



Ashmar Scientific - Sample Prep Systems - China

Wide range of sample preparation systems are available. These include:

- **Solid Phase Extractor:** High recovery; Both manual and automatic with positive or negative pressure.
- **Concentrator:** Fully automatic, with both positive and vacuum purging pressure. Maximum sample of 36, each could be processed with specific conditions.
- **Forced Solvent Extractor:** Processed with pressurized pressure at elevated temperature. Offers both parallel (up to 8 samples) and sequential (up to 26 samples) extraction.
- **Liquid Handling System (FlexStation P4)** automatic setting calibration standards.
- **Automatic pH measuring Station** (up to 60 samples).
- **Automatic multi-sample Homogenizer** (up to 36 samples) .
- **Multi-sample vortex mixer** (up to 48 samples).



Parallel Concentrator



SPE



Vacuum Parallel Concentrator



Forced Solvent Extractor



pH Measuring Station



FlexStation P4



Homogenizer



Mixer

FMS - Dioxin Prep & Cleanup - USA



Ball Mill & Ultrasonic Homogenizer



pH Buffer Preparator & Molecular Distillator



Spray Dryer



Freeze Dryer

Sample Preparation

J2 Scientific – Sample Clean-Up Systems - USA

PrepLinc GPC Clean-up System performs clean-up of a wide range of samples including foods, tissues, grains, plants and environmental samples (soil, sludge and hazardous waste). Unique features of the system are combined with high-powered software and the ability for further automation by combining GPC with other preparation processes on the **PrepLinc**.

Meets many GPC Clean-up Regulatory Guidelines

Meets guidelines for US EPA, US FDA, USDA, USGS, Centers for Disease Control (CDC), CLP, EN 1528, EN 12393, L 00.0034, AOAC, DFG S19 and Canadian Food Inspection Agency (CFIA) Methods for GPC Clean-Up.

Septum Piercing

This standard feature is present in all **PrepLinc** systems. Allows both sample and collection vials to be capped to eliminate contamination and evaporation.

Direct Inject

Entire sample is injected onto the column. This eliminates data factoring and is essential for lowering detection limits.

Programmable Probe Control

Probe depths that are user programmable and probe **SmartTrack** keep contact with the sample to a minimum. Programmable rinse volumes and solvents eliminate cross-contamination.

Column Compatibility

System is compatible with Traditional Glass columns and high pressure GPC Clean-up columns from many manufacturers.

The PrepLinc SPEi offers full-featured automated sample prep instrument. It uses positive pressure for consistent flow from sample to sample and run to run. Intuitive software makes method development easy. It is extremely easy to convert any manual SPE method to automated set ups. The SPEi could be used as a stand-alone automated SPE system or integrate with other PrepLinc modules, like the AccuVap Evaporation Modules or GPC Cleanup module for a completely automated sample prep system.

PrepLinc2 LVi offers true Large Volume water automation - load 1-liter samples and walk away!

GPC Maxx has the solution for high-lipid GPC Clean-up samples. No need to split a sample into multiple injections again!

AcceleVAP N₂ Evaporator is a tried-and-true technology with new features!

- Heated water bath nitrogen evaporator with 8, 16/32 or 48-position options.
- Adjustable needles by row.
- Needle coating available.
- Three zones to ensure maximum evaporation efficiency as volume decreases.
- 8-Position version holds up to 250mL and has level sensor endpoint.
- Save programs for repeated use.
- Various tray options for each head capacity. Custom trays available.

Adding the **AccuVap Inline™ Evaporation System** to the **PrepLinc 2 GPC Clean-up System** eliminates the need for a separate bulk evaporation step after GPC Clean-up. When you operate in GPC with Inline Evaporation Mode, the AccuVap Inline™ concentrates the GPC Collect fraction(s) as it elutes from the column. You still have the option to use GPC Only Mode to perform traditional GPC Cleanup and collect directly into the flask of your choice.



