



EDGE[®]

Automated Extraction System

Method Note Compendium

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Agriculture

Extraction of Cannabinoids from Cannabis/Hemp Plant

Procedure

1. Homogenize, mill, or cryomill the sample. The S1 Q-Disc is a preassembled sandwich of the G1 Q-Disc between two C9 Q-Discs. Place entire sandwich, excluding the blue separator, into the bottom of the Q-Cup, and assemble the Q-Cup.
2. Weigh the sample into the Q-Cup.
3. Insert a Q-Screen into the Q-Cup using the Q-Screen tool.

Notes

Possessing, using, distributing, or selling marijuana or marijuana-based products constitute federal crimes in the United States, even where a state law decriminalizes or legalizes such activities. CEM Corporation produces instruments that are intended for use in testing laboratories and applications only where such use is permitted under applicable state/country law.

Sorbents

N/A

Solvents

Options:
2-Propanol (IPA)
Methanol

Sample Weight

≤ 0.5 g

Equipment

EDGE
50 mL centrifuge tubes
Q-Screen

Q-Disc

S1

Heating Program

Cycle	Top Add (mL)	Bottom Add (mL)	Rinse (mL)	Temp (°C)	Hold (mm:ss)
1	15	0	5	45	5:00

Note: Temperature and hold times may vary depending on the sample and analytes of interest.

Wash Program

Cycle	Solvent	Volume (mL)	Temp (°C)	Hold (mm:ss)
1	2-Propanol (IPA)	20	80	0:05
2	Methanol	10	---	---:--

General Guidelines

- a) This procedure is a reference point for sample extraction using a CEM system and may need to be modified or changed to obtain required results on your sample or analytes of interest.
- b) Wear hand, eye, and body protection when handling organic solvents.
- c) Any of CEM's collection vials/centrifuge tubes in the correct size for the rack owned may be used.
- d) Verify needed solvents are loaded onto the system with sufficient volume. Load the rack containing sample(s) into the EDGE. Select the method and position to load method. Press play and add any any sample ID's, etc. as needed.
- e) Bring to volume or evaporate as necessary for analysis.

Extraction of Dioxins from Feeds/Foods (Wet)

Procedure

1. Homogenize, mill, or cryomill the sample. The S1 Q-Disc is a preassembled sandwich of the G1 Q-Disc between two C9 Q-Discs. Place entire sandwich, excluding the blue separator, into the bottom of the Q-Cup, and assemble the Q-Cup.
2. Weigh the sample into the Q-Cup.
3. Insert a Q-Screen into the Q-Cup using the Q-Screen tool.

Notes

None

Sorbents

N/A

Solvents

Options:
Dichloromethane
Methyl tert-butyl ether
Toluene

Sample Weight

≤ 5 g

Equipment

EDGE
Q-Screen
60 mL collection vials

Q-Disc

S1

Heating Program

Cycle	Top Add (mL)	Bottom Add (mL)	Rinse (mL)	Temp (°C)	Hold (mm:ss)
1	20	0	0	150	1:00
2	20	0	0	150	1:00
3	20	0	0	150	1:00

Note: Temperature and hold times may vary depending on the sample and analytes of interest.

Wash Program

Cycle	Solvent	Volume (mL)	Temp (°C)	Hold (mm:ss)
1	Extraction Solvent	30	150	0:30
2	Extraction Solvent	30	---	--:--

General Guidelines

- a) This procedure is a reference point for sample extraction using a CEM system and may need to be modified or changed to obtain required results on your sample or analytes of interest.
- b) Wear hand, eye, and body protection when handling organic solvents.
- c) Any of CEM's collection vials/centrifuge tubes in the correct size for the rack owned may be used.
- d) Verify needed solvents are loaded onto the system with sufficient volume. Load the rack containing sample(s) into the EDGE. Select the method and position to load method. Press play and add any any sample ID's, etc. as needed.
- e) Bring to volume or evaporate as necessary for analysis.

Extraction of Pesticides from Avocados

Procedure

1. Homogenize, mill, or cryomill the sample. The S1 Q-Disc is a preassembled sandwich of the G1 Q-Disc between two C9 Q-Discs. Place entire sandwich, excluding the blue separator, into the bottom of the Q-Cup, and assemble the Q-Cup.
2. Weigh the sorbents into the Q-Cup. Spread evenly across the sample by gentle tapping.
3. Weigh the sample into the Q-Cup layering the sample on top of the sorbent. Gently mix the sample and sorbent mixture with a glass stir rod, ensuring that the Q-Disc is not damaged.
4. Insert a Q-Screen into the Q-Cup using the Q-Screen tool.

Notes

The second cycle in the heating program is a "Rinse Only" cycle.
Add 1:00 bubbling to Cycle 1 by selecting the pencil icon in the Cycles tab.

Sorbents

Q-Matrix Hydra™ (2.5 g)
Sodium Citrate (0.25 g)
Sodium Bicarbonate (0.25 g)

Solvents

Acetonitrile w/ 1.0% Acetic Acid (v/v)

Sample Weight

≤ 10 g

Equipment

EDGE
50 mL centrifuge tubes
Q-Screen

Q-Disc

S1

Heating Program

Cycle	Top Add (mL)	Bottom Add (mL)	Rinse (mL)	Temp (°C)	Hold (mm:ss)
1	25	0	5	40	3:00
2	0	0	10	---	--:--

Note: Temperature and hold times may vary depending on the sample and analytes of interest.

Wash Program

Cycle	Solvent	Volume (mL)	Temp (°C)	Hold (mm:ss)
1	Acetonitrile w/ 1.0% Acetic Acid (v/v)	10	40	0:03

General Guidelines

- a) This procedure is a reference point for sample extraction using a CEM system and may need to be modified or changed to obtain required results on your sample or analytes of interest.
- b) Wear hand, eye, and body protection when handling organic solvents.
- c) Any of CEM's collection vials/centrifuge tubes in the correct size for the rack owned may be used.
- d) Verify needed solvents are loaded onto the system with sufficient volume. Load the rack containing sample(s) into the EDGE. Select the method and position to load method. Press play and add any any sample ID's, etc. as needed.
- e) Bring to volume or evaporate as necessary for analysis.

Extraction of Pesticides from Bixin Powder

Procedure

1. Homogenize, mill, or cryomill the sample. The S1 Q-Disc is a preassembled sandwich of the G1 Q-Disc between two C9 Q-Discs. Place entire sandwich, excluding the blue separator, into the bottom of the Q-Cup, and assemble the Q-Cup.
2. Weigh the sample into the Q-Cup.
3. Insert a Q-Screen into the Q-Cup using the Q-Screen tool.

Notes

Sorbents

Solvents

Acetonitrile w/ 1.0% Acetic Acid (v/v)
Methanol

Sample Weight

≤ 1 g

Equipment

EDGE
50 mL centrifuge tubes
Q-Screen

Q-Disc

S1

Heating Program

Cycle	Top Add (mL)	Bottom Add (mL)	Rinse (mL)	Temp (°C)	Hold (mm:ss)
1	15	0	10	40	3:00

Note: Temperature and hold times may vary depending on the sample and analytes of interest.

Wash Program

Cycle	Solvent	Volume (mL)	Temp (°C)	Hold (mm:ss)
1	Methanol	40	120	0:30
2	Methanol	40	100	0:30
3	Acetonitrile w/ 1.0% Acetic Acid (v/v)	40	40	--:--

General Guidelines

- a) This procedure is a reference point for sample extraction using a CEM system and may need to be modified or changed to obtain required results on your sample or analytes of interest.
- b) Wear hand, eye, and body protection when handling organic solvents.
- c) Any of CEM's collection vials/centrifuge tubes in the correct size for the rack owned may be used.
- d) Verify needed solvents are loaded onto the system with sufficient volume. Load the rack containing sample(s) into the EDGE. Select the method and position to load method. Press play and add any any sample ID's, etc. as needed.
- e) Bring to volume or evaporate as necessary for analysis.

Extraction of Pesticides from Black Pepper

Procedure

1. Homogenize, mill, or cryomill the sample. The S1 Q-Disc is a preassembled sandwich of the G1 Q-Disc between two C9 Q-Discs. Place entire sandwich, excluding the blue separator, into the bottom of the Q-Cup, and assemble the Q-Cup.
2. Weigh the sample into the Q-Cup.
3. Insert a Q-Screen into the Q-Cup using the Q-Screen tool.

Notes

The second cycle in the heating program is a "Rinse Only" cycle.

Sorbents

PSA (150 mg)

Solvents

Acetonitrile w/ 1.0% Acetic Acid (v/v)

Sample Weight

≤ 2 g

Equipment

EDGE
50 mL centrifuge tubes
Q-Screen

Q-Disc

S1

Heating Program

Cycle	Top Add (mL)	Bottom Add (mL)	Rinse (mL)	Temp (°C)	Hold (mm:ss)
1	15	0	0	40	3:00
2	0	0	5	---	--:--

Note: Temperature and hold times may vary depending on the sample and analytes of interest.

Wash Program

Cycle	Solvent	Volume (mL)	Temp (°C)	Hold (mm:ss)
1	Acetonitrile w/ 1.0% Acetic Acid (v/v)	15	40	0:03

General Guidelines

Extraction of Pesticides from Black Tea

Procedure

1. Homogenize, mill, or cryomill the sample. The S1 Q-Disc is a preassembled sandwich of the G1 Q-Disc between two C9 Q-Discs. Place entire sandwich, excluding the blue separator, into the bottom of the Q-Cup, and assemble the Q-Cup.
2. Weigh the sample into the Q-Cup.
3. Insert a Q-Screen into the Q-Cup using the Q-Screen tool.

Notes

The second cycle in the heating program is a "Rinse Only" cycle.

Sorbents

N/A

Solvents

Acetonitrile

Sample Weight

2 g

Equipment

EDGE
50 mL centrifuge tubes
Q-Screen

Q-Disc

S1

Heating Program

Cycle	Top Add (mL)	Bottom Add (mL)	Rinse (mL)	Temp (°C)	Hold (mm:ss)
1	10	0	0	40	1:30
2	0	0	5	---	--:--

Note: Temperature and hold times may vary depending on the sample and analytes of interest.

Wash Program

Cycle	Solvent	Volume (mL)	Temp (°C)	Hold (mm:ss)
1	Acetonitrile	10	40	0:03

General Guidelines

- a) This procedure is a reference point for sample extraction using a CEM system and may need to be modified or changed to obtain required results on your sample or analytes of interest.
- b) Wear hand, eye, and body protection when handling organic solvents.
- c) Any of CEM's collection vials/centrifuge tubes in the correct size for the rack owned may be used.
- d) Verify needed solvents are loaded onto the system with sufficient volume. Load the rack containing sample(s) into the EDGE. Select the method and position to load method. Press play and add any any sample ID's, etc. as needed.
- e) Bring to volume or evaporate as necessary for analysis.

Extraction of Pesticides from Blueberries

Procedure

1. Homogenize, mill, or cryomill the sample. The S1 Q-Disc is a preassembled sandwich of the G1 Q-Disc between two C9 Q-Discs. Place entire sandwich, excluding the blue separator, into the bottom of the Q-Cup, and assemble the Q-Cup.
2. Weigh the sorbents into the Q-Cup. Spread evenly across the sample by gentle tapping.
3. Weigh the sample into the Q-Cup layering the sample on top of the sorbent. Gently mix the sample and sorbent mixture with a glass stir rod, ensuring that the Q-Disc is not damaged.
4. Insert a Q-Screen into the Q-Cup using the Q-Screen tool.

Notes

The second cycle in the heating program is a "Rinse Only" cycle.
Add 1:00 bubbling to Cycle 1 by selecting the pencil icon in the Cycles tab.

Sorbents

Q-Matrix Hydra™ (2.5 g)
PSA (0.5 g)

Solvents

Acetonitrile w/ 1.0% Acetic Acid (v/v)

Sample Weight

≤ 10 g

Equipment

EDGE
50 mL centrifuge tubes
Q-Screen

Q-Disc

S1

Heating Program

Cycle	Top Add (mL)	Bottom Add (mL)	Rinse (mL)	Temp (°C)	Hold (mm:ss)
1	25	0	5	40	3:00
2	0	0	10	---	--:--

Note: Temperature and hold times may vary depending on the sample and analytes of interest.

Wash Program

Cycle	Solvent	Volume (mL)	Temp (°C)	Hold (mm:ss)
1	Acetonitrile w/ 1.0% Acetic Acid (v/v)	10	40	0:03

General Guidelines

- a) This procedure is a reference point for sample extraction using a CEM system and may need to be modified or changed to obtain required results on your sample or analytes of interest.
- b) Wear hand, eye, and body protection when handling organic solvents.
- c) Any of CEM's collection vials/centrifuge tubes in the correct size for the rack owned may be used.
- d) Verify needed solvents are loaded onto the system with sufficient volume. Load the rack containing sample(s) into the EDGE. Select the method and position to load method. Press play and add any any sample ID's, etc. as needed.
- e) Bring to volume or evaporate as necessary for analysis.

Extraction of Pesticides from Cannabis Edibles

Procedure

1. Homogenize, mill, or cryomill the sample. The S1 Q-Disc is a preassembled sandwich of the G1 Q-Disc between two C9 Q-Discs. Place entire sandwich, excluding the blue separator, into the bottom of the Q-Cup, and assemble the Q-Cup.
2. Weigh the sample into the Q-Cup.
3. Insert a Q-Screen into the Q-Cup using the Q-Screen tool.

Notes

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Sorbents

N/A

Solvents

Acetonitrile w/ 1.0% Acetic Acid (v/v)

Sample Weight

0.3 g

Equipment

EDGE
50 mL centrifuge tubes
Q-Screen

Q-Disc

S1

Heating Program

Cycle	Top Add (mL)	Bottom Add (mL)	Rinse (mL)	Temp (°C)	Hold (mm:ss)
1	25	0	5	40	2:00

Note: Temperature and hold times may vary depending on the sample and analytes of interest.

Wash Program

Cycle	Solvent	Volume (mL)	Temp (°C)	Hold (mm:ss)
1	Acetonitrile w/ 1.0% Acetic Acid (v/v)	15	40	0:03
2	Acetonitrile w/ 1.0% Acetic Acid (v/v)	15	---	---:--

General Guidelines

- a) This procedure is a reference point for sample extraction using a CEM system and may need to be modified or changed to obtain required results on your sample or analytes of interest.
- b) Wear hand, eye, and body protection when handling organic solvents.
- c) Any of CEM's collection vials/centrifuge tubes in the correct size for the rack owned may be used.
- d) Verify needed solvents are loaded onto the system with sufficient volume. Load the rack containing sample(s) into the EDGE. Select the method and position to load method. Press play and add any any sample ID's, etc. as needed.
- e) Bring to volume or evaporate as necessary for analysis.

Extraction of Pesticides from Cannabis/Hemp Plant

Procedure

1. Homogenize, mill, or cryomill the sample. The S1 Q-Disc is a preassembled sandwich of the G1 Q-Disc between two C9 Q-Discs. Place entire sandwich, excluding the blue separator, into the bottom of the Q-Cup, and assemble the Q-Cup.
2. Weigh the sample into the Q-Cup.
3. Insert a Q-Screen into the Q-Cup using the Q-Screen tool.

Notes

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Sorbents

N/A

Solvents

Acetonitrile w/ 1.0% Acetic Acid (v/v)

Sample Weight

≤ 1.5 g

Equipment

EDGE
50 mL centrifuge tubes
Q-Screen

Q-Disc

S1

Heating Program

Cycle	Top Add (mL)	Bottom Add (mL)	Rinse (mL)	Temp (°C)	Hold (mm:ss)
1	25	0	5	40	2:00

Note: Temperature and hold times may vary depending on the sample and analytes of interest.

Wash Program

Cycle	Solvent	Volume (mL)	Temp (°C)	Hold (mm:ss)
1	Acetonitrile w/ 1.0% Acetic Acid (v/v)	10	40	0:30

General Guidelines

- a) This procedure is a reference point for sample extraction using a CEM system and may need to be modified or changed to obtain required results on your sample or analytes of interest.
- b) Wear hand, eye, and body protection when handling organic solvents.
- c) Any of CEM's collection vials/centrifuge tubes in the correct size for the rack owned may be used.
- d) Verify needed solvents are loaded onto the system with sufficient volume. Load the rack containing sample(s) into the EDGE. Select the method and position to load method. Press play and add any any sample ID's, etc. as needed.
- e) Bring to volume or evaporate as necessary for analysis.

Extraction of Pesticides from Cinnamon

Procedure

1. Homogenize, mill, or cryomill the sample. The S1 Q-Disc is a preassembled sandwich of the G1 Q-Disc between two C9 Q-Discs. Place entire sandwich, excluding the blue separator, into the bottom of the Q-Cup, and assemble the Q-Cup.
2. Weigh the sample into the Q-Cup.
3. Insert a Q-Screen into the Q-Cup using the Q-Screen tool.

Notes

The second cycle in the heating program is a "Rinse Only" cycle.

Sorbents

N/A

Solvents

Acetonitrile w/ 1.0% Acetic Acid (v/v)

Sample Weight

≤ 2 g

Equipment

EDGE
50 mL centrifuge tubes
Q-Screen

Q-Disc

S1

Heating Program

Cycle	Top Add (mL)	Bottom Add (mL)	Rinse (mL)	Temp (°C)	Hold (mm:ss)
1	25	0	5	40	3:00
3	0	0	5	---	--:--

Note: Temperature and hold times may vary depending on the sample and analytes of interest.

Wash Program

Cycle	Solvent	Volume (mL)	Temp (°C)	Hold (mm:ss)
1	Acetonitrile w/ 1.0% Acetic Acid (v/v)	10	40	0:03

General Guidelines

- a) This procedure is a reference point for sample extraction using a CEM system and may need to be modified or changed to obtain required results on your sample or analytes of interest.
- b) Wear hand, eye, and body protection when handling organic solvents.
- c) Any of CEM's collection vials/centrifuge tubes in the correct size for the rack owned may be used.
- d) Verify needed solvents are loaded onto the system with sufficient volume. Load the rack containing sample(s) into the EDGE. Select the method and position to load method. Press play and add any any sample ID's, etc. as needed.
- e) Bring to volume or evaporate as necessary for analysis.

Extraction of Pesticides from Cranberries

Procedure

1. Homogenize, mill, or cryomill the sample. The S1 Q-Disc is a preassembled sandwich of the G1 Q-Disc between two C9 Q-Discs. Place entire sandwich, excluding the blue separator, into the bottom of the Q-Cup, and assemble the Q-Cup.
2. Weigh the sorbents into the Q-Cup. Spread evenly across the sample by gentle tapping.
3. Weigh the sample into the Q-Cup layering the sample on top of the sorbent. Gently mix the sample and sorbent mixture with a glass stir rod, ensuring that the Q-Disc is not damaged.
4. Insert a Q-Screen into the Q-Cup using the Q-Screen tool.

Notes

The second cycle in the heating program is a "Rinse Only" cycle.
Add 1:00 bubbling to Cycle 1 by selecting the pencil icon in the Cycles tab.

