



A 100% Australian owned
company supplying scientific
laboratories throughout Australia
and overseas since 1987.



METALS DIGESTION & SAMPLE PREPARATION

Designed so you can perform metals digestion rapidly and safely, with accuracy and uniformity



Metals Digestion & Sample Preparation

The Environmental Express® range is designed so that you can perform metals digestion rapidly and safely, with accuracy and uniformity. There are products for every step of the sample preparation process from sampling and digestion, right the way through to filtration. There is also options to create HotBlocks to suit your workflow.



The HotBlock® Digestion Systems

Perform faster, cleaner and more reliable digestion

The Digestion Systems have a metal-free construction, fire resistant Kydex® housing and PTFE-coated graphite block to limit contamination. Each unit has integrated electronics and a silicone heating mat for uniformity of heating. The systems can be stored easily via a wall or bench mounting.

The HotBlock® 100 Series Digestion Systems

- Uniformly heat ($\pm 1.5^{\circ}\text{C}$ sample consistency)
- Block heat to an ambient temperature of up to 150°C ($\pm 0.1^{\circ}\text{C}$)

The HotBlock® 200 Series Digestion Systems

- Block heat to an ambient temperature of up to 200°C ($\pm 0.2^{\circ}\text{C}$, resolution 0.1°C)
- Externally control one block (SC1831) or two blocks simultaneously (SC1832)

Included:

- Polycarbonate transfer rack

Compatible with:

- 15 mL, 50 mL, and 100 mL cups
- AutoBlock® Fill
- StirBase™

The HotBlock 100 series

Catalogue ref.	Sample (no.)	Sample vol. (mL)	Size (W x L; mm)	Weight (kg)	240 VAC Amps
ID0359	12	50	216 x 470	25.4	4.5
ID0360	36	50	381 x 381	26.3	4.5
ID0121	54	50	381 x 546	29.5	4.5
ID0361	25	100	381 x 381	19.1	4.5
ID0362	35	100	381 x 546	26.8	4.5
ID0363	96	15	381 x 546	37.7	4.5

The HotBlock 200 series

Catalogue ref.	Sample (no.)	Sample vol. (mL)	Size (W x L; mm)	Weight (kg)	240 VAC Amps
ID0364	36	50	381 x 381	24.5	6.5
ID0365	54	50	381 x 546	35.4	6.5
ID0366	25	100	381 x 381	24.5	6.5
ID0367	35	100	381 x 546	32.2	6.5
ID0368	96	15	381 x 546	37.7	6.5



HotBlock 200 digestion system - uniformly heats all samples up to 200°C



StirBase™

The StirBase™ Magnetic Stirrer

Turn your existing HotBlock® into a stirring HotBlock or use as a stand-alone stirrer with this durable unit

- Perform determinations of hexavalent chromium in soils, pharmaceutical dissolutions, and more
- Control the speed safely and at a distance with a remote (0 to 2150 rpm, in 100 different ranges)

Included:

- Remote control (1.8 m cord)
- 60 custom-made stir bars

Compatible with:

- The HotBlock® 100 Series
- The HotBlock® 200 Series

Catalogue ref.	Speed (rpm)	Size (W x D; mm)	Power (VAC)
IP1490	0 - 2150	559 x 406	240 VAC



HotBlock sitting on top of the StirBase

AutoBlock®

The AutoBlock® Fill Filling Station

Partner this system with a HotBlock® of your choice to undertake safe and cost-effective reagent additions

- Dispenses from up to five different reagents
- Switch between methods and reagents easily with the five-way valve system
- Programme the unit to calibrate and dispense the required volume of reagent
- Control via an onboard touch-screen or included software
- Cost-effective alternative to fully automated system

Included:

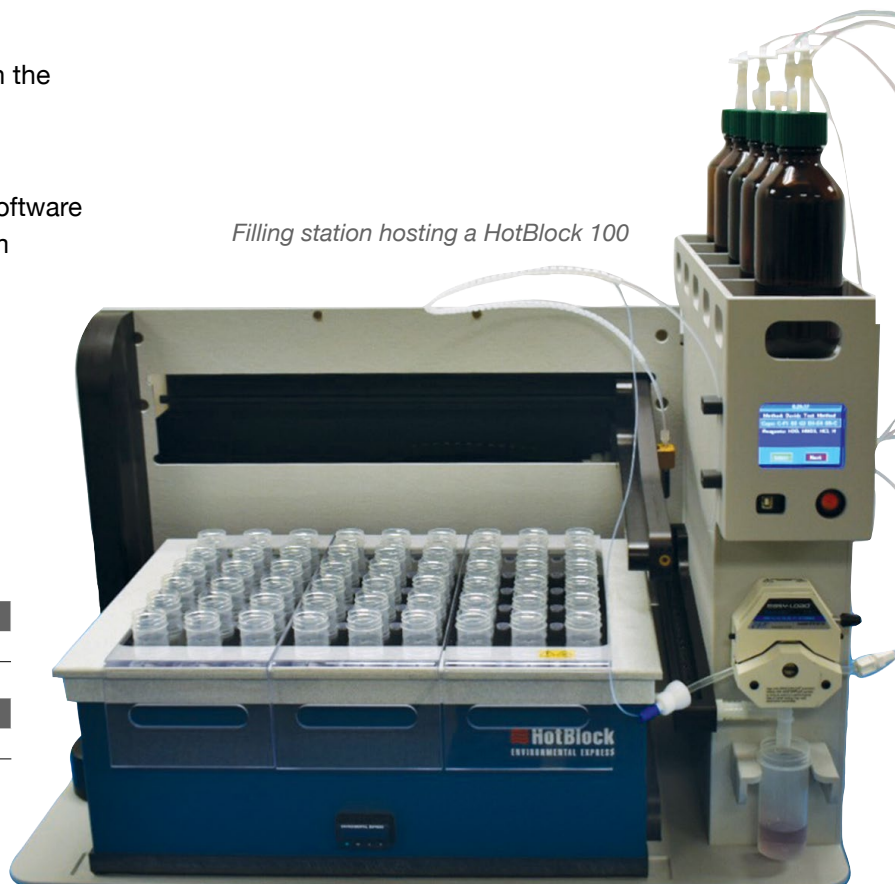
- Masterflex® peristaltic pump (2% vol. accuracy)
- PTFE tubing
- Five 1 L glass reagent bottles
- Waste container

Compatible with:

- The HotBlock® 100 Series
- The HotBlock® 200 Series

Catalogue ref.	Sample capacity	Nominal sample size
IA0310	12 to 96 wells	15 to 100 mL

Operating temperature of block	Size (W x L x D; mm)	Weight (kg)
Ambient to 300°C	787 x 686 x 559	20.4



Filling station hosting a HotBlock 100

The AutoBlock® Plus Digestion System

Automate and monitor the simultaneous digestions

- Safely run a custom method and record all digestion procedures and data, at a distance, with user-friendly software on a PC or laptop
- Determine batch size and automate reagent addition for up to 54 samples with a single X, Y, Z injection probe. The AutoBlock has eight reagent and two deionised (DI) water ports and is ideal for the economical use of reagents
- Achieve a final volume, with DI water, by using the final fill-to-volume function
- Detect leaks and monitor pressure and maximise your safety

Included:

- 10 L waste carboy
- Two reagent rack kits (six-place rack, five reagent caps, five lengths of 3 mm PTFE tubing)

Compatible with:

- Existing fume hood

Catalogue ref.	Description
IA0311	AutoBlock Plus digestion system, 240 VAC
IP1502	Replacement reagent rack kit
IP1503	Replacement 10-L carboy assembly with cap and tubing

Sample capacity: 54
Sample cup size: 50 mL
Number of reagents: 8
Footprint (mm): 914 x 978 x 610
Clearance: 52 mm all sides
Weight: 113 kg (136 kg packaged)
Temperature: ambient to 150°C

