Capitiva ND 96-well plate, A5969045

Captiva Filtration

Captiva's unique dual-depth filtration media provides complete removal of precipitated proteins and outstanding resistance to sample clogging, with no loss of analytes. All Captiva components are ultra clean, and rigorously tested to ensure against non-specific binding. With Captiva, your plasma samples are processed quickly and reliably. Captiva is easily automated for enhanced productivity and excellent for sample storage.

Time-consuming sample transfer steps required with conventional precipitation are now a thing of the past. With Captiva, clean, clear filtrates are ready for injection in minutes — this user-friendly filtration device is simple and streamlined with an easy-to-follow 3-step process. And because Captiva samples are pellet-free, you can sample directly from the collection plate.

The Captiva range includes:

• Captiva ND non-drip filtration plates for organic-based protein precipitation

• Captiva ND^{Lipids} non-drip filtration plates for lipid and protein depletion

• Captiva 96-well filter plates for general sample filtration

• Captiva filter cartridges, all the usual Captiva benefits in a standard SPE cartridge format

• Captiva Syringe Filters available in a wide range of sizes,formats, and membranes to cover every matrix and sample

Captiva ND

A simple-to-use filtration device designed for high-throughput, automated, in-well protein precipitation. Built with a unique non-drip (ND) membrane, Captiva ND plates allow for solvent-first protein precipitation using methanol or acetonitrile. Captiva's unique dual filter design offers fast uniform flow while avoiding sample loss and filter plugging.

Captiva ND^{Lipids}

Specifically designed for LC/MS bioanalysis of plasma, Captiva ND^{Lipids} combine the ease of use and superior flow properties of Captiva ND with a unique chemical filter. The plate efficiently removes ion-suppressing phospholipids, proteins, and surfactant interferences from precipitated plasma samples.

Captiva Syringe Filters

Captiva Syringe Filters reliably filter from 1mL up to 150mL sample volume for HPLC, UHPLC, CE, ICP-MS and LC/MS with superior flow rates and maximum loading capacity to ensure maximum productivity.

All products are supplied with an HPLC or LC/MS Certificate guaranteeing extremely low levels of extractables. Packages are color coded by membrane for easy and fast identification.

Premium syringe filter, glass microfiber, 5190-5122

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Captiva ND

• Easy automation – non-drip design resists organic solvent flow until vacuum is applied

• Exceptional flow – dual depth filter avoids plugged membranes and lost samples

• Efficient protein removal – MS-suitable samples in as little as one-fifth the time

• Multiple pore sizes available for greater flexibility with solvent use

Captiva ND's unique non-drip design simplifies your workflow, ends the need to use messy tip or well seals, and reduces the number of liquid transfer steps needed to process samples. Best of all, Captiva ND's dual-depth filter construction delivers a fast reproducible flow, so you get uniform sample treatment and reliable filtrate recovery in a fraction of the time of other protein precipitation plates.

Captiva ND 96-well filter plates

Description	Unit	Part No.
Capitiva ND plate, 0.2 µm, polypropylene Recommended for both methanol and acetonitrile	5/pk	A5969002
Capitiva ND plate, 0.45 µm, polypropylene Suitable for acetonitrile only	5/pk	A5969045

Get fast, reproducible flow with Agilent Captiva ND

Agilent Captiva ND plates process samples quickly and uniformly without the need for positive pressure manifolds. Plus, its uniform flow facilitates vacuum processing making it more automation friendly.

