



# Sample Preparation

## Chromatography & Mass Spectrometry



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## Chromatography & Mass Spectrometry

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SpinFlow<sup>®</sup>



**High Throughput Micro-Filter Solution**

Please check page 50 for more details



# Chromatography & Mass Spectrometry



# Copure<sup>®</sup> High-Throughput Residue Analysis of Veterinary Drug Solution

In 2018, Biocomma launched the first HLB Lim Cartridges for Multi-Residue Analysis of Veterinary Drug which used to remove phospholipid. The sorbent is keeping optimization and win wide market recognition in terms of purification performance.

In order to further improve the detection efficiency, Biocomma continues to develop and innovate. In 2022, we launched Copure<sup>®</sup> 24-Well HLB Lim Plates which purify 24 samples with biocomma<sup>®</sup> Positive Pressure 24 Processor to realize simpler procedures and more reliable results. Copure<sup>®</sup> 24-Well HLB Lim Plates are the first choice of veterinary drug residue purification for high-throughput detection in laboratory.





# Copure<sup>®</sup> 24-Well HLB Lim Plates

## Features

- ✓ **High-Throughput:** 24 samples can be processed at a time, suitable for automated preparation workstations
- ✓ **Limited Matrix Effects:** HLB Lim media removes interference impurities such as fat, phospholipid and pigment quickly and efficiently
- ✓ **Good Stability:** reduce experimental error, higher reproducible data
- ✓ **Easy Operation:** skipped activation and equilibration steps, also, cooperate with biocomma<sup>®</sup> Positive Pressure 24 Processor to simplify the purification process

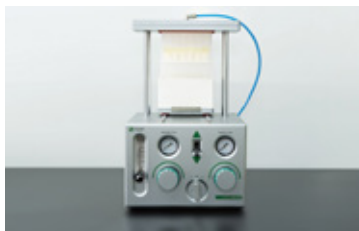


## Procedures

### Copure<sup>®</sup> 24-Well HLB Lim Plates



1. Pipette the sample supernatant to a Copure<sup>®</sup> 24-Well HLB Lim Plates.



2. Filter with biocomma<sup>®</sup> Positive Pressure 24 Processor.



3. Concentrate by biocomma<sup>®</sup> 24-Well Plate Intelligent Nitrogen Evaporator



4. Filter by biocomma<sup>®</sup> Syringe Filter and Sample Vials.



5. Liquid chromatography mass spectrometry analysis.

## TIC Chromatogram of 36 Drug Residue in Pork Samples

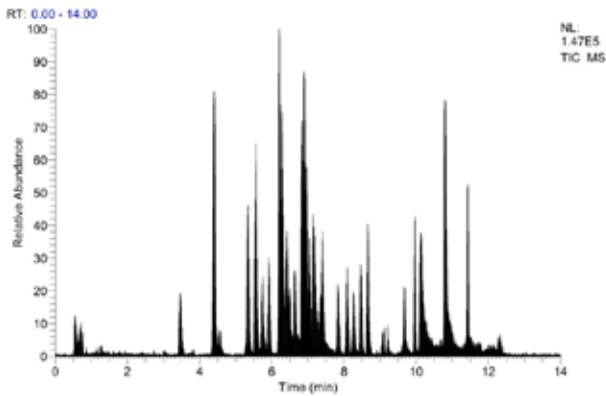


Figure 1 10 µg/kg Spike in Pork Samples

## TIC Chromatogram of 36 Drug Residue in Chicken Samples

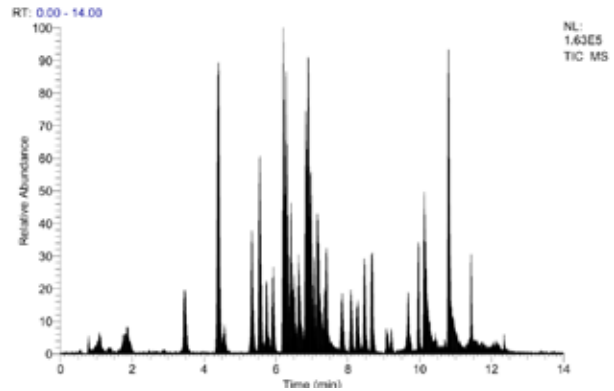


Figure 2 10 µg/kg Spike in Chicken Samples

## TIC Chromatogram of 36 Drug Residue in Shrimp Samples

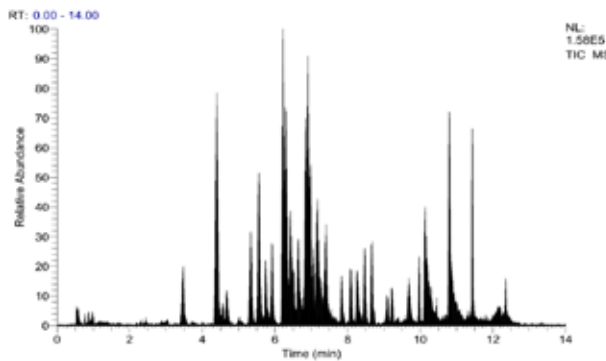


Figure 3 10 µg/kg Spike in Shrimp Samples

## Conclusion

The fast and high-throughput detection of 36 residue analysis of veterinary drug realized by Copure® 24-Well HLB Lim Plates. LC-MS/MS method for the determination of 36 drug residue of tetracyclines, sulfonamides and quinolones in pork, chicken and shrimp. The recovery rates of the two spike of 10 ng/g and 20 ng/g are between 60-110%, and the CV values is less than 10% (n=8), which meet the standard of experimental requirements.

## Ordering Information

Cat..#	Description	Qty.
COHLB24200-lim	Copure® 24-Well HLB Lim Plates	1 Pc/Box
SDC-3000-D	biocomma® Multi-Tube Vortex Mixer	1 Set/Ctn.
BCY2402	Positive Pressure 24 Processor	1 Set/Ctn.
24WP-S100	24 Well Collection Plate, square well	1 Pc/Box
BCN2403	24 Well Intelligent Nitrogen Evaporator, Flat Bottom Plate	1 Set/Ctn.



# Copure<sup>®</sup> High-Throughput Pesticide Residue Purification Solution

In 2010, Biocomma launched optional Copure<sup>®</sup> QuEChERS kits to establish standard-compliant detection methods in laboratory quickly for many years. The kits win wide market recognition in terms of purification performance.

In order to further improve the detection efficiency, Biocomma continues to develop and innovate. In 2022, we launched Copure<sup>®</sup> 24-Well Pesticide Residue Purification Plates which purify 24 samples with biocomma<sup>®</sup> Positive Pressure 24 Processor to realize simpler procedures and more reliable results. The purification does not need filtration by syringe filter any more, and the filtrate can be analysis directly.



# Copure<sup>®</sup> 24-Well Pesticide Residue Purification Plates

## Features:

- ✓ **High-Throughput:** 24 samples can be processed at a time, suitable for automated preparation workstations
- ✓ **High Recovery Rate:** equivalent to the recovery rate and purification effect of the traditional QuEChERS method
- ✓ **Good Stability:** reduce experimental error, higher reproducible data
- ✓ **No Syringe Filter Needed:** the sample filtered with 0.22µm nylon membrane can be tested on the machine directly
- ✓ **Easy Operation:** cooperate with biocomma<sup>®</sup> Positive Pressure 24 Processor to simplify the purification process

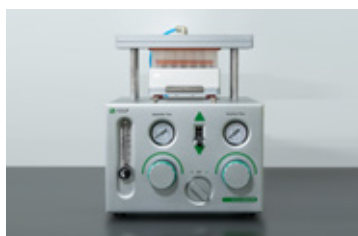


## Procedures

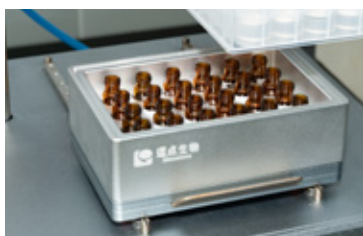
### Copure<sup>®</sup> 24-Well Pesticide Residue Purification Plates



1. Pipette the sample supernatant to a Copure<sup>®</sup> 24-Well Pesticide Residue Purification Plate.



2. Filter with biocomma<sup>®</sup> Positive Pressure 24 Processor, and the sample vials are placed in the sample vial tray to collect the sample.



3. Cap the vials, no syringe filter filtration needed.



4. Direct mass spectrometry analysis.

# Strawberry

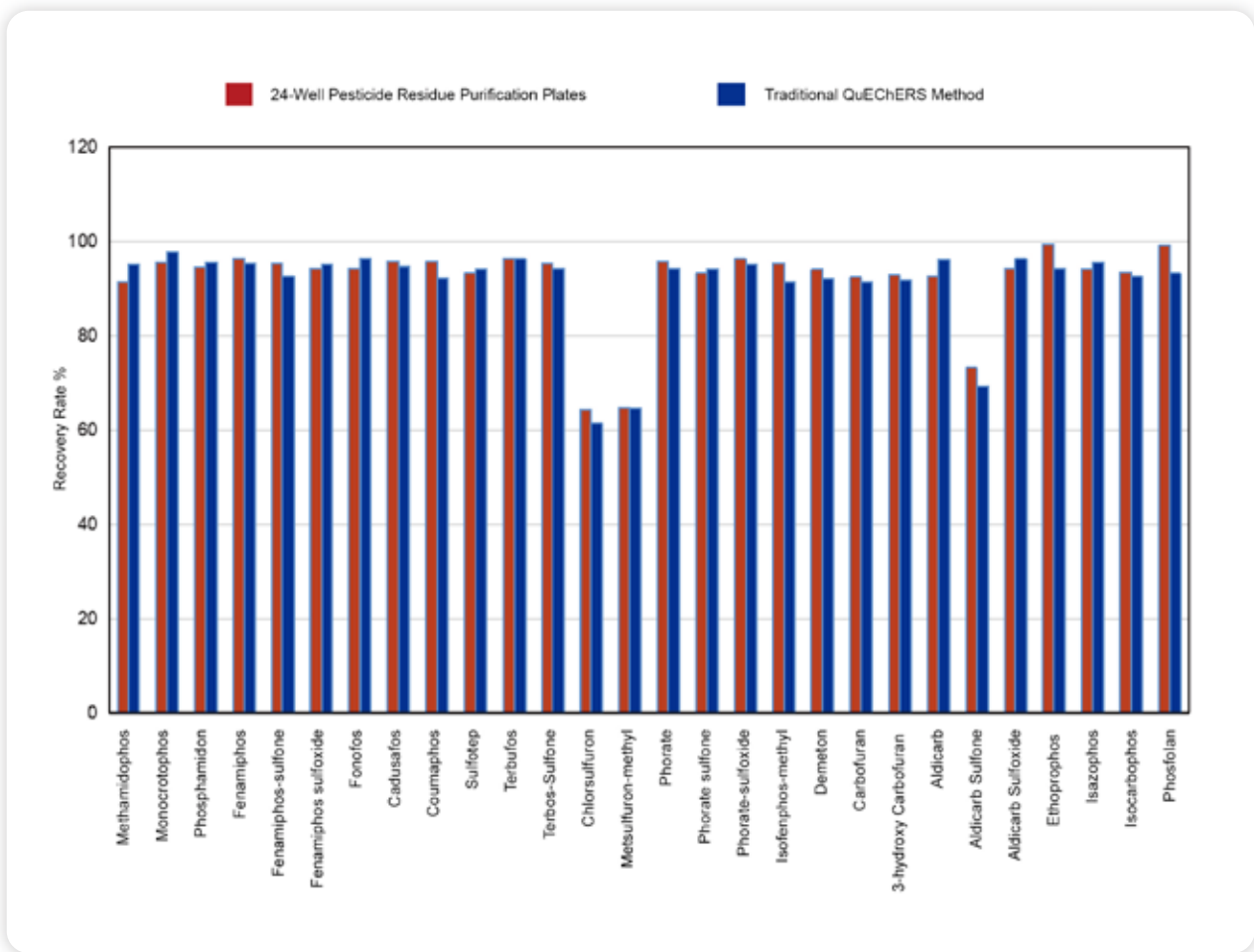


Figure 1 Recovery Rate Comparison of Multi-Pesticide Residues (5 ng/g)

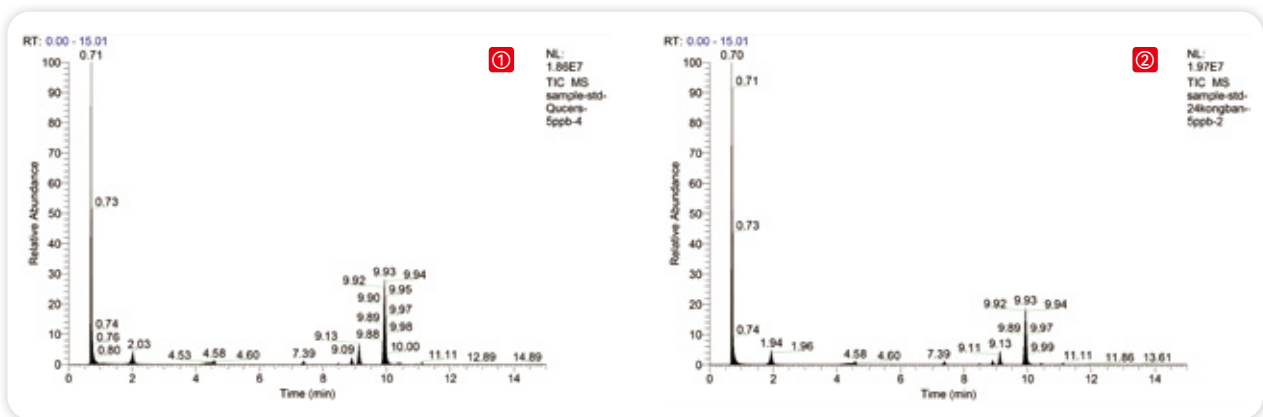


Figure 2 TIC Chromatograms of Multi-Pesticide Residues After Different Purification Methods (5 ng/g)

(① Traditional QuEChERS Method ② Copure® 24-Well Pesticide Residue Purification Plates)



# Conclusion

According to the results, the Copure® 24-Well Pesticide Residue Purification Plates are more stable. The simpler and more convenient operation reduces the detection time and significantly improve the detection efficiency.

## Ordering Information

Cat..#	Description	Qty.
NC24001	Copure® 24-Well Pesticide Residue Purification Plates (suitable for vegetables, fruits and edible fungi with light pigment)	1 Pc/Box
NC24002	Copure® 24-Well Pesticide Residue Purification Plates (suitable for vegetables, fruits and edible fungi with dark pigment)	1 Pc/Box
NC24003	Copure® 24-Well Pesticide Residue Purification Plates (suitable for grains, oil and nuts)	1 Pc/Box
NC24004	Copure® 24-Well Pesticide Residue Purification Plates (suitable for tea and spices)	1 Pc/Box
COQ050010H	Extraction Salts + 50 mL Tube: 4 g MgSO <sub>4</sub> , 1 g NaCl, 1 g Trisodium Citrate, 0.5 g Disodium Citrate	50 Pcs/Box
COQ050020H	Extraction Salts + 50 mL Tube: 6 g MgSO <sub>4</sub> , 1.5 g NaOAc	50 Pcs/Box
SDC-3000-D	biocomma® Multi-Tube Vortex Mixer	1 Set/Ctn.
NC24DZ	24-Well Vial Tray	1 Set/Ctn.
BCY2402	Positive Pressure 24 Processor	1 Set/Ctn.
BCN2403	24 Well Intelligent Nitrogen Evaporator, Flat Bottom Plate	1 Set/Ctn.



# Copure<sup>®</sup>

## Fast Mycotoxin Determination Solution

In 2016, Biocomma launched Copure<sup>®</sup> Multi-Functional Purification Column which adsorb quickly and selectively of lipids, organic acids, proteins, pigments and other impurities to realize fast purification. The purification columns win wide market recognition in terms of purification performance.

In order to further improve the detection efficiency, Biocomma continues to develop and innovate. In 2022, we launched Copure<sup>®</sup> 24-Well Multi-Functional Purification Plates which purify 24 samples with biocomma<sup>®</sup> Positive Pressure 24 Processor to realize more sensitive analysis, shorter instrument downtime and higher efficiency. Copure<sup>®</sup> 24-Well Multi-Functional Purification Plates are the first choice for quantitative detection needs in laboratory.



# Copure<sup>®</sup> 24-Well Multi-Functional Purification Plates

## Features:

- ✓ **High throughput:** process 24 samples in one time, suitable for automated sample preparation workstations.
- ✓ **High recovery rate:** good purification effect, no background interference, high recoveries
- ✓ **Good stability:** reduce experimental errors, highly reproducible experimental data.
- ✓ **Simple and fast:** the purification can be finished within 30 seconds. Achieve selective adsorption of impurities such as pigments, lipids, and proteins in sample.

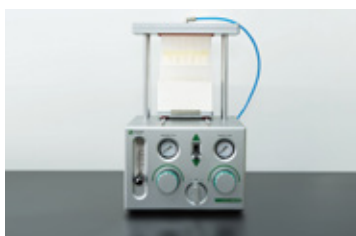


## Procedures

### Copure<sup>®</sup> 24-Well HLB Lim Plates



1. Pipette the sample supernatant to a Copure<sup>®</sup> 24-Well Multi-Functional Purification Plates.



2. Filter with biocomma<sup>®</sup> Positive Pressure 24 Processor.



3. Concentrate by biocomma<sup>®</sup> 24-Well Plate Intelligent Nitrogen Evaporator



4. Filter by biocomma<sup>®</sup> Syringe Filter and Sample Vials.



5. Liquid chromatography mass spectrometry analysis.



# Corn Flour

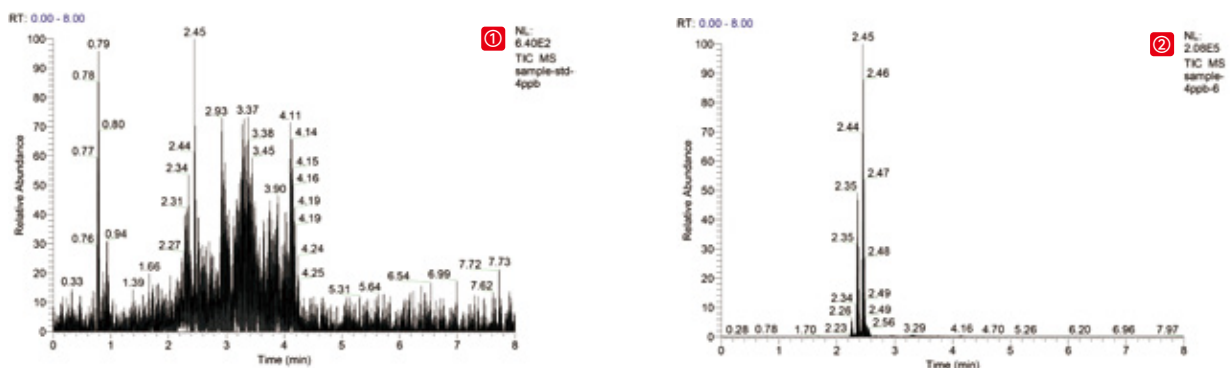


Figure 1 TIC Chromatograms of Corn Flour Sample  
 (① Before Purification ② After Purification by Copure® 226 Multifunctional Clean-Up Plate)

Test	Spike (ng/g)	Copure® 226 Multifunctional Clean-Up Plate	
		Recovery (% , n=24)	CV (%)
AFT B1	0.5	105	3.92
	1.0	101	2.41
AFT B2	0.5	102	4.12
	1.0	95.8	4.15
AFT G1	0.5	105	2.69
	1.0	104	4.13
AFT G2	0.5	101	4.28
	1.0	95.4	3.75

Based on Figure 1, the impurities are obviously adsorbed, therefore miscellaneous peaks are fewer in the TIC chromatogram. As result, the purified sample is cleaner, and the purification effect is better.

Based on Table 1, the recovery rates of aflatoxin in the 24 wells are between 90-110%, and the CV value of the recovery rate between wells is less than 5%, which meet the standard of experimental requirements.

## Conclusion

According to the results, the Copure® 24-Well Multi-Functional Purification Plates are more stable. The miscellaneous peaks are less on the chromatogram, and no interfering peaks next to the target peaks result in more accurate quantification.

## Ordering Information

Cat. #	Description	Application	Qty.
COAF228-GTL	Copure® 228 Multifunctional Clean-Up Plate	Patulin, Aflatoxin B1, B2, G1, G2	1 Pc/Box
COAF226-GTL	Copure® 226 Multifunctional Clean-Up Plate	Zearalenone, Alatoxin B1, B2, G1, G2	1 Pc/Box
COAF224-GTL	Copure® 224 Multifunctional Clean-Up Plate	Zearalenone	1 Pc/Box
COAF223-GTL	Copure® 223 Multifunctional Clean-Up Plate	Aflatoxin M1, M2	1 Pc/Box
COAF230-GTL	Copure® 230 Multifunctional Clean-Up Plate	Deoxynivalenol	1 Pc/Box
COAF229-GTL	Copure® 229 Multifunctional Clean-Up Plate	Ochratoxin	1 Pc/Box
COAF302-GTL	Copure® 302 Multifunctional Clean-Up Plate	Multiple functions	1 Pc/Box
BCY2401	Positive Pressure 24 Processor		1 Set/Ctn
BCN2403	24-Well Plate Intelligent Nitrogen Evaporator		1 Set/Ctn

# Pretreatment for Food Safety Testing

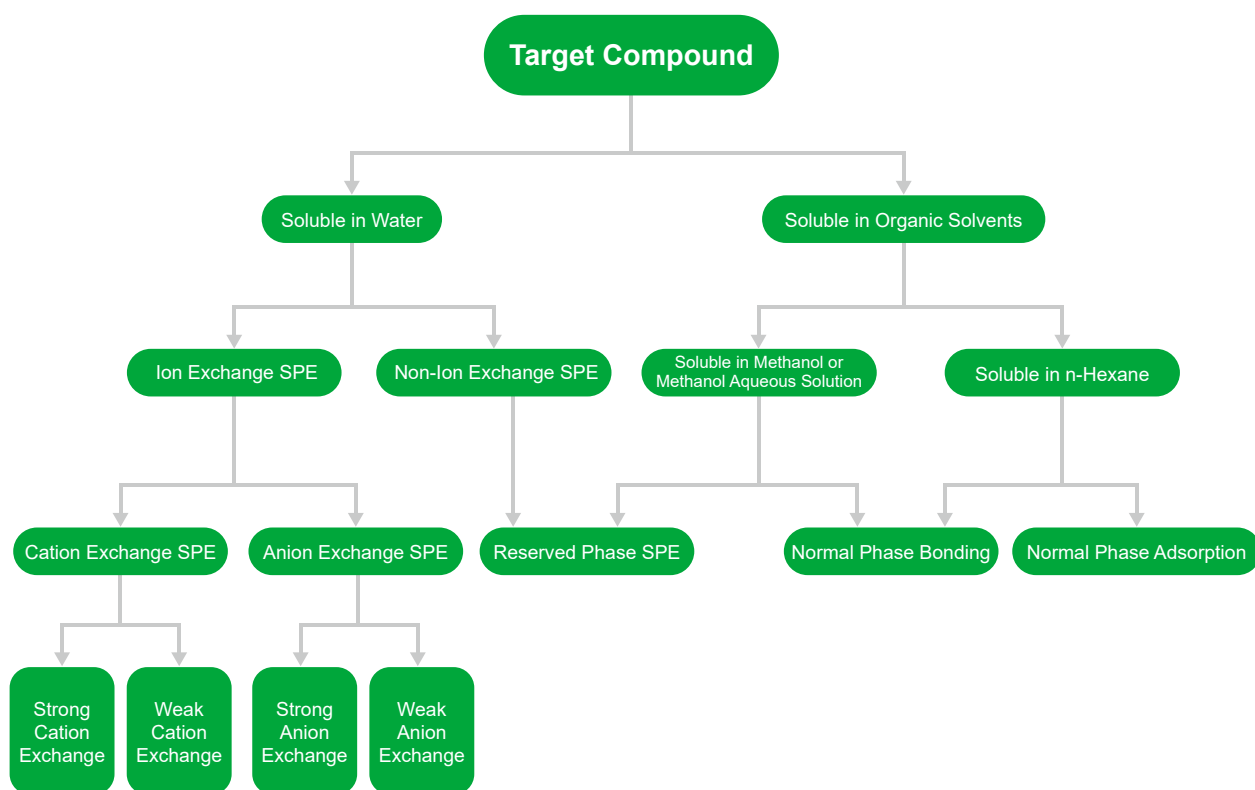
*Detection of pesticide residue, animal residue, mycotoxin, and additives*

Biocomma Limited is committed to pretreatment of complex matrix samples in food analysis field. Our products effectively remove interfering components in the samples to ensure satisfactory recovery and repeatability of each target.

