med associates inc

Instrumentation and Software for Research

UROVOID™

MET-UROS-R with MET-URO-INT
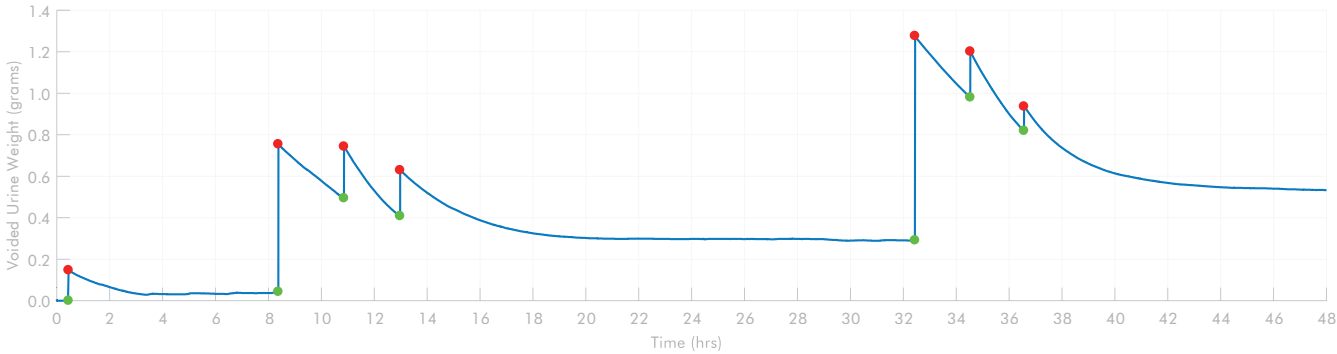
UROS-M-MOD (without stand) with MET-URO-INT

