FMS
Fluid Management Systems

SuperVap™

SuperVap™

Direct to Vial Concentration System

SuperVap Concentrator

Automated Direct to Vial Concentration and Evaporation

The SuperVap Concentrator is a dry, waterless system which is programmable. It can preheat as well as ramp up to final temperature. It automatically senses the extract being delivered to each vessel, starts Nitrogen blow down and shuts off Nitrogen when the final volume is achieved. Samples are concentrated for unattended transfer directly to a vial. Eliminating errors that occur during manual transfer.

Easy to Use:

The SuperVap uses a Touch Screen display for programming, storing and running methods. Real time plotting and display of temperature throughout the process. Simply touch a point on the plot and instantly see the temperature of that point.

Reduces Errors:

Performs the entire evaporation and concentration, automatically achieving consistent, reproducible high recoveries for all analytes. Unattended operation of the process saves labor and time reducing glassware and solvents.

High Recovery of all Analytes:

The SuperVap with Direct to Vial Concentration with automatic endpoint detection and Nitrogen shut off for each vessel, lowers labor costs and errors introduced from sample handling while increasing throughput.

Uses No Water:

Uses a robust waterless, dry bath with no electronics submerged in water, easily and inexpensively capture solvents.

Minimize Contamination:

An integrated HEPA/Carbon filter eliminates outside contamination.

Inexpensive Glassware:

Economically Priced Vessels in 500ul, 1ml and Direct to Vial.

Fully Automated:

Automatic endpoint detection, nitrogen shutoff and alarm for each vessel.

Documentation:

Every method and run are documented and stored on the SuperVap and can easily be retrieved for electronic documentation. Communicates via USB to a PC.

Stand Alone or Integrated:

The SuperVap can easily be added and integrated into existing FMS Sample Prep Systems. Integration allows for PC based control and automatic solvent exchange.

INDUSTRIES

Agricultural

Clinical

Environmental

Chemical Products

Food and Beverage

Pharmaceutical Products

Natural Products

PetroChemical

PRINCIPALS of OPERATION

The SuperVap is a standalone Automated Direct to Vial Concentration system that replaces older techniques and instruments such as KD, nitrogen blow down and water baths. It automates existing manual evaporation/concentration processes. The SuperVap Automated Direct to Vial Concentration System is built by design to simplify, improve and increase the productivity of the laboratory by automating the manual steps in your sample evaporation/ concentration process. It automates time consuming steps involved in manual sample concentration lowering labor costs and reducing errors.

Compatible with existing FMS Sample Prep Systems

The SuperVap Concentrator sets a new standard for automating rapid sample evaporation and concentration for producing consistent, reliable results. The SuperVap Automated Concentration system is used for the analysis of Pesticides, Herbicides, Persistent Organic Pollutants, PCBs, PAHs, Pharmaceutical by-products, and Personal care by-products as well as many other applications.

HEPA/Carbon Filter

HEPA/Carbon Filter to Eliminate Outside Contamination

Easy to Use Touch Screen Programming

Programmable Heat Ramp and Nitrogen Settings to Precisely Control the Concentration and Evaporation Process

A temperature log is saved for each run and may be downloaded to a PC via a USB port

Uses No Water, Dry heating assembly makes solvent recovery simple

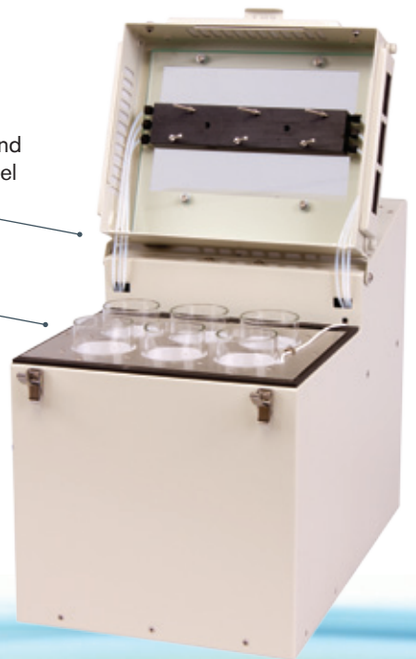
Measurements - Concentration / Evaporation vessels in 500ul, 1ml, and Direct to a GC Vial

Automatic Endpoint Detection and Nitrogen Shut Off for each vessel

Concentrates up to 6 Samples

Sample Sizes up to 220 ml

Compact Size



Specifications

SuperVap

Dimensions: 13"W x 13"D x 12"H

Weight: 20 lbs.

