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MAKING LABS WORK

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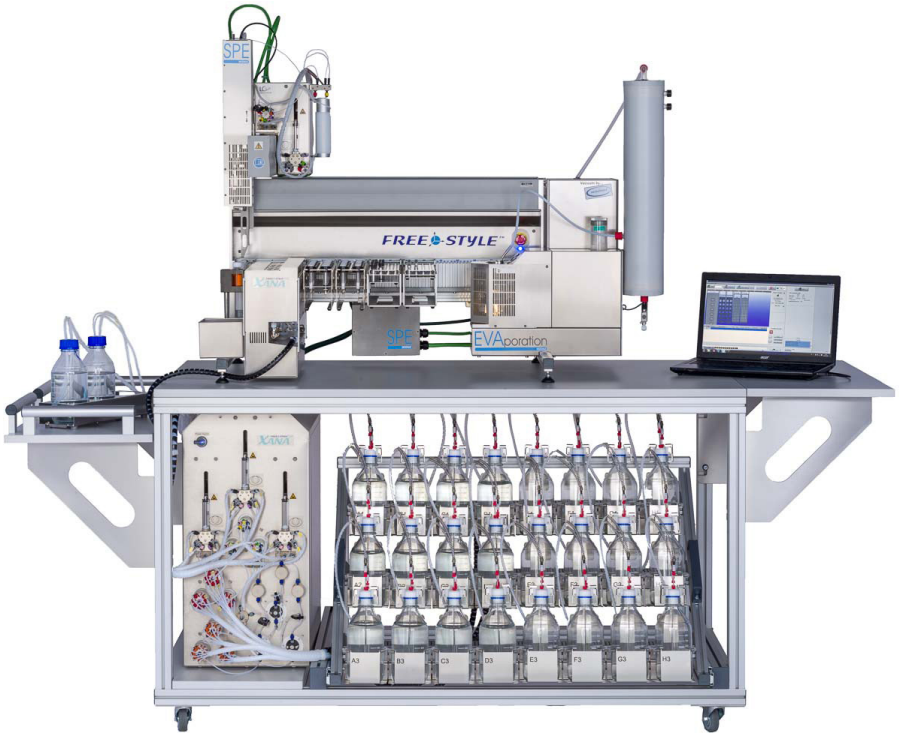

FREE-STYLE™ TM XANA

Automated Sample Preparation for Water Analysis

Complete Automation of EPA Method 537.1 for PFAS Compounds

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FREESTYLE XANA for PFAS Determination

For analysts that need to automate the SPE method for the determination of PFAS compounds in drinking water following the updated EPA method 537.1, the FREESTYLE XANA is the only system available that offers complete automation of the entire SPE clean up process. Unlike other platforms that require manual intervention steps and struggle with high blank values, low recoveries and limited sample throughput, the FREESTYLE XANA platform provides reliable 24/7 operation and meets all performance standards of the method.

When paired with the high throughput D-EVA system, the required evaporation step can be performed in multiple Falcon™ tubes simultaneously. Using vacuum, infrared heating and centrifugal force, the D-EVA system provides extremely precise control of evaporation conditions without analyte loss. Sample can be brought to dryness or to a user defined final volume, and due to the elimination of “bumping” and aerosol generation, the sample can be directly transferred to a HPLC-vial without the need to rinse the Falcon tube.

Key FREESTYLE XANA - D-EVA Features

- Complete automation of SPE clean up and evaporation steps
- No fluoroplastic containing parts
- Clean blanks and no carry over
- Reliable 24/7 operation
- Parallel sample processing for high sample throughput up to 30 samples per batch
- 250 mL plastic sample bottles with automatic required methanol rinse
- Advanced automated sample evaporation to user defined set volume
- High tolerance for water in eluate
- Direct sample transfer to HPLC-vial, no tube rinsing needed
- Advanced software for easy method set up and system control

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PFAS Determination Workflow

Load 250 mL sample plastic sample bottle onto FREESTYLE XANA system gripper

Perform automated sample SPE clean-up and concentration

Simultaneously concentrate up to 22 samples to dryness using D-EVA

Directly transfer sample to LC-MS/MS for analysis

EPA Method 537.1 Workflow Summary

- 250 mL water sample spiked with surrogates is passed through a SPE cartridge packed with stryrenedivinyl benzene (SDVB)
- After sample is loaded, bottle is rinsed with methanol and rinsate is also passed through the SPE cartridge
- Eluate is concentrated to dryness
- Dried sample dissolved in 1 mL of 96.4% (vol/vol) methanol: water
- Internal standards are added
- 10 µL of sample is injected into an LC-MS/MS system using a C18 column for separation

