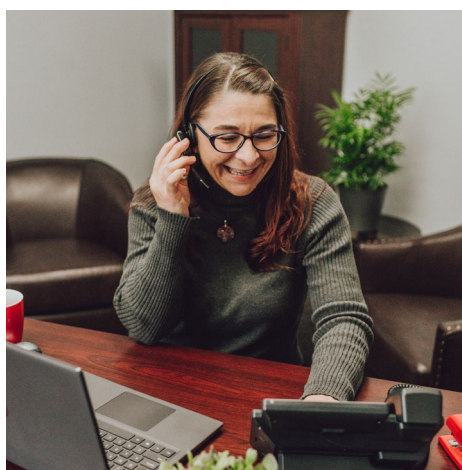




Drug Analysis Consumables Your Lab Needs



Your preferred supplier of chromatography
instruments & consumables



Consumables You **NEED** **WHEN** You Need Them

Say goodbye to delayed orders and unresponsive vendors that can delay your projects and jeopardize your outcomes. Chrom Tech is a team of chromatography consumable specialists who expedite procurement of the supplies you need. Get back to the work that matters!

In the pages that follow, you'll see applications relating to drug analysis (e.g., Fentanyl and EtG/EtS), safety in the lab, and optimizing sample prep. As an authorized distributor of industry-leading manufacturers, we have supplies for all your toxicology and forensic needs. Purchase the consumables that help ensure successful analyses in any chromatography application.

Why Shop With Us?

- ✓ **Responsive & Proactive Ordering**
We listen with your future in mind.
- ✓ **Self-Proclaimed Chromatography Nerds**
Product specialists, not just salespeople.
- ✓ **Obsessed with Meeting Your Timelines**
More time doing work that matters.

WHAT'S INSIDE?

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Your Chromatography Product Specialist

Hi, I'm Michelle Iverson, President of Chrom Tech. Tell us what you're trying to accomplish, and we'll help you know what to buy. We know that you're often up against a timeline, so our team works hard to get you what you need right away. For 40 years, Chrom Tech has been providing technical expertise to help you get the right supplies for your application - right on time.



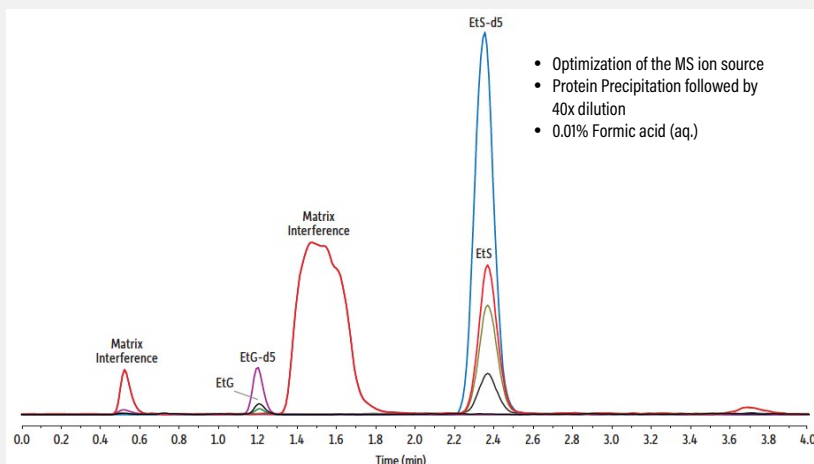
Strategies for the Analysis of EtG and EtS in Urine Resolving from Matrix Interferences

- ➔ Optimize instrument setup—MS ion source
- ➔ Optimize sample prep—Protein precipitation followed by dilution
- ➔ Reduce formic acid in aqueous mobile phase



RAPTOR ETG/ETS PRODUCTS	
PART NO	DESCRIPTION
RTK-9325A12	Raptor EtG/EtS, 2.7 μm, 2.1 x 100 mm, ea
RTK-25809	UltraShield UHPLC precolumn filter, 0.2 μm frit, ea

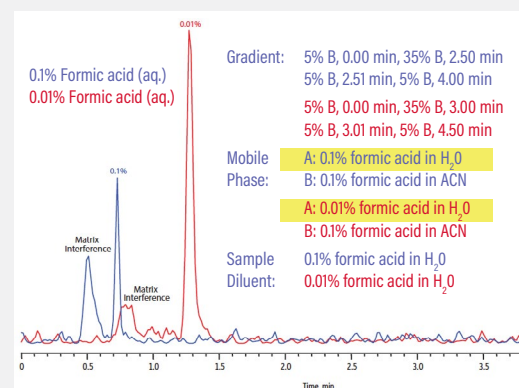
The Raptor EtG/EtS column resulted in good sensitivity and separation for the analysis of EtG and EtS in urine with the combined analytical strategy:



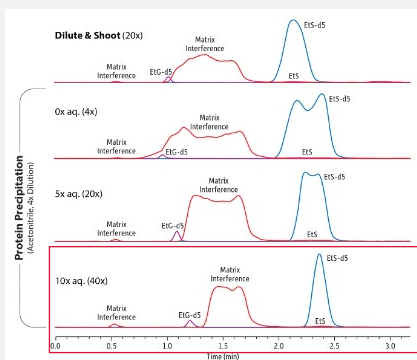
Optimization of MS Ion Source

It's important to recognize that optimized ionization source settings for highly organic mobile phases may not be optimal for the ionization of compounds that elute under high aqueous mobile phase conditions.

Improvement in EtG response by dropping the aqueous mobile phase concentration of formic acid from 0.1% to 0.01%



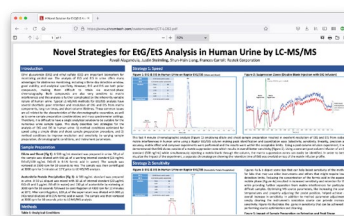
Impact of Sample Preparation on Retention and Peak Shape



When simple dilute and shoot sample preparation is not enough, protein precipitation followed by dilution can be useful.

Adding an aqueous dilution factor of 20x with 0.01% formic acid, and then ultimately 40x, significantly improved chromatographic performance, allowing for confident quantitation.

INSIDE THE APP



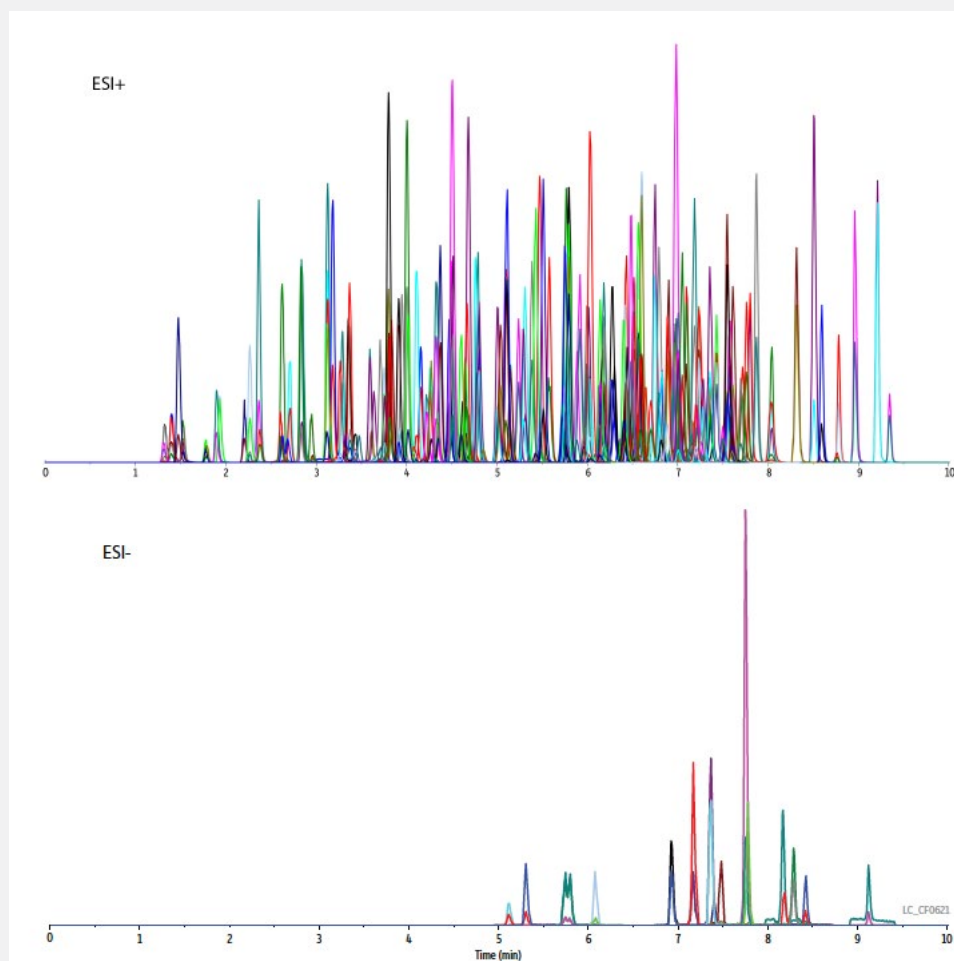
Authorized Distributor



“The Big Pain”: Pain-Free Methods for Analyzing 231 Multiclass Drugs and Metabolites by LC-MS/MS

- ➔ 231 compounds, 40+ isobars, 10 drug classes, 22 ESI-compounds in 10 minutes with 1 column
- ➔ Achieve excellent separation of critical isobars with no tailing peaks
- ➔ Run fast and reliable high-throughput LC-MS/MS analyses with increased sensitivity using simple mobile phases

Fast 10-minute analysis of 231 drugs and metabolites on a Raptor™ Biphenyl column by LC-MS/MS.