Sorbents

Q-Matrix Hydra™ (2.5 g)
PSA (0.5 g)

Solvents

Acetonitrile w/ 1.0% Acetic Acid (v/v)

Sample Weight

≤ 10 g

Equipment

EDGE
50 mL centrifuge tubes
Q-Screen

Q-Disc

S1

Heating Program

Cycle	Top Add (mL)	Bottom Add (mL)	Rinse (mL)	Temp (°C)	Hold (mm:ss)
1	25	0	5	40	3:00
2	0	0	10	---	--:--

Note: Temperature and hold times may vary depending on the sample and analytes of interest.

Wash Program

Cycle	Solvent	Volume (mL)	Temp (°C)	Hold (mm:ss)
1	Acetonitrile w/ 1.0% Acetic Acid (v/v)	10	40	0:03

General Guidelines

- a) This procedure is a reference point for sample extraction using a CEM system and may need to be modified or changed to obtain required results on your sample or analytes of interest.
- b) Wear hand, eye, and body protection when handling organic solvents.
- c) Any of CEM's collection vials/centrifuge tubes in the correct size for the rack owned may be used.
- d) Verify needed solvents are loaded onto the system with sufficient volume. Load the rack containing sample(s) into the EDGE. Select the method and position to load method. Press play and add any any sample ID's, etc. as needed.
- e) Bring to volume or evaporate as necessary for analysis.

Extraction of Pesticides from Curcumin

Procedure

1. Homogenize, mill, or cryomill the sample. The S1 Q-Disc is a preassembled sandwich of the G1 Q-Disc between two C9 Q-Discs. Place entire sandwich, excluding the blue separator, into the bottom of the Q-Cup, and assemble the Q-Cup.
2. Weigh the sample into the Q-Cup.
3. Insert a Q-Screen into the Q-Cup using the Q-Screen tool.

Notes

Sorbents

N/A

Solvents

Acetonitrile w/ 1.0% Acetic Acid (v/v)
Methanol

Sample Weight

≤ 1 g

Equipment

EDGE
50 mL centrifuge tubes
Q-Screen

Q-Disc

S1

Heating Program

Cycle	Top Add (mL)	Bottom Add (mL)	Rinse (mL)	Temp (°C)	Hold (mm:ss)
1	15	0	10	40	3:00

Note: Temperature and hold times may vary depending on the sample and analytes of interest.

Wash Program

Cycle	Solvent	Volume (mL)	Temp (°C)	Hold (mm:ss)
1	Methanol	40	120	0:30
2	Methanol	40	100	0:30
3	Acetonitrile w/ 1.0% Acetic Acid (v/v)	40	40	--:--

General Guidelines

- a) This procedure is a reference point for sample extraction using a CEM system and may need to be modified or changed to obtain required results on your sample or analytes of interest.
- b) Wear hand, eye, and body protection when handling organic solvents.
- c) Any of CEM's collection vials/centrifuge tubes in the correct size for the rack owned may be used.
- d) Verify needed solvents are loaded onto the system with sufficient volume. Load the rack containing sample(s) into the EDGE. Select the method and position to load method. Press play and add any any sample ID's, etc. as needed.
- e) Bring to volume or evaporate as necessary for analysis.

Extraction of Pesticides from Foods (Wet)

Procedure

1. Homogenize, mill, or cryomill the sample. The S1 Q-Disc is a preassembled sandwich of the G1 Q-Disc between two C9 Q-Discs. Place entire sandwich, excluding the blue separator, into the bottom of the Q-Cup, and assemble the Q-Cup.
2. Weigh the sorbents into the Q-Cup. Spread evenly across the sample by gentle tapping.
3. Weigh the sample into the Q-Cup layering the sample on top of the sorbent. Mixing is not required.
3. Insert a Q-Screen into the Q-Cup using the Q-Screen tool.

Notes

The second cycle in the heating program is a "Rinse Only" cycle.
Add 2:00 bubbling to Cycle 1 by selecting the pencil icon in the Cycles tab.

Sorbents

Q-Matrix Hydra™ (2.5 g)

Solvents

Acetonitrile w/ 1.0% Acetic Acid (v/v)

Sample Weight

≤ 5 g

Equipment

EDGE
50 mL centrifuge tubes
Q-Screen

Q-Disc

S1

Heating Program

Cycle	Top Add (mL)	Bottom Add (mL)	Rinse (mL)	Temp (°C)	Hold (mm:ss)
1	25	0	5	40	1:00
2	0	0	10	---	--:--

Note: Temperature and hold times may vary depending on the sample and analytes of interest.

Wash Program

Cycle	Solvent	Volume (mL)	Temp (°C)	Hold (mm:ss)
1	Acetonitrile w/ 1.0% Acetic Acid (v/v)	10	40	0:03

General Guidelines

- a) This procedure is a reference point for sample extraction using a CEM system and may need to be modified or changed to obtain required results on your sample or analytes of interest.
- b) Wear hand, eye, and body protection when handling organic solvents.
- c) Any of CEM's collection vials/centrifuge tubes in the correct size for the rack owned may be used.
- d) Verify needed solvents are loaded onto the system with sufficient volume. Load the rack containing sample(s) into the EDGE. Select the method and position to load method. Press play and add any any sample ID's, etc. as needed.
- e) Bring to volume or evaporate as necessary for analysis.

Extraction of Pesticides from Norbixin

Procedure

1. Homogenize, mill, or cryomill the sample. The S1 Q-Disc is a preassembled sandwich of the G1 Q-Disc between two C9 Q-Discs. Place entire sandwich, excluding the blue separator, into the bottom of the Q-Cup, and assemble the Q-Cup.
2. Weigh the sample into the Q-Cup.
3. Insert a Q-Screen into the Q-Cup using the Q-Screen tool.

Notes

Sorbents

Solvents

Acetonitrile w/ 1.0% Acetic Acid (v/v)
Acetone

Sample Weight

≤ 1 g

Equipment

EDGE
50 mL centrifuge tubes
Q-Screen

Q-Disc

S1

Heating Program

Cycle	Top Add (mL)	Bottom Add (mL)	Rinse (mL)	Temp (°C)	Hold (mm:ss)
1	15	0	10	40	3:00

Note: Temperature and hold times may vary depending on the sample and analytes of interest.

Wash Program

Cycle	Solvent	Volume (mL)	Temp (°C)	Hold (mm:ss)
1	Acetone	40	120	0:30
2	Acetone	40	100	0:30
3	Acetonitrile w/ 1.0% Acetic Acid (v/v)	40	40	--:--

General Guidelines

- a) This procedure is a reference point for sample extraction using a CEM system and may need to be modified or changed to obtain required results on your sample or analytes of interest.
- b) Wear hand, eye, and body protection when handling organic solvents.
- c) Any of CEM's collection vials/centrifuge tubes in the correct size for the rack owned may be used.
- d) Verify needed solvents are loaded onto the system with sufficient volume. Load the rack containing sample(s) into the EDGE. Select the method and position to load method. Press play and add any any sample ID's, etc. as needed.
- e) Bring to volume or evaporate as necessary for analysis.

Extraction of Pesticides from Oregano

Procedure

1. Homogenize, mill, or cryomill the sample. The S1 Q-Disc is a preassembled sandwich of the G1 Q-Disc between two C9 Q-Discs. Place entire sandwich, excluding the blue separator, into the bottom of the Q-Cup, and assemble the Q-Cup.
2. Weigh the sample into the Q-Cup.
3. Insert a Q-Screen into the Q-Cup using the Q-Screen tool.

Notes

The second cycle in the heating program is a "Rinse Only" cycle.

Sorbents

N/A

Solvents

Acetonitrile w/ 1.0% Acetic Acid (v/v)

Sample Weight

≤ 2 g

Equipment

EDGE
50 mL centrifuge tubes
Q-Screen

Q-Disc

S1

Heating Program

Cycle	Top Add (mL)	Bottom Add (mL)	Rinse (mL)	Temp (°C)	Hold (mm:ss)
1	25	0	5	40	3:00
2	0	0	5	---	--:--

Note: Temperature and hold times may vary depending on the sample and analytes of interest.

Wash Program

Cycle	Solvent	Volume (mL)	Temp (°C)	Hold (mm:ss)
1	Acetonitrile w/ 1.0% Acetic Acid (v/v)	10	40	0:03

General Guidelines

- a) This procedure is a reference point for sample extraction using a CEM system and may need to be modified or changed to obtain required results on your sample or analytes of interest.
- b) Wear hand, eye, and body protection when handling organic solvents.
- c) Any of CEM's collection vials/centrifuge tubes in the correct size for the rack owned may be used.
- d) Verify needed solvents are loaded onto the system with sufficient volume. Load the rack containing sample(s) into the EDGE. Select the method and position to load method. Press play and add any any sample ID's, etc. as needed.
- e) Bring to volume or evaporate as necessary for analysis.

Extraction of Pesticides from Paprika

Procedure

1. Homogenize, mill, or cryomill the sample. The S1 Q-Disc is a preassembled sandwich of the G1 Q-Disc between two C9 Q-Discs. Place entire sandwich, excluding the blue separator, into the bottom of the Q-Cup, and assemble the Q-Cup.
2. Weigh the sample into the Q-Cup.
3. Insert a Q-Screen into the Q-Cup using the Q-Screen tool.

Notes

The second cycle in the heating program is a "Rinse Only" cycle.

Sorbents

N/A

Solvents

Acetonitrile w/ 1.0% Acetic Acid (v/v)

Sample Weight

≤ 2 g

Equipment

Q-Disc

S1

Heating Program

Cycle	Top Add (mL)	Bottom Add (mL)	Rinse (mL)	Temp (°C)	Hold (mm:ss)
1	15	0	0	40	3:00
2	0	0	5	---	--:--

Note: Temperature and hold times may vary depending on the sample and analytes of interest.

Wash Program

Cycle	Solvent	Volume (mL)	Temp (°C)	Hold (mm:ss)
1	Acetonitrile w/ 1.0% Acetic Acid (v/v)	15	40	0:003

General Guidelines

Extraction of Pesticides from Rice

Procedure

1. Homogenize, mill, or cryomill the sample. The S1 Q-Disc is a preassembled sandwich of the G1 Q-Disc between two C9 Q-Discs. Place entire sandwich, excluding the blue separator, into the bottom of the Q-Cup, and assemble the Q-Cup.
2. Weigh the sample into the Q-Cup.
3. Insert a Q-Screen into the Q-Cup using the Q-Screen tool.

Notes

None

Sorbents

N/A

Solvents

Acetonitrile w/ 1.0% Acetic Acid (v/v)

Sample Weight

≤ 2 g

Equipment

EDGE
50 mL centrifuge tubes
Q-Screen

Q-Disc

S1

Heating Program

Cycle	Top Add (mL)	Bottom Add (mL)	Rinse (mL)	Temp (°C)	Hold (mm:ss)
1	25	0	5	40	3:00

Note: Temperature and hold times may vary depending on the sample and analytes of interest.

Wash Program

Cycle	Solvent	Volume (mL)	Temp (°C)	Hold (mm:ss)
1	Acetonitrile w/ 1.0% Acetic Acid (v/v)	10	40	0:03

General Guidelines

- a) This procedure is a reference point for sample extraction using a CEM system and may need to be modified or changed to obtain required results on your sample or analytes of interest.
- b) Wear hand, eye, and body protection when handling organic solvents.
- c) Any of CEM's collection vials/centrifuge tubes in the correct size for the rack owned may be used.
- d) Verify needed solvents are loaded onto the system with sufficient volume. Load the rack containing sample(s) into the EDGE. Select the method and position to load method. Press play and add any any sample ID's, etc. as needed.
- e) Bring to volume or evaporate as necessary for analysis.

Extraction of Pesticides from Salmon

Procedure

1. Homogenize, mill, or cryomill the sample. The S1 Q-Disc is a preassembled sandwich of the G1 Q-Disc between two C9 Q-Discs. Place entire sandwich, excluding the blue separator, into the bottom of the Q-Cup, and assemble the Q-Cup.
2. Weigh the sorbents into the Q-Cup. Spread evenly across the sample by gentle tapping.
3. Weigh the sample into the Q-Cup layering the sample on top of the sorbent. Gently mix the sample and sorbent mixture with a glass stir rod, ensuring that the Q-Disc is not damaged.
4. Insert a Q-Screen into the Q-Cup using the Q-Screen tool.

Notes

The second cycle in the heating program is a "Rinse Only" cycle.
Add 1:00 bubbling to Cycle 1 by selecting the pencil icon in the Cycles tab.

Sorbents

Q-Matrix Hydra™ (2.5 g)
Sodium Citrate (0.25 g)
Sodium Bicarbonate (0.25 g)

Solvents

Acetonitrile w/ 1.0% Acetic Acid (v/v)

Sample Weight

≤ 10 g

Equipment

EDGE
50 mL centrifuge tubes
Q-Screen

Q-Disc

S1

Heating Program

Cycle	Top Add (mL)	Bottom Add (mL)	Rinse (mL)	Temp (°C)	Hold (mm:ss)
1	25	0	5	40	3:00
2	0	0	10	---	--:--

Note: Temperature and hold times may vary depending on the sample and analytes of interest.

Wash Program

Cycle	Solvent	Volume (mL)	Temp (°C)	Hold (mm:ss)
1	Acetonitrile w/ 1.0% Acetic Acid (v/v)	10	40	0:03

General Guidelines

- a) This procedure is a reference point for sample extraction using a CEM system and may need to be modified or changed to obtain required results on your sample or analytes of interest.
- b) Wear hand, eye, and body protection when handling organic solvents.
- c) Any of CEM's collection vials/centrifuge tubes in the correct size for the rack owned may be used.
- d) Verify needed solvents are loaded onto the system with sufficient volume. Load the rack containing sample(s) into the EDGE. Select the method and position to load method. Press play and add any any sample ID's, etc. as needed.
- e) Bring to volume or evaporate as necessary for analysis.

Extraction of Pesticides from Sodium Copper Chlorophyllin Powder

Procedure

1. Homogenize, mill, or cryomill the sample. The S1 Q-Disc is a preassembled sandwich of the G1 Q-Disc between two C9 Q-Discs. Place entire sandwich, excluding the blue separator, into the bottom of the Q-Cup, and assemble the Q-Cup.
2. Weigh the sample into the Q-Cup.
3. Insert a Q-Screen into the Q-Cup using the Q-Screen tool.

Notes

Sorbents

N/A

Solvents

Acetonitrile w/ 1.0% Acetic Acid (v/v)

Sample Weight

≤ 1 g

Equipment

EDGE
50 mL centrifuge tubes
Q-Screen

Q-Disc

S1

Heating Program

Cycle	Top Add (mL)	Bottom Add (mL)	Rinse (mL)	Temp (°C)	Hold (mm:ss)
1	15	0	10	40	3:00

Note: Temperature and hold times may vary depending on the sample and analytes of interest.

Wash Program

Cycle	Solvent	Volume (mL)	Temp (°C)	Hold (mm:ss)
1	Methanol	40	120	0:30
2	Methanol	40	100	0:30
3	Acetonitrile w/ 1.0% Acetic Acid (v/v)	40	40	--:--

General Guidelines

- a) This procedure is a reference point for sample extraction using a CEM system and may need to be modified or changed to obtain required results on your sample or analytes of interest.
- b) Wear hand, eye, and body protection when handling organic solvents.
- c) Any of CEM's collection vials/centrifuge tubes in the correct size for the rack owned may be used.
- d) Verify needed solvents are loaded onto the system with sufficient volume. Load the rack containing sample(s) into the EDGE. Select the method and position to load method. Press play and add any any sample ID's, etc. as needed.
- e) Bring to volume or evaporate as necessary for analysis.

Extraction of Pesticides from Strawberries

Procedure

1. Homogenize, mill, or cryomill the sample. The S1 Q-Disc is a preassembled sandwich of the G1 Q-Disc between two C9 Q-Discs. Place entire sandwich, excluding the blue separator, into the bottom of the Q-Cup, and assemble the Q-Cup.
2. Weigh the sorbents into the Q-Cup. Spread evenly across the sample by gentle tapping.
3. Weigh the sample into the Q-Cup layering the sample on top of the sorbent. Mixing is not required.
4. Insert a Q-Screen into the Q-Cup using the Q-Screen tool.

Notes

The second cycle in the heating program is a "Rinse Only" cycle.
Add 2:00 bubbling to the method by selecting the pencil icon in the Cycles tab.

Sorbents

Q-Matrix Hydra™ (2.5 g)

Solvents

Acetonitrile w/ 1.0% Acetic Acid (v/v)

Sample Weight

≤ 10 g

Equipment

EDGE
50 mL centrifuge tubes
Q-Screen

Q-Disc

S1

Heating Program

Cycle	Top Add (mL)	Bottom Add (mL)	Rinse (mL)	Temp (°C)	Hold (mm:ss)
1	15	0	5	40	4:00
2	0	0	10	---	--:--

Note: Temperature and hold times may vary depending on the sample and analytes of interest.

Wash Program

Cycle	Solvent	Volume (mL)	Temp (°C)	Hold (mm:ss)
1	Acetonitrile w/ 1.0% Acetic Acid (v/v)	10	40	0:03

General Guidelines

- a) This procedure is a reference point for sample extraction using a CEM system and may need to be modified or changed to obtain required results on your sample or analytes of interest.
- b) Wear hand, eye, and body protection when handling organic solvents.
- c) Any of CEM's collection vials/centrifuge tubes in the correct size for the rack owned may be used.
- d) Verify needed solvents are loaded onto the system with sufficient volume. Load the rack containing sample(s) into the EDGE. Select the method and position to load method. Press play and add any any sample ID's, etc. as needed.
- e) Bring to volume or evaporate as necessary for analysis.

Extraction of PFAS from Carrots

Procedure

1. Homogenize, mill, or cryomill the sample. The S1 Q-Disc is a preassembled sandwich of the G1 Q-Disc between two C9 Q-Discs. Place entire sandwich, excluding the blue separator, into the bottom of the Q-Cup, and assemble the Q-Cup.
2. Weigh the sorbents into the Q-Cup. Spread evenly across the sample by gentle tapping.
3. Weigh the sample into the Q-Cup, layering the sample on top of the sorbent.

Notes

Add 2:00 bubbling to each cycle of the method by selecting the pencil icon in the Cycles tab.

Sorbents

Sodium Sulfate (6 g)
Sodium Chloride (1.75 g)

Solvents

Methanol/Water (80:20) w/ 0.3% ammonium hydroxide (v/v)
Methanol

Sample Weight

5 g

Equipment

50 mL centrifuge tubes

Q-Disc

S1

Heating Program

Cycle	Top Add (mL)	Bottom Add (mL)	Rinse (mL)	Temp (°C)	Hold (mm:ss)
1	20	0	0	65	2:00
2	20	0	0	65	2:00

Note: Temperature and hold times may vary depending on the sample and analytes of interest.

Wash Program

Cycle	Solvent	Volume (mL)	Temp (°C)	Hold (mm:ss)
1	Methanol	30	65	0:30
2	Methanol	30	65	0:30
3	Methanol/Water (80:20) w/ 0.3% ammonium	10	65	0:30

General Guidelines

- a) This procedure is a reference point for sample extraction using a CEM system and may need to be modified or changed to obtain required results on your sample or analytes of interest.
- b) Wear hand, eye, and body protection when handling organic solvents.
- c) Any of CEM's collection vials/centrifuge tubes in the correct size for the rack owned may be used.
- d) Verify needed solvents are loaded onto the system with sufficient volume. Load the rack containing sample(s) into the EDGE. Select the method and position to load method. Press play and add any any sample ID's, etc. as needed.
- e) Bring to volume or evaporate as necessary for analysis.

