

From Sample to Vial

Automated Sample Prep Solutions

Extraction • Cleanup • Concentration



FMS
Fluid Management Systems

CAMPRO
SCIENTIFIC

Germany

Tel. +49.(0)30.629.01.89.0
info@campro.eu

www.campro.eu

The Netherlands

Tel. +31.(0)318.529.437
info.nl@campro.eu

EconoTrace® Parallel SPE System

The EconoTrace Parallel SPE System is designed to streamline your laboratory's workflow and increase productivity by automating the manual steps in your sample preparation process. The EconoTrace Parallel SPE system automates existing manual SPE techniques and replaces older manual Liquid-Liquid Extraction techniques and outdated semi-automated instruments.

The EconoTrace Parallel SPE system is the only SPE system that combines extraction, drying and concentration into one step – providing a truly automated total sample prep solution for the laboratory. Simply load samples onto the EconoTrace Parallel SPE system and trigger the automated extraction process. After loading the sample onto the SPE cartridge at the programmed flow rate, the drying step is accomplished using Nitrogen. This drying step replaces manual techniques. The analytes of interest are then eluted directly to the SuperVap Concentrator where the concentration process automatically brings the extract to final volume in an autosampler vial, ready for final analysis. Automating these processes into one step ensures the highest quality results in the shortest amount of time and eliminates both human error and the possibility of contamination.



The EconoTrace runs two samples per module in parallel. It is expandable from one to four modules to grow with your laboratory giving you up to 8 extractions simultaneously.

Reduces Errors and Costs

One-step automated SPE and concentration eliminates human error, saves labor costs and reduces solvent usage while increasing your sample throughput.

Fully Automated

Hyphenates the entire sample prep process—extraction, drying and concentration steps into a one process.

Runs up to eight samples simultaneously.

Automatic sample bottle rinse.

Concentrates samples up to 250ml directly to a GC vial.

High Speed

The fastest automated sample processing available for SPE cartridges and columns of all sizes.

Runs up to eight samples simultaneously.

Positive pressure pumping for fast, simultaneous loading of samples.

Applications

Drinking Water

Supports EPA Methods

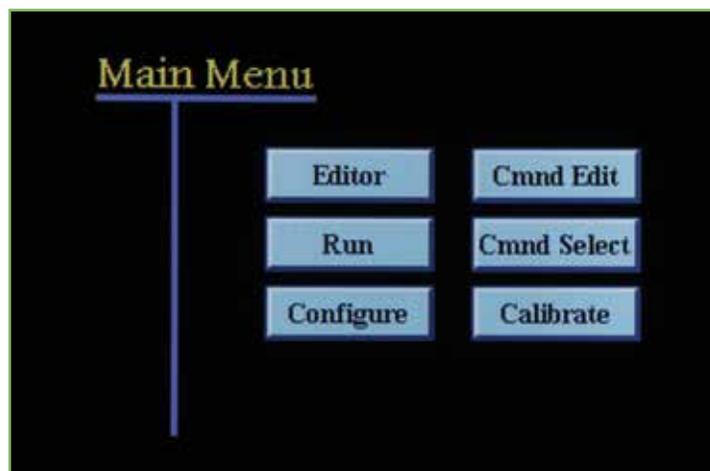
- 506 Phthalates and Adipate Esters
- 508.1 Chlorinated Pesticides, Herbicides, and Organohalides
- 515.2 Chlorinated Acids
- 521 Nitrosamines
- 525.2 Semi-volatiles
- 526 Semi-volatiles
- 527 Selected Pesticides and Flame Retardants
- 528 Phenols
- 529 Explosives
- 532 Phenylurea Compounds
- 535 Chloroacetanilide and other Acetamide Herbicides
- 548.1 Endothall
- 549.2 Diquat and Paraquat
- 550.1 PAH's
- 552.1 Haloacetic Acids and Dalapon
- 553 Benzidines and Nitrogen Containing Pesticides

High Throughput Solid Phase Extraction for Drinking Water, Beverages, Urine and Blood

EconoTrace

The EconoTrace Parallel SPE system uses positive pressure pumping for precise and accurate delivery of the sample as well as conditioning, washing and elution solvents. The system is specifically designed to isolate analytes of interest from a wide variety of liquid matrices such as urine, blood, water, milk, and beverages. Sample sizes range from 2ml to Liters and uses the same bottle the sample was collected in. Sample loading rates are programmable. A positive pressure pump is used to load samples onto any SPE cartridge or column available on the market and it easily handles both clean and tough sample matrices.

The EconoTrace Parallel SPE/SuperVap system concentrates samples up to 250ml directly to a GC vial. For guaranteed results, especially when dealing with low limits of detection, we recommend using FMS cartridges. Sample Processing Modules can easily be replaced for service which means your lab will experience zero downtime.



System control is accomplished via an easy-to-use touch screen.



The EconoTrace System is expandable from one to four modules

The SuperVap® Concentrator is where the concentration process automatically brings the extract to final volume in an autosampler vial, ready for final analysis.



Automatic time-based or endpoint detection for nitrogen shut off for each vessel

Measurements - Concentration / Evaporation vessels in 500 μ L, 1ml, and direct to a GC Vial or to dryness.

Specifications

Dimensions: 15" W x 18" D x 35" H

Weight: 65 lbs.