UROVOID™ URINARY VOIDING FREQUENCY QUANTIFICATION

Non-invasive measurement of bladder function in conscious rats and mice

- Monitor up to twelve (12) cages simultaneously
- Collect data for up to forty (40) days
- A complete UroVoid system consists of the following:
    - Interface package/software *(see pages 16-17)*
    - Up to twelve (12) cage packages *(see pages 4-11 for mouse, and pages 12-15 for rat)*
- Basic UroVoid design requirements:
    - Cage designed for the mouse to live in for 24-48 hours or longer
    - Access to food and water
    - Prevent food and water from contaminating measurements
    - Separate feces from urine
    - Collect and measure voided urine, each void time and volume need to be captured
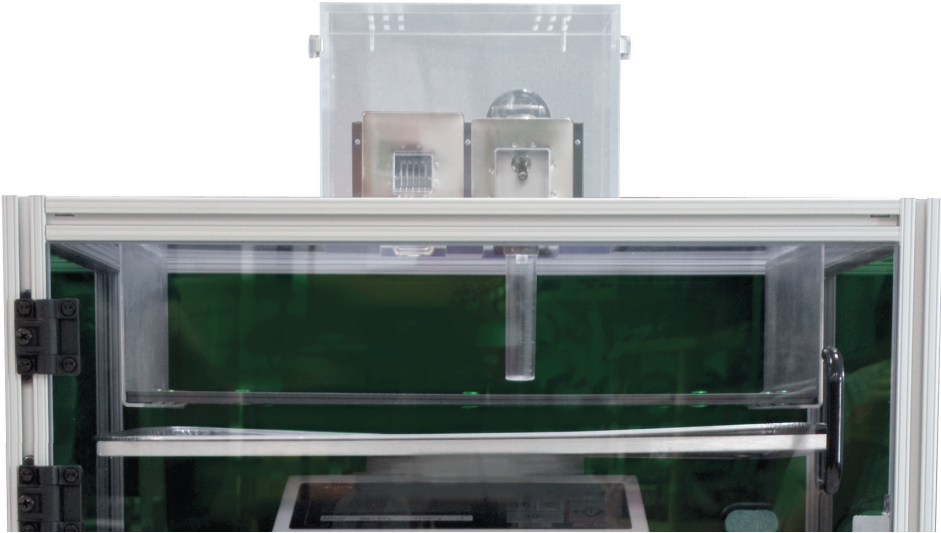
UROS-M-MOD
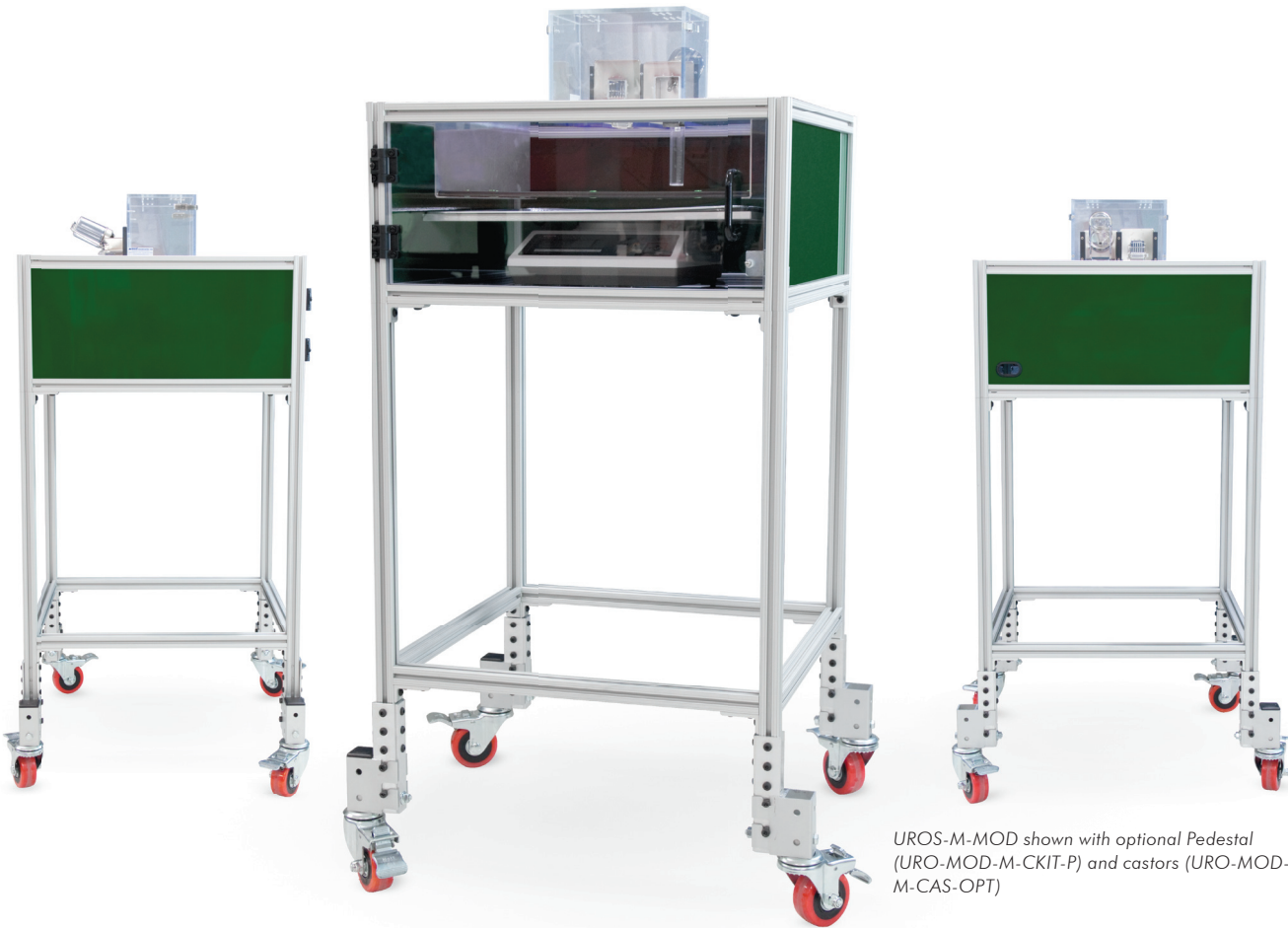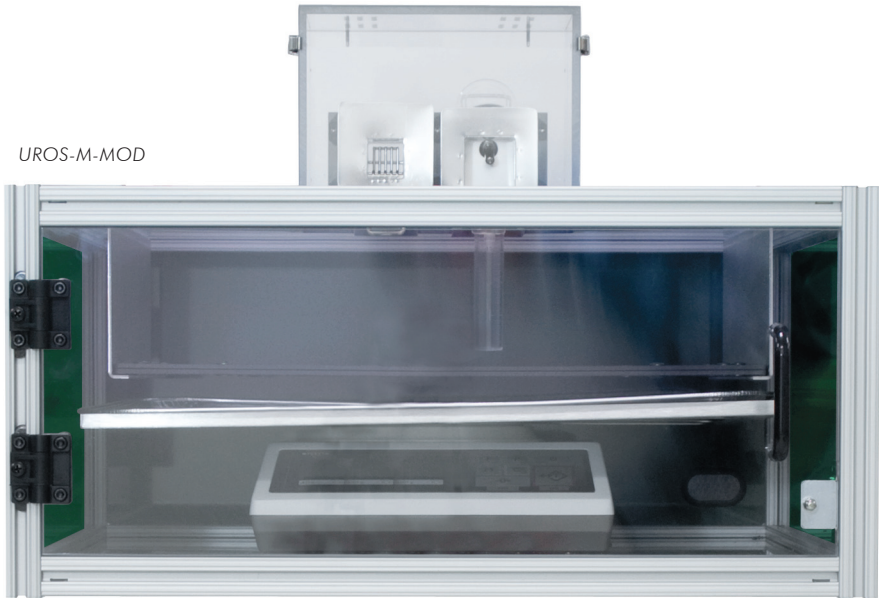
UROS-M-MOD shown with optional Pedestal (URO-MOD-M-CKIT-P) and castors (URO-MOD-M-CAS-OPT)