Column	Raptor™ Biphenyl (RTK-9309A12) 100 mm x 2.1 mm ID
Particle Size:	2.7 µm
Guard Column:	Raptor™ Biphenyl EXP® 5mm, 2.1 mm ID, 2.7 µm (RTK-9309A0252)
Temp.:	30 °C
Sample	
Diluent:	Water
Inj. Vol	5 µL
Mobile Phase	
A:	Water + 0.1% formic acid + 2mM ammonium formate
B:	Methanol + 0.1% formic acid + 2 mM ammonium formate
Detector	MS/MS
Ion Mode:	ESI+/ESI-
Mode:	Scheduled MRM
Instrument	UHPLC

Notes

1. Positive and negative polarity data were collected simultaneously from a single injection.
2. Ibuprofen, fosphenytoin, and topiramate degrade quickly in solution.
3. Levorphanol and dextrophan are enantiomers and are not resolved.
4. Escitalopram is a pure enantiomer and citalopram is a racemic mixture of both enantiomers.
5. DMAA consists of 4 stereoisomers, 2 of which are partially resolved.
6. Doxepin and desmethyldoxepin consist of a mixture of *cis/trans* isomers. The isomers are fully resolved and the retention time identifies the main isomer component.
7. Laornoxicam, meloxicam, etodolac, oxaprozin, indomethacin, and mefenamic acid can be detected by positive or negative polarity. The polarity chosen in this chromatogram provides optimal response.

RESTEK® RAPTOR BIPHENYL PRODUCTS

PART NO	DESCRIPTION
RTK-9309A12	Restek Raptor Biphenyl, 100 mm x 2.1 mm ID, 2.7 µm
RTK-9309A0252	Restek Raptor Biphenyl EXP Guard Column Cartridge
RTK-25808	Restek EXP Guard Cartridge Holder includes fitting & ferrules

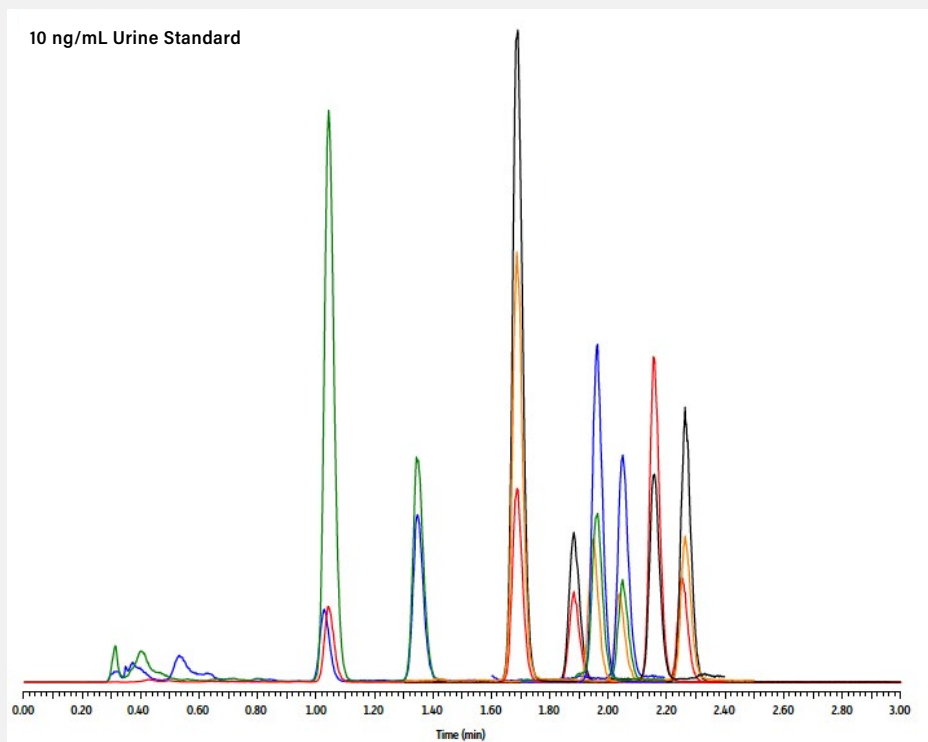
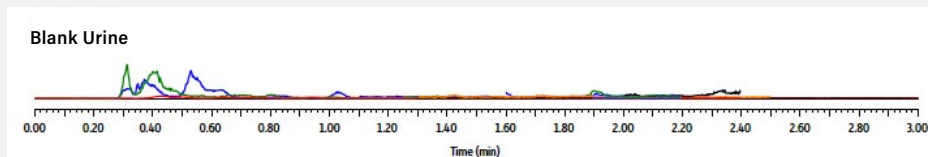
INSIDE THE APP



Analysis of Fentanyl and Its Analogues in Human Urine by LC-MS/MS

- ➔ Simple dilute-and-shoot method for quantitative analysis
- ➔ Fast, 3.5-minute analysis of fentanyl and related compounds
- ➔ Rugged and sensitive with acceptable accuracy and precision for urine samples

The Raptor Biphenyl column effectively separated all target compounds in urine with no observed matrix interferences.



1. Norfentanyl-d5
2. Norfentanyl
3. Remifentanyl
4. Acetyl fentanyl-¹³C₆
5. Acetyl fentanyl
6. Alfentanil
7. Fentanyl-d5
8. Fentanyl
9. Carfentanil-d5
10. Carfentanil
11. Butyryl fentanyl
12. Sufentanil-d5
13. Sufentanil

Column	Raptor™ Biphenyl (RTK-9309552) 50 mm x 2.1 mm ID		
Particle Size:	5 µm		
Pore Size:	90 Å		
Guard Column:	Raptor™ Biphenyl EXP® 5mm, 2.1 mm ID, 5 µm (RTK-930950252)		
Temp.:	40 °C		
Sample			
Diluent:	70:30 Water:methanol		
Inj. Vol	5 µL		
Mobile Phase			
A:	0.1% Formic acid in water		
B:	0.1% Formic acid in methanol		
Time (min)	Flow (mL/min)	%A	%B
0.00	0.4	70	30
2.50	0.4	30	70
2.51	0.4	70	30
3.50	0.4	70	30
Detector	MS/MS		
Ion Mode:	ESI+		
Mode:	MRM		
Instrument	UHPLC		

Notes
Human urine was fortified at 10 ng/ml with target analytes. An 80 µL urine aliquot was mixed with 320 µL of 70:30 water:methanol solution (5-fold dilution) and 10 µL of internal standard solution (40 ng/mL in methanol) in a Thomson SINGLE STEEP filter vial (RTK-25895). After filtering through the 0.2 µm PVDF membrane, 5 µL was injected for analysis.

