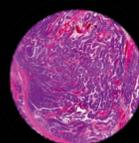
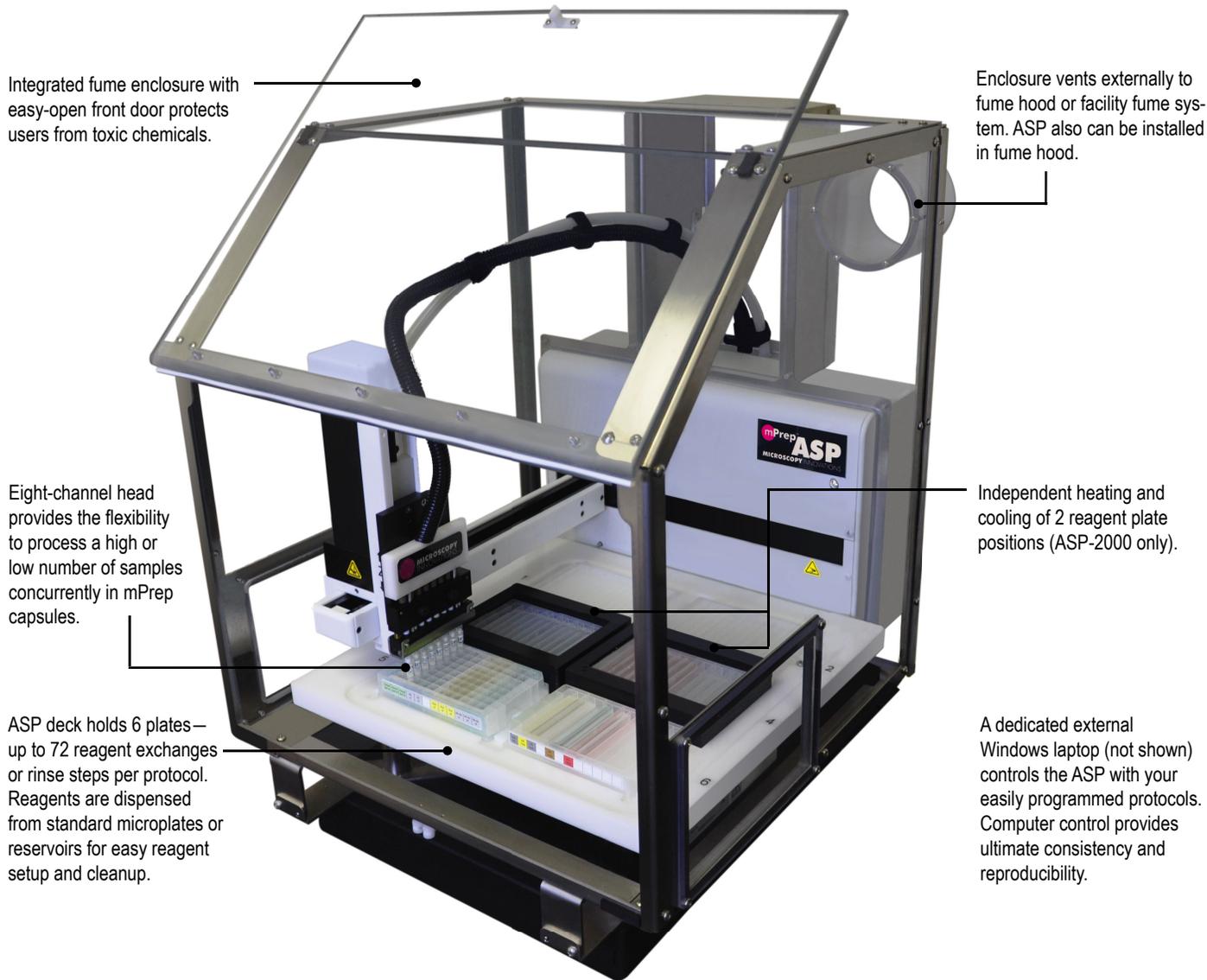


mPrep™ ASP™

Automated Specimen Processor



MICROSCOPY™
INNOVATIONS LLC



Integrated fume enclosure with easy-open front door protects users from toxic chemicals.

Enclosure vents externally to fume hood or facility fume system. ASP also can be installed in fume hood.

Eight-channel head provides the flexibility to process a high or low number of samples concurrently in mPrep capsules.

Independent heating and cooling of 2 reagent plate positions (ASP-2000 only).

ASP deck holds 6 plates—up to 72 reagent exchanges or rinse steps per protocol. Reagents are dispensed from standard microplates or reservoirs for easy reagent setup and cleanup.

