



ChloroFiltr®

Selectively removing
Chlorophyll without
Compromising your
Planar Pesticides

INNOVATION THROUGH CHEMISTRY



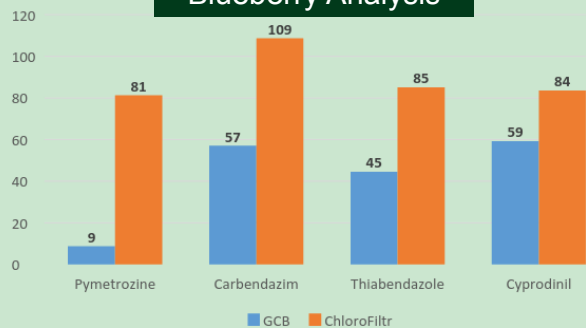
ChloroFiltr[®]



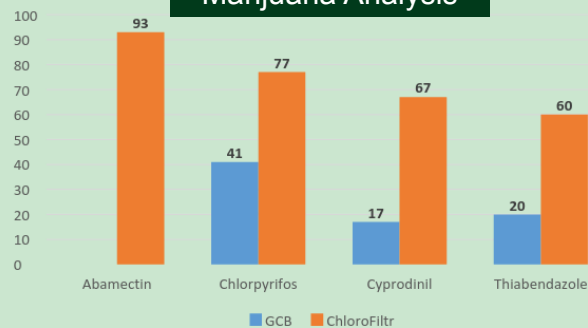
ChloroFiltr[®] is a polymeric sorbent available exclusively from UCT. It is designed to replace graphitized carbon black (GCB) for the efficient removal of chlorophyll without loss of planar analytes.

ChloroFiltr[®] has been tested against hundreds of pesticides and herbicides and has been shown to reduce chlorophyll concentration by greater than 82% without loss of planar analytes.

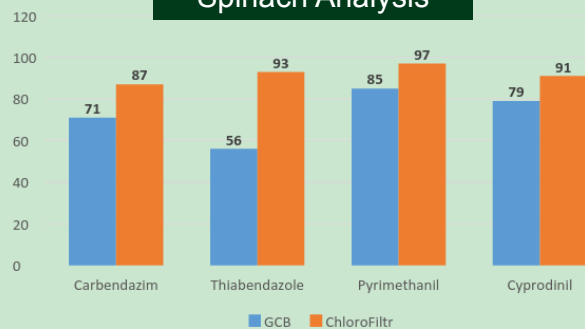
Blueberry Analysis



Marijuana Analysis



Spinach Analysis



Don't Sacrifice Your Planar Pesticides!



6106-01-01

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ChloroFiltr®



INNOVATION THROUGH CHEMISTRY

ChloroFiltr®

Most QuEChERS methods use graphitized carbon black (GCB) to remove chlorophyll from QuEChERS extracts. GCB is very effective in removing chlorophyll, but it also removes planar pesticides. UCT has developed a new sorbent that removes chlorophyll without the loss of planar pesticides. ChloroFiltr® is used as an alternative to GCB. No method modifications are required.