PACKAGE CONTENTS			
A = UROS-M-MOD			
#	**SKU**	**DESCRIPTION**	**A**
1	URO-M-CAGE-001	Urovoid Cage	A
1	URO-MODENC	Modular Isolation Enclosure	A
1	URO-M-FILTER	Separation Filter & Frame	A
1	URO-M-FOOD	Food Hopper	A
1	URO-M-WATER	Water Bottle	A
1	URO-M-PAN	Urine Collection Pan Pk/5	A
1	SCALE-TOR-AD-520-USB-URO	Precision Balance w/USB Kit	A
1	URO-PSP-TOR-AD-520	Urine Collection Pan Scale Support	A

PACKAGE CONTENTS							
A = UROP-M-MOD-2		**C = UROP-M-MOD-6**		**E = UROP-M-MOD-12**			
B = UROP-M-MOD-4		**D = UROP-M-MOD-8**					
#	**SKU**	**DESCRIPTION**	**A**	**B**	**C**	**D**	**E**
2 | 4 | 6 | 8 | 12	UROS-M-MOD	Modular Urovoid Package	A	B	C	D	E
0 | 3 | 6 | 9 | 12	URO-MOD-M-CKIT-H	Horizontal Complexing Kit		B	C	D	E
4 | 6 | 8 | 10 | 10	URO-MOD-M-CKIT-M	Pedestal Mobility Kit	A	B	C	D	E
1 | 2 | 3 | 4 | 4	URO-MOD-M-CKIT-P	Pedestal Complexing Kit	A	B	C	D	E
1 | 2 | 3 | 4 | 8	URO-MOD-M-CKIT-V	Vertical Complexing Kit	A	B	C	D	E

MODULAR UROVOID™ VOIDING FREQUENCY PACKAGES

UROS-M-MOD MOUSE | SINGLE UNIT		**UROP-M-MOD-6** MOUSE | SIX UNIT	
UROP-M-MOD-2 MOUSE | TWO UNIT		**UROP-M-MOD-8** MOUSE | EIGHT UNIT	
UROP-M-MOD-4 MOUSE | FOUR UNIT		**UROP-M-MOD-12** MOUSE | TWELVE UNIT	

- Each station is equipped with a precision analytical balance for accurate void mass quantification and USB connectivity for easy & reliable data acquisition
- Ad-lib access to food and water
- Food hopper and water bottle designed to contain spilled matter and minimize caching behavior

- Isolation enclosure protects the scale from ambient noise and air currents
- The cage is designed for the mouse to live in for prolonged periods of time (24-48 hours or longer)
- Optional modified cage top for accommodating optogenetics, IV self-administration, or cystometry equipment
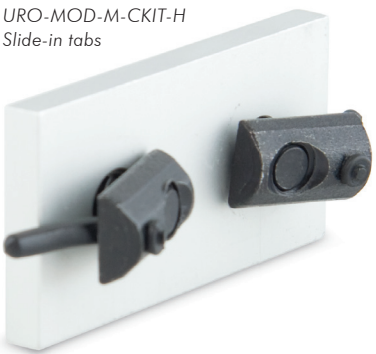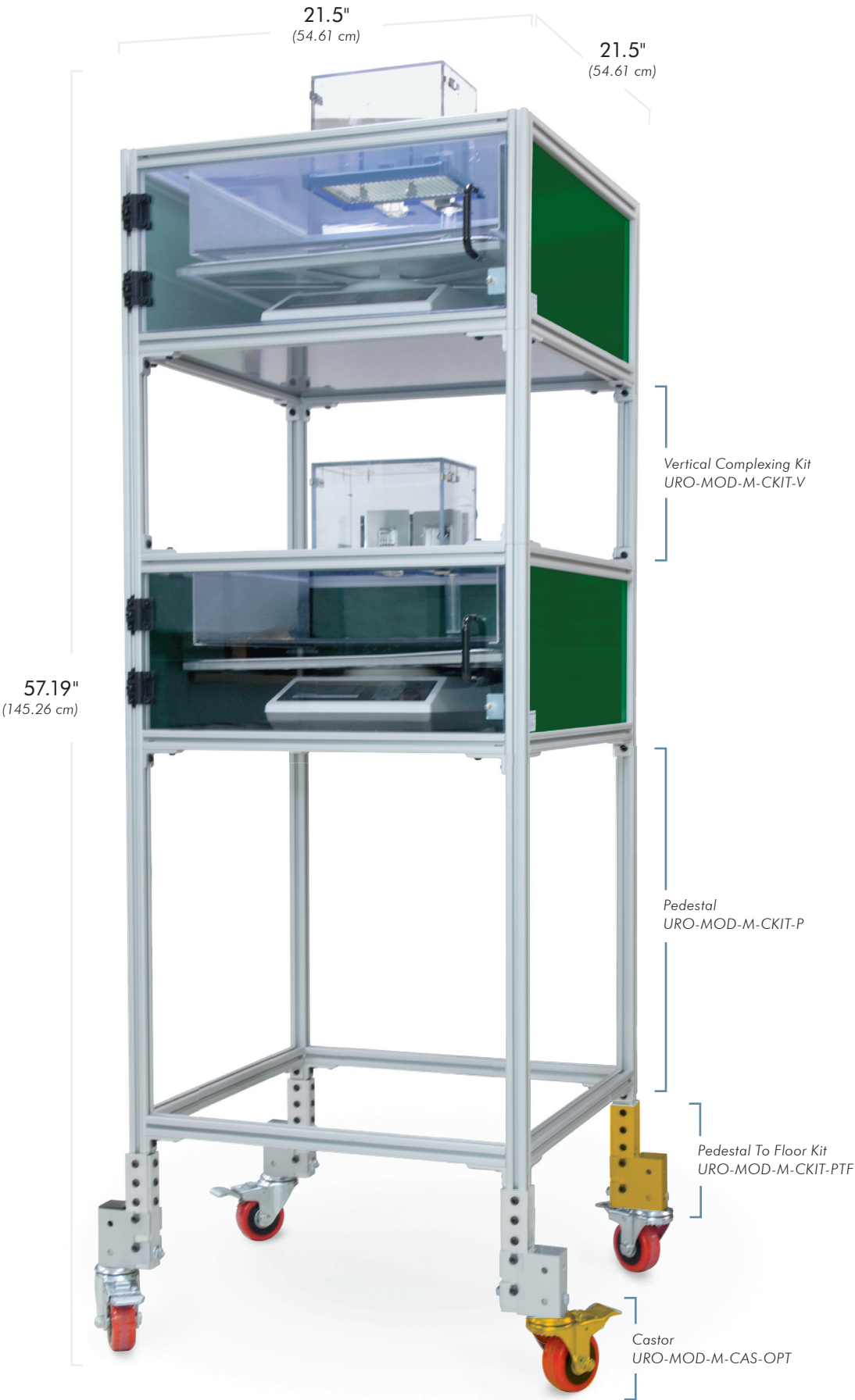
UROP-M-MOD-2

