Minimize Lipids.
Maximize Recovery.

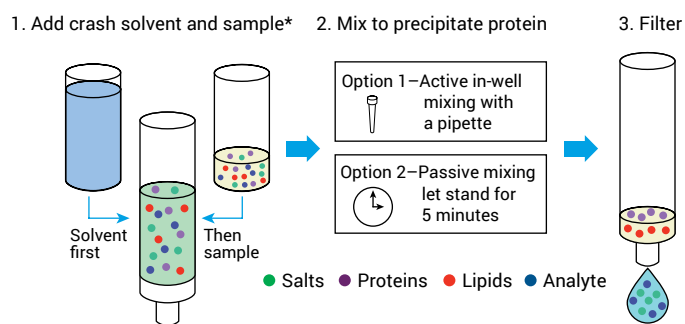Agilent Captiva EMR—Lipid 96-well plates and 1, 3, and 6 mL cartridges

Achieve effective lipid removal without analyte loss

Streamline in-well protein precipitation and filtration of biological samples with 96-well plates and 1mL cartridges

Reducing matrix interference is a must for maintaining analytical sensitivity standards—especially for biological matrices, such as plasma, and high-fat food matrices from animal or plant origin. The innovative sorbent in Captiva EMR—Lipid cartridges and plates capture ion-suppressing lipids—while allowing analytes of interest to pass through. It provides excellent cleanup for fat-containing samples, improving data quality and minimizing system maintenance. Advantages include:
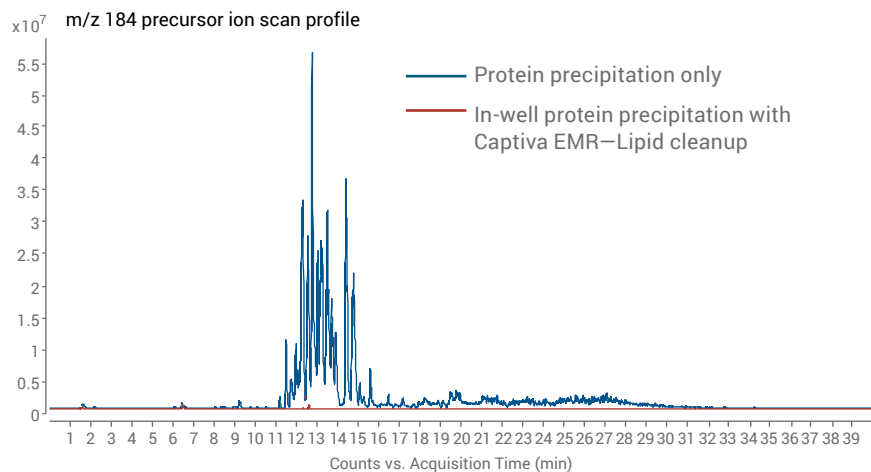
- **Improved efficiency:** Unique EMR—Lipid mechanism combines size exclusion and hydrophobic interactions between the sorbent and the long aliphatic chain of the lipids

- **Better speed and precision:** Solvent retention frit streamlines and automates your in-well protein precipitation workflow

- **An easier flow:** An advanced filter design and construction technology ensure clog-free operation

Captiva EMR—Lipid 96-well plates and 1 mL cartridges.

* Alternatively, protein precipitation (Steps 1 and 2) can be performed off-line (Option 3), at which point the sample can be transferred to Step 3.
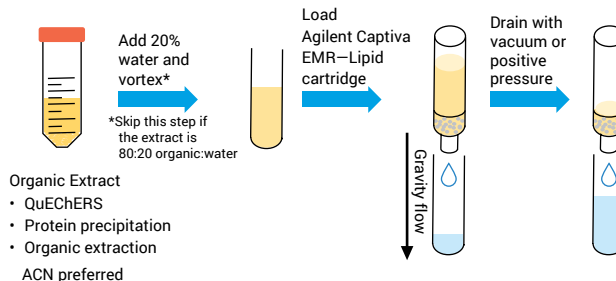
Effective phospholipid removal

LC/MS analysis of a plasma sample. >99% phospholipid removal was achieved using protein precipitation (PPT) and Captiva EMR—Lipid cleanup, compared to PPT alone.