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FREESTYLE Xana
Main Hardware Components

- **SPE module with gripper**

  Performs all functions needed for SPE clean-up

- **XANA workstation**

  Allows simultaneous sample processing for higher throughput

- **Solvent delivery system**

  Advanced flow control with process monitoring

- **FREESTYLE basic platform**

  Flexible upgrade path through addition of numerous sample preparation modules and sample racks

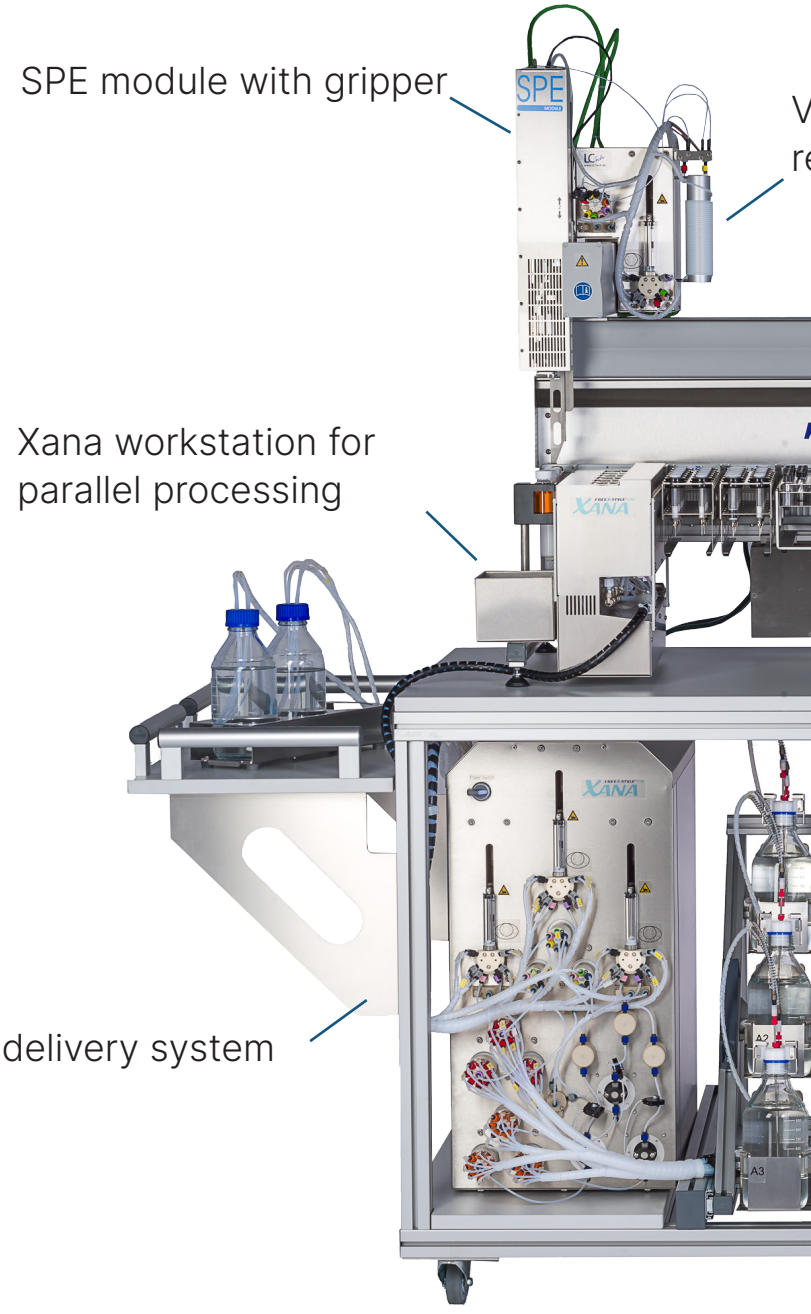
- **FREESTYLE XANA table**

  Included custom table for optimum use of solvent delivery system and sample rack

  Bench top version also available

- **FREESTYLE XANA sample bottle rack**

  Unique design allows for



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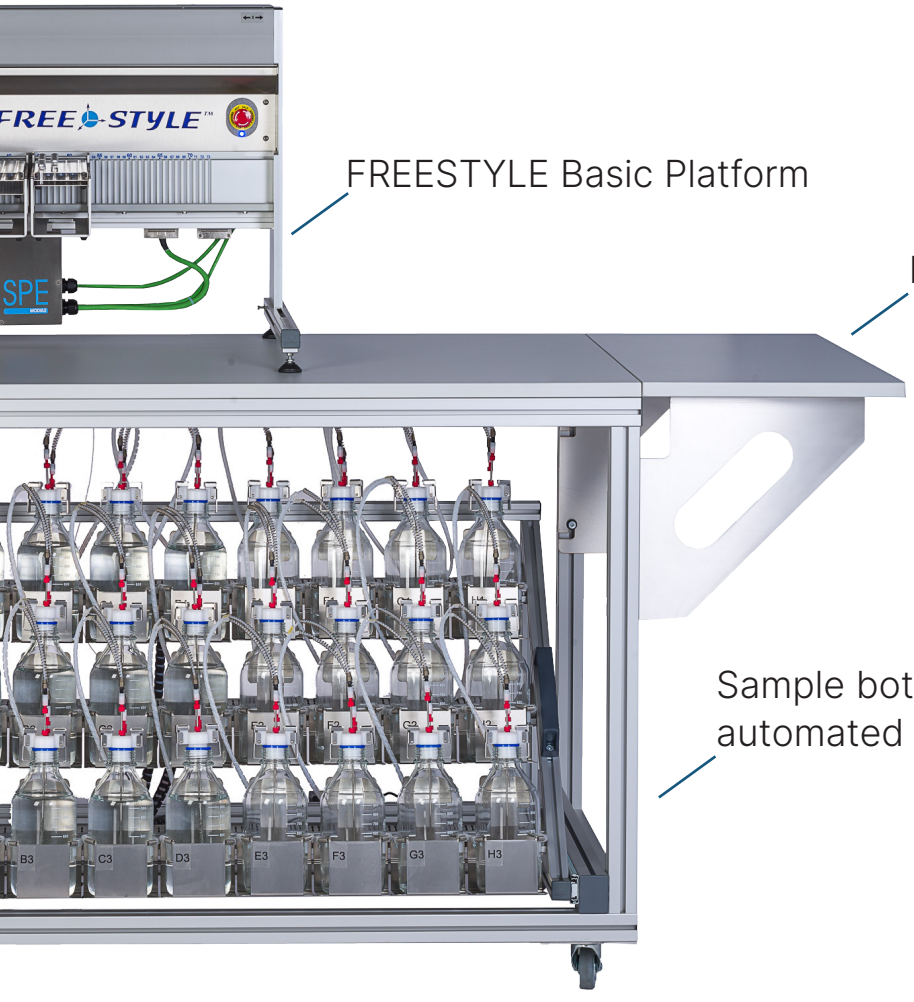
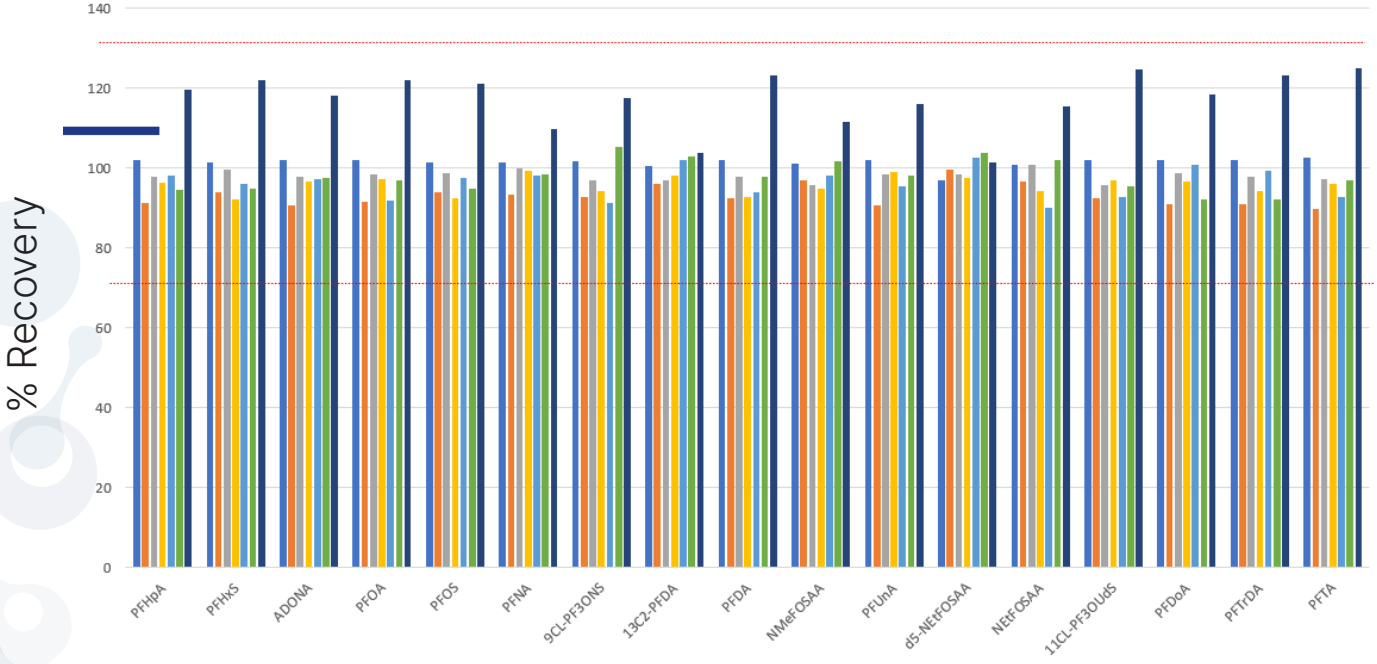
Valve and syringe pump location
reduces dead volume