Alternative configurations (such as this side-by-side) can be assembled, contact Sales for more info.

UROP-M-MOD-4

21.5"
(54.61 cm)

21.5"
(54.61 cm)

57.19"
(145.26 cm)

Vertical Complexing Kit
URO-MOD-M-CKIT-V

Pedestal
URO-MOD-M-CKIT-P

Pedestal To Floor Kit
URO-MOD-M-CKIT-PTF

Castor
URO-MOD-M-CAS-OPT

URO-MOD-M-CKIT-H
Slide-in tabs

Standard

PEDESTAL MOBILITY KIT

URO-MOD-M-CKIT-M MOUSE

Consists of the Pedestal To Floor Kit *(URO-MOD-M-CKIT-PTF)* and Castors *(URO-MOD-M-CAS-OPT)*.

• Pedestal To Floor Kit
  ◦ Steel brackets for connecting the pedestal to the castor wheel
• Castors
  ◦ Double brake locks both wheel and swivel rotation
  ◦ Polyurethane tires will not form a "flat spot" or marks on the floor

Optional

LEVELING FEET

URO-MOD-M-LVFT-OPT MOUSE

• Use in place of Castors *(URO-MOD-M-CAS-OPT)*
• Zinc-plated steel is corrosion resistant
• Ball-and-socket design swivels to compensate for uneven floors up to 7.5 degrees in any direction
• Non-skid cushion for stability

Standard

VERTICAL COMPLEXING KIT

URO-MOD-M-CKIT-V MOUSE

Steel brackets and slide-in tabs to stack a unit one on top of another.

HORIZONTAL COMPLEXING KIT

URO-MOD-M-CKIT-H MOUSE

Steel brackets and slide-in tabs to connect units side-by-side.

PEDESTAL

URO-MOD-M-CKIT-P MOUSE

Four steel legs that connect to the modular enclosure via brackets.

URO-M-FILTER

URO-M-PAN (1)

URO-PSP

WASTE SEPARATION FILTER + FRAME

URO-M-FILTER MOUSE

Our research-driven design uses finely spaced stainless steel wire for optimal urine/solid waste separation.

• Rigid frame to protect & support the mesh
• Clean by hand-washing with warm soapy water, wipe gently to prevent damaging the separator

Standard

SCALE ISOLATION ENCLOSURE

URO-M-MODENC MOUSE

Holds cage, scale, waste separation filter + frame, and urine collection pan + support.