A dedicated external Windows laptop (not shown) controls the ASP with your easily programmed protocols. Computer control provides ultimate consistency and reproducibility.

mPrep ASP

Meet Your Most Dependable Lab Assistant

Meet the **mPrep ASP – Automated Specimen Processor** family, a robust, consistent and faster solution to prepare biological specimens and grids for electron microscopy. Designed for ease-of-use, productivity, convenience, consistency, and flexibility, the ASP enables nearly any TEM or volume EM (vEM) preparation protocol, including immunolabeling of specimens and grids. Safety is

improved by reduced handling of toxic reagents, walk-away operation, and integrated fume enclosure

Laboratories can shorten their workflows from multi-day, manually intensive protocols to automated specimen preparation that takes just hours. Perform automated TEM tissue prep in just hours or volume EM prep in just one day to transform your lab's productivity.

Key Advantages

System Capabilities



Fully automated, walk-away prep



Parallel prep of multiple samples simultaneously



Independent heating and cooling of 2 reagent plate positions (ASP-2000 only)



Accelerated sample processing



Notification (text, light, sound, popup) signals when ASP finishes processing or if intervention is required

Lab Efficiencies



Enables one-touch specimen handling



Easy, efficient setup; cleans up in less than 5 minutes



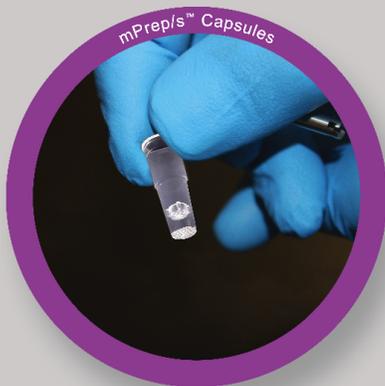
Reduces reagent consumption and costs



Requires minimal technician training



Minimizes exposure to hazardous chemicals, increasing lab safety



mPrep/s Capsules

- Uses adjustable, insertable screen to entrap or precisely orient specimen.
- Processes multiple specimens in stacked capsules for high throughput.
- Protects specimens from loss or damage during processing.
- Keeps specimens immersed in reagent for complete processing.



mPrep/g Capsules

- Processes 1 or 2 grids per capsule concurrently for efficiency and consistency across specimens.
- Reduces direct grid touches and protects grids from loss or damage.
- Keeps grids immersed in reagent for complete processing.

Comprehensive Automation Across Methods, Organisms & Tissues / Cells

Human
Mouse / Rat
Planaria
C. elegans
Plant
Yeast
Fish
More...

TEM specimens
TEM grids
Volume EM
Immunogold
XRM
More...

Brain / Nerves
Heart
Kidney
Muscle
Lung
Liver
Biopsies
More...

Tissues
Cells
Cancer / Tumors
Viruses / Infection
Microorganisms
More...



INCREASED PRODUCTIVITY

Walk-away Convenience

The ASP automates EM sample processing, enabling walkaway convenience to focus on other lab projects. A preprogrammed signal (text, light, sound, popup) alerts you when human interaction is required. Tissue specimens are resin infiltrated entirely within mPrep capsules, ready for oven curing, thus eliminating the transfer of messy, resin-covered specimens from baskets to embedding molds. Or use conventional embedding molds. Either way, resin cleanup is nearly eliminated and you get uninterrupted control over your workday.

UNCOMPROMISED, QUALITY RESULTS

One-touch Sample Handling, Consistency, and Reproducibility

With one-touch specimen and grid handling, the ASP reduces the potential for sample damage or loss. ASP automation guarantees consistent processing from sample-to-sample and batch-to-batch. In addition to reducing the training required for new lab technicians, the ASP eliminates technician-to-technician variability, ensuring quality, reproducible results.

UNMATCHED FLEXIBILITY

Your Lab, Your Protocols, Your Way

During installation, the ASP is programmed with your lab's protocols, ready to run again and again. The controller software provides an easy-to-use interface, making it straightforward to modify protocols, develop new ones, or share with other ASP users. Precise software control over heating and cooling of two plate positions is available via the ASP-2000 model.

UNRIVALED SPEED & EFFICIENCY

Save Time, Cut Costs, Turn Around Results Faster

The ASP's unique, continuous, directed agitation speeds reagent infiltration to dramatically cut processing times, thus providing faster results. Simplified setup and cleanup additionally save hands-on time. With precise, automated pipetting, the ASP reduces reagent consumption to save consumable costs.

YOUR WORKFLOW...

SIMPLIFIED

A Simplified Workflow with Walkaway Convenience



Invest in Productivity, Convenience, and Accelerated, Quality Results

A key feature of the ASP is its ability to reduce processing time with no reduction in specimen preparation quality. The ASP's continuous, directed reagent agitation, rapid reagent exchanges, and low carryover greatly accelerate infiltration of all reagents, even 100% resin, compared to other processing methods. The result is unprecedented processing speed.