Gas Requirements: Nitrogen - 20 PSI minimum

Pump: Piston Displacement

Flow rate: 0.2 to 15ml/minute

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

Controller: Integrated Touch Screen Control

Ordering Information

Part number	Description
EconoTrace/1	EconoTrace SPE system for 2 samples (1 Module)
EconoTrace/2	EconoTrace SPE system for 4 samples (2 Modules)
EconoTrace/3	EconoTrace SPE system for 6 samples (3 Modules)
EconoTrace/4	EconoTrace SPE system for 8 samples (4 Modules)
ECONO-EXP	EconoTrace Expansion Module

Consumables

Part number	Description
SPE-ADP-1	SPE 1ml Cartridge Adapter
SPE-ADP-20	SPE 20ml Cartridge Adapter
SPE-ADP-3	SPE 3ml Cartridge Adapter
SPE-ADP-6	SPE 6ml Cartridge Adapter
SPE-BT.5L	SPE Sample Bottle 500ml
SPE-BT1	SPE Sample Bottle 1L
SPE-BT1.25L	SPE Sample Bottle 1250ml
SPE-BTRC	SPE Sample Bottle Rinse Cap
SPE-CAP-1L	SPE Bottle Cap with Loading and Sample Rinse Tubings and Adapters, 1L
SPE-CAP-2L	SPE Bottle Cap with Loading and Sample Rinse Tubings and Adapters, 2L
SPE-CAR1-C18	SPE Cartridge 1 gram C18
SPE-CAR1-DVB	SPE Cartridge 1 gram DVB
SPE-CAR5-C18	SPE Cartridge 5 gram C18
SPE-CAR6-DVB	SPE Cartridge 6 gram DVB

SPE Accessories

Part number	Description
SPE-CART-TRY	SPE Portable Cart and Tray

TurboTrace[®] Parallel SPE System

The TurboTrace Parallel SPE system is designed to streamline your laboratory's workflow and increase productivity by automating the manual steps in your sample preparation process. It is designed for high throughput and tough sample matrices. The TurboTrace Parallel SPE system automates existing manual SPE techniques and replaces older manual Liquid-Liquid Extraction techniques and outdated semi-automated instruments.

The TurboTrace Parallel SPE system combines extraction, drying and concentration into one step -- providing a truly automated total sample prep solution for the laboratory. Simply load samples onto the TurboTrace Parallel SPE system, use the touch screen to trigger the automated extraction process. After loading the sample onto the SPE cartridge, the drying step is accomplished using vacuum or nitrogen or both. This drying step replaces manual techniques such as sodium sulfate drying. The analytes of interest are then eluted directly to the SuperVap Concentrator where the concentration process automatically brings the extract to final volume in an autosampler vial, ready for final analysis. Automating these processes into one step ensures the highest quality results in the shortest amount of time and eliminates both human error and the possibility of contamination.



The TurboTrace Parallel system is modular and can run up to 8 samples in parallel providing direct-to-vial concentration and delivering unmatched throughput in solid phase extraction

Reduces Errors and Costs

One-step automated SPE and concentration eliminates human error, saves labor costs and reduces solvent usage while increasing your sample throughput

Fully Automated

Hyphenates the entire sample prep process-- extraction, drying and concentration steps--into a one step process.

Runs up to 8 samples simultaneously

Sample Liquid Level Sensors to detect when the Sample has finished loading and waste overflow

Automatic Sample bottle rinse

Concentrates samples up to 250ml directly to a GC vial

High Speed

The fastest automated sample processing available for SPE cartridges and columns

Run up to eight samples simultaneously

Vacuum for fast loading of large volume samples

Applications

Drinking Water, Waste Water, Blood, Milk and Beverages

EPA Methods

608 Chlorinated Pesticides and PCB's

1613 Dioxin

1664A Oil and Grease and SGT-HEM

1668A Toxic PCB's by Isotope Dilution and GC/MS

1694 Pharmaceutical and Personal Care Products

8061 Phthalate esters

8081 TCLP Organochlorine pesticides

8082 PCB's

8095 Explosives

8141 Organophosphorus pesticides

8321 TCLP Phenoxyacid herbicides

8330 Nitroaromatics / Nitramines

Compliant

Complies with existing methods that require vacuum, positive pressure pumping for the precise delivery of sample and solvents

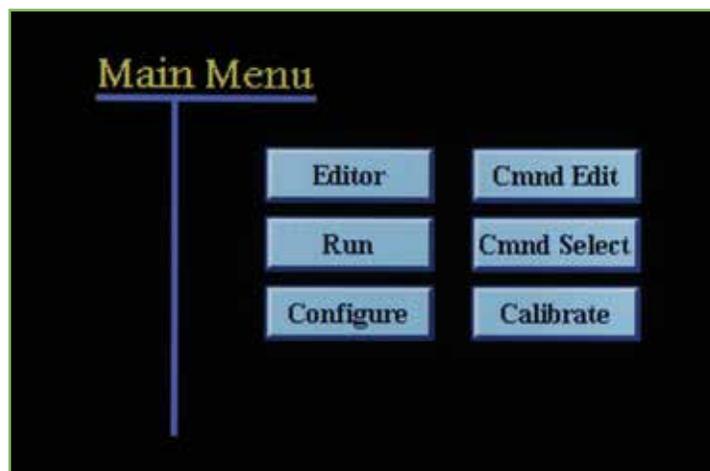
High Speed, High Throughput Automated Solid Phase Extraction for Difficult Samples