• Protects the scale from ambient noise and air currents
• Clear polycarbonate door for easy viewing
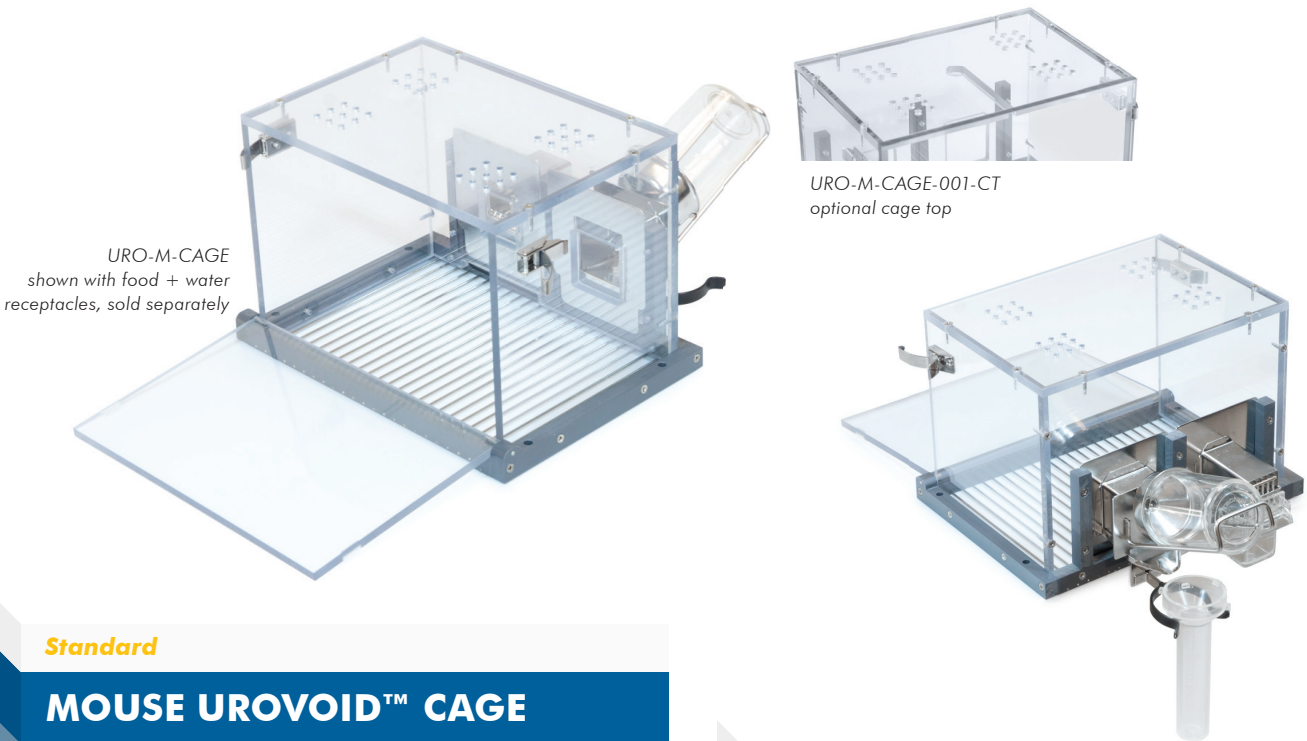
URINE COLLECTION PAN
PACK OF 5

URO-M-PAN MOUSE

• Lightweight, inexpensive, easily cleaned aluminum

URINE COLLECTION PAN SCALE SUPPORT

URO-PSP MOUSE

• Lightweight rigid support for urine collection pan
• Correctly positions pan under the cage

URO-M-CAGE
shown with food + water receptacles, sold separately

URO-M-CAGE-001-CT
optional cage top

Standard

MOUSE UROVOID™ CAGE

URO-M-CAGE-001 MOUSE STANDARD TOP

• Additional cages increase experimental throughput by eliminating the time lost cleaning between mice
NOTE: food hopper and water bottle sold separately

• Cage size and ventilation optimal for long term housing requirements, and is large enough to accommodate certain enrichment devices

• Door opens from the front for easy placement and removal of mouse, with water and food on the backside for an unobstructed view of the mouse

• The floor of the cage is made up of stainless steel rods to allow urine and feces to drop down

Working Area *(HxWxL)* = 5.2" × 5" × 7"
(13.2 x 12.7 x 17.78 cm)

Grid rods = 0.06" *(0.15 cm)*

Rod spacing = 0.25" *(0.64 cm)*

Optional

MOUSE UROVOID™ CAGE
w/MODIFIED TOP

URO-M-CAGE-001-CT MOUSE MODIFIED TOP

Modified top option adds a slit in the top to accommodate tethered animals, making it ideal for optogenetics, IV self administration, or cystometry

Modified top slit = 0.19" W *(0.48 cm)*

Standard

FOOD HOPPER

URO-M-FOOD MOUSE

• Size discourages nesting behavior
• Feed storage bin and separate spillage bin
• Design minimizes contamination of urine from spilled food.
   ◦ If the mouse gets food crumbs on itself, the crumbs go into the spillage bin, not down onto the pan
• We recommend powdered feed (not pelletized)

Food Bin *(HxWxL)* = 0.94" × 0.67" × 1.26"
(24 x 17 x 32 mm)

Access Opening = 0.94" *(2.4 cm)*

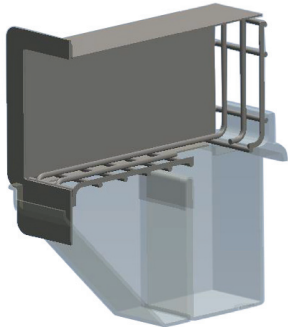Capacity = 0.46 oz *(~13 g)*

WATER BOTTLE

URO-M-WATER MOUSE

• Recessed receptacle for accessing sipper tube
• Receptacle has a sloped base to prevent water from dripping onto collection pan, and instead gets collected in a spill cup below the sipper

Liquid capacity = ~3.04 fl. oz *(90 mL)*

Water Bottle (cutaway)

Food Hopper (cut-away)