Extraction of PFAS from Cranberries

Procedure

1. Homogenize, mill, or cryomill the sample. The S1 Q-Disc is a preassembled sandwich of the G1 Q-Disc between two C9 Q-Discs. Place entire sandwich, excluding the blue separator, into the bottom of the Q-Cup, and assemble the Q-Cup.
2. Weigh the sorbents into the Q-Cup. Spread evenly across the sample by gentle tapping.
3. Weigh the sample into the Q-Cup, layering the sample on top of the sorbent.

Notes

Add 2:00 bubbling to each cycle of the method by selecting the pencil icon in the Cycles tab.

Sorbents

Sodium Sulfate (6 g)
Sodium Chloride (1.75 g)

Solvents

Methanol/Water (80:20) w/ 0.3% ammonium hydroxide (v/v)
Methanol

Sample Weight

5 g

Equipment

50 mL centrifuge tubes

Q-Disc

S1

Heating Program

Cycle	Top Add (mL)	Bottom Add (mL)	Rinse (mL)	Temp (°C)	Hold (mm:ss)
1	20	0	0	65	2:00
2	20	0	0	65	2:00

Note: Temperature and hold times may vary depending on the sample and analytes of interest.

Wash Program

Cycle	Solvent	Volume (mL)	Temp (°C)	Hold (mm:ss)
1	Methanol	30	65	0:30
2	Methanol	30	65	0:30
3	Methanol/Water (80:20) w/ 0.3% ammonium	10	65	0:30

General Guidelines

- a) This procedure is a reference point for sample extraction using a CEM system and may need to be modified or changed to obtain required results on your sample or analytes of interest.
- b) Wear hand, eye, and body protection when handling organic solvents.
- c) Any of CEM's collection vials/centrifuge tubes in the correct size for the rack owned may be used.
- d) Verify needed solvents are loaded onto the system with sufficient volume. Load the rack containing sample(s) into the EDGE. Select the method and position to load method. Press play and add any any sample ID's, etc. as needed.
- e) Bring to volume or evaporate as necessary for analysis.

Extraction of PFAS from Lettuce

Procedure

1. Homogenize, mill, or cryomill the sample. The S1 Q-Disc is a preassembled sandwich of the G1 Q-Disc between two C9 Q-Discs. Place entire sandwich, excluding the blue separator, into the bottom of the Q-Cup, and assemble the Q-Cup.
2. Weigh the sorbents into the Q-Cup. Spread evenly across the sample by gentle tapping.
3. Weigh the sample into the Q-Cup layering the sample on top of the sorbetn.

Notes

Add 2:00 bubbling to each cycle of the method by selecting the pencil icon in the Cycles tab.

Sorbents

Sodium Sulfate (6 g)
Sodium Chloride (1.75 g)

Solvents

Methanol/Water (80:20) w/ 0.3% ammonium hydroxide (v/v)
Methanol

Sample Weight

5 g

Equipment

50 mL centrifuge tubes

Q-Disc

S1

Heating Program

Cycle	Top Add (mL)	Bottom Add (mL)	Rinse (mL)	Temp (°C)	Hold (mm:ss)
1	20	0	0	65	2:00
2	20	0	0	65	2:00

Note: Temperature and hold times may vary depending on the sample and analytes of interest.

Wash Program

Cycle	Solvent	Volume (mL)	Temp (°C)	Hold (mm:ss)
1	Methanol	30	65	0:30
2	Methanol	30	65	0:30
3	Methanol/Water (80:20) w/ 0.3% ammoniur	10	65	0:03

General Guidelines

- a) This procedure is a reference point for sample extraction using a CEM system and may need to be modified or changed to obtain required results on your sample or analytes of interest.
- b) Wear hand, eye, and body protection when handling organic solvents.
- c) Any of CEM's collection vials/centrifuge tubes in the correct size for the rack owned may be used.
- d) Verify needed solvents are loaded onto the system with sufficient volume. Load the rack containing sample(s) into the EDGE. Select the method and position to load method. Press play and add any any sample ID's, etc. as needed.
- e) Bring to volume or evaporate as necessary for analysis.

Extraction of PFAS from Potatoes

Procedure

1. Homogenize, mill, or cryomill the sample. The S1 Q-Disc is a preassembled sandwich of the G1 Q-Disc between two C9 Q-Discs. Place entire sandwich, excluding the blue separator, into the bottom of the Q-Cup, and assemble the Q-Cup.
2. Weigh the sorbents into the Q-Cup. Spread evenly across the sample by gentle tapping.
3. Weigh the sample into the Q-Cup, layering the sample on top of the sorbent.

Notes

Add 2:00 bubbling to each cycle of the method by selecting the pencil icon in the Cycles tab.

Sorbents

Sodium Sulfate (6 g)
Sodium Chloride (1.75 g)

Solvents

Methanol/Water (80:20) w/ 0.3% ammonium hydroxide (v/v)
Methanol

Sample Weight

5 g

Equipment

50 mL centrifuge tubes

Q-Disc

S1

Heating Program

Cycle	Top Add (mL)	Bottom Add (mL)	Rinse (mL)	Temp (°C)	Hold (mm:ss)
1	20	0	0	65	2:00
2	20	0	0	65	2:00

Note: Temperature and hold times may vary depending on the sample and analytes of interest.

Wash Program

Cycle	Solvent	Volume (mL)	Temp (°C)	Hold (mm:ss)
1	Methanol	30	65	0:30
2	Methanol	30	65	0:30
3	Methanol/Water (80:20) w/ 0.3% ammonium	10	65	0:30

General Guidelines

- a) This procedure is a reference point for sample extraction using a CEM system and may need to be modified or changed to obtain required results on your sample or analytes of interest.
- b) Wear hand, eye, and body protection when handling organic solvents.
- c) Any of CEM's collection vials/centrifuge tubes in the correct size for the rack owned may be used.
- d) Verify needed solvents are loaded onto the system with sufficient volume. Load the rack containing sample(s) into the EDGE. Select the method and position to load method. Press play and add any any sample ID's, etc. as needed.
- e) Bring to volume or evaporate as necessary for analysis.

Extraction of PFAS from Strawberries

Procedure

1. Homogenize, mill, or cryomill the sample. The S1 Q-Disc is a preassembled sandwich of the G1 Q-Disc between two C9 Q-Discs. Place entire sandwich, excluding the blue separator, into the bottom of the Q-Cup, and assemble the Q-Cup.
2. Weigh the sorbents into the Q-Cup. Spread evenly across the sample by gentle tapping.
3. Weigh the sample into the Q-Cup, layering the sample on top of the sorbent.

Notes

Add 2:00 bubbling to each cycle of the method by selecting the pencil icon in the Cycles tab.

Sorbents

Sodium Sulfate (6 g)
Sodium Chloride (1.75 g)

Solvents

Methanol/Water (80:20) w/ 0.3% ammonium hydroxide (v/v)
Methanol

Sample Weight

5 g

Equipment

50 mL centrifuge tubes

Q-Disc

S1

Heating Program

Cycle	Top Add (mL)	Bottom Add (mL)	Rinse (mL)	Temp (°C)	Hold (mm:ss)
1	20	0	0	65	2:00
2	20	0	0	65	2:00

Note: Temperature and hold times may vary depending on the sample and analytes of interest.

Wash Program

Cycle	Solvent	Volume (mL)	Temp (°C)	Hold (mm:ss)
1	Methanol	30	65	0:30
2	Methanol	30	65	0:30
3	Methanol/Water (80:20) w/ 0.3% ammonium	10	65	0:30

General Guidelines

- a) This procedure is a reference point for sample extraction using a CEM system and may need to be modified or changed to obtain required results on your sample or analytes of interest.
- b) Wear hand, eye, and body protection when handling organic solvents.
- c) Any of CEM's collection vials/centrifuge tubes in the correct size for the rack owned may be used.
- d) Verify needed solvents are loaded onto the system with sufficient volume. Load the rack containing sample(s) into the EDGE. Select the method and position to load method. Press play and add any any sample ID's, etc. as needed.
- e) Bring to volume or evaporate as necessary for analysis.

Extraction of Polyphenols from Cacao

Procedure

1. Homogenize, mill, or cryomill the sample. The S1 Q-Disc is a preassembled sandwich of the G1 Q-Disc between two C9 Q-Discs. Place entire sandwich, excluding the blue separator, into the bottom of the Q-Cup, and assemble the Q-Cup.
2. Weigh the sample into the Q-Cup.
3. Insert a Q-Screen into the Q-Cup using the Q-Screen tool.

Notes

None

Sorbents

N/A

Solvents

Methanol/Water (1:1)

Sample Weight

≤ 0.5 g

Equipment

EDGE
Q-Screen
40 mL collection vials

Q-Disc

S1

Heating Program

Cycle	Top Add (mL)	Bottom Add (mL)	Rinse (mL)	Temp (°C)	Hold (mm:ss)
1	20	10	10	80	10:00

Note: Temperature and hold times may vary depending on the sample and analytes of interest.

Wash Program

Cycle	Solvent	Volume (mL)	Temp (°C)	Hold (mm:ss)
1	Methanol/Water (1:1)	15	80	0:15
2	Methanol/Water (1:1)	15	---	---:--

General Guidelines

- a) This procedure is a reference point for sample extraction using a CEM system and may need to be modified or changed to obtain required results on your sample or analytes of interest.
- b) Wear hand, eye, and body protection when handling organic solvents.
- c) Any of CEM's collection vials/centrifuge tubes in the correct size for the rack owned may be used.
- d) Verify needed solvents are loaded onto the system with sufficient volume. Load the rack containing sample(s) into the EDGE. Select the method and position to load method. Press play and add any any sample ID's, etc. as needed.
- e) Bring to volume or evaporate as necessary for analysis.

Extraction of Solubles from Tobacco

Procedure

1. The S1 Q-Disc is a preassembled sandwich of the G1 Q-Disc between two C9 Q-Discs. Place entire sandwich, excluding the blue separator, into the bottom of the Q-Cup, and assemble the Q-Cup.
2. Weigh the sample into the Q-Cup.
3. Insert a Q-Screen into the Q-Cup using the Q-Screen tool.

Notes

None

Sorbents

N/A

Solvents

Water

Sample Weight

5 g

Equipment

EDGE
40 mL collection vials - clear
Q-Screen

Q-Disc

S1

Heating Program

Cycle	Top Add (mL)	Bottom Add (mL)	Rinse (mL)	Temp (°C)	Hold (mm:ss)
1	30	---	---	100	3:00

Note: Temperature and hold times may vary depending on the sample and analytes of interest.

Wash Program

Cycle	Solvent	Volume (mL)	Temp (°C)	Hold (mm:ss)
1	Water	30	100	0:15

General Guidelines

- a) This procedure is a reference point for sample extraction using a CEM system and may need to be modified or changed to obtain required results on your sample or analytes of interest.
- b) Wear hand, eye, and body protection when handling organic solvents.
- c) Any of CEM's collection vials/centrifuge tubes in the correct size for the rack owned may be used.
- d) Verify needed solvents are loaded onto the system with sufficient volume. Load the rack containing sample(s) into the EDGE. Select the method and position to load method. Press play and add any any sample ID's, etc. as needed.
- e) Bring to volume or evaporate as necessary for analysis.

Cannabis

Extraction of Cannabinoids from Cannabis/Hemp Plant

Procedure

1. Homogenize, mill, or cryomill the sample. The S1 Q-Disc is a preassembled sandwich of the G1 Q-Disc between two C9 Q-Discs. Place entire sandwich, excluding the blue separator, into the bottom of the Q-Cup, and assemble the Q-Cup.
2. Weigh the sample into the Q-Cup.
3. Insert a Q-Screen into the Q-Cup using the Q-Screen tool.

Notes

Possessing, using, distributing, or selling marijuana or marijuana-based products constitute federal crimes in the United States, even where a state law decriminalizes or legalizes such activities. CEM Corporation produces instruments that are intended for use in testing laboratories and applications only where such use is permitted under applicable state/country law.

Sorbents

N/A

Solvents

Options:
2-Propanol (IPA)
Methanol

Sample Weight

≤ 0.5 g

Equipment

EDGE
50 mL centrifuge tubes
Q-Screen

Q-Disc

S1

Heating Program

Cycle	Top Add (mL)	Bottom Add (mL)	Rinse (mL)	Temp (°C)	Hold (mm:ss)
1	15	0	5	45	5:00

Note: Temperature and hold times may vary depending on the sample and analytes of interest.

Wash Program

Cycle	Solvent	Volume (mL)	Temp (°C)	Hold (mm:ss)
1	2-Propanol (IPA)	20	80	0:05
2	Methanol	10	---	---:--

General Guidelines

- a) This procedure is a reference point for sample extraction using a CEM system and may need to be modified or changed to obtain required results on your sample or analytes of interest.
- b) Wear hand, eye, and body protection when handling organic solvents.
- c) Any of CEM's collection vials/centrifuge tubes in the correct size for the rack owned may be used.
- d) Verify needed solvents are loaded onto the system with sufficient volume. Load the rack containing sample(s) into the EDGE. Select the method and position to load method. Press play and add any any sample ID's, etc. as needed.
- e) Bring to volume or evaporate as necessary for analysis.

Extraction of Pesticides from Cannabis Edibles

Procedure

1. Homogenize, mill, or cryomill the sample. The S1 Q-Disc is a preassembled sandwich of the G1 Q-Disc between two C9 Q-Discs. Place entire sandwich, excluding the blue separator, into the bottom of the Q-Cup, and assemble the Q-Cup.
2. Weigh the sample into the Q-Cup.
3. Insert a Q-Screen into the Q-Cup using the Q-Screen tool.

Notes

Possessing, using, distributing, or selling marijuana or marijuana-based products constitute federal crimes in the United States, even where a state law decriminalizes or legalizes such activities. CEM Corporation produces instruments that are intended for use in testing laboratories and applications only where such use is permitted under applicable state/country law.

Sorbents

N/A

Solvents

Acetonitrile w/ 1.0% Acetic Acid (v/v)

Sample Weight

0.3 g

Equipment

EDGE
50 mL centrifuge tubes
Q-Screen

Q-Disc

S1

Heating Program

Cycle	Top Add (mL)	Bottom Add (mL)	Rinse (mL)	Temp (°C)	Hold (mm:ss)
1	25	0	5	40	2:00

Note: Temperature and hold times may vary depending on the sample and analytes of interest.

Wash Program

Cycle	Solvent	Volume (mL)	Temp (°C)	Hold (mm:ss)
1	Acetonitrile w/ 1.0% Acetic Acid (v/v)	15	40	0:03
2	Acetonitrile w/ 1.0% Acetic Acid (v/v)	15	---	---:--

General Guidelines

- a) This procedure is a reference point for sample extraction using a CEM system and may need to be modified or changed to obtain required results on your sample or analytes of interest.
- b) Wear hand, eye, and body protection when handling organic solvents.
- c) Any of CEM's collection vials/centrifuge tubes in the correct size for the rack owned may be used.
- d) Verify needed solvents are loaded onto the system with sufficient volume. Load the rack containing sample(s) into the EDGE. Select the method and position to load method. Press play and add any any sample ID's, etc. as needed.
- e) Bring to volume or evaporate as necessary for analysis.

Extraction of Pesticides from Cannabis/Hemp Plant

Procedure

1. Homogenize, mill, or cryomill the sample. The S1 Q-Disc is a preassembled sandwich of the G1 Q-Disc between two C9 Q-Discs. Place entire sandwich, excluding the blue separator, into the bottom of the Q-Cup, and assemble the Q-Cup.
2. Weigh the sample into the Q-Cup.
3. Insert a Q-Screen into the Q-Cup using the Q-Screen tool.

Notes

Possessing, using, distributing, or selling marijuana or marijuana-based products constitute federal crimes in the United States, even where a state law decriminalizes or legalizes such activities. CEM Corporation produces instruments that are intended for use in testing laboratories and applications only where such use is permitted under applicable state/country law.

Sorbents

N/A

Solvents

Acetonitrile w/ 1.0% Acetic Acid (v/v)

Sample Weight

≤ 1.5 g

Equipment

EDGE
50 mL centrifuge tubes
Q-Screen

Q-Disc

S1

Heating Program

Cycle	Top Add (mL)	Bottom Add (mL)	Rinse (mL)	Temp (°C)	Hold (mm:ss)
1	25	0	5	40	2:00

Note: Temperature and hold times may vary depending on the sample and analytes of interest.

Wash Program

Cycle	Solvent	Volume (mL)	Temp (°C)	Hold (mm:ss)
1	Acetonitrile w/ 1.0% Acetic Acid (v/v)	10	40	0:30

General Guidelines

- a) This procedure is a reference point for sample extraction using a CEM system and may need to be modified or changed to obtain required results on your sample or analytes of interest.
- b) Wear hand, eye, and body protection when handling organic solvents.
- c) Any of CEM's collection vials/centrifuge tubes in the correct size for the rack owned may be used.
- d) Verify needed solvents are loaded onto the system with sufficient volume. Load the rack containing sample(s) into the EDGE. Select the method and position to load method. Press play and add any any sample ID's, etc. as needed.
- e) Bring to volume or evaporate as necessary for analysis.

Environmental & Regulatory

Extraction of Diesel and Oils from Soil

Procedure

1. Homogenize, mill, or cryomill the sample. The S1 Q-Disc is a preassembled sandwich of the G1 Q-Disc between two C9 Q-Discs. Place entire sandwich, excluding the blue separator, into the bottom of the Q-Cup, and assemble the Q-Cup.
2. Weigh the sorbents into the Q-Cup. Spread evenly across the sample by gentle tapping.
3. Weigh the sample into the Q-Cup layering the sample on top of the sorbent. Mixing is not required.
4. Insert a Q-Screen into the Q-Cup using the Q-Screen tool.

Notes

None

Sorbents

Diatomaceous Earth (1 g)

Solvents

Dichloromethane

Sample Weight

≤ 30 g

Equipment

EDGE
Q-Screen
60 mL collection vials

Q-Disc

S1

Heating Program

Cycle	Top Add (mL)	Bottom Add (mL)	Rinse (mL)	Temp (°C)	Hold (mm:ss)
1	30	0	0	100	3:00
2	30	0	0	100	3:00

Note: Temperature and hold times may vary depending on the sample and analytes of interest.

Wash Program

Cycle	Solvent	Volume (mL)	Temp (°C)	Hold (mm:ss)
1	Dichloromethane	30	120	0:15
2	Dichloromethane	30	---	--:--

General Guidelines

- a) This procedure is a reference point for sample extraction using a CEM system and may need to be modified or changed to obtain required results on your sample or analytes of interest.
- b) Wear hand, eye, and body protection when handling organic solvents.
- c) Any of CEM's collection vials/centrifuge tubes in the correct size for the rack owned may be used.
- d) Verify needed solvents are loaded onto the system with sufficient volume. Load the rack containing sample(s) into the EDGE. Select the method and position to load method. Press play and add any any sample ID's, etc. as needed.
- e) Bring to volume or evaporate as necessary for analysis.

Extraction of Dioxins From Soil, Loam, or Clay

Procedure

1. Homogenize, mill, or cryomill the sample. The S1 Q-Disc is a preassembled sandwich of the G1 Q-Disc between two C9 Q-Discs. Place entire sandwich, excluding the blue separator, into the bottom of the Q-Cup, and assemble the Q-Cup.
2. Weigh the sample into the Q-Cup.
3. Insert a Q-Screen into the Q-Cup using the Q-Screen tool.

