

13mm and 25mm Syringe Filters

All Finneran Products Are Certified



Our syringe filters are made using polypropylene medical-grade housings with Luer-Lock and Luer-Slip fittings in compliance with ISO 594-1. Each filter is sealed, using an external ring insert, to maintain the membrane integrity and best performance. Filters are color-coded for easy identification.

The Certified Filters are supplied with a Certificate of Quality, batch-to-batch, to guarantee product performance and quality. The filters are visually inspected following quality specifications. Each batch of filters is tested for external dimensions, bubble point, filter integrity, water flow rate, UV extractable, and compliance with all technical procedures, manufacturing specifications, and quality controls for release. Tests are performed by an independent laboratory.

General Specifications

Syringe filters are available in two sizes (13 and 25 mm Ø) with a variety of membranes.

Filter size	Sample volume size (*)	Hold- up volume (after air purge)	Filtration area	Max. operating pressure	External dimensions	Weight
13mm	1-10 mL	< 30 µL	0.95 cm ²	750 kPa	6.2 ±0.3mmØ x 19.0 ±0.3mm	10.90 ±0.10g
13mm PF	1-5 mL	< 25 µL	0.95 cm ²	750 kPa	16.2 ±0.3mmØ x 17.3 ±0.3mm	0.80 ±0.10g
25mm	>10 mL	< 120 µL	3.55 cm ²	650 kPa	31.9 ±0.3mmØ x 25.7 ±0.3mm	3.90 ±0.10g
25mm R	>10 mL	< 120 µL	3.55 cm ²	650 kPa	30.0 ±0.3mmØ x 21.5 ±0.3mm	3.90 ±0.10g
25mm A	>10 mL	<150 µL	3.55 cm ²	650 kPa	30.0 ±0.3mmØ x 21.3 ±0.3mm	2.90 ±0.10g

(*) For critical applications using chromatography detection at < 210nm is recommended to reject the first filtrated ml.

Membrane selection

In the selection of membrane for chromatography sample and solvent filtration, there are several important considerations:

- The membrane must be highly solvent resistant, since most chromatography solvents are aggressive and sometimes corrosive.
- It should not have extractables because they can interfere with analytical results.
- It should be a low protein binding membrane for biological samples.

Special Formats Available

Robot filters (low hold-up volume) designed for robotic devices (25mm R).

Automatic filters (high stress resistance) available for automatic applications (25mm A).

Mini-tip filters (for small quantities of analytical samples) (13mm PF)

Connection Luer-lock full screw (available on 13mm Filters)

Traceability on Certified Filters

Certified filters, with Traceability, are available on standard products. These filters have PRINTED, externally, a color-coded plastic ring with the BATCH NUMBER (i.e. LOT 123456). This batch number provides extended certification and traceable documentation in accordance with ISO protocol.

13mm and 25mm Syringe Filters



13mm Syringe Filters

Available in 1.0 μ m, 2.0 μ m and 5.0 μ m pore sizes. Glass fiber membranes have fast filtration flow, eliminate sample contamination, and have good chemical compatibility. Autoclavable.

Case Pack - 100 pieces

Cat. No.	Description
FEC0213PC	13mm Syringe Filter, 0.2 μ m Mixed Esters Cellulose, Light Yellow
FEC0413PC	13mm Syringe Filter, 0.45 μ m Mixed Esters Cellulose, Dark Yellow
FPV0213PC	13mm Syringe Filter, 0.2 μ m PVDF, Light Red
FPV0413PC	13mm Syringe Filter, 0.45 μ m PVDF, Dark Red
FNY0213PC	13mm Syringe Filter, 0.2 μ m Nylon, Light Green
FNY0413PC	13mm Syringe Filter, 0.45 μ m Nylon, Dark Green
FPT0213PC	13mm Syringe Filter, 0.2 μ m PTFE, Light Blue
FPT0413PC	13mm Syringe Filter, 0.45 μ m PTFE, Dark Blue
FPP0213PC	13mm Syringe Filter, 0.2 μ m Polypropylene, Transparent
FPP0413PC	13mm Syringe Filter, 0.45 μ m Polypropylene, White
FRC0213PC	13mm Syringe Filter, 0.2 μ m Regenerated Cellulose, Light Brown
FRC0413PC	13mm Syringe Filter, 0.45 μ m Regenerated Cellulose, Dark Brown
FAC0213PC	13mm Syringe Filter, 0.2 μ m Cellulose Acetate, Light Orange
FAC0413PC	13mm Syringe Filter, 0.45 μ m Cellulose Acetate, Dark Orange
FPS0213PC	13mm Syringe Filter, 0.2 μ m Polyethersulfone, Light Purple
FPS0413PC	13mm Syringe Filter, 0.45 μ m Polyethersulfone, Dark Purple
FGF1013PC	13mm Syringe Filter, 1.0 μ m Glass Fiber, Grey
FGF2013PC	13mm Syringe Filter, 2.0 μ m Glass Fiber, Grey
FGF5013PC	13mm Syringe Filter, 5.0 μ m Glass Fiber, Grey

13mm Syringe Filters - Mini Tip

Provide extremely low dead volume of less than 10 μ L, and are available in 0.2 μ m and 0.45 μ m pore sizes. Autoclavable.

Case Pack - 500 pieces

Cat. No.	Description
FEC0213PF	13mm Syringe Filter - Mini Tip, 0.2 μ m Mixed Esters Cellulose, Light Yellow
FEC0413PF	13mm Syringe Filter - Mini Tip, 0.45 μ m Mixed Esters Cellulose, Dark Yellow
FPV0213PF	13mm Syringe Filter - Mini Tip, 0.2 μ m PVDF, Light Red
FPV0413PF	13mm Syringe Filter - Mini Tip, 0.45 μ m PVDF, Dark Red
FNY0213PF	13mm Syringe Filter - Mini Tip, 0.2 μ m Nylon, Light Green
FNY0413PF	13mm Syringe Filter - Mini Tip, 0.45 μ m Nylon, Dark Green
FPT0213PF	13mm Syringe Filter - Mini Tip, 0.2 μ m PTFE, Light Blue
FPT0413PF	13mm Syringe Filter - Mini Tip, 0.45 μ m PTFE, Dark Blue
FPP0213PF	13mm Syringe Filter - Mini Tip, 0.2 μ m Polypropylene, Transparent
FPP0413PF	13mm Syringe Filter - Mini Tip, 0.45 μ m Polypropylene, White
FRC0213PF	13mm Syringe Filter - Mini Tip, 0.2 μ m Regenerated Cellulose, Light Brown
FRC0413PF	13mm Syringe Filter - Mini Tip, 0.45 μ m Regenerated Cellulose, Dark Brown
FAC0213PF	13mm Syringe Filter - Mini Tip, 0.2 μ m Cellulose Acetate, Light Orange
FAC0413PF	13mm Syringe Filter - Mini Tip, 0.45 μ m Cellulose Acetate, Dark Orange
FPS0213PF	13mm Syringe Filter - Mini Tip, 0.2 μ m Polyethersulfone, Light Purple
FPS0413PF	13mm Syringe Filter - Mini Tip, 0.45 μ m Polyethersulfone, Dark Purple
FGF1013PF	13mm Syringe Filter - Mini Tip, 1.0 μ m Glass Fiber, Grey
FGF2013PF	13mm Syringe Filter - Mini Tip, 2.0 μ m Glass Fiber, Grey
FGF5013PF	13mm Syringe Filter - Mini Tip, 5.0 μ m Glass Fiber, Grey

13mm and 25mm Syringe Filters

25mm Syringe Filters

Available in 0.2 μ m and 0.45 μ m pore size. Autoclavable.