TurboTrace Parallel

The TurboTrace Parallel SPE system incorporates vacuum or positive pressure pump to load samples for compliance with all SPE methods. It uses positive pressure pumping for precise and accurate delivery of conditioning, washing and elution solvents. The TurboTrace Parallel SPE system is specifically designed to isolate analytes of interest from a wide variety of liquid matrices such as urine, blood, water, milk, beverages. Sample sizes range from 2ml to 8L and use the same bottle the sample was collected in. Many sample loading rates are programmable. A vacuum or positive pressure pump is used to load samples onto the SPE cartridges and columns at unprecedented speeds and it easily handles both clean and tough sample matrices. A liquid sensor detects when the sample has been loaded, triggering the system to initiate next steps. The TurboTrace Parallel SPE system concentrates samples up to 250ml directly to a GC vial. The Sample Processing Module is designed to use all standard formats of SPE cartridges and columns on the market today. For guaranteed results, especially when dealing with low limits of detection, we recommend FMS pre-packed columns and cartridges.



TurboTrace System is expandable from one to eight modules.



System control is accomplished via an easy-to-use touch screen.

The SuperVap® Concentrator is where the concentration process automatically brings the extract to final volume in an autosampler vial, ready for final analysis.



Automatic time-based or endpoint detection for nitrogen shut off for each vessel

Measurements - Concentration / Evaporation vessels in 500 μ L, 1ml, and direct to a GC Vial or to dryness.

Specifications

Dimensions: 15" W x 18" D x 35" H

Weight: 65 lbs.

Gas Requirements: Nitrogen - 20 PSI minimum

Vacuum Requirements: 25" Hg minimum

Pump: Piston Displacement

Flow rate: 0.2 to 15ml/minute

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

Controller: Integrated Touch Screen Control

Ordering Information

Part number	Description
TurboTrace/1	TurboTrace SPE parallel system for 1 sample
TurboTrace/2	TurboTrace SPE parallel system for 2 samples
TurboTrace/3	TurboTrace SPE parallel system for 3 samples
TurboTrace/4	TurboTrace SPE parallel system for 4 samples
TurboTrace/5	TurboTrace SPE parallel system for 5 samples
TurboTrace/6	TurboTrace SPE parallel system for 6 samples
TurboTrace/7	TurboTrace SPE parallel system for 7 samples
TurboTrace/8	TurboTrace SPE parallel system for 8 samples
TurboTrace -EXP	TurboTrace Expansion Module

Consumables

Part number	Description
SPE-ADP-1	SPE 1ml Cartridge Adapter
SPE-ADP-20	SPE 20ml Cartridge Adapter
SPE-ADP-3	SPE 3ml Cartridge Adapter
SPE-ADP-6	SPE 6ml Cartridge Adapter
SPE-BT.05L	SPE Sample Bottle 500ml
SPE-BT1	SPE Sample Bottle 1L
SPE-BT1.25L	SPE Sample Bottle 1250ml
SPE-BTRC	SPE Sample Bottle Rinse Cap
SPE-CAP-1L	SPE Bottle Cap with Loading and Sample Rinse Tubings and Adapters, 1L
SPE-CAP-2L	SPE Bottle Cap with Loading and Sample Rinse Tubings and Adapters, 2L
SPE-CAR1-C18	SPE Cartridge 1 gram C18
SPE-CAR1-DVB	SPE Cartridge 1 gram DVB
SPE-CAR5-C18	SPE Cartridge 5 gram C18
SPE-CAR6-DVB	SPE Cartridge 6 gram DVB

SPE Accessories

Part number	Description
SPE-CART-TRY	SPE Portable Cart and Tray

TurboTrace® Sequential SPE System

The TurboTrace® Sequential SPE Automated One-Step Extraction and Concentration System is designed to streamline your laboratory's workflow and increase productivity by automating the manual steps in your sample preparation process. The TurboTrace Sequential SPE system automates existing manual SPE techniques and replaces older manual Liquid-Liquid Extraction techniques and outdated semi-automated instruments.

The TurboTrace Sequential SPE system is the only SPE system that combines extraction, drying and concentration into one step -- providing a truly automated total sample prep solution for the laboratory. Simply load samples onto the TurboTrace Sequential SPE system to start the automated extraction process. After loading the sample onto the SPE cartridge, the drying step is accomplished using Nitrogen. This drying step replaces manual techniques. The analytes of interest are then eluted directly to the SuperVap Concentrator where the concentration process automatically brings the extract to final volume in an autosampler vial, ready for final analysis. Automating these processes into one step ensures the highest quality results in the shortest amount of time and eliminates both human error and the possibility of contamination.



The TurboTrace Sequential module is capable of readying five samples running one at a time.

Reduces Errors

One-step automated SPE and concentration eliminates human error, saves labor costs and reduces solvent usage while increasing your sample throughput

Fully Automated

Hyphenates the entire sample prep process-- extraction, drying and concentration steps--into a one step program.

Runs up to 5 different methods/sample matrices sequentially

Concentrates samples up to 250ml directly to a GC vial.

