



About Hawach Scientific

Hawach is a modern enterprise, contains well integration of R&D, production, sales and after-sales service. Hawach located at Xi'an High-Tech development Zone, which is one of the five national level High-Tech development Zones with plant covers a production workshop area of 8000 m², with 4000 m² of clean room. Hawach mainly produces and exports laboratory consumables to the global market over a decade. The product range mainly refers to Sample Preparation of LC/GC Chromatography, Microporous Filtration, Molecular Diagnostics, Cell culture as well as other scientific supply fields, etc.

Hawach Scientific never stop upgrading our technique, corporate with many famous universities including Northwestern Polytechnical Universities, Xi'an University of Technology, and Shaanxi University of Science and Technology. Hawach has established laboratory analysis institute, research and development center.

In Hawach Scientific, quality always comes first, in the very beginning, Hawach started to learn world advanced production technology and experience, especially quality control testing laboratory. We have ultraviolet absorption detector (UVD), liquid chromatography, integrity tester, flow rate tester, dielectric strength tester, heating plate, laser particle counter etc. After production, all articles are delivered to QC center, only qualified products can be to the next procedure.

Today, we are happy to see our products exported to the United States, Korea, Japan, UK, Germany, Dubai, Israel and Mexico. The quality and service of our products receive consistent approval from customers. Our prospect is to be leader and century enterprise, Provide superior products, service and solution to global laboratories and factories. Hawach Scientific's mission is "Accomplish Sciences, help employee realized their dreams.", By joint efforts of Hawach's employee, business partners and customers, we believe Hawach can be a leader of laboratory industry.



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1. Introduction of QuEChERS

QuEChERS (Quick, Easy, Cheap, Effective, Rugged and Safe), a sample preparation method proposed by Michelangelo Anastassiades and co-workers in 2003, has been adopted as official procedures for multiresidual pesticide monitoring in Europe, the U.S. and China.

Features:

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

Application:

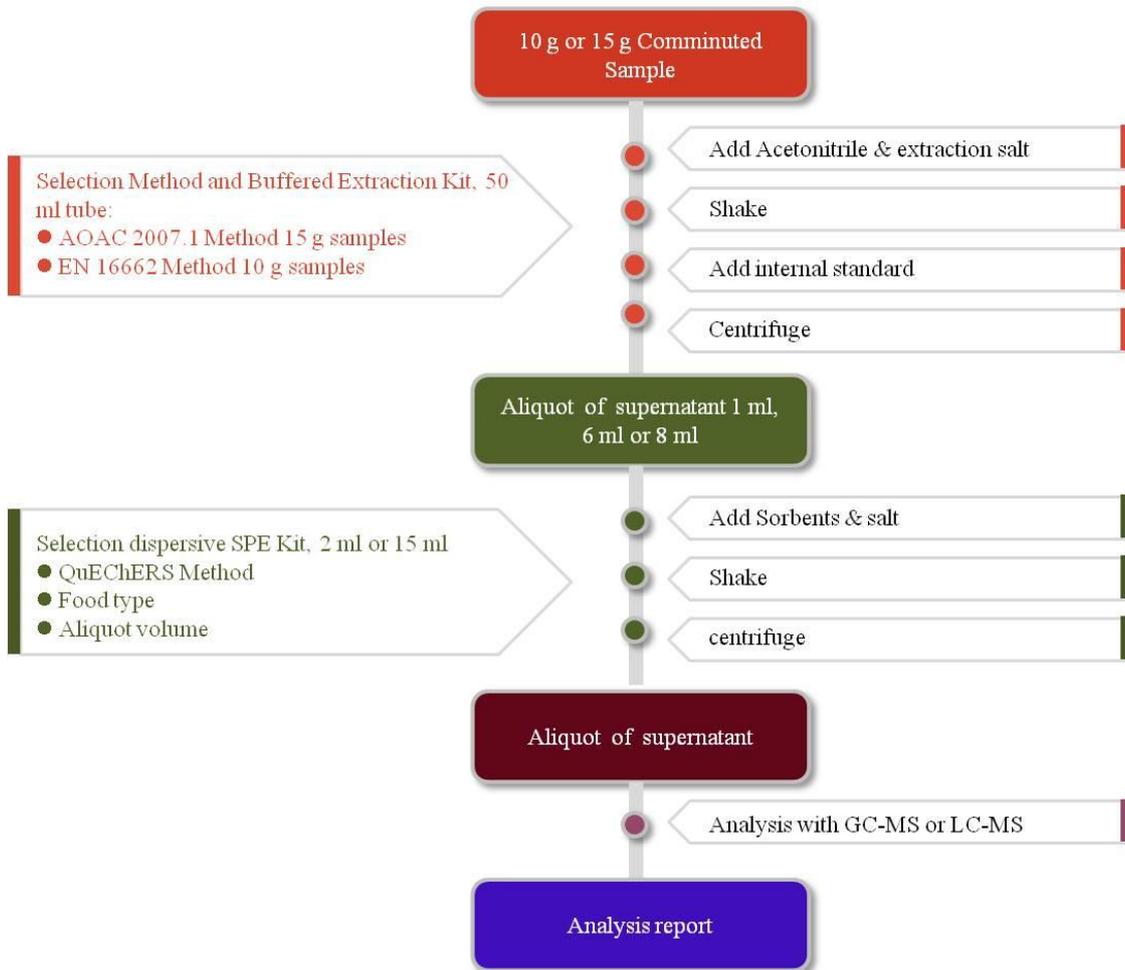
Satisfactory recoveries for a wide variety of pesticides in many food matrices