Food analysis products include polymer-based solid-phase extraction (SPE) cartridges, silica-based SPE cartridges, inorganic-based SPE cartridges, MS Series 96-well SPE plates, dispersive SPE (QuChERS), immunoaffinity cartridges, multifunctional purification column, and SPE specialty column, etc., which are widely applied to food analysis and testing of pesticide and veterinary drug residues, food additives, mycotoxins, pollutants, etc.



# SPE Cartridge Sorbent Selection Guide



## Mechanism of Action

Type	Reversed Phase	Normal Phase	Ion Exchange	Other
Mechanism	The reversed phase column sorbent is less polar substance, which extract medium or less polar substances from the extract through hydrophobic interaction.	The normal phase column sorbent is a strong polar substance, which extract strong polar substance from the extract through hydrophilic interaction.	The ion exchange column sorbent is charged, which extract corresponding charged ions by interaction force.	Solid Supported Liquid-Liquid Extraction (SLE), Graphite-Carbon Black (GCB), etc.
Typical Application	Degreasing by reversed phase column in the detection of veterinary drug residues in foods of animal origin.	Remove organic acids from plant-based foods by normal phase column in pesticide residues test.	The MCX column adsorbs the target alkaline compounds such as melamine, ractopamine, etc., then rinse to remove impurities.	Extract aromatic amines in aqueous solution by SLE in azo dyes detection.





## Solid Phase Extraction Cartridge Operation Procedures

Distinguish whether the SPE cartridge is used to adsorb the target compound or impurities before experiment.

If the SPE cartridge adsorbs the target compound, process will be in 4 steps: activating, loading, washing and elution.

If the SPE cartridge adsorbs the impurities, process will be in 3 steps: activating, loading and elution.

1-2 mL/min flow rate and Vacuum Manifolds with pressure control function are recommended.

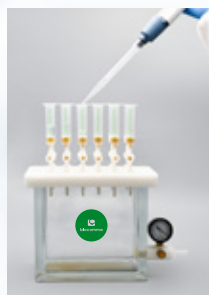
### General Procedures



① Activating



② Loading



③ Washing



④ Elution



⑦ Analysis



⑥ Filtration



⑤ Concentration

# SPE Cartridge Directions



## Solvent Selection:

SPE Cartridges	Category	Low Elution Strength Solvent (Weak Solvent)	High Elution Strength Solvent (Strong Solvent)
Reversed Phase Cartridges	HLB, C18, C8	Water, Acetonitrile, Methanol	Ethyl, Acetate, Ether
Normal Phase Cartridges	Florisil, ALN, Silica	n-Hexane, Cyclohexane	Acetone, Dichloromethane
Cation Exchange Cartridges	MCX, SCX, WCX, PRS	Acidic or Neutral Solution	Alkaline Solution
Anion Exchange Cartridges	MAX, SAX, WA X	Alkaline or Neutral Solution	Acid Solution

The elution strength gradually increases during the experiments. In general, weak solvent is used during activating and loading. Weak solvent (might mixed with small amount of strong solvent) used during washing. Strong solvent (might mixed with small amount of weak solvent) during elution.

## Analysis and Solutions of Low Recovery Rate

### ① Analyze the Solution Collected Each Step

When the absolute recovery of the target substance is low, detect the solution collected after each step, then optimize the filtration method.

Detected Target	Reason	Solution
Sample	Improper strong solvent	Concentrate the sample, change to weak solvent
Wash Solution	Excessive washing	Decrease the volume of wash solution, or decrease the wash strength (increase the proportion of weak solvent or decrease the proportion of strong solvent)
Re-Elute*	Insufficient elution	Increase the elution volume, or increase the eluent strength (decrease the proportion of weak solvent or increase the proportion of strong solvent)

\*After elution, elute the SPE cartridge with stronger solvent again

### ② Add Spike in Different Steps

Detected Target	Reason	Solution
Low recovery of blank spike	Improper SPE cartridge or improper operation	Replace the SPE cartridge or exclude improper solvent
Good recovery of blank spike, but low recovery of pre spike	Matrix effect interference	Optimize pretreatment method or use matrix standard for quantification
Good recovery of pre spike, but low recovery of matrix spike	Low extraction efficiency	Change the extraction solvent or the extraction method

Notes:

① Blank spike: add a spike to pure solvent. ② Pre spike: add a spike to blank matrix extract. ③ Matrix spiked: add a spike to blank matrix.

## Solid Phase Extraction (SPE) Cartridge Product List

SorbentPhase	Biocomma	Waters	Agilent	Phenomenex	Supelco	Agela
C18	Copure® C18	Sep-pak tC18	Bond Elut C18	Strata C18-E	Sepelclean ENVI-18	Cleanert C18
C18-Ne	Copure® C18-n	Sep-pak C18	Bond Elut C18OH	Strata C18-U		Cleanert C18-N
C8	Copure® C8	Sep-pak C8	Bond Elut C8	Strata C8	Sepelclean ENVI-8	Cleanert C8
CN	Copure® CN	Sep-pak CN	Bond Elut CN-E	Strata CN	Sepelclean LC-CN	Cleanert CN
NH2	Copure® NH2	Sep-pak NH2	Bond Elut NH2	Strata NH2	Sepelclean LC-NH2	Cleanert NH2
PSA	Copure® PSA		Bond Elut PSA	Strata PSA	Sepelclean PSA	Cleanert PSA
SAX	Copure® SAX		Bond Elut SAX	Strata SAX	Sepelclean LC-SAX	Cleanert SAX
SCX	Copure® SCX		Bond Elut SCX	Strata SCX	Sepelclean LC-SI	Cleanert SCX
Salica	Copure® Silica	Sep-pak SI	Bond Elut SI	Strata SI-I	Sepelclean LC-SCX	Cleanert Silica
HLB	Copure® HLB	Oasis HLB	Bond Elut Plexa	Strata-X	Supel-Select HLB	Cleanert PEP
HLB	Copure® HLB-lim	Oasis PRIME HLB				
MCX	Copure® MCX	Oasis MCX	Bond Elut Plexa PCX	Strata-XC	Supel-Select SCX	Cleanert PCX
MAX	Copure® MAX	Oasis MAX	Bond Elut Plexa PAX	Strata-XA	Supel-Select SAX	Cleanert PAX
Florisil	Copure® Florisil	Sep-pak FI	Bond Elut FL	Strata FR-PR	Sepelclean LC-Florisil	Cleanert Florisil
Graphitized Bond	Copure® Carb-GCB		Bond Elut Carbon		Sepelclean ENVI Carb	Cleanert PestiCarb
Alumina-N	Copure® ALN	Sep-pak Alumina-N	Bond Elut Alumina-N	Strata Alumina-N	Sepelclean LC-Alumina-N	Cleanert AluminaN
Alumina-A	Copure® ALA	Sep-pak Alumina-A	Bond Elut Alumina-A	Strata Alumina-A	Sepelclean LC-Alumina-A	Cleanert AluminaA
Alumina-B	Copure® ALB	Sep-pak Alumina-B	Bond Elut Alumina-B	Strata Alumina-B	Sepelclean LC-Alumina-B	Cleanert AluminaB
GCB/NH2	Copure® Carb-GCB/NH2		Bond Elut Carb/NH2		Sepelclean ENVI Carb/NH2	Cleanert PestiCarb/NH2
GCB/PSA	Copure® Carb-GCB/PSA		Bond Elut Carb/PSA		Sepelclean ENVI Carb-II/PSA	

# Polymer Sorbent

biocomma<sup>®</sup> provides various specifications and sorbents of polymeric SPE Cartridges. Each batch has passed performance verification to meet the pretreatment needs of various sample matrices. We provide excellent products of high recoveries and good stability to customers.





# HLB Hydrophilic-Lipophilic Balanced

Extracting non-polar to moderately polar acidic, neutral and alkaline compounds

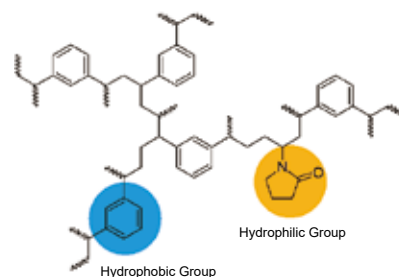
## Specifications

Surface area: 600 m<sup>2</sup>/g Particle size: 40 μm Pore size: 300 Å

## Ordering Information

Cat.#	Description	Qty.
COHLB130	30mg/1mL	100 Pcs/Box
COHLB360	60mg/3mL	50 Pcs/Box
COHLB3200	200mg/3mL	50 Pcs/Box
COHLB6150	150mg/6mL	30 Pcs/Box
COHLB6200	200mg/6mL	30 Pcs/Box
COHLB6500	500mg/6mL	30 Pcs/Box
COHLB12500	500mg/12mL	20 Pcs/Box

Note: equivalent to Waters Oasis HLB



# MAX Mixed-mode Anion Exchange

Extracting acidic compounds

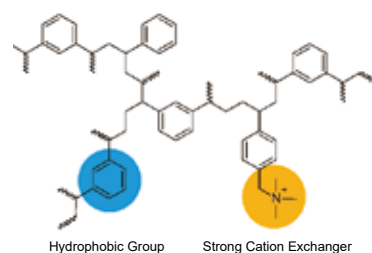
## Specifications

Surface area: 600 m<sup>2</sup>/g

## Ordering Information

Cat.#	Description	Qty.
COMAX130	30mg/1mL	100 Pcs/Box
COMAX360	60mg/3mL	50 Pcs/Box
COMAX3200	200mg/3mL	50 Pcs/Box
COMAX6150	150mg/6mL	30 Pcs/Box
COMAX6200	200mg/6mL	30 Pcs/Box
COMAX6500	500mg/6mL	30 Pcs/Box
COMAX12500	500mg/12mL	20 Pcs/Box

Note: equivalent to Waters Oasis MAX



# MCX Mixed-mode Cation Exchange

Extracting alkaline compounds

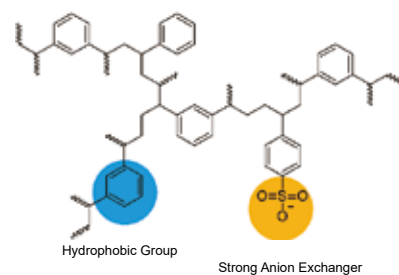
## Specifications

Surface area: 600 m<sup>2</sup>/g Particle size: 40 μm Pore size: 300 Å

## Ordering Information

Cat.#	Description	Qty.
COMCX130	30mg/1mL	100 Pcs/Box
COMCX360	60mg/3mL	50 Pcs/Box
COMCX3200	200mg/3mL	50 Pcs/Box
COMCX6150	150mg/6mL	30 Pcs/Box
COMCX6200	200mg/6mL	30 Pcs/Box
COMCX6500	500mg/6mL	30 Pcs/Box
COMCX12500	500mg/12mL	20 Pcs/Box

Note: equivalent to Waters Oasis MCX



# WCX Weak Cation Exchange

Extracting strong bases

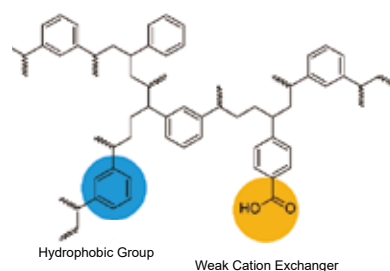
## Specifications

Surface area: 600 m<sup>2</sup>/g Particle size: 40 µm Pore size: 300 Å

## Ordering Information

Cat.#	Description	Qty.
COWCX130	30mg/1mL	100 Pcs/Box
COWCX360	60mg/3mL	50 Pcs/Box
COWCX3200	200mg/3mL	50 Pcs/Box
COWCX3500	500mg/3mL	50 Pcs/Box
COWCX6150	150mg/6mL	30 Pcs/Box
COWCX6200	200mg/6mL	30 Pcs/Box
COWCX6500	500mg/6mL	30 Pcs/Box

Note: equivalent to Waters Oasis WCX



# WAX Weak Anion Exchange

Extracting strong acids

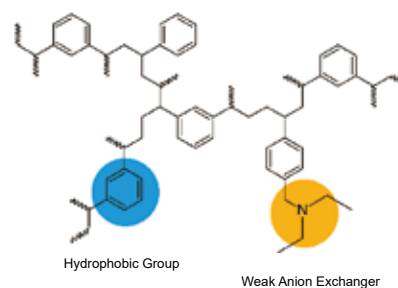
## Specifications

Surface area: 600 m<sup>2</sup>/g Particle size: 40 µm Pore size: 300 Å

## Ordering Information

Cat.#	Description	Qty.
COWAX130	30mg/1mL	100 Pcs/Box
COWAX360	60mg/3mL	50 Pcs/Box
COWAX3200	200mg/3mL	50 Pcs/Box
COWAX3500	500mg/3mL	50 Pcs/Box
COWAX6150	150mg/6mL	30 Pcs/Box
COWAX6200	200mg/6mL	30 Pcs/Box
COWAX6500	500mg/6mL	30 Pcs/Box

Note: equivalent to Waters Oasis WAX



# HLB Lim Cartridges for Multi-Residue Analysis of Veterinary Drug

HLB Lim cartridge is a new type of solid phase extraction column packed with special sorbent. Comparing to traditional SPE cartridges, it removes interfering substances such as fat, phospholipid and pigment faster to reduce matrix effect.

The HLB Lim Cartridge greatly simplifies the process of sample preparation. Activation and equilibration steps can be skipped. Filtering the sample directly after extraction saves a lot of time and reagents so that the sample preparation is simpler and more efficient.



## Features

- One step purification and shorter pretreatment time
- High recovery rate and good reproducibility.
- Suitable for multi-matrix and multi-residue analysis of veterinary drug.
- Save solvent and cost

## Typical Recovery

Compound	Recovery (%)
Tetracycline	97.7
Chlortetracycline	87.9
Oxytetracycline	87.7
Ractopamine	95.8
Salbutamol	108
Clenbuterol	91.6

## Ordering Information

Cat. #	Description	Qty.
COHLB3200-Lim	Copure® HLB Lim Cartridges,3 mL	50 Pcs/Box

# SPE Cartridges

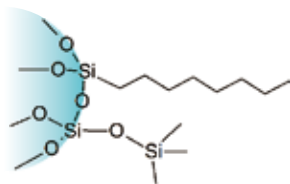
SPE cartridges generally include traditional silica-based SPE cartridges and inorganic chemical based SPE cartridges. Biocomma® independently researches and develops sorbents to ensure its stability and performance. Normal phase, reverse phase, and ion exchange phase are available to improve sample preparation efficiency.





## C8 Octyl

Extracting non-polar compounds



### Specifications

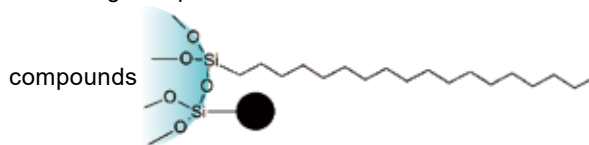
Carbon content: 9%      Surface area: 280 m<sup>2</sup>/g  
 Particle size: 40 - 75 μm      Pore size: 70 Å

### Ordering Information

Cat. #	Description	Qty.
COC81100	100mg/1mL	100 Pcs/Box
COC83200	200mg/3mL	50 Pcs/Box
COC83500	500mg/3mL	50 Pcs/Box
COC86500	500mg/6mL	30 Pcs/Box
COC861000	1000mg/6mL	30 Pcs/Box
COC8121000	1000mg/12mL	20 Pcs/Box
COC8122000	2000mg/12mL	20 Pcs/Box

## C18A Unendcapped Octadecyl

Extracting non-polar



### Specifications

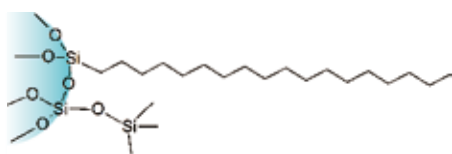
Carbon content: 12%      Surface area: 300 m<sup>2</sup>/g  
 Particle size: 40 - 75 μm      Pore size: 70 Å

### Ordering Information

Cat. #	Description	Qty.
COC18A1100	100mg/1mL	100 Pcs/Box
COC18A3200	200mg/3mL	50 Pcs/Box
COC18A3500	500mg/3mL	50 Pcs/Box
COC18A6500	500mg/6mL	30 Pcs/Box
COC18A61000	1000mg/6mL	30 Pcs/Box
COC18A121000	1000mg/12mL	20 Pcs/Box
COC18A122000	2000mg/12mL	20 Pcs/Box

## C18 Endcapped Octadecyl

Extracting non-polar compounds



### Specifications

Carbon content: 17.6%      Surface area: 300 m<sup>2</sup>/g  
 Particle size: 40 - 60 μm      Pore size: 70 Å

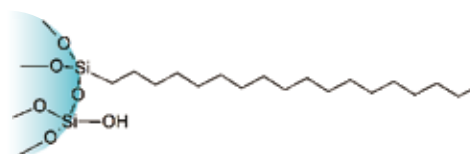
### Ordering Information

Cat.#	Description	Qty.
COC181100	100mg/1mL	100 Pcs/Box
COC18360	60mg/3mL	50 Pcs/Box
COC183200	200mg/3mL	50 Pcs/Box
COC183500	500mg/3mL	50 Pcs/Box
COC186500	500mg/6mL	30 Pcs/Box
COC1861000	1000mg/6mL	30 Pcs/Box
COC18121000	1000mg/12mL	20 Pcs/Box
COC18122000	2000mg/12mL	20 Pcs/Box

Note: equivalent to Waters Sep-Pak IC18/C18, Agilent Bond Elut C18, Supelco Supelclean ENVI-18

## C18N Unendcapped Octadecyl

Extracting polar and non-polar compounds



### Specifications

Carbon content: 17%      Surface area: 300 m<sup>2</sup>/g  
 Particle size: 40 - 75 μm      Pore size: 70 Å

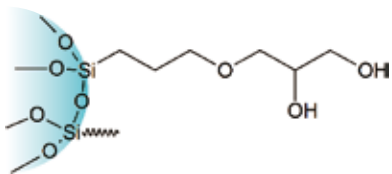
### Ordering Information

Cat.#	Description	Qty.
COC18N1100	100mg/1mL	100 Pcs/Box
COC18N3200	200mg/3mL	50 Pcs/Box
COC18N3500	500mg/3mL	50 Pcs/Box
COC18N6500	500mg/6mL	30 Pcs/Box
COC18N61000	1000mg/6mL	30 Pcs/Box
COC18N121000	1000mg/12mL	20 Pcs/Box
COC18N122000	2000mg/12mL	20 Pcs/Box

Note: equivalent to Agilent Bond Elut C18-OH

## Diol Dihydroxy

Extracting polar compounds



### Specifications

Surface area: 290 m<sup>2</sup>/g Carbon content: 5.5%

Particle size: 40-75 μm Pore size: 70 Å

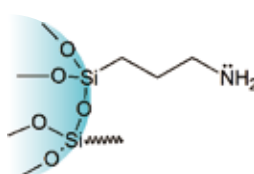
### Ordering Information

Cat.#	Description	Qty.
CODI1100	100mg/1mL	100 Pcs/Box
CODI3200	200mg/3mL	50 Pcs/Box
CODI3500	500mg/3mL	50 Pcs/Box
CODI6500	500mg/6mL	30 Pcs/Box
CODI61000	1000mg/6mL	30 Pcs/Box
CODI121000	1000mg/12mL	20 Pcs/Box
CODI122000	2000mg/12mL	20 Pcs/Box

Note: equivalent to Waters Sep-Pak Diol & Agilent Bond Elut 2OH

## NH<sub>2</sub> Aminopropyl

Extracting moderately polar and acidic compounds



### Specifications

Surface area: 200 m<sup>2</sup>/g Carbon content: 4.5%

Particle size: 40-75 μm Pore size: 70 Å

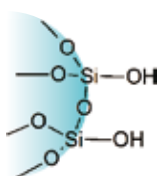
### Ordering Information

Cat.#	Description	Qty.
CONH1100	100mg/1mL	100 Pcs/Box
CONH3100	100mg/3mL	50 Pcs/Box
CONH3200	200mg/3mL	50 Pcs/Box
CONH3500	500mg/3mL	50 Pcs/Box
CONH6200	200mg/6mL	30 Pcs/Box
CONH6500	500mg/6mL	30 Pcs/Box
CONH61000	1000mg/6mL	30 Pcs/Box
CONH121000	1000mg/12mL	20 Pcs/Box
CONH122000	2000mg/12mL	20 Pcs/Box

Note: equivalent to Waters Sep-Pak NH<sub>2</sub> & Agilent Bond Elut NH<sub>2</sub>

## Silica Unbounded Silica Gel

Extracting polar compounds



### Specifications

Surface area: 480 m<sup>2</sup>/g

Particle size: 40 - 75 μm

Pore size: 70 Å

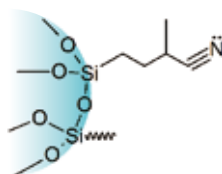
### Ordering Information

Cat.#	Description	Qty.
COSIL1100	100mg/1mL	100 Pcs/Box
COSIL3200	200mg/3mL	50 Pcs/Box
COSIL3500	500mg/3mL	50 Pcs/Box
COSIL6500	500mg/6mL	30 Pcs/Box
COSIL61000	1000mg/6mL	30 Pcs/Box
COSIL121000	1000mg/12mL	20 Pcs/Box
COSIL122000	2000mg/12mL	20 Pcs/Box