Communication: USB
Computer requirements: WindowsR 7 operating system; Intel Core: i3-2330M processor @ 2.20 GHz or better; 4 GB of DDR3 SDRAM memory
Computer is not supplied



Digest 54 samples simultaneously all the way through to the final fill-to volume step

AutoBlock with PC setup and close up of the X, Y, Z Injection Probe





**Certified
for 68
Elements**

	UltimateCup	Ultimate Clean
Ag	<0.5	<0.1
Al	<50	<50
As	<2	<0.2
Au	<1	<0.25
B	<15	<15
Ba	<2	<1
Be	<0.1	<0.1
Bi	<0.5	<0.1
Ca	<300	<200
Cd	<0.5	<0.2
Ce	<0.5	<0.2
Co	<0.5	<0.1
Cr	<5	<1.5
Cs	<0.5	<0.1
Cu	<1	<0.5
Dy	<0.5	<0.1
Er	<0.5	<0.25
Eu	<0.5	<0.1
Fe	<100	<25
Ga	<1	<1
Gd	<0.5	<0.1
Ge	<0.5	<0.1
Hf	<0.5	<0.1
Hg	<0.5	<0.1
Ho	<0.0005	<0.0005
Ho	<0.5	<0.1
In	<0.5	<0.1
Ir	<0.5	<0.1
K	<300	<50
La	<0.5	<0.1
Li	<1	<0.5
Lu	<0.5	<0.1
Mg	<30	<30
Mn	<5	<0.5
Mo	<0.5	<0.1
Na	<250	<50
Nb	<0.5	<0.1
Nd	<0.5	<0.25
Ni	<2	<0.25
Os	<0.5	<0.1
P	<50	<10
Pb	<2	<0.25
Pd	<0.5	<0.1
Pr	<0.5	<0.1
Pt	<2	<0.5
Rb	<0.5	<0.1
Re	<0.5	<0.1
Rh	<0.5	<0.1
Ru	<0.5	<0.1
Sb	<1	<0.5
Sc	<0.5	<0.2
Se	<2	<0.25
Si	<100	<50
Sm	<0.5	<0.25
Sn	<5	<1
Sr	<5	<2.5
Ta	<0.5	<0.1
Tb	<0.5	<0.1
Te	<1	<0.5
Ti	<5	<0.5
Tl	<0.1	<0.1
Tm	<0.5	<0.1
U	<0.1	<0.1
V	<5	<0.5
W	<0.5	<0.1
Y	<0.5	<0.1
Yb	<0.5	<0.1
Zn	<7.5	<2
Zr	<2	<1
Lot no.	1802043	Lot no. 17009027

Digestion cups

'One-Cup Solution' - chemical resistant digestion cups.
Eliminate contamination, save time, labour & costs

UltimateCup™

- Bring a sample to volume, cap it, and store it
 - Durable clarified homopolymer polypropylene
 - No vent lines so it's easier to read
 - Certified volume accuracy ($\pm 0.5\%$) at all graduation lines
 - Available in 15-, 50-, 100-, and 250-mL
 - Screw thread design for a tight seal
 - Outer diameter fits your digestion block
 - Deep dimple in base gives stability



UltimateCup™ Rack Lok Cup

- Ergonomically handle digestion cups
 - Cups lock in place in racks so you can open them with one hand

Ultimate Clean™ Cup

- Digest trace metals (ppb and ppt) in any clean environment
 - 50 mL cup is made from clarified homopolymer propylene - The moment each cup comes off the mould, it is carefully capped and handled to avoid common means of contamination
 - All cups arrive ready to use

Trust your
measurements, with
these reliable and durable
'One cup' solutions!

