



**Synergy  
Analytical  
Labs**

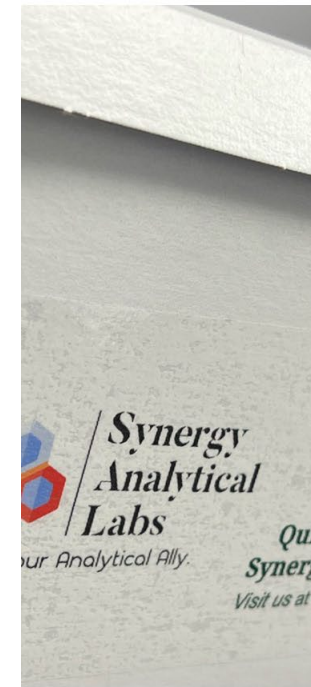
Your Analytical Ally.

# **SAMPLE PREPARATION**

Synergy Analytical Laboratories Inc.

# TABLE OF CONTENT

Sample Preparation	4
Workflow	5
Extraction salts	6-7
Dispersive Kits	8-9
Solid Phase Extraction products	10-13
■ Polymer Based Cartridges.	11
■ Silica Based Cartridges.	12
■ Adsorption Based Cartridges	13
Mycotoxin Clean-up Columns	14-15



# OVERVIEW

In 2003, Michelangelo Anastassiades and Steven J Lehotay scientists who developed similar groundbreaking methods to simplify the way labs prepare food samples pesticide analysis. It's called QuEChERS. The "QuEChERS" (Quick, Easy, Cheap, Effective, Rugged, and Safe) method, dispersive SPE (dSPE), is a sample prep technique that has become popular in the area of multi-residue pesticide analysis in food and agricultural products.

Synergy Analytical Laboratories Inc. offers standard EN or AOAC QuEChERS kits, and also offers customized QuEChERS kits for customers, including different specifications of the centrifuge tube, extraction tube, purification tubes and reagents to help you quickly establish a standard detection method.

## Features

- ◆ Satisfactory recoveries for a wide variety of pesticides, veterinary drugs and additives in many food matrices
- ◆ Streamlined procedure with few simple steps, lowering potential errors
- ◆ Minimal organic solvent usage, safer for analysts and environment-friendly
- ◆ Saving time and cost significantly

## Related Methods

Synergy Analytical Laboratories Inc. provides QuEChERS kits dedicated for most common methods:

- ◆ **BS EN 15662:2018** Foods of plant origin-Multimethod for the determination of pesticide residues using GC-and LC-based analysis following acetonitrile extraction/ partitioning and clean-up by dispersive SPE-Modular QuEChERS-method.
- ◆ **AOAC Official Method 2007.01** Pesticide Residues in Foods by Acetonitrile Extraction and Partitioning with Magnesium Sulfate.

## SAMPLE PREPARATION

Synergy Analytical Laboratories Inc. provides QuEChERS kits dedicated for most common methods:

- ◆ BS EN 15662:2018 foods of plant origin-multimethod for the determination of pesticide residues using GC- and lc-based analysis following acetonitrile extraction/ partitioning and clean-up by dispersive SPE-modular QuEChERS-method.
- ◆ AOAC official method 2007.01 pesticide residues in foods by acetonitrile extraction and partitioning with magnesium sulfate.

Along with Extraction salts and cleanup sorbents, Synergy Analytics also provides SPE cartridges and Mycotoxin cleanup columns