Gas Requirements:
Nitrogen - 20 PSI minimum

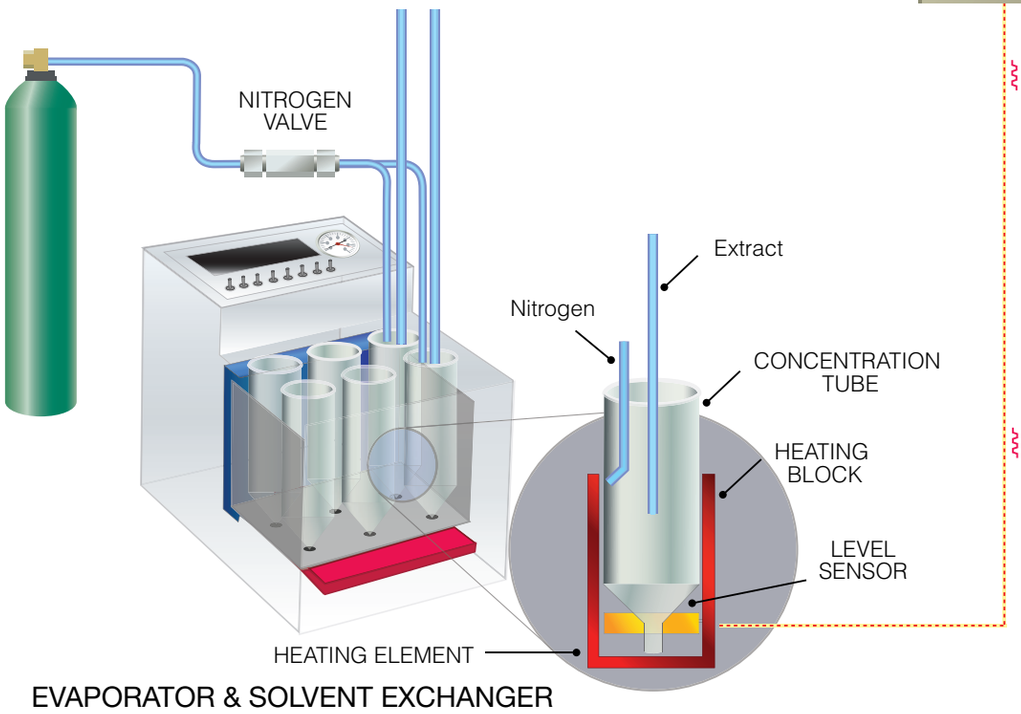
Electrical Input:
110/220 Volts, 50/60 HZ

Controller: Touch Screen

Bath: Dry

SuperVap Concentrator

Automated Direct to Vial Concentration and Evaporation



EVAPORATOR & SOLVENT EXCHANGER

Alkanes

Compound	Percent Recovery
Nonane (C9)	75%
Decane (C10)	77%
Dodecane (C12)	88%
Tetradecane (C14)	92%
Hexadecane (C16)	95%
Octadecane (C18)	97%
Nonadecane (C19)	97%
Eicosane (C20)	98%
Docosane (C22)	98%
Tetracosane (C24)	99%
Hexacosane (C26)	98%
Octacosane (C28)	97%
Triacontane (C30)	96%
Hexatriacontane (C36)	97%