Automatic Sample bottle rinse

High Speed

The fastest automated sample processing available for SPE cartridges and columns

Run up to four samples simultaneously, up to 20 samples total

Vacuum for fast loading of large volume samples

Applications

Drinking Water, Waste Water, Blood, Milk and Beverages

EPA Methods

500 Series

600 Series

1600 Series

8000 Series

Compliant

Complies with existing methods that require vacuum, positive pressure pumping for the precise delivery of sample and solvents

Dispenses up to five solvents using an HPLC pump to deliver precise volumes and flow rates for conditioning and elution

Easy Documentation

Programs and stores an unlimited number of methods and runs

Easy-to-use software

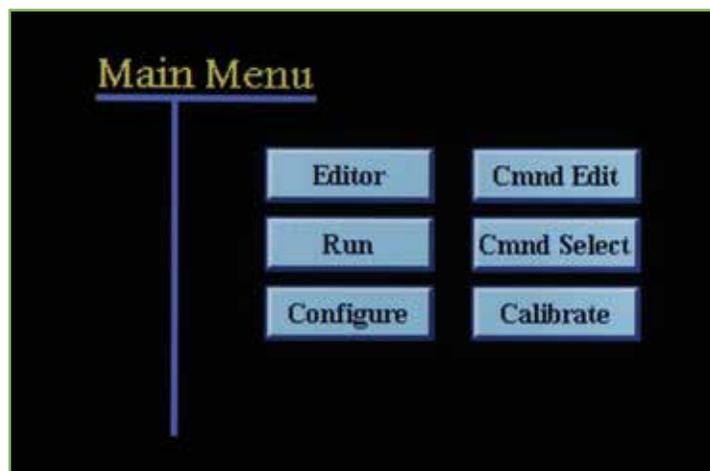
Automated Solid Phase Extraction and Direct to Vial Concentration

TurboTrace Sequential

The TurboTrace® Sequential SPE system uses positive pressure pumping for precise and accurate delivery of conditioning, washing and elution solvents. The TurboTrace® Sequential SPE system is specifically designed to isolate analytes of interest from a wide variety of liquid matrices such as urine, blood, water, milk, beverages. Sample sizes range from 2ml to 8L and use the same bottle the sample was collected in. Sample loading rates are programmable. A vacuum or positive pressure pump is used to load samples onto the SPE cartridges and columns at unprecedented speeds and it easily handles both clean and tough sample matrices. The TurboTrace® Sequential SPE system concentrates samples up to 250ml directly to a GC vial. The Sample Processing Module is designed to use all standard formats of SPE cartridges and columns on the market today. For guaranteed results, especially when dealing with low limits of detection, we recommend FMS pre-packed columns and cartridges. Sample Processing Modules can be easily replaced to perform cleanup column chemistries allowing the lab to multipurpose the TurboTrace® to automate other sample prep processes.



The TurboTrace Sequential System is expandable from one to four modules to grow with your lab.



System control is accomplished via an easy-to-use touch screen.

The SuperVap® Concentrator is where the concentration process automatically brings the extract to final volume in an autosampler vial, ready for final analysis.



Automatic time-based or endpoint detection for nitrogen shut off for each vessel

Measurements - Concentration / Evaporation vessels in 500 µL, 1ml, and direct to a GC Vial or to dryness.

Specifications

Dimensions: 15" W x 18" D x 35" H

Weight: 65 lbs.

Gas Requirements: Nitrogen - 20 PSI minimum

Vacuum Requirements: 25" Hg minimum

Pump: Piston Displacement

Flow rate: 0.2 to 15ml/minute

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

Controller: Integrated Touch Screen Control

Ordering Information

Part number	Description
TurboTrace/SEQ/1	TurboTrace Sequential system for 5 samples
TurboTrace/SEQ/2	TurboTrace Sequential system for 10 samples
TurboTrace/SEQ/3	TurboTrace Sequential system for 15 samples
TurboTrace/SEQ/4	TurboTrace Sequential system for 20 samples
TurboTrace SEQ-EXP	TurboTrace Sequential Expansion Module

Consumables

Part number	Description
SPE-ADP-1	SPE 1ml Cartridge Adapter
SPE-ADP-20	SPE 20ml Cartridge Adapter
SPE-ADP-3	SPE 3ml Cartridge Adapter
SPE-ADP-6	SPE 6ml Cartridge Adapter
SPE-BT.05L	SPE Sample Bottle 500ml
SPE-BT1	SPE Sample Bottle 1 L
SPE-BT1.25L	SPE Sample Bottle 1250ml
SPE-BTRC	SPE Sample Bottle Rinse Cap
SPE-CAP-1L	SPE Bottle Cap with Loading and Sample Rinse Tubings and Adapters, 1L
SPE-CAP-2L	SPE Bottle Cap with Loading and Sample Rinse Tubings and Adapters, 2L
SPE-CAR1-C18	SPE Cartridge 1 gram C18
SPE-CAR1-DVB	SPE Cartridge 1 gram DVB
SPE-CAR5-C18	SPE Cartridge 5 gram C18
SPE-CAR6-DVB	SPE Cartridge 6 gram DVB

SPE Accessories

Part number	Description
SPE-CART-TRY	SPE Portable Cart and Tray

TurboTrace[®] ABN SPE System

The TurboTrace ABN SPE system is designed to streamline your laboratory's workflow and increase productivity by automating the manual steps in your sample preparation process. The TurboTrace ABN SPE system automates existing manual SPE techniques and replaces older manual Liquid-Liquid Extraction techniques and outdated semi-automated instruments.