Extraction Salts

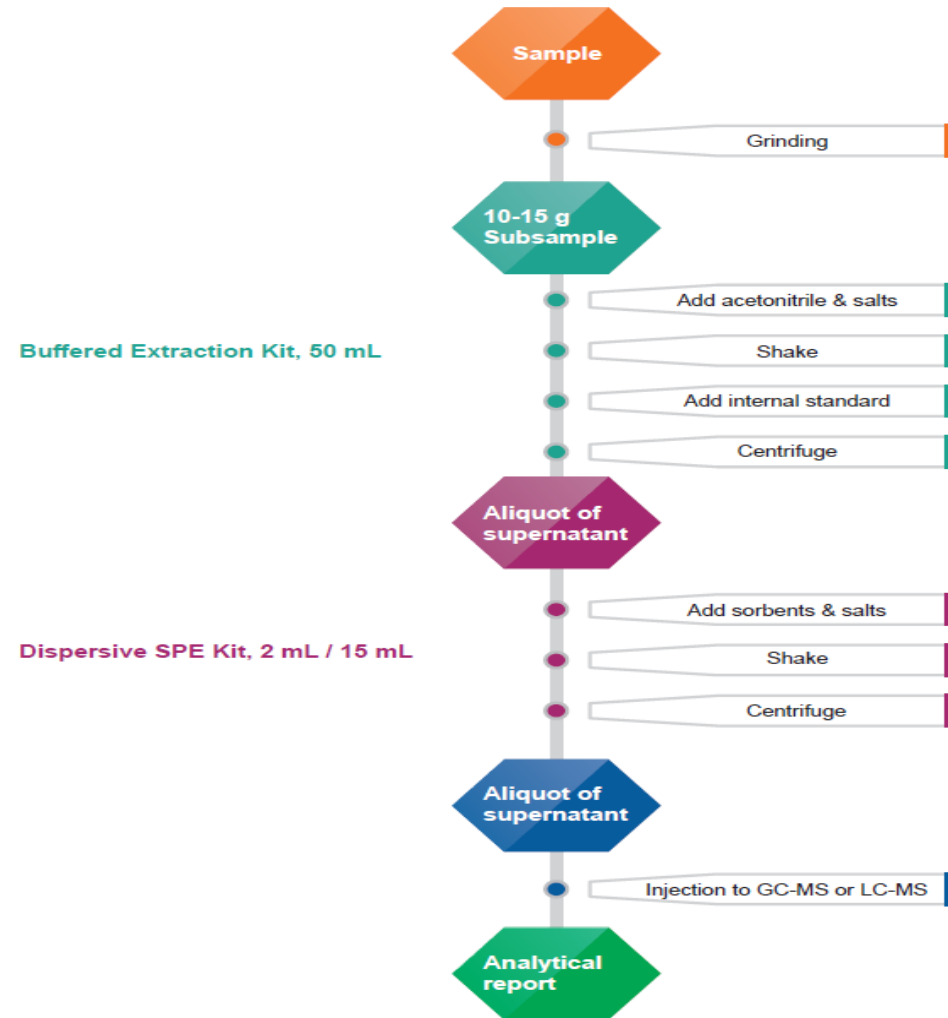
Dispersive Kits and pouches

SPE Cartridges

Mycotoxin Cleanup columns

# WORKFLOW

- Standard Sample Preparation Workflow by using Extraction salts and sorbents for clean up to analyze sample on LCMS/GCMS



# EXTRACTION SALTS

*Synergy  
Analytical  
Labs*

*Your Analytical Ally.*

*QuEChERS  
Synergy*



- Synergy Analytics QuEChERS Kits includes extraction pouches and 50 mL centrifuge tubes, ceramic homogenizers are optional.
- The pouches contain anhydrous extraction salts. Among the mixture,  $\text{MgSO}_4$  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, We provides separate extraction salt pouches that the operator can add extraction salts after the addition of organic solvents.
- QuEChERS salts are sealed in aluminum foil bags to avoid leakage. The type and amount are printed on the bag for handy choice. The easy-cut mark is very convenient for use. Our automated powder dispensing & packaging assembly line promise the accuracy and repeatability.