Flow Rate Consistency
(100 µL Plasma w/400 µL ACN)

— Captiva ND
— Competitor 1
— Competitor 2
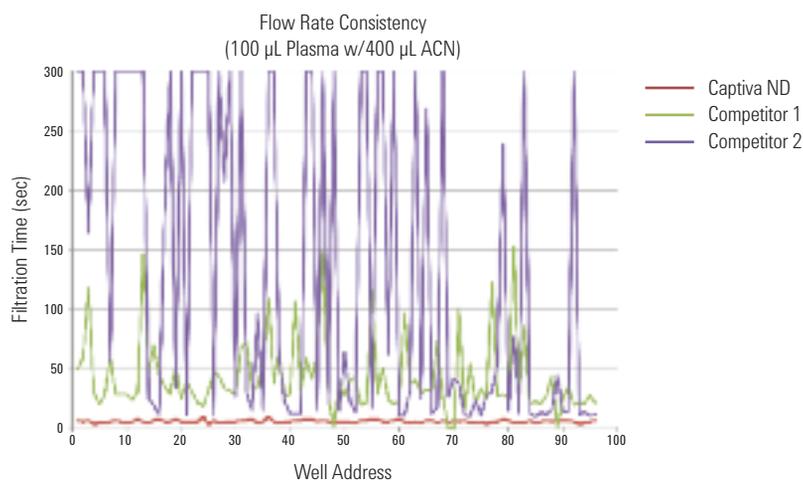
TIPS & TOOLS

For more information on Agilent Captiva ND Plates, please visit **www.agilent.com/chem/captiva**

Captiva ND^Lipids 96-well filtration starter kit, A59640002SK

Captiva ND^Lipids

- More precise and reproducible quantitation with removal of phospholipids and proteins

- Increased productivity due to extended column lifetimes and cleaner MS ion sources

- Simple 3-step procedure

- Available with 0.2 µm pore size only, to optimize lipid removal; Methanol recommended

Captiva ND^Lipids is as simple and easy-to-use as a standard protein precipitation plate. The non-drip 96-well filtration plate is specially designed to effectively remove phospholipids from biofluids. Captiva ND^Lipids removes lipids, proteins, surfactants and other matrix interferences from plasma extracts. Ion suppression is significantly reduced for enhanced sensitivity and precision during trace analysis. The depletion of lipid compounds also gives you better peak shapes and reproducible retention times so that standard operating procedures are easily validated. In addition, the fast, in-well precipitation technology of Captiva ND^Lipids ensures high sample throughput and helps reduce instrument downtime, with virtually no need for method development on a wide range of analytes.

Captiva ND^Lipids 96-well filter plates

Description	Part No.
Captiva ND^Lipids 96-well filtration starter kit Includes 1 CaptiVac vacuum collar, 2 Captiva ND^Lipids filter plates, 2 Captiva 96 deep-well 1 mL collection plates and 2 Captiva collection plate pierceable covers	A59640002SK
Captiva ND^Lipids 96-well filtration replacement kit Includes 2 Captiva ND^Lipids filter plates, 2 Captiva 96 deep-well 1 mL collection plates and 2 Captiva collection plate pierceable covers	A59640002RK
Captiva ND^Lipids 96-well filtration plate, 100/pk	A59640002B
Captiva ND^Lipids 96-well filter plate, 1 mL well, 1/pk	A59640002I
Captiva ND^Lipids 96-well filter plates, 1 mL well, 5/pk	A59640002V
DuoSeal 96 96-well plate seals, 10/pk	A8961008

TIPS & TOOLS

Using Captiva ND^Lipids with methanol is an excellent replacement for acetonitrile as the precipitation solvent. Methods with methanol show better removal of lipids than with acetonitrile. Converting to methanol is advantageous when the supply or cost of acetonitrile is restrictive. Methanol can now be your solvent of choice for lipid removal.

For more information about solvents, reference Application Note *"Agilent Captiva ND Lipids Sample Prep Choice of Precipitation Solvent: Acetonitrile versus Methanol"* publication number 5991-0445EN.

