation, drying, concentration and purification include:

• Distillation and rotary evaporation methods at high temperatures and under nearly atmospheric pressure, which can only process a single sample;

• The freeze-drying method under low temperature and high vacuum conditions, which is time-consuming, although sublimation can keep the sample activity;

• Fast evaporation at low temperature by means of termovap sample concentrator, which can process only a small amount of samples, with high use cost and complicated operation;

• Evaporation under vacuum conditions at room temperature by means of vacuum centrifugation concentration, where the evaporation rate of the sample solvent is higher;

•The phenomenon of evaporation is an endothermic process. When the water in a sample evaporates, it will take away the heat of the product, so that the temperature of the product will be lowered, thus maintaining the properties and activity of the sample. However, to speed up the evaporation process, the equipment used needs to provide the heat (generally through cavity heating or infrared heating) to be absorbed in the evaporation. The method is especially suitable for concentrating and purifying heat-sensitive biological samples or clinical medicines.

•The vacuum centrifugal concentrator revolves at speeds of 1500~2000r/min, which generates centrifugal force that prevents sample dispersion and flash boiling during the preparation of high-concentration samples. This can prevent cross-contamination, sample loss, denaturation, activity reduction, oxidation and other problems. The product is particularly suitable for preparing sensitive biological samples, such as nucleic acids and proteins.

• TFT-LCD true color display screen, dual operation modes of touch screen and physical keys, displaying the set parameters and operating parameters at the same time.

• Sealed wide-mouth collection bottles made of soda-lime glass with good chemical resistance and optional capacity.

• Imported fluorine-free refrigeration compressor unit and eco-friendly refrigerant R404a, allowing for a wide temperature control range: from -50°C to room temperature (CT-50) (can beset during operation); pre-cooling function (quickly cool down to the set temperature); standby cooling function (maintain the set temperature in the standby state).

• Closed circulation mode to avoid laboratory environmental pollution.

SPECIFICATIONS

Model	BET1C1	BET1C2	BET1C3
Circulation method	Closed circulation		
Freezing method	Refrigeration compressor, eco-friendly refrigerants		
Max power	300W	320W	380W
Temperatures of working environments	15°C-30°C		
Extreme temperature	-40°C		-50°C
Adjustable temperature range	Room temperature to -40°C		Room temperature to -45°C
Temperature control accuracy	±1°C		
Max capture volume for concentration and condensation	Medium: Water 260ml/12 hoursTemperature set at -15°C300ml collection bottle recommendedMedium: Ethanol 284ml/6 hoursTemperature set at -35°C to -40°C600ml collection bottle recommended		
Condensing area of the collection chamber	760cm²		
Safety mechanism	Compressor overload protection, compressor timing protection, high-voltage switch protection, temperature self-regulation, defrosting		
Pagoda Interface	Φ12		
Collection bottle volume	200mL	300mL	600mL

Power supply	AC220V50HZ15A		
Weight	44kg	53kg	54kg
Dimensions (LxWxH)	340mmx440mmx630mm	250mmx580mmx560mm	
Alt Name	Cold Trap		

FEATURES

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• Closed circulation mode to avoid laboratory environmental pollution.
• Volume as small as 0.8m3, allowing for a collection area of up to 760cm2. High recovery efficiency with a max capture volume of 284ml/6H (absolute ethanol)

Economical, Efficient Vacuum Centrifugal Concentrator:
• No foaming of samples and minimal sample loss
• Simultaneous drying of multiple samples
• Sample all concentrated at the bottom of the centrifuge tube
• Suitable for drying samples of 1ml to 3,000ml
• Repeatable drying by controlling process parameters such as rotor chamber temperature (providing evaporation energy) and vacuum (auto setting of optimal pressure)
• Safe and simple solvent recovery

APPLICATIONS

These cold traps are rapid solvent capture systems for efficient condensation of solvent vapors. When they condense vapor into a liquid, the reduction of gaseous substances increases the vacuum of the system, thus speeding up the concentration process and significantly improving the performance of the vacuum concentration system.

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