ChloroFiltr® Dispersive Products		
PART NUMBER	DESCRIPTION	UNITS
CUMPSGG2CT	2mL centrifuge tubes with 150mg MgSO ₄ , 50mg PSA and 50mg ChloroFiltr® Designed to clean-up a 1 mL aliquot of supernatant.	100/pack
CUMPSGGC182CT	2mL centrifuge tubes with 150mg MgSO ₄ , 50mg PSA, 50mg C18 and 50mg ChloroFiltr® Designed to clean-up a 1 mL aliquot of supernatant.	100/pack
ECQUCHL12CT	2mL centrifuge tube with 150mg MgSO ₄ , 50mg C18, and 50mg ChloroFiltr® Designed to clean-up a 1 mL aliquot of supernatant.	100/pack
ECMPSGG15CT	15mL centrifuge tube with 900mg MgSO ₄ , 300mg PSA and 150mg ChloroFiltr® Designed to clean-up a 3 mL aliquot of supernatant.	50/pack
ECMSGG15CT	15mL centrifuge tube with 900mg MgSO ₄ and 150mg ChloroFiltr® Designed to clean-up a 3 mL aliquot of supernatant.	50/pack
ECQUCHL115CT	15mL centrifuge tube with 900mg MgSO ₄ , 300mg PSA, and 300mg ChloroFiltr® Designed to clean-up a 6 mL aliquot of supernatant.	50/pack
ECQUCHL215CT	15mL centrifuge tube with 900mg MgSO ₄ , 300mg C18, and 300mg ChloroFiltr® Designed to clean-up a 6 mL aliquot of supernatant.	50/pack
ECQUCHL315CT	15mL centrifuge tube with 900mg MgSO ₄ , 300mg PSA, 300mg C18, and 300mg ChloroFiltr® Designed to clean-up a 6 mL aliquot of supernatant.	50/pack
ECQUCHL150CT	50mL centrifuge tube with 1800mg MgSO ₄ , 600mg PSA, and 600mg ChloroFiltr® Designed to clean-up a 12 mL aliquot of supernatant.	50/pack
ECQUCHL250CT	50mL centrifuge tube with 1800mg MgSO ₄ , 600mg C18, and 600mg ChloroFiltr® Designed to clean-up a 12 mL aliquot of supernatant.	50/pack
ECQUCHL350CT	50mL centrifuge tube with 1800mg MgSO ₄ , 600mg PSA, 600mg C18, and 600mg ChloroFiltr® Designed to clean-up a 12 mL aliquot of supernatant.	50/pack

ChloroFiltr®: A Novel Sorbent for Chlorophyll Removal using QuEChERS

Spinach and other highly pigmented vegetables contain chlorophylls, carotenoids, xanthophylls, and anthocyanins. Chlorophylls have the greatest adverse effect on GC systems due to their non-volatile characteristics. This QuEChERS procedure uses ChloroFiltr® to significantly reduce chlorophylls without sacrificing the recoveries of planar pesticides.

Procedure

1. QuEChERS Extraction

- Homogenize 500 g of spinach in a food processor for 1-2 minutes
- Weigh 10 grams of homogenized spinach sample into 50 mL centrifuge tube
- Spike with 100 µL of 50 ppm triphenyl phosphate* as internal standard (IS)
- Add 10 mL of acetonitrile then shake for 1 min
- Add contents of Mylar pouch **ECQUUS2-MP** then shake vigorously for 1 min
- Centrifuge at 5,000 rpm for 5 min
- Supernatant is ready for clean-up

*50 ppm TPP solution: mix 50 µL of 5000 ppm TPP solution with 4.95 mL of MeCN

2. dSPE Clean-up

- Transfer 1 mL of the extract to the 2 mL **CUMPSGGC182CT** (ChloroFiltr®) dSPE micro centrifuge tube
- Shake for 30 sec
- Centrifuge at 3,000 rpm for 5 min
- Transfer 0.4 mL of the supernatant to a 2 mL autosampler vial e) Sample is ready for LC/MS/MS analysis

Comparison of Pesticide Recoveries and RSDs Obtained by dSPE Clean-up of Spinach Sample using ChloroFiltr® and GCB (n=4)				
Pesticide	ChloroFiltr®		GCB (7.5 mg)	
	Recovery%	RSD%	Recovery%	RSD%
Carbendazim	87.1	1.0	71.2	4.0
Thiabendazole	93.2	1.9	55.9	2.6
Pyrimethanil	97.3	1.2	85.0	1.2
Cyprodinil	91.2	0.5	79.3	3.1
Diazinon	104.5	2.3	100.0	0.6
Pyrazophos	92.0	0.9	92.7	1.6
Chlorpyrifos	95.6	2.5	96.3	2.1