Notes

None

Sorbents

N/A

Solvents

Options:
Dichloromethane
Methyl tert-butyl ether
Toluene

Sample Weight

≤ 10 g

Equipment

EDGE
Q-Screen
60 mL collection vials

Q-Disc

S1

Heating Program

Cycle	Top Add (mL)	Bottom Add (mL)	Rinse (mL)	Temp (°C)	Hold (mm:ss)
1	20	0	0	150	1:00
2	20	0	0	150	1:00
3	20	0	0	150	1:00

Note: Temperature and hold times may vary depending on the sample and analytes of interest.

Wash Program

Cycle	Solvent	Volume (mL)	Temp (°C)	Hold (mm:ss)
1	Extraction Solvent	30	120	0:15
2	Extraction Solvent	30	---	--:--

General Guidelines

- a) This procedure is a reference point for sample extraction using a CEM system and may need to be modified or changed to obtain required results on your sample or analytes of interest.
- b) Wear hand, eye, and body protection when handling organic solvents.
- c) Any of CEM's collection vials/centrifuge tubes in the correct size for the rack owned may be used.
- d) Verify needed solvents are loaded onto the system with sufficient volume. Load the rack containing sample(s) into the EDGE. Select the method and position to load method. Press play and add any any sample ID's, etc. as needed.
- e) Bring to volume or evaporate as necessary for analysis.

Extraction of Organic Compounds from Soils, Clays, Sediments, Sludges, and Waste Solids (EPA 3545A)

Procedure

1. Homogenize, mill, or cryomill the sample. The S1 Q-Disc is a preassembled sandwich of the G1 Q-Disc between two C9 Q-Discs. Place entire sandwich, excluding the blue separator, into the bottom of the Q-Cup, and assemble the Q-Cup.
2. Weigh the sample into the Q-Cup.
3. Add 2 g of Florisil on top of each sample.
4. Insert a Q-Screen into the Q-Cup using the Q-Screen tool.

Notes

None

Sorbents

Florisil

Solvents

Options:
Hexane/Acetone (1:1)
Dichloromethane
Dichloromethane/Acetone (1:1)

Sample Weight

≤ 30 g

Equipment

EDGE
Q-Screen
60 mL collection vials

Q-Disc

S1

Heating Program

Cycle	Top Add (mL)	Bottom Add (mL)	Rinse (mL)	Temp (°C)	Hold (mm:ss)
1	15	0	0	70	0:30
2	15	0	0	70	0:30
3	15	0	0	100	0:30
4	15	0	0	100	0:30

Note: Temperature and hold times may vary depending on the sample and analytes of interest.

Wash Program

Cycle	Solvent	Volume (mL)	Temp (°C)	Hold (mm:ss)
1	Extraction Solvent	30	120	0:30
2	Extraction Solvent	30	---	--:--

General Guidelines

- a) This procedure is a reference point for sample extraction using a CEM system and may need to be modified or changed to obtain required results on your sample or analytes of interest.
- b) Wear hand, eye, and body protection when handling organic solvents.
- c) Any of CEM's collection vials/centrifuge tubes in the correct size for the rack owned may be used.
- d) Verify needed solvents are loaded onto the system with sufficient volume. Load the rack containing sample(s) into the EDGE. Select the method and position to load method. Press play and add any any sample ID's, etc. as needed.
- e) Bring to volume or evaporate as necessary for analysis.

Extraction of PAHs from Soil, Loam, or Clay

Procedure

1. Homogenize, mill, or cryomill the sample. The S1 Q-Disc is a preassembled sandwich of the G1 Q-Disc between two C9 Q-Discs. Place entire sandwich, excluding the blue separator, into the bottom of the Q-Cup, and assemble the Q-Cup.
2. Weigh the sample into the Q-Cup.
3. Add 2 g of Florisil on top of each sample.
4. Insert a Q-Screen into the Q-Cup using the Q-Screen tool without disturbing the Florisil layer.

Notes

If the sample is wet, add sodium sulfate to the sample before adding to the Q-Cup.

Sorbents

Florisil

Solvents

Options:
Hexane/Acetone (1:1)
Dichloromethane
Dichloromethane/Acetone (1:1)

Sample Weight

≤ 30 g

Equipment

EDGE
Q-Screen
60 mL collection vials

Q-Disc

S1

Heating Program

Cycle	Top Add (mL)	Bottom Add (mL)	Rinse (mL)	Temp (°C)	Hold (mm:ss)
1	15	0	0	70	0:30
2	15	0	0	70	0:30
3	15	0	0	100	0:30
4	15	0	0	100	0:30

Note: Temperature and hold times may vary depending on the sample and analytes of interest.

Wash Program

Cycle	Solvent	Volume (mL)	Temp (°C)	Hold (mm:ss)
1	Extraction Solvent	30	120	0:30
2	Extraction Solvent	30	---	---:--

General Guidelines

- a) This procedure is a reference point for sample extraction using a CEM system and may need to be modified or changed to obtain required results on your sample or analytes of interest.
- b) Wear hand, eye, and body protection when handling organic solvents.
- c) Any of CEM's collection vials/centrifuge tubes in the correct size for the rack owned may be used.
- d) Verify needed solvents are loaded onto the system with sufficient volume. Load the rack containing sample(s) into the EDGE. Select the method and position to load method. Press play and add any any sample ID's, etc. as needed.
- e) Bring to volume or evaporate as necessary for analysis.

Extraction of PCBs from Soil, Loam or Clay

Procedure

1. Homogenize, mill, or cryomill the sample. The S1 Q-Disc is a preassembled sandwich of the G1 Q-Disc between two C9 Q-Discs. Place entire sandwich, excluding the blue separator, into the bottom of the Q-Cup, and assemble the Q-Cup.
2. Weigh the sample into the Q-Cup.
3. Insert a Q-Screen into the Q-Cup using the Q-Screen tool.

Notes

Sorbents

N/A

Solvents

Options:
Hexane/Acetone (1:1)
Dichloromethane

Sample Weight

≤ 30 g

Equipment

EDGE
Q-Screen
60 mL collection vials

Q-Disc

S1

Heating Program

Cycle	Top Add (mL)	Bottom Add (mL)	Rinse (mL)	Temp (°C)	Hold (mm:ss)
1	30	0	0	100	3:00
2	30	0	0	100	3:00

Note: Temperature and hold times may vary depending on the sample and analytes of interest.

Wash Program

Cycle	Solvent	Volume (mL)	Temp (°C)	Hold (mm:ss)
1	Dichloromethane	30	120	0:15
2	Extraction Solvent	30	---	--:--

General Guidelines

- a) This procedure is a reference point for sample extraction using a CEM system and may need to be modified or changed to obtain required results on your sample or analytes of interest.
- b) Wear hand, eye, and body protection when handling organic solvents.
- c) Any of CEM's collection vials/centrifuge tubes in the correct size for the rack owned may be used.
- d) Verify needed solvents are loaded onto the system with sufficient volume. Load the rack containing sample(s) into the EDGE. Select the method and position to load method. Press play and add any any sample ID's, etc. as needed.
- e) Bring to volume or evaporate as necessary for analysis.

Extraction of PFAS from Carrots

Procedure

1. Homogenize, mill, or cryomill the sample. The S1 Q-Disc is a preassembled sandwich of the G1 Q-Disc between two C9 Q-Discs. Place entire sandwich, excluding the blue separator, into the bottom of the Q-Cup, and assemble the Q-Cup.
2. Weigh the sorbents into the Q-Cup. Spread evenly across the sample by gentle tapping.
3. Weigh the sample into the Q-Cup, layering the sample on top of the sorbent.

Notes

Add 2:00 bubbling to each cycle of the method by selecting the pencil icon in the Cycles tab.

Sorbents

Sodium Sulfate (6 g)
Sodium Chloride (1.75 g)

Solvents

Methanol/Water (80:20) w/ 0.3% ammonium hydroxide (v/v)
Methanol

Sample Weight

5 g

Equipment

50 mL centrifuge tubes

Q-Disc

S1

Heating Program

Cycle	Top Add (mL)	Bottom Add (mL)	Rinse (mL)	Temp (°C)	Hold (mm:ss)
1	20	0	0	65	2:00
2	20	0	0	65	2:00

Note: Temperature and hold times may vary depending on the sample and analytes of interest.

Wash Program

Cycle	Solvent	Volume (mL)	Temp (°C)	Hold (mm:ss)
1	Methanol	30	65	0:30
2	Methanol	30	65	0:30
3	Methanol/Water (80:20) w/ 0.3% ammonium	10	65	0:30

General Guidelines

- a) This procedure is a reference point for sample extraction using a CEM system and may need to be modified or changed to obtain required results on your sample or analytes of interest.
- b) Wear hand, eye, and body protection when handling organic solvents.
- c) Any of CEM's collection vials/centrifuge tubes in the correct size for the rack owned may be used.
- d) Verify needed solvents are loaded onto the system with sufficient volume. Load the rack containing sample(s) into the EDGE. Select the method and position to load method. Press play and add any any sample ID's, etc. as needed.
- e) Bring to volume or evaporate as necessary for analysis.

Extraction of PFAS from Cranberries

Procedure

1. Homogenize, mill, or cryomill the sample. The S1 Q-Disc is a preassembled sandwich of the G1 Q-Disc between two C9 Q-Discs. Place entire sandwich, excluding the blue separator, into the bottom of the Q-Cup, and assemble the Q-Cup.
2. Weigh the sorbents into the Q-Cup. Spread evenly across the sample by gentle tapping.
3. Weigh the sample into the Q-Cup, layering the sample on top of the sorbent.

Notes

Add 2:00 bubbling to each cycle of the method by selecting the pencil icon in the Cycles tab.

Sorbents

Sodium Sulfate (6 g)
Sodium Chloride (1.75 g)

Solvents

Methanol/Water (80:20) w/ 0.3% ammonium hydroxide (v/v)
Methanol

Sample Weight

5 g

Equipment

50 mL centrifuge tubes

Q-Disc

S1

Heating Program

Cycle	Top Add (mL)	Bottom Add (mL)	Rinse (mL)	Temp (°C)	Hold (mm:ss)
1	20	0	0	65	2:00
2	20	0	0	65	2:00

Note: Temperature and hold times may vary depending on the sample and analytes of interest.

Wash Program

Cycle	Solvent	Volume (mL)	Temp (°C)	Hold (mm:ss)
1	Methanol	30	65	0:30
2	Methanol	30	65	0:30
3	Methanol/Water (80:20) w/ 0.3% ammonium	10	65	0:30

General Guidelines

- a) This procedure is a reference point for sample extraction using a CEM system and may need to be modified or changed to obtain required results on your sample or analytes of interest.
- b) Wear hand, eye, and body protection when handling organic solvents.
- c) Any of CEM's collection vials/centrifuge tubes in the correct size for the rack owned may be used.
- d) Verify needed solvents are loaded onto the system with sufficient volume. Load the rack containing sample(s) into the EDGE. Select the method and position to load method. Press play and add any any sample ID's, etc. as needed.
- e) Bring to volume or evaporate as necessary for analysis.

Extraction of PFAS from Lettuce

Procedure

1. Homogenize, mill, or cryomill the sample. The S1 Q-Disc is a preassembled sandwich of the G1 Q-Disc between two C9 Q-Discs. Place entire sandwich, excluding the blue separator, into the bottom of the Q-Cup, and assemble the Q-Cup.
2. Weigh the sorbents into the Q-Cup. Spread evenly across the sample by gentle tapping.
3. Weigh the sample into the Q-Cup layering the sample on top of the sorbetn.

Notes

Add 2:00 bubbling to each cycle of the method by selecting the pencil icon in the Cycles tab.

Sorbents

Sodium Sulfate (6 g)
Sodium Chloride (1.75 g)

Solvents

Methanol/Water (80:20) w/ 0.3% ammonium hydroxide (v/v)
Methanol

Sample Weight

5 g

Equipment

50 mL centrifuge tubes

Q-Disc

S1

Heating Program

Cycle	Top Add (mL)	Bottom Add (mL)	Rinse (mL)	Temp (°C)	Hold (mm:ss)
1	20	0	0	65	2:00
2	20	0	0	65	2:00

Note: Temperature and hold times may vary depending on the sample and analytes of interest.

Wash Program

Cycle	Solvent	Volume (mL)	Temp (°C)	Hold (mm:ss)
1	Methanol	30	65	0:30
2	Methanol	30	65	0:30
3	Methanol/Water (80:20) w/ 0.3% ammoniur	10	65	0:03

General Guidelines

- a) This procedure is a reference point for sample extraction using a CEM system and may need to be modified or changed to obtain required results on your sample or analytes of interest.
- b) Wear hand, eye, and body protection when handling organic solvents.
- c) Any of CEM's collection vials/centrifuge tubes in the correct size for the rack owned may be used.
- d) Verify needed solvents are loaded onto the system with sufficient volume. Load the rack containing sample(s) into the EDGE. Select the method and position to load method. Press play and add any any sample ID's, etc. as needed.
- e) Bring to volume or evaporate as necessary for analysis.

Extraction of PFAS from Potatoes

Procedure

1. Homogenize, mill, or cryomill the sample. The S1 Q-Disc is a preassembled sandwich of the G1 Q-Disc between two C9 Q-Discs. Place entire sandwich, excluding the blue separator, into the bottom of the Q-Cup, and assemble the Q-Cup.
2. Weigh the sorbents into the Q-Cup. Spread evenly across the sample by gentle tapping.
3. Weigh the sample into the Q-Cup, layering the sample on top of the sorbent.

Notes

Add 2:00 bubbling to each cycle of the method by selecting the pencil icon in the Cycles tab.

Sorbents

Sodium Sulfate (6 g)
Sodium Chloride (1.75 g)

Solvents

Methanol/Water (80:20) w/ 0.3% ammonium hydroxide (v/v)
Methanol

Sample Weight

5 g

Equipment

50 mL centrifuge tubes

Q-Disc

S1

Heating Program

Cycle	Top Add (mL)	Bottom Add (mL)	Rinse (mL)	Temp (°C)	Hold (mm:ss)
1	20	0	0	65	2:00
2	20	0	0	65	2:00

Note: Temperature and hold times may vary depending on the sample and analytes of interest.

Wash Program

Cycle	Solvent	Volume (mL)	Temp (°C)	Hold (mm:ss)
1	Methanol	30	65	0:30
2	Methanol	30	65	0:30
3	Methanol/Water (80:20) w/ 0.3% ammonium	10	65	0:30

General Guidelines

- a) This procedure is a reference point for sample extraction using a CEM system and may need to be modified or changed to obtain required results on your sample or analytes of interest.
- b) Wear hand, eye, and body protection when handling organic solvents.
- c) Any of CEM's collection vials/centrifuge tubes in the correct size for the rack owned may be used.
- d) Verify needed solvents are loaded onto the system with sufficient volume. Load the rack containing sample(s) into the EDGE. Select the method and position to load method. Press play and add any any sample ID's, etc. as needed.
- e) Bring to volume or evaporate as necessary for analysis.

Extraction of PFAS from Soil

Procedure

1. Homogenize, mill, or cryomill the sample. The S1 Q-Disc is a preassembled sandwich of the G1 Q-Disc between two C9 Q-Discs. Place entire sandwich, excluding the blue separator, into the bottom of the Q-Cup and assemble the Q-Cup.
2. Weigh the sample into the Q-Cup.

Notes

None

Sorbents

N/A

Solvents

Methanol/Water (80:20) w/ 0.3% ammonium hydroxide (v/v)
Methanol

Sample Weight

5 g

Equipment

50 mL centrifuge tubes
PFAS EDGE

Q-Disc

S1

Heating Program

Cycle	Top Add (mL)	Bottom Add (mL)	Rinse (mL)	Temp (°C)	Hold (mm:ss)
1	10	0	0	65	3:00
2	10	0	0	65	4:00

Note: Temperature and hold times may vary depending on the sample and analytes of interest.

Wash Program

Cycle	Solvent	Volume (mL)	Temp (°C)	Hold (mm:ss)
1	Methanol	10	50	0:03
2	Methanol:Water (80:20) w/ 0.3% ammoniur	10	---	--:--

General Guidelines

- a) This procedure is a reference point for sample extraction using a CEM system and may need to be modified or changed to obtain required results on your sample or analytes of interest.
- b) Wear hand, eye, and body protection when handling organic solvents.
- c) Any of CEM's collection vials/centrifuge tubes in the correct size for the rack owned may be used.
- d) Verify needed solvents are loaded onto the system with sufficient volume. Load the rack containing sample(s) into the EDGE. Select the method and position to load method. Press play and add any any sample ID's, etc. as needed.
- e) Bring to volume or evaporate as necessary for analysis.

Extraction of PFAS from Strawberries

Procedure

1. Homogenize, mill, or cryomill the sample. The S1 Q-Disc is a preassembled sandwich of the G1 Q-Disc between two C9 Q-Discs. Place entire sandwich, excluding the blue separator, into the bottom of the Q-Cup, and assemble the Q-Cup.
2. Weigh the sorbents into the Q-Cup. Spread evenly across the sample by gentle tapping.
3. Weigh the sample into the Q-Cup, layering the sample on top of the sorbent.

Notes

Add 2:00 bubbling to each cycle of the method by selecting the pencil icon in the Cycles tab.

Sorbents

Sodium Sulfate (6 g)
Sodium Chloride (1.75 g)

Solvents

Methanol/Water (80:20) w/ 0.3% ammonium hydroxide (v/v)
Methanol

Sample Weight

5 g

Equipment

50 mL centrifuge tubes

Q-Disc

S1

Heating Program

Cycle	Top Add (mL)	Bottom Add (mL)	Rinse (mL)	Temp (°C)	Hold (mm:ss)
1	20	0	0	65	2:00
2	20	0	0	65	2:00

Note: Temperature and hold times may vary depending on the sample and analytes of interest.

Wash Program

Cycle	Solvent	Volume (mL)	Temp (°C)	Hold (mm:ss)
1	Methanol	30	65	0:30
2	Methanol	30	65	0:30
3	Methanol/Water (80:20) w/ 0.3% ammonium	10	65	0:30

General Guidelines

- a) This procedure is a reference point for sample extraction using a CEM system and may need to be modified or changed to obtain required results on your sample or analytes of interest.
- b) Wear hand, eye, and body protection when handling organic solvents.
- c) Any of CEM's collection vials/centrifuge tubes in the correct size for the rack owned may be used.
- d) Verify needed solvents are loaded onto the system with sufficient volume. Load the rack containing sample(s) into the EDGE. Select the method and position to load method. Press play and add any any sample ID's, etc. as needed.
- e) Bring to volume or evaporate as necessary for analysis.

Food Testing

Extraction of Cannabinoids from Cannabis/Hemp Plant

Procedure

1. Homogenize, mill, or cryomill the sample. The S1 Q-Disc is a preassembled sandwich of the G1 Q-Disc between two C9 Q-Discs. Place entire sandwich, excluding the blue separator, into the bottom of the Q-Cup, and assemble the Q-Cup.
2. Weigh the sample into the Q-Cup.
3. Insert a Q-Screen into the Q-Cup using the Q-Screen tool.

Notes

Possessing, using, distributing, or selling marijuana or marijuana-based products constitute federal crimes in the United States, even where a state law decriminalizes or legalizes such activities. CEM Corporation produces instruments that are intended for use in testing laboratories and applications only where such use is permitted under applicable state/country law.