INSIDE THE APP



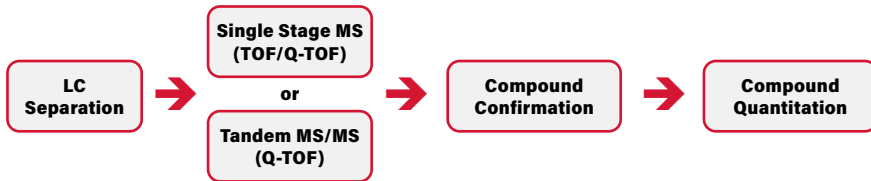
RESTEK® RAPTOR BIPHENYL PRODUCTS

PART NO	DESCRIPTION
RTK-9309552	Restek Raptor Biphenyl, 50 mm x 2.1 mm ID, 5 µm
RTK-930950252	Restek Raptor Biphenyl EXP Guard Column Cartridge
RTK-25808	Restek EXP Guard Cartridge Holder includes fitting & ferrules



Analysis of Synthetic Fentanyl Opioids in Serum using Captiva EMR-Lipid Sample Preparation by LC-QTOF

- ➔ Highly selective, efficient lipid/matrix removal without analyte loss
- ➔ Removes lipids based on size exclusion and hydrophobic interaction
- ➔ Ensure minimal ion suppression of target analytes



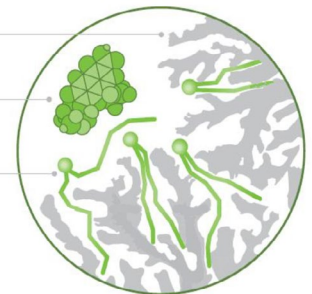
QTOF targeted/untargeted screening workflow which begins with an LC separation, followed by data acquisition in single stage MS or tandem MS/MS mode, followed by compound confirmation using Mass Hunter Qualitative Software in conjunction with the Personal Compound Database and Library, and compound quantitation.

Captiva EMR eluant was dried under nitrogen and reconstituted in starting gradient conditions.

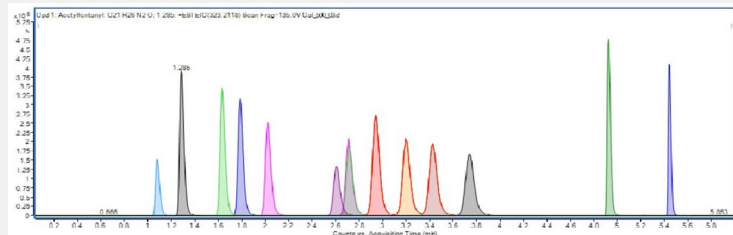


Size exclusion - Unbranched hydrocarbon chains (lipids) enter the sorbent; bulky analytes do not

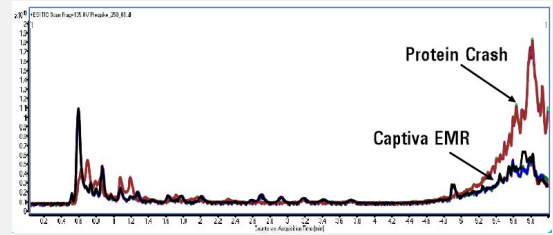
Sorbent chemistry - Lipid chains that enter the sorbent are trapped by hydrophobic interactions



Overlaid EICs of the LC Separation of the 14 Analytes in Study

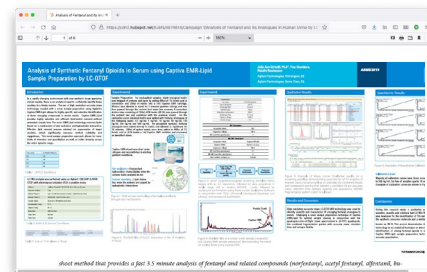


Protein Crash vs. Captiva EMR Overlay



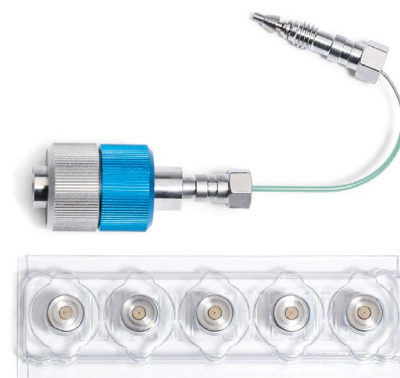
AGILENT CAPTIVA EMR-LIPID		
PART NO	DESCRIPTION	QTY
5190-1002	Captiva EMR-Lipid, 1 mL, 40 mg	100/pk
5190-1000	Captiva EMR-Lipid, 1 mL, 96 well-plate, 40 mg	ea
5190-1001	Captiva EMR-Lipid, 1 mL, 96 well-plate, 40 mg	5/pk
5190-1003	Captiva EMR-Lipid, 3 mL, 300 mg	100/pk
5190-1004	Captiva EMR-Lipid, 6 mL, 600 mg	50/pk

INSIDE THE APP

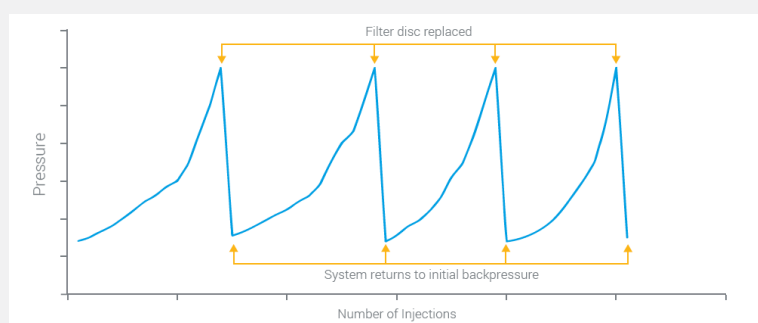


Agilent InfinityLab Inline Filter

- ➔ Less particles clogging the column means more uptime
- ➔ Replace filter discs in less time, with a touchless design to avoid contamination
- ➔ 100+ replacements with the InfinityLine holder vs. only a few with standard inline filters means lower operational costs
- ➔ No risk of leaks or over-tightening which reduces troubleshooting time in the lab, a click sound tells you when the filter is tight up to 1300 bar



Accelerated lifetime test shows how inline filter captures particles.



Touchless packaging to avoid potential contamination

Uniquely designed packaging lets you insert the filter disc into filter housing without touching it to avoid potential contamination.

AGILENT INLINE FILTER ASSEMBLIES	
PART NO	DESCRIPTION
5067-1603	InfinityLab Quick Change inline filter assembly for UHPLC (incl. 5 filter discs 2.1 mm ID, 0.2 µm porosity), with 90 mm flexible capillary
5067-1602	InfinityLab Quick Change inline filter assembly for HPLC (incl. 5 filter discs 4.6 mm ID, 0.5 µm porosity), with 90 mm flexible capillary
5067-1610	Filter discs, 2.1 mm ID, 0.2 µm porosity, 5/pk
5067-1611	Filter discs, 2.1 mm ID, 0.5 µm porosity, 5/pk
5067-1612	Filter discs, 4.6 mm ID, 0.2 µm porosity, 5/pk
5067-1613	Filter discs, 4.6 mm ID, 0.5 µm porosity, 5/pk
5067-1614	Filter discs, 4.6 mm ID, 2.0 µm porosity, 5/pk

Chrom Tech Syringe Filters

SYRINGE FILTERS (100/PK)							
MEMBRANE	AQUEOUS	ORGANIC	LOW PROTEIN BINDING	COLOR	PORE SIZE	13 mm	30 mm
Nylon	●	●		Blue	0.2 µm	F13-NY020	F30-NY020
					0.45 µm	F13-NY045	F30-NY045
PTFE (hydrophobic) (polytetrafluoroethylene)		●		Pink	0.2 µm	F13-PT020	F30-PT020
					0.45 µm	F13-PT045	F30-PT045
PVDF (hydrophilic) (polyvinylidene difluoride)	●	●	●	Yellow	0.2 µm	F13-PV020	F30-PV020
					0.45 µm	F13-PV045	F30-PV045
PES (polyethersulfone)	●	●	●		0.2 µm	F13-PS020	F30-PS020
					0.45 µm	F13-PS045	F30-PS045
CA (cellulose acetate)	●		●	Green	0.2 µm	F13-CA020	F30-CA020
					0.45 µm	F13-CA045	F30-CA045
PP (polypropylene)	●	●		Orange	0.2 µm	F13-PP020	F30-PP020
					0.45 µm	F13-PP045	F30-PP045
Glass Fiber	●	●		Purple	1.2 µm	F13-GF120	F30-GF120
					0.7 µm	F13-GF070	F30-GF070

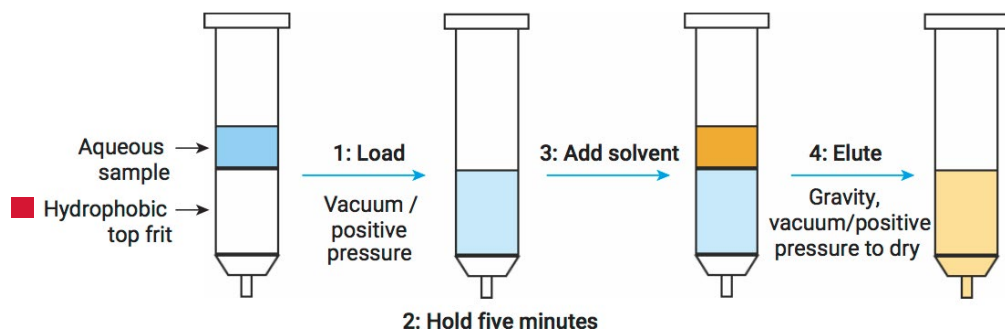


SPECIFICATIONS	
Effective Filtration Area:	13 mm: 1.09 cm ² 30 mm: 5.39 cm ²
Holdup Volume:	13 mm: <25 µl 30 mm: <200 µl
Sample Volume:	13 mm: < 10 mL 30 mm: < 200 mL
Inlet/Outlet Connections:	Female luer lock inlet, male slip luer outlet
Max Temperature:	122 °F (50 °C)
Max Pressure:	87 PSI at 20 °C



Drug of Abuse Analysis in Human Urine Using Agilent Chem Elut S Supported Liquid Extraction by LC/MS/MS

Agilent Chem Elut S Workflow



TECH TIP

The hydrophobic top frit is capable of holding aqueous samples for 60 minutes or more until positive pressure is applied.