# EXTRACTION SALTS AND POUCHES-

## ORDER INFORMATION

WWW.SYNERGYANALYTICALLABS.COM

CATALOG#	TUBE VOLUME	DESCRIPTION	PACK SIZE
SY-EXT-10001	50 mL	6g MgSO <sub>4</sub> , 1.5g NaCl	50
SY-EXT-10002	50 mL	1.5g NaAcetate, 6g MgSO <sub>4</sub>	50
SY-EXT-10003	50 mL	1.5g NaCitrate, 1g NaCl, 4g MgSO <sub>4</sub> , 0.5g disodium citrate sesquihydrate	50
SY-EXT-10004	50 mL	1g NaCl, 4g MgSO <sub>4</sub>	50
SY-EXT-10005	50 mL	1g NaAcetate, 4g MgSO <sub>4</sub>	50
SY-EXT-10006	50 mL	1.5g NaAcetate, 6g Na <sub>2</sub> SO <sub>4</sub>	50
SY-EXT-10007	50 mL	1.5g NaAcetate, 6g MgSO <sub>4</sub>	50
SY-EXT-10008	50 mL	1g NaCitrate, 1g NaCl, 4g MgSO <sub>4</sub> , 0.5g disodium citrate sesquihydrate	50
SY-EXT-10009	50 mL	1g NaCl, 4g MgSO <sub>4</sub>	50

# DISPERSIVE KITS AND POUCHES

Synergy Analytics, QuEChERS Clean-up Kits includes sorbents and 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 combination with different samples.

## Features

- Supply 2 mL or 15 mL purification tubes
- Fit for AOAC 2007, EN 15662 standards, etc

Synergy Analytics QuEChERS Clean-up Pouches are used for analyzing multiresidue pesticides. Synergy Analytics 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-Cut package to open easily without any cutting tooling
- Lower cost, suitable for mass quantity testing



# DISPERSIVE KITS AND POUCHES-

## ORDER INFORMATION

Catalogue#	Tube Volume	Application	Application	Pack Size
SY-DIS-10001	50 mL	400 mg PSA, 400 mg C18, 400 mg GCB, 1200 mg MgSO4	General fruits and Vegetables	50
SY-DIS-10002	2 mL	25 mg PSA, 150 mg MgSO4	General fruits and vegetables	100
SY-DIS-10003	15 mL	150 mg PSA, 900 mg MgSO4		50
SY-DIS-10004	2 mL	25 mg PSA, 25 mg C18, 150 mg MgSO4	General fruits and vegetables with fats and waxes	100
SY-DIS-10005	15 mL	150 mg PSA, 150 mg C18, 900 mg MgSO4		50
SY-DIS-10006	2 mL	25 mg PSA, 25 mg C18, 150 mg MgSO4	General fruits and vegetables with pigments	100
SY-DIS-10007	15 mL	150 mg PSA, 15 mg GCB, 900 mg MgSO4		50
SY-DIS-10008	2 mL	25 mg PSA, 7.5 mg GCB, 150 mg MgSO4	General fruits and vegetables with highly pigments	100
SY-DIS-10009	15 mL	150 mg PSA, 45 mg GCB, 900 mg MgSO4		50
SY-DIS-10010	2 mL	50 mg PSA, 150 mg MgSO4	General fruits and vegetables	100
SY-DIS-10011	15 mL	400 mg PSA, 1200 mg MgSO4		50
SY-DIS-10012	2 mL	50 mg PSA, 50 mg C18, 150 mg MgSO4	General fruits and vegetables with fats and waxes	100
SY-DIS-10013	15 mL	400 mg PSA, 400 mg C18, 1200 mg MgSO4		50
SY-DIS-10014	2 mL	50 mg PSA, 50 mg GCB, 150 mg MgSO4	General fruits and vegetables with pigments	100
SY-DIS-10015	15 mL	400 mg PSA, 400 mg GCB, 1200 mg MgSO4		50
SY-DIS-10016	2 mL	50 mg PSA, 50 mg C18, 50 mg GCB, 150 mg MgSO4	General fruits and vegetables with pigments and fats	100
SY-DIS-10017	15 mL	400 mg PSA, 400 mg C18, 400 mg GCB, 1200 mg MgSO4		50
SY-DIS-10018	2 mL	25 mg C18, 150 mg MgSO4	Other food methods	100
SY-DIS-10019	15 mL	150 mg C18, 900 mg MgSO4		50
SY-DIS-10020	2 mL	50 mg PSA, 50 mg C18, 7.5 mg GCB, 150 mg MgSO4	All food types	100
SY-DIS-10021	15 mL	400 mg PSA, 400 mg C18, 45 mg GCB, 1200 mg MgSO4		50