Sorbents

N/A

Solvents

Options:
2-Propanol (IPA)
Methanol

Sample Weight

≤ 0.5 g

Equipment

EDGE
50 mL centrifuge tubes
Q-Screen

Q-Disc

S1

Heating Program

Cycle	Top Add (mL)	Bottom Add (mL)	Rinse (mL)	Temp (°C)	Hold (mm:ss)
1	15	0	5	45	5:00

Note: Temperature and hold times may vary depending on the sample and analytes of interest.

Wash Program

Cycle	Solvent	Volume (mL)	Temp (°C)	Hold (mm:ss)
1	2-Propanol (IPA)	20	80	0:05
2	Methanol	10	---	---:--

General Guidelines

- a) This procedure is a reference point for sample extraction using a CEM system and may need to be modified or changed to obtain required results on your sample or analytes of interest.
- b) Wear hand, eye, and body protection when handling organic solvents.
- c) Any of CEM's collection vials/centrifuge tubes in the correct size for the rack owned may be used.
- d) Verify needed solvents are loaded onto the system with sufficient volume. Load the rack containing sample(s) into the EDGE. Select the method and position to load method. Press play and add any any sample ID's, etc. as needed.
- e) Bring to volume or evaporate as necessary for analysis.

Extraction of Dioxins from Feeds/Foods (Wet)

Procedure

1. Homogenize, mill, or cryomill the sample. The S1 Q-Disc is a preassembled sandwich of the G1 Q-Disc between two C9 Q-Discs. Place entire sandwich, excluding the blue separator, into the bottom of the Q-Cup, and assemble the Q-Cup.
2. Weigh the sample into the Q-Cup.
3. Insert a Q-Screen into the Q-Cup using the Q-Screen tool.

Notes

None

Sorbents

N/A

Solvents

Options:
Dichloromethane
Methyl tert-butyl ether
Toluene

Sample Weight

≤ 5 g

Equipment

EDGE
Q-Screen
60 mL collection vials

Q-Disc

S1

Heating Program

Cycle	Top Add (mL)	Bottom Add (mL)	Rinse (mL)	Temp (°C)	Hold (mm:ss)
1	20	0	0	150	1:00
2	20	0	0	150	1:00
3	20	0	0	150	1:00

Note: Temperature and hold times may vary depending on the sample and analytes of interest.

Wash Program

Cycle	Solvent	Volume (mL)	Temp (°C)	Hold (mm:ss)
1	Extraction Solvent	30	150	0:30
2	Extraction Solvent	30	---	--:--

General Guidelines

- a) This procedure is a reference point for sample extraction using a CEM system and may need to be modified or changed to obtain required results on your sample or analytes of interest.
- b) Wear hand, eye, and body protection when handling organic solvents.
- c) Any of CEM's collection vials/centrifuge tubes in the correct size for the rack owned may be used.
- d) Verify needed solvents are loaded onto the system with sufficient volume. Load the rack containing sample(s) into the EDGE. Select the method and position to load method. Press play and add any any sample ID's, etc. as needed.
- e) Bring to volume or evaporate as necessary for analysis.

Extraction of Fat from Baking Products

Procedure

1. The S1 Q-Disc is a preassembled sandwich of the G1 Q-Disc between two C9 Q-Discs. Place entire sandwich, excluding the blue separator, into the bottom of the Q-Cup, and assemble the Q-Cup.
2. Weigh the sample into the Q-Cup.
3. Insert a Q-Screen into the Q-Cup using the Q-Screen tool.

Notes

Sample types: DATEM powder, chocolate product, Nutella, coconut flour, and bread
 This is not an exhaustive list of possible sample types

Sorbents

N/A

Solvents

Petroleum Ether

Sample Weight

≤2 g

Equipment

EDGE
 Q-Screen
 60 mL collection vials

Q-Disc

S1

Heating Program

Cycle	Top Add (mL)	Bottom Add (mL)	Rinse (mL)	Temp (°C)	Hold (mm:ss)
1	30	0	0	140	5:00
2	30	0	0	140	5:00

Note: Temperature and hold times may vary depending on the sample and analytes of interest.

Wash Program

Cycle	Solvent	Volume (mL)	Temp (°C)	Hold (mm:ss)
1	Petroleum Ether	30	30	0:15

General Guidelines

- a) This procedure is a reference point for sample extraction using a CEM system and may need to be modified or changed to obtain required results on your sample or analytes of interest.
- b) Wear hand, eye, and body protection when handling organic solvents.
- c) Any of CEM's collection vials/centrifuge tubes in the correct size for the rack owned may be used.
- d) Verify needed solvents are loaded onto the system with sufficient volume. Load the rack containing sample(s) into the EDGE. Select the method and position to load method. Press play and add any any sample ID's, etc. as needed.
- e) Bring to volume or evaporate as necessary for analysis.

Extraction of Fat from Nut Products

Procedure

1. Homogenize, mill, or cryomill the sample. The S1 Q-Disc, is a preassembled sandwich of the G1 Q-Disc between two C9 Q-Discs. Place entire sandwich, excluding the blue separator, into the bottom of the Q-Cup, and assemble the Q-Cup.
2. Weigh the sample into the Q-Cup.
3. Insert a Q-Screen into the Q-Cup using the Q-Screen tool.

Notes

Sample Types: peanut butter, hazelnut paste brazil nuts, cashews, hazelnuts, peanuts, and pumpkin seeds
This is not an exhaustive list of possible sample types

Sorbents

N/A

Solvents

Petroleum Ether

Sample Weight

≤3 g

Equipment

EDGE
Q-Screen
60 mL collection vials

Q-Disc

S1

Heating Program

Cycle	Top Add (mL)	Bottom Add (mL)	Rinse (mL)	Temp (°C)	Hold (mm:ss)
1	30	0	0	140	5:00
2	30	0	0	140	5:00

Note: Temperature and hold times may vary depending on the sample and analytes of interest.

Wash Program

Cycle	Solvent	Volume (mL)	Temp (°C)	Hold (mm:ss)
1	Petroleum Ether	30	30	0:15

General Guidelines

- a) This procedure is a reference point for sample extraction using a CEM system and may need to be modified or changed to obtain required results on your sample or analytes of interest.
- b) Wear hand, eye, and body protection when handling organic solvents.
- c) Any of CEM's collection vials/centrifuge tubes in the correct size for the rack owned may be used.
- d) Verify needed solvents are loaded onto the system with sufficient volume. Load the rack containing sample(s) into the EDGE. Select the method and position to load method. Press play and add any any sample ID's, etc. as needed.
- e) Bring to volume or evaporate as necessary for analysis.

Extraction of Oil from Coffee Grinds

Procedure

1. Homogenize, mill, or cryomill the sample. The S1 Q-Disc is a preassembled sandwich of the G1 Q-Disc between two C9 Q-Discs. Place entire sandwich, excluding the blue separator, into the bottom of the Q-Cup, and assemble the Q-Cup.
2. Weigh the sample into the Q-Cup.
3. Insert a Q-Screen into the Q-Cup using the Q-Screen tool.

Notes

None

Sorbents

N/A

Solvents

Petroleum Ether

Sample Weight

≤ 6 g

Equipment

EDGE
Q-Screen
40 mL collection vials

Q-Disc

S1

Heating Program

Cycle	Top Add (mL)	Bottom Add (mL)	Rinse (mL)	Temp (°C)	Hold (mm:ss)
1	20	0	0	140	5:00
2	20	0	0	140	5:00

Note: Temperature and hold times may vary depending on the sample and analytes of interest.

Wash Program

Cycle	Solvent	Volume (mL)	Temp (°C)	Hold (mm:ss)
1	Petroleum Ether	20	100	0:10

General Guidelines

- a) This procedure is a reference point for sample extraction using a CEM system and may need to be modified or changed to obtain required results on your sample or analytes of interest.
- b) Wear hand, eye, and body protection when handling organic solvents.
- c) Any of CEM's collection vials/centrifuge tubes in the correct size for the rack owned may be used.
- d) Verify needed solvents are loaded onto the system with sufficient volume. Load the rack containing sample(s) into the EDGE. Select the method and position to load method. Press play and add any any sample ID's, etc. as needed.
- e) Bring to volume or evaporate as necessary for analysis.

Extraction of PAHs from Yerba Mate

Procedure

1. Homogenize, mill, or cryomill the sample. The S1 Q-Disc is a preassembled sandwich of the G1 Q-Disc between two C9 Q-Discs. Place entire sandwich, excluding the blue separator, into the bottom of the Q-Cup, and assemble the Q-Cup.
2. Weigh the sample into the Q-Cup.
3. Insert a Q-Screen into the Q-Cup using the Q-Screen tool.

Notes

None

Sorbents

N/A

Solvents

Options:
Acetone
Dichloromethane
Hexane/Acetone (1:1)

Sample Weight

≤ 0.5 g

Equipment

EDGE
Q-Screen
40 mL collection vials

Q-Disc

S1

Heating Program

Cycle	Top Add (mL)	Bottom Add (mL)	Rinse (mL)	Temp (°C)	Hold (mm:ss)
1	20	0	10	120	1:00

Note: Temperature and hold times may vary depending on the sample and analytes of interest.

Wash Program

Cycle	Solvent	Volume (mL)	Temp (°C)	Hold (mm:ss)
1	Extraction Solvent	15	120	0:30
2	Extraction Solvent	15	---	---:--

General Guidelines

- a) This procedure is a reference point for sample extraction using a CEM system and may need to be modified or changed to obtain required results on your sample or analytes of interest.
- b) Wear hand, eye, and body protection when handling organic solvents.
- c) Any of CEM's collection vials/centrifuge tubes in the correct size for the rack owned may be used.
- d) Verify needed solvents are loaded onto the system with sufficient volume. Load the rack containing sample(s) into the EDGE. Select the method and position to load method. Press play and add any any sample ID's, etc. as needed.
- e) Bring to volume or evaporate as necessary for analysis.

Extraction of Pesticides from Avocados

Procedure

1. Homogenize, mill, or cryomill the sample. The S1 Q-Disc is a preassembled sandwich of the G1 Q-Disc between two C9 Q-Discs. Place entire sandwich, excluding the blue separator, into the bottom of the Q-Cup, and assemble the Q-Cup.
2. Weigh the sorbents into the Q-Cup. Spread evenly across the sample by gentle tapping.
3. Weigh the sample into the Q-Cup layering the sample on top of the sorbent. Gently mix the sample and sorbent mixture with a glass stir rod, ensuring that the Q-Disc is not damaged.
4. Insert a Q-Screen into the Q-Cup using the Q-Screen tool.

Notes

The second cycle in the heating program is a "Rinse Only" cycle.
Add 1:00 bubbling to Cycle 1 by selecting the pencil icon in the Cycles tab.

Sorbents

Q-Matrix Hydra™ (2.5 g)
Sodium Citrate (0.25 g)
Sodium Bicarbonate (0.25 g)

Solvents

Acetonitrile w/ 1.0% Acetic Acid (v/v)

Sample Weight

≤ 10 g

Equipment

EDGE
50 mL centrifuge tubes
Q-Screen

Q-Disc

S1

Heating Program

Cycle	Top Add (mL)	Bottom Add (mL)	Rinse (mL)	Temp (°C)	Hold (mm:ss)
1	25	0	5	40	3:00
2	0	0	10	---	--:--

Note: Temperature and hold times may vary depending on the sample and analytes of interest.

Wash Program

Cycle	Solvent	Volume (mL)	Temp (°C)	Hold (mm:ss)
1	Acetonitrile w/ 1.0% Acetic Acid (v/v)	10	40	0:03

General Guidelines

- a) This procedure is a reference point for sample extraction using a CEM system and may need to be modified or changed to obtain required results on your sample or analytes of interest.
- b) Wear hand, eye, and body protection when handling organic solvents.
- c) Any of CEM's collection vials/centrifuge tubes in the correct size for the rack owned may be used.
- d) Verify needed solvents are loaded onto the system with sufficient volume. Load the rack containing sample(s) into the EDGE. Select the method and position to load method. Press play and add any any sample ID's, etc. as needed.
- e) Bring to volume or evaporate as necessary for analysis.

Extraction of Pesticides from Bixin Powder

Procedure

1. Homogenize, mill, or cryomill the sample. The S1 Q-Disc is a preassembled sandwich of the G1 Q-Disc between two C9 Q-Discs. Place entire sandwich, excluding the blue separator, into the bottom of the Q-Cup, and assemble the Q-Cup.
2. Weigh the sample into the Q-Cup.
3. Insert a Q-Screen into the Q-Cup using the Q-Screen tool.

Notes

Sorbents

Solvents

Acetonitrile w/ 1.0% Acetic Acid (v/v)
Methanol

Sample Weight

≤ 1 g

Equipment

EDGE
50 mL centrifuge tubes
Q-Screen

Q-Disc

S1

Heating Program

Cycle	Top Add (mL)	Bottom Add (mL)	Rinse (mL)	Temp (°C)	Hold (mm:ss)
1	15	0	10	40	3:00

Note: Temperature and hold times may vary depending on the sample and analytes of interest.

Wash Program

Cycle	Solvent	Volume (mL)	Temp (°C)	Hold (mm:ss)
1	Methanol	40	120	0:30
2	Methanol	40	100	0:30
3	Acetonitrile w/ 1.0% Acetic Acid (v/v)	40	40	--:--

General Guidelines

- a) This procedure is a reference point for sample extraction using a CEM system and may need to be modified or changed to obtain required results on your sample or analytes of interest.
- b) Wear hand, eye, and body protection when handling organic solvents.
- c) Any of CEM's collection vials/centrifuge tubes in the correct size for the rack owned may be used.
- d) Verify needed solvents are loaded onto the system with sufficient volume. Load the rack containing sample(s) into the EDGE. Select the method and position to load method. Press play and add any any sample ID's, etc. as needed.
- e) Bring to volume or evaporate as necessary for analysis.

Extraction of Pesticides from Black Pepper

Procedure

1. Homogenize, mill, or cryomill the sample. The S1 Q-Disc is a preassembled sandwich of the G1 Q-Disc between two C9 Q-Discs. Place entire sandwich, excluding the blue separator, into the bottom of the Q-Cup, and assemble the Q-Cup.
2. Weigh the sample into the Q-Cup.
3. Insert a Q-Screen into the Q-Cup using the Q-Screen tool.

Notes

The second cycle in the heating program is a "Rinse Only" cycle.

Sorbents

PSA (150 mg)

Solvents

Acetonitrile w/ 1.0% Acetic Acid (v/v)

Sample Weight

≤ 2 g

Equipment

EDGE
50 mL centrifuge tubes
Q-Screen

Q-Disc

S1

Heating Program

Cycle	Top Add (mL)	Bottom Add (mL)	Rinse (mL)	Temp (°C)	Hold (mm:ss)
1	15	0	0	40	3:00
2	0	0	5	---	--:--

Note: Temperature and hold times may vary depending on the sample and analytes of interest.

Wash Program

Cycle	Solvent	Volume (mL)	Temp (°C)	Hold (mm:ss)
1	Acetonitrile w/ 1.0% Acetic Acid (v/v)	15	40	0:03

General Guidelines

Extraction of Pesticides from Black Tea

Procedure

1. Homogenize, mill, or cryomill the sample. The S1 Q-Disc is a preassembled sandwich of the G1 Q-Disc between two C9 Q-Discs. Place entire sandwich, excluding the blue separator, into the bottom of the Q-Cup, and assemble the Q-Cup.
2. Weigh the sample into the Q-Cup.
3. Insert a Q-Screen into the Q-Cup using the Q-Screen tool.

Notes

The second cycle in the heating program is a "Rinse Only" cycle.

Sorbents

N/A

Solvents

Acetonitrile

Sample Weight

2 g

Equipment

EDGE
50 mL centrifuge tubes
Q-Screen

Q-Disc

S1

Heating Program

Cycle	Top Add (mL)	Bottom Add (mL)	Rinse (mL)	Temp (°C)	Hold (mm:ss)
1	10	0	0	40	1:30
2	0	0	5	---	--:--

Note: Temperature and hold times may vary depending on the sample and analytes of interest.

Wash Program

Cycle	Solvent	Volume (mL)	Temp (°C)	Hold (mm:ss)
1	Acetonitrile	10	40	0:03

General Guidelines

- a) This procedure is a reference point for sample extraction using a CEM system and may need to be modified or changed to obtain required results on your sample or analytes of interest.
- b) Wear hand, eye, and body protection when handling organic solvents.
- c) Any of CEM's collection vials/centrifuge tubes in the correct size for the rack owned may be used.
- d) Verify needed solvents are loaded onto the system with sufficient volume. Load the rack containing sample(s) into the EDGE. Select the method and position to load method. Press play and add any any sample ID's, etc. as needed.
- e) Bring to volume or evaporate as necessary for analysis.

Extraction of Pesticides from Blueberries

Procedure

1. Homogenize, mill, or cryomill the sample. The S1 Q-Disc is a preassembled sandwich of the G1 Q-Disc between two C9 Q-Discs. Place entire sandwich, excluding the blue separator, into the bottom of the Q-Cup, and assemble the Q-Cup.
2. Weigh the sorbents into the Q-Cup. Spread evenly across the sample by gentle tapping.
3. Weigh the sample into the Q-Cup layering the sample on top of the sorbent. Gently mix the sample and sorbent mixture with a glass stir rod, ensuring that the Q-Disc is not damaged.
4. Insert a Q-Screen into the Q-Cup using the Q-Screen tool.

Notes

The second cycle in the heating program is a "Rinse Only" cycle.
Add 1:00 bubbling to Cycle 1 by selecting the pencil icon in the Cycles tab.

Sorbents

Q-Matrix Hydra™ (2.5 g)
PSA (0.5 g)

Solvents

Acetonitrile w/ 1.0% Acetic Acid (v/v)

Sample Weight

≤ 10 g

Equipment

EDGE
50 mL centrifuge tubes
Q-Screen

Q-Disc

S1

Heating Program

Cycle	Top Add (mL)	Bottom Add (mL)	Rinse (mL)	Temp (°C)	Hold (mm:ss)
1	25	0	5	40	3:00
2	0	0	10	---	--:--

Note: Temperature and hold times may vary depending on the sample and analytes of interest.

Wash Program

Cycle	Solvent	Volume (mL)	Temp (°C)	Hold (mm:ss)
1	Acetonitrile w/ 1.0% Acetic Acid (v/v)	10	40	0:03

General Guidelines

- a) This procedure is a reference point for sample extraction using a CEM system and may need to be modified or changed to obtain required results on your sample or analytes of interest.
- b) Wear hand, eye, and body protection when handling organic solvents.
- c) Any of CEM's collection vials/centrifuge tubes in the correct size for the rack owned may be used.
- d) Verify needed solvents are loaded onto the system with sufficient volume. Load the rack containing sample(s) into the EDGE. Select the method and position to load method. Press play and add any any sample ID's, etc. as needed.
- e) Bring to volume or evaporate as necessary for analysis.

Extraction of Pesticides from Cannabis Edibles

Procedure

1. Homogenize, mill, or cryomill the sample. The S1 Q-Disc is a preassembled sandwich of the G1 Q-Disc between two C9 Q-Discs. Place entire sandwich, excluding the blue separator, into the bottom of the Q-Cup, and assemble the Q-Cup.
2. Weigh the sample into the Q-Cup.
3. Insert a Q-Screen into the Q-Cup using the Q-Screen tool.