TECH TIP

When loading sample, apply 2-3 PSI pressure to drive the aqueous sample in to the sorbent until no visible liquid is left in the wells.

Sample Preparation Procedure

1. Load the aqueous sample into the Chem Elut S (plate or cartridge) with gentle positive pressure.

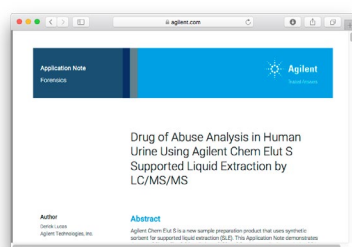


289-0004



288-0001

INSIDE THE APP



Scan the QR code to view the entire app note, which demonstrates the use of Agilent's new sample preparation product Chem Elut S 96-well plates for the quantitative analysis of 24 drugs of abuse (DOAs) in human urine by LC/MS/MS.

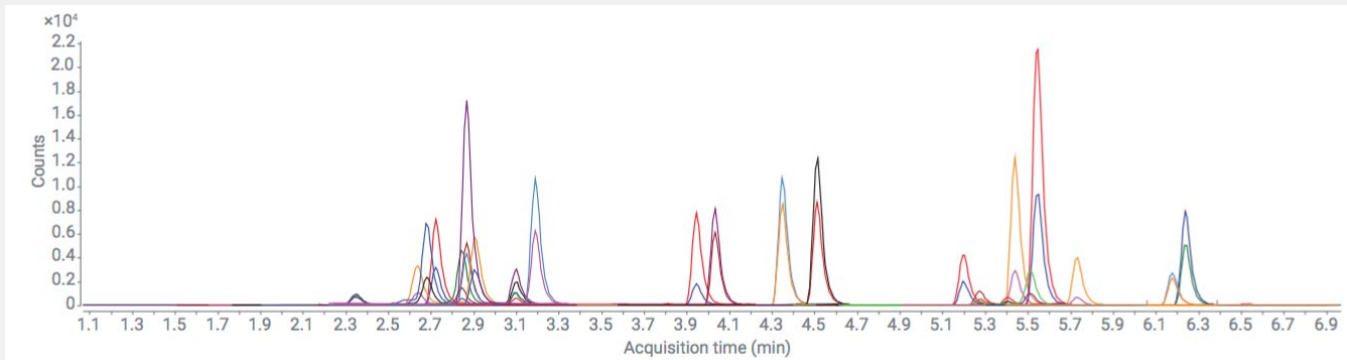
POSITIVE PRESSURE MANIFOLD

PART NO	DESCRIPTION
289-0004	Cerex System 48-II Positive Pressure Processor
288-0001	Cerex System 96 Processor, includes gas supply adapter and sealing gasket

AGILENT SYNTHETIC CHEM ELUT S

PART NO	DESCRIPTION
5610-2003	2 mL, Chem Elut S 96-well plate, 200 µL sample
5610-2004	2 mL, Chem Elut S 96-well plate, 400 µL sample
5610-2005	1 mL Chem Elut S tube, 200 µL, 100/pk
5610-2006	3 mL Chem Elut S tube, 400 µL, 100/pk
2610-2007	6 mL Chem Elut S tube, 1 mL sample, 100/pk
WELL PLATE ACCESSORIES	
96-6009	2 mL, square, 96 well plate, rimmed, 50/cs
96-0662	Pierceable cap mat for 2 mL square, 50/pk
BST-9790	2 mil PTFE sealing tape

LC/MS/MS MRM chromatogram overlay of 24 drugs at 1 ng/mL in urine after Agilent Chem Elut S treatment.



2. Equilibrate the sample in Chem Elut S sorbent for five minutes.
3. Add a water immiscible solvent mixture to extract the analytes.
4. Elute the organic solvent with gravity, then applying positive pressure vacuum to drain the plate. It is better to do two elution steps in smaller volumes than a single large volume elution.
5. Evaporate and reconstitute in initial mobile phase conditions for LC/MS/MS analysis.



CONCENTRATORS & EVAPORATORS

PART NO	DESCRIPTION
279-0050	CEREX Concentrator 48, includes collection rack
500149	Evaporator without a head (head required)

BENCHMARK VORTEXERS

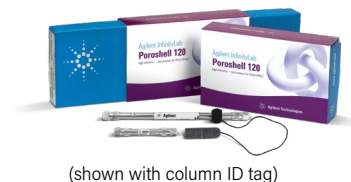
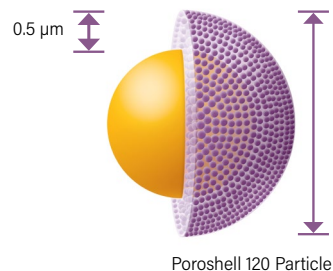
PART NO	DESCRIPTION
BV1003	BenchMixer V2 Vortex Mixer with flip top cup head
BV1010	BenchMixer XL Multi-Tube Vortexer (includes 50x12 mm tube rack)

TARGET DRUGS & RETENTION TIME

Analyte	Retention Time (min)	Analyte	Retention Time (min)	Analyte	Retention Time (min)
Codeine	2.35	Phentermine	3.10	Oxazepam	5.27
Oxycodone	2.68	MDEA	3.19	Verapamil	5.44
Amphetamine	2.64	Heroin	3.81	Lorazepam	5.41
Amphetamine-d3 (IS 1)	2.64	Cocaine	3.94	Alprazolam	5.51
MDA	2.72	Cocaine-d3 (IS 2)	3.94	Methadone	5.54
Hydrocodone	2.84	Meperidine	4.03	Temazepam	5.73
Methamphetamine	2.87	Trazodone	4.35	Proadifen	6.24
MDMA	2.91	PCP	4.51	Dizepam	6.18
Strychnine	3.10	Nitrazepam	5.20	Diazepam-d3 (IS 3)	6.18

LC PARAMETERS

Analytical Column	Agilent Poroshell 120 EC-C8, 2.7 µm, 2.1 × 100 mm (695775-906) Agilent Poroshell 120 EC-C18, 2.1 × 5 mm, 2.7 µm, guard column (821725-911)
Column Temperature	50 °C
Injection Volume	2 µL
Mobile Phase A	5 mM ammonium formate + 0.1% formic acid in water
Mobile Phase B	0.1% formic acid in ACN
Flow Rate	0.5 mL/min
Gradient	Hold at 5% B to 0.5 minutes, Ramp to 50% B at 5 minutes, Ramp to 95% B at 6 minutes, Hold at 95% B to 7 minutes
Post Time	2 minutes

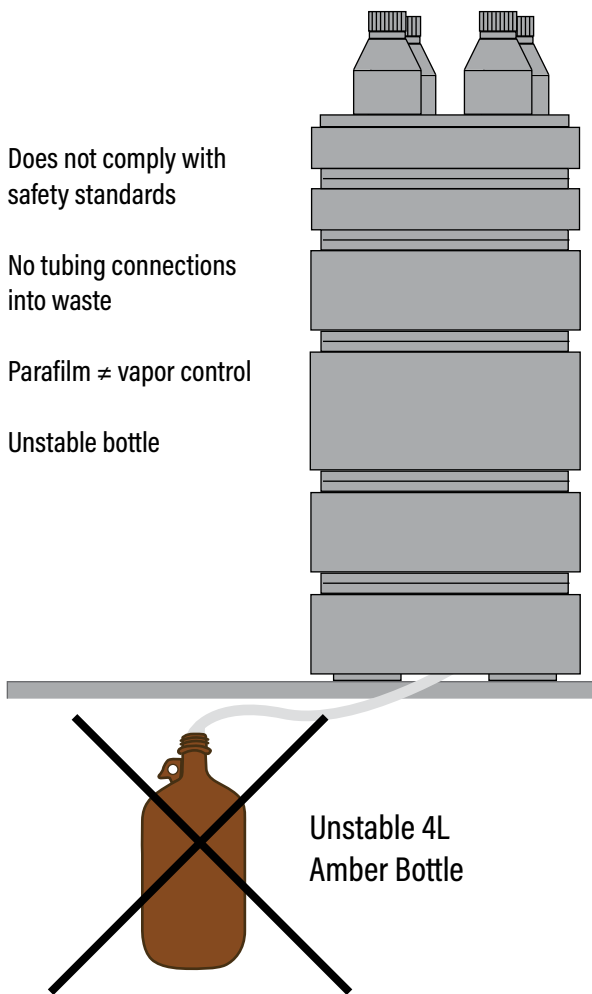


Have you ever been written up for improper collection of solvent waste?