Note: equivalent to Agilent Bond Elut Silica & Waters Sep-Pak Silica

## CN Cyanopropyl

Extracting polar and non-polar compounds, enriching metal ions



### Specifications

Surface area: 280 m<sup>2</sup>/g Carbon content: 5.8%

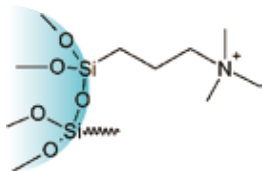
Particle size: 40 - 75 μm Pore size: 70 Å

### Ordering Information

Cat.#	Description	Qty.
COCN1100	100mg/1mL	100 Pcs/Box
COCN3200	200mg/3mL	50 Pcs/Box
COCN3500	500mg/3mL	50 Pcs/Box
COCN6500	500mg/6mL	30 Pcs/Box
COCN61000	1000mg/6mL	30 Pcs/Box
COCN121000	1000mg/12mL	20 Pcs/Box
COCN122000	2000mg/12mL	20 Pcs/Box

## SAX Strong Anion Exchange

Extracting acidic compounds



### Specifications

Surface area: 510 m<sup>2</sup>/g Particle size: 40-75 μm

Pore size: 70 Å

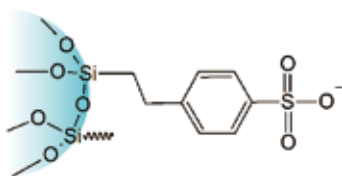
### Ordering Information

Cat.#	Description	Qty.
COSAX130	30mg/1mL	100 Pcs/Box
COSAX1100	100mg/1mL	100 Pcs/Box
COSAX3100	100mg/3mL	50 Pcs/Box
COSAX3200	200mg/3mL	50 Pcs/Box
COSAX3500	500mg/3mL	50 Pcs/Box
COSAX6200	200mg/6mL	30 Pcs/Box
COSAX6500	500mg/6mL	30 Pcs/Box
COSAX61000	1000mg/6mL	30 Pcs/Box
COSAX121000	1000mg/12mL	20 Pcs/Box
COSAX122000	2000mg/12mL	20 Pcs/Box

Note: equivalent to Supelco Supelclean LC-SAX

## SCX Strong Cation Exchange

Extracting basic compounds



### Specifications

Surface area: 510 m<sup>2</sup>/g Particle size: 40 - 75 μm

Pore size: 70 Å

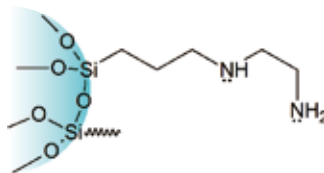
### Ordering Information

Cat.#	Description	Qty.
COSCX130	30mg/1mL	100 Pcs/Box
COSCX1100	100mg/1mL	100 Pcs/Box
COSCX3100	100mg/3mL	50 Pcs/Box
COSCX3200	200mg/3mL	50 Pcs/Box
COSCX3500	500mg/3mL	50 Pcs/Box
COSCX6200	200mg/6mL	30 Pcs/Box
COSCX6500	500mg/6mL	30 Pcs/Box
COSCX61000	1000mg/6mL	30 Pcs/Box
COSCX121000	1000mg/12mL	20 Pcs/Box
COSCX122000	2000mg/12mL	20 Pcs/Box

Note: equivalent to Waters Sep-Pak CN

## PSA Primary-Secondary Amine

Extracting strong acids, polar compounds and metal ions



### Specifications

Surface area: 500 m<sup>2</sup>/g Carbon content: 8%

Particle size: 50-75 μm Pore size: 70 Å

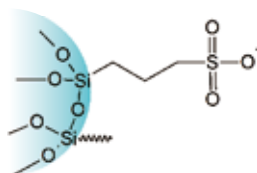
### Ordering Information

Cat.#	Description	Qty.
COPSA1100	100mg/1mL	100 Pcs/Box
COPSA3100	100mg/3mL	50 Pcs/Box
COPSA3200	200mg/3mL	50 Pcs/Box
COPSA3500	500mg/3mL	50 Pcs/Box
COPSA6200	200mg/6mL	30 Pcs/Box
COPSA6500	500mg/6mL	30 Pcs/Box
COPSA61000	1000mg/6mL	30 Pcs/Box
COPSA121000	1000mg/12mL	20 Pcs/Box
COPSA122000	2000mg/12mL	20 Pcs/Box

Note: equivalent to Agilent Bond Elut PSA

## PRS Propylsulfonic Acid

Extracting weak bases in biological fluids



### Specifications

Surface area: 310 m<sup>2</sup>/g Carbon content: 4.5%

Particle size: 40-75 μm Pore size: 70 Å

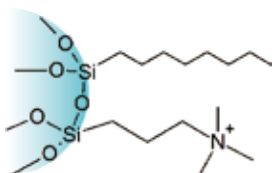
### Ordering Information

Cat.#	Format	Qty.
COPRS1100	100mg/1mL	100 Pcs/Box
COPRS3200	200mg/3mL	50 Pcs/Box
COPRS3500	500mg/3mL	50 Pcs/Box
COPRS6500	500mg/6mL	30 Pcs/Box
COPRS61000	1000mg/6mL	30 Pcs/Box
COPRS121000	1000mg/12mL	20 Pcs/Box

Note: equivalent to Agilent Bond Elut PRS

## C8/SAX Octyl/Strong Anion Exchange

Extracting acidic drugs in biological fluids



### Specifications

Surface area: 510 m<sup>2</sup>/g

Particle size: 40-75 µm

Pore size: 70 Å

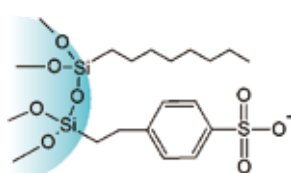
### Ordering Information

Cat.#	Description	Qty.
COC8SAX1100	100mg/1mL	100 Pcs/Box
COC8SAX3200	200mg/3mL	50 Pcs/Box
COC8SAX3500	500mg/3mL	50 Pcs/Box
COC8SAX6500	500mg/6mL	30 Pcs/Box
COC8SAX61000	1000mg/6mL	30 Pcs/Box
COC8SAX121000	1000mg/12mL	20 Pcs/Box
COC8SAX122000	2000mg/12mL	20 Pcs/Box

Note: equivalent to Agilent Bond Elut Certify II & Phenomenex Screen-A

## C8/SCX Octyl/Strong Cation Exchange

Extracting basic drugs in biological fluids



### Specifications

Surface area: 510 m<sup>2</sup>/g

Particle size: 40-75 µm

Pore size: 70 Å

### Ordering Information

Cat.#	Description	Qty.
COC8SCX1100	100mg/1mL	100 Pcs/Box
COC8SCX3200	200mg/3mL	50 Pcs/Box
COC8SCX3500	500mg/3mL	50 Pcs/Box
COC8SCX6500	500mg/6mL	30 Pcs/Box
COC8SCX61000	1000mg/6mL	30 Pcs/Box
COC8SCX121000	1000mg/12mL	20 Pcs/Box
COC8SCX122000	2000mg/12mL	20 Pcs/Box

Note: equivalent to Agilent Bond Elut Certify & Phenomenex Screen-C

## Carb-GCB Graphitized Carbon Black

Extracting herbicides in drinking water

### Specifications

Surface area: 100 m<sup>2</sup>/g

Particle size: 100-300 mesh

### Ordering Information

Cat.#	Description	Qty.
COGCB1100	100mg/1mL	100 Pcs/Box
COGCB3200	200mg/3mL	50 Pcs/Box
COGCB3500	500mg/3mL	50 Pcs/Box
COGCB6500	500mg/6mL	30 Pcs/Box
COGCB61000	1000mg/6mL	30 Pcs/Box
COGCB121000	1000mg/12mL	20 Pcs/Box
COGCB122000	2000mg/12mL	20 Pcs/Box

Note: equivalent to Agilent Bond Elut Carbon

## Carb-GCB/PSA Graphitized Carbon Black/ Primary-Secondary Amine Bilayer

Cleanup of samples in multiresidual pesticide analysis

### GCB Specifications

Surface area: 100 m<sup>2</sup>/g

Particle size: 100-300 mesh

### PSA Specifications

Surface area: 500 m<sup>2</sup>/g      Carbon content: 8%

Particle size: 40-75 µm      Pore size: 70 Å

### Ordering Information

Cat.#	Description	Qty.
COPSGC32525	250mg/250mg/3mL	50 Pcs/box
COPSGC655	500mg/500mg/6mL	30 Pcs/Box
COPSGC653	300mg/500mg/6mL	30 Pcs/Box



## Carb-GCB/NH2

### Graphitized Carbon Black/Aminopropyl Bilayer

Cleanup of samples in multiresidual pesticide analysis

#### GCB Specifications

Surface area: 100 m<sup>2</sup>/g Particle size: 100-300 mesh

#### NH2 Specifications

Carbon content: 4.5% Surface area: 200 m<sup>2</sup>/g

Particle size: 40 - 75 µm Pore size: 70 Å

#### Ordering Information

Cat.#	Description	Qty.
CONHGC32525	250mg/250mg/3mL	50 Pcs/Box
CONHGC655	500mg/500mg/6mL	30 Pcs/Box
CONHGC653	300mg/500mg/6mL	30 Pcs/Box

## PH Phenyl

Extracting non-polar compounds

#### Specifications

Surface area: 480m<sup>2</sup>/g Carbon content: 8.8%

Particle size: 40-75 µm Pore size: 70 Å

#### Ordering Information

Cat.#	Description	Qty.
COPH3500	500mg/3mL	50 Pcs/Box
COPH6500	500mg/6mL	30 Pcs/Box

Note: equivalent to Waters Sep-Pak CN

## Florisil Pesticide Grade

### Florisil

Extracting multiresidual pesticides

#### Specifications

Particle size: 150 - 250 µm

#### Ordering Information

Cat.#	Description	Qty.
COFL1100	100mg/1mL	100 Pcs/Box
COFL3200	200mg/3mL	50 Pcs/Box
COFL3500	500mg/3mL	50 Pcs/Box
COFL6500	500mg/6mL	30 Pcs/Box
COFL61000	1000mg/6mL	30 Pcs/Box
COFL121000	1000mg/12mL	20 Pcs/Box
COFL122000	2000mg/12mL	20 Pcs/Box

## ALA, ALN, ALB, Alumina

Extracting aromatic amines

#### Specifications

Surface area >150 m<sup>2</sup>/g

pH : Acidic Alumina pH 4.0

Neutral Alumina pH 7.0

Basic Alumina pH 9.5

#### Ordering Information

##### ① Acidic Alumina (ALA)

Cat.#	Description	Qty.
COALA1100	100mg/1mL	100 Pcs/Box
COALA3200	200mg/3mL	50 Pcs/Box
COALA3500	500mg/3mL	50 Pcs/Box
COALA6500	500mg/6mL	30 Pcs/Box
COALA61000	1000mg/6mL	30 Pcs/Box
COALA121000	1000mg/12mL	20 Pcs/Box
COALA122000	2000mg/12mL	20 Pcs/Box

Note: equivalent to Waters Sep-Pak Alumina-A

##### ② Neutral Alumina(ALN)

Cat.#	Description	Qty.
COALN1100	100mg/1mL	100 Pcs/Box
COALN3200	200mg/3mL	50 Pcs/Box
COALN3500	500mg/3mL	50 Pcs/Box
COALN6500	500mg/6mL	30 Pcs/Box
COALN61000	1000mg/6mL	30 Pcs/Box
COALN121000	1000mg/12mL	20 Pcs/Box
COALN122000	2000mg/12mL	20 Pcs/Box

Note: equivalent to Waters Sep-Pak Alumina-N

##### ③ Basic Alumina(ALB)

Cat.#	Description	Qty.
COALB1100	100mg/1mL	100 Pcs/Box
COALB3200	200mg/3mL	50 Pcs/Box
COALB3500	500mg/3mL	50 Pcs/Box
COALB6500	500mg/6mL	30 Pcs/Box
COALB61000	1000mg/6mL	30 Pcs/Box
COALB121000	1000mg/12mL	20 Pcs/Box
COALB122000	2000mg/12mL	20 Pcs/Box

Note: equivalent to Waters Sep-Pak Alumina-B



# Mycotoxin Clean-up Columns

## Mycotoxin Rapid Testing Solutions

Mycotoxin immunoaffinity column is an affinity chromatography column made by the principle of immunoaffinity chromatography for the analysis of antigens. After extraction, dilution, and column passing, most impurities can be removed.

### General Procedures of Mycotoxin Clean-Up Columns



① Loading



② Washing & Eluting



③ Concentration



④ Filtration



⑤ Analysis

Note: 1.The extraction solution is acetonitrile: water 84:16 or methanol: water 70:30;

2. For samples with more protein, filter through glass fiber filter paper before loading is recommended.

## Aflatoxin Immunoaffinity Columns

Aflatoxin is a highly toxic substance, which is harmful to human and animal liver tissues. Aflatoxin Immunoaffinity Columns are based on the antigen-antibody specific reaction, binding the antibody to the gel to combine with aflatoxin specificity, thereby achieving the effect of separation and purification.



### Ordering Information

Cat.#	Description	Qty.
COAFMT101	Aflatoxin B1,B2,G1,G2 , 1mL	25 Pcs/Box
COAFMT103	Aflatoxin B1,B2,G1,G2 , 3mL	20 Pcs/Box
COAFMB101	Aflatoxin B1, 1mL	25 Pcs/Box
COAFMB103	Aflatoxin B1, 3mL	20 Pcs/Box
COAFMM101	Aflatoxin M1, 1mL	25 Pcs/Box
COAFMM103	Aflatoxin M1, 3mL	20 Pcs/Box

## Three-in-one (ADZ) Immunoaffinity Columns

Copure® ADZ immunoaffinity columns specifically purify and concentrate aflatoxin B1, B2, G1, G2, DON and zearalenone in samples. Copure® ADZ immunoaffinity column is widely used in the extraction of grain, food, feed, nuts, peanuts, soy sauce, vinegar, pepper, medicinal materials and wine. The method is high efficiency, easy operation and high accuracy.

### Ordering Information

Cat.#	Description	Qty.
COAFADZ303	3mL	10 Pcs/Box

## Zearalenone Immunoaffinity Columns

Zearalenone is widely found in moldy corn, sorghum, wheat, oats, barley and other cereal crops and milk, and is the most widely contaminated Fusarium toxin in the world. It has estrogenic effects, mainly acts on the reproductive system, and is very harmful to humans and animals. Zearalenone Immunoaffinity Columns can be used to extract and enrich zearalenone from samples, which makes high targeted purification performance come true.



### Ordering Information

Cat.#	Description	Qty.
COAFZEA101	Zearalenone, 1mL	25 Pcs/Box
COAFZEA103	Zearalenone, 3mL	20 Pcs/Box

## Four-in-one (ADOZ) Immunoaffinity Columns

Copure® ADOZ immunoaffinity column is suitable for the purification of aflatoxin B1, B2, G1, G2, zearalenone, DON, ochratoxin A in samples of grain, food, feed, nuts, peanuts, soy sauce, etc. This method can treat four toxins at one time, greatly improving the pretreatment efficiency, and the recoveries of the four toxins can reach more than 80%.

### Ordering Information

Cat.#	Description	Qty.
COAFADOZ403	3mL	10 Pcs/Box

## Deoxynivalenol Immunoaffinity Columns

DON, also known as deoxynivalenol, is mostly distributed in wheat, barley, corn and other grains, and has a certain harmful effect on the human body. It is three-level carcinogen in the EU classification standard. DON Immunoaffinity Columns can selectively separate deoxynivalenol from the sample by the specific binding of antibody and antigen to achieve good purification effect.



### Ordering Information

Cat.#	Description	Qty.
COAFDON101	Deoxynivalenol, 1mL	25 Pcs/Box
COAFDON103	Deoxynivalenol, 3mL	20 Pcs/Box

## Ochratoxin A Immunoaffinity Columns

Ochratoxin A is very common in moldy grains and feed. It comes from the aspergillus and penicillium on various crops (wheat, corn, barley, oats, rye, rice and millet), peanuts, vegetables (beans), etc., which cause enormous harm to the kidneys and livers of human and animal. Ochratoxin A immunoaffinity column can selectively adsorb ochratoxin A in the sample extract, so as to have a very targeted purification effect on ochratoxin A in the sample solution.



### Ordering Information

Cat.#	Description	Qty.
COAFOCH101	Ochratoxin A, 1mL	25 Pcs/Box
COAFOCH103	Ochratoxin A, 3mL	20 Pcs/Box

## Complete solutions for mycotoxin testing

Simple · Fast · Safe





## T-2 Toxin Immunoaffinity Columns

T-2 toxin is a mycotoxin produced by a variety of *Fusarium* species. It mainly pollutes wheat, barley, corn and other food crops and their products, and poses a great harm to human health and animal husbandry. T-2 toxin immunoaffinity column can selectively adsorb the T-2 toxin in the sample solution to specifically purify T-2 toxin. The purified sample solution can be directly used in the liquid phase test.

### Ordering Information

Cat.#	Description	Qty.
COAFT2101	T-2 toxin, 1mL	25 Pcs/Box
COAFT2103	T-2 toxin, 3mL	20 Pcs/Box

## Tetrodotoxin Immunoaffinity Column

Tetrodotoxin is an aminoperhydroquinazoline compound, which is one of the most toxic neurotoxins found in nature. It was once considered to be the most toxic non-protein toxin in nature. The toxin has a local stimulating effect on the intestinal tract. After absorption, it acts on nerve endings and nerve centers rapidly. It can block sodium ion channels on nerve excitation membrane with high selectivity and affinity, and block nerve conduction, thus causing nerve paralysis and death. Tetrodotoxin immunoaffinity column has a strong targeted purification effect on the extraction and enrichment of tetrodotoxin.

### Ordering Information

Cat.#	Description	Qty.
COAFTTX10	Tetrodotoxin, 1mL	25 Pcs/Box
COAFTTX103	Tetrodotoxin, 3mL	20 Pcs/Box



## Fumonisin FB Immunoaffinity Column

Fumonisin FB is a mycotoxin, which is a watersoluble metabolite produced by *Fusarium moniliforme*. It is a kind of diester compound composed by different polyhydric alcohols and glycerol tricarboxylic acid. Fumonisin has FA1, FA2, FB1, FB2, FB3 etc. FB1 is the main component.

### Ordering Information

Cat.#	Description	Qty.
COAFFB101	Fumonisin FB, 1mL	25 Pcs/Box
COAFFB103	Fumonisin FB, 3mL	20 Pcs/Box

## ELISA Kit

ELISA (ELISA Kit) is the most widely used technology in enzyme immunoassay. In an ELISA assay, the antigen is immobilized to a solid surface. This is done either directly or via the use of a capture antibody itself immobilized on the surface. The antigen is then complexed to a detection antibody conjugated with a molecule amenable for detection such as an enzyme or a fluorophore.

### Features

- This product is a quantitative detection kit based on the principle of immunocompetitive detection.
- It is simple and rapid to use, with accurate results and high sensitivity, and the accuracy rate is more than 95%.
- It is suitable for the detection of mycotoxins in grains, feed ingredients and other samples.

### Application

Feed raw materials and finished feed, corn, rice, wheat, flour, nuts, peanuts and peanut products, vegetable oil, soy sauce, vinegar, spices, dairy products, milk, milk powder, cakes, wine, fish offal, fermentation broth, etc.

### Ordering Information

Cat.#	Description	Format
BC-201	Aflatoxin B1 ELISA Kit	96 wells
BC-201-48	Aflatoxin B1 ELISA Kit	48 wells
BC-202	Aflatoxin M1 ELISA Kit	96 wells
BC-202-48	Aflatoxin M1 ELISA Kit	48 wells
BC-203	Total Aflatoxin ELISA Kit	96 wells
BC-203-48	Total Aflatoxin ELISA Kit	48 wells
BC-204	Ochratoxin A ELISA Kit	96 wells
BC-204-48	Ochratoxin A ELISA Kit	48 wells
BC-205	Zearalenone ELISA Kit	96 wells
BC-205-48	Zearalenone ELISA Kit	48 wells
BC-206	Deoxynivalenol ELISA Kit	96 wells
BC-206-48	Deoxynivalenol ELISA Kit	48 wells

# Copure® Multi-Functional Purification Column

Copure® Multi-Functional Purification Column contains multiple adsorption matrices to adsorb quickly and selectively of lipids, organic acids, proteins, pigments and other impurities. The matrices do not absorb the target to realize fast purification.



## Features

- Complete purification in 30s
- Easy operation and high efficiency
- Stored at room temperature for more than 18 months
- Recovery rate  $\geq 90\%$ , RSD  $\leq 5\%$

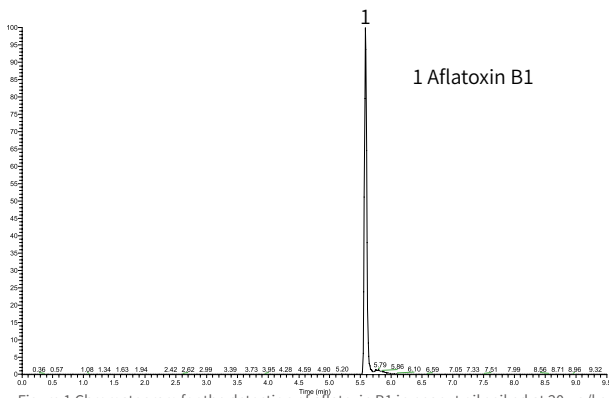


Figure 1 Chromatogram for the detection of aflatoxin B1 in peanut oil spiked at 20  $\mu\text{g}/\text{kg}$

## Procedures

1. Extract sample.
2. Add the extracted sample to the test tube and insert the rubber-tipped end of the purification column into the test tube.
3. Push the purification column to the bottom of the test tube.
4. The purified sample passes through sorbent to the top of the purification column.
5. The purified sample can be analyzed after concentrate.

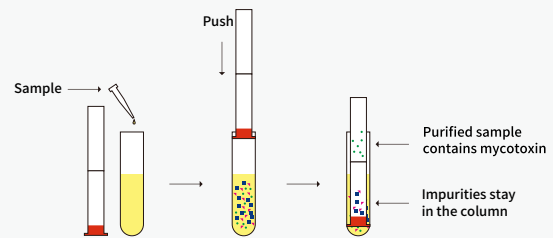


Table 1 Recovery of aflatoxin B1 in 20  $\mu\text{g}/\text{kg}$  peanut oil

Compound	Recovery (%)			Average recoveries (%)	RSD (%)
	1	2	3		
Aflatoxin B1	81.9	84.5	82.4	82.9	1.7

## Ordering Information

Cat. #	Description	Application	Qty.
COAF228	Copure® 228 Multi-Functional Purification Column	Patulin, Aflatoxin B1 B2 G1 G2	25 Pcs/Box
COAF226	Copure® 226 Multi-Functional Purification Column	Zearalenone, Aflatoxin B1 B2 G1 G2	25 Pcs/Box
COAF224	Copure® 224 Multi-Functional Purification Column	Zearalenone	25 Pcs/Box
COAF223	Copure® 223 Multi-Functional Purification Column	Aflatoxin M1 M2	25 Pcs/Box
COAF230	Copure® 230 Multi-Functional Purification Column	Deoxynivalenol	25 Pcs/Box
COAF229	Copure® 229 Multi-Functional Purification Column	Ochratoxin A	25 Pcs/Box
COAF302	Copure® 302 Multi-Functional Purification Column	Multiple functions	25 Pcs/Box

# Special SPE Cartridges



# SLE Cartridges for AZO Dye Testing

## Determination of banned azo dyes in textile products

Most currently-used dyes and pigments in textile and leather industries are azo dye compounds which under reductive conditions, are decomposed to form fatty or aromatic amines. Those amines derived from azo compounds, some aromatic amines are believed to be carcinogenic or potentially carcinogenic and banned in EU, the U.S. and China.