MET-UROS-R

PACKAGE CONTENTS

		A = MET-UROS-R	B = MET-UROS-R-L		
#	SKU	DESCRIPTION		A	B
1	MET-STAND	Table Top Stand		A	B
1	MET-VOID-001	Urine Collection Flask		A	B
1	SCALE-TOR-AD-520-USB-URO*	Precision Scale w/USB kit		A	B
1	MET-CAGE-R150-300	Metabolic Cage for Rats 150-300g		A	
1	MET-CAGE-R300	Metabolic Cage for Rats >300g			B

Exact model may vary based on supplier availability

MET-UROS-R

UROVOID™ METABOLIC CAGE PACKAGES

MET-UROS-R RAT | 150-300G
MET-UROS-R-L RAT | >300G

- Each metabolic cage is equipped with a precision analytical balance with USB connectivity for easy and accurate void mass quantification

- Specially designed urine collection flask minimizes evaporative loss while maximizing collection volume using a funnel-style mouth

- Ad-lib access to food and water

- Food hopper designed to contain spilled food and minimize caching behavior

- Water bottle designed to minimize water spillage into cage area

- Urine/feces separation funnel maximizes collection of urine from each void and prevents feces from interfering with void mass quantification

MET-STAND

MET-CAGE-R150-300

SCALE-TOR-AD-520-USB-URO

MET-VOID-001

ANALYTICAL BALANCE

SCALE-TOR-AD-520-USB-URO MOUSE+RAT

• Analytical balance for recording voided urine volume. Contains a USB cable for easy connection to data acquisition computer.

SPECIFICATIONS

Readability = 1 mg

Repeatability (typical) = 0.7 mg

Minimum Weight (USP), Typical: 1.4 g

Linearity = ± 0.002 g

Linearity = 50 g

Settling Time = 1.5 s

Linearity (typical) = 0.6 mg

Resolution = 1 mg

NOTE: exact model may vary, contact sales to confirm current model specifications·

TABLETOP STAND

MET-STAND RAT

• Stainless steel stand securely holds one cage above the collection flask and scale.

Overall = 16.88" H x 12.38" W
(42.88 x 31.45 cm)

URINE COLLECTION FLASK

MET-VOID-001 RAT

• Specially designed with a narrow mouth and wide base to minimize evaporative loss, and a funnel top to facilitate urine collection

• High quality Pyrex® glass

Capacity = 4.23 fl. oz *(125 mL)*

METABOLIC CAGE FOR RATS

MET-CAGE-R150-300 RAT | 150-300ɢ
MET-CAGE-R300 RAT | >300ɢ

• High quality Techniplast metabolic cage provides ad-lib food & water access

• Designed to reduce instances where the animal would normally be disturbed
  ◦ Refilling the feeder*
  ◦ Removing components *(below the cage floor)*

• All components are easily cleaned and autoclavable, and the two-part polycarbonate cage body cleans easily with soap and water

• Feeder designed to discourage animal from sleeping in the dish

• Nonwetting polymethylpentene (PMP) funnel and separating cone separates waste to collect in separate collection tubes for accurate metabolic monitoring without urine wash-over

• Both the water bottle and feeder are designed to prevent spillage into the funnel

• Two-chamber design provides a safe and sanitary environment for acquisition of untainted urine and feces

• Constructed of smooth, transparent polycarbonate to prevent gnawing and noise

*NOTE: designed for use with slurries, powders, or liquids — not pellets
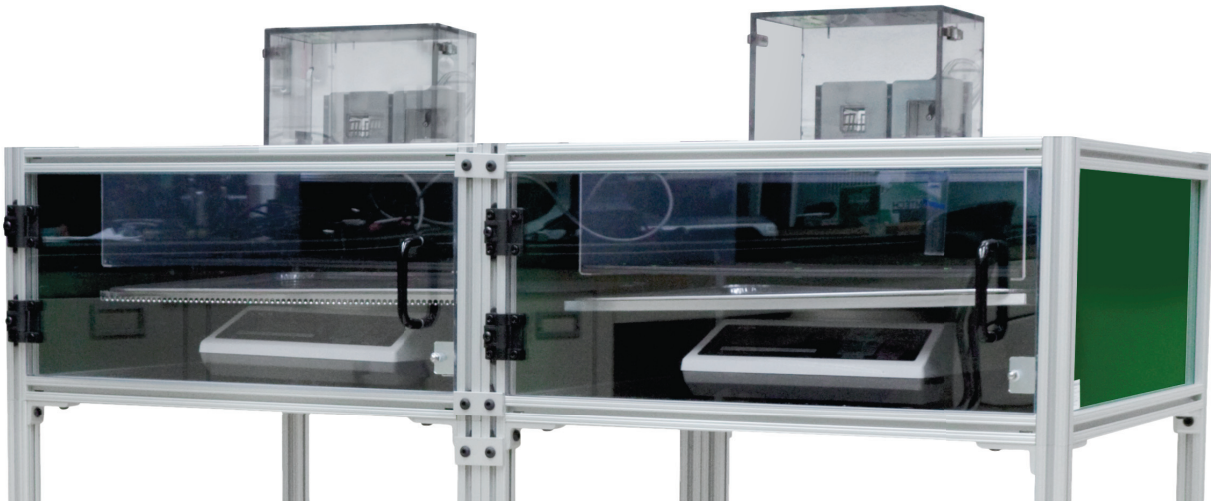
		PACKAGE CONTENTS		
	A = **MET-URO-INT-LT**	**B** = **MET-URO-INT**		
#	**SKU**	**DESCRIPTION**	**A**	**B**
1	COM-103LT*	Lenovo Thinkpad E580 Laptop	A	
1	COM-106R3-PC*	Intel i5-9500 3.0 GHz PC		B
1	COM-MONITOR-LCD*	LED Monitor, 19.5" W (49.53 cm)		B
1	SOF-580	UroVoid Software	A	B
1	SOF-581	UroVoid Data Analysis Software	A	B