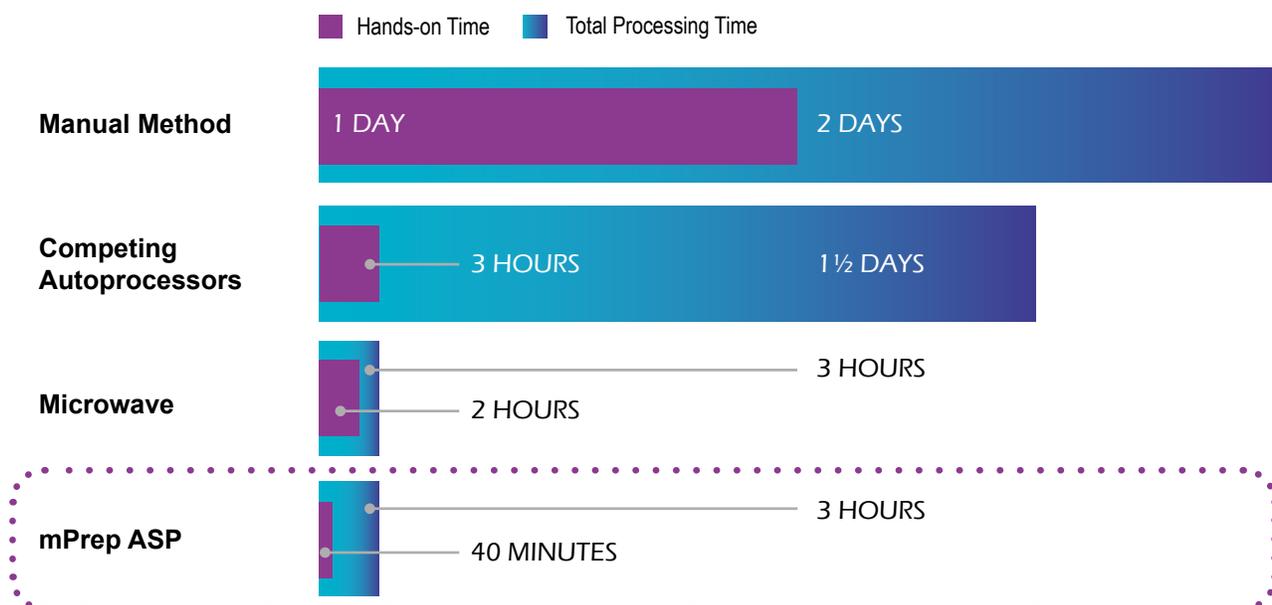
Up to 8 patient specimens, each consisting of 1-8 biopsy segments (18 Ga, max 3 mm long).

* Scan QR code at the bottom of this page for protocol details.

SPECIMENS (# of samples)	PROTOCOLS *	ASP	MANUAL METHODS
Kidney (8)	TEM: Fix rinse, Os, epoxy infiltration	46 minutes	8 - 36 hours
Kidney clinical biopsies (8-64) #	TEM: Fix rinse, Os, UA, epoxy infiltration	180 minutes	24 - 36 hours
Liver, muscle, heart, brain (8)	TEM: Fix rinse, Os, epoxy infiltration	132 minutes	24 - 36 hours
Flatworm (8)	TEM: Fix rinse, Os, epoxy infiltration & curing	8 hours	5 - 7 days
Brain, heart, liver (8)	vEM: Fix rinse, TA, Os-KFeCN, TCH, Os, UA, Pb, epoxy infiltration	8 hours	4 - 5 days
Breast tumors (8)	vEM: Fix rinse, Os-KFeCN, TCH, Os, UA, Pb, epoxy infiltration	5 hours	20 hours
Flatworm (8)	vEM: Fix rinse, Os-KFeCN, TCH, Os, UA, Pb, epoxy infiltration & curing	2 days	5 days

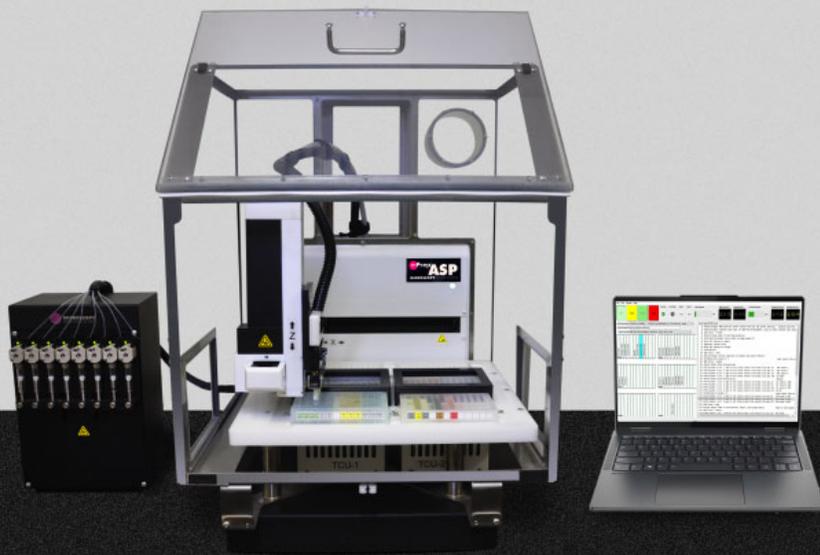
Comparison: Typical TEM Specimen Preparation