Case Pack - 100 pieces



Cat. No.	Description
FEC0225PC	25mm Syringe Filter, 0.2 μ m Mixed Esters Cellulose, Light Yellow
FEC0425PC	25mm Syringe Filter, 0.45 μ m Mixed Esters Cellulose, Dark Yellow
FPV0225PC	25mm Syringe Filter, 0.2 μ m PVDF, Light Red
FPV0425PC	25mm Syringe Filter, 0.45 μ m PVDF, Dark Red
FNY0225PC	25mm Syringe Filter, 0.2 μ m Nylon, Light Green
FNY0425PC	25mm Syringe Filter, 0.45 μ m Nylon, Dark Green
FPT0225PC	25mm Syringe Filter, 0.2 μ m PTFE, Light Blue
FPT0425PC	25mm Syringe Filter, 0.45 μ m PTFE, Dark Blue
FPP0225PC	25mm Syringe Filter, 0.2 μ m Polypropylene, Transparent
FPP0425PC	25mm Syringe Filter, 0.45 μ m Polypropylene, White
FRC0225PC	25mm Syringe Filter, 0.2 μ m Regenerated Cellulose, Light Brown
FRC0425PC	25mm Syringe Filter, 0.45 μ m Regenerated Cellulose, Dark Brown
FAC0225PC	25mm Syringe Filter, 0.2 μ m Cellulose Acetate, Light Orange
FAC0425PC	25mm Syringe Filter, 0.45 μ m Cellulose Acetate, Dark Orange
FPS0225PC	25mm Syringe Filter, 0.2 μ m Polyethersulfone, Light Purple
FPS0425PC	25mm Syringe Filter, 0.45 μ m Polyethersulfone, Dark Purple
FGF1025PC	25mm Syringe Filter, 1.0 μ m Glass Fiber, Grey
FGF2025PC	25mm Syringe Filter, 2.0 μ m Glass Fiber, Grey
FGF5025PC	25mm Syringe Filter, 5.0 μ m Glass Fiber, Grey

25mm Syringe Filters with 1.0 μ m Glass Fiber

Glass fiber membranes have fast filtration flow, eliminate sample contamination, and have good chemical compatibility. Autoclavable.

Case Pack - 100 pieces

Cat. No.	Description
FEC0225GC	25mm Syringe Filter - Glass Fiber 1.0 μ m, 0.2 μ m Mixed Esters Cellulose, Light Yellow
FEC0425GC	25mm Syringe Filter - Glass Fiber 1.0 μ m, 0.45 μ m Mixed Esters Cellulose, Dark Yellow
FPV0225GC	25mm Syringe Filter - Glass Fiber 1.0 μ m, 0.2 μ m PVDF, Light Red
FPV0425GC	25mm Syringe Filter - Glass Fiber 1.0 μ m, 0.45 μ m PVDF, Dark Red
FNY0225GC	25mm Syringe Filter - Glass Fiber 1.0 μ m, 0.2 μ m Nylon, Light Green
FNY0425GC	25mm Syringe Filter - Glass Fiber 1.0 μ m, 0.45 μ m Nylon, Dark Green
FPT0225GC	25mm Syringe Filter - Glass Fiber 1.0 μ m, 0.2 μ m PTFE, Light Blue
FPT0425GC	25mm Syringe Filter - Glass Fiber 1.0 μ m, 0.45 μ m PTFE, Dark Blue
FPP0225GC	25mm Syringe Filter - Glass Fiber 1.0 μ m, 0.2 μ m Polypropylene, Transparent
FPP0425GC	25mm Syringe Filter - Glass Fiber 1.0 μ m, 0.45 μ m Polypropylene, White
FRC0225GC	25mm Syringe Filter - Glass Fiber 1.0 μ m, 0.2 μ m Regenerated Cellulose, Light Brown
FRC0425GC	25mm Syringe Filter - Glass Fiber 1.0 μ m, 0.45 μ m Regenerated Cellulose, Dark Brown
FAC0225GC	25mm Syringe Filter - Glass Fiber 1.0 μ m, 0.2 μ m Cellulose Acetate, Light Orange
FAC0425GC	25mm Syringe Filter - Glass Fiber 1.0 μ m, 0.45 μ m Cellulose Acetate, Dark Orange
FPS0225GC	25mm Syringe Filter - Glass Fiber 1.0 μ m, 0.2 μ m Polyethersulfone, Light Purple
FPS0425GC	25mm Syringe Filter - Glass Fiber 1.0 μ m, 0.45 μ m Polyethersulfone, Dark Purple

13mm and 25mm Syringe Filters

25mm Robotic Syringe Filters

Developed specifically for automated sample filtration systems. Autoclavable.



Case Pack - 1000 pieces

Cat. No.	Description
FEC0225RC	25mm Robotic Filter, 0.2µm Mixed Esters Cellulose, Light Yellow
FEC0425RC	25mm Robotic Filter, 0.45µm Mixed Esters Cellulose, Dark Yellow
FPV0225RC	25mm Robotic Filter, 0.2µm PVDF, Light Red
FPV0425RC	25mm Robotic Filter, 0.45µm PVDF, Dark Red
FNY0225RC	25mm Robotic Filter, 0.2µm Nylon, Light Green
FNY0425RC	25mm Robotic Filter, 0.45µm Nylon, Dark Green
FPT0225RC	25mm Robotic Filter, 0.2µm PTFE, Light Blue
FPT0425RC	25mm Robotic Filter, 0.45µm PTFE, Dark Blue
FPP0225RC	25mm Robotic Filter, 0.2µm Polypropylene, Transparent
FPP0425RC	25mm Robotic Filter, 0.45µm Polypropylene, White
FRC0225RC	25mm Robotic Filter, 0.2µm Regenerated Cellulose, Light Brown
FRC0425RC	25mm Robotic Filter, 0.45µm Regenerated Cellulose, Dark Brown
FAC0225RC	25mm Robotic Filter, 0.2µm Cellulose Acetate, Light Orange
FAC0425RC	25mm Robotic Filter, 0.45µm Cellulose Acetate, Dark Orange
FPS0225RC	25mm Robotic Filter, 0.2µm Polyethersulfone, Light Purple
FPS0425RC	25mm Robotic Filter, 0.45µm Polyethersulfone, Dark Purple
FGF1025RC	25mm Robotic Filter, 1.0µm Glass Fiber, Grey
FGF2025RC	25mm Robotic Filter, 2.0µm Glass Fiber, Grey
FGF5025RC	25mm Robotic Filter, 5.0µm Glass Fiber, Grey