Polyaromatic Hydrocarbons PAHs

Compound	Percent Recovery
Naphthalene	78%
2-Methylnaphthalene	102%
Acenaphthylene	83%
Acenaphthene	83%
Fluorene	87%
Phenanthrene	89%
Anthracene	89%
Fluoranthene	93%
Pyrene	90%
Benzo[a]anthracene	86%
Chrysene	95%
Benzo[b]fluoranthene	90%
Benzo[k]fluoranthene	93%
Benzo[a]pyrene	89%
Indeno[1,2,3-cd]pyrene	90%
Dibenzo[a,h]anthracene	89%
Benzo[g,h,i]perylene	91%

EPA Method 525

		Temp.	40 dreg. C
Compound	Spike	Amount	Percent Recovery
Acenaphthylene	5	4.485 ug/ml	89%
Anthracene	5	4.24 ug/ml	84%
Benz(a)anthracene	5	4.792 ug/ml	95%
Benzo(b)fluoranthene	5	5.804 ug/ml	106%
Benzo(k)fluoranthene	5	5.688 ug/ml	103%
Benzo(ghi)perylene	5	5.997 ug/ml	101%
Benzo(a)pyrene	5	5.281 ug/ml	105%
Butyl benzyl phthalate	5	4.488 ug/ml	89%
2-Chlorobiphenyl BZ# 1)	5	4.375 ug/ml	87%
Chrysene	5	5.057 ug/ml	101%
Dibenz(a,h)anthracene	5	5.674 ug/ml	103%
2,3-Dichlorobiphenyl (BZ# 5)	5	4.253 ug/ml	85%
Bis(2-ethylhexyl)adipate	5	4.44 ug/ml	88%
Bis(2-ethylhexyl)phthalate	5	4.488 ug/ml	89%
Diethyl phthalate	5	4.417 ug/ml	88%
Dimethyl phthalate	5	4.433 ug/ml	88%
Di-n-butyl phthalate	5	4.306 ug/ml	86%
2,4-Dinitrotoluene	5	4.239 ug/ml	84%
2,6-Dinitrotoluene	5	4.005 ug/ml	80%
Fluorene	5	4.4 ug/ml	88%
Hexachlorobenzene	5	4.093 ug/ml	81%
2,2',4,4',5,6'-Hexachlorobiphenyl (BZ# 154)	5	4.458 ug/ml	89%
2,2',3,3',4,4',6-Heptachlorobiphenyl (BZ# 171)	5	5.105 ug/ml	102%
Hexachlorocyclopentadiene	5	4.328 ug/ml	86%
Indeno(1,2,3-cd)pyrene	5	6.677 ug/ml	103%
Isophorone	5	4.322 ug/ml	86%
2,2',3,3',4,5,6,6'-octachlorobiphenyl (BZ# 200)	5	7.177 ug/ml	104%
2,2',3,4,6-Pentachlorobiphenyl (BZ# 98)	5	4.607 ug/ml	92%
Phenanthrene	5	4.3 ug/ml	86%
Pyrene	5	4.52 ug/ml	90%
2,2',4,4'-Tetrachlorobiphenyl (BZ# 47)	5	5.374 ug/ml	107%
2,4,5-Trichlorobiphenyl (BZ# 29)	5	4.003 ug/ml	80%
Pentachlorophenol	5	2.92 ug/ml	58%

Applications

Automated Sample Preparation

For the analysis of

Agricultural
Clinical
Environmental
Chemical Products
Food and Beverage
Pharmaceutical and Natural Products
PetroChemical