LCTech D-EVA

D-EVA for EPA Method 537.1

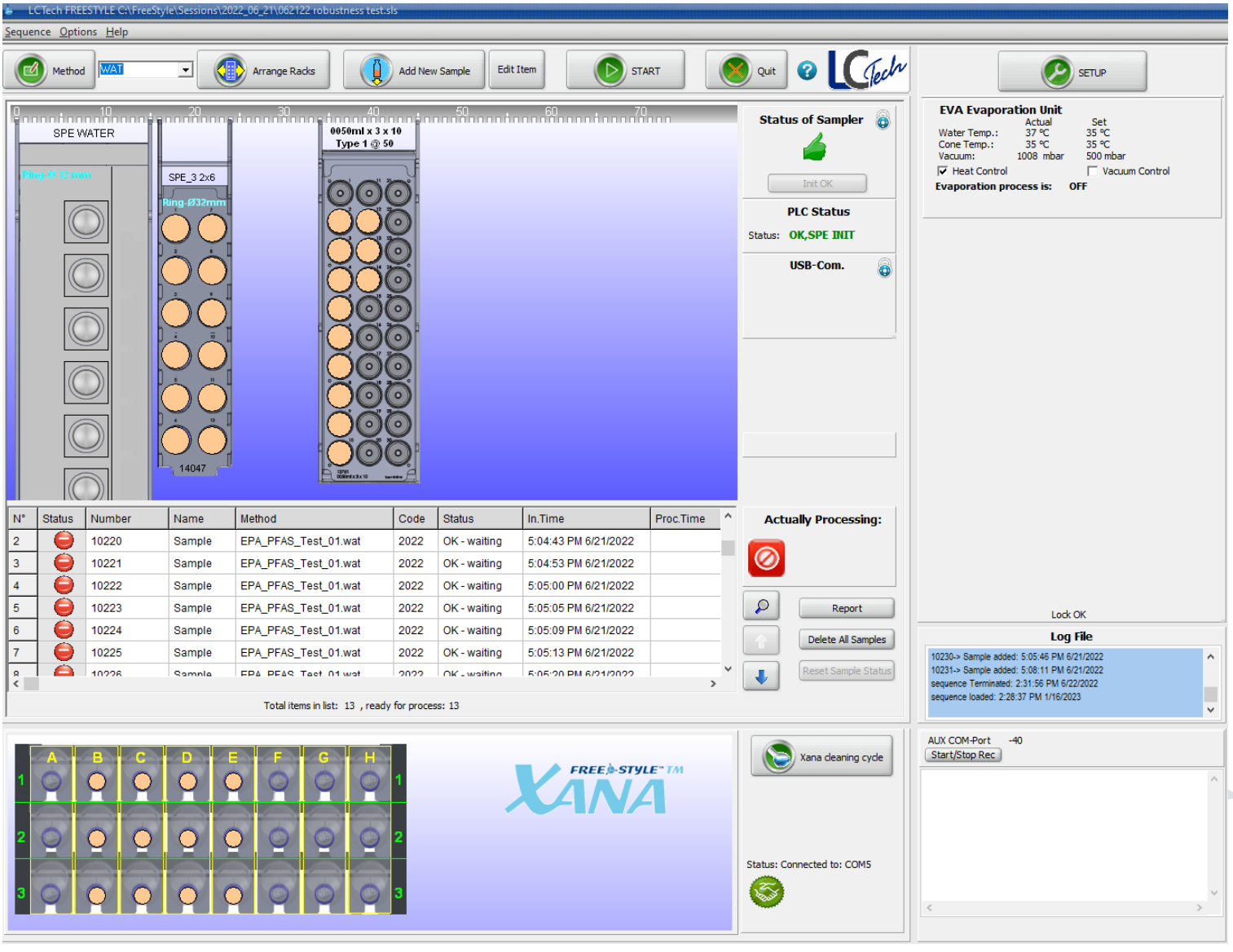
- Gentle, accelerated evaporation using infrared heat, vacuum and centrifugal force
- Simultaneous evaporation of up to 22 × 15 mL or 11 × 50 mL Falcon tubes
- Sample can be evaporated to dryness or to user define final volume
- Elimination of “bumping” and aerosol formation during evaporation eliminates the need for tube rinsing when transferring sample to HPLC vial
- No loss of analytes or carry over
- All relevant parameters (vacuum pressure, rotor temperature, final volume, etc.) are programmable
- Up to 16 custom methods can be stored