GPC Clean-up



Auto SPE



Large Vol Water Extraction



GPC Maxx



PrepLinc 2 with GPC, SPE and Autosampler System



AcceleVAP N₂ Evaporator

Sample Preparation

FMS - PFAS Prep Systems - USA

FMS provides a complete suite of **automated EPA Method 1633** solution:

- Auto & semi-auto PFAS Extractors
- PFAS concentrator/Evaporator
- Dedicated SPE for PFAS
- PFAS Certified Cartridges



PFAS Food Prep Sys; PFAS Waste Water Prep Sys; PFAS Water Prep Sys; SPE for PFAS

Concerns: Per- and polyfluoroalkyl substances (**PFAS**) are synthetic chemicals used in **firefighting foams, non-stick cookware, water-repellent fabrics, and food packaging**. Their **resistance to heat, water, and oil** makes them valuable in many industries, but also contributes to their persistence in the environment and human body, earning them the name **"forever chemicals."** Exposure to certain PFAS has been linked to **liver damage, thyroid disease, and an increased risk of cancer**, making their detection and regulation a public health priority. As PFAS contamination spreads through **water, soil, food, and biological systems**, accurate analytical methods are essential for effective monitoring and mitigation efforts.



PFAS Concentrator/Evaporator & PFAS Certified Cartridges.

Challenges: The analysis is complex due to **their chemical stability, extremely low detection limits, and high risk of contamination** from lab equipment & environmental sources. Effective **sample preparation** is crucial to ensuring accurate & reproducible results. **SPE** is widely used to isolate PFAS from **water, soil, food, and biological samples**, providing clean extracts for analysis. Standardized methods such as **EPA 537.1, EPA 533, EPA 1633 and ISO 21675** offer protocols to ensure **reliable, reproducible results**.

Steroglass - Industrial Scale Rotary Evaporator - Italy

Strike 100 ATEX is designed for operation in ATEX Zone 1 environments, ideal for evaporation, distillation, and solvent separation in chemical, pharmaceutical, and food industries. Equipped with a PLC control system, borosilicate 3.3 glassware, and a mobile powder-coated steel frame, it ensures high energy efficiency, operational safety, and full **ATEX compliance (II 2G Ex h IIB T3/T4 Gb)**. Features include a protective cabinet with safety sensors, integrated vacuum control, hydraulic lift, and remote interface. A reliable, precise, and compliant solution for demanding industrial processes. **Non-ATEX versions are also available.**



Strike 100 ATEX Rating (L) & Non-ATEX (R)

Misc - Sample Prep Systems - Misc

Products include:

- Multifunctional reflux extraction workstation
- High Precision Temperature Water Bath
- Anionic Synthetic Detergent Extractor
- HT Vacuum Parallel Evaporator
- Array Water Bath Workstation
- Sulphur Dioxide Distiller
- Array Rotary Evaporator
- AZO Extraction Unit
- HT Tube Extractor
- Digestion



Sample Preparation Equipment

Sample Preparation

Hanon Group - Sample Prep Systems - China

Microwave Digestion/Extraction & Synthesizer

With the most advanced technology and material, MASTER serial ultrahigh throughput microwave digestion/extraction workstation is versatile for 16-vessel independent frame-type high pressure digestion rotor, 18-vessel carousel integrated ultra-high pressure digestion rotor, 40/100-vessel ultrahigh throughput carousel rotor and 16-200ml-vessel carousel large capacity rotor etc., meets different experiment applications. Other core technologies including airplane Xtra Fiber digestion outer vessel, quantitative Safety Bolt patented design, UTH-Caro design of high throughput carousel, unique piezoelectric crystal pressure measuring technology and Uni-Turn technology of one direction continuous rotation of digestion rotor in...

MAS-II Plus microwave synthesis/extraction workstation meets various experiment plans, it has a rational, friendly and simple operation design and is widely used in researches, such as organic synthesis, organic extraction, food science, analytical chemistry, inorganic chemistry, protein research, petrochemical engineering and materials chemistry, etc. MAS-II Plus supplies a versatile reaction platform that is superior to regular heating methods.

Soxhlet Extractor

It is designed based on the Soxhlet extraction principle with weight method to determine the fat content. It has five extraction methods to meet different demands from customers. The whole metal heating module, heating up fast, good effect, low power consumption; access to all-round water temperature, flow control, environmental protection more economical; built-in ether leak detection device to ensure experimental safety. It is widely used in agricultural/ food /chemical /environment and other areas, especially for the drug, soil, sludge, cleaner, and other substances in the extraction of soluble organic compounds.

