

Evaporation the Easy, Environmental Way

*Reliable Results for
Small Samples*



*Small
Volume
Evaporator*



GREEN
CHEMISTRY

kdScientific

www.kdscientific.com

CENTRIFANTM PE

MEDICINAL CHEMISTRY
RNA PURIFICATION
SYNTHESIS
FLASH CHROMATOGRAPHY
HPLC
ISOTOPIC MARKERS
PROTEIN CONCENTRATION
DNA PREPARATION



CENTRIFAN™ PE

Simplifies Small Volume Evaporation

The new Centrifan™ PE simplifies small volume evaporation tasks for synthetic and medicinal chemists, as well as pharmaceutical, biotech, and university researchers. Proprietary self-generated blow-down technology eliminates the potential problems with common evaporation systems such as vacuum centrifuges, rotary evaporators, nitrogen blow-down, and freeze dryers. Experience reliable results, lower costs, greater safety, and increased productivity by choosing the Centrifan™ PE for your laboratory!

Easy Operation Frees Your Time

- Just close the cover and walk away – no monitoring required.
- Dry samples directly in 20mL scintillation and other common vials.
- No need to maintain a vacuum pump or use a large supply of blow-down gas.
- Move the portable unit near your experiment – it even operates on a lab cart.
- Set the required temperature (ambient to 55°C) and off-timer (minutes to hours).

Efficient Technology Delivers Reliable Results

- The low price **Centrifan™ PE** withstands years of lab work with virtually no maintenance.
- The self-generating blow-down technology protects samples from loss.
- Centrifugal force allows secure drying directly in convenient scintillation vials.
- High vapor recovery permits collection of the condensate as the final product.

Effective Process Eliminates Cross Contamination

- No vacuum pump means no cross contamination from solvent bumping.
- Radiolabeled compounds dry safely.
- Residual solvent content in the sample can be reduced with inert dry gas.
- Compact unit fits in a hot cell to contain radioisotopes.

Environmental Design Saves Energy, Protects Your Health

- The unit captures toxic vapors and materials in a closed system.
- Quiet operation reduces noise pollution in the laboratory.
- Low power consumption saves energy.



Easy

Efficient

Effective

Environmental

The **Centrifan™ PE** is a convenient, compact evaporator/concentrator for research, pharmaceutical, and biotech labs working with samples such as DNA, RNA, and protein. Synthetic and medicinal chemists will save time because the **Centrifan™ PE** dries samples without the monitoring required by a rotorvap. The system also works well for processing fractions collected from flash liquid chromatography. Pharmaceutical and university labs working with radioactive and other highly toxic compounds will appreciate the advantage of the green chemistry design.

Completely self contained,
no vacuum pump!

Solvent vaporproof powder coat lid and fan

Efficient recirculating sealed Kapton heater

Epoxy encapsulates PTC temperature sensor

Solvent proof stainless steel liner

Splitter creates air flow to dry solvent

Powder coat finish

Small footprint

Automatic timer or manual on/off control (optional)

Adjustable temperature setpoint up to 55°C

SMALL FOOTPRINT

12" (30.5 cm) w x 8" (20.3 cm) d x 18" (45.7 cm) h

Flexible cold trap interfaces external chiller, dry ice or water ice

Oxygen free drying with nitrogen (fittings included)

Optimize solvent recovery with cold trap models
Green recovery

Quick stopping electronic brake for motor
Low power, low noise, 1200 RPM, 72G

Rotors for Centrifan™ PE

The versatile **Centrifan™ PE** has a rotor to fit your needs. Choose from one of seven different standard rotors, or we can make a custom rotor for your application.