Catalogue ref.	Description	Capacity (mL)	Graduations (mL)	Size (mm)	Qty/pk
Ultimate Clean digestion cup					
PT0782	50 mL digestion cup	63	Up to 50	30 x 106	150
Ultimate digestion cups					
PT0494	50 mL digestion cup	63	Up to 50	30 x 106	500
PT0493	50 mL digestion cup	63	Up to 50	30 x 106	500
PT0495	50 mL digestion cup	63	Up to 50	30 x 106	500
PT0783	50 mL digestion cup	63	Up to 50	30 x 106	500
Ultimate Rack Lok cup					
PT0784	50 mL Rack Lok cup	63	Up to 50	30 x 106	500
PT0785	50 mL Rack Lok cup	63	Up to 50	30 x 106	500
PT0786	50 mL Rack Lok cup	63	Up to 50	30 x 106	500
Other digestion cups					
PT0787	15 mL digestion cup	18	Up to 15	17.5 x 105	1000
PT0788	15 mL digestion cup	18	Up to 15	17.5 x 105	1000
PT0789	100 mL digestion cup	125	Up to 100	46 x 100	225
PT0790	100 mL digestion cup	125	Up to 100	46 x 100	225
PT0791	250 mL digestion cup	330	Up to 250	76 x 83	180

*Note: caps are available upon request UC474-NL, UC474-GN, UC474-WH

Key: NL - Natural, no liner; WH - White, lined; GN - Green, lined; RD - Red, no liner; PK - Pink, no liner; OR - Orange, no liner, YL - Yellow, no liner.

**We now offer coloured, linerless caps.
Please contact us for further details.**



Example of typical special digestion vessels

Special digestion vessel

- Achieve digestions above 130°C with borosilicate glass, quartz or PFA vessels
- Digest large volumes of concentrated acids for long periods of time (>50%, >6 hrs) in glass or quartz vessels
- When digesting samples for silicon, PFA vessels as the ideal choice

Catalogue ref.	Description	Total capacity (mL)	Size (mm)	Qty/pk
GT0347	50 mL Borosilicate glass cup	98	178 x 33	1
GT0348	50 mL Disposable glass vial, no cap	48	94 x 29	432
GT0349	50 mL Quartz tube, grade GE124	55	102 x 33	1
GT0350	50 mL Borosilicate glass cup	55	113 x 33	1
PT0792	50 mL PFA cup, with screw cap	62	129 x 30	1
PT0793	100 mL polypropylene cup, with hinged snap-cap	130	94 x 46	250
PT0794	70 mL polypropylene cup, with hinged snap-cap	80	94 x 36	400
PT0795	100 mL PFA cup	125	103 x 42	1
PT0792	60 mL PFA vial with threaded closure	64	132 x 29	1
GT0351	100 mL Borosilicate glass cup	230	178 x 45	1
GT0352	100 mL Borosilicate glass cup	130	102 x 45	1

All digestion cups and vessels are compatible with: AutoBlock® Fill, The HotBlock® 100 Series, The HotBlock® 200 Series.

Accessories include racks, watch glasses, reflux cap, thermometers

Racks

Prepare, transfer and store samples

Plastic-Coated Wire Storage Rack

- Transfer up to 18 digestion cups (100 mL) with ease.

Polycarbonate Transfer Racks

- Transfer safely with this heat and acid resistant rack

Stackable Foam Storage Rack

- Store up to 25 digestion cups (50 mL)