LAPTOP INTERFACE PACKAGE
FOR UROVOID™ FREQUENCY ANALYSIS SYSTEM

MET-URO-INT-LT | MOUSE+RAT | LAPTOP

Processor: Intel Core i7-8550U 1.8GHz

Memory (RAM): 16 GB

Hard Drive: 500 GB

Operating System: Windows® 11

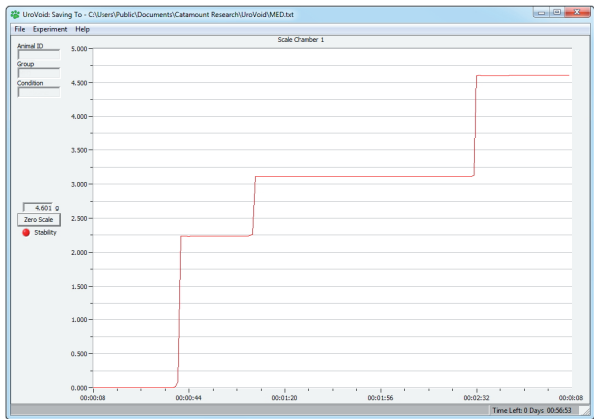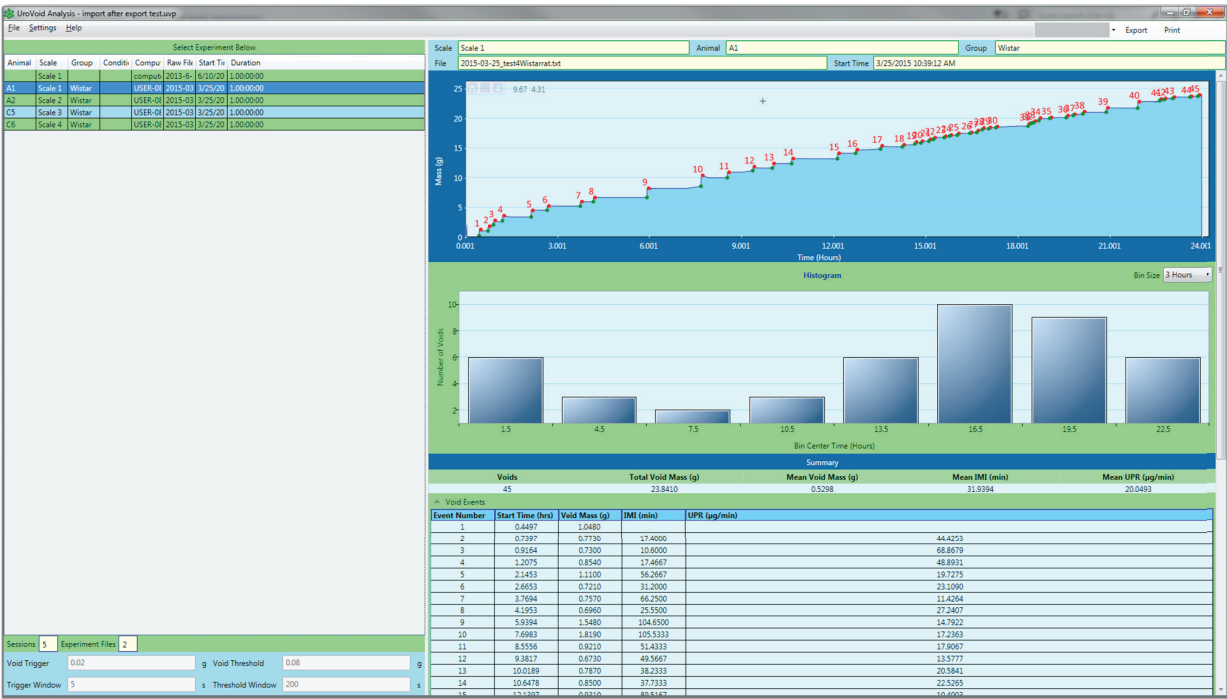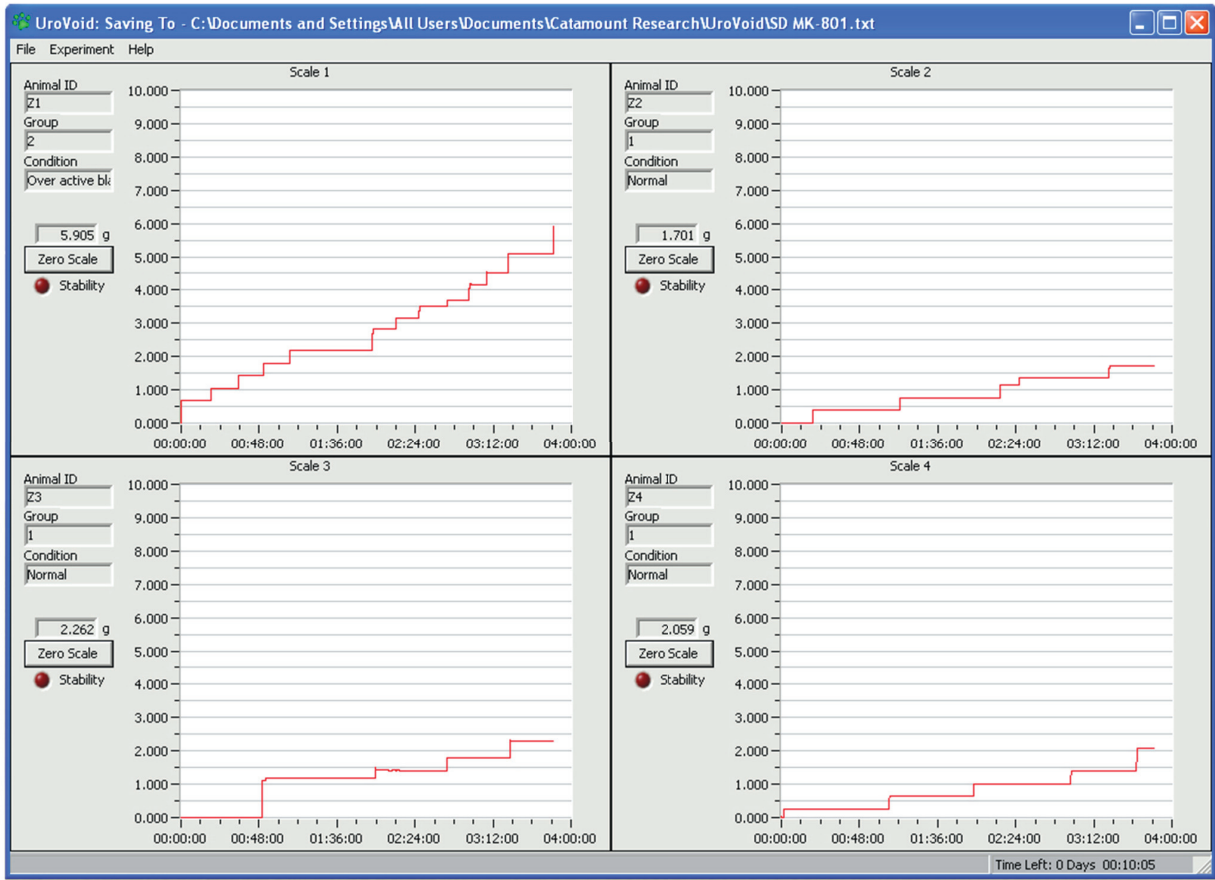*NOTE: Computer specifications subject to change, contact sales for current details*