TIPS & TOOLS

Agilent provides you with the tools you need to make bioanalysis quick and reliable. Here, in this video, we demonstrate an opiate panel analysis, from sample prep using Captiva ND^Lipids through HPLC separation using Poroshell 120 columns and the Agilent 6490 QQQ MS/MS with iFunnel. For part one of this video, please visit **www.agilent.com/chem/bioanalysis1** — for part two of this video, please visit **www.agilent.com/chem/bioanalysis2**

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Operating Instructions and Tips for Captiva ND^{Lipids} 96-well Plates

1 Add   **2** Precipitate   **3** Filter

Solvent first

Then plasma

Key
- Salts
- Proteins
- Lipids
- Analyte
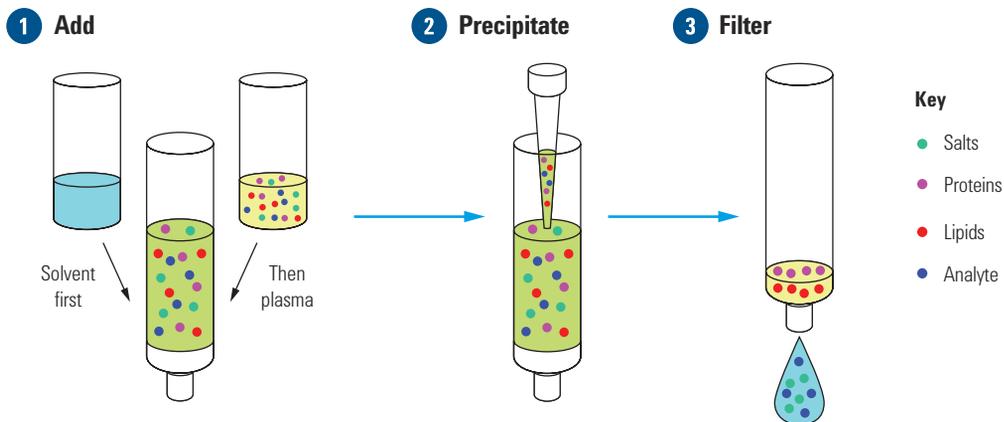
Post-Column Infusion (PCI) of Albuterol Before Treatment With Captiva ND^{Lipids}

Note that the ion-suppression features (top trace) correlate with the elution of phospholipids (bottom trace).

PCI

MS lipid trace

Norm (%)

0   min   35
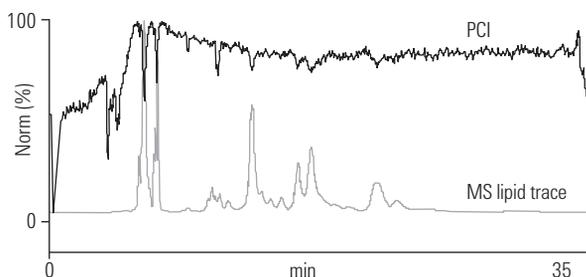
Same Experiment After Protein and Lipid Depletion With Captiva ND^{Lipids}

PCI

MS lipid trace

Norm (%)

0   min   35
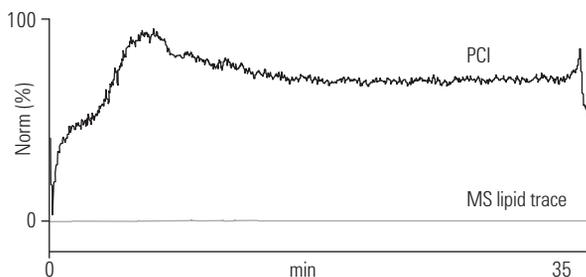
CAPTIVA_01

Ion suppression is dramatically reduced and the lipids are almost non-detectable.

Longevity Study Illustrating Prolonged Column Lifetime When Using Captiva ND^{Lipids}