25mm Robotic Syringe Filters with 1.0µm Glass Fiber

Case Pack - 1000 pieces

Cat. No.	Description
FEC0225GRC	25mm Robot Filter - Glass Fiber 1.0µm, 0.2µm Mixed Esters Cellulose, Light Yellow
FEC0425GRC	25mm Robot Filter - Glass Fiber 1.0µm, 0.45µm Mixed Esters Cellulose, Dark Yellow
FPV0225GRC	25mm Robot Filter - Glass Fiber 1.0µm, 0.2µm PVDF, Light Red
FPV0425GRC	25mm Robot Filter - Glass Fiber 1.0µm, 0.45µm PVDF, Dark Red
FNY0225GRC	25mm Robot Filter - Glass Fiber 1.0µm, 0.2µm Nylon, Light Green
FNY0425GRC	25mm Robot Filter - Glass Fiber 1.0µm, 0.45µm Nylon, Dark Green
FPT0225GRC	25mm Robot Filter - Glass Fiber 1.0µm, 0.2µm PTFE, Light Blue
FPT0425GRC	25mm Robot Filter - Glass Fiber 1.0µm, 0.45µm PTFE, Dark Blue
FPP0225GRC	25mm Robot Filter - Glass Fiber 1.0µm, 0.2µm Polypropylene, Transparent
FPP0425GRC	25mm Robot Filter - Glass Fiber 1.0µm, 0.45µm Polypropylene, White
FRC0225GRC	25mm Robot Filter - Glass Fiber 1.0µm, 0.2µm Regenerated Cellulose, Light Brown
FRC0425GRC	25mm Robot Filter - Glass Fiber 1.0µm, 0.45µm Regenerated Cellulose, Dark Brown
FAC0225GRC	25mm Robot Filter - Glass Fiber 1.0µm, 0.2µm Cellulose Acetate, Light Orange
FAC0425GRC	25mm Robot Filter - Glass Fiber 1.0µm, 0.45µm Cellulose Acetate, Dark Orange
FPS0225GRC	25mm Robot Filter - Glass Fiber 1.0µm, 0.2µm Polyethersulfone, Light Purple
FPS0425GRC	25mm Robot Filter - Glass Fiber 1.0µm, 0.45µm Polyethersulfone, Dark Purple

13mm and 25mm Syringe Filters

25mm Automatic Syringe Filters

Suitable for manual and automated filtrations. Ideal for sample volumes up to 10mL. Autoclavable.



Case Pack - 1000 pieces

Cat. No.	Description
FEC0225AC	25mm Automatic Filter, 0.2µm Mixed Esters Cellulose, Light Yellow
FEC0425AC	25mm Automatic Filter, 0.45µm Mixed Esters Cellulose, Dark Yellow
FPV0225AC	25mm Automatic Filter, 0.2µm PVDF, Light Red
FPV0425AC	25mm Automatic Filter, 0.45µm PVDF, Dark Red
FNY0225AC	25mm Automatic Filter, 0.2µm Nylon, Light Green
FNY0425AC	25mm Automatic Filter, 0.45µm Nylon, Dark Green
FPT0225AC	25mm Automatic Filter, 0.2µm PTFE, Light Blue
FPT0425AC	25mm Automatic Filter, 0.45µm PTFE, Dark Blue
FPP0225AC	25mm Automatic Filter, 0.2µm Polypropylene, Transparent
FPP0425AC	25mm Automatic Filter, 0.45µm Polypropylene, White
FRC0225AC	25mm Automatic Filter, 0.2µm Regenerated Cellulose, Light Brown
FRC0425AC	25mm Automatic Filter, 0.45µm Regenerated Cellulose, Dark Brown
FAC0225AC	25mm Automatic Filter, 0.2µm Cellulose Acetate, Light Orange
FAC0425AC	25mm Automatic Filter, 0.45µm Cellulose Acetate, Dark Orange
FPS0225AC	25mm Automatic Filter, 0.2µm Polyethersulfone, Light Purple
FPS0425AC	25mm Automatic Filter, 0.45µm Polyethersulfone, Dark Purple
FGF1025AC	25mm Automatic Filter, 1.0µm Glass Fiber, Grey
FGF2025AC	25mm Automatic Filter, 2.0µm Glass Fiber, Grey
FGF5025AC	25mm Automatic Filter, 5.0µm Glass Fiber, Grey

25mm Automatic Syringe Filters with 1.0µm Glass Fiber

Case Pack - 1000 pieces

Cat. No.	Description
FEC0225GAC	25mm Automatic Filter - Glass Fiber 1.0µm, 0.2µm Mixed Esters Cellulose, Light Yellow
FEC0425GAC	25mm Automatic Filter - Glass Fiber 1.0µm, 0.45µm Mixed Esters Cellulose, Dark Yellow
FPV0225GAC	25mm Automatic Filter - Glass Fiber 1.0µm, 0.2µm PVDF, Light Red
FPV0425GAC	25mm Automatic Filter - Glass Fiber 1.0µm, 0.45µm PVDF, Dark Red
FNY0225GAC	25mm Automatic Filter - Glass Fiber 1.0µm, 0.2µm Nylon, Light Green
FNY0425GAC	25mm Automatic Filter - Glass Fiber 1.0µm, 0.45µm Nylon, Dark Green
FPT0225GAC	25mm Automatic Filter - Glass Fiber 1.0µm, 0.2µm PTFE, Light Blue
FPT0425GAC	25mm Automatic Filter - Glass Fiber 1.0µm, 0.45µm PTFE, Dark Blue
FPP0225GAC	25mm Automatic Filter - Glass Fiber 1.0µm, 0.2µm Polypropylene, Transparent
FPP0425GAC	25mm Automatic Filter - Glass Fiber 1.0µm, 0.45µm Polypropylene, White
FRC0225GAC	25mm Automatic Filter - Glass Fiber 1.0µm, 0.2µm Regenerated Cellulose, Light Brown
FRC0425GAC	25mm Automatic Filter - Glass Fiber 1.0µm, 0.45µm Regenerated Cellulose, Dark Brown
FAC0225GAC	25mm Automatic Filter - Glass Fiber 1.0µm, 0.2µm Cellulose Acetate, Light Orange
FAC0425GAC	25mm Automatic Filter - Glass Fiber 1.0µm, 0.45µm Cellulose Acetate, Dark Orange
FPS0225GAC	25mm Automatic Filter - Glass Fiber 1.0µm, 0.2µm Polyethersulfone, Light Purple
FPS0425GAC	25mm Automatic Filter - Glass Fiber 1.0µm, 0.45µm Polyethersulfone, Dark Purple