Stackable and Durable Polypropylene Storage Rack

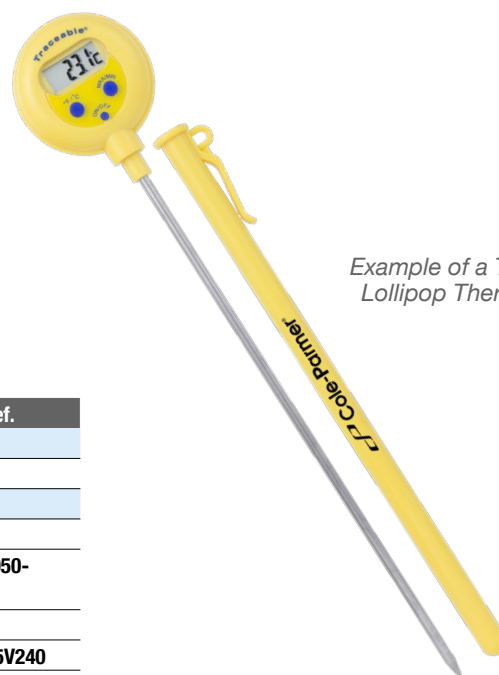
- Store and organise up to 24 digestion cup (30 mm diameter)



Thermometers

Monitor temperature of individual samples with the Lollipop™ Traceable® Thermometer

- Solid-state construction
- Choose to switch between °F/°C units
- Temperature Range: 58 to 572°F and 50 to 300°C
- Resolution is 0.1° from 20 to 200°; 1° outside this range
- Accuracy is ±1°C between 0 and 100°C



Example of a Traceable Lollipop Thermometer

Catalogue ref.	Description	Digestion cups, HotBlock, & AutoBlock ref.
Plastic-coated wire storage rack		
PR0185	18 place rack (1 no.)	100 mL cups
Polycarbonate transfer rack		
PR0186	12 place rack (1 no.)	50 mL cups and C6002-240
PR0187	18 place rack (1 no.)	50 mL cups, SC100-240 SC154-240 SC2050-35V240 SC2050-35V240
PR0188	18 place rack (3 no.)	50 mL cups, AB4001
PR0189	15 place rack (1 no.) & 10 place rack (1 no.)	100 mL cups, SC150-240, and SC2100-25V240
PR0190	15 place rack (1 no.) & 10 place rack (2 no.)	100 mL cups, SC151-240, and SC2100-35V240
PR0191	32 place rack (3 no.)	15 mL cups, SC196-240, and SC2015-96V240
Foam storage rack		
PR0192	25 place stackable rack (5 no.)	50 mL cups
Polypropylene storage rack		
PR0193	24 place rack (1 no.)	Use with any tube up to 30 mm in diameter

Catalogue ref.	Description	Max temp.	Fits cup model
IP1505	For 50 mL cups	300°C	UC475
IP1507	For 100 mL cups	300°C	SC490
IP1508	For 15 mL cups	300°C	SC415

Ribbed watch glasses

Achieve partial reflux

- Designed with a central stem for easy placement
- Free of contaminants due to polypropylene construction



Ribbed watch glasses

Disposable reflux cap

Smooth reagent addition

- Achieves equal reflux as the ribbed watch glasses.
- Central opening allows you to add reagent easily



Disposable reflux cap

Catalogue ref.	Description	Diameter (mm)	Qty/pk
Ribbed watch glasses			
GW0017	For 50 mL digestion cup	44.0	1000
GW0018	For 100 mL digestion cup	52.0	500
GW0019	For 15 mL digestion cup	19.5	1000
Disposable reflux cap			
PC1059	For 50 mL digestion cup	34.0	1000

All accessories are compatible with: UltimateCup™, Ultimate Clean™ Cup, Rack Lok Cup, Speciality Vessels.

Filtration System

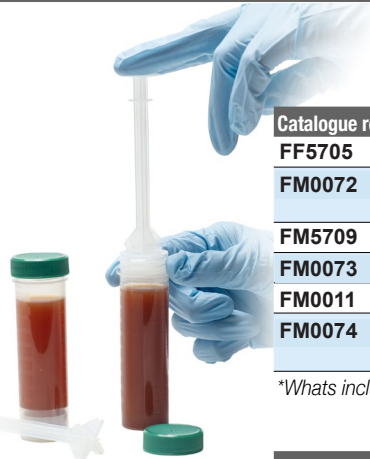


FilterMate® System

Simple to use—just attach the FilterMate® plunger to the filter assembly, press down on the plunger until the filter reaches the bottom of the cup, and remove the plunger prior to capping and storage or auto-sampling

Included:

100 filter assemblies and plungers.



