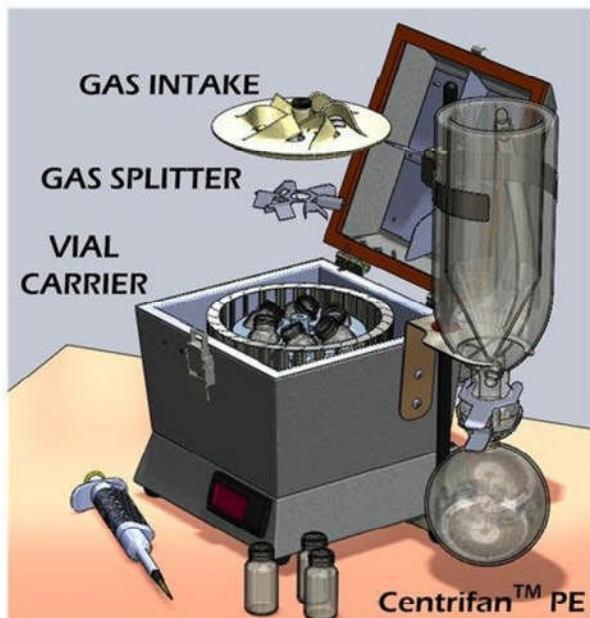


Centrifan™ PE Evaporator/Concentrator with Cold Trap

Shows optional connection for inert gas bleed for O₂ free evaporation

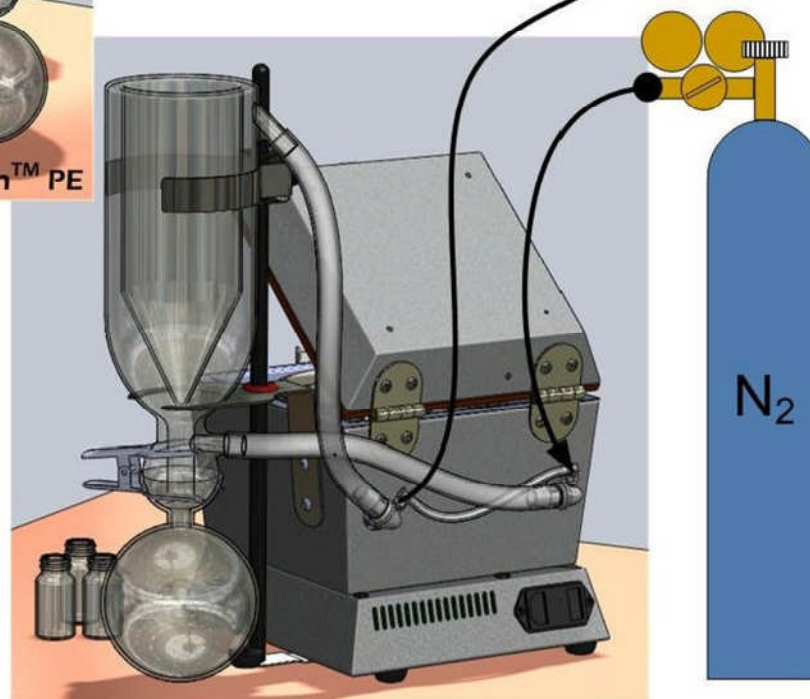
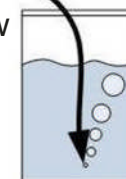


A: The [Centrifan™ PE](#) is an 8-inch cube that uses proprietary recirculating evaporation of a captured gas volume to transfer the solvent from six 20ml scintillation vials to a coldtrap without requiring an external source of blow-down gas and without a vacuum pump.

B: Solvent vapor is produced by inert gas flow through vials driven by centrifugal fan (50 cfm). The fan also circulates vapor laden gas through trap where the vapor is condensed (3 cfm). Dry gas returned to the [Centrifan™ PE](#) from the trap to pick up more solvent.

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Inert gas overflow vents to hood (recommended)



C: Inert gas bleeds into closed system to displace any oxygen which could cause degradation of drying compounds (optional) (1 liter/hour typical)

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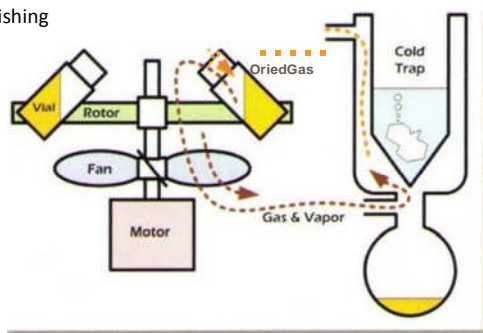
Reducing Operator Time for Rotary Evaporators

Problem: Rotor-vacuum evaporators are commonly used by synthetic and purification chemists to dry solutions prior to redissolution in another solvent or prior to long-term storage of the finished product. Since the volume of the starting solution is always greater than that of the final dried compound, the practice of moving to a 20 ml scintillation vial for the final evaporation step is common. Rotorvap manufacturers have facilitated compound transfer from round bottom flasks to scintillation vials by providing special adapters to maintain a vacuum-tight seal between the relatively small vial format and the large vacuum taper of the rotorvap. Drying the last 10ml in a scintillation vial requires care and experience to prevent sample loss or contamination from bumping and foaming. This compound-finishing step is critical to the process and can require the same amount of rotorvap time to complete as the first 490ml, while requiring much more analyst time.

Solution: KD Scientific's Centrifan™ PE can be used instead of a rotorvap to efficiently dry the last 10ml of product solution in a 20 ml scintillation vial with confidence and unattended operation. The Centrifan™ PE is a portable, easy-to-use centrifugal evaporation system that provides safe, rapid drying of purified fractions and lab scale reaction mixtures. After transferring the 10 ml aliquot from the round-bottom to the scintillation vial, the user simply places the sample in the rotor of the Centrifan™ PE, closes the lid to start the rotor, and sets the temperature. The solution in the scintillation vial dries securely without further monitoring and frees the laboratory worker for other tasks. In addition, the Centrifan™ PE offloads the time-consuming finishing tasks from the rotorvap, potentially increasing overall evaporation productivity. The Centrifan™ PE generates its own gas flow to accelerate sample evaporation by recirculating the volume of gas captured inside its

enclosure. Centrifugal force keeps samples secure in their containers and ensures maximum purity and yield. The technique eliminates the need for a vacuum pump or a large supply of blow-down gas, significantly reducing complexity and maintenance compared to rotary evaporators, vacuum centrifuges and blow-down equipment. Because it operates without vacuum, the system eliminates the potential for cross-contamination and sample loss caused by solvent bumping and foaming. The enclosure can be purged with inert gas for oxygen-free evaporation.

With a small 8 x 12 inch footprint and only 18 inches high, the self-contained Centrifan™ PE requires



little bench space and doesn't need to be placed under a fume hood; an elephant trunk is usually sufficient for instances when the Centrifan™ PE cover is open during loading and unloading. The portable system can also be operated on a lab cart, providing further convenience and savings of bench space. The versatile Centrifan™ PE provides rotor options for six 20 ml scintillation vials, eight 1.6 ml Eppendorf tubes, and smaller test tubes.

For more information, visit www.kdscientific.com



Centrifan™ PE streamlines final dry-down into Scin vials and Eppi tubes.

Centrifan™ PE produces blow-down flow by an internal fan; no external vacuum pump or gas supply.