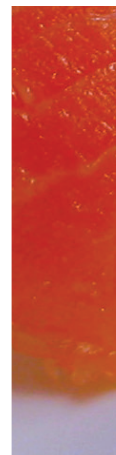




# LipiFiltr<sup>®</sup>

Three white, cylindrical LipiFiltr cartridges are shown standing upright on a dark, reflective surface. Each cartridge has a green logo and text that reads "UCT LPFLTR01".

P.O. Box 1150  
300 Laurier Blvd.  
Brockville, ON K6V 5W1, Canada

 **CHROMATOGRAPHIC  
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# LIPIFILTR<sup>®</sup>

The easy-to-use LipiFiltr<sup>®</sup> push-thru purification cartridge was designed to remove lipids from acetonitrile extracts. Samples are extracted using a standard QuEChERS procedure and an aliquot of the supernatant is simply pushed through the LipiFiltr<sup>®</sup> purification cartridge using a disposable syringe. The purified extract is collected in an autosampler vial and analyzed by UHPLC-MS/MS. The ability to obtain significantly cleaner extracts, ease of use, and time and cost savings make the new LipiFiltr<sup>®</sup> push-thru cartridges an attractive cleanup option for laboratories conducting pesticide residue analysis in complex fatty samples.

## LipiFiltr<sup>®</sup> Push Thru Cartridge

Part Number	Unit
LPFLTR01	50/Pack



## QuEChERS Procedure:

### Sample Extraction

#### For high water content (>70%) samples:

Weigh 10g of homogenized sample into a 50 mL centrifuge tube.

- For this study ground beef (80% lean), salmon, avocado, swordfish and whole black olives were evaluated.

#### For low water content samples:

Weigh 3g of homogenized sample into a 50 mL centrifuge tube and add 7 mL of reagent water.

- For this study olive oil, chicken fat and whole macadamia nuts were evaluated.

1. Add fortification standards and/or internal standards.
2. Add 10 mL acetonitrile.
3. Shake on a SPEX® SamplePrep® GenoGrinder® (or alternative mechanical shaker) or vortex samples for 5 minutes at 1500 strokes/minute.
4. Add ECQUEU7-MP packet to each sample and shake for 1 additional minute at 1500 strokes/minute.
5. Centrifuge the samples for 15 min at  $\geq 3000$  rcf.

### Sample Cleanup

1. Attach the LipiFiltr® push-thru cartridge to disposable syringe.
2. Transfer 1.5 mL of supernatant into the syringe barrel. Attach the plunger and gently push the sample through the LipiFiltr® cartridge into an autosampler vial for analysis.

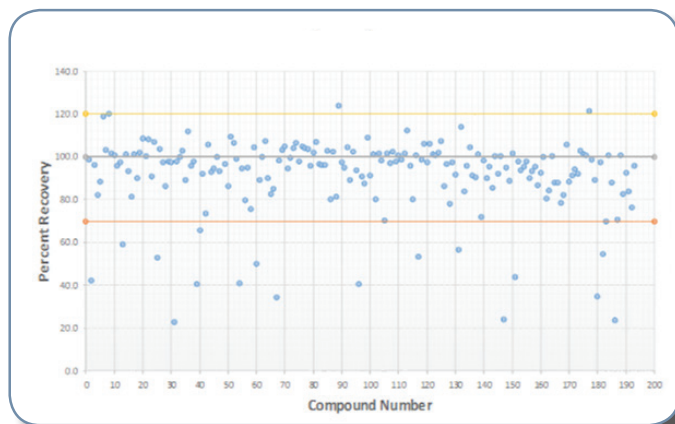


## Results:

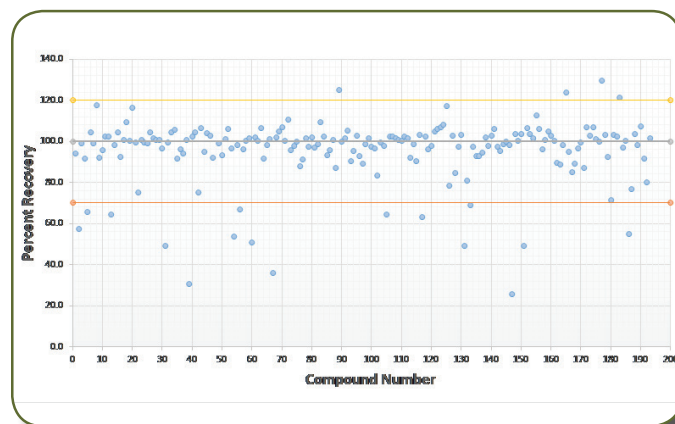
Summary Charts Showing the Recoveries Obtained for 189 Pesticides in Various High-Lipid Samples.

