

# QuEChERS Sample Preparation

## AUTOMATED SYSTEM

*Fully automated laboratory analysis from sample to result — ensuring more efficient, accurate, and reliable testing*



### 01

#### TRUE WALKAUTOMATION

Improved efficiency through complete end-to-end automation from sample weighing to clean extract injection.

### 02

#### REDUCED HUMAN ERROR

Increased data accuracy by eliminating manual handling steps that introduce variability and contamination risk.

### 03

#### FULLY TRACEABLE PROCESS

Enhanced data reliability with complete audit trail logging every step of the sample preparation workflow.

### 04

#### FLEXIBLE MODULE DESIGN

Modular configuration adapts to diverse matrices including vegetables, tea, grains, soil, and biological samples.

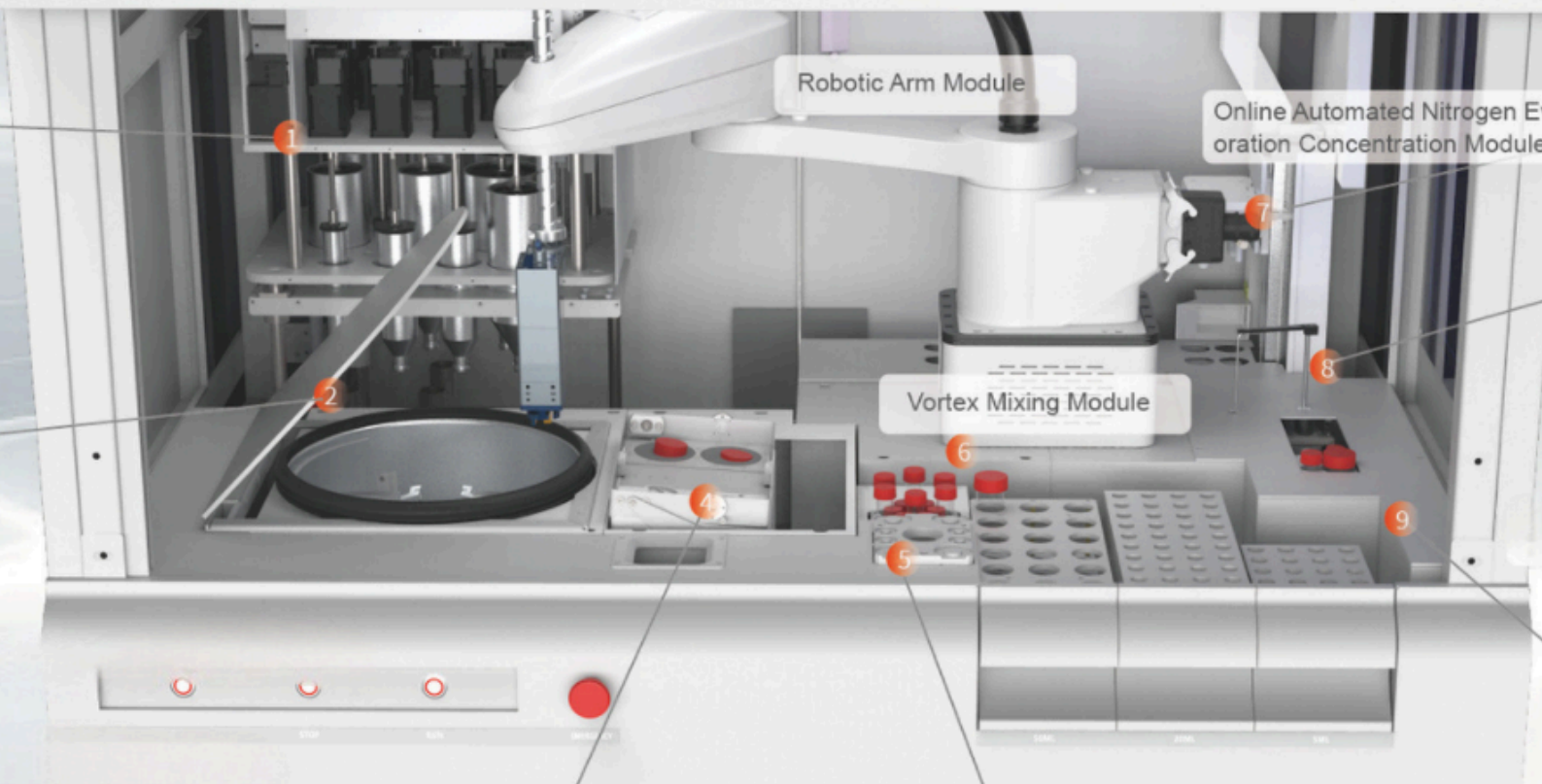
## KEY CAPABILITIES

- Automated weighing, extraction, cleanup and concentration
- Compatible with GC-MS/MS and LC-MS/MS analytical systems
- Independent precise addition of up to ten powder types
- Online automated filtration before MS injection