4 x 40 mL
Scintillation Vials



6 x 30 mL
Scintillation Vials



6 x 20 mL
Scintillation Vials



10 x 1.5 mL
HPLC Vials



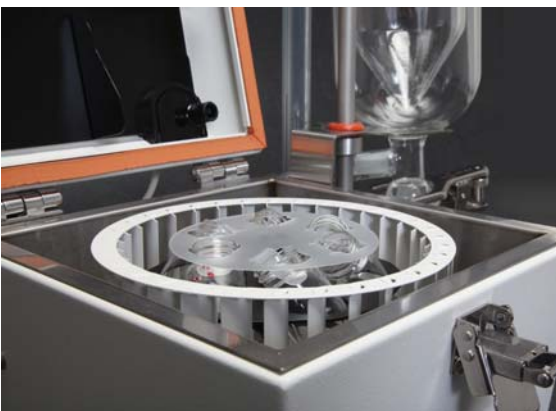
6 x 16 mm x 100 mm
Test Tubes



8 x 1.6 mL
Micro Centrifuge Vials



8 x 4 mL
Vials



Specifications

New Proprietary Evaporation Technology you should know about

| Possible Problems with Common Evaporation Systems | Vacuum Centrifuge | Rotary Evaporator | Nitrogen Blowdown | Freeze Dryer | Centrifan™ PE Advantages |
|--|-------------------|-------------------|-------------------|--------------|--|
| Sample loss from bumping caused by vacuum | X | X | | X | No vacuum pump eliminates bumping |
| Cross-contamination from splashing | X | | X | | Centrifugal force prevents splashing |
| Dry sample blown from vial; lost and contaminated | | | X | | Centrifugal force ensures material retention |
| Sample lost from bumping when vacuum slow and sample melts | | | | X | No vacuum pump eliminates bumping |
| Must freeze sample before loading | | | | X | No pre-freeze required |
| Safety issues concerning glassware under vacuum | | X | | X | No vacuum, eliminates safety concern |
| No recovery of volatile extract compounds | X | X | X | X | Condenses all recirculating vapor |
| Solvent vapor lost through vacuum pump or vent | X | X | X | X | Closed green system condenses all vapor |
| Vacuum pump noise degrades lab work environment | X | X | | X | Makes no noise |
| System complexity requires maintenance vigilance | X | X | | X | One moving part 3-year warranty |
| Evaporator down because of vacuum pump rebuild | X | X | | X | No vacuum pump minimizes maintenance |
| Consumes large quantities of electricity or drying gas | X | X | X | X | Low power and minimal inert gas usage |
| Relative speed of evaporation (MeOH, AcN, Ether) | 3 | 1 | 3 | 4 | 4 |
| Relative speed of evaporation (Water, DMF, DMSO) | 3 | 3 | 1 | 3 | 2 |

Specifications

| | |
|-----------------------|--|
| Temp Controller Range | Ambient to 55° C |
| Ambient Temperature | 2° C to 40° C |
| Cold Finger Capacity | 1 L non-freezing liquid plus dry ice nuggets |
| Power Requirements | 115/230 VAC 50-60 Hz 200 watts |
| Fuse Ratings | 3A (115 VAC and 230 VAC) fast acting, 5 mm x 20 mm |
| Dimensions | 12" (30.5 cm) w x 8" (20.3 cm) d x 18" (45.7 cm) h |

Specify a Centrifan™ PE Model

| Item No. | Model | Description |
|----------|----------------|--|
| 78-0070 | Centrifan PE-T | Includes cold trap and timer, 115 VAC |
| 78-0001 | Centrifan PE | Includes cold trap 115 VAC |
| 78-0072 | Centrifan Lite | No cold trap 115 VAC, vent to a hood or use with aqueous solutions |
| 78-1070 | Centrifan PE-T | Includes cold trap and timer 230 VAC |
| 78-1001 | Centrifan PE | Includes cold trap 230 VAC |
| 78-1072 | Centrifan Lite | No cold trap 230 VAC, vent to a hood or use with aqueous solutions |

Specify a Rotor

| | |
|---------|---|
| 78-8400 | Rotor 6 x 20 mL Scintillation Vials |
| 78-8401 | Rotor 8 x 1.6 mL Micro Centrifuge Tubes |
| 78-8402 | Rotor 6 x 16 mm x 100 mm Test Tubes |
| 78-8403 | Rotor 8 x 4 mL vials (1 dram) |
| 78-8404 | Rotor 6 x 30 mL Scintillation Vials |
| 78-8405 | Rotor 4 x 40 mL Scintillation Vials |
| 78-8406 | Rotor 10 x 1.5 HPLC Vials |