Samples were fortified at 10ng/mL (n = 3). Full recovery data per matrix for all compounds evaluated can be found in the full application note.

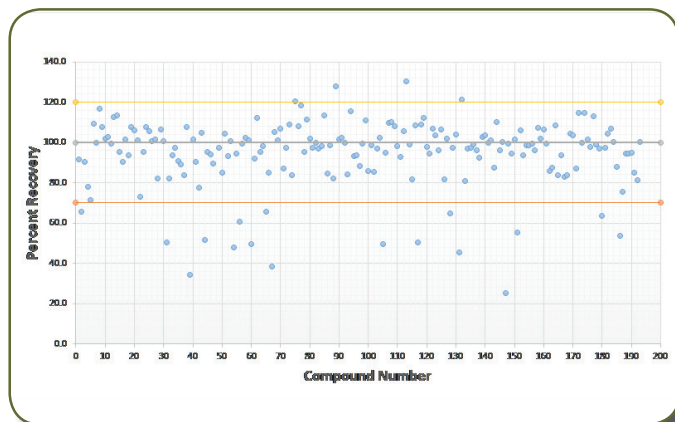
**Avocado**



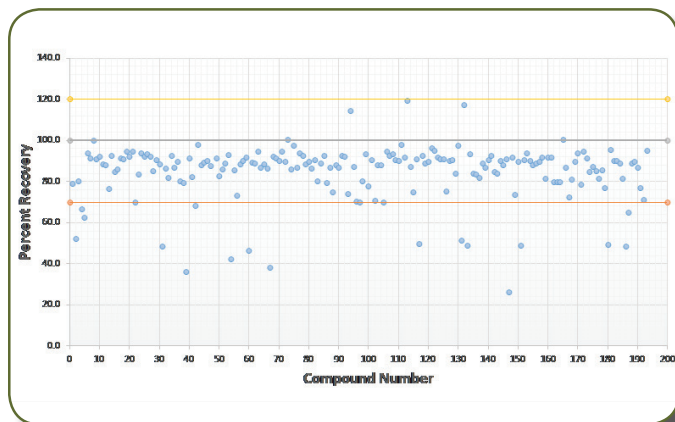
**Beef**



**Chicken Fat**

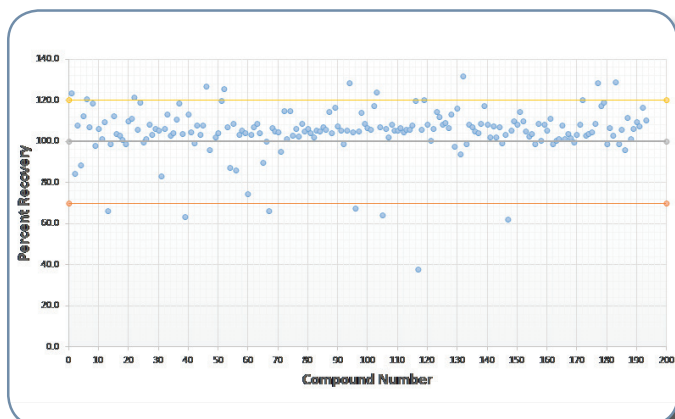


**Nuts**

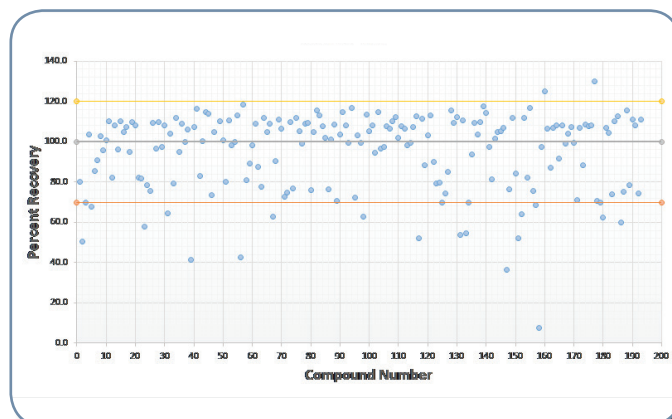




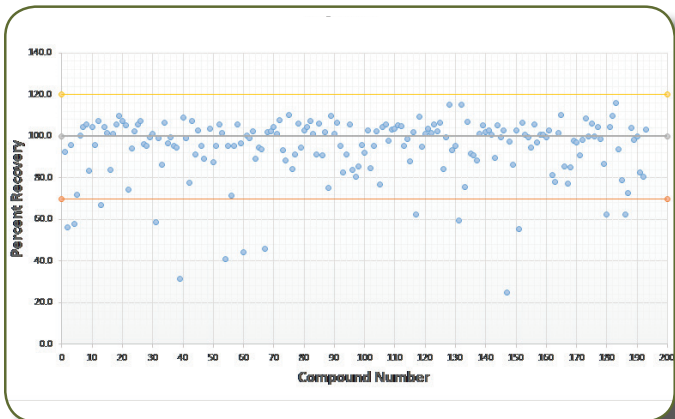
**Olives**



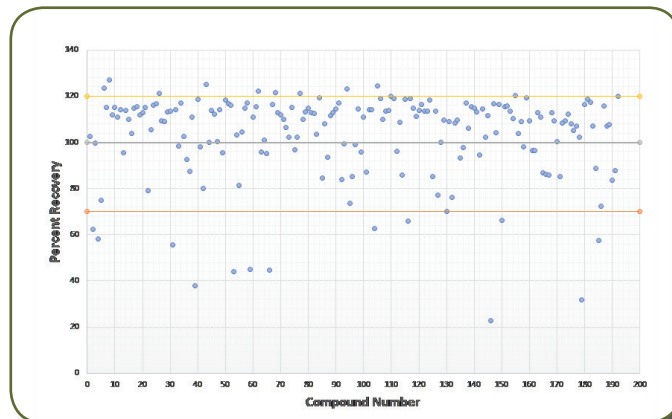
**Olive Oil**



**Salmon**



**Swordfish**



## Gravimetric Analysis:

The performance of the LipiFiltr<sup>®</sup> push-thru cartridges to remove lipids and other matrix components was evaluated gravimetrically by collecting 2 mL of sample before and after cleanup in pre-weighed test tubes and heating them to dryness at 110° C in an oven.

Matrix	Matrix Removal (%)
Beef	79.1
Black Olives	84.3
Avocado	54.7
Salmon	80.9
Chicken fat	71.7
Olive oil	61.5
Nuts	84.3
Swordfish	80.9

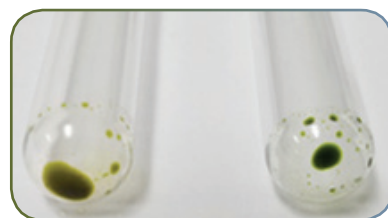
## Extract Concentration Before and After LipiFiltr<sup>®</sup> Cleanup:



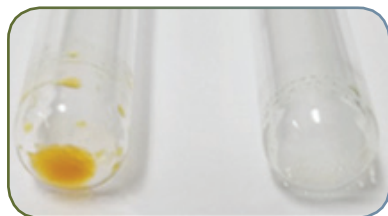
**Beef**



**Black Olives**



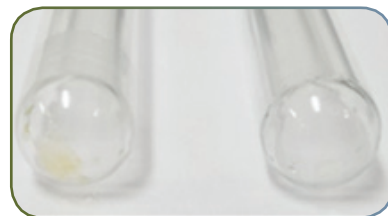
**Avocado**



**Salmon**



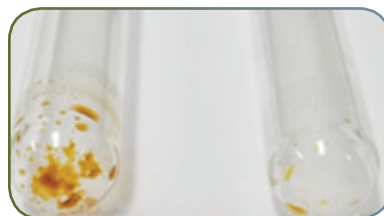
**Chicken Fat**



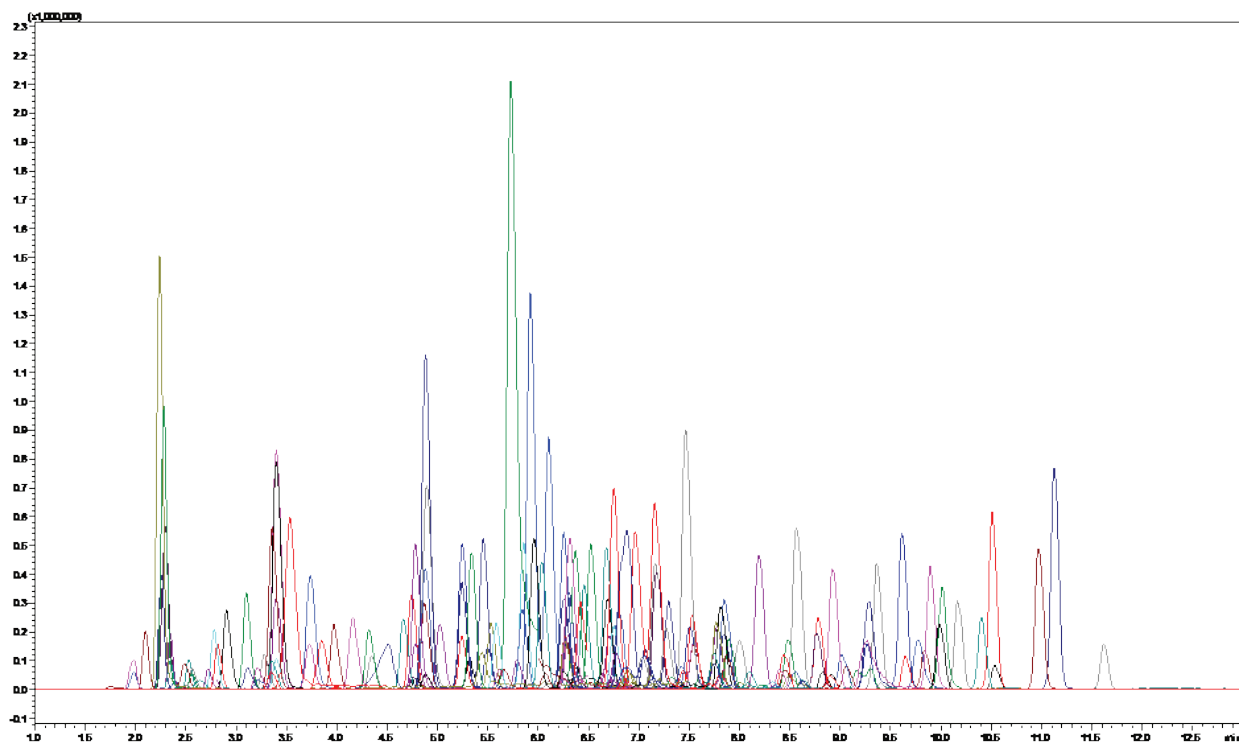
**Olive Oil**



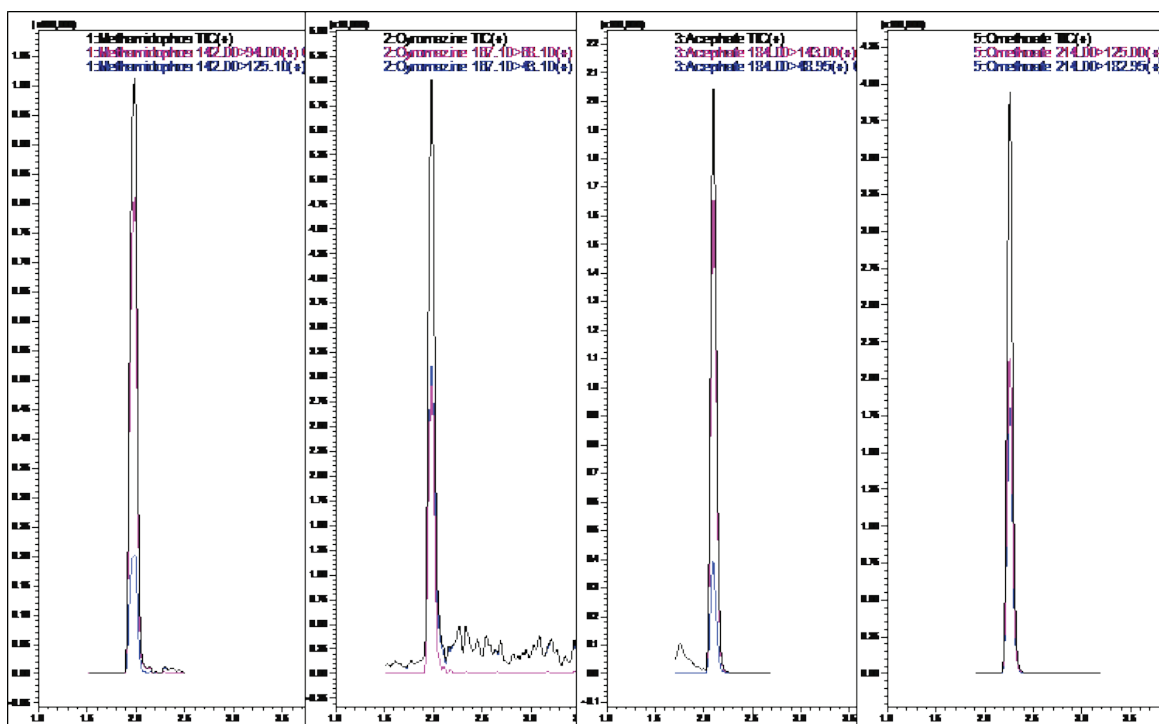
**Nuts**



**Swordfish**



**Figure 1.** Overlaid chromatogram of all 189 pesticides extracted using the LipiFiltr® cartridge at 10 ng/mL.



**Figure 2.** Close-up of polar pesticides evaluated (methamidophos, cyromazine, acephate and omethoate) highlighting the excellent retention and peak shapes obtained using the Selectra® Aqueous C18 UHPLC column.



### PRICES AND TERMS

Our prices are subject to change without notice. The price in effect when we receive your order will apply. All prices are in US Dollars and are F.O.B. Lewistown, PA 17044. Terms of payment are net 30 days.

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We welcome all orders, therefore, we do not have a minimum order requirement. When ordering, please include your purchase order number, complete "Ship To" and "Bill To" address, catalog number, quantity, and description of product(s). Also include your name and a phone number where you can be reached should we have any questions concerning your order.

### SHIPMENTS

Normal processing is within 24 hours after receipt of an order. Unless special shipping requests have been made, our trained staff will send all orders by UPS Ground service. The appropriate shipping charges (freight & insurance costs) will be added to the invoice, unless otherwise instructed by the customer.