Membrane Filters



All Finneran Products Are Certified

CHEMICAL COMPATIBILITY

PROUCT	Strong Acids	Dilute Acids	Aliphatic Alcohol	Aldehydes	Bases	Esters	Aliphatic Hydroc.	Aromatic Hydroc.	Halogen Hydroc.	CETONES	Strong Oxidants
PVDF	N	R	R	R	N	L	R	R	R	N	L
PTFE	R	R	R	R	R	R	R	R	R	R	R
Nylon	N	L	R	L	L	R	R	L	L	R	N
Mixed Esters Cellulose	N	R	L	L	N	N	R	R	L	N	L
Polypropylene	R	R	R	L	R	R	R	N	L	R	R
Cellulose Acetate	N	L	L	L	N	N	R	R	N	L	L
Regenerated Cellulose	N	R	R	L	L	R	R	R	R	R	L
Polyethersulfone	N	R	L	L	R	L	R	R	N	L	L
Glass Fiber	R	R	R	R	R	R	R	R	R	R	R

R: Recommended, L: Limited Compatibility, N: Not recommended

TECHNICAL CHARACTERISTICS

PRODUCT	Minimum Bubble Point- Water	Minimum Water flow rate (at 0.7 bar, 25°C)
PVDF 0,2µm	260 kPa	2 ml/min/cm ²
PVDF 0,45µm	170 kPa	10 ml/min/cm ²
PTFE 0,2µm	110 kPa	6 ml/min/cm ²
PTFE 0,45µm	60 kPa	15 ml/min/cm ²
Nylon 0,2µm	350 kPa	5 ml/min/cm ²
Nylon 0,45µm	210 kPa	10 ml/min/cm ²
Mixed Esters Cellulose 0,2µm	380 kPa	15 ml/min/cm ²
Mixed Esters Cellulose 0,45µm	260 kPa	25 ml/min/cm ²
Polypropylene 0,2µm	280 kPa	8 ml/min/cm ²
Polypropylene 0,45µm	210 kPa	20 ml/min/cm ²
Cellulose Acetate 0,2µm	350 kPa	10 ml/min/cm ²
Cellulose Acetate 0,45µm	270 kPa	20 ml/min/cm ²
Regenerated Cellulose 0,2µm	250 kPa	10 ml/min/cm ²
Regenerated Cellulose 0,45µm	200 kPa	15 ml/min/cm ²
Polyethersulfone 0,2µm	360 kPa	15 ml/min/cm ²
Polyethersulfone 0,45µm	280 kPa	25 ml/min/cm ²
Glass Fiber 1.0µm	N.A.	>80 ml/min/cm ²
Glass Fiber 2.0µm	N.A.	>95 ml/min/cm ²
Glass Fiber 5.0µm	N.A.	>105 ml/min/cm ²

Membrane Filters

13mm Membrane Filters

Case Pack - 100 pieces

Cat. No.	Description
FEC0213MC	13mm Membrane Filter, 0.2µm Mixed Esters Cellulose
FEC0413MC	13mm Membrane Filter, 0.45µm Mixed Esters Cellulose
FPV0213MC	13mm Membrane Filter, 0.2µm PVDF
FPV0413MC	13mm Membrane Filter, 0.45µm PVDF
FNY0213MC	13mm Membrane Filter, 0.2µm Nylon
FNY0413MC	13mm Membrane Filter, 0.45µm Nylon
FPT0213MC	13mm Membrane Filter, 0.2µm PTFE
FPT0413MC	13mm Membrane Filter, 0.45µm PTFE
FPP0213MC	13mm Membrane Filter, 0.2µm Polypropylene
FPP0413MC	13mm Membrane Filter, 0.45µm Polypropylene
FRC0213MC	13mm Membrane Filter, 0.2µm Regenerated Cellulose
FRC0413MC	13mm Membrane Filter, 0.45µm Regenerated Cellulose
FAC0213MC	13mm Membrane Filter, 0.2µm Cellulose Acetate
FAC0413MC	13mm Membrane Filter, 0.45µm Cellulose Acetate
FPS0213MC	13mm Membrane Filter, 0.2µm Polyethersulfone
FPS0413MC	13mm Membrane Filter, 0.45µm Polyethersulfone
FGF1013MC	13mm Membrane Filter, 1.0µm Glass Fiber
FGF2013MC	13mm Membrane Filter, 2.0µm Glass Fiber
FGF5013MC	13mm Membrane Filter, 5.0µm Glass Fiber

25mm Membrane Filters

Case Pack - 50 pieces

Cat. No.	Description
FEC0225MD	25mm Membrane Filter, 0.2µm Mixed Esters Cellulose
FEC0425MD	25mm Membrane Filter, 0.45µm Mixed Esters Cellulose
FPV0225MD	25mm Membrane Filter, 0.2µm PVDF
FPV0425MD	25mm Membrane Filter, 0.45µm PVDF
FNY0225MD	25mm Membrane Filter, 0.2µm Nylon
FNY0425MD	25mm Membrane Filter, 0.45µm Nylon
FPT0225MD	25mm Membrane Filter, 0.2µm PTFE
FPT0425MD	25mm Membrane Filter, 0.45µm PTFE
FPP0225MD	25mm Membrane Filter, 0.2µm Polypropylene
FPP0425MD	25mm Membrane Filter, 0.45µm Polypropylene
FRC0225MD	25mm Membrane Filter, 0.2µm Regenerated Cellulose
FRC0425MD	25mm Membrane Filter, 0.45µm Regenerated Cellulose
FAC0225MD	25mm Membrane Filter, 0.2µm Cellulose Acetate
FAC0425MD	25mm Membrane Filter, 0.45µm Cellulose Acetate
FPS0225MD	25mm Membrane Filter, 0.2µm Polyethersulfone
FPS0425MD	25mm Membrane Filter, 0.45µm Polyethersulfone
FGF1025MD	25mm Membrane Filter, 1.0µm Glass Fiber
FGF2025MD	25mm Membrane Filter, 2.0µm Glass Fiber
FGF5025MD	25mm Membrane Filter, 5.0µm Glass Fiber