UV

Mcounts

Atenolol | Pindolol | Propranolol

——— 10th Injection
tr = 0.907 min 2721 psi

——— 5010th Injection
tr = 0.908 min 2914 psi

0.25   min   1.75

MS

Mcounts

Atenolol | Pindolol | Propranolol

——— 10th Injection
tr = 0.924 min 2721 psi

——— 5010th Injection
tr = 0.924 min 2914 psi

0.25   min   1.75
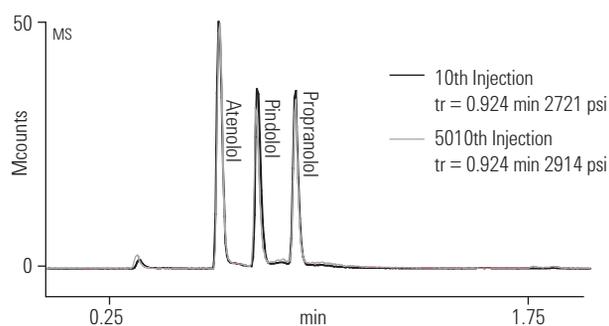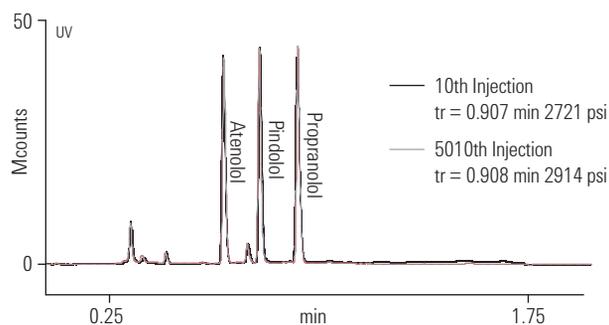
CAPTIVA_02

No significant changes in back pressure, retention time, and peak shape with Captiva ND^{Lipids} after 10 and 5010 injections for LC/MS or LC/MS/MS bioanalysis (top = UV detection; bottom = MS detection).

Captiva 96-well filter kit

Captiva 96-well Filter Kits

• The industry standard for centrifugation-free sample filtration

• Fast and reliable processing improves productivity

• Starter kits contain everything you need

Faster than centrifugation and easily automated, Captiva's unique dual-depth filtration media provides outstanding resistance to sample clogging. With Captiva, your samples are processed quickly and reliably, and you can avoid fibrinogen clogging forever. The plates are also excellent for sample storage. All Captiva components are ultra clean, and rigorously tested to ensure against non-specific binding. Starter kits contain everything you need to get up and running with minimum fuss. Replacement kits include everything you need to replenish your Captiva system.

Captiva 96-well Filter Kits

Pore Size (µm)	Filter Material	Part No.
Starter Kits		
0.2	Polypropylene	A5960002SK
0.45	Polypropylene	A5960045SK
Includes 1 CaptiVac vacuum collar, 5 Captiva filter plates, 10 DuoSeal 96 96-well plate seals, 5 Captiva 96 deep-well 1 mL collection plates, 5 Captiva collection plate pierceable covers		
Replacement Kits		
0.2	Polypropylene	A5960002K
0.45	Polyvinyldifluoride and polypropylene	A5967045K
	Polypropylene	A5960045K

Includes 5 Captiva filter plates, 10 DuoSeal 96 96-well plate seals, 5 Captiva 96 deep-well 1 mL collection plates, 5 Captiva collection plate pierceable covers

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Captiva 96-well Filter Plates

• Protect HPLC columns from clogging to reduce instrument downtime

• Clean and clear filtrates offer improved sensitivity

• High analyte recovery with simple robust methods allows faster method development

Filtration is simple, versatile, and necessary to prevent clogging of valuable HPLC columns. Captiva 0.2 µm and 0.45 µm depth filter plates are ideal for filtering samples prior to LC/MS injection. Captiva 10 µm and 20 µm glass fiber filter plates are designed for clarifying highly particle-laden samples, such as freshly thawed plasma and hepatocyte filtration, preventing sample transfer problems from pipette tip clogging. They are perfect for automated systems and for use with DuoSeal 96 96-well seals.