Notes

Possessing, using, distributing, or selling marijuana or marijuana-based products constitute federal crimes in the United States, even where a state law decriminalizes or legalizes such activities. CEM Corporation produces instruments that are intended for use in testing laboratories and applications only where such use is permitted under applicable state/country law.

Sorbents

N/A

Solvents

Acetonitrile w/ 1.0% Acetic Acid (v/v)

Sample Weight

0.3 g

Equipment

EDGE
50 mL centrifuge tubes
Q-Screen

Q-Disc

S1

Heating Program

Cycle	Top Add (mL)	Bottom Add (mL)	Rinse (mL)	Temp (°C)	Hold (mm:ss)
1	25	0	5	40	2:00

Note: Temperature and hold times may vary depending on the sample and analytes of interest.

Wash Program

Cycle	Solvent	Volume (mL)	Temp (°C)	Hold (mm:ss)
1	Acetonitrile w/ 1.0% Acetic Acid (v/v)	15	40	0:03
2	Acetonitrile w/ 1.0% Acetic Acid (v/v)	15	---	---:--

General Guidelines

- a) This procedure is a reference point for sample extraction using a CEM system and may need to be modified or changed to obtain required results on your sample or analytes of interest.
- b) Wear hand, eye, and body protection when handling organic solvents.
- c) Any of CEM's collection vials/centrifuge tubes in the correct size for the rack owned may be used.
- d) Verify needed solvents are loaded onto the system with sufficient volume. Load the rack containing sample(s) into the EDGE. Select the method and position to load method. Press play and add any any sample ID's, etc. as needed.
- e) Bring to volume or evaporate as necessary for analysis.

Extraction of Pesticides from Cannabis/Hemp Plant

Procedure

1. Homogenize, mill, or cryomill the sample. The S1 Q-Disc is a preassembled sandwich of the G1 Q-Disc between two C9 Q-Discs. Place entire sandwich, excluding the blue separator, into the bottom of the Q-Cup, and assemble the Q-Cup.
2. Weigh the sample into the Q-Cup.
3. Insert a Q-Screen into the Q-Cup using the Q-Screen tool.

Notes

Possessing, using, distributing, or selling marijuana or marijuana-based products constitute federal crimes in the United States, even where a state law decriminalizes or legalizes such activities. CEM Corporation produces instruments that are intended for use in testing laboratories and applications only where such use is permitted under applicable state/country law.

Sorbents

N/A

Solvents

Acetonitrile w/ 1.0% Acetic Acid (v/v)

Sample Weight

≤ 1.5 g

Equipment

EDGE
50 mL centrifuge tubes
Q-Screen

Q-Disc

S1

Heating Program

Cycle	Top Add (mL)	Bottom Add (mL)	Rinse (mL)	Temp (°C)	Hold (mm:ss)
1	25	0	5	40	2:00

Note: Temperature and hold times may vary depending on the sample and analytes of interest.

Wash Program

Cycle	Solvent	Volume (mL)	Temp (°C)	Hold (mm:ss)
1	Acetonitrile w/ 1.0% Acetic Acid (v/v)	10	40	0:30

General Guidelines

- a) This procedure is a reference point for sample extraction using a CEM system and may need to be modified or changed to obtain required results on your sample or analytes of interest.
- b) Wear hand, eye, and body protection when handling organic solvents.
- c) Any of CEM's collection vials/centrifuge tubes in the correct size for the rack owned may be used.
- d) Verify needed solvents are loaded onto the system with sufficient volume. Load the rack containing sample(s) into the EDGE. Select the method and position to load method. Press play and add any any sample ID's, etc. as needed.
- e) Bring to volume or evaporate as necessary for analysis.

Extraction of Pesticides from Cinnamon

Procedure

1. Homogenize, mill, or cryomill the sample. The S1 Q-Disc is a preassembled sandwich of the G1 Q-Disc between two C9 Q-Discs. Place entire sandwich, excluding the blue separator, into the bottom of the Q-Cup, and assemble the Q-Cup.
2. Weigh the sample into the Q-Cup.
3. Insert a Q-Screen into the Q-Cup using the Q-Screen tool.

Notes

The second cycle in the heating program is a "Rinse Only" cycle.

Sorbents

N/A

Solvents

Acetonitrile w/ 1.0% Acetic Acid (v/v)

Sample Weight

≤ 2 g

Equipment

EDGE
50 mL centrifuge tubes
Q-Screen

Q-Disc

S1

Heating Program

Cycle	Top Add (mL)	Bottom Add (mL)	Rinse (mL)	Temp (°C)	Hold (mm:ss)
1	25	0	5	40	3:00
3	0	0	5	---	--:--

Note: Temperature and hold times may vary depending on the sample and analytes of interest.

Wash Program

Cycle	Solvent	Volume (mL)	Temp (°C)	Hold (mm:ss)
1	Acetonitrile w/ 1.0% Acetic Acid (v/v)	10	40	0:03

General Guidelines

- a) This procedure is a reference point for sample extraction using a CEM system and may need to be modified or changed to obtain required results on your sample or analytes of interest.
- b) Wear hand, eye, and body protection when handling organic solvents.
- c) Any of CEM's collection vials/centrifuge tubes in the correct size for the rack owned may be used.
- d) Verify needed solvents are loaded onto the system with sufficient volume. Load the rack containing sample(s) into the EDGE. Select the method and position to load method. Press play and add any any sample ID's, etc. as needed.
- e) Bring to volume or evaporate as necessary for analysis.

Extraction of Pesticides from Cranberries

Procedure

1. Homogenize, mill, or cryomill the sample. The S1 Q-Disc is a preassembled sandwich of the G1 Q-Disc between two C9 Q-Discs. Place entire sandwich, excluding the blue separator, into the bottom of the Q-Cup, and assemble the Q-Cup.
2. Weigh the sorbents into the Q-Cup. Spread evenly across the sample by gentle tapping.
3. Weigh the sample into the Q-Cup layering the sample on top of the sorbent. Gently mix the sample and sorbent mixture with a glass stir rod, ensuring that the Q-Disc is not damaged.
4. Insert a Q-Screen into the Q-Cup using the Q-Screen tool.

Notes

The second cycle in the heating program is a "Rinse Only" cycle.
Add 1:00 bubbling to Cycle 1 by selecting the pencil icon in the Cycles tab.

Sorbents

Q-Matrix Hydra™ (2.5 g)
PSA (0.5 g)

Solvents

Acetonitrile w/ 1.0% Acetic Acid (v/v)

Sample Weight

≤ 10 g

Equipment

EDGE
50 mL centrifuge tubes
Q-Screen

Q-Disc

S1

Heating Program

Cycle	Top Add (mL)	Bottom Add (mL)	Rinse (mL)	Temp (°C)	Hold (mm:ss)
1	25	0	5	40	3:00
2	0	0	10	---	--:--

Note: Temperature and hold times may vary depending on the sample and analytes of interest.

Wash Program

Cycle	Solvent	Volume (mL)	Temp (°C)	Hold (mm:ss)
1	Acetonitrile w/ 1.0% Acetic Acid (v/v)	10	40	0:03

General Guidelines

- a) This procedure is a reference point for sample extraction using a CEM system and may need to be modified or changed to obtain required results on your sample or analytes of interest.
- b) Wear hand, eye, and body protection when handling organic solvents.
- c) Any of CEM's collection vials/centrifuge tubes in the correct size for the rack owned may be used.
- d) Verify needed solvents are loaded onto the system with sufficient volume. Load the rack containing sample(s) into the EDGE. Select the method and position to load method. Press play and add any any sample ID's, etc. as needed.
- e) Bring to volume or evaporate as necessary for analysis.

Extraction of Pesticides from Curcumin

Procedure

1. Homogenize, mill, or cryomill the sample. The S1 Q-Disc is a preassembled sandwich of the G1 Q-Disc between two C9 Q-Discs. Place entire sandwich, excluding the blue separator, into the bottom of the Q-Cup, and assemble the Q-Cup.
2. Weigh the sample into the Q-Cup.
3. Insert a Q-Screen into the Q-Cup using the Q-Screen tool.

Notes

Sorbents

N/A

Solvents

Acetonitrile w/ 1.0% Acetic Acid (v/v)
Methanol

Sample Weight

≤ 1 g

Equipment

EDGE
50 mL centrifuge tubes
Q-Screen

Q-Disc

S1

Heating Program

Cycle	Top Add (mL)	Bottom Add (mL)	Rinse (mL)	Temp (°C)	Hold (mm:ss)
1	15	0	10	40	3:00

Note: Temperature and hold times may vary depending on the sample and analytes of interest.

Wash Program

Cycle	Solvent	Volume (mL)	Temp (°C)	Hold (mm:ss)
1	Methanol	40	120	0:30
2	Methanol	40	100	0:30
3	Acetonitrile w/ 1.0% Acetic Acid (v/v)	40	40	--:--

General Guidelines

- a) This procedure is a reference point for sample extraction using a CEM system and may need to be modified or changed to obtain required results on your sample or analytes of interest.
- b) Wear hand, eye, and body protection when handling organic solvents.
- c) Any of CEM's collection vials/centrifuge tubes in the correct size for the rack owned may be used.
- d) Verify needed solvents are loaded onto the system with sufficient volume. Load the rack containing sample(s) into the EDGE. Select the method and position to load method. Press play and add any any sample ID's, etc. as needed.
- e) Bring to volume or evaporate as necessary for analysis.

Extraction of Pesticides from Foods (Wet)

Procedure

1. Homogenize, mill, or cryomill the sample. The S1 Q-Disc is a preassembled sandwich of the G1 Q-Disc between two C9 Q-Discs. Place entire sandwich, excluding the blue separator, into the bottom of the Q-Cup, and assemble the Q-Cup.
2. Weigh the sorbents into the Q-Cup. Spread evenly across the sample by gentle tapping.
3. Weigh the sample into the Q-Cup layering the sample on top of the sorbent. Mixing is not required.
3. Insert a Q-Screen into the Q-Cup using the Q-Screen tool.

Notes

The second cycle in the heating program is a "Rinse Only" cycle.
Add 2:00 bubbling to Cycle 1 by selecting the pencil icon in the Cycles tab.

Sorbents

Q-Matrix Hydra™ (2.5 g)

Solvents

Acetonitrile w/ 1.0% Acetic Acid (v/v)

Sample Weight

≤ 5 g

Equipment

EDGE
50 mL centrifuge tubes
Q-Screen

Q-Disc

S1

Heating Program

Cycle	Top Add (mL)	Bottom Add (mL)	Rinse (mL)	Temp (°C)	Hold (mm:ss)
1	25	0	5	40	1:00
2	0	0	10	---	--:--

Note: Temperature and hold times may vary depending on the sample and analytes of interest.

Wash Program

Cycle	Solvent	Volume (mL)	Temp (°C)	Hold (mm:ss)
1	Acetonitrile w/ 1.0% Acetic Acid (v/v)	10	40	0:03

General Guidelines

- a) This procedure is a reference point for sample extraction using a CEM system and may need to be modified or changed to obtain required results on your sample or analytes of interest.
- b) Wear hand, eye, and body protection when handling organic solvents.
- c) Any of CEM's collection vials/centrifuge tubes in the correct size for the rack owned may be used.
- d) Verify needed solvents are loaded onto the system with sufficient volume. Load the rack containing sample(s) into the EDGE. Select the method and position to load method. Press play and add any any sample ID's, etc. as needed.
- e) Bring to volume or evaporate as necessary for analysis.

Extraction of Pesticides from Norbixin

Procedure

1. Homogenize, mill, or cryomill the sample. The S1 Q-Disc is a preassembled sandwich of the G1 Q-Disc between two C9 Q-Discs. Place entire sandwich, excluding the blue separator, into the bottom of the Q-Cup, and assemble the Q-Cup.
2. Weigh the sample into the Q-Cup.
3. Insert a Q-Screen into the Q-Cup using the Q-Screen tool.

Notes

Sorbents

Solvents

Acetonitrile w/ 1.0% Acetic Acid (v/v)
Acetone

Sample Weight

≤ 1 g

Equipment

EDGE
50 mL centrifuge tubes
Q-Screen

Q-Disc

S1

Heating Program

Cycle	Top Add (mL)	Bottom Add (mL)	Rinse (mL)	Temp (°C)	Hold (mm:ss)
1	15	0	10	40	3:00

Note: Temperature and hold times may vary depending on the sample and analytes of interest.

Wash Program

Cycle	Solvent	Volume (mL)	Temp (°C)	Hold (mm:ss)
1	Acetone	40	120	0:30
2	Acetone	40	100	0:30
3	Acetonitrile w/ 1.0% Acetic Acid (v/v)	40	40	--:--

General Guidelines

- a) This procedure is a reference point for sample extraction using a CEM system and may need to be modified or changed to obtain required results on your sample or analytes of interest.
- b) Wear hand, eye, and body protection when handling organic solvents.
- c) Any of CEM's collection vials/centrifuge tubes in the correct size for the rack owned may be used.
- d) Verify needed solvents are loaded onto the system with sufficient volume. Load the rack containing sample(s) into the EDGE. Select the method and position to load method. Press play and add any any sample ID's, etc. as needed.
- e) Bring to volume or evaporate as necessary for analysis.

Extraction of Pesticides from Oregano

Procedure

1. Homogenize, mill, or cryomill the sample. The S1 Q-Disc is a preassembled sandwich of the G1 Q-Disc between two C9 Q-Discs. Place entire sandwich, excluding the blue separator, into the bottom of the Q-Cup, and assemble the Q-Cup.
2. Weigh the sample into the Q-Cup.
3. Insert a Q-Screen into the Q-Cup using the Q-Screen tool.

Notes

The second cycle in the heating program is a "Rinse Only" cycle.

Sorbents

N/A

Solvents

Acetonitrile w/ 1.0% Acetic Acid (v/v)

Sample Weight

≤ 2 g

Equipment

EDGE
50 mL centrifuge tubes
Q-Screen

Q-Disc

S1

Heating Program

Cycle	Top Add (mL)	Bottom Add (mL)	Rinse (mL)	Temp (°C)	Hold (mm:ss)
1	25	0	5	40	3:00
2	0	0	5	---	--:--

Note: Temperature and hold times may vary depending on the sample and analytes of interest.

Wash Program

Cycle	Solvent	Volume (mL)	Temp (°C)	Hold (mm:ss)
1	Acetonitrile w/ 1.0% Acetic Acid (v/v)	10	40	0:03

General Guidelines

- a) This procedure is a reference point for sample extraction using a CEM system and may need to be modified or changed to obtain required results on your sample or analytes of interest.
- b) Wear hand, eye, and body protection when handling organic solvents.
- c) Any of CEM's collection vials/centrifuge tubes in the correct size for the rack owned may be used.
- d) Verify needed solvents are loaded onto the system with sufficient volume. Load the rack containing sample(s) into the EDGE. Select the method and position to load method. Press play and add any any sample ID's, etc. as needed.
- e) Bring to volume or evaporate as necessary for analysis.

Extraction of Pesticides from Paprika

Procedure

1. Homogenize, mill, or cryomill the sample. The S1 Q-Disc is a preassembled sandwich of the G1 Q-Disc between two C9 Q-Discs. Place entire sandwich, excluding the blue separator, into the bottom of the Q-Cup, and assemble the Q-Cup.
2. Weigh the sample into the Q-Cup.
3. Insert a Q-Screen into the Q-Cup using the Q-Screen tool.

Notes

The second cycle in the heating program is a "Rinse Only" cycle.

Sorbents

N/A

Solvents

Acetonitrile w/ 1.0% Acetic Acid (v/v)

Sample Weight

≤ 2 g

Equipment

Q-Disc

S1

Heating Program

Cycle	Top Add (mL)	Bottom Add (mL)	Rinse (mL)	Temp (°C)	Hold (mm:ss)
1	15	0	0	40	3:00
2	0	0	5	---	--:--

Note: Temperature and hold times may vary depending on the sample and analytes of interest.

Wash Program

Cycle	Solvent	Volume (mL)	Temp (°C)	Hold (mm:ss)
1	Acetonitrile w/ 1.0% Acetic Acid (v/v)	15	40	0:003

General Guidelines

Extraction of Pesticides from Rice

Procedure

1. Homogenize, mill, or cryomill the sample. The S1 Q-Disc is a preassembled sandwich of the G1 Q-Disc between two C9 Q-Discs. Place entire sandwich, excluding the blue separator, into the bottom of the Q-Cup, and assemble the Q-Cup.
2. Weigh the sample into the Q-Cup.
3. Insert a Q-Screen into the Q-Cup using the Q-Screen tool.

Notes

None

Sorbents

N/A

Solvents

Acetonitrile w/ 1.0% Acetic Acid (v/v)

Sample Weight

≤ 2 g

Equipment

EDGE
50 mL centrifuge tubes
Q-Screen

Q-Disc

S1

Heating Program

Cycle	Top Add (mL)	Bottom Add (mL)	Rinse (mL)	Temp (°C)	Hold (mm:ss)
1	25	0	5	40	3:00

Note: Temperature and hold times may vary depending on the sample and analytes of interest.

Wash Program

Cycle	Solvent	Volume (mL)	Temp (°C)	Hold (mm:ss)
1	Acetonitrile w/ 1.0% Acetic Acid (v/v)	10	40	0:03

General Guidelines

- a) This procedure is a reference point for sample extraction using a CEM system and may need to be modified or changed to obtain required results on your sample or analytes of interest.
- b) Wear hand, eye, and body protection when handling organic solvents.
- c) Any of CEM's collection vials/centrifuge tubes in the correct size for the rack owned may be used.
- d) Verify needed solvents are loaded onto the system with sufficient volume. Load the rack containing sample(s) into the EDGE. Select the method and position to load method. Press play and add any any sample ID's, etc. as needed.
- e) Bring to volume or evaporate as necessary for analysis.

Extraction of Pesticides from Salmon

Procedure

1. Homogenize, mill, or cryomill the sample. The S1 Q-Disc is a preassembled sandwich of the G1 Q-Disc between two C9 Q-Discs. Place entire sandwich, excluding the blue separator, into the bottom of the Q-Cup, and assemble the Q-Cup.
2. Weigh the sorbents into the Q-Cup. Spread evenly across the sample by gentle tapping.
3. Weigh the sample into the Q-Cup layering the sample on top of the sorbent. Gently mix the sample and sorbent mixture with a glass stir rod, ensuring that the Q-Disc is not damaged.
4. Insert a Q-Screen into the Q-Cup using the Q-Screen tool.

Notes

The second cycle in the heating program is a "Rinse Only" cycle.
Add 1:00 bubbling to Cycle 1 by selecting the pencil icon in the Cycles tab.

Sorbents

Q-Matrix Hydra™ (2.5 g)
Sodium Citrate (0.25 g)
Sodium Bicarbonate (0.25 g)

Solvents

Acetonitrile w/ 1.0% Acetic Acid (v/v)

Sample Weight

≤ 10 g

Equipment

EDGE
50 mL centrifuge tubes
Q-Screen

Q-Disc

S1

Heating Program

Cycle	Top Add (mL)	Bottom Add (mL)	Rinse (mL)	Temp (°C)	Hold (mm:ss)
1	25	0	5	40	3:00
2	0	0	10	---	--:--

Note: Temperature and hold times may vary depending on the sample and analytes of interest.