Membrane Filters

37mm Membrane Filter

Case Pack - 50 pieces

Cat. No.	Description
FEC0237MD	37mm Membrane Filter, 0.2µm Mixed Esters Cellulose
FEC0437MD	37mm Membrane Filter, 0.45µm Mixed Esters Cellulose
FPV0237MD	37mm Membrane Filter, 0.2µm PVDF
FPV0437MD	37mm Membrane Filter, 0.45µm PVDF
FNY0237MD	37mm Membrane Filter, 0.2µm Nylon
FNY0437MD	37mm Membrane Filter, 0.45µm Nylon
FPT0237MD	37mm Membrane Filter, 0.2µm PTFE
FPT0437MD	37mm Membrane Filter, 0.45µm PTFE
FPP0237MD	37mm Membrane Filter, 0.2µm Polypropylene
FPP0437MD	37mm Membrane Filter, 0.45µm Polypropylene
FRC0237MD	37mm Membrane Filter, 0.2µm Regenerated Cellulose
FRC0437MD	37mm Membrane Filter, 0.45µm Regenerated Cellulose
FAC0237MD	37mm Membrane Filter, 0.2µm Cellulose Acetate
FAC0437MD	37mm Membrane Filter, 0.45µm Cellulose Acetate
FPS0237MD	37mm Membrane Filter, 0.2µm Polyethersulfone
FPS0437MD	37mm Membrane Filter, 0.45µm Polyethersulfone
FGF1037MD	37mm Membrane Filter, 1.0µm Glass Fiber (25 pieces)
FGF2037MD	37mm Membrane Filter, 2.0µm Glass Fiber (25 pieces)
FGF5037MD	37mm Membrane Filter, 5.0µm Glass Fiber (25 pieces)

47mm Membrane Filters

Case Pack - 50 pieces

Cat. No.	Description
FEC0247MD	47mm Membrane Filter, 0.2µm Mixed Esters Cellulose
FEC0447MD	47mm Membrane Filter, 0.45µm Mixed Esters Cellulose
FPV0247MD	47mm Membrane Filter, 0.2µm PVDF
FPV0447MD	47mm Membrane Filter, 0.45µm PVDF
FNY0247MD	47mm Membrane Filter, 0.2µm Nylon
FNY0447MD	47mm Membrane Filter, 0.45µm Nylon
FPT0247MD	47mm Membrane Filter, 0.2µm PTFE
FPT0447MD	47mm Membrane Filter, 0.45µm PTFE
FPP0247MD	47mm Membrane Filter, 0.2µm Polypropylene
FPP0447MD	47mm Membrane Filter, 0.45µm Polypropylene
FRC0247MD	47mm Membrane Filter, 0.2µm Regenerated Cellulose
FRC0447MD	47mm Membrane Filter, 0.45µm Regenerated Cellulose
FAC0247MD	47mm Membrane Filter, 0.2µm Cellulose Acetate
FAC0447MD	47mm Membrane Filter, 0.45µm Cellulose Acetate
FPS0247MD	47mm Membrane Filter, 0.2µm Polyethersulfone
FPS0447MD	47mm Membrane Filter, 0.45µm Polyethersulfone
FGF1047MD	47mm Membrane Filter, 1.0µm Glass Fiber (25 pieces)
FGF2047MD	47mm Membrane Filter, 2.0µm Glass Fiber (25 pieces)
FGF5047MD	47mm Membrane Filter, 5.0µm Glass Fiber (25 pieces)

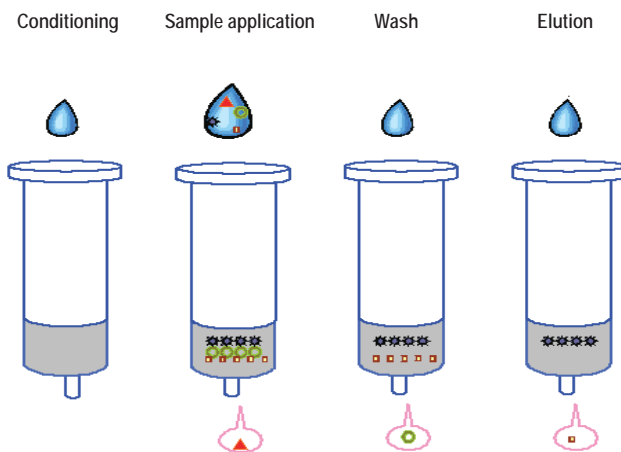
SPE Cartridges

All Finneran Products Are Certified



Finneran Solid Phase Extraction (SPE) cartridges provide a fast and efficient sample clean-up and concentration prior to analysis through GC, HPLC, and/or other instrument methods. SPE method concentrates and purifies analytes from solution by absorption onto a disposable solid phase cartridge, followed by elution of the analyte with a solvent appropriate for instrument analysis. Finneran SPE cartridges consist of molded high purity polypropylene bodies with two 20µm polyethylene frits that contain the packing material. The cartridges are designed for manual and automated uses. All of our SPE cartridges are equipped with male Luer-tips to permit the use with multi-position vacuum manifolds.

SPE cartridges are simple to use and allow four-step sample preparation: conditioning, sample application, wash and elution.



SPE products are manufactured in compliance with ISO 9001 and technical procedures and tested according to international standards of ISO 17025. The manufacturing methods guarantee the highest quality of products. The controlled weighing system, for each functional group dosage, assures high accuracy results from cartridge to cartridge with minimal variability. Samples and raw data of all SPE cartridge batches are stored for five years from production for reference.

Finneran SPE cartridges are available in four sizes (1, 3, 6, and 12mL) and different packing/phase materials (C2, C4, C8, C18, SI, CN, NH2, DIOL, Phenyl, Florisil®, SAX and SCX). Sorbent weights range from 100mg to 1g.

SPE Cartridges

GENERAL EXTRACTION PROCEDURES

Reversed-phase: Packing is composed of a silica backbone bonded with hydrocarbon chains. It is used to isolate relatively non-polar compounds from a polar matrix.

Conditioning	Sample application	Wash	Elution
Rinse packing bed with 3 - 5ml of methanol followed by 3 - 5ml of water or buffer (do not let packing bed dry before adding sample).	Apply sample solution to the top of the packing bed. Push or draw the sample through the bed at a flow rate of 1 - 5ml/min. Collect sample for analysis if desired compound has passed through the packing bed without being retained.	If the desired compound was retained, wash off any weakly retained interfering compound(s) with a polar solvent.	Elute desired compound with 1 - 2ml of a non-polar solvent and collect for analysis.

Normal-phase: Packing is composed of a silica backbone bonded with carbon chains containing polar functional groups. It is used to isolate polar compounds from a non-polar matrix.

Conditioning	Sample application	Wash	Elution
Rinse packing bed with 3 - 5ml of non-polar solvent (do not let packing bed dry before adding sample).	Apply sample solution to the top of the packing bed. Push or draw the sample through the bed at a flow rate of 1 - 5ml/min. Collect sample for analysis if desired compound has passed through the packing bed without being retained.	If the desired compound was retained, wash off any weakly retained interfering compound(s) with a non-polar solvent.	Elute desired compound with 1 - 2ml of a polar solvent and collect for analysis.

Ion-exchange: Packing is composed of different materials backbone bonded with carbon chains terminated by a negatively or positively charged functional groups. It is used to isolate charged or potentially charged compounds.