Consider this: **For the cost of an HPLC column, you could be compliant.** Plus, not collecting solvent waste properly poses a risk to the people and property in your lab.

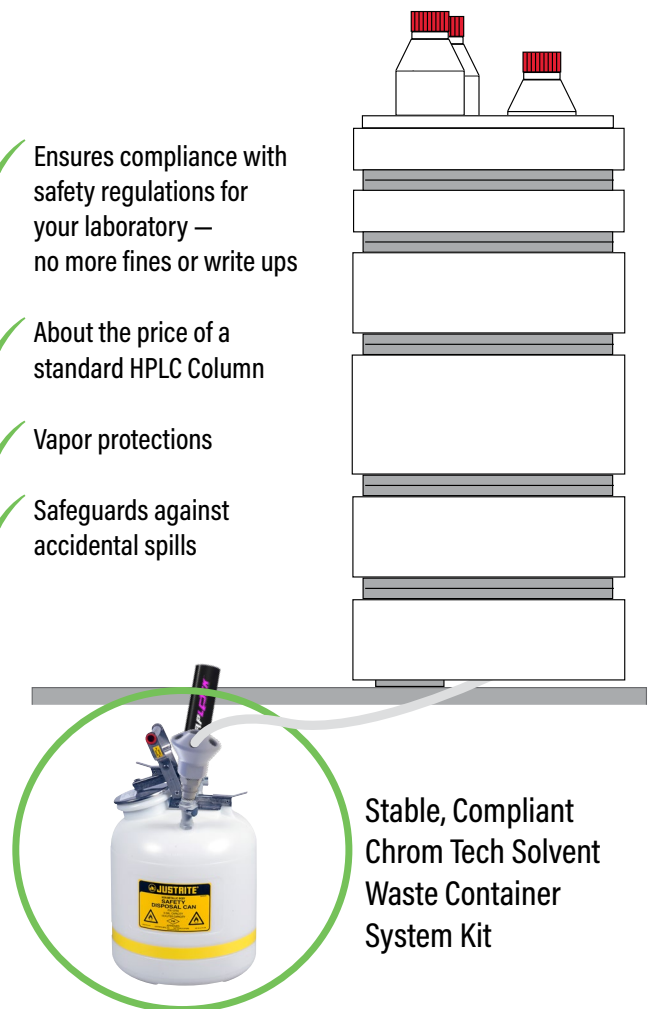
The Problem

- ✗ Does not comply with safety standards
- ✗ No tubing connections into waste
- ✗ Parafilm ≠ vapor control
- ✗ Unstable bottle



The Solution

- ✓ Ensures compliance with safety regulations for your laboratory — no more fines or write ups
- ✓ About the price of a standard HPLC Column
- ✓ Vapor protections
- ✓ Safeguards against accidental spills



Stable, Compliant Chrom Tech Solvent Waste Container System Kit

Choosing the right system for solvent waste doesn't have to be complicated.

How many HPLCs are in your lab and are they adjacent to each other? We can accommodate multiple HPLCs into one 6-port manifold.

TECH TIP

Polypropylene or **Stainless Steel**? Choose **Polypropylene (EPDM O-Ring) quick connects** for typical reversed phase applications (economical and recommended option). Choose **Stainless Steel (PTFE O-Ring) quick connects** for normal phase or GPC applications.

SAFETY WASTE CONTAINER KIT—2 OR 5 GALLON KITS

6-PORT MANIFOLD, CONNECTIONS, AND ACCESSORIES INCLUDED IN KIT

- Organized laboratory space
- Remove harmful gases — protect lab personnel from adverse health effects
- Tubing connections for the following tubing sizes:

1/16" OD (Qty 2)
1/8" OD (Qty 2)
1/4" ID (Qty 2)
Plugs to close off any unused ports (Qty 4)



MA-601
6-Port PP Waste Manifold



EF-100
Organic Vapor Filter

CHROM TECH SOLVENT WASTE CONTAINER COMPLETE SYSTEM KIT

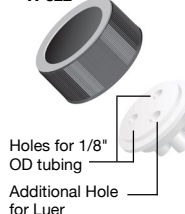
PART NO	DESCRIPTION
SAFETY-2PP	2 gal PE Solvent Waste Containment System w/PP quick connects
SAFETY-5PP	5 gal PE Solvent Waste Containment System w/PP quick connects
SAFETY-2SS	2 gal PE Solvent Waste Containment System w/SS quick connects
SAFETY-5SS	5 gal PE Solvent Waste Containment System w/SS quick connects

SAFETY KIT ACCESSORIES (NOT INCLUDED IN KIT)

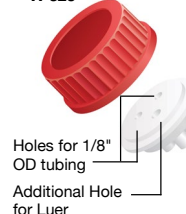
IDEX BOTTLE CAPS, PLUGS & ADAPTERS

- Safely store your HPLC solvents
- Ports for 1/8" tubing and a luer taper
- Plugs and adapters for unused ports

A-622



A-620



A-626



A-629



IDEX BOTTLE CAPS

PART NO	PORT QTY	PORT STYLE	MATERIALS
IDEX GL38 BOTTLE CAPS			
A-622	3	(2) 1/8" OD Tubing, (1) Luer Taper	PTFE, Polypropylene
IDEX GL45 BOTTLE CAPS			
A-620	3	(2) 1/8" OD Tubing, (1) Luer Taper	PTFE, Polypropylene

IDEX PLUGS & ADAPTERS

PART NO	DESCRIPTION
A-626	Bottle Cap Plug for luer hole, UHMWPE
A-628	Bottle Cap Plug for 1/16", 1/8" or 3/16" hole, UHMWPE
A-629	Filter Bottle Cap Plug for 1/16", 1/8" or 3/16" hole, UHMWPE with 20 µm stainless steel frit

SAFETY ACCESSORIES

PART NO	DESCRIPTION
JT-84003	HPLC Can Spill Basin with 5 g spill capacity
JT-08500	Antistatic flexible wire with dual alligator clips, 3'



JT-84003



JT-08500

Increased Accuracy and Time Savings

- ➔ Eliminate variability in standard concentrations for calibration curve accuracy
- ➔ Lock down methods to reduce opportunity for user error
- ➔ Maximize throughput
- ➔ Lower costs/sample—dramatic time, labor, and solvent savings

Demand for Accurate Measurements

The Microlab 600 Advanced version has features that will allow you to lock down your process, so even when under oath, you can be confident in your methodology. The Microlab 600 Diluter/Dispenser makes measurements more reliable.

Less User Variation with the MicroLab 600 Diluter/Dispenser

Eliminate variation between users, inconsistencies with different solution types, and performance variation at different elevations with the MicroLab 600.

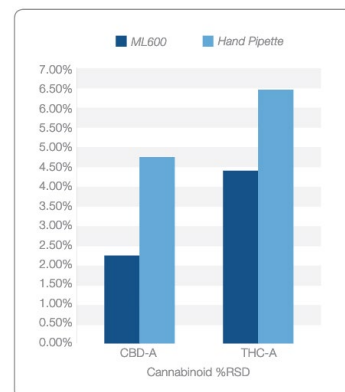


Fig. 1: % Relative Standard Deviation testing comparison between the ML600 and traditional hand pipetting methods for CBD-A and THC-A. The Microlab 600 can reduce %RSD by more than 50% compared to hand pipetting methods.