Related Methods:

- **NY/T 1380-2007** Determination of 51 Pesticides Residues in Fruits and Vegetables GC-MS
- **EN 15662** Foods of plant origin - Determination of pesticide residues using GC-MS and/or LC-MS/MS following acetonitrile extraction/partitioning and clean-up by dispersive SPE - QuEChERS-method
- **AOAC Official Method 2007.01** Pesticide Residues in Foods by Acetonitrile Extraction and Partitioning with Magnesium Sulfate.



2. Work Flow



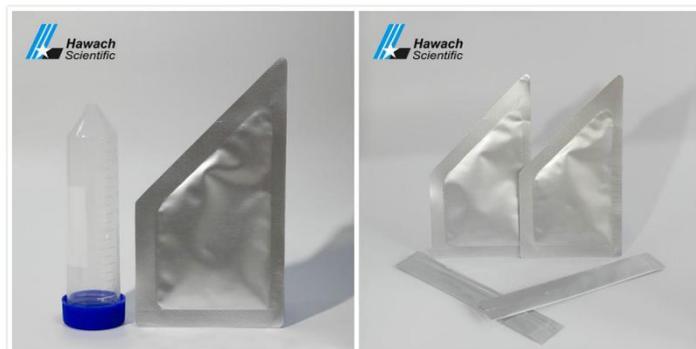
Product Information

Hawach Scientific's QuEChERS products include QuEChERS Kit, QuEChERS Extraction kit, QuEChERS Extraction Salts, QuEChERS Dispersive SPE Kit, QuEChERS Dispersive Absorbent, QuEChERS Ceramic Homogenizers, the comprehensive type of products can satisfy various customer requirements, at the same time, other type will also supply by us which you can buy according to your requirements.

3. QuEChERS Extraction kit

Description

- Available in or without 50 ml centrifuge tube and caps
- Samples with high percentage of water can not directly added in the salt for the case of an exothermic reaction that can affect your analyze recoveries, Hawach pre-packages its QuEChERS salts and buffers(AOAC & EN) in anhydrous packages, which allows you to add them after adding your solvent to the sample, as specified in QuEChERS methodologies.
- Customized also accepted



Ordering Information

Method	Description	Qty/Pack	Item code
AOAC	50mL empty tube Bag: 6g MgSO ₄ , 1.5g NaAc	50	SLQEA2500600
EN	50mL empty tube Bag: 4g MgSO ₄ , 1g NaCl, 0.5g Na ₂ C ₆ H ₆ O ₇ , 1g Na ₃ C ₆ H ₅ O ₇	50	SLQEE2500400
AOAC	Bag: 6g MgSO ₄ , 1.5g NaAc	50	SLQSA1000600
EN	Bag: 4g MgSO ₄ , 1g NaCl, 0.5g Na ₂ C ₆ H ₆ O ₇ , 1g Na ₃ C ₆ H ₅ O ₇	50	SLQSE1000400

4. QuEChERS Dispersive SPE Kit

Description

The extracted aliquot of sample will be added to a 2 ml or 15 ml centrifuge tube containing a certain amount of SPE Dispersive sorbent and MgSO₄. The sorbent will pull out interfering matrix materials from the sample, while MgSO₄ helps to remove excess water and improve analyte partitioning.



You can choose suitable QuEChERS Dispersive SPE tube according to the volume of sample aliquot and sample type
Customized also accepted.