Conditioning	Sample application	Wash	Elution
Rinse packing bed with 3 - 5ml of de-ionized water or low ionic strength buffer (e.g. 0.0001M - 0.01M).	Apply sample to the top of the packing bed. Push or draw the sample through the bed at a flow rate of 1 - 2ml/min. Collect sample for analysis if desired compound has passed through the packing bed without being retained.	If the desired compound was retained, wash off any weakly retained interfering compound(s) with de-ionized water or low strength buffer.	Elute desired compound with 1 - 5ml of a high salt concentration solution (e.g. 0.1M - 0.5M) or change elution buffer pH such that the sample compound is no longer ionized and collect for analysis.

SPE Cartridges

FUNCTIONAL GROUPS

C8 - Octyl Bonded, Endcapped Silica

Average Particle Size: 50 μ m, Pore Size: 60Å

Retention mechanism: Reversed phase. Hydrophobic phase.

Applications: For reversed phase extraction of non-polar to moderately polar compounds, such as antibiotics, barbiturates, benzodiazepines, caffeine, drugs, dyes, essential oils, fat soluble vitamins, fungicides, herbicides, pesticides, hydrocarbons, parabens, phenols, phthalate esters, steroids, surfactants, theophylline, and water soluble vitamins.

Application Examples: Extraction of Alkylsulfonate Surfactants in Water, Extraction of Aldicarb Residues from Ground Water, Extraction of Anionic Surfactants in Soil.

C18 - Octadecyl Bonded, Endcapped Silica

Average Particle Size: 50 μ m, Pore Size: 60Å

Retention mechanism: Reversed phase. One of the most Hydrophobic phases.

Applications: For reversed phase extraction of nonpolar to moderately polar compounds, such as antibiotics, barbiturates, benzodiazepines, caffeine, drugs, dyes, essential oils, fat soluble vitamins, fungicides, herbicides, pesticides, hydrocarbons, parabens, phenols, phthalate esters, steroids, surfactants, theophylline, and water soluble vitamins.

Application Examples: Extraction of Catecholamines from Urine, Extraction of Polyaromatic Hydrocarbons in Drinking Water, Extraction of Organo Chlorine pesticides from aqueous solutions.

Silica - Silica Gel with no bonded phase

Average Particle Size: 50 μ m, Pore Size: 60Å

Retention mechanism: Normal phase. Polar neutral phase.

Applications: For extraction of polar compounds, such as alcohols, aldehydes, amines, drugs, dyes, herbicides, pesticides, ketones, nitro compounds, organic acids, phenols, and steroids.

Application Examples: Extraction of Vitamin D from Serum, Extraction of Aflatoxins from Corn, Peanuts, and Peanut Butter, Extraction of Amine Antioxidant from motor oil.

CN - Cyanopropyl, Endcapped Silica

Average Particle Size: 50 μ m, Pore Size: 60Å

Retention mechanism: Normal phase.

Weak/moderate non-polar with aqueous matrix, or polar with non-polar organic matrix.

Applications: For reversed phase extraction of moderately polar compounds, normal phase extraction of polar compounds, such as aflatoxins, antibiotics, dyes, herbicides, pesticides, phenols, steroids. Weak cation exchange for carbohydrates and cationic compounds.

Application Examples: Organochlorine Pesticides in Water, Extraction of Paraquat and Diquat from aqueous solutions. Extraction of N-Nitrosamine (N-Nitrosopyrrolidine) from bacon.

SPE Cartridges

NH₂ - Aminopropyl, Bonded Silica

Average Particle Size: 50µm, Pore Size: 60Å

Retention mechanism: Weak anion exchange with aqueous matrix, normal phase with non-polar organic matrix.

Applications: For normal phase extraction of polar compounds, weak anion exchange for carbohydrates, weak anions, and organic acids.

Application Examples: Extraction of Pyridonecarboxylic-Acid Antibacterials (PCAs) from fish tissue, Extraction of Lipids from serum and tissue, Extraction of Pyridonecarboxylic-Acid Antibacterials from fish tissue.

Diol, (Glyceroxypropylsilyl) Bonded Silica

Average Particle Size: 50µm, Pore Size: 60Å

Retention mechanism: Normal phase

Applications: For normal phase extraction of polar compounds, weak anion exchange for carbohydrates, weak anions, and organic acids.

Application Examples: Extraction of Antibiotics from Ointment, Extraction of Urinary Cortisol, Extraction of the herbicide Atrazine from Corn Oil.

Florisol®, Magnesium Silicate

Average Particle Size: 60µm, Pore Size: 100Å and Average Particle Size: 100µm, Pore Size: 200Å

Retention mechanism: Normal phase application – polar slightly basic phase

Applications: For adsorption extraction of polar compounds, such as alcohols, aldehydes, amines, drugs, dyes, herbicides, pesticides, PCBs, ketones, nitro compounds, organic acids, phenols, and steroids.

Application Examples: Extraction of Polychlorinated Biphenyls (PCBs) from transformer Oil, Extraction of Pesticides from fish, Extraction of Carbofuran and Carboxin from cabbage.

SCX, Tosic Acid, Bonded Silica with Na⁺ counterion

Average Particle Size: 40 - 63µm, Pore Size: 60Å

Retention mechanism: Cation exchange

Applications: For strong cation exchange for cations, antibiotics, drugs, organic bases, amino acids, catecholamines, herbicides, nucleic acid bases, nucleosides, and surfactants. Exchange Capacity: 0.2meq/g.

Application Examples: Extraction of Methylimidazole from food, Extraction of Amino Acids in medical plant extracts, Extraction of Hydroxyatrazine Metabolites from water.

SPE Cartridges

SAX, Tetramethyl ammonium chloride

Average Particle Size: 40 - 63 μ m, Pore Size: 60Å

Retention mechanism: Anion exchange

Applications: For strong anion exchange for anions, organic acids, nucleic acids, nucleotides, and surfactants.
Capacity: 0.2meq/g.

Application Examples: Extraction of caffeine, Saccharin and Sodium benzoate in beverages (Diet cola), Extraction of Folic Acid in cabbage, Extraction of Methylmalonic Acid from serum or plasma.