The mPrep ASP dramatically cuts hands-on time and reduces total processing time.**



** Based on typical ranges observed in microscopy laboratories. Estimates based on publicly available protocols. Scan QR code for details.





Precise Thermal Control with the ASP-2000

The ASP-1000 and ASP-2000 are equally adept at automating complex biological specimen preparation protocols. With the ASP-2000, you gain the additional control of automated reagent heating and cooling (0 - 100°C), important for applications such as vEM staining, enhancing resin infiltration, and immuno-gold labeling.

Specifications

mPrep ASP-1000 & ASP-2000	
Base Unit	Approx. dimensions with fume enclosure (W x D x H): 48.3 cm x 61 cm x 63.5 cm (19" x 24" x 25")
	Weight: ASP-1000 34 kg (75 lbs) ASP-2000 41.5 kg (91.6 lbs)
	6 ANSI/SLAS format 96-well or 12-column reservoir microplates
	Integrated, removable fume enclosure
	8-channel head
Thermal Control (ASP-2000 only)	Independent heating and cooling of 2 reagent plate positions
	Temperature control from 0-100°C, protocol or independently controlled
Pump Module	Anodized aluminum base and 2 covers for each thermal unit provide thermal mass to maintain steady temperature
	Dimensions (W x D x H): 20.3 cm x 20.3 cm x 30.5 cm (8" x 8" x 12") Weight: 7.25 kg (16 lbs)
Exhaust Fan	Dimensions (W x D x H): 20 cm x 17 cm x 19 cm (8" x 7" x 7")
	Weight: 1.6 kg (3.5 lbs)
Laptop Controller	Dimensions (W x D): 25.4 cm x 35.6 cm (10" x 14")
	Weight: 1.14 kg (2.5 lbs)
	Windows, solid-state drive Software with multiple preinstalled protocols and unlimited storage for user-defined protocols
Capsule Requirements	mPrep/s or mPrep/g capsules
Power Requirements	120 VAC, 60 Hz (North America); 240 VAC, 50 Hz available
System Weight	ASP-1000 44 kg (97 lbs) Shipping Weight 132 kg (290 lbs)
	ASP-2000 52 kg (114 lbs) Shipping Weight 148 kg (325 lbs)

Ordering

PRODUCT	CAT. NO.
mPrep ASP System & Accessories	
mPrep ASP-2000 Automatic Specimen Processor	41120
mPrep ASP-1000 Automatic Specimen Processor	41000
mPrep/bench™ 96-well silicone rack	34000
mPrep/f30™ Standard Filter Couplers, 16/pk	31500
mPrep/s (Specimen) Capsules & Accessories	
mPrep/s Capsules with screens, 24/pk	22405
mPrep/s Capsules with screens, 96/bag	22505
mPrep/s Capsules without screens, 96/bag	22550
mPrep/s Insertion Tool	32010
mPrep/s Workstation, complete	42100
mPrep/g (Grid) Capsules	
mPrep/g Capsules, 16/pk	21305
mPrep/g Capsules, 96/bag	21505

PRODUCT	Qty	CAT. NO.
Reagent Reservoir Plates & Seals		
12-col reagent reservoir plates, PP	1	52501
	5	52503
	25	52502
96-well reagent plates, square well, PP, 1.2 ml	10	51010
	100	51011
96-well reagent plates, PP, 500 µL	10	51001
X-Pierce™ plate seal sheets	100	53010
Self-adhesive pierceable foil plate seal sheets	100	53050
Pierce Seal, pierceable foil heat seal sheets	100	53070
Additional Items		
Service Agreement		
Installation & Training		

See www.microscopyinnovations.com for a complete product list.

About MICROSCOPY INNOVATIONS

Microscopy Innovations creates innovative solutions for specimen preparation in electron microscopy laboratories. From one-touch specimen handling that maintains biological sample integrity to walk-away automation that guarantees consistency, reproducibility, and quality, Microscopy Innovations creates 21st century lab products to increase productivity and accelerate scientific discovery. With best-in-class customer support, Microscopy Innovations engages with and supports the microscopy community to advance scientific research and clinical diagnoses.

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