Ordering Information

Method	Description	Qty/Pack	Application Note	Item code
AOAC	2mL tube with 50mg PSA, 150mg MgSO ₄	100	General fruits and vegetables: Removes polar organic acids, some sugars and lipids	SLQDA1020050P
AOAC	15mL tube with 400mg PSA, 1200mg MgSO ₄	50	General fruits and vegetables: Removes polar organic acids, some sugars and lipids	SLQDA1150040P
AOAC	2mL tube with 50mg PSA, 50mg C18, 150mg MgSO ₄	100	Fruits and vegetables with fats and waxes: Removes polar organic acids, some sugars, more lipids and sterols	SLQDA1020050PC
AOAC	15mL tube with 400mg PSA, 400mg C18, 1200mg MgSO ₄	50	Fruits and vegetables with fats and waxes:Removes polar organic acids, some sugars, more lipids and sterols	SLQDA1150040PC
AOAC	2mL tube with 50mg PSA, 50mg C18, 50mg GCB, 150mg MgSO ₄	100	Fruits and vegetables with pigments and fats: Removes polar organic acids, some sugars and lipids, plus carotenoids and chlorophyll; not for use with planar pesticides	SLQDA1020050PCG
AOAC	15mL tube with 400mg PSA, 400mg C18, 400mg GCB 1200mg MgSO ₄	50	Fruits and vegetables with pigments and fats: Removes polar organic acids, some sugars and lipids, plus carotenoids and chlorophyll; not for use with planar pesticides	SLQDA1150040PCG
EN	2mL tube with 25mg PSA, 150mg MgSO ₄	100	General fruits and vegetables: Removes polar organic acids, some sugars and lipids	SLQDE1020025P
EN	15mL tube with 150mg PSA, 900mg MgSO ₄	50	General fruits and vegetables: Removes polar organic acids, some sugars and lipids	SLQDE1150015P
EN	2mL tube with 25mg PSA, 25mg C18, 150 mg MgSO ₄	100	Fruits and vegetables with fats and waxes: Removes polar organic acids, some sugars, more lipids and sterols	SLQDE1020025PC
EN	15mL tube with 150mg PSA, 150mg C18, 900 mg MgSO ₄	50	Fruits and vegetables with fats and waxes: Removes polar organic acids, some sugars, more lipids and sterols	SLQDE1150015PC

EN	15mL tube with 150mg PSA, 15mg GCB, 900 mg MgSO ₄	50	Pigmented fruits and vegetables: Removes polar organic acids, some sugars and lipids, and carotenoids and chlorophyll; not for use with planar pesticides	SLQDE1150015PG
EN	15mL tube with 150mg PSA, 45mg GCB, 900 mg MgSO ₄	50	Highly pigmented fruits and vegetables: Removes polar organic acids, some sugars and lipids, plus high levels of carotenoids and chlorophyll; not for use with planar pesticides	SLQDE1150045GP

5. QuEChERS Dispersive Absorbent

Description

The QuEChERS Dispersive absorbent can also be sold in bulk bottles and customized also accepted



Order Information

Product	Description	g/bottle	Item code
C18	SPE Bulk Sorbent, C18, 300m ² /g, 40-60um, 120Å, Carbon content: 17.6%	100	SLQAN1000001C
PSA	SPE Bulk Sorbent, primary secondary amine (PSA), 500m ² /g, 50-75 um, 100Å, Carbon content: 8%	100/1000	SLQAN1000001P
GCB	SPE Bulk Sorbent, Graphitized Carbon Blacks (GCB), 100m ² /g, ~40 um	10/50	SLQAN1000001G

6. QuEChERS Ceramic Homogenizers

Description

Ceramic Homogenizers increase your overall lab productivity and give you greater confidence in your results.

They make analyte extraction easier by:

- Cutting the required extraction time from 60 seconds to as little as 20 seconds a time savings of 70% per sample
- maintaining high, reproducible extractions in a third of the time
- minimizing variance between technicians
- Breaking up salt agglomerates and maintaining a consistent grinding of homogenizing material
- Increasing your overall lab productivity and having greater confidence in your results

Order Information

Product	Qty/Pack	Item code
Ceramic Homogenizers for 50mL tube	100	SLQCN100000050
Ceramic Homogenizers for 15mL tube	100	SLQCN100000015
Ceramic Homogenizers for 2mL tube	200	SLQCN100000002