The TurboTrace ABN SPE system is the only SPE system that combines Dual Cartridge extraction, fractionation, drying and concentration into one step -- providing a truly automated total sample prep solution for the laboratory. Simply load samples onto the TurboTrace ABN SPE system and trigger the automated extraction process. After loading the sample onto the SPE cartridges, the drying step is accomplished using Nitrogen. This drying step replaces manual techniques. The analytes of interest are then eluted directly to the SuperVap Concentrator where the concentration process automatically brings the extract to final volume in an autosampler vial, ready for final analysis. Automating these processes into one step ensures the highest quality results in the shortest amount of time and eliminates both human error and the possibility of contamination. The full process is complete in just over 1 hour versus 16 to 18 hrs and cuts solvent consumption by 70%.



The TurboTrace ABN System is expandable from one to eight modules.

Reduces Errors

One-step automated SPE and concentration eliminates human error, saves labor costs and reduces solvent usage while increasing your sample throughput

Fully Automated

Hyphenates the entire sample prep process-- extraction, drying and concentration steps--into a one step program.

Runs up to 6 samples, simultaneously

Sample Liquid Level Sensor to detect when the Sample has finished loading

Automatic Sample bottle rinse

Concentrates samples up to 250ml directly to a GC vial

Waste liquid level sensor to prevent waste overflow

Dual Cartridge extraction and fractionation of Acid/ Base/Neutral analytes

High Speed

The fastest automated sample processing available for ABN methods using SPE cartridges and columns ready for analysis in hours versus days

Run up to eight samples simultaneously

Vacuum for fast loading of large volume samples

Versatile

Handles a wide range of sample sizes and all matrix types

Dual Cartridge allows for many other types of multi cartridge applications

Up to 3 fractions per run

Sample Sizes 2ml to many liters

Sample Liquid Level Sensor to detect when the Sample has finished loading

Expandable from 1 to 6 modules

Applications

Drinking Water, Waste Water, Blood, Milk and Beverages

EPA Methods

625 Semi-Volatiles

8270 TCLP Semi-volatiles

500, 600, 1600, 8000 Series

The First Automated Multi Cartridge MultiFraction Solid Phase Extraction System

TurboTrace ABN

Compliant

Complies with existing methods that require vacuum, positive pressure pumping for the precise delivery of sample and solvents

Dispenses up to five solvents using an HPLC pump to deliver precise volumes and flow rates for conditioning and elution

Easy Documentation

Programs and stores an unlimited number of methods and runs on an SD Card for Easy method transfer

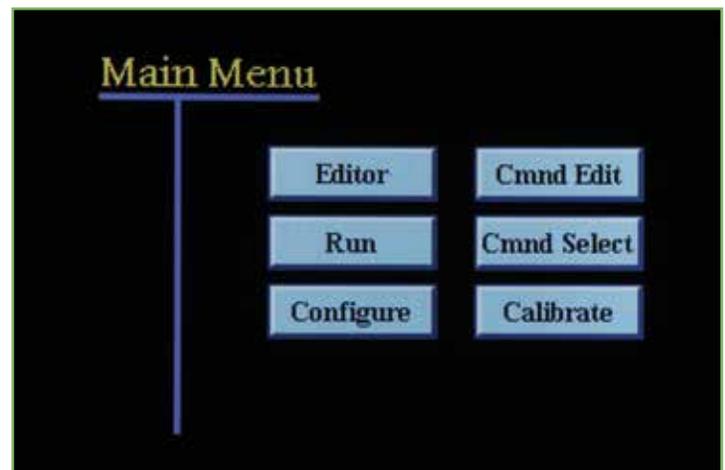
Easy-to-use software

The TurboTrace ABN SPE system uses positive pressure pumping for precise and accurate delivery of conditioning, washing and elution solvents. The TurboTrace ABN SPE system is specifically designed to isolate analytes of interest from a wide variety of liquid matrices such as urine, blood, water, milk, beverages. Sample sizes range from 2ml to 8L and use the same bottle the sample was collected in. Sample loading rates are programmable. A vacuum or positive pressure pump is used to load samples onto the SPE cartridges and columns at unprecedented speeds and it easily handles both clean and tough sample matrices. The TurboTrace ABN SPE system concentrates samples up to 250ml directly to a GC vial. The Sample Processing Module is designed to use all standard formats of SPE cartridges and columns on the market today. For guaranteed results, especially when dealing with low limits of detection, we recommend FMS pre-packed columns and cartridges.

The TurboTrace ABN SPE system is a Multi Cartridge, Multi fractionation system that can be used for any SPE method requiring more than one cartridge or fraction.



The TurboTrace System is expandable from one to eight modules.



System control is accomplished via an easy-to-use touch screen.

Prep ABN Samples Directly to a Vial in Hours Not Days

TurboTrace ABN

The SuperVap® Concentrator is where the concentration process automatically brings the extract to final volume in an autosampler vial, ready for final analysis.



Automatic time-based or endpoint detection for nitrogen shut off for each vessel

Measurements - Concentration / Evaporation vessels in 500 µL, 1ml, and direct to a GC Vial or to dryness.