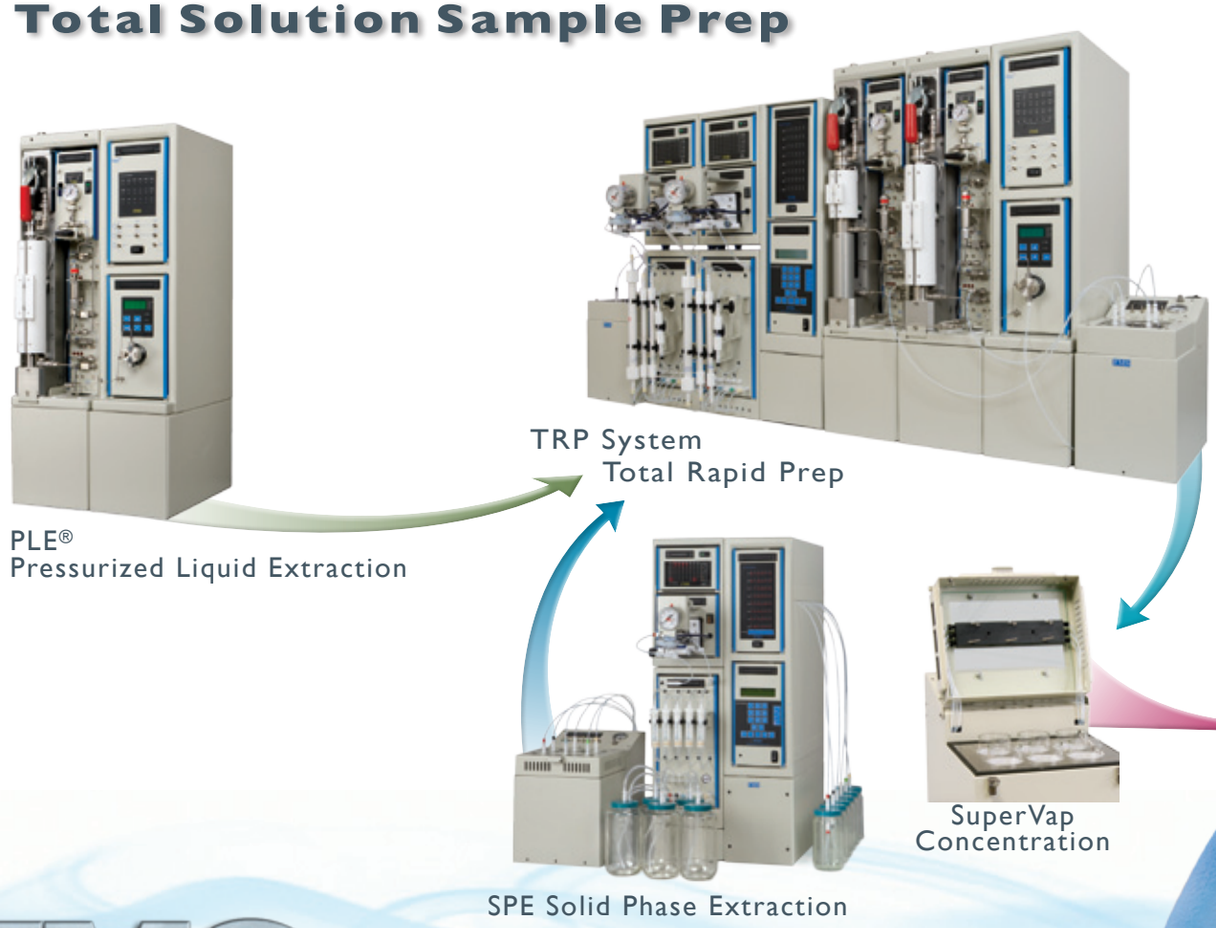
Consumables

Part Number	Description
PVAP-TUB-GC	Concentrator Tubes Standard - GC
PVAP-VIA-GC	GC Vial
PVAP-UNI-GC	GC Vial Union
PVAP-TUB-1ml	250ml Concentrator tubes 1 ml tip
PVAP-TUB-500ul	250ml Concentrator tubes 500 ul tip
PVAP-FLT-HC	Hepa/Carbon Filter

Accessories

Part Number	Description
PVAP-USB-CB	USB Communications Cable
PVAP-EXH-PE	Exhaust tube
PVAP-CVR-TFE	Concentrator tube cover
PVAP-RAC-15ml	Rack for 15 ml Conical tubes
PVAP-RAC-GVC	Rack for 11 mm GC Vials
PVAP-RAC-60ml	Rack for 17 x 60 mm Vials
PVAP-RAC-100ml	Rack for 16 x 100 mm Vials
PVAP-RAC-200ml	Rack for 250 ml Concentrator tubes
PVAP-STA	Standalone SuperVap
PVAP-INTG	Integrated SuperVap

Total Solution Sample Prep



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