Biocomma provides SLE cartridges dedicatedly optimized for determining banned azo dyes in textile products, helping you manage product quality quickly and reliably and protect health of your customers.

### Features

- Packed with dedicatedly optimized diatomaceous earth
- Frits with excellent flowrate control technology
- Complying with China and EU official methods
- Superb performance proven by China's most authoritative textile testing institute

### Typical Recoveries

Analyte	Recovery Rate
2,4-diaminoanisole	>20
o-toluidine	>50
2,4-diaminotoluene	>50
other aromatic amines	>70

### Related Methods

- EN 14362-1:2017 Textiles: methods for determination of certain aromatic amines derived from azo colorants

### Ordering Information

Cat. #	Description	Qty.
COAZO060	SLE Cartridges for Azo Dye Testing	4 Pcs/PK



## SPE Cartridges for Pesticide Residue Testing in Tea

Copure® SPE Cartridges have good performance for pigment, tea polyphenol, organic acid etc in tea.

### Features

- Packed with dedicatedly optimized diatomaceous earth
- Frits with excellent flowrate control technology
- Complying with China and EU official methods
- Superb performance proven by China's most authoritative textile testing institute

### Ordering Information

Cat. #	Description	Qty.
COTPT6	6 mL	30 Pcs/Box
COTPT12	12 mL	20 Pcs/Box

## Cartridges for Ion chromatography Preparation

In ion chromatography, organic, metal and other interfering ions may affect the analysis of target compounds. The pretreatment columns are based on the principle of reversed phase adsorption or ion exchange, can effectively remove interferences and ensure the accuracy of the results.

### Ordering Information

Cat. #	Description	Format	Qty.
COICC1801	C18 cartridge	300mg	50 Pcs/Box
COICRP01	RP cartridge	1mL	50 Pcs/Box
COICH01	H cartridge	1mL	50 Pcs/Box
COICAG01	Ag cartridge	1mL	50 Pcs/Box
COICNA01	Na cartridge	1mL	50 Pcs/Box
COICAGH01	Ag/H cartridge	1mL	50 Pcs/Box
COICAGNA01	Ag/Na cartridge	1mL	50 Pcs/Box

## Destaining Cartridges for Chrome (VI) Testing

Chrome (VI) in leather articles are converted from Chrome (III) in the process of leather production. The toxic substance has been banned by China and EU. To determine Chrome (VI), pigments in leather should be removed firstly.

Destaining cartridges for Chrome (VI) testing are dedicatedly optimized, capable of helping you remove pigments.

### Features

- Optimized for destaining leather samples
- Improved recovery and repeatability
- Complying with official methods

### Applications

- Determination of Chrome (VI) in leather.

### Related Methods

- ISO 17075:2007 Leather -- Chemical tests -- Determination of chromium(VI) content

### Ordering Information

Cat. #	Description	Qty.
COCR3500	500mg/3mL	50 Pcs/Box
COCR6500	500mg/6mL	30 Pcs/Box
COCR121000	1000mg/12mL	20 Pcs/Box



## Cartridges for Plasticizer Testing

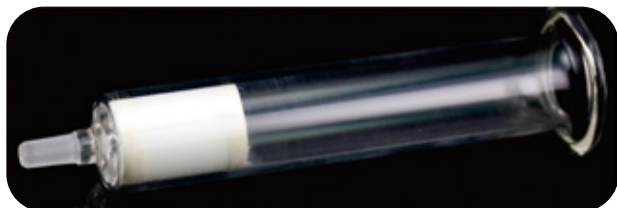
### Determination of phthalate esters

Plasticizers are currently used in plastic and packaging food contact materials and their products are mostly phthalate esters (PAEs), some of which are carcinogenic and reproductively toxic. As toxic PAEs leached into food cause health risks for human beings, their use is strictly limited in EU, the U.S., China, Japan, etc.

Biocomma's cartridges for plasticizer testing are made of glass tubes and PTFE frits that prevent impurities from being introduced into the sample. Dedicatedly optimized PSA sorbent also enables thorough cleanup and satisfactory recoveries for official methods.

### Features

- Chemically inert glass tubes
- High purity PTFE frits
- Satisfactory recoveries for official methods



### Applications

- Determination of phthalate esters in foods

### Related Methods

- SN/T 3147-2012 Determination of phthalate esters in foods for export

### Ordering Information

Cat. #	Description	Qty.
COPAE655	500mg/500mg/6mL	30 Pcs/Box
COPAE61000	1000mg/6mL	30 Pcs/Box

## Polyamide(PA) SPE Cartridges

### For Testing Artificial Color in Extraction Samples

PA is a macromolecule substance polymerized by Amide monomer(hexanolactam, adipamide, Oxalic acid), its amido linkage is easily to bring Hydrogen bond with other Polar bond groups, this enables to remove interferents such as artificial color from samples, this is used for testing artificial color.

PA SPE cartridges are filled with special optimized PA sorbent which enables its good decoloring and high recovery.



### Specifications

- Particle Size: 100-200 mesh

### Related Methods

- EN ISO17075-2007 Leather-Chemical tests– Determination of chromium(VI) content

### Ordering Information

Cat. #	Description	Qty.
COPACR36	500mg/3mL	50 Pcs/Box
COPACR66	500mg/6mL	30 Pcs/Box
COPACR61	1000mg/6mL	30 Pcs/Box
COPACR122	2000mg/12mL	20 Pcs/Box

# Supported Liquid Extraction (SLE) Cartridges

## Revolutionary Liquid-Liquid Extraction Solution

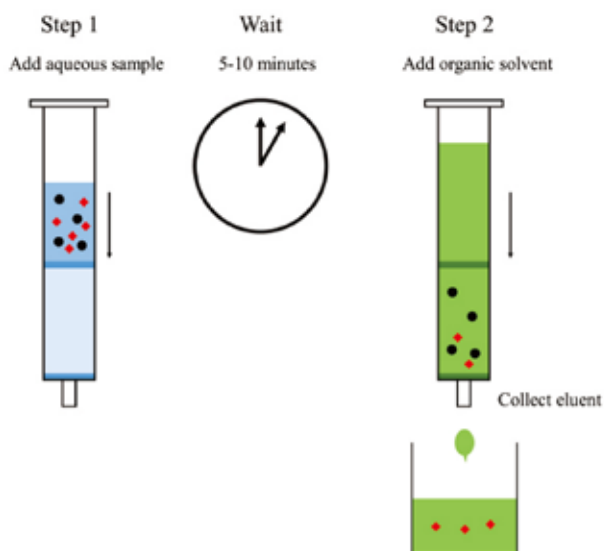
SLE (Solid Supported Liquid/Liquid Extraction) is a highly efficient and economical new extraction method. Only two steps of sample application and elution need to extract target compounds from the aqueous phase. SLE is widely applied to the fields of food safety, environmental monitoring, clinical diagnosis, forensic science and industrial product testing.

### Features

- High recovery rate and good repeatability
- Simplified operation steps and shorter pre-processing time
- No shaking required, no microemulsion
- Less consumption of organic solvent and cost saving
- Easy to automate and parallelize

### Applications

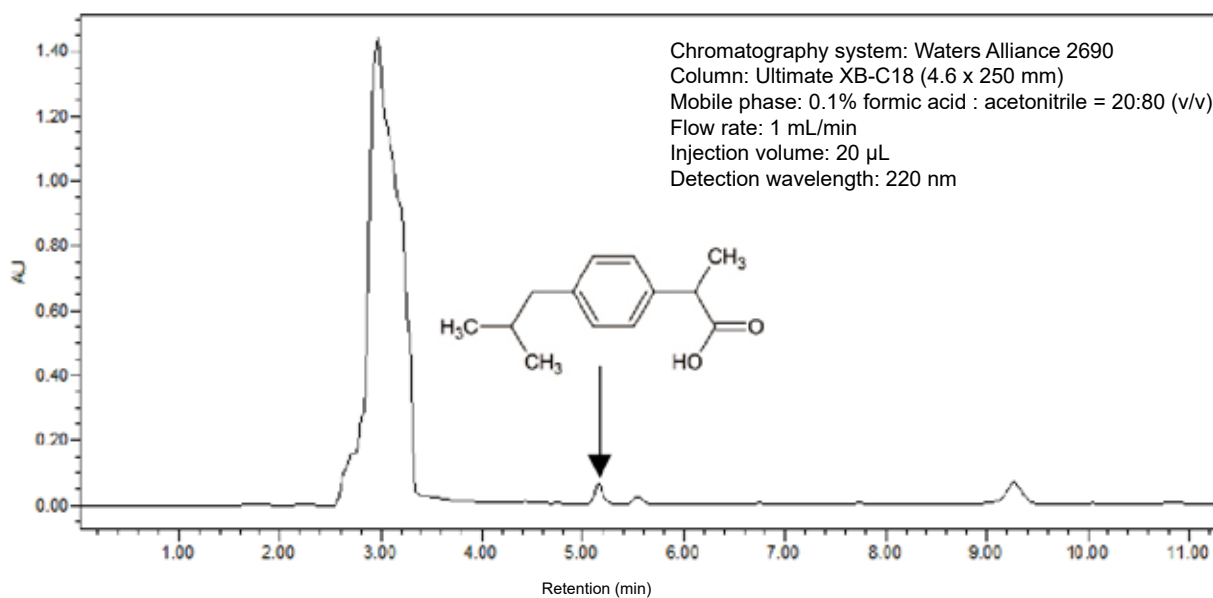
- Detection of drugs in biological fluids, for example, antidepressant Sertraline and the anti-inflammatory drug Ibuprofen
- Detection of parabens in cosmetics, pharmaceuticals and foods



### Ordering Information

Cat. #	Description	Qty.
COSLE1CC	SLE Cartridges, 1 mL	100 Pcs/Box
COSLE3CC	SLE Cartridges, 3 mL	50 Pcs/Box
COSLE6CC	SLE Cartridges, 6 mL	30 Pcs/Box
COSLE12CC	SLE Cartridges, 12 mL	20 Pcs/Box

### Example: Extraction of ibuprofen from human serum with SLE



# QuEChERS

In 2003, Michelangelo Anastassiades and Steven J. Lehotay developed a dispersive SPE (dSPE) method called QuEChERS (Quick, Easy, Cheap, Effective, Rugged, and Safe) to simplify the preparation of food samples pesticide analysis. The groundbreaking preparation method is widely applied to pollution tests in food safety, environmental water samples and soil pollutants.

Biocomma offers standard EN and AOAC QuEChERS kits including centrifuge tubes, extraction tubes, purification tubes and reagents in different specifications to help you establish standard detection quickly.



## General Procedures of QuEChERS



### Features

- Good recovery rate for most pesticides, veterinary drugs and additives
- Fewer steps to limit manual error
- More friendly to the operators and environment
- Simple, quick and inexpensive

### Standards

- EN 15662 Foods of Plant Origin - Determination of pesticide residues using GC-MS and/or LC-MS/MS following acetonitrile extraction/partitioning and clean-up by dispersive SPE - QuEChERS-method
- AOAC Official Method 2007.01 Pesticide Residues in Foods by Acetonitrile Extraction and Partitioning with Magnesium Sulfate





# Copure® QuEChERS Extraction Kits

Copure® QuEChERS Extraction Kits include extraction pouches and 50 mL centrifuge tubes, ceramic homogenizers are optional as well.

The pouches contain anhydrous extraction salts. Among the mixture, MgSO<sub>4</sub> is responsible for removing water from samples, while other components are responsible for maintaining appropriate pH to ensure the recoveries of alkaline-sensitive pesticides.

Directly adding water-abundant samples into tubes containing extraction salts may cause local overheating which compromise the resulting recoveries. To avoid such situations, Biocomma provides separate extraction salt pouches that the operator can add extraction salts after the addition of organic solvents.



## Features

- The salts are sealed in aluminum foil bags to avoid leakage.
- The compositions are printed on the bag for handy choice. The easy-tear package is very convenient for use.
- Automated powder dispensing & packaging assembly line promise the accuracy and repeatability.

## Ordering Information

### AOAC 2007.01 Kits

Cat.#	Description	Sorbents	Qty.
COQ050020H	Extraction Salts+50 mL Tube	6 g MgSO <sub>4</sub>	50 Pcs/Box
COQ050020CH	Extraction Salts+50 mL Tube+Ceramic Homogenizers	1.5 g NaOAc	50 Pcs/Box

### EN 15662 Kits

Cat.#	Description	Sorbents	Qty.
COQ050010H	Extraction Salts+50 mL Tube	4 g MgSO <sub>4</sub> 1 g NaCl	50 Pcs/Box
COQ050010CH	Extraction Salts+50 mL Tube+Ceramic Homogenizers	1 g Trisodium Citrate 0.5 g Disodium Citrate	50 Pcs/Box

### Original Method Kits

Cat.#	Description	Sorbents	Qty.
COQ050040H	Extraction Salts+50 mL Tube	4 g MgSO <sub>4</sub>	50 Pcs/Box
COQ050040CH	Extraction Salts+50 mL Tube+Ceramic Homogenizers	1 g NaCl	50 Pcs/Box

### Ceramic Homogenizers

Cat.#	Description	Qty.
009903A	Ceramic Homogenizers, 50 mL	100 Pcs/Box



# Copure® QuEChERS Premixed Extraction Salts

Copure® QuEChERS Premixed Extraction Salts are suitable for various QuEChERS Standards and used in analysis of multi-pesticide residue.

## Features

- Optimized premixed formula, more flexible operation
- Two optional packages: easy-tear pouches and bottle Package (equivalent to 150 extractions)
- Suitable for AOAC 2007, EN 15662 standards, etc.

## Ordering Information

### AOAC 2007.01 Kits

Cat.#	Description	Sorbents	Qty.
COQP6150	Extraction Pouches	6 g MgSO <sub>4</sub>	50 Pcs/Box
COQS6150	Bottled Premixed Extraction Salts	1.5 g NaOAcc	1 Kg/Bottle

### EN 15662 Kits

Cat.#	Description	Sorbents	Qty.
COQP4115	Extraction Pouches	4g MgSO <sub>4</sub> 1g NaCl	50 Pcs/Box
COQS4115	Bottled Premixed Extraction Salts	1g Trisodium Citrate 0.5g Disodium Citrate	1 Kg/Bottle

### Original Method Kits

Cat.#	Description	Sorbents	Qty.
COQP4100	Extraction Pouches	4g MgSO <sub>4</sub>	50 Pcs/Box
COQS4100	Bottled Premixed Extraction Salts	1g NaCl	1 Kg/Bottle



**Upgrade**  
**QuEChERS Salt**  
**Pouches Easy-Tear**

## Copure® QuEChERS Clean-Up Kits

Copure® QuEChERS Clean-Up Kits include sorbents and anhydrous MgSO<sub>4</sub>, 2 mL and 15 mL centrifuge tubes, ceramic homogenizers are optional as well.

The sorbents include PSA/C18-EC/GCB, etc. PSA is to remove the fatty acids and organic acids from samples. C18-EC is to remove the fats from samples, GCB is to remove the pigments from samples. Choose appropriate sorbent according to different samples.



### Features

- Supply 2 mL or 15 mL clean-up tubes
- Suitable for AOAC 2007, EN 15662 standards, etc

### Ordering Information

#### BS EN 15662: 2018 Kits

Cat.#	Format	Application	Sorbents	Qty.
COQ002030H	2 mL	General fruits and vegetables	25 mg PSA, 150 mg MgSO <sub>4</sub>	100 Pcs/Box
COQ015022H	15 mL		150 mg PSA, 900 mg MgSO <sub>4</sub>	50 Pcs/Box
COQ002032H	2 mL	General fruits and vegetables with fats and waxes	25 mg PSA, 25 mg C18, 150 mg MgSO <sub>4</sub>	100 Pcs/Box
COQ015032H	15 mL		150 mg PSA, 150 mg C18, 900 mg MgSO <sub>4</sub>	50 Pcs/Box
COQ002020H	2 mL	General fruits and vegetables with pigments	25 mg PSA, 2.5 mg GCB, 150 mg MgSO <sub>4</sub>	100 Pcs/Box
COQ015020H	15 mL		150 mg PSA, 15 mg GCB, 900 mg MgSO <sub>4</sub>	50 Pcs/Box
COQ002024H	2 mL	General fruits and vegetables with highly pigments	25 mg PSA, 7.5 mg GCB, 150 mg MgSO <sub>4</sub>	100 Pcs/Box
COQ015024H	15 mL		150 mg PSA, 45 mg GCB, 900 mg MgSO <sub>4</sub>	50 Pcs/Box

#### Ceramic Homogenizers

Cat.#	Description	Qty.
009902B	Ceramic Homogenizers, 15 mL	100/Bottle
009901B	Ceramic Homogenizers, 2 mL	200/Bottle

#### AOAC 2007.01 Kits

Cat.#	Format	Application	Sorbents	Qty.
COQ002031H	2 mL	General fruits and vegetables	50 mg PSA, 150 mg MgSO <sub>4</sub>	100 Pcs/Box
COQ015031H	15 mL		400 mg PSA, 1200 mg MgSO <sub>4</sub>	50 Pcs/Box
COQ002033H	2 mL	General fruits and vegetables with fats and waxes	50 mg PSA, 50 mg C18, 150 mg MgSO <sub>4</sub>	100 Pcs/Box
COQ015033H	15 mL		400 mg PSA, 400 mg C18, 1200 mg MgSO <sub>4</sub>	50 Pcs/Box
COQ002036H	2 mL	General fruits and vegetables with pigments	50 mg PSA, 50 mg GCB, 150 mg MgSO <sub>4</sub>	100 Pcs/Box
COQ015036H	15 mL		400 mg PSA, 400 mg GCB, 1200 mg MgSO <sub>4</sub>	50 Pcs/Box
COQ002040H	2 mL	General fruits and vegetables with pigments and fats	50 mg PSA, 50 mg C18, 50 mg GCB, 150 mg MgSO <sub>4</sub>	100 Pcs/Box
COQ015040H	15 mL		400 mg PSA, 400 mg C18, 400 mg GCB, 1200 mg MgSO <sub>4</sub>	50 Pcs/Box
COQ002025H	2 mL	Other food methods	25 mg C18, 150 mg MgSO <sub>4</sub>	100 Pcs/Box
COQ015025H	15 mL		150 mg C18, 900 mg MgSO <sub>4</sub>	50 Pcs/Box
COQ002035H	2 mL	All food types	50 mg PSA, 50 mg C18, 7.5 mg GCB, 150 mg MgSO <sub>4</sub>	100 Pcs/Box
COQ015035H	15 mL		400 mg PSA, 400 mg C18, 45 mg GCB, 1200 mg MgSO <sub>4</sub>	50 Pcs/Box

## Copure® QuEChERS Clean-Up Pouches

Copure® QuEChERS Clean-Up Pouches are used for the analysis of multi-pesticide residual. Biocomma uses its automatic powder distribution technology to transfer the sorbent into pouches instead of tube, which is very convenient to match with customer's own 15 mL centrifuge tubes.



### Features

- Save 50% of volume, convenient for transportation, saving laboratory space
- Easy-tear package to open easily without any tools required
- Lower cost, suitable for mass quantity testing

### Ordering Information

Cat.#	Type	Sorbents	Qty.
COQ015031P	AOAC 2007	400 mg PSA, 1200 mg MgSO <sub>4</sub>	100 Pcs/Box
COQ015033P	AOAC 2007	400 mg PSA, 400 mg C18, 1200 mg MgSO <sub>4</sub>	100 Pcs/Box
COQ015036P	AOAC 2007	400 mg PSA, 400 mg GCB, 1200 mg MgSO <sub>4</sub>	100 Pcs/Box
COQ015040P	AOAC 2007	400 mg PSA, 400 mg C18, 400 mg GCB, 1200 mg MgSO <sub>4</sub>	100 Pcs/Box
COQ015025P	AOAC 2007	150 mg C18, 900 mg MgSO <sub>4</sub>	100 Pcs/Box
COQ015035P	AOAC 2007	400 mg PSA, 400 mg C18, 45 mg GCB, 1200 mg MgSO <sub>4</sub>	100 Pcs/Box
COQ015022P	EN 15662	150 mg PSA, 900 mg MgSO <sub>4</sub>	100 Pcs/Box
COQ015032P	EN 15662	150 mg PSA, 150 mg C18, 900 mg MgSO <sub>4</sub>	100 Pcs/Box
COQ015020P	EN 15662	150 mg PSA, 15 mg GCB, 900 mg MgSO <sub>4</sub>	100 Pcs/Box
COQ015024P	EN 15662	150 mg PSA, 45 mg GCB, 900 mg MgSO <sub>4</sub>	100 Pcs/Box

## QuEChERS Bulk Sorbents

biocomma® provides superior quality QuEChERS bulk sorbents which have been verified by our lab. You can choose the ratio according to the needs of the experiment.



### Features

- Supply 2 mL or 15 mL clean-up tubes
- Suitable for AOAC 2007, EN 15662 standards, etc.

### Ordering Information

Cat.#	Sorbent	Specification	Qty.
PSA-2-100	PSA	Carbon Content: 8%, Surface area: 480 m <sup>2</sup> /g, Particle size: 50-75 μm, Pore size: 70 Å	100 g
C18-1-100	C18	Carbon Content: 17.6%, Surface area: 300 m <sup>2</sup> /g, Particle size: 40-75 μm, Pore size: 70 Å	100 g
GCB-1-50	Carb-GCB	Surface area: 100 m <sup>2</sup> /g, Particle size: 100-300 mesh	50 g
MGSO4-1	Anhydrous MgSO <sub>4</sub>	AR Grade	1 kg
NAOAC-1	NaOAc	AR Grade	1 kg
NACL-1	NaCl	AR Grade	1 kg
CIT-1	Trisodium Citrate	AR Grade	1 kg
CIT2-1	Disodium Citrate	AR Grade	1 kg

## QuEChERS Ceramic Homogenizers

biocomma<sup>®</sup> Ceramic Homogenizers can be used in Copure<sup>®</sup> QuEChERS extraction kit and clean-up kit to improve extraction recovery and reproducibility.