1ml SPE Cartridge, 100mg Dosage

Cat. No.	Description	Qty
JGF01C1801	C18 Functional Group	100
JGF01C801	C8 Functional Group	100
JGF01CN01	CN Functional Group	100
JGF01SI01	Silica Functional Group	100
JGF01NH01	NH2 Functional Group	100
JGF01FL0160	Florisil® Functional Group (60/100)	100
JGF01FL01100	Florisil® Functional Group (100/200)	100
JGF01DI01	Diol Functional Group	100
JGF01SA01	SAX Functional Group	100
JGF01SC01	SCX Functional Group	100



3ml SPE Cartridge, 200mg Dosage

Cat. No.	Description	Qty
JGF03C1802	C18 Functional Group	50
JGF03C802	C8 Functional Group	50
JGF03CN02	CN Functional Group	50
JGF03SI02	Silica Functional Group	50
JGF03NH02	NH2 Functional Group	50
JGF03FL0260	Florisil® Functional Group (60/100)	50
JGF03FL02100	Florisil® Functional Group (100/200)	50
JGF03DI02	Diol Functional Group	50
JGF03SA02	SAX Functional Group	50
JGF03SC02	SCX Functional Group	50



3ml SPE Cartridge, 500mg Dosage

Cat. No.	Description	Qty
JGF03C1805	C18 Functional Group	50
JGF03C805	C8 Functional Group	50
JGF03CN05	CN Functional Group	50
JGF03SI05	Silica Functional Group	50
JGF03NH05	NH2 Functional Group	50
JGF03FL0560	Florisil® Functional Group (60/100)	50
JGF03FL05100	Florisil® Functional Group (100/200)	50
JGF03DI05	Diol Functional Group	50
JGF03SA05	SAX Functional Group	50
JGF03SC05	SCX Functional Group	50

SPE Cartridges



6ml SPE Cartridge, 500mg Dosage

Cat. No.	Description	Qty
JGF06C1805	C18 Functional Group	30
JGF06C805	C8 Functional Group	30
JGF06CN05	CN Functional Group	30
JGF06SI05	Silica Functional Group	30
JGF06NH05	NH2 Functional Group	30
JGF06FL0560	Florisil® Functional Group (60/100)	30
JGF06FL05100	Florisil® Functional Group (100/200)	30
JGF06DI05	Diol Functional Group	30
JGF06SA05	SAX Functional Group	30
JGF06SC05	SCX Functional Group	30



6ml SPE Cartridge, 1000mg Dosage

Cat. No.	Description	Qty
JGF06C1810	C18 Functional Group	30
JGF06C810	C8 Functional Group	30
JGF06CN10	CN Functional Group	30
JGF06SI10	Silica Functional Group	30
JGF06NH10	NH2 Functional Group	30
JGF06FL1060	Florisil® Functional Group (60/100)	30
JGF06FL10100	Florisil® Functional Group (100/200)	30
JGF06DI10	Diol Functional Group	30
JGF06SA10	SAX Functional Group	30
JGF06SC10	SCX Functional Group	30



12ml SPE Cartridge, 1000mg Dosage

Cat. No.	Description	Qty
JGF12C1810	C18 Functional Group	20
JGF12C810	C8 Functional Group	20
JGF12CN10	CN Functional Group	20
JGF12SI10	Silica Functional Group	20
JGF12NH10	NH2 Functional Group	20
JGF12FL1060	Florisil® Functional Group (60/100)	20
JGF12FL10100	Florisil® Functional Group (100/200)	20
JGF12DI10	Diol Functional Group	20
JGF12SA10	SAX Functional Group	20
JGF12SC10	SCX Functional Group	20

TECHNICAL INFORMATION OF J.G. FINNERAN'S QuEChERS

QuEChERS (Quick, Easy, Cheap, Effective, Rugged & Safe) offer a convenient and effective approach for determining pesticide residues in fruits, vegetables, and other foods.

The J.G. Finneran QuEChERS Extraction and Dispersive SPE Kits enable you to work with specific methods, including:

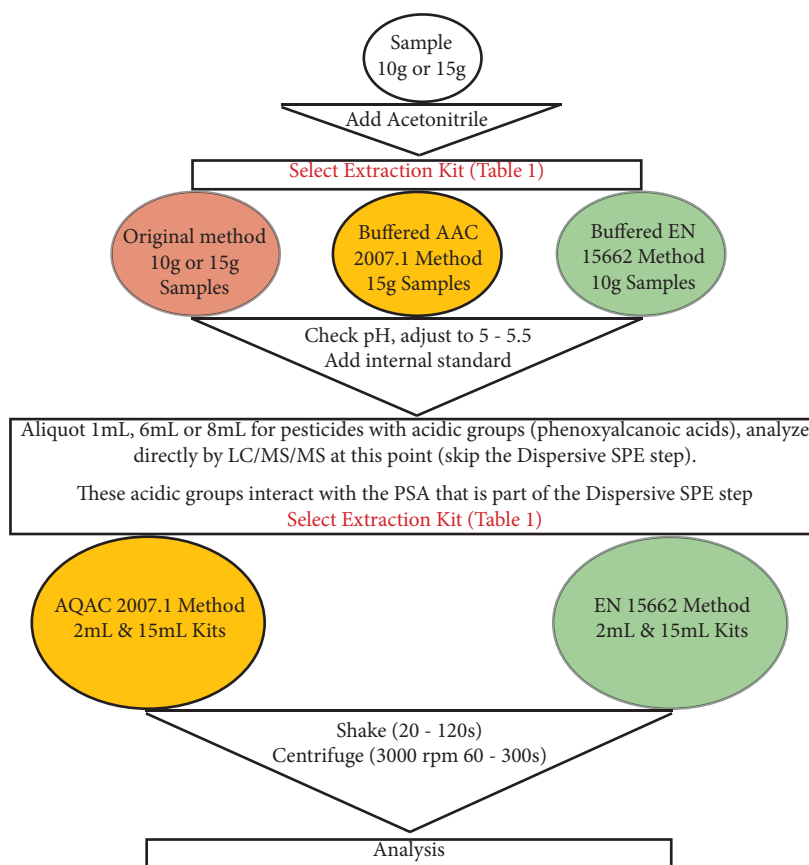
1. **European EN 15662 Method** - Foods and Plant Origin - Determination of Pesticide Residues using GC-MS and/or LC-MS/MS following Acetonitrile Extraction/Partitioning and Clean-up by Dispersive SPE - QuEChERS method.
2. **AOAC Official 2007.01 Method** - Pesticide Residues in Food by Acetonitrile Extraction and Partitioning with Magnesium Sulfate.
3. **Mini-multiresidue Method** - Method for the Analysis of Pesticide Residues in Low-Fat Products.

Our products make it simple to prepare your food samples for analysis with:

- High recoveries
- Accurate results
- High sample throughput
- Minimal solvent use
- Less labor
- Lower costs

We offer QuEChERS Extraction and Dispersive SPE products in a variety of standard sizes and formats.

- Extraction kits contain preweighed salts, so you can add them after the Acetonitrile Extraction step, protecting the integrity of your sample.
- Dispersive SPE kits are assembled in 2mL and 15mL sizes, they are preweighed and premixed with the right mix of salts and sorbents for your aliquot volume.



QuEChERS

PHASE 1: Extraction

Select the Extraction Kit depending on the type of food and the method to be used. Add solvent and salts to a small (10 or 15g) fruit or vegetable sample, enabling the extraction of the pesticide into an organic layer. (Table 1).