Specifications

Dimensions: 15" W x 18" D x 35" H

Weight: 65 lbs.

Gas Requirements: Nitrogen - 20 PSI minimum

Vacuum Requirements: 25" Hg minimum

Pump: Piston Displacement

Flow rate: 0.2 to 15ml/minute

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

Controller: Integrated Touch Screen Control

Ordering Information

Part number	Description
TurboTrace/ABN/1	TurboTrace ABN SPE parallel system for 1 sample
TurboTrace/ABN/2	TurboTrace ABN SPE parallel system for 2 samples
TurboTrace/ABN/3	TurboTrace ABN SPE parallel system for 3 samples
TurboTrace/ABN/4	TurboTrace ABN SPE parallel system for 4 samples
TurboTrace/ABN/5	TurboTrace ABN SPE parallel system for 5 samples
TurboTrace/ABN/6	TurboTrace ABN SPE parallel system for 6 samples
TurboTrace/ABN/-EXP	TurboTrace ABN Expansion Module

Consumables

Part number	Description
SPE-ADP-1	SPE 1ml Cartridge Adapter
SPE-ADP-20	SPE 20ml Cartridge Adapter
SPE-ADP-3	SPE 3ml Cartridge Adapter
SPE-ADP-6	SPE 6ml Cartridge Adapter
SPE-BT.05L	SPE Sample Bottle 500ml
SPE-BT1	SPE Sample Bottle 1L
SPE-BT1.25L	SPE Sample Bottle 1250ml
SPE-BTRC	SPE Sample Bottle Rinse Cap
SPE-CAP-1L	SPE Bottle Cap with Loading and Sample Rinse Tubings and Adapters, 1L
SPE-CAP-2L	SPE Bottle Cap with Loading and Sample Rinse Tubings and Adapters, 2L
SPE-CAR1-C18	SPE Cartridge 1 gram C18
SPE-CAR1-DVB	SPE Cartridge 1 gram DVB
SPE-CAR5-C18	SPE Cartridge 5 gram C18
SPE-CAR6-DVB	SPE Cartridge 6 gram DVB

SPE Accessories

Part number	Description
SPE-CART-TRY	SPE Portable Cart and Tray
SPE-CAR2 -ABN Kit	SPE ABN Cartridge Kit, contains cartridges for ABN extraction

TurboTrace[®] PFC SPE System

The TurboTrace PFC (Perfluoralkylated substances) SPE system is designed to streamline your laboratory's workflow and increase productivity by automating the manual steps in your sample preparation process. It is designed for high throughput and tough sample matrices. The TurboTrace PFC SPE system automates existing manual SPE techniques and replaces older manual Liquid-Liquid Extraction techniques and outdated semi-automated instruments. Perfluoralkylated is a general term used to describe substances which are largely comprised of or contain a perfluorinated or polyfluorinated carbon chain moiety such as $F(CF_2)_n-$ or $F(CF_2)_n-(C_2H_4)_n$. In recent years, there has been increasing concern over the levels of perfluorinated and polyfluorinated chemicals, such as PFOS (perfluorosulfonate) and PFOA (perfluorooctanoic acid), in the global environment and their fate and possible adverse effects in the environment. PFOS is now subject to varying but increasing levels of control in a number of countries. The TurboTrace PFC SPE system, the first automated solid phase extraction system made specifically for PFC extraction and concentration. Primarily effective at reducing background contamination. Extraction and concentration of aqueous samples takes less than two hours.

The TurboTrace PFC SPE system combines extraction, drying and concentration into one step -- providing a truly automated total sample prep solution for the laboratory. Simply load samples onto the TurboTrace PFC SPE system, and use the touch screen to trigger the automated extraction process. After loading the sample onto the SPE cartridge, the drying step is accomplished using vacuum or nitrogen or both. This drying step replaces manual techniques such as sodium sulfate drying. The analytes of interest are then eluted directly to the SuperVap Concentrator where the concentration process automatically brings the extract to final volume in an autosampler vial, ready for final analysis. Automating these processes into one step ensures the highest quality results in the shortest amount of time and eliminates both human error and the possibility of contamination.



The TurboTrace PFC System runs in parallel and is expandable from one to eight modules.

The First Automated Solid Phase Extraction System Dedicated to Perfluoralkylated Substances

TurboTrace PFC

Reduces Errors

One-step automated SPE and concentration eliminates human error, saves labor costs and reduces solvent usage while increasing your sample throughput

Reduces background Contamination

Fully Automated

Hyphenates the entire sample prep process--extraction, drying and concentration steps--into a one step program.

Runs up to eight samples simultaneously

Sample Liquid Level Sensors to detect when the Sample has finished loading and to prevent waste overflows.