DESKTOP INTERFACE PACKAGE
FOR UROVOID™ FREQUENCY ANALYSIS SYSTEM

MET-URO-INT | MOUSE+RAT | DESKTOP

Processor: Intel i5-7400 3.5Ghz

Memory (RAM): 16 GB

Hard Drive: 1 TB

Operating System: Windows® 11

NOTE: Computer specifications subject to change, contact sales for current details

UROVOID™ DATA ACQUISITION
SOFTWARE

SOF-580 MOUSE+RAT

- Real-time display of urine mass
- Simultaneously record from up to 12 cages
- Record data for up to 40 consecutive days
- Keep track of:
  - Animal ID
  - Group
  - Condition

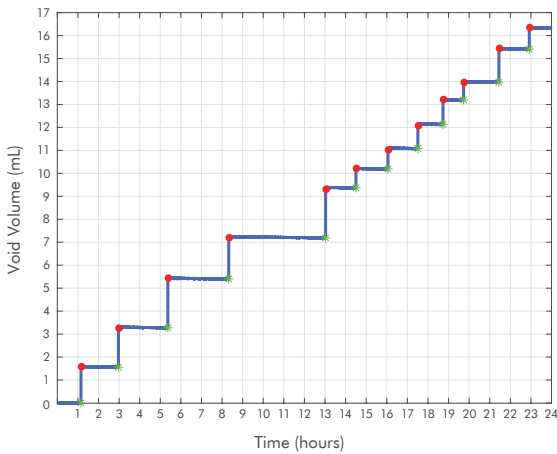#### COMPUTER REQUIREMENTS

- Windows 7 or newer

UROVOID™ DATA ANALYSIS
SOFTWARE

SOF-581 MOUSE+RAT

- Detects void mass and frequency based on user-defined parameters
- The Voiding Micturogram™ (VMG) graphically displays void events, identified by a number, with the baseline and peak indicated
- Void histogram with user-defined bin times
- Event log summarizes for each void:
  - Start Time
  - Void Mass
  - Intermicturition Interval (IMI)
  - Urine Production Rate (UPR)
- Data can be exported to Excel (or other similar programs) for further analysis and graphing

COMPUTER REQUIREMENTS

- Windows 7 or newer