Recovery of SPE Processed Calibration Standards

Concentration Range 0.08 to 20 ng/L, recoveries must be between 70-130%

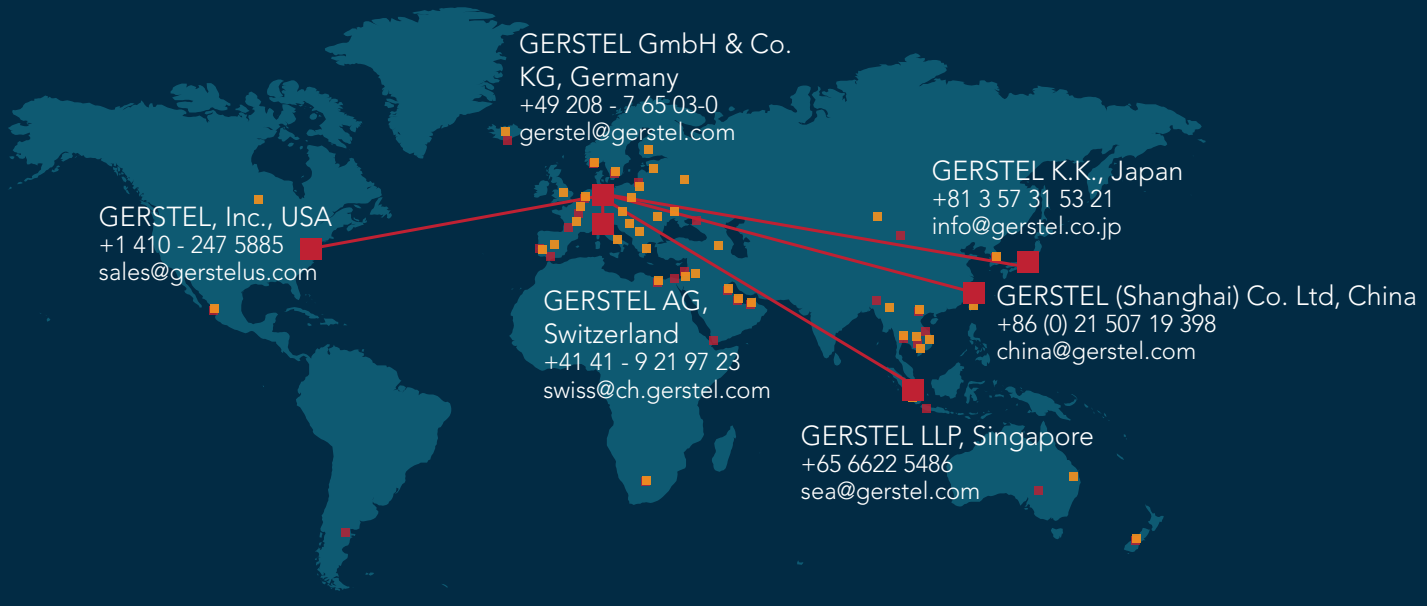
FREESTYLE Software



- Controls all FREESTYLE functions and modules
- Easy to use, intuitive graphical user interface
- Simple and fast transfer of manual method parameters
- “Non-Stop” protocol ensures uninterrupted operation

GERSTEL Worldwide Regions

GERSTEL is an international company with offices all over the world including Germany, USA, Singapore, Japan, and China. Contact a member of our team who serves your region.



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