Wash Program

Cycle	Solvent	Volume (mL)	Temp (°C)	Hold (mm:ss)
1	Acetonitrile w/ 1.0% Acetic Acid (v/v)	10	40	0:03

General Guidelines

- a) This procedure is a reference point for sample extraction using a CEM system and may need to be modified or changed to obtain required results on your sample or analytes of interest.
- b) Wear hand, eye, and body protection when handling organic solvents.
- c) Any of CEM's collection vials/centrifuge tubes in the correct size for the rack owned may be used.
- d) Verify needed solvents are loaded onto the system with sufficient volume. Load the rack containing sample(s) into the EDGE. Select the method and position to load method. Press play and add any any sample ID's, etc. as needed.
- e) Bring to volume or evaporate as necessary for analysis.

Extraction of Pesticides from Sodium Copper Chlorophyllin Powder

Procedure

1. Homogenize, mill, or cryomill the sample. The S1 Q-Disc is a preassembled sandwich of the G1 Q-Disc between two C9 Q-Discs. Place entire sandwich, excluding the blue separator, into the bottom of the Q-Cup, and assemble the Q-Cup.
2. Weigh the sample into the Q-Cup.
3. Insert a Q-Screen into the Q-Cup using the Q-Screen tool.

Notes

Sorbents

N/A

Solvents

Acetonitrile w/ 1.0% Acetic Acid (v/v)

Sample Weight

≤ 1 g

Equipment

EDGE
50 mL centrifuge tubes
Q-Screen

Q-Disc

S1

Heating Program

Cycle	Top Add (mL)	Bottom Add (mL)	Rinse (mL)	Temp (°C)	Hold (mm:ss)
1	15	0	10	40	3:00

Note: Temperature and hold times may vary depending on the sample and analytes of interest.

Wash Program

Cycle	Solvent	Volume (mL)	Temp (°C)	Hold (mm:ss)
1	Methanol	40	120	0:30
2	Methanol	40	100	0:30
3	Acetonitrile w/ 1.0% Acetic Acid (v/v)	40	40	--:--

General Guidelines

- a) This procedure is a reference point for sample extraction using a CEM system and may need to be modified or changed to obtain required results on your sample or analytes of interest.
- b) Wear hand, eye, and body protection when handling organic solvents.
- c) Any of CEM's collection vials/centrifuge tubes in the correct size for the rack owned may be used.
- d) Verify needed solvents are loaded onto the system with sufficient volume. Load the rack containing sample(s) into the EDGE. Select the method and position to load method. Press play and add any any sample ID's, etc. as needed.
- e) Bring to volume or evaporate as necessary for analysis.

Extraction of Pesticides from Strawberries

Procedure

1. Homogenize, mill, or cryomill the sample. The S1 Q-Disc is a preassembled sandwich of the G1 Q-Disc between two C9 Q-Discs. Place entire sandwich, excluding the blue separator, into the bottom of the Q-Cup, and assemble the Q-Cup.
2. Weigh the sorbents into the Q-Cup. Spread evenly across the sample by gentle tapping.
3. Weigh the sample into the Q-Cup layering the sample on top of the sorbent. Mixing is not required.
4. Insert a Q-Screen into the Q-Cup using the Q-Screen tool.

Notes

The second cycle in the heating program is a "Rinse Only" cycle.
Add 2:00 bubbling to the method by selecting the pencil icon in the Cycles tab.

Sorbents

Q-Matrix Hydra™ (2.5 g)

Solvents

Acetonitrile w/ 1.0% Acetic Acid (v/v)

Sample Weight

≤ 10 g

Equipment

EDGE
50 mL centrifuge tubes
Q-Screen

Q-Disc

S1

Heating Program

Cycle	Top Add (mL)	Bottom Add (mL)	Rinse (mL)	Temp (°C)	Hold (mm:ss)
1	15	0	5	40	4:00
2	0	0	10	---	--:--

Note: Temperature and hold times may vary depending on the sample and analytes of interest.

Wash Program

Cycle	Solvent	Volume (mL)	Temp (°C)	Hold (mm:ss)
1	Acetonitrile w/ 1.0% Acetic Acid (v/v)	10	40	0:03

General Guidelines

- a) This procedure is a reference point for sample extraction using a CEM system and may need to be modified or changed to obtain required results on your sample or analytes of interest.
- b) Wear hand, eye, and body protection when handling organic solvents.
- c) Any of CEM's collection vials/centrifuge tubes in the correct size for the rack owned may be used.
- d) Verify needed solvents are loaded onto the system with sufficient volume. Load the rack containing sample(s) into the EDGE. Select the method and position to load method. Press play and add any any sample ID's, etc. as needed.
- e) Bring to volume or evaporate as necessary for analysis.

Extraction of PFAS from Carrots

Procedure

1. Homogenize, mill, or cryomill the sample. The S1 Q-Disc is a preassembled sandwich of the G1 Q-Disc between two C9 Q-Discs. Place entire sandwich, excluding the blue separator, into the bottom of the Q-Cup, and assemble the Q-Cup.
2. Weigh the sorbents into the Q-Cup. Spread evenly across the sample by gentle tapping.
3. Weigh the sample into the Q-Cup, layering the sample on top of the sorbent.

Notes

Add 2:00 bubbling to each cycle of the method by selecting the pencil icon in the Cycles tab.

Sorbents

Sodium Sulfate (6 g)
Sodium Chloride (1.75 g)

Solvents

Methanol/Water (80:20) w/ 0.3% ammonium hydroxide (v/v)
Methanol

Sample Weight

5 g

Equipment

50 mL centrifuge tubes

Q-Disc

S1

Heating Program

Cycle	Top Add (mL)	Bottom Add (mL)	Rinse (mL)	Temp (°C)	Hold (mm:ss)
1	20	0	0	65	2:00
2	20	0	0	65	2:00

Note: Temperature and hold times may vary depending on the sample and analytes of interest.

Wash Program

Cycle	Solvent	Volume (mL)	Temp (°C)	Hold (mm:ss)
1	Methanol	30	65	0:30
2	Methanol	30	65	0:30
3	Methanol/Water (80:20) w/ 0.3% ammonium	10	65	0:30

General Guidelines

- a) This procedure is a reference point for sample extraction using a CEM system and may need to be modified or changed to obtain required results on your sample or analytes of interest.
- b) Wear hand, eye, and body protection when handling organic solvents.
- c) Any of CEM's collection vials/centrifuge tubes in the correct size for the rack owned may be used.
- d) Verify needed solvents are loaded onto the system with sufficient volume. Load the rack containing sample(s) into the EDGE. Select the method and position to load method. Press play and add any any sample ID's, etc. as needed.
- e) Bring to volume or evaporate as necessary for analysis.

Extraction of PFAS from Cranberries

Procedure

1. Homogenize, mill, or cryomill the sample. The S1 Q-Disc is a preassembled sandwich of the G1 Q-Disc between two C9 Q-Discs. Place entire sandwich, excluding the blue separator, into the bottom of the Q-Cup, and assemble the Q-Cup.
2. Weigh the sorbents into the Q-Cup. Spread evenly across the sample by gentle tapping.
3. Weigh the sample into the Q-Cup, layering the sample on top of the sorbent.

Notes

Add 2:00 bubbling to each cycle of the method by selecting the pencil icon in the Cycles tab.

Sorbents

Sodium Sulfate (6 g)
Sodium Chloride (1.75 g)

Solvents

Methanol/Water (80:20) w/ 0.3% ammonium hydroxide (v/v)
Methanol

Sample Weight

5 g

Equipment

50 mL centrifuge tubes

Q-Disc

S1

Heating Program

Cycle	Top Add (mL)	Bottom Add (mL)	Rinse (mL)	Temp (°C)	Hold (mm:ss)
1	20	0	0	65	2:00
2	20	0	0	65	2:00

Note: Temperature and hold times may vary depending on the sample and analytes of interest.

Wash Program

Cycle	Solvent	Volume (mL)	Temp (°C)	Hold (mm:ss)
1	Methanol	30	65	0:30
2	Methanol	30	65	0:30
3	Methanol/Water (80:20) w/ 0.3% ammonium	10	65	0:30

General Guidelines

- a) This procedure is a reference point for sample extraction using a CEM system and may need to be modified or changed to obtain required results on your sample or analytes of interest.
- b) Wear hand, eye, and body protection when handling organic solvents.
- c) Any of CEM's collection vials/centrifuge tubes in the correct size for the rack owned may be used.
- d) Verify needed solvents are loaded onto the system with sufficient volume. Load the rack containing sample(s) into the EDGE. Select the method and position to load method. Press play and add any any sample ID's, etc. as needed.
- e) Bring to volume or evaporate as necessary for analysis.

Extraction of PFAS from Lettuce

Procedure

1. Homogenize, mill, or cryomill the sample. The S1 Q-Disc is a preassembled sandwich of the G1 Q-Disc between two C9 Q-Discs. Place entire sandwich, excluding the blue separator, into the bottom of the Q-Cup, and assemble the Q-Cup.
2. Weigh the sorbents into the Q-Cup. Spread evenly across the sample by gentle tapping.
3. Weigh the sample into the Q-Cup layering the sample on top of the sorbent.

Notes

Add 2:00 bubbling to each cycle of the method by selecting the pencil icon in the Cycles tab.

Sorbents

Sodium Sulfate (6 g)
Sodium Chloride (1.75 g)

Solvents

Methanol/Water (80:20) w/ 0.3% ammonium hydroxide (v/v)
Methanol

Sample Weight

5 g

Equipment

50 mL centrifuge tubes

Q-Disc

S1

Heating Program

Cycle	Top Add (mL)	Bottom Add (mL)	Rinse (mL)	Temp (°C)	Hold (mm:ss)
1	20	0	0	65	2:00
2	20	0	0	65	2:00

Note: Temperature and hold times may vary depending on the sample and analytes of interest.

Wash Program

Cycle	Solvent	Volume (mL)	Temp (°C)	Hold (mm:ss)
1	Methanol	30	65	0:30
2	Methanol	30	65	0:30
3	Methanol/Water (80:20) w/ 0.3% ammonium	10	65	0:03

General Guidelines

- a) This procedure is a reference point for sample extraction using a CEM system and may need to be modified or changed to obtain required results on your sample or analytes of interest.
- b) Wear hand, eye, and body protection when handling organic solvents.
- c) Any of CEM's collection vials/centrifuge tubes in the correct size for the rack owned may be used.
- d) Verify needed solvents are loaded onto the system with sufficient volume. Load the rack containing sample(s) into the EDGE. Select the method and position to load method. Press play and add any any sample ID's, etc. as needed.
- e) Bring to volume or evaporate as necessary for analysis.

Extraction of PFAS from Potatoes

Procedure

1. Homogenize, mill, or cryomill the sample. The S1 Q-Disc is a preassembled sandwich of the G1 Q-Disc between two C9 Q-Discs. Place entire sandwich, excluding the blue separator, into the bottom of the Q-Cup, and assemble the Q-Cup.
2. Weigh the sorbents into the Q-Cup. Spread evenly across the sample by gentle tapping.
3. Weigh the sample into the Q-Cup, layering the sample on top of the sorbent.

Notes

Add 2:00 bubbling to each cycle of the method by selecting the pencil icon in the Cycles tab.

Sorbents

Sodium Sulfate (6 g)
Sodium Chloride (1.75 g)

Solvents

Methanol/Water (80:20) w/ 0.3% ammonium hydroxide (v/v)
Methanol

Sample Weight

5 g

Equipment

50 mL centrifuge tubes

Q-Disc

S1

Heating Program

Cycle	Top Add (mL)	Bottom Add (mL)	Rinse (mL)	Temp (°C)	Hold (mm:ss)
1	20	0	0	65	2:00
2	20	0	0	65	2:00

Note: Temperature and hold times may vary depending on the sample and analytes of interest.

Wash Program

Cycle	Solvent	Volume (mL)	Temp (°C)	Hold (mm:ss)
1	Methanol	30	65	0:30
2	Methanol	30	65	0:30
3	Methanol/Water (80:20) w/ 0.3% ammonium	10	65	0:30

General Guidelines

- a) This procedure is a reference point for sample extraction using a CEM system and may need to be modified or changed to obtain required results on your sample or analytes of interest.
- b) Wear hand, eye, and body protection when handling organic solvents.
- c) Any of CEM's collection vials/centrifuge tubes in the correct size for the rack owned may be used.
- d) Verify needed solvents are loaded onto the system with sufficient volume. Load the rack containing sample(s) into the EDGE. Select the method and position to load method. Press play and add any any sample ID's, etc. as needed.
- e) Bring to volume or evaporate as necessary for analysis.

Extraction of PFAS from Strawberries

Procedure

1. Homogenize, mill, or cryomill the sample. The S1 Q-Disc is a preassembled sandwich of the G1 Q-Disc between two C9 Q-Discs. Place entire sandwich, excluding the blue separator, into the bottom of the Q-Cup, and assemble the Q-Cup.
2. Weigh the sorbents into the Q-Cup. Spread evenly across the sample by gentle tapping.
3. Weigh the sample into the Q-Cup, layering the sample on top of the sorbent.

Notes

Add 2:00 bubbling to each cycle of the method by selecting the pencil icon in the Cycles tab.

Sorbents

Sodium Sulfate (6 g)
Sodium Chloride (1.75 g)

Solvents

Methanol/Water (80:20) w/ 0.3% ammonium hydroxide (v/v)
Methanol

Sample Weight

5 g

Equipment

50 mL centrifuge tubes

Q-Disc

S1

Heating Program

Cycle	Top Add (mL)	Bottom Add (mL)	Rinse (mL)	Temp (°C)	Hold (mm:ss)
1	20	0	0	65	2:00
2	20	0	0	65	2:00

Note: Temperature and hold times may vary depending on the sample and analytes of interest.

Wash Program

Cycle	Solvent	Volume (mL)	Temp (°C)	Hold (mm:ss)
1	Methanol	30	65	0:30
2	Methanol	30	65	0:30
3	Methanol/Water (80:20) w/ 0.3% ammonium	10	65	0:30

General Guidelines

- a) This procedure is a reference point for sample extraction using a CEM system and may need to be modified or changed to obtain required results on your sample or analytes of interest.
- b) Wear hand, eye, and body protection when handling organic solvents.
- c) Any of CEM's collection vials/centrifuge tubes in the correct size for the rack owned may be used.
- d) Verify needed solvents are loaded onto the system with sufficient volume. Load the rack containing sample(s) into the EDGE. Select the method and position to load method. Press play and add any any sample ID's, etc. as needed.
- e) Bring to volume or evaporate as necessary for analysis.

Extraction of Polyphenols from Cacao

Procedure

1. Homogenize, mill, or cryomill the sample. The S1 Q-Disc is a preassembled sandwich of the G1 Q-Disc between two C9 Q-Discs. Place entire sandwich, excluding the blue separator, into the bottom of the Q-Cup, and assemble the Q-Cup.
2. Weigh the sample into the Q-Cup.
3. Insert a Q-Screen into the Q-Cup using the Q-Screen tool.

Notes

None

Sorbents

N/A

Solvents

Methanol/Water (1:1)

Sample Weight

≤ 0.5 g

Equipment

EDGE
Q-Screen
40 mL collection vials

Q-Disc

S1

Heating Program

Cycle	Top Add (mL)	Bottom Add (mL)	Rinse (mL)	Temp (°C)	Hold (mm:ss)
1	20	10	10	80	10:00

Note: Temperature and hold times may vary depending on the sample and analytes of interest.

Wash Program

Cycle	Solvent	Volume (mL)	Temp (°C)	Hold (mm:ss)
1	Methanol/Water (1:1)	15	80	0:15
2	Methanol/Water (1:1)	15	---	---:--

General Guidelines

- a) This procedure is a reference point for sample extraction using a CEM system and may need to be modified or changed to obtain required results on your sample or analytes of interest.
- b) Wear hand, eye, and body protection when handling organic solvents.
- c) Any of CEM's collection vials/centrifuge tubes in the correct size for the rack owned may be used.
- d) Verify needed solvents are loaded onto the system with sufficient volume. Load the rack containing sample(s) into the EDGE. Select the method and position to load method. Press play and add any any sample ID's, etc. as needed.
- e) Bring to volume or evaporate as necessary for analysis.

Hydrolysis & Extraction of Fat from Baking Products

Procedure

Step 1- Hydrolysis Method

For hydrolysis method, see "The Extraction of Fat from Low, Middle, and High Fat Foods" Application Note

Step 2 - EDGE Method

1. G0 refers to a G1 Q-Disc with a Q-Support. Place a G1 Q-Disc into the bottom of the Q-Cup. Place a Q-Support on top of the G1 Q-Disc and assemble the Q-Cup.

2. Place the filter with the hydrolyzed sample in the Q-Cup.

3. Insert a Q-Screen into the Q-Cup using the Q-Screen tool.

Notes

If not performing hydrolysis, proceed to EDGE Method

Sample Types: DATEM powder, chocolate product, Nutella, coconut flour, bread, and raw eggs

This is not an exhaustive list of possible sample types.

Sorbents

N/A

Solvents

Petroleum Ether

Sample Weight

≤3 g

Equipment

EDGE
Q-Screen
60 mL collection vials
Q-Support

Q-Disc

G0

Heating Program

Cycle	Top Add (mL)	Bottom Add (mL)	Rinse (mL)	Temp (°C)	Hold (mm:ss)
1	30	0	0	140	5:00
2	30	0	0	140	5:00

Note: Temperature and hold times may vary depending on the sample and analytes of interest.

Wash Program

Cycle	Solvent	Volume (mL)	Temp (°C)	Hold (mm:ss)
1	Petroleum Ether	30	30	0:15

General Guidelines

- This procedure is a reference point for sample extraction using a CEM system and may need to be modified or changed to obtain required results on your sample or analytes of interest.
- Wear hand, eye, and body protection when handling organic solvents.
- Any of CEM's collection vials/centrifuge tubes in the correct size for the rack owned may be used.
- Verify needed solvents are loaded onto the system with sufficient volume. Load the rack containing sample(s) into the EDGE. Select the method and position to load method. Press play and add any any sample ID's, etc. as needed.
- Bring to volume or evaporate as necessary for analysis.

Hydrolysis & Extraction of Fat from Nut Products

Procedure

Step 1- Hydrolysis Method

For hydrolysis method, see "The Extraction of Fat from Low, Middle, and High Fat Foods" Application Note

Step 2 - EDGE Method

1. G0 refers to a G1 Q-Disc with a Q-Support. Place a G1 Q-Disc into the bottom of the Q-Cup. Place a Q-Support on top of the G1 Q-Disc and assemble the Q-Cup.

2. Place the filter with hydrolyzed sample in the Q-Cup.

3. Insert a Q-Screen into the Q-Cup using the Q-Screen tool.

Notes

If not performing hydrolysis, proceed to EDGE Method

Sample types: peanut butter, hazelnut paste, brazil nuts, cashews, hazelnuts, peanuts, and pumpkin seeds

This is not an exhaustive list of possible sample types

Sorbents

N/A

Solvents

Petroleum Ether

Sample Weight

≤2 g

Equipment

EDGE
Q-Screen
60 mL collection vials
Q-Support

Q-Disc

G0

Heating Program

Cycle	Top Add (mL)	Bottom Add (mL)	Rinse (mL)	Temp (°C)	Hold (mm:ss)
1	30	0	0	140	5:00
2	30	0	0	140	5:00

Note: Temperature and hold times may vary depending on the sample and analytes of interest.