50 µL ClickSure Tip



1 mL ClickSure Tip

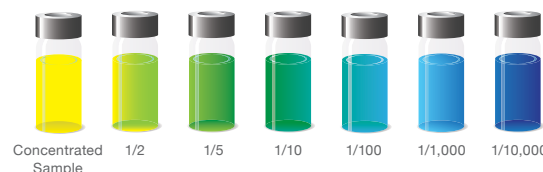
HAMILTON 600 DILUTERS & DISPENSERS	
PART NO	DESCRIPTION
MICROLAB 600 DILUTERS	
ML615-DIL	MicroLab 615 Basic Dual Syringe Diluter
ML625-DIL	MicroLab 625 Advanced Dual Syringe Diluter*
MICROLAB 600 DISPENSERS	
ML615-DIS	MicroLab 615 Basic Dual Syringe Dispenser
ML625-DIS	MicroLab 625 Advanced Dual Syringe Dispenser*
DISPOSABLE TIP HAND PROBE	
ML625-DTHP	MicroLab 600 Diluter with Disposable Tip Hand Probe
CLICKSURE TIPS FOR DTHP	
235537	50 µL, non-sterile ClickSure Tips, 960 tips, racked
235543	50 µL, non-sterile ClickSure Tips, 960 tips, bulk
235539	1 mL, non-sterile ClickSure Tips, 960 tips, racked
235545	1 mL, non-sterile ClickSure Tips, 960 tips, bulk

*Advanced Systems come with 2 GB SD card with advanced wizards, programs. Basic models can be upgraded to advanced software with purchase of SD card.

More configurations, plus disposable tip versions are available for all systems. View website for more options.

How Does it Work?

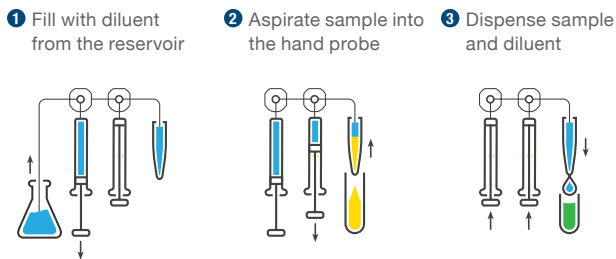
- Step 1. Program sample and diluent volume.
- Step 2. Trigger the hand probe to fill left syringe with diluent and aspirate sample into the hand probe with the right syringe.
- Step 3. Trigger the hand probe to dispense the sample and then the diluent into the vial to complete the dilution and wash the tube for the next sample.



The Microlab 600's Dual Syringe Diluter configuration uses two syringes to create up to a 1:50,000 dilutions in a single step

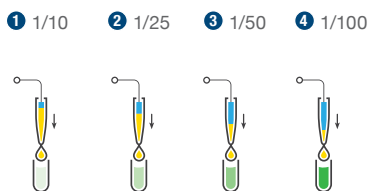
Dilution Wizard

Dual Syringe Dilution



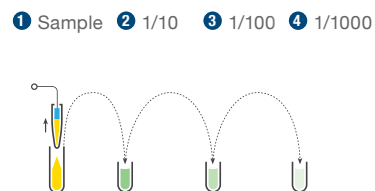
Serial Dilution (Programmed)

Repeat the steps for single or dual dilution with varying dilution ratios and the same final volume.

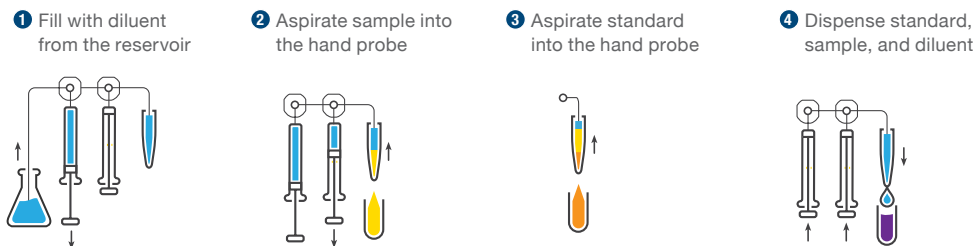


Serial Dilution (Tube to Tube)

Repeat the steps for single or dual dilution and use the resulting dilution as the sample for the next dilution.

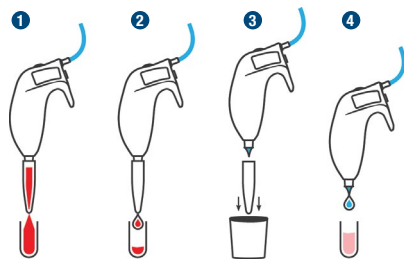


Multi Sample Dilution (or Internal Standard Addition)



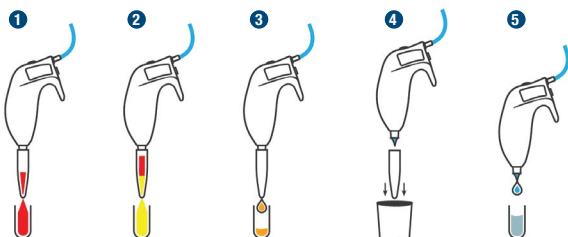
Dilution Options

Single Sample Dilution



- 1 The trigger is pressed and the sample is aspirated into the tip using the right syringe while diluent is drawn into the left syringe.
- 2 The trigger is pressed again and the sample is dispensed from the tip.
- 3 The tip is ejected.
- 4 Another trigger dispenses the diluent to complete the dilution.

Multi-Sample Dilution



- 1 Aspirate Sample 1 into ClickSure Tip.
- 2 Aspirate Sample 2. Repeat with additional solutions.
- 3 Dispense Samples.
- 4 Discard ClickSure Tip.
- 5 Dispense Diluent.

Popular Vials - Premium Autosampler Vials without the Premium Price

11 mm Wide Mouth Crimp Top Vials & Closures (100/pk)



				<i>Insert is pre-assembled in vial at an economical price.</i>
	2 mL	2 mL w/Graduated Marking	2 mL Assembled w/200 µL pulled point insert (1,000/cs)*	
MATERIAL	CLEAR GLASS	AMBER GLASS	CLEAR GLASS	AMBER GLASS
PART NO	CTV-1104	CTV-1104A	CTV-1104GS	CTV-1104GSA
	CLEAR GLASS			
	CTV-1104-02			
	PRE-LOADED VIALS ASSEMBLED W/INSERTS			

11 MM ALUMINUM CLOSURE			
PART NO	SEPTA	COLOR	QTY
CTC-1108*	PTFE/Nat. Rubber	Silver	1,000/pk
CTC-1109	PTFE/Seal	Silver	1,000/pk
CTC-1109B	PTFE/Seal	Blue	1,000/pk
408007	PTFE/Nat. Rubber	Red	100/pk
515011	PTFE/Silicone	Silver	100/pk
551011	10 mil PTFE	Poly Crimp	100/pk

*Most popular crimp top closure

11 mm Snap Seal Vials & Closures (100/pk)

	2 mL	2 mL w/Graduated Marking	300 µL w/ Fused Insert	1.5 mL High Recovery	300 µL	500 µL	700 µL	1.5 mL
MATERIAL	CLEAR GLASS	AMBER GLASS	CLEAR GLASS	AMBER GLASS	CLEAR GLASS	CLEAR GLASS	PE	PP
PART NO	CTV-1108	CTV-1108A	CTV-1108GS	CTV-1108GSA	CTV-1830	CTH-1800	CTV-1203	CTV-1206
							PP	PP
							CTV-1211	CTV-1108P

11 mm SNAP TOP CLOSURES, 100/PK			
SEPTA	CLEAR	BLUE	GREEN
10 mil PE, (1000/pk)	CTC-5200M	—	—
PTFE/Silicone	CTC-1305	CTC-1305B	CTC-1305G
PTFE/Silicone w/slit	CTC-1370	CTC-1370B	CTC-1370G



TECH TIP

All glass vials available as deactivated. Contact Chrom Tech for a quote.

11 mm Standard Opening Crimp Top Vials (100/pk) & Closures

	2 mL	2 mL w/Graduated Marking	1.5 mL High Recov	2 mL Assembled	2 mL Assembled
MATERIAL	CLEAR GLASS	AMBER GLASS	CLEAR GLASS	AMBER GLASS	CLEAR GLASS
INSERT	N/A	N/A	N/A	N/A	N/A
PART NO	CTV-1100	CTV-1100A	CTV-1100GS	CTV-1100GSA	CTH-1400
	CTV-1100M*				
			CLEAR GLASS		CLEAR GLASS
			200 µL conical		300 µL flat bottom
			CTV-1100-02*		CTV-1100-03*
	PRE-LOADED VIALS ASSEMBLED W/INSERTS				

Insert is pre-assembled in vial at an economical price.

