

Metals Digestion / Sample Prep

Environmental Express® UltimateCup™ Digestion Cups

Disposable, convenient, and easy to use

- Volume certified for accuracy within 0.5% at all graduation lines
- Certified for low metals background
- Graduated design allows you to dilute, digest, and store sample in the same vessel
- Improved functional design:
 - Increased wall strength for digesting with concentrated acids
 - Tighter screw threads engage FlipMate® system more securely
 - Reduced outer diameter allows a better fit in your digestion block
 - Wobble-free—deeper dimple on bottom of cup adds extra stability
 - Defined graduation lines, on both sides of the cup with no vent lines, makes reading easier
- Certified for 68 elements—the most on the market



UltimateCup digestion cups are specifically designed for your Environmental Express HotBlock® or AutoBlock® system. Manufactured from clarified homopolymer polypropylene, the cups provide a higher working temperature (max 130°C) and greater chemical resistance. A “one-cup” system greatly reduces labor and costs associated with metals preparation. After digestion is complete, the sample can be brought to volume and capped for storage, eliminating time-consuming transfer steps and possible contamination entry points.

Rack Lok cup models feature tabs molded into the side of the cup that fit into grooves on the sample rack, locking the caps in place for easier opening with one hand.

Description	Total capacity	Graduations	Dimensions	Cap	Qty/pk	Cup Catalog number	Replacement cap Catalog number
UltimateCup digestion cups							
50-mL digestion cup with cap	63 mL	To 50 mL	30 x 106 mm	Green, with PE foam liner	500	UC475-GN	UC474-GN
				White, with PE foam liner	500	UC475-WH	UC474-WH
				Natural, no liner	500	UC475-NL	UC474-NL
				Orange, no liner	500	UC475-OR	UC474-OR
				Pink, no liner	500	UC475-PK	UC474-PK
				Red, no liner	500	UC475-RD	UC474-RD
				Yellow, no liner	500	UC475-YL	UC474-YL
50-mL digestion cup, no cap	63 mL	To 50 mL	30 x 106 mm	—	500	UC474	—
50-mL Rack Lok cup with cap	63 mL	To 50 mL	30 x 106 mm	White, with PE foam liner	500	UC482-WH	UC474-WH
50-mL Rack Lok cup, no cap	63 mL	To 50 mL	30 x 106 mm	Natural, no liner	500	UC482-NL	UC474-NL
50-mL Rack Lok cup, no cap	63 mL	To 50 mL	30 x 106 mm	—	500	UC483	—
Other digestion cups							
15-mL digestion cup with cap	18 mL	To 15 mL	17.5 x 105 mm	Clear, no liner	1000	SC415	—
15-mL digestion cup, no cap				—	1000	SC414	—
100-mL digestion cup with cap	125 mL	To 100 mL	46 x 100 mm	White, with PE foam liner	225	SC490	SC492-C
100-mL digestion cup, no cap				—	225	SC491	—
250-mL digestion cup with cap	330 mL	To 250 mL	76 x 83 mm	White, with PE foam liner	180	SC425	—

UltimateCup Certificate of Analysis

Element	Results (ug/L)	Element	Results (ug/L)	Element	Results (ug/L)	Element	Results (ug/L)	Element	Results (ug/L)	Element	Results (ug/L)
Ag	<0.5	Cr	<5	Ho	<0.5	Nd	<0.5	Sb	<1	Tm	<0.5
Al	<50	Cs	<0.5	In	<0.5	Ni	<2	Sc	<0.5	U	<0.1
As	<2	Cu	<1	Ir	<0.5	Os	<0.5	Se	<2	V	<5
Au	<1	Dy	<0.5	K	<300	P	<50	St	<100	W	<0.5
B	<15	Er	<0.5	La	<0.5	Pb	<2	Sm	<0.5	Y	<0.5
Ba	<2	Eu	<0.5	Li	<1	Pd	<0.5	Sn	<5	Yb	<0.5
Be	<0.1	Fe	<100	Lu	<0.5	Pr	<0.5	Sr	<5	Zn	<7.5
Bi	<0.5	Ga	<1	Mg	<30	Pt	<2	Ta	<0.5	Zr	<2
Ca	<300	Gd	<0.5	Mn	<5	Rb	<0.5	Tb	<0.5	Lot Number: 1802043	
Cd	<0.5	Ge	<0.5	Mo	<0.5	Re	<0.5	Te	<1		
Ce	<0.5	Hf	<0.5	Na	<250	Rh	<0.5	Ti	<5		
Co	<0.5	Hg	<0.0005	Nb	<0.5	Ru	<0.5	Tl	<0.1		