### Features

- Inert ceramic material, no impurities dissolution
- Shorten sample extraction time and reduce labor cost
- Improve recovery rate and reproducibility of sample extraction



### Ordering Information

Cat.#	Description	Qty.
009903A	Ceramic Homogenizers, 50 mL	100 Pcs/Box
009902A	Ceramic Homogenizers, 15 mL	100 Pcs/Box
009901A	Ceramic Homogenizers, 2 mL	200 Pcs/Box

## Veterinary Drug Residue Specialty QuEChERS

In order to solve the problem of rapid detection of veterinary drug residues in animal-derived foods, biocomma has launched Veterinary Drug Residue Specialty QuEChERS for different types of veterinary drug residues. The specific extraction and clean-up kits are as follows:



### Ordering Information

Application	Extraction Kit	Qty.	Clean-Up Kit	Qty.
Sulfonamides	COQ050050H	50 Pcs/Box	COQ015601H	50 Pcs/Box
Hormones	COQ050050H	50 Pcs/Box	COQ015601H	50 Pcs/Box
Chloramphenicol	COQ050050H	50 Pcs/Box	COQ015601H	50 Pcs/Box
Beta-agonist	COQ050050H	50 Pcs/Box	COQ015601H	50 Pcs/Box
Quinolone	COQ050051H	50 Pcs/Box	COQ015601H	50 Pcs/Box
Tetracycline	COQ050051H	50 Pcs/Box	COQ015601H	50 Pcs/Box
Fipronil	COQ050051H	50 Pcs/Box	COQ015602H	50 Pcs/Box
Dimetridazole	COQ050051H	50 Pcs/Box	COQ015603H	50 Pcs/Box
Diethylstilbestrol	COQ050050H	50 Pcs/Box	COQ002603H	100 Pcs/Box

# CommaSil<sup>®</sup> Liquid Chromatography (LC) Columns

CommaSil<sup>®</sup> Liquid Chromatography Columns' sorbents are all made of ultra-pure porous spherical silica gel, which has good mechanical strength, uniform pore and particle size distribution range, and excellent variation and stability. The columns are mainly used in food testing and pharmaceutical industry, and can be applied to different instruments of HPLC and UPLC.



## Features

- Superior selectivity and separation capability
- Excellent repeatability among batches
- Excellent chromatographic peak shape
- Perfect spherical silica with narrow particle size distribution
- Extremely strong mechanical strength, long shelf life.
- Good acid and alkali resistance

CommaSil<sup>®</sup> C18-H (2.1 mm×100 mm, 3 μm)

Mobile phase: A: water (0.1% formic acid) B: Methanol-Acetonitrile solution containing 0.1% formic acid (methanol: acetonitrile=2:8)

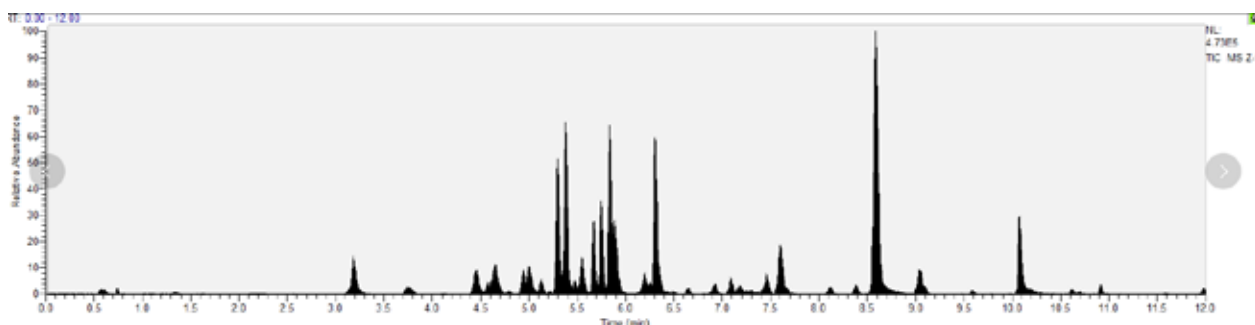
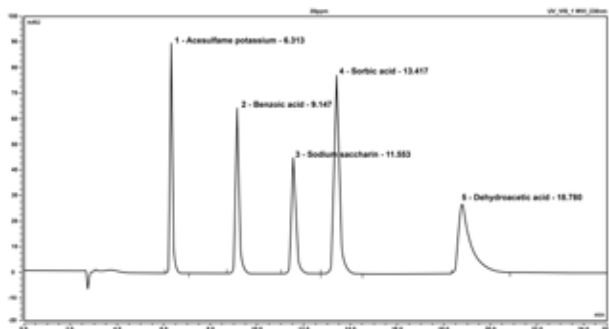


Fig.1 Total ion chromatogram of 36 kinds of veterinary residues in pork samples when additive level is 10 μg/kg

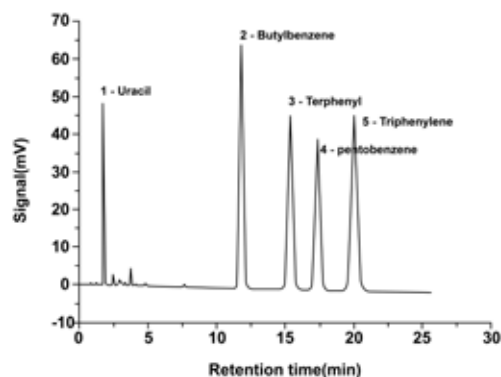
Chromatography columns: CommaSil<sup>®</sup> AQ-C18  
(4.6 mm×250 mm, 5μm )

Mobile phase: 0.002% acetic acid-0.02mol/L ammonium acetate solution: methanol=90:10  
Flow rate: 1.0 mL/min  
Column temperature: 30 °C  
Detector: UV detector  
Detection wavelength: 230 nm



Chromatography column: CommaSil<sup>®</sup> ODS 5μm 4.6 x150mm

Mobile phase: methanol: water = 80:20  
Flow rate: 1.0mL/min  
Column temperature: 30 °C  
Detector: UV detector  
Detection wavelength: 254 nm





## C18-H

- C18 functional group
- After special treatment, tolerated a wider pH range
- 1.8µm and 3µm are available, more suitable for UPLC

### Ordering Information

Cat. #	Description	Specification
CS215018C18	C18-bonded 130Å PH: 1.0~12.5	1.8µm, ID2.1mm*50mm
CS215003C18	C18-bonded 130Å PH: 1.0~12.5	3µm, ID2.1mm*50mm
CS2110003C18	C18-bonded 130Å PH: 1.0~12.5	3µm, ID2.1mm*100mm
CS2115003C18	C18-bonded 130Å PH: 1.0~12.5	3µm, ID2.1mm*150mm
CS465003C18	C18-bonded 130Å PH: 1.0~12.5	3µm, ID4.6mm*50mm
CS4610003C18	C18-bonded 130Å PH: 1.0~12.5	3µm, ID4.6mm*100mm
CS4615003C18	C18-bonded 130Å PH: 1.0~12.5	3µm, ID4.6mm*150mm

## C18

- C18 functional group
- PH: 1.5-9
- Excellent hydrophobic selectivity and low hydrogen bonding capacity

### Ordering Information

Cat. #	Description	Specification
CM4615005C18	C18-bonded 100Å PH: 1.5-9	5µm, 4.6mmI.D. x 150mm
CM4625005C18	C18-bonded 100Å PH: 1.5-9	5µm, 4.6mmI.D. x 250mm

## C8

- C8 functional group
- Stronger retention than C18 group, shorter retention time for non-polar substances

### Ordering Information

Cat. #	Description	Specification
CM4615005C8	C8-bonded 120Å PH: 2-8	5µm, 4.6mmI.D. x 150mm
CM4625005C8	C8-bonded 120Å PH: 2-8	5µm, 4.6mmI.D. x 250mm

## NH2

- NH2 functional group
- Suitable for the analysis of monosaccharide compounds

### Ordering Information

Cat. #	Description	Specification
CM4615005NH2	NH2-bonded 120Å PH: 2-8	5µm, 4.6mmI.D. x 150mm
CM4625005NH2	NH2-bonded 120Å PH: 2-8	5µm, 4.6mmI.D. x 250mm

## SCX

- Sulfonic acid type strong cation exchange silica SCX
- Suitable for the analysis of basic substances, especially amines

### Ordering Information

Cat. #	Description	Specification
SPZ4615005SCX	SCX-bonded 120Å PH: 2.0~6.5	5µm, 4.6*150mm
SPZ4625005SCX	SCX-bonded 120Å PH: 2.0~6.5	5µm, 4.6*250mm

## CN

- CN functional group
- Fast elution of hydrophobic molecules with unique selectivity for polar compounds

### Ordering Information

Cat. #	Description	Specification
CS4615005CN	CN-bonded 120Å PH: 1.5-10	5µm, ID4.6mm*150mm
CS4625005CN	CN-bonded 120Å PH: 1.5-10	5µm, ID4.6mm*250mm

## PEP

- PEP functional group
- High selectivity for fluorine-containing and halogen-containing compounds

### Ordering Information

Cat. #	Description	Specification
CS4615005PEP	PEP-bonded 120Å PH1.5-10	5µm, ID4.6mm*150mm
CS4625005PEP	PEP-bonded 120Å PH1.5-10	5µm, ID4.6mm*250mm

# CommaSil<sup>®</sup> Gas Chromatography (GC) columns

CommaSil<sup>®</sup> Gas Chromatography Columns, performing test strictly for each GC column, have the advantages of high column efficiency, stable product performance, and high sensitivity. CommaSil<sup>®</sup> GC Columns are widely used in petrochemical, environmental protection, medicine, food, health and other fields.



## Features

- High column efficiency, good separation effect
- High quality and competitive price, highly competitive choice
- Stable performance and long shelf life

## Ordering Information

Cat. #	Fixative Composition	Stationary Phase	Equivalent	Specification
CS30025025CB1	100% Dimethicone	100% Dimethylpolysiloxane	DB-1, HP-1,	30m*0.25mm*0.25μm
CS30025025CB5	5% Phenyl 95% Dimethicone	(5%-Phenyl)-methylpolysiloxane	DB-5, HP-5	30m*0.25mm*0.25μm
CS30025025PEG	Polyethylene glycol	Polyethylene glycol (PEG)	HP-INNOWax, DB-WAX	30m*0.25mm*0.25μm
CS30025025PFAP	Modified polyethylene glycol	Nitroterephthalic acid modified polyethylene glycol	HP-FFAP, DB-FFAP, CB-WAX	30m*0.25mm*0.25μm
CS30025025CB225	50% Cyanopropylphenyl 50% Dimethicone	(50%-Cyanopropylphenyl)-dimethylpolysiloxane	DB-225	30m*0.25mm*0.25μm
CS30025025CB35	35% Phenyl 65% Dimethicone	(35%-Phenyl)-methylpolysiloxane	HP-35MS, DB-35,	30m*0.25mm*0.25μm
CS30025025CB624	6% Cyanopropylphenyl 94% Dimethicone	(6%-Cyanopropyl-phenyl)-methylpolysiloxane	HP-1301, DB-1301	30m*0.25mm*0.25μm
CS30025025CB1701	14% Cyanopropylphenyl 86% Dimethicone	(14%-Cyanopropyl-phenyl)-methylpolysiloxane	DB 1701	30m*0.25mm*0.25μm
CS30025025CB17	50% Phenyl 50% Dimethicone	(50%-Phenyl)-methylpolysiloxane	DB-17, DB-17ms	30m*0.25mm*0.25μm
CS30025025CBPONA	100% Dimethicone	100% Dimethylpolysiloxane	HP PONA, Petrocol DH	30m*0.25mm*0.25μm

Note: For more specifications, please contact us.

# Sample Preparation for Clinical Mass Spectrometry

biocomma<sup>®</sup> is specialized in providing innovative solutions in the field of clinical mass spectrometry. Through continuous independent innovation in materials, biocomma provides optimized solutions in technical services to help customers obtain more efficient, higher quality and more stable products. Sample preparation products for clinical mass spectrometry include 96-well PPT protein precipitation plate, 96-well SLE solid support liquid-liquid extraction plate, 96-well PPRP protein phospholipid removal plate and 96-well PPRP phospholipid removal plate, etc.



## 96-Well Micro-Filter Plates

biocomma® 96-Well Micro-Filter Plates are precision injection molded of polystyrene and equipped with many different types and materials of filter membranes, such as polyvinylidene fluoride (PVDF), mixed cellulose (MCE), polytetrafluoroethylene (PTFE) and other microporous filter membranes. Seamless integration is achieved by individually sealed well and removable guide plate and collection plate.

### Ordering Information

Microporous filter plates equipped with MCE microporous filter membranes are applied for DNA hybridization, ELISPOT and protein binding assays.

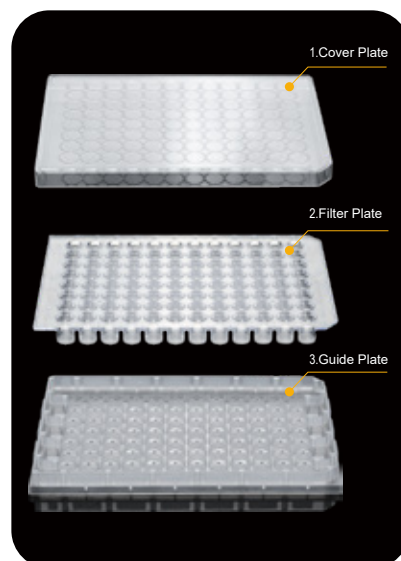
Cat. #	Description	Qty.
M0096-MCE-45	96-Well Micro-Filter Plates 50-250 µL, hydrophilic MCE, 0.45 µm	10 Pcs/PK
M0096-MCE-22	96-Well Micro-Filter Plates 50-250 µL, hydrophilic MCE, 0.22 µm	10 Pcs/PK

Microporous filter plates equipped with PVDF microporous filter membranes are applied for protein kinase/phosphatase analysis, sample preparation, fluorescent dyes removal, etc.

Cat. #	Description	Qty.
M0096-PVDF-45	96-Well Micro-Filter Plates 50-250 µL, hydrophobic PVDF, 0.45 µm	10 Pcs/PK
M0096-PVDF-22	96-Well Micro-Filter Plates 50-250 µL, hydrophobic PVDF, 0.22 µm	10 Pcs/PK
M0096-PVDF-H-45	96-Well Micro-Filter Plates 50-250 µL, hydrophilic PVDF, 0.45 µm	10 Pcs/PK
M0096-PVDF-H-22	96-Well Micro-Filter Plates 50-250 µL, hydrophilic PVDF, 0.22 µm	10 Pcs/PK

Microporous filter plates equipped with PTFE microporous filter membranes are applied for dissolution testing, total drug analysis, protein precipitation analysis, etc.

Cat. #	Description	Qty.
M0096-PTFE-45	96-Well Micro-Filter Plates 50-250 µL, hydrophobic PTFE, 0.45 µm	10 Pcs/PK
M0096-PTFE-22	96-Well Micro-Filter Plates 50-250 µL, hydrophobic PTFE, 0.22 µm	10 Pcs/PK
M0096-PTFE-H-45	96-Well Micro-Filter Plates 50-250 µL, hydrophilic PTFE, 0.45 µm	10 Pcs/PK
M0096-PTFE-H-22	96-Well Micro-Filter Plates 50-250 µL, hydrophilic PTFE, 0.22 µm	10 Pcs/PK

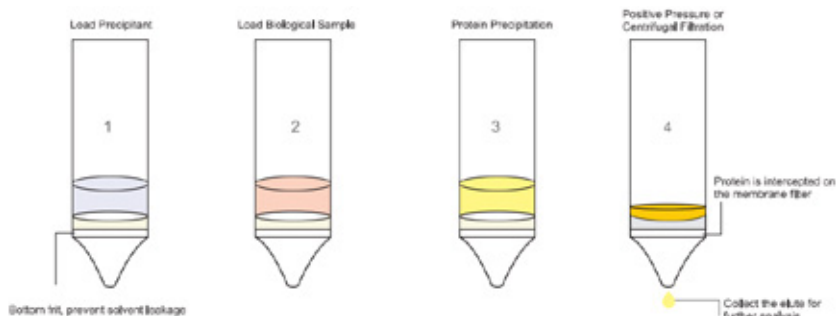


## Copure® 96 Well Protein Precipitation (PPT) Plate

Copure® 96-Well Protein Precipitation (PPT) Plate is designed to remove proteins from biological fluid samples (plasma, serum or blood), suitable for LC-MS/MS clinical detection studies.

### Features

- Low adsorption membrane filter is applied, which resistant to pH 0-14
- Membrane filter is made by a special process and does not break at high-speed centrifugation
- Super long retention time, effective interception of precipitator, no liquid leakage
- Suitable for clinical diagnosis, pharmacokinetic study, new drug development and scientific research



General processing method for pretreatment of liquid biological samples by CommaSep™ PPT 96 well protein precipitation plate



### Ordering Information

Cat.#	Description	Qty.
MPPT9601	Copure® 96 Well PPT Plate, 1.0 mL/well	1 Pc/Box
MPPT9602	Copure® 96 Well PPT Plate, 2.0 mL/well	1 Pc/Box
M0096-PTFE-H-45	Copure® 96 Well Micro-Filter PPT Plate, 50-250 µL, Hydrophilic PTFE, 0.45 µm	10 Pcs/Box
M0096-PTFE-45	Copure® 96 Well Micro-Filter PPT Plate, 50-250 µL, Organic PTFE, 0.45 µm	10 Pcs/Box
M0096-PTFE-22	Copure® 96 Well Micro-Filter PPT Plate, 50-250 µL, Organic PTFE, 0.22 µm	10 Pcs/Box

## Copure® 96 Well Phospholipid Removal (PRP) Plate

Copure® 96 Well Phospholipid Removal (PRP) Plate with specially developed new adsorbents Lipoclean® in the pores captures phospholipid interferents that cause ion suppression to provide excellent cleanup effect for lipid-containing samples, also, improve data quality for target analyte detection and minimize LC-MS/MS system maintenance.

### Features

- Remove phospholipids to limit ion suppression effect
- Simple and convenient to use
- 96-well plate and 1 mL cartridge are available

### Ordering Information

Cat.#	Description	Qty.
MPRP9601	Copure® 96 Well PRP Plate, 40 mg/1 mL/well	1 Pc/Box





# Copure® 96 Well Protein Phospholipid Removal (PPRP) Plate

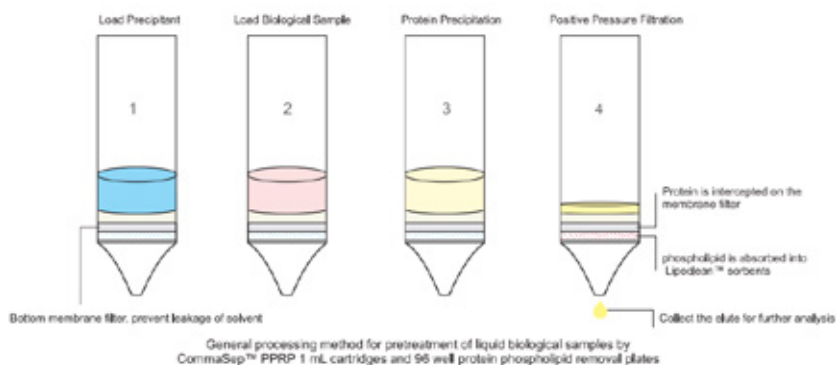
Copure® 96 Well Protein Phospholipid Removal (PPRP) Plate uses a new drip-free technology filter membrane to achieve protein precipitation in the wells and combines with the specially developed new adsorbent lipoclean® in the wells to simultaneously remove proteins and phospholipids in the sample. Therefore, the purification effect for lipidic samples and data of target have been improved greatly. Also, the maintenance of instrument system could be minimized.



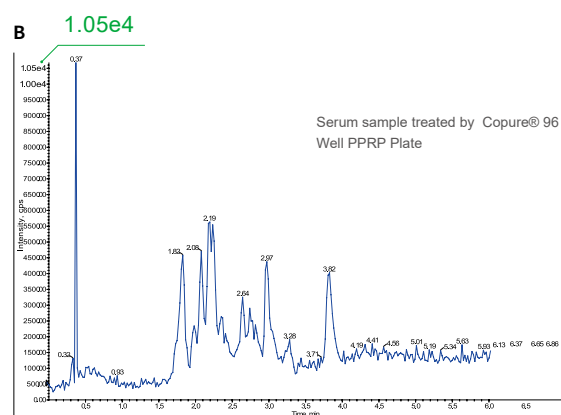
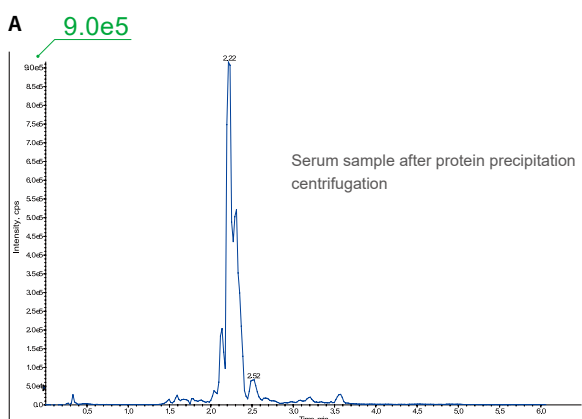
## Features

- Protein precipitation and phospholipid removal in the wells to limit ion suppression
- 2-4 steps general procedures
- 96-well plate and 1 mL cartridge are available
- Applied to TDM, forensic toxicology, endocrine study

## Flow Chart



## Mass Spectrum



Comparing the intensity of phospholipids of Figure A and B, the biological samples were treated by Copure® 96 Well PPRP Plate was reduced by nearly 2 orders of magnitude. The effect of removing phospholipids was very significant.

## Ordering Information

Cat.#	Description	Qty.
MPPRP9601	Copure® 96 Well PPRP Plate, 40 mg/1 mL/well	1 Pc/Box
MPPRP9602	Copure® 96 Well PPRP Plate, 40 mg/2 mL/well	1 Pc/Box
MPPRP0140	Copure® PPRP Cartridge, 40 mg/1 mL/cartridge	30 Pcs/Box

# Copure<sup>®</sup> MS Series 96-Well Solid Phase Extraction (SPE) Plates

Copure<sup>®</sup> MS Series 96-well SPE Plates are designed for high-throughput clinical mass spectrometry based on biocomma<sup>®</sup> special SPE sorbents and core accessories.

The special SPE sorbents have more uniform particle size, larger specific surface area, higher loading capacity, higher purity, and no background impurities. Copure<sup>®</sup> MS Series overcame the difficulties of complex matrix of biological samples and extremely low amount of target to achieve excellent purity, excellent stability and low background interference result to ensure the quality of analysis.

Beside the products, we also provide applications as reference to address customer concerns. Our products have excellent recovery rate of steroid hormones, catecholamines, vitamins, etc.

## Features

- MS Series HLB is a versatile, hydrophilic-lipophilic-balanced reversed-phase sorbent suitable for acidic, basic, and neutral compounds.
- MS Series MCX is a strong cation exchange reversed-phase sorbent with high selectivity for weakly basic compounds.
- MS Series MAX is a strong anion exchange reversed-phase sorbent with high selectivity for weakly acidic compounds.
- MS Series WCX is a weak cation exchange reversed-phase sorbent with high selectivity for strongly basic compounds.
- MS Series WAX is a weak anion exchange reversed-phase sorbent with high selectivity for strongly acidic compounds.