# SOLID PHASE EXTRACTION PRODUCTS



Synergy Analytics Solid phase Extraction products includes Cartridge covered with polymer-based, silica-based and adsorption-based SPE Cartridges.



They can be assembled into different specifications and widely used in food, medical and industrial field, etc.



Contact Synergy Analytical Laboratories Inc. for details specification for SPE cartridges

# POLYMER BASED CARTRIDGES-

## ORDER INFORMATION

WWW.SYNERGYANALYTICALLABS.COM

	30mg/1ML	60mg/3ml	200mg/3ml	150mg/6ml	500mg/6ml	1000mg/12ml
<b>HLB</b>	SY-HLB-130	SY-HLB-360	SY-HLB-3200	SY-HLB-6150	SY-HLB-6500	SY-HLB-121000
<b>MCX</b>	SY-MCX-130	SY-MCX-360	SY-MCX-3200	SY-MCX-6150	SY-MCX-6500	SY-MCX-121000
<b>MAX</b>	SY-MAX-130	SY-MAX-360	SY-MAX-3200	SY-MAX-6150	SY-MAX-6500	SY-MAX-121000
<b>WCX</b>	SY-WCX-130	SY-WCX-360	SY-WCX-3200	SY-WCX-6150	SY-WCX-6500	SY-WCX-121000
<b>WAX</b>	SY-WAX-130	SY-WAX-360	SY-WAX-3200	SY-WAX-6150	SY-WAX-6500	SY-WAX-121000

# SILICA BASED CARTRIDGES-

## ORDER INFORMATION

WWW.SYNERGYANALYTICALLABS.COM

	100mg/1ml	200mg/3ml	500mg/3ml	500mg/6ml	1000mg/6ml	1000mg/12ml
<b>C18</b>	SY-C18-1100	SY-C18-3200	SY-C18-3500	SY-C18-6500	SY-C18-61000	SY-C18-121000
<b>C8</b>	SY-C8-1100	SY-C8-3200	SY-C8-3500	SY-C8-6500	SY-C8-61000	SY-C8-121000
<b>Silica</b>	SY-SIL-1100	SY-SIL-3200	SY-SIL-3500	SY-SIL-6500	SY-SIL-61000	SY-SIL-121000
<b>Diol</b>	SY-DI-1100	SY-DI-3200	SY-DI-3500	SY-DI-6500	SY-DI-61000	SY-DI-121000
<b>CN</b>	SY-CN-1100	SY-CN-3200	SY-CN-3500	SY-CN-6500	SY-CN-61000	SY-CN-121000
<b>SCX</b>	SY-SCX-1100	SY-SCX-3200	SY-SCX-3500	SY-SCX-6500	SY-SCX-61000	SY-SCX-121000
<b>SAX</b>	SY-SAX-1100	SY-SAX-3200	SY-SAX-3500	SY-SAX-6500	SY-SAX-61000	SY-SAX-121000
<b>NH2</b>	SY-NH-1100	SY-NH-3200	SY-NH-3500	SY-NH-6500	SY-NH-61000	SY-NH-121000
<b>PSA</b>	SY-PSA-1100	SY-PSA-3200	SY-PSA-3500	SY-PSA-6500	SY-PSA-61000	SY-PSA-121000
<b>PRS</b>	SY-PRS-1100	SY-PRS-3200	SY-PRS-3500	SY-PRS-6500	SY-PRS-61000	SY-PRS-121000