Environmental Express® Ultimate Clean™ Cup

The cleanest digestion cup on the market today

- The moment each cup comes off the mold, it is carefully capped and handled to avoid common means of contamination
- Specially designed packaging ensures all cups arrive ready to use in any clean environment setting
- Certified for 68 elements at part-per-billion and part-per trillion levels—the most robust certification on the market today

Using the improved features of the UltimateCup™ digestion cup, (shown on page 1), the 50-mL Ultimate Clean cup has been designed specifically for trace metals analysis. The digestion cup is manufactured from clarified homopolymer polypropylene, a reliable material Environmental Express' customers have come to know and trust. Homopolymer polypropylene assures higher working temperatures and greater chemical resistance than commonly used copolymer polypropylene.



Description	Qty/pk	Catalog number
Ultimate Clean cup, 50 mL, with natural cap	150	UCC000-50

Ultimate Clean Cup Certificate of Analysis is available online

Element	Results (ug/L)	Element	Results (ug/L)	Element	Results (ug/L)	Element	Results (ug/L)	Element	Results (ug/L)	Element	Results (ug/L)
Ag	<0.1	Cr	<1.5	Ho	<0.1	Nd	<0.25	Sb	<0.5	Tm	<0.1
Al	<50	Cs	<0.1	In	<0.1	Ni	<0.25	Sc	<0.2	U	<0.1
As	<0.2	Cu	<0.5	Ir	<0.1	Os	<0.1	Se	<0.25	V	<0.5
Au	<.25	Dy	<0.1	K	<50	P	<10	Si	<50	W	<0.1
B	<15	Er	<0.25	La	<0.1	Pb	<0.25	Sm	<0.25	Y	<0.1
Ba	<1	Eu	<0.1	Li	<0.5	Pd	<0.1	Sn	<1	Yb	<0.1
Be	<0.1	Fe	<25	Lu	<0.1	Pr	<0.1	Sr	<2.5	Zn	<2
Bi	<0.1	Ga	<1	Mg	<30	Pt	<0.5	Ta	<0.1	Zr	<1
Ca	<200	Gd	<0.1	Mn	<0.5	Rb	<0.1	Tb	<0.1	Lot Number: 17009027	
Cd	<0.2	Ge	<0.1	Mo	<0.1	Re	<0.1	Te	<0.5		
Ce	<0.2	Hf	<0.1	Na	<50	Rh	<0.1	Ti	<0.5		
Co	<0.1	Hg	<0.0005	Nb	<0.1	Ru	<0.1	Tl	<0.1		

Specialty Digestion Vessels

Get the right vessel for your needs

- Achieve digestions above 130°C with borosilicate glass, quartz, or PFA vessels
- For digestions involving large volumes of concentrated acids for long periods of time (>50% and >6 hours), select glass or quartz material
- When digesting samples for silicon, PFA vessels are the best choice
- Vessels do not work with Environmental Express® FilterMate® or FlipMate® filtration devices