## DVfree 96-Well Plates

- No dead volume structure design, no solvent residue, reduce analyte loss.
- 3-5 mg sorbent per well, suitable for extraction of trace substances.
- Trace sorbent evenly packed with better results consistency and reproducibility.
- No evaporation and reconstitution necessary due to elution volumes as low as 25 µL.
- Compatible with biocomma<sup>®</sup> positive pressure devices and most liquid-handling robotic systems for automated, reliable high-throughput solid phase extraction.

## Regular 96-Well Plates

- Classic 96-well plate design for greater versatility.
- Available in 10 mg, 30 mg, etc. with high sample loading to meet most customer needs.
- Compatible with biocomma<sup>®</sup> positive pressure devices and most liquid-handling robotic systems for automated, reliable high-throughput solid phase extraction.

## Results

### 1. MS Series HLB 96-Well Plate recovery and stability results

4 Steroid Hormones in Spiked Plasma				
Concentration (ppb)	Recovery (% ,n=24)			
	Cortisone	Corticosterone	Androstenedione	Testosterone
2	82.2	101.0	102.6	128.4
20	102.4	101.0	125.4	125.0

As result, under different spiked concentrations, the four compounds have good recovery.

MS Series HLB Stability	
Compound	CV (% ,n=24)
Cortisone	6.00
Corticosterone	5.44
Androstenedione	5.35
Testosterone	6.89

In this experiment, the results of target compound compared from different wells from different plates and batches. The result shows good stability.

### 2. MS Series WCX 96-well plate stability test

Catecholamine Stability		
Compound	CV (%)	n
NMN	11.63	44
MN	4.75	44

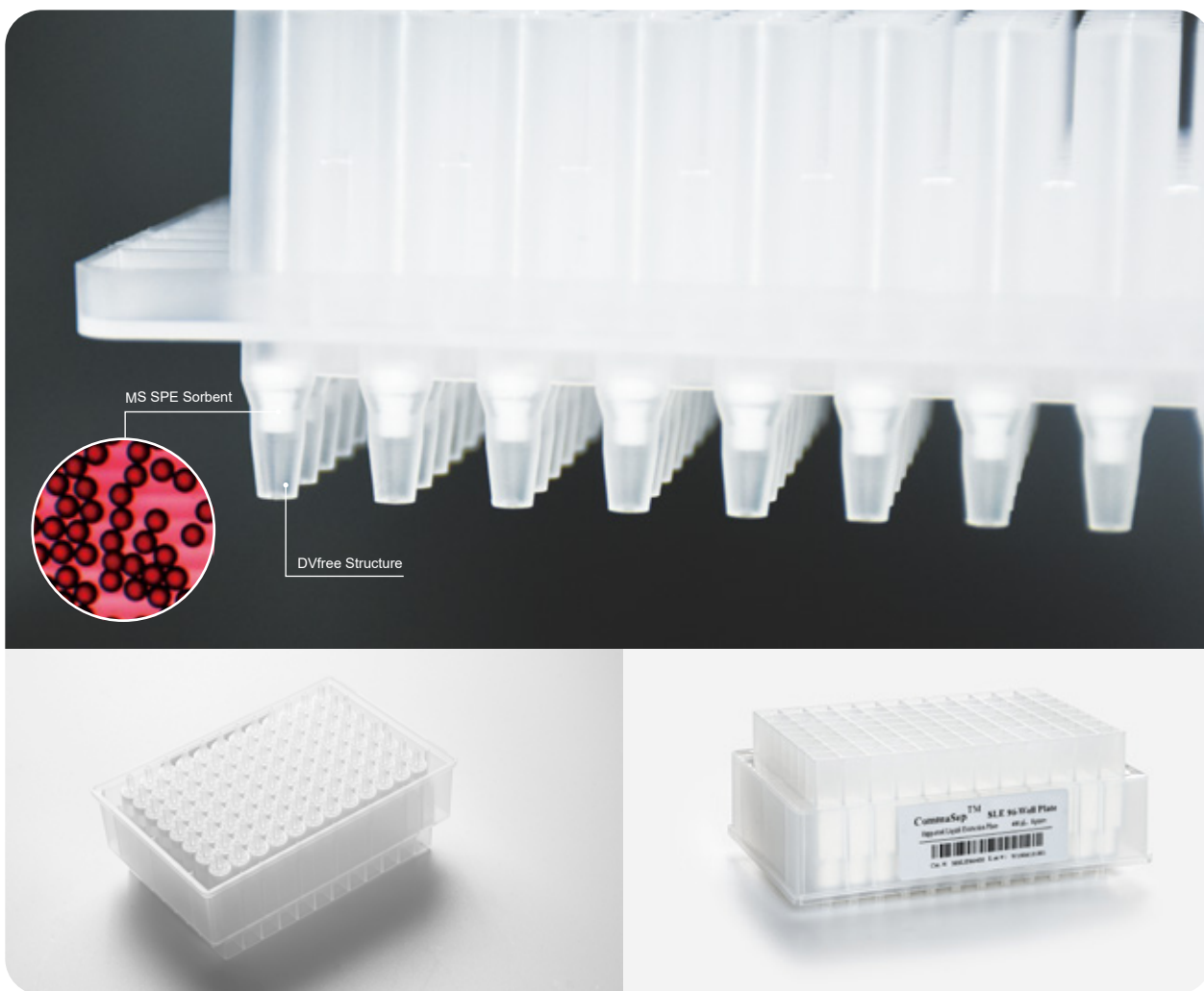
### 3. MS Series MCX 96-Well Plate recovery and stability results

Thyroid Hormones T3 and T4 in Serum Recovery Rate			
Compound	Recovery (% ,n=24)		
	4.5 ppb	18 ppb	45 ppb
T3	86.36	96.15	93.73
T4	103.5	116.2	109.22

As result, under different spiked concentrations, both T3 and T4 have good recovery.

Thyroid Hormones T3 and T4 in Serum Stability		
Compound	CV (%)	n
T3	4.5 ppb	4.88
	18 ppb	2.98
	45 ppb	1.05
T4	4.5 ppb	7.92
	18 ppb	1.41
	45 ppb	0.75

In this experiment, the results of target compound compared from different wells from different plates and batches. The result shows good stability.



## Ordering Information

	Cat. #	Description	Specification	Qty.
Dvfree 96-Well Plate	MHLB9603	Copure <sup>®</sup> MS HLB 96-well plate	3 mg/600 $\mu$ L	1 PC/PK
	MHLB9605	Copure <sup>®</sup> MS HLB 96-well plate	5 mg/600 $\mu$ L	1 PC/PK
	MWAX9603	Copure <sup>®</sup> MS WAX 96-well plate	3 mg/600 $\mu$ L	1 PC/PK
	MWAX9605	Copure <sup>®</sup> MS WAX 96-well plate	5 mg/600 $\mu$ L	1 PC/PK
	MWCX9603	Copure <sup>®</sup> MS WCX 96-well plate	3 mg/600 $\mu$ L	1 PC/PK
	MWCX9605	Copure <sup>®</sup> MS WCX 96-well plate	5 mg/600 $\mu$ L	1 PC/PK
	MMAX9603	Copure <sup>®</sup> MS MAX 96-well plate	3 mg/600 $\mu$ L	1 PC/PK
	MMAX9605	Copure <sup>®</sup> MS MAX 96-well plate	5 mg/600 $\mu$ L	1 PC/PK
	MMCX9603	Copure <sup>®</sup> MS MCX 96-well plate	3 mg/600 $\mu$ L	1 PC/PK
	MMCX9605	Copure <sup>®</sup> MS MCX 96-well plate	5 mg/600 $\mu$ L	1 PC/PK
Regular 96-Well Plates	MHLB9610	Copure <sup>®</sup> MS HLB 96-well plate	10 mg/1 mL, 10 mg/2 mL	1 PC/PK
	MHLB9630	Copure <sup>®</sup> MS HLB 96-well plate	30 mg/1 mL, 30 mg/2 mL	1 PC/PK
	MWAX9610	Copure <sup>®</sup> MS WAX 96-well plate	10 mg/1 mL, 10 mg/2 mL	1 PC/PK
	MWAX9630	Copure <sup>®</sup> MS WAX 96-well plate	30 mg/1 mL, 30 mg/2 mL	1 PC/PK
	MWCX9610	Copure <sup>®</sup> MS WCX 96-well plate	10 mg/1 mL, 10 mg/2 mL	1 PC/PK
	MWCX9630	Copure <sup>®</sup> MS WCX 96-well plate	30 mg/1 mL, 30 mg/2 mL	1 PC/PK
	MMAX9610	Copure <sup>®</sup> MS MAX 96-well plate	10 mg/1 mL, 10 mg/2 mL	1 PC/PK
	MMAX9630	Copure <sup>®</sup> MS MAX 96-well plate	30 mg/1 mL, 30 mg/2 mL	1 PC/PK
	MMCX9610	Copure <sup>®</sup> MS MCX 96-well plate	10 mg/1 mL, 10 mg/2 mL	1 PC/PK
	MMCX9630	Copure <sup>®</sup> MS MCX 96-well plate	30 mg/1 mL, 30 mg/2 mL	1 PC/PK

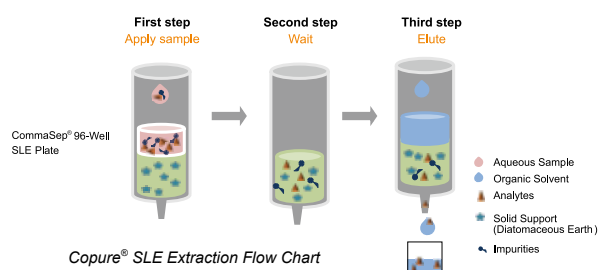
# Copure<sup>®</sup> 96 Well Supported Liquid Extraction (SLE) Plate

Copure<sup>®</sup> 96-well SLE plate adopts special technology to process the materials. The material adopts porous diatomite filler with high specific surface area and strong chemical inertia as liquid-liquid distribution carrier. It can replace the most of traditional liquid-liquid extraction methods, and it has higher extraction efficiency and stability. This method is widely used in food safety, environmental monitoring, clinical diagnosis and industrial product detection.

## Features

- Replace the traditional liquid-liquid extraction, provide an ideal surface of liquid-liquid extraction for target analytes
- Avoid the emulsions phenomenon
- The operation of SLE is very simple: load-elute, saving solvent and time, easy to automate
- Better reproducibility and higher recovery
- Lower detection limit and higher sensitivity

Fig.1 Operation process of Copure<sup>®</sup> 96-well SLE plate

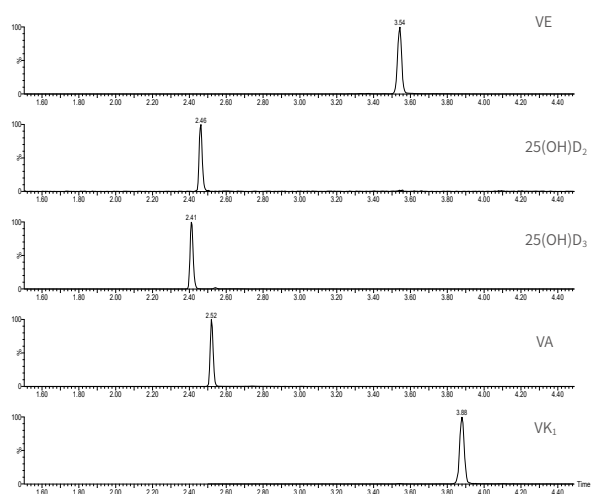


Compounds	Recovery of compounds (%)				
	25(OH)D <sub>2</sub>	25(OH)D <sub>3</sub>	VA	VE	VK <sub>1</sub>
Copure <sup>®</sup> SLE plate	70.2	69.8	75.2	67.5	76.5
Brand A	60.3	61.6	67.9	63.4	69.7
Brand B	67.8	68.9	76.2	68.9	75.4

Table 2. Stability of vitamins

Compounds	RSD (% , n=8)
25(OH)D <sub>2</sub>	5.78
25(OH)D <sub>3</sub>	9.89
VA	7.21
VE	4.6
VK1	6.55

Fig.2 Liquid chromatography of standards



The above data show that: Copure<sup>®</sup> 96-well SLE plate has good recovery and high stability.

Table 1. Comparison of vitamins recovery

## Ordering Information

Cat. #	Description	Qty.
MSLE96200	Copure <sup>®</sup> 96-well SLE plate, 200 µL/1 mL	1 Pcs/Box
MSLE96400	Copure <sup>®</sup> 96-well SLE plate, 400 µL/2 mL	1 Pcs/Box

# Laboprtry Device & Consumables





## Filtration Guide

Filtration Media	Main Features	Applications
Nylon	<ul style="list-style-type: none"> <li>• Hydrophilic</li> <li>• Robust</li> <li>• pH range: 3-12</li> <li>• Broad Chemical compatibility</li> </ul>	<ul style="list-style-type: none"> <li>• Chemicals filtration</li> <li>• Beverage filtration</li> <li>• HPLC sample preparation</li> </ul>
PES	<ul style="list-style-type: none"> <li>• Hydrophilic</li> <li>• High flow rate</li> <li>• Low extractables</li> <li>• Low protein binding</li> <li>• pH range: 1-14</li> </ul>	<ul style="list-style-type: none"> <li>• Protein filtration</li> <li>• Tissue culture media filtration</li> <li>• Buffer prep</li> <li>• HPLC sample preparation</li> </ul>
PTFE	<ul style="list-style-type: none"> <li>• Broad chemical compatibility</li> <li>• Hydrophobic and hydrophilic available</li> <li>• pH range: 1-14</li> <li>• Available supported or unsupported</li> </ul>	<ul style="list-style-type: none"> <li>• Organic solvents</li> <li>• Strong acid and alkaline resistance</li> <li>• Gas filtration</li> <li>• Air sampling</li> </ul>
PVDF	<ul style="list-style-type: none"> <li>• High thermal resistance</li> <li>• Broad chemical compatibility</li> <li>• Hydrophobic and hydrophilic available</li> <li>• Low protein binding</li> </ul>	<ul style="list-style-type: none"> <li>• Gas filtration</li> <li>• Food industry</li> <li>• Pharmaceutical filtration</li> </ul>
MCE	<ul style="list-style-type: none"> <li>• Hydrophilic</li> <li>• High flow rate</li> <li>• Low protein binding</li> <li>• pH range: 4-8</li> </ul>	<ul style="list-style-type: none"> <li>• Cell culture media</li> <li>• Microorganism enumeration and identification</li> <li>• Acid digestion</li> <li>• Heavy metals testing</li> </ul>
CA	<ul style="list-style-type: none"> <li>• Hydrophilic</li> <li>• Low protein binding</li> <li>• pH range: 4-8</li> </ul>	<ul style="list-style-type: none"> <li>• Protein, enzyme and biological solutions</li> <li>• Tissue culture media</li> </ul>
Glass Fiber	<ul style="list-style-type: none"> <li>• Broad chemical compatibility</li> <li>• High dirt holding capacity</li> <li>• pH range: 4-14</li> <li>• High thermal resistance (up to 500°C )</li> <li>• With or without binders</li> </ul>	<ul style="list-style-type: none"> <li>• Clarification and prefiltration</li> <li>• Tissue Culture media</li> <li>• DNA/RNA adsorption and purification</li> <li>• Qualification and quantification</li> </ul>
PP microfiber	<ul style="list-style-type: none"> <li>• Broad chemical compatibility</li> <li>• pH range: 1-14</li> </ul>	<ul style="list-style-type: none"> <li>• Pre-filtration</li> <li>• Clarification</li> </ul>

# Syringe Filters

## Specification

Diameter (mm)	13 mm	25 mm
Filtration Area (cm <sup>2</sup> ):	0.92	2.98
Housing Material:	PP	
Holdup-Volume (μl):	<10	<100
Volume Throughput (ml):	<10	<50
Connections (Inlet/Outlet):	Female Luer Lock inlet and Male Luer slip outlet	
Max Operating Pressure (psi):	87	
Max Operating Temperature (°C )	100	

Filter Media	Diameter (mm)	Pore Size (um)	Pre-Fliter Layer
Nylon	13	0.22	PP
CA		0.45	
PES	25	0.8	GF
MCE	33	1.0	
PVDF			
PTFE			
RC			



# Syringe Filters

biocomma® Syringe Filters are suitable for solution preparation, sterilization filtration and biological sample preparation.

## Ordering Information

Mixed Cellulose Ester (MCE) Syringe Filters

Cat. #	Description	Qty.
SF130-22-MCE	MCE / $\Phi$ 13 mm / 0.22 $\mu$ m / Hydrophilic	100 Pcs/Box
SF130-45-MCE	MCE / $\Phi$ 13 mm / 0.45 $\mu$ m / Hydrophilic	100 Pcs/Box
SF250-22-MCE	MCE / $\Phi$ 25 mm / 0.22 $\mu$ m / Hydrophilic	100 Pcs/Box
SF250-45-MCE	MCE / $\Phi$ 25 mm / 0.45 $\mu$ m / Hydrophilic	100 Pcs/Box

Cellulose Acetate (CA) Syringe Filters

Cat. #	Description	Qty.
SF130-22-CA	CA / $\Phi$ 13 mm / 0.22 $\mu$ m / Hydrophilic	100 Pcs/Box
SF130-45-CA	CA / $\Phi$ 13 mm / 0.45 $\mu$ m / Hydrophilic	100 Pcs/Box
SF250-22-CA	CA / $\Phi$ 25 mm / 0.22 $\mu$ m / Hydrophilic	100 Pcs/Box
SF250-45-CA	CA / $\Phi$ 25 mm / 0.45 $\mu$ m / Hydrophilic	100 Pcs/Box

Hydrophilic Polytetrafluoroethylene (PTFE) Syringe Filters

Cat. #	Description	Qty.
SF130-22-PTFE-HL	PTFE / $\Phi$ 13 mm / 0.22 $\mu$ m / Hydrophilic	100 Pcs/Box
SF130-45-PTFE-HL	PTFE / $\Phi$ 13 mm / 0.45 $\mu$ m / Hydrophilic	100 Pcs/Box
SF250-22-PTFE-HL	PTFE / $\Phi$ 25 mm / 0.22 $\mu$ m / Hydrophilic	100 Pcs/Box
SF250-45-PTFE-HL	PTFE / $\Phi$ 25 mm / 0.45 $\mu$ m / Hydrophilic	100 Pcs/Box

Hydrophilic Polyvinylidene Fluoride (PVDF) Syringe Filters

Cat. #	Description	Qty.
SF130-22-PVDF-HL	PVDF / $\Phi$ 13 mm / 0.22 $\mu$ m / Hydrophilic	100 Pcs/Box
SF130-45-PVDF-HL	PVDF / $\Phi$ 13 mm / 0.45 $\mu$ m / Hydrophilic	100 Pcs/Box
SF250-22-PVDF-HL	PVDF / $\Phi$ 25 mm / 0.22 $\mu$ m / Hydrophilic	100 Pcs/Box
SF250-45-PVDF-HL	PVDF / $\Phi$ 25 mm / 0.45 $\mu$ m / Hydrophilic	100 Pcs/Box

Polyethersulfone (PES) Syringe Filters

Cat. #	Description	Qty.
SF130-22-PES	PES / $\Phi$ 13 mm / 0.22 $\mu$ m / Hydrophilic	100 Pcs/Box
SF130-45-PES	PES / $\Phi$ 13 mm / 0.45 $\mu$ m / Hydrophilic	100 Pcs/Box
SF250-22-PES	PES / $\Phi$ 25 mm / 0.22 $\mu$ m / Hydrophilic	100 Pcs/Box
SF250-45-PES	PES / $\Phi$ 25 mm / 0.45 $\mu$ m / Hydrophilic	100 Pcs/Box

Polytetrafluoroethylene (PTFE) Syringe Filters

Cat. #	Description	Qty.
SF130-22-PTFE	PTFE / $\Phi$ 13 mm / 0.22 $\mu$ m / Hydrophobic	100 Pcs/Box
SF130-45-PTFE	PTFE / $\Phi$ 13 mm / 0.45 $\mu$ m / Hydrophobic	100 Pcs/Box
SF250-22-PTFE	PTFE / $\Phi$ 25 mm / 0.22 $\mu$ m / Hydrophobic	100 Pcs/Box
SF250-45-PTFE	PTFE / $\Phi$ 25 mm / 0.45 $\mu$ m / Hydrophobic	100 Pcs/Box

Nylon Syringe Filters

Cat. #	Description	Qty.
SF130-22-NL	Nylon / $\Phi$ 13 mm / 0.22 $\mu$ m / Hydrophilic	100 Pcs/Box
SF130-45-NL	Nylon / $\Phi$ 13 mm / 0.45 $\mu$ m / Hydrophilic	100 Pcs/Box
SF250-22-NL	Nylon / $\Phi$ 25 mm / 0.22 $\mu$ m / Hydrophilic	100 Pcs/Box
SF250-45-NL	Nylon / $\Phi$ 25 mm / 0.45 $\mu$ m / Hydrophilic	100 Pcs/Box

Polyvinylidene Fluoride (PVDF) Syringe Filters

Cat. #	Description	Qty.
SF130-22-PVDF	PVDF / $\Phi$ 13 mm / 0.22 $\mu$ m / Hydrophobic	100 Pcs/Box
SF130-45-PVDF	PVDF / $\Phi$ 13 mm / 0.45 $\mu$ m / Hydrophobic	100 Pcs/Box
SF250-22-PVDF	PVDF / $\Phi$ 25 mm / 0.22 $\mu$ m / Hydrophobic	100 Pcs/Box
SF250-45-PVDF	PVDF / $\Phi$ 25 mm / 0.45 $\mu$ m / Hydrophobic	100 Pcs/Box



# Sterile Syringe Filters

biocomma® Sterile Syringe Filters remove bacteria fast and reduce the impact on active ingredients in liquid during sterilization process. Generally, 0.1 µm syringe filter filters mycoplasma, 0.22 µm filters bacteria, and 0.45µm filters solid particles. Sterile syringe filters are widely applied to various fields of life science to sterilize small-volume biological liquids, such as proteins, culture media, additives, buffers, reagents, pharmaceuticals and etc.