Catalogue ref.	Membrane description	Application	Pore size (µm)
FF5705	PTFE-faced polypropylene	Most laboratory applications	6.0
FM0072	Acid-Washed glass fibre with polyethylene frit	TCLP extractions	0.7
FM5709	PVDF with PTFE prefilter	Dissolved metals only	0.45
FM0073	Certified PTFE	Trace level analysis	6.0
FM0011	PVDF with PTFE prefilter	Dissolved metals only	0.45
FM0074	Polyethylene frit	Use with 15 mL digestion cups (SC415)	2.0

*Whats included: 100 filter assemblies and plungers.



FlipMate® Systems

- Simply screw on filtration assembly, add an additional digestion cup, and apply vacuum to filter samples.
- FlipMate® is compatible with a 12-place, chemical resistant, PVC vacuum manifold (SC0620)

Included:

FlipMate® 50 systems include 200 FlipMate® filtration assemblies, 400 digestion cups (UC475), and 200 caps.

FlipMate® 100 systems include 100 FlipMate® filtration assemblies, 200 digestion cups (SC490), and 100 caps.



Complete system Catalogue ref.	Filtration assembly only Catalogue ref.	Membrane description	Pore size (µl)
FlipMate 50 System (Sample size 50 mL, Qty/pk: 100)			
-	FF0578	PES filter with prefilter	0.2
FF0579	FF0580	PES filter with prefilter	0.45
FF0581	-	PES filter with prefilter, white caps	0.45
FF0582	FF0583	Glass fibre filter	1.5
FF0584	-	Glass fibre filter, white caps	1.5
FF0585	FF0586	PES filter without prefilter	0.45
FF0587	FF0588	PES filter with PTFE prefilter*	0.45
FF0589	FF0590	Glass fibre filter with PTFE prefilter*	0.7
FF0591	-	White glass fibre filter with PTFE prefilter*	0.7
FlipMate 100 System (Sample size 100 mL, Qty/pk: 50)			
FF0411	FF0592	PES filter with prefilter	0.45
FF0593	FF0594	Glass fibre filter	1.5
FF0595	FF0596	PES filter with prefilter	0.2
FF0597	FF0598	Acid-washed glass fibre filter without prefilter	0.7
FF0599	FF0600	Acid-washed glass fibre filter without prefilter	>10
FF0601	FF0602	PES filter with prefilter*	0.45
FF0603	FF0604	Sintered polyethylene filter	40-90

*Certified for trace metals

Manifold

Filter multiple 50 or 100 mL samples simultaneously.

Simple to use—Multiple manifolds fit together and allow the attached vacuum to be controlled easily with valves.

GhostWipes®

Undertake sample preparation with ease

- For surface lead and beryllium dust (ASTM E 1792 and D 7707 compliant).
- Sturdy wiping material that holds together on the roughest surfaces. Premoistened in deionised water and ready for sample collection, all you need to do is just wipe the area that you want to digest.
- Wipes breakdown completely and won't clog your sample uptake capillary or nebuliser. Moreover this results in complete dispersion of analytes and uniform recoveries.

Catalogue ref.	Description	Size (mm)	Qty/pk
HG0577	GhostWipe premoistened wipes Individually wrapped	150 x 150	200
HG0578	GhostWipe premoistened wipes Individually wrapped.	150 x 150	500
HW1003	GhostWipe premoistened wipes Individually wrapped.	150 x 150	1000
HG0579	GhostWipe dry wipes	200 x 250	100

Accessories

Catalogue ref.	Description	Qty/pk
HD0123	Dust sampling template, isolates a 100 x 100 mm testing area	250
HD0124	Dust sampling template, isolates a 300 x 300 mm testing area	100
PT0494	UltimateCup™ digestion cup, 50 mL, linerless cap.	500

Ghost wipe kit components



www.rowe.com.au

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