Optimize analyte recovery in complex matrices **www.agilent.com/chem/captiva-emr-lipid**

Improve method reliability and ruggedness with 3 mL and 6 mL cartridges

Interference from lipids is a problem for labs measuring trace residues in fatty foods. Lipids can build up in the instrument and column, decreasing lifetime and reducing analyte analytical sensitivity due to ion suppression. Captiva EMR—Lipid effectively removes matrix, not analytes of interest, due to the highly selective lipid removal mechanism. This unique feature offers distinct advantages over other pass-through SPE products:
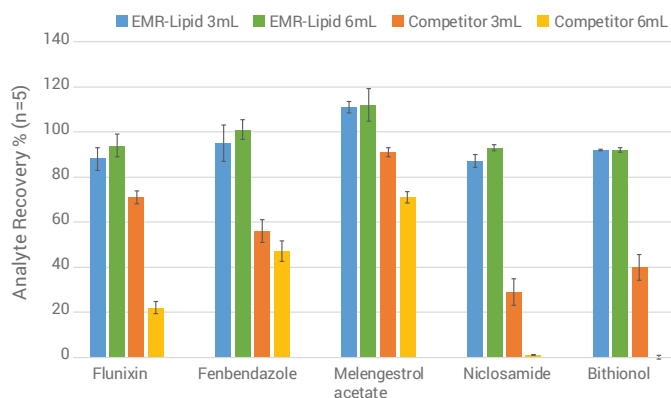
- **Clog-free elution:** The advanced filter design ensures reliable pass-through by gravity
- **Efficient lipid removal:** Results show excellent lipid removal, superior eluent clarity, and easier flow
- **Analysis optimization:** High analytical sensitivity and robustness are achieved for multi-class, multi-residue analysis
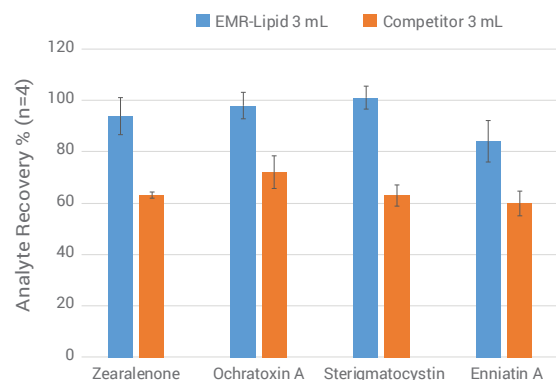

Organic Extract
- QuEChERS
- Protein precipitation
- Organic extraction
  ACN preferred

Add 20% water and vortex*

*Skip this step if the extract is 80:20 organic:water

Load Agilent Captiva EMR—Lipid cartridge

Gravity flow

Drain with vacuum or positive pressure

Agilent Captiva EMR—Lipid 3 and 6 mL cartridges

Analyte recovery comparison

Vet Drugs in Pork Extract (Error Bar = 95% Confidence Interval)

Mycotoxins in Infant Formula Extract (Error bar = 95% Confidence Interval)

Captiva EMR-Lipid vs. competitor's product. These graphs represent absolute recovery for the analytes at 10 ng/mL for vet drugs in pork extract and 5 ng/mL for mycotoxins in infant formula extract.

More plate and cartridge formats to fit your analytical needs

Captiva EMR—Lipid 96-well plates are ideal for high-throughput workflows. 1 mL cartridges accommodate small batch needs. 3 mL cartridges cover 1.5 to 2.5 mL sample extract, and 6 mL cover 3 to 5 mL sample extract.

Ordering Information

Description	Quantity	Part number
Captiva EMR—Lipid 96-well plate, 40 mg*	1/pack	5190-1000
Captiva EMR—Lipid 96-well plate, 40 mg*	5/pack	5190-1001
Captiva EMR—Lipid, 1 mL, 40 mg*	100/pack	5190-1002
Captiva EMR—Lipid, 3 mL, 300 mg	100/pack	5190-1003
Captiva EMR—Lipid, 6 mL, 600 mg	50/pack	5190-1004

*96-well plate and 1 mL cartridge formats incorporate a solvent retention frit to allow in-well protein precipitation

See Agilent's industry-leading portfolio of food testing and clinical research solutions, including LC/MS, GC/MS, and ICP-MS instruments, applications, webinars and more at **www.agilent.com/chem/clinicalresearch**

Agilent Captiva EMR-Lipid received The Analytical Scientist Innovation Award (TASIA) 2017.
Read more at: **www.agilent.com/chem/tasia2017**

Learn more:
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