



PREEKEM

Sample Preparation-General Catalog

Statement: Specification may change without notice. Preekem reserves rights of final explanations. Jan., 2020

PREEKEM SCIENTIFIC INSTRUMENTS CO., LTD

HEADQUARTER:

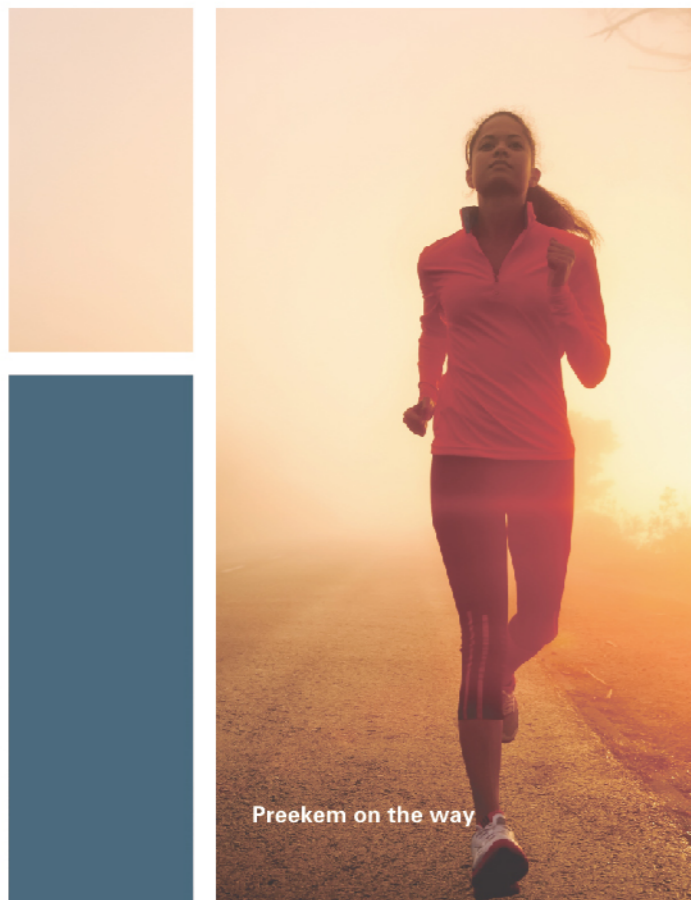
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SIMPLER PROCESS, EASIER WORK



Corporate Development History

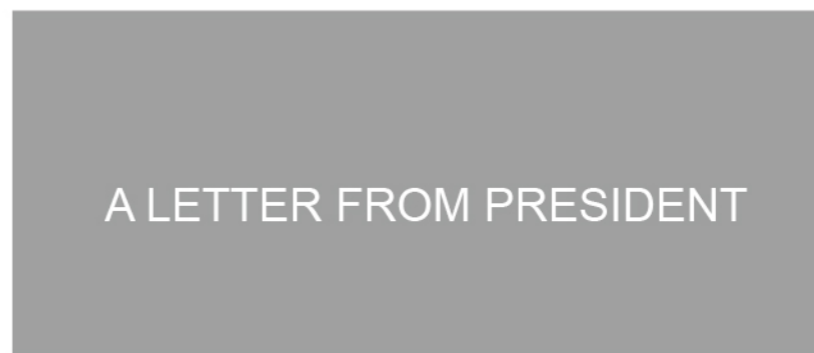
- 2018: Introduced S1-Sub-boilding Acid Purifier
- 2017: Introduced PREPS-Preekem Robot Enhanced Preparation Workstation

- 2016: Introduced FLEXI-Automated GPC
- 2015: Introduced N1-Automated Evaporation System
- 2013: Introduced EXTRA-Automated SPE

- 2012: Introduced TOPEX-Microwave Digestion System
- 2011: Introduced NOVA2S+VOCA-Automated Microwave Synthesizer
- 2008: Introduced NOVA-First Single Mode Microwave Synthesizer

- 2005: Introduced WX-8000 & EXCEL-Best Seller in China
- 2001: Introduced WX-2000-First Microwave Digester with Temperature and Pressure Control
- 2000: Preekem Scientific Instrument Co., Ltd was founded

SIMPLER PROCESS, EASIER WORK



Jeff Ni

President and CEO of PreeKem

Dear customers and colleagues,

Thanks to your continued support and trust, PreeKem enjoyed another successful year of operation in 2019 and embarked on new journey in 2020 with passion, ambition, and determination.