PHASE 1 Extraction Kit 50mL Centrifuge Tubes for Sample Extraction

Table 1

Part No.	Description	Qty.	Recommended Application
JGF00150P	4g MgSO ₄ , 1g NaCl, 1g trisodium citrate dihydrate, 0.5g disodium hydrogencitrate sesquihydrate	50	European EN-15662
JGF00450P	6g MgSO ₄ , 1.5g NaOAc	50	AOAC 2007.01
JGF00250P	4g MgSO ₄ , 1g NaCl	50	Mini-Multiresidue (10g sample)
JGF00650P	6g MgSO ₄ , 1.5g NaCl	50	Mini-Multiresidue (15g sample)

PHASE 2: Dispersive SPE Clean-up

Select the Extraction Kit depending on the type of food and the method to be used. One aliquot (*) of sample extract from Phase 1 is added to either the 2mL or 15mL centrifuge tube that contains a small quantity of SPE sorbent and MgSO₄ (Table 2 or Table 3).

PHASE 2 Dispersive SPE Kit 2mL Micro-centrifuge tubes

Table 2

Part No.	Description	Qty.	*Aliquot (mL)	Recommended Application
JGF00102P	150mg MgSO ₄ , 25mg PSA	100	1	European EN-15662 Mini-Multiresidue
JGF00202P	150mg MgSO ₄ , 25mg PSA, 25mg C18	100	1	European EN-15662 Mini-Multiresidue
JGF00302P	150mg MgSO ₄ , 25mg PSA, 2.5mg GCB	100	1	European EN-15662 Mini-Multiresidue
JGF00402P	150mg MgSO ₄ , 25mg PSA, 7.5mg GCB	100	1	European EN-15662 Mini-Multiresidue
JGF00502P	150mg MgSO ₄ , 50mg PSA	100	1	AOAC 2007.01
JGF00602P	150mg MgSO ₄ , 50mg PSA, 50mg C18	100	1	AOAC 2007.01
JGF00702P	150mg MgSO ₄ , 50mg PSA, 50mg GCB	100	1	AOAC 2007.01
JGF00802P	150mg MgSO ₄ , 50mg PSA, 50mg C18, 50mg GCB	100	1	AOAC 2007.01
JGF00902P	150mg MgSO ₄ , 25mg C18	100	1	AOAC 2007.01

PHASE 2 Dispersive SPE Kit 15mL Centrifuge tubes

Table 3

Part No.	Description	Qty.	*Aliquot (mL)	Recommended Application
JGF00515P	900mg MgSO ₄ , 150mg PSA	50	6	European EN-15662
JGF00815P	900mg MgSO ₄ , 150mg PSA, 150mg C18	50	6	European EN-15662
JGF00615P	900mg MgSO ₄ , 150mg PSA, 15mg GCB	50	6	European EN-15662
JGF00715P	900mg MgSO ₄ , 150mg PSA, 45mg GCB	50	6	European EN-15662
JGF00115P	1200mg MgSO ₄ , 400mg PSA	50	8	AOAC 2007.01
JGF00215P	1200mg MgSO ₄ , 400mg PSA, 400mg C18	50	8	AOAC 2007.01
JGF00315P	1200mg MgSO ₄ , 400mg PSA, 400mg GCB	50	8	AOAC 2007.01
JGF00415P	1200mg MgSO ₄ , 400mg PSA, 400mg C18, 400mg GCB	50	8	AOAC 2007.01
JGF01115P	900mg MgSO ₄ , 150mg C18	50	6	AOAC 2007.01

PSA= Primary and secondary exchange material

GCB= Graphitized carbon blank



QuEChERS

Selection Guide for Dispersive Kits. Phase 2

Methods



Types	Quantity per pack	EN 15662	AOAC 2007.1	Mini Multiresidue	Others
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General Fruits and Vegetables: Removes polar organic acids, some sugars and lipids

	100 tubes, 2mL	25mg PSA 150mg MgSO4 Part No. JGF00102P	50mg PSA 150mg MgSO4 Part No. JGF00502P	25mg PSA 150mg MgSO4 Part No. JGF00102P	
	50 tubes, 15mL	150mg PSA 900mg MgSO4 Part No. JGF00515P	400mg PSA 1200mg MgSO4 Part No. JGF00115P		





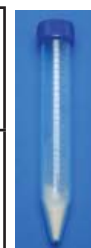
Fruits and Vegetables with Fats and Waxes: Removes polar organic acids, some sugars, more lipids and sterols

	100 tubes, 2mL	25mg PSA 25mg C18 150 mg MgSO4 Part No. JGF00202P	50mg PSA 50mg C18 150mg MgSO4 Part No. JGF00602P	25mg PSA 25mg C18 150mg MgSO4 Part No. JGF00202P	
	50 tubes, 15mL	150mg PSA 150mg C18 900mg MgSO4 Part No. JGF00815P	400mg PSA 400mg C18 1200mg MgSO4 Part No. JGF00215P		150mg C18 900mg MgSO4 Part No. JGF00815P





Pigmented Fruits and Vegetables: Removes polar organic acids, some sugars and lipids, and carotinoides and chlorophyll; not for use with planar pesticides

	100 tubes, 2mL	25mg PSA 2.5mg GCB 150mg MgSO4 Part No. JGF00302P	50mg PSA 50mg GCB 150mg MgSO4 Part No. JGF00702P	25mg PSA 2.5mg GCB 150mg MgSO4 Part No. JGF00302P	50mg PSA 50mg GCB 150mg MgSO4 Part No. JGF00702P
	50 tubes, 15mL	150mg PSA 15mg GCB 900mg MgSO4 Part No. JGF00615P	400mg PSA 400mg GCB 1200mg MgSO4 Part No. JGF00315P		





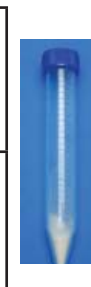
Highly Pigmented Fruits and Vegetables: Removes polar organic acids, some sugars and lipids, plus high levels of carotinoides and chlorophyll; not for use with planar pesticides

	100 tubes, 2mL	25mg PSA 7.5mg GCB 150mg MgSO4 Part No. JGF00402P	50mg PSA 50mg C18 50mg GCB 150mg MgSO4 Part No. JGF00802P	25mg PSA 7.5mg GCB 150mg MgSO4 Part No. JGF00402P	
	50 tubes, 15mL	150mg PSA 45mg GCB 900mg MgSO4 Part No. JGF00715P			300mg PSA 150mg GCB 900mg MgSO4 Part No. JGF00915P



Fruits and Vegetables with Pigments and Fats: Removes polar organic acids, some sugars and lipids, plus carotinoides and chlorophyll; not for use with planar pesticides

	100 tubes, 2mL		50mg PSA 50mg C18 50mg GCB 150mg MgSO4 Part No. JGF00802P		
	50 tubes, 15mL		400mg PSA 400mg C18 400mg GCB 1200mg MgSO4 Part No. JGF00415P		



Other Food Methods: Removes biological matrix interferences, including hydrophobic substances (fats, lipids) and proteins

	100 tubes, 2mL		25mg C18 150mg MgSO4 Part No. JGF00902P		
	50 tubes, 15mL		150mg C18 900mg MgSO4 Part No. JGF01115P		