### SPECIAL PRICING

We offer special pricing for volume purchases and standing orders. These discounts apply to bonded phase extraction column purchases only. Please call a sales representative for more information on special pricing qualifications.

### RETURN POLICY

Our Quality Manager will handle all returns. Before returning merchandise, please call to obtain a return authorization number from the quality manager. We will need to know the reason for the return, date of purchase, purchase order number and invoice number in order to issue a return authorization number. Return merchandise must be received before a credit can be issued. Returns will not be accepted after 90 days. A restocking fee of 25% of the price paid, or a minimum of \$25.00 (whichever is greater) will be charged on all returns.

### WARRANTY

All products manufactured by UCT are guaranteed against defects in materials and workmanship for a period of 90 days after shipment. UCT will replace any items that prove to be defective during this time period. The exclusive remedy requires the end user to first advise UCT of the defective product by phone or in writing and must include order number, the lot number and the shipping date.

To initiate this action, photographs of the product, including packaging and labeling of the containers, must be submitted to the UCT Representative for approval. With approval a return authorization can be initiated, and must be received within 30 days. Once the materials arrive at UCT a further inspection of the materials must be completed and accepted by our Quality Manager prior to further action of credits or replacement. UCT's total liability is limited to the replacement cost of UCT products.

This warranty does not apply to damage resulting from misuse.

### Placing An Order

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