Kjeldahl Digester & Analyzer

This Kjeldahl Digester is a fully automatic digester adhering to the design concept of "reliable, intelligent and environmentally friendly", which can automatically complete the digestion process based on the Kjeldahl method experiments. SH508/SH520 can be matched with 8 positions or 20 positions according to the number of laboratory samples. At the same time, it adopts an Android system, and the host is combined with a lifting device and scrubber to realize the automation of the entire digestion process.

With advanced distillation, titration, and calculation systems built into one unit, the K1100F minimizes operator intervention and ensures precise results every time. Its intuitive touch-screen interface, robust construction, and automatic cleaning functions make it an ideal choice for modern laboratories seeking speed and compliance with international standards.

Heavy Metal Digester

SH230N Heavy Metal Digester, with the advantages of rapid disintegration, high efficiency, convenience and large processing capacity, is suitable for food, medicine, agriculture, forestry, environmental protection, chemical, biochemical and other industries, as well as higher education institutions, scientific research departments on soil, feed, food, ore, etc.



Microwave Digestion/Extraction



Microwave Synthesizer



Soxhlet Extractor



Kjeldahl Digester



Kjeldahl Analyzer



Heavy Metal Digester

Sample Preparation

HRHT - Automatic QuEChERS System - China

Though QuEChERS pesticide residue preparation method is widely employed, it is very labour intensive, inefficient, error-prone and poorly reproducible when large number of samples have to be processed. Fully automated QuEChERS system integrates multiple functions including automated solvents /salt /ceramic homogenizer feeding, shaking, vortexing, centrifuging, ice bath and precision pipetting. It can handle 32, 40, 60 and 120 samples in single batch. With simple operation and no personnel involvement, it can avoid manual errors, ensure accuracy and stability of detection, realize fully automated detection and improve test efficiency. The design complies with both China and foreign testing protocols.



Fully Automatic QuEChERS System with 120 samples processed in < 6 hours

- Design: After placing weighed samples and test tubes, the system would be automatically.
- Automated Salt and Ceramic Homogenizer Feeding: User-defined protocol can be set.
- Oscillating: 4 test tubes oscillate simultaneously with adjustable speed and time. Compatible with 50ml/15ml test tubes.
- Horizontal Centrifuge Module: 4-rotor horizontal centrifuge with adjustable centrifugal time and speed.
- Dual-channel Vortex Module: each channel is driven independently and vortex time is adjustable.
- High-precision Pipetting Robot Arm: Integrate with precise liquid-level detection.
- Automated Tip Replacement: Replace tips for each pipetting to avoid cross-contamination.
- Intelligent Syringe Pump: equipped with an 8-way switching valve, which can fully meet liquid filling requirements in routine tests. Real-time tube-level monitoring guarantees pipetting accuracy and reliability.
- Ice Bath: Meet requirements of ChP2020.
- Multi-directional Fault Monitoring: Monitor real-time failures of centrifugal weight match, cap screw/unscrew, tube delivering, ceramic homogenizer feeding, and other failures during operation, and feedback to the user interface in time.
- Multi-terminal Remote Monitoring: monitor software main interface and real-time internal operation remotely via mobile phone and computer.
- Complies to GB 23200.113-2018 and GB 23200.121-2021
- Complies to Chinese Pharmacopoeia 2020
- Complies to both AOAC 2007.01 and EN 15662:2008

HRHT - Automatic Culture Medium Dispensing System - China

It is widely used in the preparation of microbial culture media in hospitals, food, environment, disease control, scientific research, inspection, third-party testing and other fields.



Fully Automatic Petri Dish Filling System

HRHT - Automatic Microbiology System - China

Applicable to, but not limited to, the national food safety standard GB4789 for food microbiological testing pre-processing. The system can automatically complete pre-processing for microbial testing that is harmful to the human body, including total bacterial count determination, coliform count, bifidobacterium testing, Staphylococcus aureus testing, Bacillus cereus testing, Clostridium perfringens testing, bifidobacterium testing, lactic acid bacteria testing, Enterobacteriaceae testing, Listeria monocytogenes testing, and mold and yeast counting.