I am especially grateful to all PreeKem staffs that have been committed to our common mission. It is our shared goal to deliver, besides high-performing instruments and quality service to our end users, but to establish a long-lasting and trusting reputation as a leading sample preparation instrument manufacturer in the analytical community in the most professional and responsible manner.

PreeKem was founded in 2000 as a startup company focusing solely on microwave digestion. The very first model was known as WX-2000, a completely in-house design. In 2001, PreeKem was quick to launch a series of microwave based instruments, including microwave synthesizer, microwave extraction, and microwave moisture analyzer, dramatically driving the business into a cross-discipline structure. Along the way, new products such as automated SPE, GPC, and nitrogen evaporation systems, among many other renovations, were added to PreeKem fleet of products, thanks to the continuing investment in technical innovation. In 2017, PreeKem broke the new ground by presenting world's very first fully automated microwave digestion system known as 'PREPS'. This game-changing innovation revolutionizes sample preparation by conventional microwave as it provides modern day customers with high sample throughput, high reproducibility, and high protection of lab technicians.

In PreeKem we understand what it means to customers as an instrument manufacturer, as a service provider, or an information hub for sample preparation related businesses. Our company has implemented advanced systems in supply chain management, quality management, and rapid customer response. Our manufacturing facility has achieved a 'zero-inventory' status due to continuous streamlining of managing framework. To date, our line of products have set foot in more than 30 countries worldwide, owing to the superb quality, reliability, and cost-effectiveness our products have to offer.

Once again, I would like to express my sincere gratitude to all PreeKem customers for their recognition, guidance, and trust. We will not rest to make PreeKem a better company to serve our clients domestic and abroad. Thanks also to the entire PreeKem family, without whose unwavering support we would not have achieved what we celebrate today. I look forward to a more prosperous year with your help and dedication.

Jeff Ni
2019.12



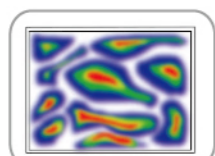
After service

- One-to-one customer manager provides optimized solutions for customer
- 6 Service station cover whole China
- Toll-free 400 service hot line, assisting you 365 days a year
- Quick response within 15 minutes
- On-site support within 48 hours

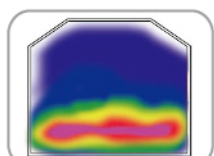
TOPEX+ Microwave Digestion System

Enhanced Microwave Focusing

- Focused microwave energy on sample
- Homogenous microwave field
- High microwave efficiency



Microwave in Plain Cavity



Microwave in TOPEX+ Cavity

Control & Monitoring

- Remote observation of vessels & sensors is available through the built in video camera
- User-friendly operation via touch screen

Superb safety features

- Floor mounted Contactless IR sensor
- Auto venting and reseal technology
- Cavity 316L stainless steel construction

Genuine Expert in Microwave Extraction

- High efficiency: 40 parallel samples in 30 minutes
- Operational convenience: need only 2 steps to assemble a 11—0mL extraction vessel
- Guaranteed safety: solvent sensor secure better experience
- Improved recovery: Magnetic stirrer ensures better extraction results

Multiple Application Modes

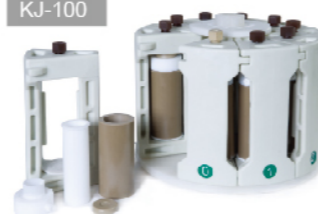
- Digestion
- Extraction
- Synthesis
- Desiccation
- Oxygen Combustion
- Protein Hydrolysis

Total Solution for Pharmaceutical Industry

- Compliance with 21CFR PART 11
- User access control interface, signature and data protection function
- Complete 3Q Audit Trail