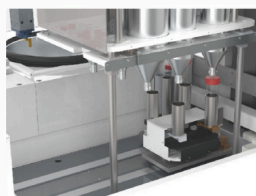
- Nitrogen blow-down evaporation with near-dryness detection
- Online solvent exchange for compliance with GB 23200.113
- Intelligent sensors for automated process control
- Seamless downstream connection to analytical instruments

# QuEChERS Sample Preparation

## AUTOMATED SYSTEM

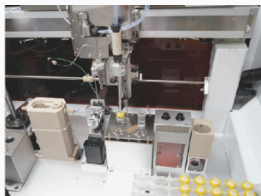


## ADVANTAGES



### FLEXIBLE POWDER DISPENSING

- Independent, precise addition of up to ten powder types
- Supports mg-level GCB, PSA, C18 sorbent dispensing
- Separate powder addition reduces costs by over 40%
- Ideal for method development and optimization
- Compatible with mixed salt packs and cleanup salts



### ONLINE FILTRATION

- Removes particulate impurities before MS injection
- Achieves true end-to-end automated pretreatment
- Seamless connection with LC/MS/MS and GC/MS/MS
- Eliminates manual filtration steps and contamination
- Enables fully automated pesticide residue analysis



### NITROGEN EVAPORATION

- Automated solvent exchange per GB 23200.113-2026
- Intelligent sensors determine blowdown status
- Highly sensitive independent sensors per channel
- Concentrates to near-dryness for optimal recovery
- Reconstitution with ethyl acetate for GC analysis

## AUTOMATED CONFIGURATIONS

### Fully Automated Laboratory Analysis from Sample to Result

QuEChERS Sample Preparation AUTOMATED SYSTEM — GC-MS/MS

QuEChERS Sample Preparation AUTOMATED SYSTEM — LC-MS/MS

True walkaway automation — improved efficiency  
Reduced human error — increased data accuracy  
Fully traceable process — enhanced data reliability



## RELIABLE INSTRUMENT MANUFACTURING & SERVICES

Call us: +86 189-6516-4839 Email: sales@nwspec.com Address: Xiongan Pilot Free Trade Zone, Hebei, China

## MAIN SYSTEM

Sample Capacity	96 positions
Sample Weight Range	0.5 - 10 g
Extraction Solvent Volume	5 - 20 mL
Extraction Mixing	Vortex, adjustable speed
Extraction Time	1 - 60 min programmable
Salt Addition	Automated, programmable
Salt Types	MgSO <sub>4</sub> , NaCl, NaAc, citrate buffers
Centrifuge Speed	1000 - 10000 rpm
Centrifuge Time	1 - 30 min programmable
Temperature Control	Ambient +5°C to 60°C
dSPE Cleanup	Automated sorbent addition
Sorbent Types	PSA, C18, GCB, Florisil
Final Extract Volume	0.5 - 5 mL
Filtration	0.22 um membrane, automated
Powder Dispensing	Up to 10 powder types, mg-level
Nitrogen Evaporation	Intelligent near-dryness detection

## SAMPLE HANDLING

Supported Matrices	Soil, sediment, feed, food, TCM, tea
Weighing Accuracy	± 0.01 g
Liquid Handling Precision	± 2%
Carryover	< 0.1%
Sample Tracking	Barcode reader (optional)

## PERFORMANCE HIGHLIGHTS

**226**

pesticides screened simultaneously

**10000**

rpm maximum centrifugation speed

**96**

sample positions for batch processing

**< 30 min**

per batch extraction and cleanup cycle

**10**

independent powder dispensing channels

## SOFTWARE & DATA SYSTEM

Operating System	Windows 10/11
User Interface	Touch-screen, graphical
Method Library	50+ pre-installed protocols
Data Export	CSV, PDF, LIMS-compatible
Audit Trail	Full compliance logging
Remote Access	Ethernet, optional WiFi

## ELECTRICAL & ENVIRONMENT

Power Supply	110 - 240 VAC, 50/60 Hz
Power Consumption	800 W max
Dimensions (W x D x H)	850 x 650 x 720 mm
Weight	85 kg
Operating Temperature	15 - 30°C
Humidity	20 - 80% RH, non-condensing
Noise Level	< 65 dB