Automatic Sample bottle rinse

Concentrates samples up to 250ml directly to a GC vial

High Speed

The fastest automated sample processing available for SPE cartridges and columns

Run up to eight samples simultaneously

Vacuum for fast loading of large volume samples

Versatile

Handles a wide range of sample sizes and all matrix types

Sample Sizes 2ml to many liters

Sample Liquid Level Sensor to detect when the Sample has finished loading

Expandable from 1 to 8 modules

Efficient

Uses all SPE cartridge and column sizes

Positive pressure pumping for loading small volume samples

Nitrogen drying

Compliant

Complies with existing methods that require vacuum, positive pressure pumping for the precise delivery of sample and solvents

Dispenses up to six solvents using an HPLC pump to deliver precise volumes and flow rates for conditioning and elution

Easy Documentation

Programs and stores an unlimited number of methods and runs on an SD Card for Easy method transfer

Easy-to-use software - Touch screen operation

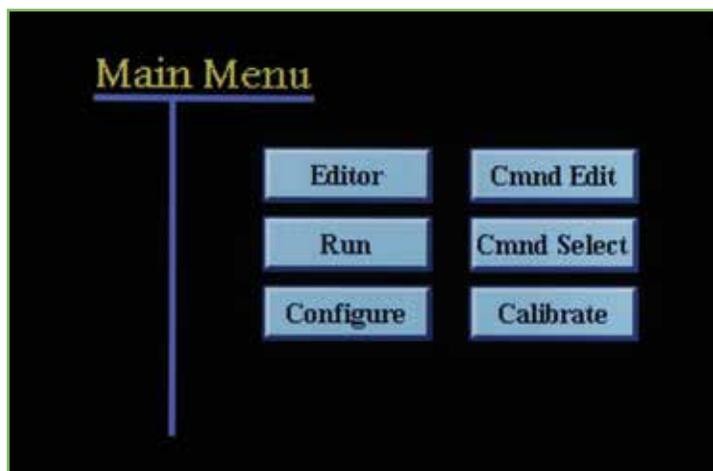
The TurboTrace PFC SPE system incorporates vacuum or positive pressure pump to load samples for compliance with all SPE methods. It uses positive pressure pumping for precise and accurate delivery of conditioning, washing and elution solvents. The TurboTrace PFC SPE system is specifically designed to isolate analytes of interest from a wide variety of liquid matrices such as urine, blood, water, milk, beverages. Sample sizes range from 2ml to 8L and use the same bottle the sample was collected in. Sample loading rates are programmable. A vacuum or positive pressure pump is used to load samples onto the SPE cartridges and columns at unprecedented speeds and it easily handles both clean and tough sample matrices. A liquid sensor detects when the sample has been loaded, triggering the system to initiate next steps. The TurboTrace PFC SPE system concentrates samples up to 250ml directly to a GC vial. The Sample Processing Module is designed to use all standard formats of SPE cartridges and columns on the market today. For guaranteed results, especially when dealing with low limits of detection, we recommend FMS pre-packed columns and cartridges. Sample Processing Modules can be easily replaced to perform cleanup column chemistries allowing the lab to multipurpose the TurboTrace PFC SPE system to automate other sample prep processes.



The TurboTrace PFC System is expandable from one to eight modules

An Automated Low Background, High Throughput method for a Tedious Manual Sample Prep

TurboTrace PFC



System control is accomplished via an easy-to-use touch screen.

The SuperVap® Concentrator is where the concentration process automatically brings the extract to final volume in an autosampler vial, ready for final analysis.



Automatic time-based or endpoint detection for nitrogen shut off for each vessel

Measurements - Concentration / Evaporation vessels in 500 µL, 1ml, and direct to a GC Vial or to dryness.

Specifications

Dimensions: 15" W x 18" D x 35" H

Weight: 65 lbs.

Gas Requirements: Nitrogen - 20 PSI minimum

Vacuum Requirements: 25" Hg minimum

Pump: Piston Displacement

Flow rate: 0.2 to 15ml/minute

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

Controller: Integrated Touch Screen Control

Ordering Information

Part number	Description
TurboTrace/PFC/1	TurboTrace PFC parallel system for 1 sample
TurboTrace/PFC/2	TurboTrace PFC parallel system for 2 samples
TurboTrace/PFC/3	TurboTrace PFC parallel system for 3 samples
TurboTrace/PFC/4	TurboTrace PFC parallel system for 4 samples
TurboTrace/PFC/5	TurboTrace PFC parallel system for 5 samples
TurboTrace/PFC/6	TurboTrace PFC parallel system for 6 samples
TurboTrace/PFC/7	TurboTrace PFC parallel system for 7 samples
TurboTrace/PFC/8	TurboTrace PFC parallel system for 8 samples
TurboTrace PFC-EXP	TurboTrace PFC Expansion Module

Consumables

Part number	Description
SPE-ADP-1	SPE 1ml Cartridge Adapter
SPE-ADP-20	SPE 20ml Cartridge Adapter
SPE-ADP-3	SPE 3ml Cartridge Adapter
SPE-ADP-6	SPE 6ml Cartridge Adapter
SPE-BT.05L	SPE Sample Bottle 500ml
SPE-BT1	SPE Sample Bottle 1L
SPE-BT1.25L	SPE Sample Bottle 1250ml
SPE-BTRC	SPE Sample Bottle Rinse Cap
SPE-CAP-1L	SPE Bottle Cap with Loading and Sample Rinse Tubings and Adapters, 1L
SPE-CAP-2L	SPE Bottle Cap with Loading and Sample Rinse Tubings and Adapters, 2L

SPE Accessories

Part number	Description
SPE-CART-TRY	SPE Portable Cart and Tray

NanoTrace[®] Small Volume SPE system

The NanoTrace Small Volume SPE Automated One-Step Extraction and Concentration System is designed to streamline your laboratory's workflow and increase productivity by automating the manual steps in your sample preparation process. The NanoTrace Small Volume SPE system automates existing manual SPE techniques and replaces older manual Liquid-Liquid Extraction techniques and outdated semi-automated instruments.