## Features

- The easy tear packaging is made of medical polypropylene to ensure good sealing
- Sterilized by gamma radiation
- DNase and RNase free, pyrogen free and No Endotoxin
- Low protein adsorption rate

## Ordering Information

### Sterile Mixed Cellulose Ester (MCE) Syringe Filters

Cat. #	Description	Qty.
SSF130-22-MCE	MCE / Φ13 mm / 0.22 µm / Hydrophilic	100 Pcs/PK
SSF130-45-MCE	MCE / Φ13 mm / 0.45 µm / Hydrophilic	100 Pcs/PK
SSF250-22-MCE	MCE / Φ25 mm / 0.22 µm / Hydrophilic	100 Pcs/PK
SSF250-45-MCE	MCE / Φ25 mm / 0.45 µm / Hydrophilic	100 Pcs/PK

### Sterile Cellulose Acetate (CA) Syringe Filters

Cat. #	Description	Qty.
SSF130-22-CA	CA / Φ13 mm / 0.22 µm / Hydrophilic	100 Pcs/PK
SSF130-45-CA	CA / Φ13 mm / 0.45 µm / Hydrophilic	100 Pcs/PK
SSF250-22-CA	CA / Φ25 mm / 0.22 µm / Hydrophilic	100 Pcs/PK
SSF250-45-CA	CA / Φ25 mm / 0.45 µm / Hydrophilic	100 Pcs/PK

### Sterile Polyethersulfone (PES) Syringe Filters

Cat. #	Description	Qty.
SSF130-22-PES	PES / Φ13 mm / 0.22 µm / Hydrophilic	100 Pcs/PK
SSF130-45-PES	PES / Φ13 mm / 0.45 µm / Hydrophilic	100 Pcs/PK
SSF250-22-PES	PES / Φ25 mm / 0.22 µm / Hydrophilic	100 Pcs/PK
SSF250-45-PES	PES / Φ25 mm / 0.45 µm / Hydrophilic	100 Pcs/PK

### Sterile Polyvinylidene Fluoride (PVDF) Syringe Filters

Cat. #	Description	Qty.
SSF130-22-PVDF	PVDF / Φ13 mm / 0.22 µm / Hydrophobic	100 Pcs/PK
SSF130-45-PVDF	PVDF / Φ13 mm / 0.45 µm / Hydrophobic	100 Pcs/PK
SSF250-22-PVDF	PVDF / Φ25 mm / 0.22 µm / Hydrophobic	100 Pcs/PK
SSF250-45-PVDF	PVDF / Φ25 mm / 0.45 µm / Hydrophobic	100 Pcs/PK

### Sterile Polytetrafluoroethylene (PTFE) Syringe Filters

Cat. #	Description	Qty.
SSF130-22-PTFE	PTFE / Φ13 mm / 0.22 µm / Hydrophobic	100 Pcs/PK
SSF130-45-PTFE	PTFE / Φ13 mm / 0.45 µm / Hydrophobic	100 Pcs/PK
SSF250-22-PTFE	PTFE / Φ25 mm / 0.22 µm / Hydrophobic	100 Pcs/PK
SSF250-45-PTFE	PTFE / Φ25 mm / 0.45 µm / Hydrophobic	100 Pcs/PK

### Sterile Nylon Syringe Filter

Cat. #	Description	Qty.
SSF130-22-NL	Nylon / Φ13 mm / 0.22 µm / Hydrophilic	100 Pcs/PK
SSF130-45-NL	Nylon / Φ13 mm / 0.45 µm / Hydrophilic	100 Pcs/PK
SSF250-22-NL	Nylon / Φ25 mm / 0.22 µm / Hydrophilic	100 Pcs/PK
SSF250-45-NL	Nylon / Φ25 mm / 0.45 µm / Hydrophilic	100 Pcs/PK

## Microfiltration Membranes

biocomma® Microfiltration Membranes are used in sample filtration during analysis process in laboratories.

### Ordering Information

#### Mixed Cellulose Ester (MCE) Microfiltration Membrane

Cat. #	Description	Qty.
MF047-22-MCE	MCE / $\Phi 47$ mm / 0.22 $\mu$ m	200 Pcs/Box
MF047-45-MCE	MCE / $\Phi 47$ mm / 0.45 $\mu$ m	200 Pcs/Box

#### Cellulose Acetate (CA) Microfiltration Membrane

Cat. #	Description	Qty.
MF047-22-CA	CA / $\Phi 47$ mm/0.22 $\mu$ m	200 Pcs/Box
MF047-45-CA	CA / $\Phi 47$ mm/0.45 $\mu$ m	200 Pcs/Box

#### Polyethersulfone (PES) Microfiltration Membrane

Cat. #	Description	Qty.
MF047-22-PES	PES / $\Phi 47$ mm/0.22 $\mu$ m	200 Pcs/Box
MF047-45-PES	PES / $\Phi 47$ mm/0.45 $\mu$ m	200 Pcs/Box

#### Hydrophilic Polytetrafluoroethylene (PTFE) Microfiltration Membrane

Cat. #	Description	Qty.
MF047-22-PTFE-HL	PTFE / $\Phi 47$ mm/0.22 $\mu$ m	200 Pcs/Box
MF047-45-PTFE-HL	PTFE / $\Phi 47$ mm/0.45 $\mu$ m	200 Pcs/Box

#### Nylon Microfiltration Membrane

Cat. #	Description	Qty.
MF047-22-NL	Nylon / $\Phi 47$ mm / 0.22 $\mu$ m	200 Pcs/Box
MF047-45-NL	Nylon / $\Phi 47$ mm / 0.45 $\mu$ m	200 Pcs/Box

#### Polyvinylidene Fluoride (PVDF) Microfiltration Membrane

Cat. #	Description	Qty.
MF047-22-PVDF	PVDF / $\Phi 47$ mm / 0.22 $\mu$ m	200 Pcs/Box
MF047-45-PVDF	PVDF / $\Phi 47$ mm / 0.45 $\mu$ m	200 Pcs/Box

#### Polytetrafluoroethylene (PTFE) Microfiltration Membrane

Cat. #	Description	Qty.
MF047-22-PTFE	PTFE / $\Phi 47$ mm / 0.22 $\mu$ m	200 Pcs/Box
MF047-45-PTFE	PTFE / $\Phi 47$ mm / 0.45 $\mu$ m	200 Pcs/Box

\*Customized diameter of mentioned membranes are available.





## Gridded Membrane Filters

biocomma® Sterile Mixed Cellulose Ester (MCE) Gridded Membrane Filter are composed of Cellulose Acetate and Cellulose Nitrate. Many microbiological techniques include colony counting after incubation as the standard method of quantification. Gridded filters have clearly defined grid lines spaced at 3.1 mm intervals. The special ink used is nontoxic and completely free from bacterial growth inhibitors. White gridded disks are designed for the recovery and retention of E. Coli bacteria in water/waste-water analysis as well as other microbiological tests. Black mixed cellulose esters (MCE) are available plain for automatic colony counting applications, as well as gridded to assist in manual counting procedures. Black MCE membranes provide contrast between residue or cell colors and the filter without having to counter-stain the membrane.



### Features

- Excellent retention and colony growth, high recovery rates of microorganisms
- Individually wrapped in easy-peel pack
- Pre-sterilized by gamma irradiation
- Calibrated Mixed Cellulose filters is designed to maximize the flow rate

### Ordering Information

Cat.#	Description	Diameter	Pore Size	Qty.
MF047-022-MCE-GWS	Individually packed Sterile MCE Gridded Membrane Filter White membrane black grid / $\Phi$ 47mm / 0.22 $\mu$ m / Aqueous	47mm	0.22 $\mu$ m	100 Pcs/Box
MF047-045-MCE-GWS	Individually packed Sterile MCE Gridded Membrane Filter White membrane black grid / $\Phi$ 47mm / 0.45 $\mu$ m / Aqueous	47mm	0.45 $\mu$ m	100 Pcs/Box
MF047-080-MCE-GWS	Individually packed Sterile MCE Gridded Membrane Filter White membrane black grid / $\Phi$ 47mm / 0.80 $\mu$ m / Aqueous	47mm	0.80 $\mu$ m	100 Pcs/Box
MF050-022-MCE-GWS	Individually packed Sterile MCE Gridded Membrane Filter White membrane black grid / $\Phi$ 50mm / 0.22 $\mu$ m / Aqueous	50mm	0.22 $\mu$ m	100 Pcs/Box
MF050-045-MCE-GWS	Individually packed Sterile MCE Gridded Membrane Filter White membrane black grid / $\Phi$ 50mm / 0.45 $\mu$ m / Aqueous	50mm	0.45 $\mu$ m	100 Pcs/Box
MF050-080-MCE-GWS	Individually packed Sterile MCE Gridded Membrane Filter White membrane black grid / $\Phi$ 50mm / 0.80 $\mu$ m / Aqueous	50mm	0.80 $\mu$ m	100 Pcs/Box
MF047-022-MCE-GBS	Individually packed Sterile MCE Gridded Membrane Filter Black membrane white grid / $\Phi$ 47mm / 0.22 $\mu$ m / Aqueous	47mm	0.22 $\mu$ m	100 Pcs/Box
MF047-045-MCE-GBS	Individually packed Sterile MCE Gridded Membrane Filter Black membrane white grid / $\Phi$ 47mm / 0.45 $\mu$ m / Aqueous	47mm	0.45 $\mu$ m	100 Pcs/Box
MF047-080-MCE-GBS	Individually packed Sterile MCE Gridded Membrane Filter Black membrane white grid / $\Phi$ 47mm / 0.80 $\mu$ m / Aqueous	47mm	0.45 $\mu$ m	100 Pcs/Box
MF050-022-MCE-GBS	Individually packed Sterile MCE Gridded Membrane Filter Black membrane white grid / $\Phi$ 50mm / 0.22 $\mu$ m / Aqueous	50mm	0.22 $\mu$ m	100 Pcs/Box
MF050-045-MCE-GBS	Individually packed Sterile MCE Gridded Membrane Filter Black membrane white grid / $\Phi$ 50mm / 0.45 $\mu$ m / Aqueous	50mm	0.45 $\mu$ m	100 Pcs/Box
MF050-080-MCE-GBS	Individually packed Sterile MCE Gridded Membrane Filter Black membrane white grid / $\Phi$ 50mm / 0.80 $\mu$ m / Aqueous	50mm	0.80 $\mu$ m	100 Pcs/Box

## Sterile Filter Device

biocomma® Disposable Vacuum Filtration units are a standalone filtration unit that combines a graduated funnel-top, filter assembly and graduated reservoir. They are ideal for when a self-contained, pre-sterilized, disposable filtration unit is required. Can be used for the sterile filtration of biological and aqueous fluids, tissue culture media and buffers. Available with PES, cellulose acetate and PVDF membranes in various pore sizes, comes in two funnel sizes (250 and 500 ml) and three receiver flask (250, 500 and 1000 mL).



### Features

- Disposable and pre-sterilized by gamma irradiation for rapid and convenient use.
- Non-pyrogenic, low extractables and surfactant-free ensures purity of filtrate.
- Reservoir has textured areas for improved grip when handling and opening and sealing the bottle.
- Glass fiber pre-filter is available.

Material	Features	Application
PES Vacuum Filtration Units	PES asymmetrical membrane, hydrophilic membrane, high porosity, fast flow rate, low fouling, and low protein adsorption	Suitable for filtering biological fluids such as serum, cell culture media, buffers, protein solutions, and for use in culturing
MCE Vacuum Filtration Units	MCE has limited chemical compatibility, low protein adsorption	Suitable for filtering biological fluids and buffer solutions.
PVDF Vacuum Filtration Units	PVDF has strong chemical compatibility, low protein adsorption, and high mechanical strength	Suitable for filtering certain organic solvents and biological fluids.
PTFE Vacuum Filtration Units	PTFE has strong chemical compatibility	Suitable for filtering strong acid and strong base, low extractable level
Nylon Vacuum Filtration Units	Nylon is hydrophilic, has high mechanical strength, is resistant to alkali but not acid, and has strong protein binding	Suitable for filtering buffer solutions and chemical reagents, but not for critical protein solution filtration
CA Vacuum Filtration Units	CA has limited chemical compatibility, low protein adsorption	Suitable for buffer solutions and protein recovery experiments
GF Vacuum Filtration Units	GF has strong chemical compatibility, high dirt holding capacity, and strong acid and alkali resistance	Suitable for pre-filtration, for solution filtration that is difficult to filter and has a lot of impurities
0.1 µm vacuum filtration units for the removal of mycoplasma 0.2 µm vacuum filtration units for liquid sterile filtration 0.45 µm vacuum filtration units for liquid clarification and filtration		

## Ordering Information

Cat.#	Description	Qty.
VFP050-010-PES-250	PES, $\Phi$ 50 mm, 0.1 $\mu$ m, 250 ml Funnel, 250 ml Receiver Flask, Sterile	12 Sets/Box
VFP050-022-PES-250	PES, $\Phi$ 50 mm, 0.22 $\mu$ m, 250 ml Funnel, 250 ml Receiver Flask, Sterile	12 Sets/Box
VFP050-045-PES-250	PES, $\Phi$ 50 mm, 0.45 $\mu$ m, 250 ml Funnel, 250 ml Receiver Flask, Sterile	12 Sets/Box
VFP050-022-CA-250	CA, $\Phi$ 50 mm, 0.22 $\mu$ m, 250 ml Funnel, 250 ml Receiver Flask, Sterile	12 Sets/Box
VFP050-045-CA-250	CA, $\Phi$ 50 mm, 0.45 $\mu$ m, 250 ml Funnel, 250 ml Receiver Flask, Sterile	12 Sets/Box
VFP050-022-PVDF-250	Hydrophilic PVDF, $\Phi$ 50 mm, 0.22 $\mu$ m, 250 ml Funnel, 250 ml Receiver Flask, Sterile	12 Sets/Box
VFP050-045-PVDF-250	Hydrophilic PVDF, $\Phi$ 50 mm, 0.45 $\mu$ m, 250 ml Funnel, 250 ml Receiver Flask, Sterile	12 Sets/Box
VFP090-010-PES-500	PES, $\Phi$ 90 mm, 0.1 $\mu$ m, 500 ml Funnel, 500 ml Receiver Flask, Sterile	12 Sets/Box
VFP090-022-PES-500	PES, $\Phi$ 90 mm, 0.22 $\mu$ m, 500 ml Funnel, 500 ml Receiver Flask, Sterile	12 Sets/Box
VFP090-045-PES-500	PES, $\Phi$ 90 mm, 0.45 $\mu$ m, 500 ml Funnel, 500 ml Receiver Flask, Sterile	12 Sets/Box
VFP090-022-CA-500	CA, $\Phi$ 90 mm, 0.22 $\mu$ m, 500ml Funnel, 500 ml Receiver Flask, Sterile	12 Sets/Box
VFP090-045-CA-500	CA, $\Phi$ 90 mm, 0.45 $\mu$ m, 500 ml Funnel, 500 ml Receiver Flask, Sterile	12 Sets/Box
VFP090-022-PVDF-500	Hydrophilic PVDF, $\Phi$ 90 mm, 0.22 $\mu$ m, 500 ml Funnel, 500 ml Receiver Flask, Sterile	12 Sets/Box
VFP090-045-PVDF-500	Hydrophilic PVDF, $\Phi$ 90 mm, 0.45 $\mu$ m, 500 ml Funnel, 500 ml Receiver Flask, Sterile	12 Sets/Box
VFP090-010-PES-1000	PES, $\Phi$ 90 mm, 0.1 $\mu$ m, 1000 ml Funnel, 1000 ml Receiver Flask, Sterile	12 Sets/Box
VFP090-022-PES-1000	PES, $\Phi$ 90 mm, 0.22 $\mu$ m, 1000 ml Funnel, 1000 ml Receiver Flask, Sterile	12 Sets/Box
VFP090-045-PES-1000	PES, $\Phi$ 90 mm, 0.45 $\mu$ m, 1000 ml Funnel, 1000 ml Receiver Flask, Sterile	12 Sets/Box
VFP090-022-CA-1000	CA, $\Phi$ 90 mm, 0.22 $\mu$ m, 1000 ml Funnel, 1000 ml Receiver Flask, Sterile	12 Sets/Box
VFP090-045-CA-1000	CA, $\Phi$ 90 mm, 0.45 $\mu$ m, 1000 ml Funnel, 1000 ml Receiver Flask, Sterile	12 Sets/Box
VFP090-022-PVDF-1000	Hydrophilic PVDF, $\Phi$ 90 mm, 0.22 $\mu$ m, 1000 ml Funnel, 1000 ml Receiver Flask, Sterile	12 Sets/Box
VFP090-045-PVDF-1000	Hydrophilic PVDF, $\Phi$ 90 mm, 0.45 $\mu$ m, 1000 ml Funnel, 1000 ml Receiver Flask, Sterile	12 Sets/Box

Note: please contact for more specifications.

## Instrument Chart

Brand	Instrument/Model #	8-425 Screw-Top	9-425 Screw-Top	10-425 Screw-Top	11mm Crimp-Top	13-425 Screw-Top	Headspace
Agilent	Headspace (HS: 6, 10, 20 mL, Flat)						•
Agilent	1042, 1050, 1080, 1082, 1084, 1090, 1100, 5890, 6850, 6890, 7670A, 671A, 7672, 7673A/B, 7683, 7890, 8042		•		•		
Beckman	501, 502, 507	•		•			
Bruker	LC51					•	
Bruker /Varian	8100/8200	•	•	•	•		
	Genesis (HS: 10, 20 mL Rounded)						•
	Marathon		•		•		
	8035, 8000 Series, 8055, 8085, 3800 GC	•					
	9100/9090/9095	•			•		
Bruker/ Varian /Rainin	Dynamax AI-IA, AI-200, Dynamax AI-3				•		
	Dynamax AI-3AI-IA, AI-2W	•					
Shimadzu	AOC14/1400	•	•			•	
	AOC20i			•	•		
	AOC-14/1400, AOC-17	•					
	AOC-20		•		•	•	
	AOC 88/9	•	•				
	AOC-5000	•	•				
	HSS-2B/4B						•
	LC 2010	•	•				
PerkinElmer	Autosystem GC/XL/AS-2000	•	•		•	•	
	AI-1		•		•		
	Clarus 500/600		•		•		
	HS16/40						•
	Integral 4000	•	•		•		
	ISS-100/200	•	•		•		
	LC 600 42 vial tray		•				
	LC Plus	•	•			•	
	Autosystem GC (HS: 10, 20 mL, Rounded)	•			•		•
	F40, F45, HS 6, HS 40 (HS: 10, 20 mL, Rounded)				•		•
	Integral 4000 (HS: 10, 20 mL, Rounded)				•		•
	TurboMatrix 40/110						•
Waters	717 Plus				•		
	Acquity	•	•		•		
	Alliance 2690	•	•	•	•		
	CapLC	•	•				
	48-pos. M700					•	
	WISP				•		

## 8-425 Screw-Thread Vials

8-425 Screw-Thread Vials are the original smaller-opening autosampler vials that are designed to work with a variety of autosamplers requiring narrow-neck vials.

### Specifications:

- Material: USP Type 1 borosilicate glass
- Total volume: 2.0 mL
- Recommended fill: 1.5 mL
- Dimensions: 11.6\*32 mm
- Openings: 8-425 screw top
- Bottom style: flat bottom



### Ordering Information

#### 8-425 Screw-Thread Vials

Cat. #	Description	Capacity	O.D.xL	Color	Qty.
V1-T	Screw-thread vials	2 mL	11.6x32 mm	Clear	100 Pcs/Box
V1-TL	Screw-thread vials with write-on spot	2 mL	11.6x32 mm	Clear	100 Pcs/Box
V1-A	Screw-thread vials	2 mL	11.6x32 mm	Amber	100 Pcs/Box
V1-AL	Screw-thread vials with write-on spot	2 mL	11.6x32 mm	Amber	100 Pcs/Box

#### Caps with septa for 8-425 screw-thread vials

Cat. #	Description	Qty.
SC1-1	Black polypropylene screw caps with white PTFE/red silicone septa, 5.5mm hole	100 Pcs/Box
SC1-2	Black polypropylene screw caps with red PTFE/white silicone septa, 5.5mm hole	100 Pcs/Box
SC1-3	Black polypropylene screw caps with red PTFE/white silicone/red PTFE septa, 5.5mm hole	100 Pcs/Box
SC1-4	Black polypropylene screw caps with blue PTFE/white silicone septa, 5.5mm hole	100 Pcs/Box
SC1-5	Black polypropylene screw caps with pre-slit white PTFE/red silicone septa, 5.5mm hole	100 Pcs/Box
SC1-6	Black polypropylene screw caps with pre-slit red PTFE/white silicone septa, 5.5mm hole	100 Pcs/Box
SC1-7	Black polypropylene screw caps with pre-slit blue PTFE/white silicone septa, 5.5mm hole	100 Pcs/Box
SC1-8	White polypropylene screw caps with white PTFE/red silicone septa, 5.5mm hole	100 Pcs/Box
SC1-9	White polypropylene screw caps with red PTFE/white silicone septa, 5.5mm hole	100 Pcs/Box
SC1-10	White polypropylene screw caps with blue PTFE/white silicone septa, 5.5mm hole	100 Pcs/Box
SC1-11	White polypropylene screw caps with pre-slit white PTFE/red silicone septa, 5.5mm hole	100 Pcs/Box
SC1-12	White polypropylene screw caps with pre-slit red PTFE/white silicone septa, 5.5mm hole	100 Pcs/Box
SC1-13	White polypropylene screw caps with pre-slit blue PTFE/white silicone septa, 5.5mm hole	100 Pcs/Box

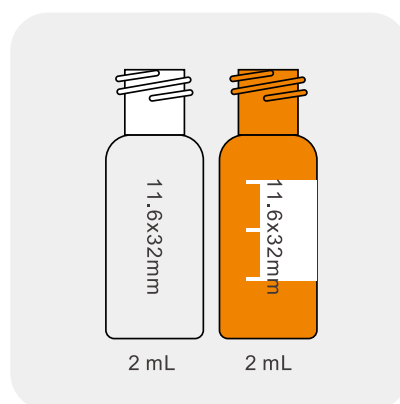
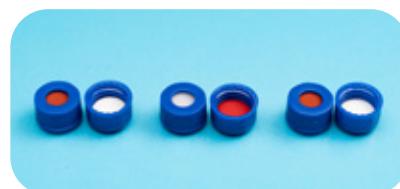


## 9-425 Screw-Thread Vials

9-425 Screw-Thread Vials are dimensionally equivalent to 11mm crimp top vials. Therefore, they can be used in any autosampler that are designed for 11mm crimp top vials. 9-425 Screw-thread vials give excellent sealing as well as the ease of applying and removing by hand.