Drying Rates for Typical Solvents in 20 mL Vials*

| Solvent | Total Volume | Temp. In Rotor | Time to Dry °C |
|------------------------------|--------------|----------------|----------------|
| Methanol | 6 x 10 mL | 40 | 60 min |
| Water | 6 x 5 mL | 40 | 3 hrs |
| Hexane | 6 x 10 mL | 40 | 15 min |
| Acetone | 6 x 10 mL | 40 | 35 min |
| Isopropyl Alcohol | 6 x 10 mL | 40 | 70 min |
| DMSO | 6 x 1 mL | 40 | 12 hrs |
| Methylene Chloride | 6 x 10 mL | 40 | 25 min |
| AcN/H ₂ O (70/30) | 6 x 10 mL | 40 | 3 hrs |

*Evaporation rates were obtained with ethanol and dry ice in the cold trap.

Spare Splitters

| | |
|---------|--|
| 78-8408 | 5 pack splitters 6 x 20 mL Scintillation Vials |
| 78-8409 | 100 pack splitters 6 x 20 mL Scintillation Vials |
| 78-8410 | 1 splitter 8 x 1.6 mL Micro Centrifuge Vials |
| 78-8411 | 1 splitter 6 x 16 mm x 100 mm Test Tubes |
| 78-8412 | 1 splitter 8 x 4 mL Vials (1 dram) |
| 78-8414 | 1 splitter 6 x 30 mL Scintillation Vials |
| 78-8415 | 1 splitter 4 x 40 mL Scintillation Vials |
| 78-8416 | 1 splitter 10 HPLC 1.5 mL Vials |

Accessories

| | |
|--------|---|
| 788417 | Conversion Kit, Add Cold Trap to Centrifan™ Lite |
| 788418 | Cold Trap replacement |
| 788419 | Circulator Coil and Tubing (provides extended concentraton time with chilled Concentrator, water bath must be supplied) |
| 788420 | Immersion cooler for cold trap, fixed at -60 deg C , 1.5" rigid coil, 120 VAC, 60 Hz |
| 788426 | Immersion cooler for cold trap, fixed at -60 deg C , 1.5" rigid coil, 240 VAC, 50 Hz |
| 788421 | Flask, round 500 mL, 35/20 socket joint |
| 788422 | Flask, round 100 mL, 35/20 socket joint |
| 788423 | Adapter Kit, Cold Trap Socket to 20 mL Scintillation Vial (low loss distillate collection) |
| 788424 | Clamp pinch, locking, 35/20 Socket Joint |

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KD Scientific offers different configurations of the **Centrifan™ PE**.
We can assist you with selecting the right **Centrifan™ PE**.
We can also customize the **Centrifan™ PE** for specific applications.

Simply fill out the questionnaire below and fax it to 1-508-893-0160 or email to info@kdscientific.com

1. **What is the volume of the sample to evaporate?** _____

2. **What type of container is currently used?**

Microcentrifuge tube _____

Scintillation vial _____

HPLC Vial _____

Other _____

3. **How many samples are run/processed at the same time?** _____

4. **What are the solvent(s)?** _____

5. **Would you like to condense the vapors in a cold trap?** Yes No

6. **Do you need oxygen free drying?** Yes No

7. **Do you need a timer to stop the drying process?** Yes No

8. **Do you want auto shut off?** Yes No

9. **Next Step**

Send quote

Contact me via email

Contact me via phone

Name _____

Title _____

Company/Organization _____

Address _____

City _____

State _____

Zip _____

Country _____

Email _____

Phone _____

CENTRIFAN™ PE



KD Scientific is recognized world-wide for their technical expertise and high performance products with unmatched reliability.

KD Scientific is committed to delivering the highest level of customer satisfaction, as well as technical support for all their products.

WORLDWIDE SALES AND SUPPORT

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to help you solve your application problems
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to meet your demanding applications

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Specification subject to change at any time.

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