KJ-100



KJ-160



GT-240



GT-400



PREPS Preekem Robot Enhanced Preparation Workstation

Automated Acid Distribution System

- X,Y,Z alignment arm with $\pm 0.01\text{mm}$ accuracy
- Three acid channels with injection pump
- Syringe spray and acid wash function to eliminate cross contamination

Innovative Single-mode Resonance Cavity

- Focused and maximized microwave energy
- Enhanced reliability and reproducibility

Reliable Safety System

- Contact free temperature and pressure control
- Standard passive pressure relief system
- Advanced PID control system



WX-6000 Microwave Digestion System

User-friendly Operating System

- 5.6 inch color LCD display
- User friendly design of control panel
- Real time temperature and pressure monitoring system
- Double safety lock protection mechanism



N1 Evaporation System

Performance

- PID temperature control with $\pm 1^\circ\text{C}$ accuracy
- Max 10 built-in method for selection
- Optional tray size of 28 or 50 positions
- Solvent and acid resistant by stainless construction



NOVA-2S Microwave Synthesizer

Focused Single Mode Microwave Technology

- Highly reproducible results with single mode microwave output
- Microwave energy more homogeneous and concentrate

Safety Control System

- Pressure and temperature dual control
- Automated vessel sealing
- Safety and protocol: temperature $\leq 70^{\circ}\text{C}$, pressure $\leq 0.1\text{MPa}$, after reaction

Software System

- High-frequency closed-loop feedback (PID) control
- Easy-to-use touch screen

Rapid Cooling System

- Proprietary air-cool design
- Air compressor device (optional)



NOVA-2S Vial Specification

Item	Closed type		Atmospheric pressure	
	10 mL	30 mL	55 mL	100 mL
Volume	10 mL	30 mL	55 mL	100 mL
Material	Pyrex Glass	Pyrex Glass	Glass	Glass
Working Temp.	200 °C	200 °C	250 °C	250 °C
Working Pres.	20 atm	20 atm	NA	NA

S1 Sub-boiling Acid Purifier

3D Surrounding heating mode

- 3D surrounding heating mode to improve energy utilization in a more efficient and even manner

Direct acid injection

- Feed acid to be injected from the bottom via specially designed delivery channel to reduce length of passage and eliminate contamination

Submerged temperature monitoring

- Pt100 temp sensor to provide accurate control of acid heating

Wide-angle spherical cooling chamber

- Optimized geometry of cooling chamber to provide highly efficient condensation



Unparalleled rate of production

HNO ₃	1800mL/24h
HCL	1600mL/24h
HF	1500mL/24h
H ₂ O	2000mL/24h

EXTRA Automated Solid Phase Extraction System

Accurate

- The precision syringe pumps provide positive pressure to precisely control the volume and flow rate of solvents and samples

Efficient

- Four samples are processed simultaneously with up to 8 solvents and 108 samples per batch

Reliable

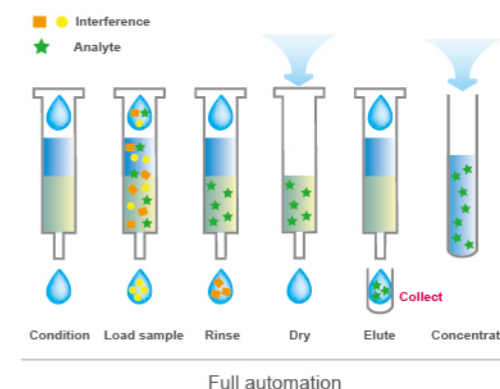
- Robust durable and industrial class robotic arms provide high precision liquid handling

Intelligent

- PC and tablet are supported in the form of cable or wireless connection



Easy Setup



FLEXI ONE GPC Cleanup System

Functions

- Embedded dual plunger pump with small pulse, low noise and broad velocity range
- Compatible with constant-wavelength UV detector or variable-wavelength UV detector
- Different column in size for various applications
- Quota-sampling by injection valve
- Automatic switch between sample components and effluent without watch-over
- Automatic alert for empty mobile phase solvent
- USB port for data export and printer connection
- Maximum 48 method store up
- Smart in size and favorable mobility

Applications



Organo-chlorine pesticide



Phthalate



Pesticide residues & Veterinary drug residue



Dioxin