*1,000/cs

VIAL SAMPLE PACKS

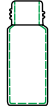
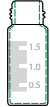
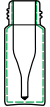

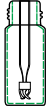

Request a Free Vial Sample Pack

Our vial sample pack features our top selling liquid and gas chromatography vials and caps. Compare our popular vials to find the best option for your lab.



Popular Vials - Premium Autosampler Vials without the Premium Price

9 mm Screw Thread Vials & Closures (100/pk)

						
	2 mL	2 mL w/Graduated Marking	300 µL w/ Fused Insert	1.5 mL Recovery Vial	200 µL Insert w/Spring	
MATERIAL	CLEAR GLASS	AMBER GLASS	CLEAR GLASS	AMBER GLASS	CLEAR GLASS	CLEAR GLASS
PART NO	CTV-1209	CTV-1209A	CTV-1209GS	CTV-1209GSA	CTV-1209-03	—
CONVENIENCE PACK (CP) INCLUDES VIAL & STANDARD PRE-ASSEMBLED CAP & SEPTA, 100/PK						
PTFE/Silicone (CTC-0952)	CP-0952	CP-0952A	CP-0952GS	CP-0952GSA	CP-0952-03*	—
PTFE/Silicone w/Slit (CTC-0955)	CP-0955	CP-0955A	CP-0955GS	CP-0955GSA	CP-0955-03*	CPH-0955-MSQ
PTFE/Silicone/PTFE (CTC-0957)	CP-0957	CP-0957A	CP-0957GS	CP-0957GSA	—	—
PTFE/Rubber (CTC-0956)	CP-0956	CP-0956A	CP-0956GS	CP-0956GSA	—	—

*Includes vial and **bonded** pre-assembled cap and septa

Insert is pre-assembled in vial at an economical price.

Storage Vials, Caps & Seals, Vial Racks

SCREW CAP VIALS						
CLEAR	QTY	AMBER	QTY	VOLUME	DESCRIPTION	FITS CAPS
408213	1,000/cs	404810	1,000/cs	2 mL	12 x 32 mm	8-425
CTV-4802	1,000/cs	CTV-4802A	1,000/cs	4 mL	15 x 45 mm	13-425
CTD-1760	1,000/cs	CTD-1760A	1,000/cs	8 mL	17 x 60 mm	15-425
CTD-2595	144/cs	—	—	32 mL	25 x 95 mm	24-400

SOLID TOP LINED CAPS			
PART NO	FITS CAPS	MATERIAL	QTY
536008	8-425	PTFE/F217	100/pk
536009	9 mm	PTFE/F217	100/pk
536013	13-425	PTFE/F217	100/pk
410209-T	15-425	PTFE	200/pk
410214-T	24-400	PTFE	100/pk

True Taper® Collection Plates

- ➔ Eliminate transfer step between larger volume and smaller volume well plates with tapered-bottom 1 and 2 mL TrueTaper plates
- ➔ Holds sample volumes as small as 3 µL

TRUE TAPER COLLECTION PLATES						
PART NO	VOLUME	WELL FORMAT	WELL BOTTOM	DIAMETER OF WELL	RIMMED	QTY
96-0001T	1 mL	Round	50 µL True Taper	6.5 mm	No	25/pk
96-0002T	2 mL	Square	100 µL True Taper	—	No	25/pk
Pre-Slit Purple Silicon Cap Mat						
96-0663P	—	Round	—	6.5 mm	—	5/pk



No need to adjust your needle height. Our TrueTaper plates maintain the same 45 mm overall height as our standard 1 and 2 mL collection plates.



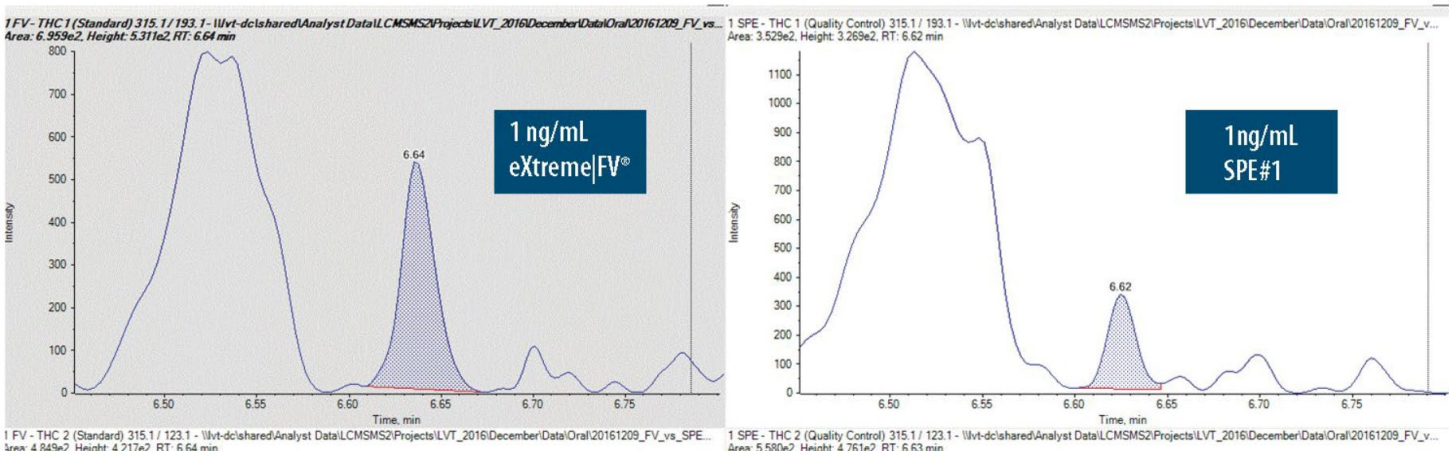
Sample Preparation for THC Testing in Oral Fluid with Thompson Filter Vials

- ➔ Filter, vial and cap - all in one design
- ➔ Fast and easy sample preparation
- ➔ Reduce background interference with higher peak height

Increase efficiency and decrease solvent waste by utilizing Thomson Filter Vials for a fast and seamless sample preparation. The filtration process from sample pipetting to autosampler ready only requires 15 seconds.



FV-3020X

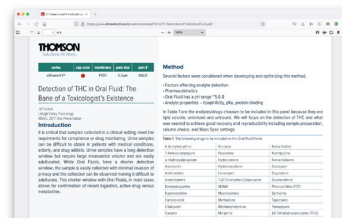


THOMSON FILTER VIALS (100/PK)						
MEMBRANE	PORE SIZE	CAP COLOR	STANDARD ¹	LOW EVAP ²	EXTREME ¹	NANO ³
Nylon	0.2 µm	Black	FV-1020	FV-1020LE	FV-1020EX	FV-1020N
	0.45 µm	Pink	FV-1045	FV-1045LE	FV-1045EX	—
PTFE (polytetrafluoroethylene)	0.2 µm	Green	FV-2020	FV-2020LE	FV-2020EX	FV-2020N
	0.45 µm	Blue	FV-2045	FV-2045LE	FV-2045EX	FV-2045N
PVDF (polyvinylidene difluoride)	0.2 µm	Red	FV-3020	FV-3020LE	FV-3020EX	FV-3020N
	0.45 µm	Yellow	FV-3045	FV-3045LE	FV-3045EX	FV-3045N
PES (polyethersulfone)	0.2 µm	Grey	FV-6020	—	FV-6020EX	FV-6020N

- 1) Standard & Extreme includes: Pre-slit PTFE/Silicone Septa Snap Cap attached to a Plunger Filter, outside PP shell vial (250 µL dead volume, 450 µL max volume).
- 2) Low Evaporation includes: PTFE/Silicone Septa Crimp Cap attached to a Plunger Filter, outside PP shell vial (250 µL dead volume 450 µL max volume).
- 3) Nano includes: Pre-slit PTFE/Silicone Septa Snap Cap attached to a Plunger Filter, outside PP shell vial (10 µL dead volume, 250 µL max volume).