The NanoTrace Small Volume SPE system is the only small volume SPE system that combines extraction, drying and concentration into one step -- providing a truly automated total sample prep solution for the laboratory. The NanoTrace uses small bore tubing throughout to minimize dead volume. It is specifically designed to use 1ml and larger SPE cartridges. Simply load samples as small as 250ul onto the NanoTrace Small Volume SPE system and trigger the automated extraction process. After loading the sample onto the SPE cartridge, the drying step is accomplished using Nitrogen. This drying step replaces manual or vacuum techniques used in manifolds. The analytes of interest are then eluted directly to the SuperVap Concentrator where the concentration process automatically brings the extract to final volume directly into an autosampler vial, ready for final analysis. Automating these processes into one step ensures the highest quality results in the shortest amount of time and eliminates both human error and the possibility of contami-



The NanoTrace Small Volume SPE system can run 5 samples sequentially per module and 2 modules in parallel

Reduces Errors

One-step automated SPE and concentration eliminates human error, saves labor costs and reduces solvent usage while increasing your sample throughput.

Fully Automated

Hyphenates the entire sample prep process--extraction, drying and concentration steps--into a one step program.

Runs up to five different methods/sample matrices sequentially

High Speed

The fastest automated sample processing available for 1ml and up SPE cartridges and columns

Run one sample at a time with a total of 5 in the ready mode

Expandable from one to two modules, each module has 5 samples in the ready mode

One to four samples simultaneously, up to 20 samples total unattended

Positive Pressure pumping for low volume samples

Versatile

Handles a wide range of sample sizes and all matrix types

Sample Sizes 250ul to liters

Expandable from 1 to 2 modules

5 samples per module sequentially

Applications

Blood, Serum, Urine, Pharmaceutical Products, Beverages

Compliant

Complies with existing methods that require positive pressure pumping for the precise delivery of sample and solvents

Dispenses up to five solvents using an HPLC pump to deliver precise volumes and flow rates for conditioning and elution

Easy Documentation

Programs and stores an unlimited number of methods on an SD card for method transfer and storage

Easy-to-use software

Touch screen entry

Unattended Sample Preparation Produces Excellent Results

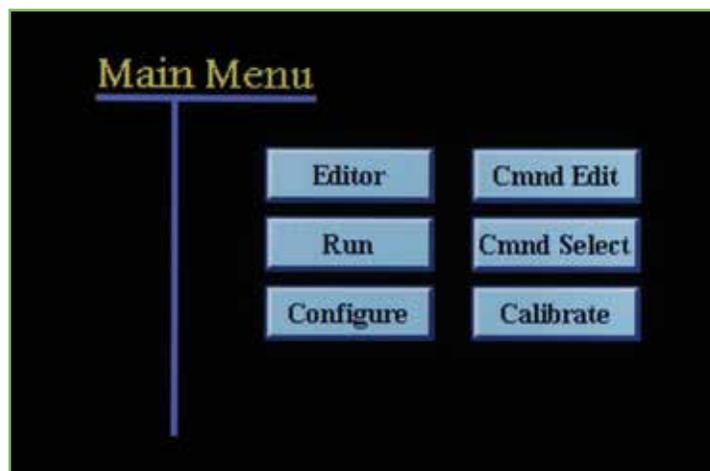
NanoTrace

nation.

The NanoTrace Small Volume SPE system uses positive pressure pumping for precise and accurate delivery of the sample, conditioning, washing and elution solvents. The NanoTrace Small Volume SPE system is specifically designed to isolate analytes of interest from a wide variety of liquid matrices such as pharmaceutical extracts and samples, urine, blood, water, milk, beverages. Sample sizes range from 250ul to liters and use the same bottle the sample was collected in. Sample loading rates are programmable. A positive pressure pump is used to load samples onto the SPE cartridges and columns at unprecedented speeds and it easily handles small volume sample matrices. The NanoTrace Small Volume SPE system combine with the SuperVap 12 50ml system concentrates samples up to 50ml down to directly to a GC vial. The Sample Processing Module is designed to use all standard formats of SPE cartridges and columns on the market today. For guaranteed results, especially when dealing with low limits of detection, we recommend FMS pre-packed columns and cartridges.



The NanoTrace is modular and expandable from one to four modules to grow with your Laboratory



System control is accomplished via an easy-to-use touch screen.

The SuperVap® Concentrator is where the concentration process automatically brings the extract to final volume in an autosampler vial, ready for final analysis.



Automatic time-based or endpoint detection for nitrogen shut off for each vessel

Measurements - Concentration / Evaporation vessels in 500 μ L, 1ml, and direct to a GC Vial or to dryness.

Specifications

Dimensions: 15" W x 18" D x 35" H

Weight: 65 lbs.

Gas Requirements: Nitrogen - 20 PSI minimum

Pump: Piston Displacement

Flow rate: 0.2 to 15ml/minute

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

Controller: Integrated Touch Screen Control

Ordering Information

Part number	Description
NanoTrace/1	NanoTrace system for 5 samples (Single Module)
NanoTrace/2	NanoTrace system for 10 samples (Two Modules)
Nano-EXP	NanoTrace Expansion Module