Versatile functions: Can be used alone for routine laboratory use under scenarios such as sample tapping pipetting, gradient dilution, culture medium packaging, etc.



Fully Automatic Microbiology System

Sample Preparation

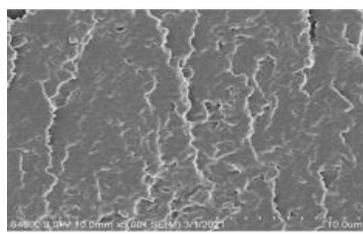
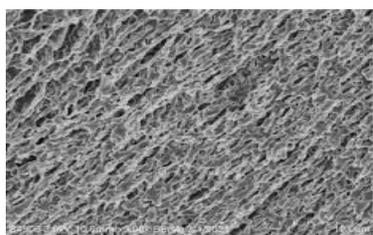
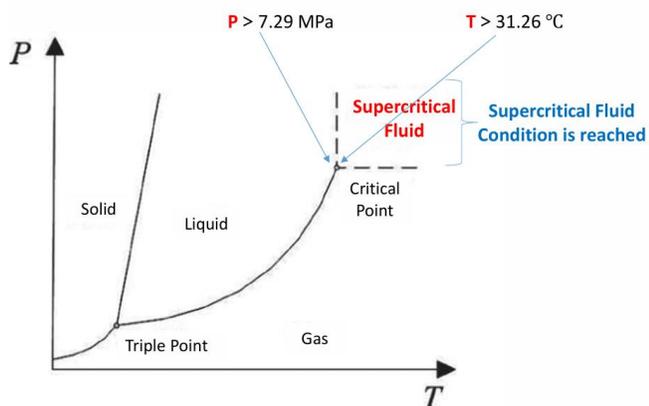
SAJ - Supercritical Fluid Extractor, Dryer, and Reactor - China.

Supercritical CO₂ behaves like n-hexane but with much higher diffusivity and lower surface tension. So, it could extract organic analytes from complex sample matrix (e.g. oil from rocks) and a lot faster. The extracted analyte is so clean that could be analyzed readily by GC or HPLC.

SF Extractor: In principle, if you are using Soxhlet Apparatus for extraction, you could use SFE (Supercritical Fluid Extraction)

SF Dryer: Traditional drying (N₂ purging, heating, and freeze dried) may damage the integrity of the fine structure of samples. Because of the high solubility of water in alcohol, with the help of little amount of alcohol mixed with sample, excess water could easily be driven out (dried) together with alcohol under supercritical extraction condition. This extraction process provides a very dry material with its integrity kept. It is specially designed for drying delicate biologicals (for microscopic or other structure-dependent studies) or electronic parts (Wafers & MEMS) without causing any damages.

Supercritical CO₂ exists under conditions of:



Supercritical Fluid Drying (L) vs Hot Air Drying (R)



Bench top & Floor Stand SFE

SF Reactor: Using Supercritical fluids as media for chemical reactions affords opportunities to manipulate the reaction environment (solvent properties) by manipulating the pressure of Supercritical CO₂ to enhance the solubilities of reactants and products, to eliminate interphase transport limitations on reaction rates, and to integrate reaction and separation unit operations. Supercritical conditions may be advantageous for reactions involved in fuels processing, biomass conversion, biocatalysis, homogeneous and heterogeneous catalysis, environmental control, polymerization, materials synthesis, and chemical synthesis. It can also be used in fundamental chemical investigations of intermolecular interactions and their influence on chemical processes.



Sample Holders for Wafers and MEMS SC Dryers



SF Reactor in Action

Guyline (Asia) Ltd.

Rm 1611, Eastern Harbour Centre, 28 Hoi Chak Street, Quarry Bay, Hong Kong

Tel: (852) 2856 0605

Fax: (852) 2811 3379

E-mail: admin@guyline-asia.com

Website: www.guyline-asia.com

香港 . 北京 . 上海 . 广州 . 深圳 . 成都 . 武汉 . 长沙 . 长春