FEATURES	Standard	Low Evap	eXtreme	nano
450 µL max volume, 120 µL dead volume	●	●	●	
250 µL max volume, 10 µL dead volume				●
Pre-slit PTFE/Silicone Snap cap	●		●	●
Low evaporation PTFE/Silicone Crimp cap		●		
Multi-layered filtration			●	

INSIDE THE APP



Glass Crimp Cap Headspace Vials (20 mm)



20 MM CRIMP CLOSURES, 100/PK

SEPTA	ALUMINUM SEALS
Cap w/PTFE/Silicone	408077
Cap w/PTFE/Butyl	408234

VIAL ONLY, 100/pk

Chrom Tech Flat Bottom
Chrom Tech Round Bottom

20 mL	10 mL	20 mL	10 mL
CLEAR	CLEAR	CLEAR AMBER	CLEAR AMBER
CTV-2375	CTV-2246	CTV-2375T CTV-2375AT	CTV-2346T CTV-2346AT

AGILENT HEADSPACE CRIMP VIALS & 20 MM CLOSURES

PART NO	DESCRIPTION	COLOR	MATERIAL	QTY
5182-0838	10 mL flat bottom vial, 20 mm crimp	Clear	Glass	100/pk
5182-0837	20 mL flat bottom vial, 20 mm crimp	Clear	Glass	100/pk
5183-4477	20 mm crimp closure, PTFE/Sil	Silver	Aluminum	100/pk



AGILENT COMBIPAL HEADSPACE SCREW TOP VIALS

PART NO	DESCRIPTION	COLOR	MATERIAL	QTY
5188-5392	10 mL, 23x46 mm vial, 18 mm screw top	Clear	Glass	100/pk
5188-6538	10 mL, 23x46 mm vial, 18 mm screw top	Amber	Glass	100/pk
5188-2753	20 mL, 23x75 mm vial, 18 mm screw top	Clear	Glass	100/pk
5188-6537	20 mL, 23x75 mm vial, 18 mm screw top	Amber	Glass	100/pk
5188-2759	18 mm Magnetic cap w/PTFE/silicone septa (top white, bottom blue)	Silver	Aluminum	100/pk
5190-3986	18 mm Certified cap w/high temperature septa	Silver	Steel	100/pk



Restek Leak Detector

Prevent small gas leaks from causing big problems

- ➔ Rapid charging and extended battery life—up to 12 hours between charges
- ➔ No more waiting for full charge—operational while charging

RESTEK LEAK DETECTOR

PART NO	DESCRIPTION
RTK-28500	Restek electronic leak detector



TECH TIP

It is best practice to use a leak detector daily to check critical seals (for example, septa, column nuts, reducing nuts, and fittings on gas lines).



DBS—Dried Blood Spot Card Punch

- ➔ Easy to use foot pedal operation
- ➔ No hand fatigue or blistering
- ➔ Reduces processing time
- ➔ Direct insertion of punched disc into collection plate well or tube
- ➔ Clear view of punching area

A pneumatic foot pedal-controlled “power punch” that increases speed and efficiency when loading dried blood spot samples into collection plates or tubes. The units require 90-110 PSI in order to properly operate; no electricity is required.

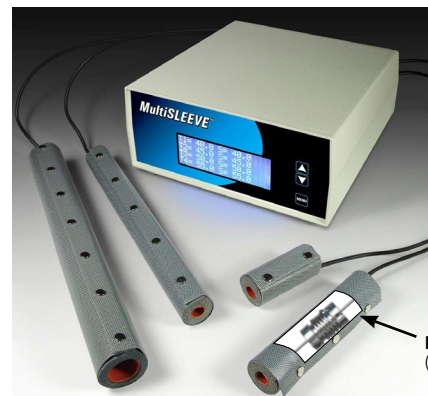


DRIED BLOOD SPOT CARD PUNCH

PART NO	DESCRIPTION
327300	3 mm Dried blood spot card punch, complete system
327400	4 mm Dried blood spot card punch, complete system
327500	5 mm Dried blood spot card punch, complete system
327600	6 mm Dried blood spot card punch, complete system

MultiSLEEVE™ Controller & Heaters

- ➔ Temperature range: 5 °C above ambient to 85 °C
- ➔ Tube style design: Unsnap for easy column insertion & removal
- ➔ Plug & Play smart heater technology, self calibrating
- ➔ Save money and space, the MultiSleeve can control up to 4 Hot Sleeves!
Heat 4 columns with one unit.



HX-038-EXP
(sold separately)

HOT SLEEVE & CONTROLLER

PART NO	DESCRIPTION
H-2004C	MultiSleeve 4 column heater controller, includes: MultiSLEEVE Controller, Power Supply, USB Cable, GUI, and Manual. Hot Sleeve+ sold separately. (Select up to 4 sleeves per unit)
H-2005CS	5 cm Hot Sleeve+, requires controller — sold separately
H-2010CS	10 cm Hot Sleeve+, requires controller — sold separately
H-2015CS	15 cm Hot Sleeve+, requires controller — sold separately
H-2025CS	25 cm Hot Sleeve+, requires controller — sold separately
H-2030CS	30 cm Hot Sleeve+, requires controller — sold separately
HX-038-EXP	3.8 µL Preheater, 1/16" OD x .005" ID x 30 cm, designed to work with EXP fitting

TECH TIP

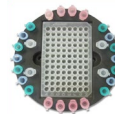
When heating your column above 40 °C, it's important to preheat your mobile phase so a temperature gradient does not occur along the column. Add 10 cm to your column length when ordering your Hot Sleeve and the HX-038-EXP preheater will fit inside the heated column jacket.

BenchMixer™ V2 Vortex Mixer

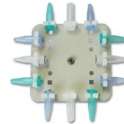
- ➔ Reversible top platform, cup or flat-dimpled surface
- ➔ Powerful motor for INSTANT vortexing
- ➔ Continuous or "touch" operation
- ➔ Variable speed from 200 - 3200 rpm
- ➔ Wide variety of accessories, for tubes up to 50ml



BV1000-COMBO



BV1000-H15



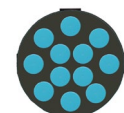
BV1000-H150



BV1000-H500



BV1003-150



BV1003-500



BENCHMIXER V2 SPECIFICATIONS

Speed	200 – 3200 rpm
Orbit	3 mm
Dimensions	5.2" x 6.7" x 6.7"
Weight	8.4 lbs
Warranty	2 years

BENCHMIXER V2 AND ATTACHMENTS

BV1003	BenchMixer V2 Vortex Mixer with flip top cup head
BV1000-COMBO	Combination head for one microplate & microtubes (38 x 1.5 & 28 x 0.5)
BV1000-H15	12 x 15 mL, horizontal
BV1000-H150	4 x 15 mL, horizontal
BV1000-H500	2 x 50 mL, horizontal
BV1000-150	12 x 15 mL
BV1003-500	5 x 50 mL

Centrifuges

MyFuge™ Mini

- ➔ Clik-N-Lok™ INSTANT rotor attachment
- ➔ Near silent operation
- ➔ Decelerates in just one second

C1008-R MYFUGE MINI SPECIFICATIONS

Speed	6,000 rpm / 2,000 xg
Capacity	8 x 1.5/2.0 mL, 32 x 0.2 mL, 4 x PCR Strips
Dimensions	5.7" x 6.9" x 4.5"
Weight	2.2 lbs
Warranty	2 years



TECH TIP

MyFuge Mini includes a second rotor for 0.2 mL PCR tubes and strips which is stored (together with the rotor removal key) in a convenient compartment on the bottom of the centrifuge.



Universal Centrifuge

- ➔ Advanced programming with automatic rotor recognition
- ➔ Available with refrigeration
- ➔ 12 x 15ml and 8 x 50 mL swing out capacity

Z326 UNIVERSAL CENTRIFUGE SPECIFICATIONS

Speed	200 – 18,000 rpm
Capacity	4 x 145 mL
Timer	up to 99 hr, 59 min
Dimensions	15.8" 18.9" x 14.1"
Weight	94.6 lbs



Available Adapters & Rotors

Z325-02MP



Z326-0650HS



Each tray can stack microplates up to a max loading height of 58 mm.

Z326-2420



Z326-1050



Shop the Largest Chromatography Portfolio in the Industry



A grid of 24 logos for various chromatography brands and suppliers, arranged in 8 rows and 3 columns. The logos include: Agilent Authorized Distributor, Benchmark, HAMILTON, IDEX Health & Science, Justrite, spectrum Chemical Mfg Corp (Trusted since 1971), Parker, RESTEK, Thermo Scientific, DURAN WHEATON KIMBLE, ASI, TELEDYNE SSI (Everywhere you look), Cole-Parmer (scientific experts), Imtakt USA, porvair sciences, Glas-Col (Tools for Scientists), CHROM, REGIS TECHNOLOGIES, INC., CONCISE SEPARATIONS, THOMSON INSTRUMENT COMPANY (Solutions At Work), TRAJAN, VIGI (Valco Instruments Co. Inc.), OPTIMIZE TECHNOLOGIES, and PICKERING LABORATORIES (CATALYST FOR SUCCESS).

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online ordering | www.chromtech.com

CT-Lit 2304_rev1