### Specifications:

- Material: USP Type 1 borosilicate glass
- Total volume: 2.0 mL
- Recommended fill: 1.5 mL
- Dimensions: 11.6\*32 mm
- Openings: 9-425 screw top
- Bottom style: flat bottom



### Ordering Information

#### 9-425 Screw-Thread Vials

Cat. #	Description	Capacity	O.D.xL	Color	Qty.
V2-T	Screw-thread vials	2 mL	11.6x32 mm	Clear	100 Pcs/Box
V2-TL	Screw-thread vials with write-on spot	2 mL	11.6x32 mm	Clear	100 Pcs/Box
V2-A	Screw-thread vials	2 mL	11.6x32 mm	Amber	100 Pcs/Box
V2-AL	Screw-thread vials with write-on spot	2 mL	11.6x32 mm	Amber	100 Pcs/Box

#### Caps with septa for 9-425 screw-thread vials

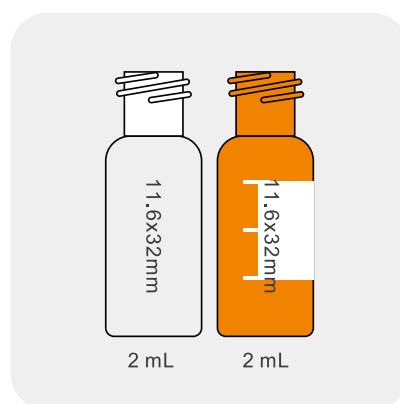
Cat. #	Description	Qty.
C2-1	Blue polypropylene screw caps, 6mm hole	100 Pcs/Box
C2-2	Blue polypropylene screw caps, closed top	100 Pcs/Box
SC2-1	Blue polypropylene screw caps with white PTFE/red silicone septa, 6mm hole	100 Pcs/Box
SC2-2	Blue polypropylene screw caps with red PTFE/white silicone septa, 6mm hole	100 Pcs/Box
SC2-3	Blue polypropylene screw caps with red PTFE/white silicone/red PTFE septa, 6mm hole	100 Pcs/Box
SC2-4	Blue polypropylene screw caps with blue PTFE/white silicone septa, 6mm hole	100 Pcs/Box
SC2-5	Blue polypropylene screw caps with pre-slit white PTFE/red silicone septa, 6mm hole	100 Pcs/Box
SC2-6	Blue polypropylene screw caps with pre-slit blue PTFE/white silicone septa, 6mm hole	100 Pcs/Box

## 10-425 Screw-Thread Vials

10-425 Screw-Thread Vials feature a wider opening than other screw-thread vials. The increased target area makes sample injection easier and reduces the chances of bending or breaking needles during sampling.

### Specifications:

- Material: USP Type 1 borosilicate glass
- Total volume: 2.0 mL
- Recommended fill: 1.5 mL
- Dimensions: 11.6\*32 mm
- Openings: 10-425 screw top
- Bottom style: flat bottom



### Ordering Information

#### 10-425 Screw-Thread Vials

Cat. #	Description	Capacity	O.D.xL	Color	Qty.
V3-T	Screw-thread vials	2 mL	11.6x32 mm	Clear	100 Pcs/Box
V3-TL	Screw-thread vials with write-on spot	2 mL	11.6x32 mm	Clear	100 Pcs/Box
V3-A	Screw-thread vials	2 mL	11.6x32 mm	Amber	100 Pcs/Box
V3-AL	Screw-thread vials with write-on spot	2 mL	11.6x32 mm	Amber	100 Pcs/Box

### Caps with septa for 10-425 screw-thread vials

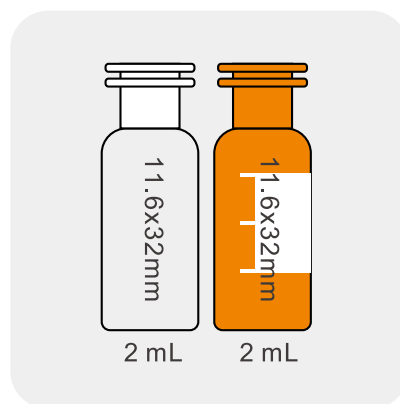
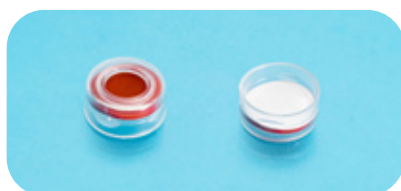
Cat. #	Description	Qty.
SC3-1	Black polypropylene screw caps with white PTFE/red silicone septa, 7mm hole	100 Pcs/Box
SC3-2	Black polypropylene screw caps with red PTFE/white silicone septa, 7mm hole	100 Pcs/Box

## Snap-Top Vials

11mm Snap-Top Vials have good sealing to minimize evaporation, even with volatile samples. Compared to crimp-top vials, snap-top vials are more convenient because the caps can be easily applied and removed by hand. An audible click ensures that a secure seal has been formed and the cap has been correctly aligned. Snap-top vials can be capped with either snap caps or crimp caps.

### Specifications:

- Material: USP Type 1 borosilicate glass
- Capacity: 2.0 mL
- Recommended fill: 1.5 mL
- Dimensions: 11.6\*32 mm
- Openings: 11mm snap-top
- Bottom style: flat bottom



### Ordering Information

#### 11mm Snap-Top Vials

Cat. #	Description	Capacity	O.D.xL	Color	Qty.
V4-T	11mm snap-top vials	2 mL	11.6x32 mm	Clear	100 Pcs/Box
V4-TL	11mm snap-top vials with write-on spot	2 mL	11.6x32 mm	Clear	100 Pcs/Box
V4-A	11mm snap-top vial	2 mL	11.6x32 mm	Amber	100 Pcs/Box
V4-AL	11mm snap-top vials with write-on spot	2 mL	11.6x32 mm	Amber	100 Pcs/Box

#### Caps with septa for 11mm snap-top vials

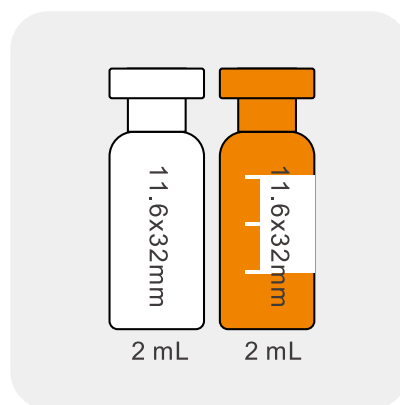
Cat. #	Description	Qty.
C4-1	Natural snap-top caps, 6mm hole	100 Pcs/Box
C4-2	Blue snap-top caps, 6mm hole	100 Pcs/Box
C4-3	Red snap-top caps, 6mm hole	100 Pcs/Box
SC4-1	Natural snap-top caps with white PTFE/red silicone septa, 6mm hole	100 Pcs/Box
SC4-2	Natural snap-top caps with red PTFE/white silicone/red PTFE septa, 6mm hole	100 Pcs/Box
SC4-3	Natural snap-top caps with blue PTFE/white silicone septa, 6mm hole	100 Pcs/Box
SC4-4	Blue snap-top caps with white PTFE/red silicone septa, 6mm hole	100 Pcs/Box
SC4-5	Blue snap-top caps with red PTFE/white silicone septa, 6mm hole	100 Pcs/Box
SC4-6	Red snap-top caps with white PTFE/red silicone septa, 6mm hole	100 Pcs/Box
SC4-7	Red snap-top caps with red PTFE/white silicone septa, 6mm hole	100 Pcs/Box
SC4-8	Natural snap-top caps with red PTFE/white silicone septa, 6mm hole	100 Pcs/Box
SC4-9	Red snap-top caps with red PTFE/white silicone/red PTFE septa, 6mm hole	100 Pcs/Box
SC4-10	Red snap-top caps with pre-slit blue PTFE/white silicone septa, 6mm hole	100 Pcs/Box

## Crimp-Top Vials

Crimp-Top Vials provide very excellent seal, reducing the chance of sample evaporation. These vials and 11mm aluminum crimp caps can be economically and easily used with crimping tools.

### Specifications:

- Material: USP Type 1 borosilicate glass
- Capacity: 2.0 mL
- Recommended fill: 1.5 mL
- Dimensions: 11.6\*32 mm
- Openings: 11mm crimp-top
- Bottom style: flat bottom



### Ordering Information

#### 11mm Crimp-Top Vials

Cat. #	Description	Capacity	O.D.xL	Color	Qty.
V5-T	11mm crimp-top vials	2 mL	11.6x32 mm	Clear	100 Pcs/Box
V5-TL	11mm crimp-top vials with write-on spot	2 mL	11.6x32 mm	Clear	100 Pcs/Box
V5-A	11mm crimp-top vial	2 mL	11.6x32 mm	Amber	100 Pcs/Box
V5-AL	11mm crimp-top vials with write-on spot	2 mL	11.6x32 mm	Amber	100 Pcs/Box

#### Aluminum caps with septa for crimp-top vials

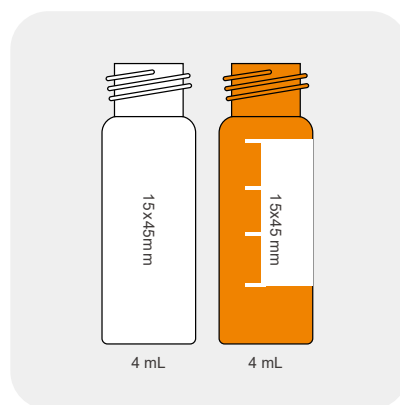
Cat. #	Description	Qty.
C5-1	Crimp-top aluminum caps, 5.5mm hole	100 Pcs/Box
SC5-1	Crimp-top aluminum caps with white PTFE/red silicone septa, 5.5mm hole	100 Pcs/Box
SC5-2	Crimp-top aluminum caps with red PTFE/white silicone septa, 5.5mm hole	100 Pcs/Box
SC5-3	Crimp-top aluminum caps with red PTFE/white silicone/red PTFE septa, 5.5mm hole	100 Pcs/Box
SC5-4	Crimp-top aluminum caps with pre-slit white PTFE/red silicone septa, 5.5mm hole	100 Pcs/Box
SC5-5	Crimp-top aluminum caps with pre-slit red PTFE/white silicone septa, 5.5mm hole	100 Pcs/Box

## 13-425 Screw-Thread Vials

13-425 Screw-Thread Vials have excellent sealing properties to store sample, then transfer directly.

### Specifications:

- Material: USP Type 1 borosilicate glass
- Total volume: 4.0 mL
- Dimensions: 15\*45 mm
- Openings: 13-425 screw top
- Bottom style: flat bottom



### Ordering Information

#### 13-425 Screw-Thread Vials

Cat. #	Description	Capacity	O.D.xL	Color	Qty.
V6-T	Screw-thread vials	4 mL	15x45 mm	Clear	100 Pcs/Box
V6-TL	Screw-thread vials with write-on spot	4 mL	15x45 mm	Clear	100 Pcs/Box
V6-A	Screw-thread vials	4 mL	15x45 mm	Amber	100 Pcs/Box
V6-AL	Screw-thread vials with write-on spot	4 mL	15x45 mm	Amber	100 Pcs/Box

### Caps with septa for 13-425 screw-thread vials

Cat. #	Description	Qty.
C6-1	Black propylene screw caps, 8.5mm hole	100 Pcs/Box
C6-2	Black propylene screw caps, closed top	100 Pcs/Box
SC5-1	Black propylene screw caps with white PTFE/red silicone septa, 8.5mm hole	100 Pcs/Box
SC5-2	Black propylene screw caps with red PTFE/white silicone septa, 8.5mm hole	100 Pcs/Box
SC5-3	Black propylene screw caps with red PTFE/white silicone/red PTFE septa, 8.5mm hole	100 Pcs/Box
SC5-4	Black propylene screw caps with natural PTFE/ natural silicone septa, 8.5mm hole	100 Pcs/Box
SC5-5	Black propylene screw caps with natural PTFE/ natural silicone septa, closed top	100 Pcs/Box

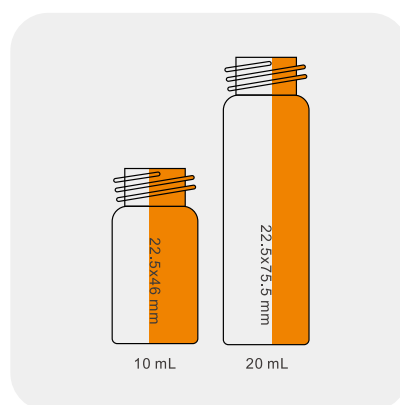
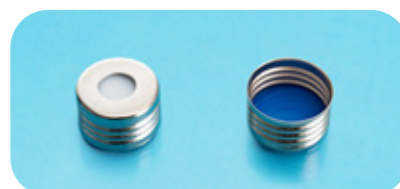


## Screw-Thread Headspace Vials

18mm Precision Screw-Thread Headspace Vials have excellent sealing properties to store sample, then transfer directly.

### Specifications:

- Material: USP Type 1 borosilicate glass
- Openings: 18mm precision screw-thread
- Bottom style: round bottom



### Ordering Information

#### 18mm Precision Screw-Thread Headspace Vials

Cat. #	Description	Capacity	O.D.xL	Color	Qty.
V7-10T	Precision screw-thread headspace vials	10 mL	22.5x46 mm	Clear	100 Pcs/Box
V7-10A	Precision screw-thread headspace vials	10 mL	22.5x46 mm	Amber	100 Pcs/Box
V7-20T	Precision screw-thread headspace vials	20 mL	22.5x75.5 mm	Clear	100 Pcs/Box
V7-20A	Precision screw-thread headspace vials	20 mL	22.5x75.5 mm	Amber	100 Pcs/Box

#### Aluminum caps with septa for 18mm precision screw-thread headspace vials

Cat. #	Description	Qty.
C7-1	aluminum caps, 8mm hole	100 Pcs/Box
SC7-1	aluminum caps with blue PTFE/white silicone septa, 8mm hole	100 Pcs/Box

## Crimp-Top Headspace Vials

Crimp-top headspace vials, with aluminum caps, have excellent sealing properties which are suitable for using in headspace autosamplers.

### Specifications:

- Material: USP Type 1 borosilicate glass
- Openings: crimp-top
- Bottom style: flat bottom



### Ordering Information

#### Crimp-Top Headspace Vials

Cat. #	Description	Capacity	O.D.xL	Color	Qty.
V8-10T	11mm Crimp-top vial	10 mL	22.5x46 mm	Clear	100 Pcs/Box
V8-10A	11mm Crimp-top vial	10 mL	22.5x46 mm	Amber	100 Pcs/Box
V8-20T	11mm Crimp-top vials with write-on spot	20 mL	22.5x75.5 mm	Clear	100 Pcs/Box
V8-20A	11mm Crimp-top vials with write-on spot	20 mL	22.5x75.5 mm	Amber	100 Pcs/Box

### Aluminum caps with septa for crimp-top headspace vials

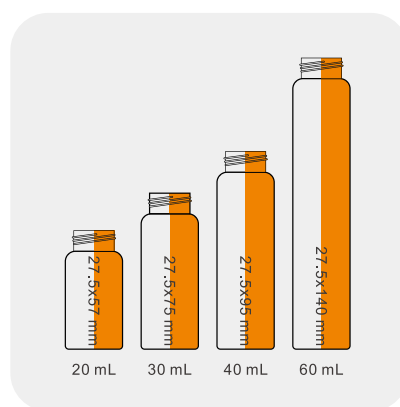
Cat. #	Description	Qty.
C8-1	Crimp-top aluminum caps, 10mm hole	100 Pcs/Box
SC8-1	Crimp-top aluminum caps with white PTFE/white silicone septa, 10mm hole	100 Pcs/Box
SC8-2	Crimp-top aluminum caps with natural PTFE/natural silicone septa, 10mm hole	100 Pcs/Box
SC8-3	Crimp-top aluminum caps with white PTFE/blue silicone septa, 10mm hole	100 Pcs/Box
SC8-4	Crimp-top aluminum caps with natural PTFE/yellow silicone septa, 10mm hole	100 Pcs/Box
SC8-5	Crimp-top aluminum caps with natural PTFE/blue silicone septa, 10mm hole	100 Pcs/Box

## Storage Vials

These large volume vials are ideal for sample storage and general laboratory use.

### Specifications:

- Material: USP Type 1 borosilicate glass
- Openings: screw-thread
- Bottom style: flat bottom



## Ordering Information

### Storage Vials

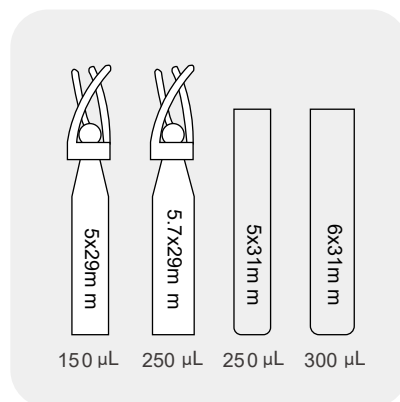
Cat. #	Description	Capacity	O.D.xL	Color	Qty.
V9-10A	Storage vials	10 mL	18.4x66 mm	Amber	100 Pcs/Box
V9-20A	Storage vials	20 mL	27.5x57 mm	Amber	100 Pcs/Box
V9-30A	Storage vials	30 mL	27.5x75 mm	Amber	100 Pcs/Box
V9-40A	Storage vials	40 mL	27.5x95 mm	Amber	100 Pcs/Box
V9-60A	Storage vials	60 mL	27.5x140 mm	Amber	100 Pcs/Box
V9-10T	Storage vials	10 mL	18.4x66 mm	Clear	100 Pcs/Box
V9-20T	Storage vials	20 mL	27.5x57 mm	Clear	100 Pcs/Box
V9-30T	Storage vials	30 mL	27.5x75 mm	Clear	100 Pcs/Box
V9-40T	Storage vials	40 mL	27.5x95 mm	Clear	100 Pcs/Box
V9-60T	Storage vials	60 mL	27.5x140 mm	Clear	100 Pcs/Box

### Caps with septa for storage vials

Cat. #	Description	Qty.
SC9-1	White screw-thread caps with natural PTFE/natural silicone septa, 15mm hole	100 Pcs/Box
SC9-2	White screw-thread caps with natural PTFE/natural silicone septa, closed top	100 Pcs/Box
SC9-3	Black screw-thread caps with natural PTFE/natural silicone septa, 15mm hole	100 Pcs/Box
SC9-4	Black screw-thread caps with natural PTFE/natural silicone septa, closed top	100 Pcs/Box

## Inserts

These micro-inserts can be used within 8-425 & 9-425 screw-thread vials and enable you to deal with micro-volume samples.



## Ordering Information

### Micro-Inserts

Cat. #	Description	Capacity	O.D.xL	Color	Qty.
SI-1	Glass inserts with mandrel interior and polypropylene feet, for 8-425 screw-thread vials	150 µL	5x29 mm	Clear	100 Pcs/Box
SI-2	Glass inserts with mandrel interior and polypropylene feet, for 9-425 screw-thread vials	250 µL	5.7x29 mm	Clear	100 Pcs/Box
SI-3	Flat-bottom glass inserts, for 8-425 screw-thread vials	250 µL	5x31 mm	Clear	100 Pcs/Box
SI-4	Flat-bottom glass inserts, for 9-425 screw-thread vials	300 µL	6x31 mm	Clear	100 Pcs/Box

## SPEMF Solid Phase Extraction Vacuum Manifold

Solid Phase Extraction Vacuum Manifold processes multiple samples at the same time to realize activating, loading, rinsing, eluting and other processes in SPE sample preparation by controlling the pressure.

### Features

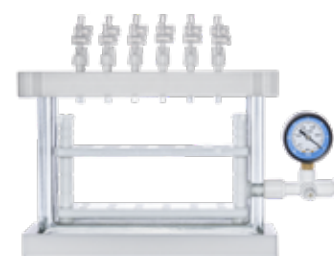
- **Accuracy:** individual valves control the flow rate independently and accurately
- **Convenience:** the pressure gauge is installed on the upper side of sealing cover, which is easy to read
- **Compatibility:** the height of the test tube rack is adjustable to meet the needs of different capacities
- **Reliability:** the vacuum chamber is formed by a quartz glass mold with uniform wall thickness and other parts are made of PTFE material, thus the manifold is resistant to strong acid and alkali
- **Anti-pollution:** anti-cross-contamination and anti-atomization vacuum chamber design
- **Efficiency:** compatible with a large capacity collector to concentrate mass samples rapidly
- **Stability:** special designed flow channel enable the pressure more uniform and the flow rate more stable

### Parameters

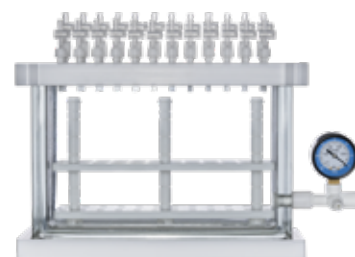
Model	SPEMF12G	SPEMF24G-S
Ports	12	24
Lid	Polyoxymethylene	Polyoxymethylene
Glass Vacuum Chamber	Quartz	Quartz
Pressure Resistance	-80 Kpa	-80 Kpa
Stable Pressure	0~80 Kpa	0~80 Kpa
Test Tubes	≤ 105 mm, Φ10/Φ13/Φ15	≤ 105 mm, Φ10/Φ13/Φ15

### Ordering Information

Cat. #	Description	Qty.
SPEMF12G-E	12-Port SPE Vacuum Manifold, square shape, individual flow valve, transparent glass	1 Set/Carton
SPEMF24G-S-E	24-Port SPE Vacuum Manifold, square shape, individual flow valve, transparent glass	1 Set/Carton



12-Port SPE Vacuum Manifold



24-Port SPE Vacuum Manifold

## Mini-Vortexer

biocomma® Mini-Vortexer focuses on touch-to-mix (short mix) for a variety of tubes / centrifugal tubes. The compact design is very attractive and easy to use. Mini-Vortexer becomes an essential experimental instrument because of its prominent mixing effect.

### Features

- Press to start, convenient and quick to use
- Speed up to 4000 rpm with a good vortex performance

### Ordering Information

Cat. #	Description	Qty.
BCM100-E	Mini-Vortexer	1 Set/Box





## Glass Filter Holders

biocomma® Glass Filter Holders are ideal for aqueous, acid, base and solvent applications. Standard 47mm/50mm filtration funnels mount on filtration flask by a ground glass joint.

### Features

- Made of 100% borosilicate glass, resistance to even the most aggressive solvents
- Support assembly's unique base design with integral vacuum connection prevents contamination of the vacuum line with filtrate

### Ordering Information

Cat.NO.	Description	Package
SK-05	250ml Glass Funnel, 500ml Filter Flask	1 Set/Box
SK-06	250ml Glass Funnel, 1000ml Filter Flask	1 Set/Box
SK-07	250ml Glass Funnel, 2000ml Filter Flask	1 Set/Box
SK-08	300ml Glass Funnel, 500ml Filter Flask	1 Set/Box
SK-02	300ml Glass Funnel, 1000ml Filter Flask	1 Set/Box
SK-09	300ml Glass Funnel, 2000ml Filter Flask	1 Set/Box
SK-03	500ml Glass Funnel, 2000ml Filter Flask	1 Set/Box



## Vacuum Pump

biocomma® Vacuum Pumps are designed to work with vacuum manifolds. Utilizing diaphragm vacuum technology without oil to eliminate contamination of media that occurs in rotary vane pumps.

### Parameters

Oil-Free Vacuum Pump	Portable	Adjustable
Model	SPEMFP01-E	SPEMFP02-E
Ultimate Pressure	0.08 MPa	0.02~0.08
Max. Flow	10 L/min	5~30 L/min
Power	55 W	90 W
Power Supply	A.C. 220 V, 50/60 Hz	A.C. 220 V, 50/60 Hz
Weight	3 Kg	3.8 Kg

### Ordering Information

Cat. #	Description	Qty.
SPEMFP01-E	Portable Oil-Free Vacuum Pump, ultimate pressure 0.08 MPa	1 Set/ Carton
SPEMFP02-E	Adjustable Oil-Free Vacuum Pump, adjustable pressure: 0.02~0.08, waste collection bottle included	1 Set/ Carton



Portable



Adjustable