BioLAB

PRODUCT CATALOG

COLD TRAP BATH BET-203

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COLD TRAP BATH BET-203

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	BET-203
Circulation method	Closed circulation
Freezing method	Refrigeration compressor, eco-friendly refrigerants
Max power	380W
Temperatures of working environments	15°C-30°C
Extreme temperature	-50°C
Adjustable temperature range	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	600mL
Power supply	AC220V50HZ15A
Weight	54kg

Dimensions (LxWxH)	250mmx580mmx560mm
Alt Name	Cold Trap

FEATURES

• 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.
• 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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