Overall Order Information

Method	Description	Qty/PK	Application Note	Item code
QuEChERS Extraction Kit				
AOAC	50mL empty tube Bag: 6g MgSO ₄ , 1.5g NaAc	50	SLQEA2500600
EN	50mL empty tube Bag: 4g MgSO ₄ , 1g NaCl, 0.5g Na ₂ C ₆ H ₆ O ₇ , 1g Na ₃ C ₆ H ₅ O ₇	50	SLQEE2500400
QuEChERS Extraction Salts				
AOAC	Bag: 6g MgSO ₄ , 1.5g NaAc	50	SLQSA1000600
EN	Bag: 4g MgSO ₄ , 1g NaCl, 0.5 g Na ₂ C ₆ H ₆ O ₇ , 1g Na ₃ C ₆ H ₅ O ₇	50	SLQSE1000400
QuEChERS Dispersive SPE Kit				
AOAC	2mL tube with 50mg PSA, 150mg MgSO ₄	100	General fruits and vegetables: Removes polar organic acids, some sugars and lipids	SLQDA1020050P
AOAC	15mL tube with 400mg PSA, 1200mg MgSO ₄	50	General fruits and vegetables: Removes polar organic acids, some sugars and lipids	SLQDA1150040P
AOAC	2mL tube with 50mg PSA,	100	Fruits and vegetables with fats and waxes: Removes polar organic acids, some sugars,	SLQDA1020050PC



	50mg C18, 150mg MgSO ₄		more lipids and sterols	
AOAC	15mL tube with 400mg PSA, 400mg C18, 1200mg MgSO ₄	50	Fruits and vegetables with fats and waxes: Removes polar organic acids, some sugars, more lipids and sterols	SLQDA1150040PC
AOAC	2mL tube with 50mg PSA, 50mg C18, 50mg GCB, 150mg MgSO ₄	100	Fruits and vegetables with pigments and fats: Removes polar organic acids, some sugars and lipids, plus carotenoids and chlorophyll; not for use with planar pesticides	SLQDA1020050PCG
AOAC	15mL tube with 400mg PSA, 400mg C18, 400mg GCB 1200mg MgSO ₄	50	Fruits and vegetables with pigments and fats: Removes polar organic acids, some sugars and lipids, plus carotenoids and chlorophyll; not for use with planar pesticides	SLQDA1150040PCG
EN	2mL tube with 25mg PSA, 150mg MgSO ₄	100	General fruits and vegetables: Removes polar organic acids, some sugars and lipids	SLQDE1020025P
EN	15mL tube with 150mg PSA, 900mg MgSO ₄	50	General fruits and vegetables: Removes polar organic acids, some sugars and lipids	SLQDE1150015P
EN	2mL tube with 25mg PSA, 25 mg C18, 150mg MgSO ₄	100	Fruits and vegetables with fats and waxes: Removes polar organic acids, some sugars, more lipids and sterols	SLQDE1020025PC
EN	15mL tube with 150mg PSA, 150mg C18, 900mg MgSO ₄	50	Fruits and vegetables with fats and waxes: Removes polar organic acids, some sugars, more lipids and sterols	SLQDE1150015PC
EN	15mL tube with 150mg PSA, 15mg GCB, 900mg MgSO ₄	50	Pigmented fruits and vegetables: Removes polar organic acids, some sugars and lipids, and carotenoids and chlorophyll; not for use with planar pesticides	SLQDE1150015PG
EN	15mL tube with 150mg PSA, 45mg GCB, 900mg MgSO ₄	50	Highly pigmented fruits and vegetables: Removes polar organic acids, some sugars and lipids, plus high levels of carotenoids and chlorophyll; not for use with planar pesticides	SLQDE1150045GP

QuEChERS Dispersive Absorbent

C18	SPE Bulk Sorbent, C18, 300m ² /g, 40-60um, 120Å, Carbon content: 17.6%			SLQAN1000001C
PSA	SPE Bulk Sorbent, primary secondary amine (PSA), 500m ² /g, 50-75um, 100Å, Carbon content : 8%			SLQAN1000001P



GCB	SPE Bulk Sorbent, Graphitized Carbon Blacks (GCB), 100m ² /g, ~40um	SLQAN1000001G
QuEChERS Ceramic Homogenizers		
50mL	QuEChERS Ceramic Homogenizers, Suitable for 50mL tube, 100pcs/pk	SLQCN100000050
15mL	QuEChERS Ceramic Homogenizers, Suitable for 15mL tube, 100pcs/pk	SLQCN100000015
2mL	QuEChERS Ceramic Homogenizers, Suitable for 2mL tube, 100pcs/pk	SLQCN100000002