Wash Program

Cycle	Solvent	Volume (mL)	Temp (°C)	Hold (mm:ss)
1	Petroleum Ether	30	30	0:15

General Guidelines

- This procedure is a reference point for sample extraction using a CEM system and may need to be modified or changed to obtain required results on your sample or analytes of interest.
- Wear hand, eye, and body protection when handling organic solvents.
- Any of CEM's collection vials/centrifuge tubes in the correct size for the rack owned may be used.
- Verify needed solvents are loaded onto the system with sufficient volume. Load the rack containing sample(s) into the EDGE. Select the method and position to load method. Press play and add any any sample ID's, etc. as needed.
- Bring to volume or evaporate as necessary for analysis.

Materials Science

Extraction of Additives from Polyethylene Powder

Procedure

1. Homogenize, mill, or cryomill the sample. The S1 Q-Disc is a preassembled sandwich of the G1 Q-Disc between two C9 Q-Discs. Place entire sandwich, excluding the blue separator, into the bottom of the Q-Cup, and assemble the Q-Cup.
2. Weigh the sample into the Q-Cup.
3. Insert a Q-Screen into the Q-Cup using the Q-Screen tool.

Notes

*Plastics and polymers should only be extracted at temperatures below melting point range. Expansion of the sample during extraction is common during polymer-based extractions.

Sorbents

N/A

Solvents

2-Propanol (IPA)

Sample Weight

≤ 1 g

Equipment

EDGE
40 mL collection vials - amber
Q-Screen

Q-Disc

S1

Heating Program

Cycle	Top Add (mL)	Bottom Add (mL)	Rinse (mL)	Temp (°C)	Hold (mm:ss)
1	30	10	0	90*	15:00

Note: Temperature and hold times may vary depending on the sample and analytes of interest.

Wash Program

Cycle	Solvent	Volume (mL)	Temp (°C)	Hold (mm:ss)
1	2-Propanol (IPA)	15	90	0:15
2	2-Propanol (IPA)	15	---	---:--

General Guidelines

- a) This procedure is a reference point for sample extraction using a CEM system and may need to be modified or changed to obtain required results on your sample or analytes of interest.
- b) Wear hand, eye, and body protection when handling organic solvents.
- c) Any of CEM's collection vials/centrifuge tubes in the correct size for the rack owned may be used.
- d) Verify needed solvents are loaded onto the system with sufficient volume. Load the rack containing sample(s) into the EDGE. Select the method and position to load method. Press play and add any any sample ID's, etc. as needed.
- e) Bring to volume or evaporate as necessary for analysis.

Extraction of Additives from Polypropylene Powder

Procedure

1. Homogenize, mill, or cryomill the sample. The S1 Q-Disc is a preassembled sandwich of the G1 Q-Disc between two C9 Q-Discs. Place entire sandwich, excluding the blue separator, into the bottom of the Q-Cup, and assemble the Q-Cup.
2. Weigh the sample into the Q-Cup.
3. Insert a Q-Screen into the Q-Cup using the Q-Screen tool.

Notes

*Plastics and polymers should only be extracted at temperatures below melting point range. Expansion of the sample during extraction is common during polymer based extraction.

Sorbents

N/A

Solvents

2-Propanol (IPA)

Sample Weight

≤ 1 g

Equipment

EDGE
40 mL collection vials - amber
Q-Screen

Q-Disc

S1

Heating Program

Cycle	Top Add (mL)	Bottom Add (mL)	Rinse (mL)	Temp (°C)	Hold (mm:ss)
1	30	10	0	120*	15:00

Note: Temperature and hold times may vary depending on the sample and analytes of interest.

Wash Program

Cycle	Solvent	Volume (mL)	Temp (°C)	Hold (mm:ss)
1	2-Propanol (IPA)	15	150	0:15
2	2-Propanol (IPA)	15	---	---:--

General Guidelines

- a) This procedure is a reference point for sample extraction using a CEM system and may need to be modified or changed to obtain required results on your sample or analytes of interest.
- b) Wear hand, eye, and body protection when handling organic solvents.
- c) Any of CEM's collection vials/centrifuge tubes in the correct size for the rack owned may be used.
- d) Verify needed solvents are loaded onto the system with sufficient volume. Load the rack containing sample(s) into the EDGE. Select the method and position to load method. Press play and add any any sample ID's, etc. as needed.
- e) Bring to volume or evaporate as necessary for analysis.

Extraction of Film Powder

Procedure

1. Homogenize, mill, or cryomill the sample. The S1 Q-Disc is a preassembled sandwich of the G1 Q-Disc between two C9 Q-Discs. Place entire sandwich, excluding the blue separator, into the bottom of the Q-Cup, and assemble the Q-Cup.
2. Weigh the sample into the Q-Cup. If the sample is in sheet form, cut into small pieces (the smaller, the better).
3. Insert a Q-Screen into the Q-Cup using the Q-Screen tool.

Notes

*Plastics and polymers should only be extracted at temperatures below melting point range.
Expansion of the sample during extraction is common during polymer based extraction.

Sorbents

N/A

Solvents

2-Propanol (IPA)

Sample Weight

≤ 2 g

Equipment

EDGE
Q-Screen
60 mL collection vials

Q-Disc

S1

Heating Program

Cycle	Top Add (mL)	Bottom Add (mL)	Rinse (mL)	Temp (°C)	Hold (mm:ss)
1	15	5	0	120	10:00
2	10	5	0	120	10:00
3	15	5	0	120	10:00
4	10	5	0	120	10:00

Note: Temperature and hold times may vary depending on the sample and analytes of interest.

Wash Program

Cycle	Solvent	Volume (mL)	Temp (°C)	Hold (mm:ss)
1	2-Propanol (IPA)	15	100	0:10
2	2-Propanol (IPA)	15	---	---:--

General Guidelines

- a) This procedure is a reference point for sample extraction using a CEM system and may need to be modified or changed to obtain required results on your sample or analytes of interest.
- b) Wear hand, eye, and body protection when handling organic solvents.
- c) Any of CEM's collection vials/centrifuge tubes in the correct size for the rack owned may be used.
- d) Verify needed solvents are loaded onto the system with sufficient volume. Load the rack containing sample(s) into the EDGE. Select the method and position to load method. Press play and add any any sample ID's, etc. as needed.
- e) Bring to volume or evaporate as necessary for analysis.

Extraction of Phthalates from Polyvinyl Chloride

Procedure

1. Homogenize, mill, or cryomill the sample. The S1 Q-Disc is a preassembled sandwich of the G1 Q-Disc between two C9 Q-Discs. Place entire sandwich, excluding the blue separator, into the bottom of the Q-Cup, and assemble the Q-Cup.
2. Weigh the sample into the Q-Cup.
3. Insert a Q-Screen into the Q-Cup using the Q-Screen tool.

Notes

*Plastics and polymers should only be extracted at temperatures below melting point range. Expansion of the sample during extraction is common during polymer-based extractions.

Sorbents

N/A

Solvents

2-propanol (IPA)/Cyclohexane (1:1)

Sample Weight

≤ 1 g

Equipment

EDGE
Q-Screen
40 mL collection vials

Q-Disc

S1

Heating Program

Cycle	Top Add (mL)	Bottom Add (mL)	Rinse (mL)	Temp (°C)	Hold (mm:ss)
1	20	10	0	80*	10:00

Note: Temperature and hold times may vary depending on the sample and analytes of interest.

Wash Program

Cycle	Solvent	Volume (mL)	Temp (°C)	Hold (mm:ss)
1	2-propanol (IPA)/Cyclohexane (1:1)	10	80	0:15
2	2-propanol (IPA)/Cyclohexane (1:1)	10	---	---:--

General Guidelines

- a) This procedure is a reference point for sample extraction using a CEM system and may need to be modified or changed to obtain required results on your sample or analytes of interest.
- b) Wear hand, eye, and body protection when handling organic solvents.
- c) Any of CEM's collection vials/centrifuge tubes in the correct size for the rack owned may be used.
- d) Verify needed solvents are loaded onto the system with sufficient volume. Load the rack containing sample(s) into the EDGE. Select the method and position to load method. Press play and add any any sample ID's, etc. as needed.
- e) Bring to volume or evaporate as necessary for analysis.

Plastics, Polymers, & Oils

Extraction of Additives from Polyethylene Powder

Procedure

1. Homogenize, mill, or cryomill the sample. The S1 Q-Disc is a preassembled sandwich of the G1 Q-Disc between two C9 Q-Discs. Place entire sandwich, excluding the blue separator, into the bottom of the Q-Cup, and assemble the Q-Cup.
2. Weigh the sample into the Q-Cup.
3. Insert a Q-Screen into the Q-Cup using the Q-Screen tool.

Notes

*Plastics and polymers should only be extracted at temperatures below melting point range. Expansion of the sample during extraction is common during polymer-based extractions.

Sorbents

N/A

Solvents

2-Propanol (IPA)

Sample Weight

≤ 1 g

Equipment

EDGE
40 mL collection vials - amber
Q-Screen

Q-Disc

S1

Heating Program

Cycle	Top Add (mL)	Bottom Add (mL)	Rinse (mL)	Temp (°C)	Hold (mm:ss)
1	30	10	0	90*	15:00

Note: Temperature and hold times may vary depending on the sample and analytes of interest.

Wash Program

Cycle	Solvent	Volume (mL)	Temp (°C)	Hold (mm:ss)
1	2-Propanol (IPA)	15	90	0:15
2	2-Propanol (IPA)	15	---	---:--

General Guidelines

- a) This procedure is a reference point for sample extraction using a CEM system and may need to be modified or changed to obtain required results on your sample or analytes of interest.
- b) Wear hand, eye, and body protection when handling organic solvents.
- c) Any of CEM's collection vials/centrifuge tubes in the correct size for the rack owned may be used.
- d) Verify needed solvents are loaded onto the system with sufficient volume. Load the rack containing sample(s) into the EDGE. Select the method and position to load method. Press play and add any any sample ID's, etc. as needed.
- e) Bring to volume or evaporate as necessary for analysis.

Extraction of Additives from Polypropylene Powder

Procedure

1. Homogenize, mill, or cryomill the sample. The S1 Q-Disc is a preassembled sandwich of the G1 Q-Disc between two C9 Q-Discs. Place entire sandwich, excluding the blue separator, into the bottom of the Q-Cup, and assemble the Q-Cup.
2. Weigh the sample into the Q-Cup.
3. Insert a Q-Screen into the Q-Cup using the Q-Screen tool.

Notes

*Plastics and polymers should only be extracted at temperatures below melting point range. Expansion of the sample during extraction is common during polymer based extraction.

Sorbents

N/A

Solvents

2-Propanol (IPA)

Sample Weight

≤ 1 g

Equipment

EDGE
40 mL collection vials - amber
Q-Screen

Q-Disc

S1

Heating Program

Cycle	Top Add (mL)	Bottom Add (mL)	Rinse (mL)	Temp (°C)	Hold (mm:ss)
1	30	10	0	120*	15:00

Note: Temperature and hold times may vary depending on the sample and analytes of interest.

Wash Program

Cycle	Solvent	Volume (mL)	Temp (°C)	Hold (mm:ss)
1	2-Propanol (IPA)	15	150	0:15
2	2-Propanol (IPA)	15	---	---:--

General Guidelines

- a) This procedure is a reference point for sample extraction using a CEM system and may need to be modified or changed to obtain required results on your sample or analytes of interest.
- b) Wear hand, eye, and body protection when handling organic solvents.
- c) Any of CEM's collection vials/centrifuge tubes in the correct size for the rack owned may be used.
- d) Verify needed solvents are loaded onto the system with sufficient volume. Load the rack containing sample(s) into the EDGE. Select the method and position to load method. Press play and add any any sample ID's, etc. as needed.
- e) Bring to volume or evaporate as necessary for analysis.

Extraction of Chemical Modifier from Polyethylene Resin

Procedure

1. Homogenize, mill, or cryomill the sample. The S1 Q-Disc is a preassembled sandwich of the G1 Q-Disc between two C9 Q-Discs. Place entire sandwich, excluding the blue separator, into the bottom of the Q-Cup, and assemble the Q-Cup.
2. Weigh the sample into the Q-Cup.
3. Insert a Q-Screen into the Q-Cup using the Q-Screen tool.

Notes

*Plastics and polymers should only be extracted at temperatures below melting point range. Expansion of the sample during extraction is common during polymer-based extractions.

Sorbents

N/A

Solvents

Hexane/Acetone (2:3)

Sample Weight

≤ 0.5 g

Equipment

EDGE
Q-Screen
40 mL collection vials

Q-Disc

S1

Heating Program

Cycle	Top Add (mL)	Bottom Add (mL)	Rinse (mL)	Temp (°C)	Hold (mm:ss)
1	20	10	10	60*	15:00

Note: Temperature and hold times may vary depending on the sample and analytes of interest.

Wash Program

Cycle	Solvent	Volume (mL)	Temp (°C)	Hold (mm:ss)
1	Hexane/Acetone (2:3)	10	60	0:15
2	Hexane/Acetone (2:3)	10	---	---:--

General Guidelines

- a) This procedure is a reference point for sample extraction using a CEM system and may need to be modified or changed to obtain required results on your sample or analytes of interest.
- b) Wear hand, eye, and body protection when handling organic solvents.
- c) Any of CEM's collection vials/centrifuge tubes in the correct size for the rack owned may be used.
- d) Verify needed solvents are loaded onto the system with sufficient volume. Load the rack containing sample(s) into the EDGE. Select the method and position to load method. Press play and add any any sample ID's, etc. as needed.
- e) Bring to volume or evaporate as necessary for analysis.

Extraction of Diesel and Oils from Soil

Procedure

1. Homogenize, mill, or cryomill the sample. The S1 Q-Disc is a preassembled sandwich of the G1 Q-Disc between two C9 Q-Discs. Place entire sandwich, excluding the blue separator, into the bottom of the Q-Cup, and assemble the Q-Cup.
2. Weigh the sorbents into the Q-Cup. Spread evenly across the sample by gentle tapping.
3. Weigh the sample into the Q-Cup layering the sample on top of the sorbent. Mixing is not required.
4. Insert a Q-Screen into the Q-Cup using the Q-Screen tool.

Notes

None

Sorbents

Diatomaceous Earth (1 g)

Solvents

Dichloromethane

Sample Weight

≤ 30 g

Equipment

EDGE
Q-Screen
60 mL collection vials

Q-Disc

S1

Heating Program

Cycle	Top Add (mL)	Bottom Add (mL)	Rinse (mL)	Temp (°C)	Hold (mm:ss)
1	30	0	0	100	3:00
2	30	0	0	100	3:00

Note: Temperature and hold times may vary depending on the sample and analytes of interest.

Wash Program

Cycle	Solvent	Volume (mL)	Temp (°C)	Hold (mm:ss)
1	Dichloromethane	30	120	0:15
2	Dichloromethane	30	---	--:--

General Guidelines

- a) This procedure is a reference point for sample extraction using a CEM system and may need to be modified or changed to obtain required results on your sample or analytes of interest.
- b) Wear hand, eye, and body protection when handling organic solvents.
- c) Any of CEM's collection vials/centrifuge tubes in the correct size for the rack owned may be used.
- d) Verify needed solvents are loaded onto the system with sufficient volume. Load the rack containing sample(s) into the EDGE. Select the method and position to load method. Press play and add any any sample ID's, etc. as needed.
- e) Bring to volume or evaporate as necessary for analysis.

Extraction of Film Powder

Procedure

1. Homogenize, mill, or cryomill the sample. The S1 Q-Disc is a preassembled sandwich of the G1 Q-Disc between two C9 Q-Discs. Place entire sandwich, excluding the blue separator, into the bottom of the Q-Cup, and assemble the Q-Cup.
2. Weigh the sample into the Q-Cup. If the sample is in sheet form, cut into small pieces (the smaller, the better).
3. Insert a Q-Screen into the Q-Cup using the Q-Screen tool.

Notes

*Plastics and polymers should only be extracted at temperatures below melting point range.
Expansion of the sample during extraction is common during polymer based extraction.

Sorbents

N/A

Solvents

2-Propanol (IPA)

Sample Weight

≤ 2 g

Equipment

EDGE
Q-Screen
60 mL collection vials

Q-Disc

S1

Heating Program

Cycle	Top Add (mL)	Bottom Add (mL)	Rinse (mL)	Temp (°C)	Hold (mm:ss)
1	15	5	0	120	10:00
2	10	5	0	120	10:00
3	15	5	0	120	10:00
4	10	5	0	120	10:00

Note: Temperature and hold times may vary depending on the sample and analytes of interest.

Wash Program

Cycle	Solvent	Volume (mL)	Temp (°C)	Hold (mm:ss)
1	2-Propanol (IPA)	15	100	0:10
2	2-Propanol (IPA)	15	---	---:--

General Guidelines

- a) This procedure is a reference point for sample extraction using a CEM system and may need to be modified or changed to obtain required results on your sample or analytes of interest.
- b) Wear hand, eye, and body protection when handling organic solvents.
- c) Any of CEM's collection vials/centrifuge tubes in the correct size for the rack owned may be used.
- d) Verify needed solvents are loaded onto the system with sufficient volume. Load the rack containing sample(s) into the EDGE. Select the method and position to load method. Press play and add any any sample ID's, etc. as needed.
- e) Bring to volume or evaporate as necessary for analysis.

Extraction of Phthalates from Polyvinyl Chloride

Procedure

1. Homogenize, mill, or cryomill the sample. The S1 Q-Disc is a preassembled sandwich of the G1 Q-Disc between two C9 Q-Discs. Place entire sandwich, excluding the blue separator, into the bottom of the Q-Cup, and assemble the Q-Cup.
2. Weigh the sample into the Q-Cup.
3. Insert a Q-Screen into the Q-Cup using the Q-Screen tool.

Notes

*Plastics and polymers should only be extracted at temperatures below melting point range. Expansion of the sample during extraction is common during polymer-based extractions.

Sorbents

N/A

Solvents

2-propanol (IPA)/Cyclohexane (1:1)

Sample Weight

≤ 1 g

Equipment

EDGE
Q-Screen
40 mL collection vials

Q-Disc

S1

Heating Program

Cycle	Top Add (mL)	Bottom Add (mL)	Rinse (mL)	Temp (°C)	Hold (mm:ss)
1	20	10	0	80*	10:00

Note: Temperature and hold times may vary depending on the sample and analytes of interest.

Wash Program

Cycle	Solvent	Volume (mL)	Temp (°C)	Hold (mm:ss)
1	2-propanol (IPA)/Cyclohexane (1:1)	10	80	0:15
2	2-propanol (IPA)/Cyclohexane (1:1)	10	---	---:--

General Guidelines

- a) This procedure is a reference point for sample extraction using a CEM system and may need to be modified or changed to obtain required results on your sample or analytes of interest.
- b) Wear hand, eye, and body protection when handling organic solvents.
- c) Any of CEM's collection vials/centrifuge tubes in the correct size for the rack owned may be used.
- d) Verify needed solvents are loaded onto the system with sufficient volume. Load the rack containing sample(s) into the EDGE. Select the method and position to load method. Press play and add any any sample ID's, etc. as needed.
- e) Bring to volume or evaporate as necessary for analysis.