

Rapid Analysis of Pesticides in Food Matrices

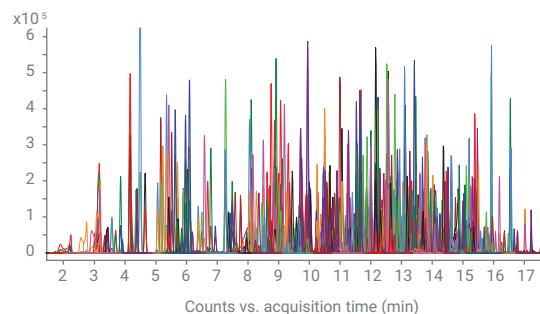
Workflow ordering guide

Get your analysis right... right from the start.

In this guide, you'll find the consumables you need for the rapid analysis of 510 pesticides in foods. All the recommended and necessary consumables and standards are conveniently listed for you to select and order.

This Agilent workflow was developed and verified using three food matrix types: tomato (high water content), wheat (low water content), and olive oil (high fat content). It includes:

- Injection-to-injection analysis of 510 pesticides in 20 minutes using an Agilent 6470 LC/TQ system
- An optimized, verified method in accordance with EU analytical guidance document SANTE/12682/2019
- Demonstrated method performance, sensitivity, reproducibility, and transferability
- Predefined consumables and ready-to-use 254-compound standard mix (other standards available individually)
- Consistent sample preparation workflow
- Optimized UHPLC separation method
- dMRM methods and database
- Comprehensive workflow guide supported by onsite and online training
- Data analysis and reporting



MRM chromatogram of 510 pesticides spiked at 10 µg/L in olive oil matrix.

Easy selection and ordering information

To add items to your "Favorite Products"* list at the Agilent online store, simply click the header links. Then, enter the quantities for the products you need. Your list will remain under "Favorite Products" for your use with future orders.

View MyList

Description	Part Number
Sample Preparation	
Extraction	
QuEChERS extraction kit, EN 15662 method, 50 mL tubes with ceramic homogenizers, 50/pk (recommended)	5982-5650CH
QuEChERS extraction kit, EN 15662 method, 50 mL tubes, 50/pk	5982-5650
QuEChERS extraction salt packets, EN 15662 method, no centrifuge tubes, 50/pk	5982-6650
QuEChERS extraction salt packets, EN 15662 method, no centrifuge tubes, 200/pk (bulk pack option)	5982-7650
Cleanup	
QuEChERS dispersive kit, Universal, 2 mL with ceramic homogenizers, 100/pk (recommended)	5982-0028CH
QuEChERS dispersive kit, Universal, 2 mL, 100/pk	5982-0028
QuEChERS dispersive kit, Universal, 15 mL with ceramic homogenizers, 50/pk (recommended)	5982-0029CH
QuEChERS dispersive kit, Universal, 15 mL, 50/pk	5982-0029
Captiva EMR–Lipid, 3 mL cartridges, with 300 mg sorbent mass, 100/pk	5190-1003
Captiva EMR–Lipid, 6 mL cartridges, with 600 mg sorbent mass, 50/pk	5190-1004
Centrifuge tube and cap, polypropylene, 50 mL, 25/pk	5610-2049
Agilent positive pressure manifold-48 processor	5191-4101**
6 mL SPE cartridge rack for PPM-48	5191-4104**
3 mL SPE cartridge rack for PPM-48	5191-4103**
Collection rack for 16 x 100 mm tubes	5191-4108**
Chemical Standards	
Ready-to-use 254-compound standards mix, 8 x 1 mL, 100 µg/mL each	5190-0551
<i>To order other standards, visit www.agilent.com/chem/standards.</i>	
HPLC Columns	
ZORBAX Eclipse Plus C18, 2.1 x 150 mm, 1.8 µm, 1200 bar	959759-902
ZORBAX Eclipse Plus C18 guard, 2.1 mm id, 1.8 µm, 3/pk	821725-901
Solvents and Reagents	
InfinityLab Ultrapure LC/MS acetonitrile	5191-4496
InfinityLab Ultrapure LC/MS methanol	5191-4497
InfinityLab Ultrapure LC/MS water	5191-4498
Formic acid reagent grade, 99.5% purity, 5 mL	G2453-85060
MS solution, formic acid, 99.5% purity, 10 mL	US-700002341
Formic acid reagent grade, 99.5% purity, 5 mL	G1946-85021
Vials and Caps	
Screw-top vials, 250 µL, 100/pk	5190-2242
Screw caps with bonded blue PTFE/red silicone septa	5190-7024

*First time using "Favorite Products?" You will be asked to enter your email address for account verification. If you have an existing Agilent account, you will be able to log in. However, if you don't have a registered Agilent account, you will need to [register](#) for one. This feature is valid only in regions that are e-commerce enabled. All items can also be ordered through your regular sales and distributor channels.

**One-time purchase.

Sample preparation made simple

Recommended Agilent extraction and cleanup consumables for vegetables and fruits, cereals, and foods of animal origin as designated by SANTE/11813/2017.

Use this matrix guide to determine which cleanup method is recommended.

High water content

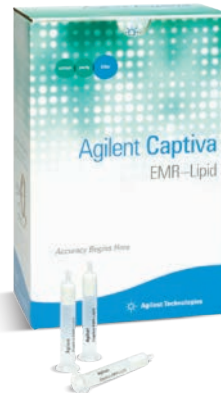
Pome fruit (apples, pears)
Stone fruit (apricots, cherries)
Other fruits (bananas)
Alliums (onions, leeks)
Fruiting vegetables/cucurbits (peppers, cucumbers, melons)
Brassica vegetables (brussel sprouts, cauliflower, cabbage)
Leafy vegetables and fresh herbs (lettuce, spinach, basil)
Stem and stalk vegetables (celery)
Fresh legume vegetables (peas)
Fresh fungi (champignons)
Root and tuber vegetables (sugar beet, carrots, potatoes)

High acid and high water content

Citrus fruit (lemons, oranges)
Small fruit and berries (strawberries, blueberries, raspberries, grapes)

High sugar and low water content

Honey, dried fruit (raisins, dried apricots or plums, fruit jams)



High oil and very low water content

Tree nuts (walnuts, hazelnuts)
Oil seeds (sunflower, soy beans)
Pastes of tree nuts and oil seeds (peanut butter, tahini)



Step 1: Extraction

QuEChERS extraction kit, EN 15662 ([5982-5650CH](#))
(recommended)
or
QuEChERS extraction salt packets, EN 15662 method
([5982-5650](#) (with tubes); [5982-6650](#))

QuEChERS extraction kit, EN 15662 ([5982-5650CH](#))
(recommended)
or
QuEChERS extraction salt packets,
([5982-5650](#) (with tubes); [5982-6650](#))

Step 2: Cleanup

Universal dispersive kit
2 mL* kit, [5982-0228CH](#) (recommended) or [5982-0028](#)
or
15 mL kit, [5982-0029CH](#) (recommended) or [5982-0029](#)

Captiva EMR-Lipid
3 mL cartridge, [5190-1003](#)
or
6 mL cartridge, [5190-1004](#)

*Size typically used during method development.

For details, see application note [5994-2370EN](#): A Comprehensive LC/MS/MS Workflow of Pesticide Residues in High Water, High Oil, and High Starch Sample Matrices Using the 6470 LC/TQ System

Agilent CrossLab services

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Click [here](#) to learn more about Agilent LC/MS solutions for pesticide analysis.

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Printed in the USA, December 7, 2020
5994-2909EN