# ADSORPTION BASED CARTRIDGES-

## ORDER INFORMATION

WWW.SYNERGYANALYTICALLABS.COM

Sorbent	100mg/1mL	200mg/3mL	500mg/3mL	500mg/6mL	1000mg/6mL	1000mg/12mL
Carb-GCB	SY-GCB-1100	SY-GCB-3200	SY-GCB-3500	SY-GCB-6500	SY-GCB-61000	SY-GCB-121000
ALA	SY-ALA-1100	SY-ALA-3200	SY-ALA-3500	SY-ALA-6500	SY-ALA-61000	SY-ALA-121000
ALN	SY-ALN-1100	SY-ALN-3200	SY-ALN-3500	SY-ALN-6500	SY-ALN-61000	SY-ALN-121000
ALB	SY-ALB-1100	SY-ALB-3200	SY-ALB-3500	SY-ALB-6500	SY-ALB-61000	SY-ALB-121000
Florisil	SY-FL-1100	SY-FL-3200	SY-FL-3500	SY-FL-6500	SY-FL-61000	SY-FL-121000

# MYCOTOXIN CLEANUP COLUMNS

- Aflatoxin is a highly toxic substance; its harmfulness lies in the destructive effect on 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.
- Deoxynivalenol is mainly distributed in wheat, barley, corn and other cereal seeds, and has a certain harmful effect on human body, it is three-level carcinogen in the EU classification standard. Deoxynivalenol Immunoaffinity Columns can selectively separate deoxynivalenol from the sample by the specific binding of antibody and antigen to achieve good purification effect.
- Ochratoxin A is very common in mildewed grain and feedstuffs. 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 Columns can selectively adsorb the Ochratoxin A from sample to purify ochratoxin A in the sample solution.
- Synergy Analytics Clean-up Columns are made of multiple absorption matrix, it can quickly and optionally absorb the impurities of lipids, proteins, pigments from sample. but not absorb the desired components and reach the quick purification purpose.

# MYCOTOXIN'S CLEANUP COLUMNS-

## ORDER INFORMATION

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Catalog#	Volume	Description	Pack size
SY-AFM-T101	1mL	Aflatoxin B1,B2,G1,G2	25/Box
SY-AFM-T103	3mL	Aflatoxin B1,B2,G1,G2	20/Box
SY-AFMB-101	1mL	Aflatoxin B1	25/Box
SY-AFMB-103	3mL	Aflatoxin B1	20/Box
SY-AFMM-101	1mL	Aflatoxin M1	25/Box
SY-AFMM-103	3mL	Aflatoxin M1	20/Box
SY-AFDON-101	1mL	Deoxynivalenol	25/Box
SY-AFDON-103	3mL	Deoxynivalenol	20/Box
SY-AFOCH-101	1mL	Ochratoxin A	25/Box
SY-AFOCH-103	3mL	Ochratoxin A	20/Box
SY-AF-228	Multifunctional Clean-up Columns	Patulin	25/Box
SY-AF-226	Multifunctional Clean-up Columns	Aflatoxin B1,B2,G1,G2	25/Box
SY-AF-224	Multifunctional Clean-up Columns	Zearalenone	25/Box
SY-AF-223	Multifunctional Clean-up Columns	Aflatoxin M1,M2	25/Box
SY-AF-230	Multifunctional Clean-up Columns	Deoxynivalenol	25/Box
SY-AF-229	Multifunctional Clean-up Columns	Ochratoxin A	25/Box

## DISTRIBUTION

Mandar Consultancy Ltd. has reserved distribution rights for North American territory.

For all inquiries contact to:



[sales@mandarconsultancy.ca](mailto:sales@mandarconsultancy.ca)



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# MORE CUSTOMIZATION



Synergy analytical laboratories provides custom mixed orders of extraction salts, clean up sorbents on request.



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for all scientific updates and analytical needs.