Captiva 96-well filter plates, A5960045

Captiva 96-well Filter Plates

Pore Size (µm)	Filter Material	Quantity	Part No.
0.2	Polypropylene	5/pk	A5960002
	Polypropylene	100/pk	A5960002B
0.45	Polyvinyldifluoride and polypropylene	5/pk	A5967045
	Polypropylene	5/pk	A5960045
	Polypropylene	100/pk	A5960045B
10	Glass fiber	5/pk	A596401000
20	Polypropylene	5/pk	A596002000
	Polypropylene Bulk Pack	100/pk	A596002000B

Captiva 96-well collection plate, A696001000

Captiva 96-well Collection Plates and Cover

• Designed for Captiva filtration, SPEC and Bond Elut 96 applications

• Standard 1 mL format offers compatibility with further automation or liquid handling

• Silicone cover preserves sample integrity

Captiva 96-well collection plates are specially designed for use with Captiva filtration plates, SPEC SPE 96-well plates and Bond Elut 96-well plates. The 1 mL capacity provides the volume needed to collect all of your filtrate or eluate. Captiva pierceable 96-well silicone covers are easily applied to completely seal the plates, ensuring no sample loss due to spillage or evaporation and no sample contamination. The silicone is specially designed for 96-well auto injectors, providing easy piercing and removal.

Captiva 96-well Collection Plates and Cover

Description	Unit	Part No.
Captiva 96-deep well collection plate, 1 mL	10/pk	A696001000
Captiva 96-deep well collection plate, 1 mL	100/pk	A696001000B
Captiva pierceable 96 deep-well collection plate cover, 1 mL	10/pk	A8961007
DuoSeal 96-well plate seal	10/pk	A8961008

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Captiva Filter Cartridges

• Standard SPE format

• Ideal for LC/MS samples

• Avoid sample transfer problems

• Non-Drip (ND) 3 mL cartridges resist flow until vacuum is applied

• Effectively remove phospholipids from biological samples with Captiva ND^{Lipids}

Captiva filter cartridges bring all of the benefits of Captiva filtration to the standard SPE cartridge format. The 0.2 µm and 0.45 µm filter cartridges are ideal for preparing precipitated protein samples for LC/MS analysis. The Captiva 10 µm glass fiber filter cartridge is designed for clarifying highly particle-laden samples, such as freshly thawed plasma, preventing sample transfer problems due to pipette tip clogging.

Captiva Filter Cartridges

Pore Size (µm)	Filter Material	Volume (mL)	Unit	Part No.
0.2	Polyvinyldifluoride and polypropylene	3	100/pk	A5300002
0.45	Polyvinyldifluoride and polypropylene	3	100/pk	A5307045
		6	100/pk	A5060045
10	Glass fiber	10	100/pk	A500401000

Captiva filter cartridges, glass fiber, A500401000

Captiva Non-Drip Filter Cartridges

Pore Size (µm)	Filter Material	Volume (mL)	Unit	Part No.
Non-Drip				
.22	Polypropylene	3	100/pk	A5300063
Non-Drip Lipids				
.22	Polypropylene	3	100/pk	A5300635

TIPS & TOOLS

Using Captiva ND^{Lipids} with methanol is an excellent replacement for acetonitrile as the precipitation solvent. Methods with methanol show better removal of lipids than with acetonitrile. Converting to methanol is advantageous when the supply or cost of acetonitrile is restrictive. Methanol can now be your solvent of choice for lipid removal.

For more information about solvents, reference Application Note *"Agilent Captiva ND^{Lipids} Sample Prep Choice of Precipitation Solvent: Acetonitrile versus Methanol"* publication number 5991-0445EN.

CaptiVac Vacuum Collar

• Pre-aligned for trouble-free operation

• Vacuum sealed for maximum efficiency

• Simple, cost effective solution

For use with Captiva Filtration and SPEC 96-well Plates, this patented vacuum collar is a completely transparent device that joins Captiva or SPEC plates directly onto our collection plate. The unique design of the Captiva collar forms a pre-set, pre-aligned vacuum seal between the filtration and collection plate, which positions the outlet tips at a specified distance inside each well, so as to prevent cross contamination of samples.

CaptiVac vacuum collar, A796

CaptiVac Vacuum Collar

Description	Part No.
CaptiVac vacuum collar	A796
CaptiVac gasket kit, 5/pk	A796G

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