A B C D E

Key	Description	Working volume	Total capacity	Dimensions (H x dia)	Qty/pk	Catalog number
A	Borosilicate glass cup	50 mL	98 mL	7.0" x 1.3" (178 x 33 mm)	1	SC440
B	Disposable glass vial, with cap	50 mL	48 mL	3.7" x 1.1" (94 x 29 mm)	432	SC432
C	Quartz tube, grade GE124	50 mL	55 mL	4.0" x 1.3" (102 x 33 mm)	1	SC442
D	Borosilicate glass tube	50 mL	55 mL	4.5" x 1.3" (113 x 33 mm)	1	SC441
E	PFA cup, with screw cap	50 mL	62 mL	5.1" x 1.2" (129 x 30 mm)	1	SC545
—	PFA cup	100 mL	125 mL	4.1" x 1.7" (103 x 42 mm)	1	SC640
—	PFA vial with threaded closure	60 mL	64 mL	5.2" x 1.1" (132 x 29 mm)	1	SC546
—	Borosilicate glass cup	100 mL	230 mL	7.0" x 1.8" (178 x 45 mm)	1	SC641
—	Borosilicate glass cup	100 mL	130 mL	4.0" x 1.8" (102 x 45 mm)	1	SC643

Disposable Snap-Cap Digestion Cups

Attached lid opens and closes in a snap!

- Graduated design for easy measuring and dosing
- Durable polypropylene construction stands up to temperature fluctuations and offers good chemical resistance
- SC601 is compatible with CPI's digestion block



Description	Total capacity	Qty/pk	Catalog number
100-mL digestion cup	130 mL	250	SC600
70-mL digestion cup	80 mL	400	SC601

Ribbed Watch Glasses

Achieve partial reflux during digestion

- Easily place and remove watch glass with center stem
- Free of contaminants—made of polypropylene



Description	Diameter	Qty/pk	Catalog number
For 15-mL digestion cups	19.5 mm	1000	SC417
For 50-mL digestion cups	44 mm	1000	SC505
For 100-mL digestion cups	52 mm	500	SC610

Disposable Reflux Cap

Center hole for smooth addition of reagents

- Fits 50-mL digestion cup (UC475)
- Achieve equal reflux as the ribbed watch glasses at left



Description	Diameter	Qty/pk	Catalog number
For 50-mL digestion cups	34 mm	1000	SC506

Polycarbonate Transfer Racks

Resists heat and acids

- For Environmental Express® HotBlock® and AutoBlock® Plus systems

Description	Sample size	Fits HotBlock or AutoBlock Plus model	Catalog number
(1) 12-place rack	50 mL	C6002	C6050
(1) 18-place rack	50 mL	SC100, SC154, SC2050-35 and SC2050-54	SC200†
(3) 18-place racks	50 mL	AB4001 and AB4230	ABP163
(1) 15-place and (1) 10-place rack	100 mL	SC150 and SC2100-25	SC225
(1) 15-place and (2) 10-place racks	100 mL	SC151 and SC2100-35	SC235
(3) 32-place racks	15 mL	SC196 and SC2015-96	SC296

†SC200 also accommodates Rak Lok cups.



Foam Storage Rack

Economically store samples

- Store up to twenty-five 50-mL digestion cups per rack
- Stackable to save space



Sample capacity	Dimensions (L x W x H)	Qty/pk	Catalog number
25 x 50 mL digestion cups	10" x 10" x 1"	5	SC700

Polypropylene Storage Rack

Store and organize up to 24 samples

- Durable polypropylene design stacks easily for storage
- Use with tubes up to 30 mm in diameter



Sample capacity	Tube diameter	Catalog number
24 x 50 mL digestion cups	Up to 30 mm	SC446

Plastic-Coated Wire Storage Rack

Prepare and transfer larger samples with ease

- Holds eighteen 100-mL digestion cups



Description	Catalog number
Wire storage rack	SC7150

Programmable Digestion Timer

Automatically turns HotBlock system on or off

- Just plug into a standard 120 VAC wall outlet and set



Voltage	Catalog number
120 VAC	SC305

Thermometers

Monitor temperature of individual samples

- Adjustable PTFE holder keeps thermometer firmly in place
- Switch °F/°C units
- Includes NIST-traceable certificate from supplier
- Thermometer stem is coated with PTFE to help in corrosive environments



Description	Maximum temperature	Fits cup model	Catalog number
Thermometer for 50-mL cups	150°C	UC475	SC980
Thermometer for 100-mL cups	150°C	SC490	SC981
Thermometer for 15-mL cups	150°C	SC415	SC985
High-temperature thermometer	250°C	SC432, SC545	SC983