



USP <232>/<233>

Method Note Compendium

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Contents

MARS™ 6

Consumer Products

Suppository (Capsule)	2
Vaseline	3
Wax (Candle)	4

Nutraceuticals

Biotin	6
Ginko (Ground)	7
Ginko (Whole Pill)	8
Kelp	9
Whey Powder	10

Pharmaceutical & Biotech

(4-Fluorophenyl)diphenylsulfonium Triflate	12
Allergy Pill (Ground)	13
Allergy Pill (Whole Pill)	14
Antioxidant (Ground)	15
Antioxidant (Whole Pill)	16
APIs with Aromatic Ring Structures	17
Ascorbic Acid	18
Aspirin (Ground)	19
Aspirin (Whole)	20
Beta Carotene	21
Biotin	22
Calcium Carbonate	23
Calpan Pantothenic Acid	24
Cephalexin	25
Chromium Chelate	26

Cold and Flu Medicine (Liquid)	27
Cupric Sulfate	28
Diclofenac K	29
Empty Capsule (gel)	30
Fish Oil (No Capsule)	31
Folic Acid	32
Ginko (Ground)	33
Ginko (Whole Pill)	34
Kelp	35
Losataran K	36
Magnesium Carbonate	37
Magnesium Oxide	38
Manganese Carbonate	39
Metaformin (ground)	40
Multivitamin (Ground)	41
Multivitamin (Whole)	42
Niacinamide	43
Pantothenic Acid	44
Potassium Chelate	45
Pyridoxine	46
Riboflavin	47
Selenium Chelate	48
Stearic Acid	49
Thiamine	50
Trixie Phosphate in iPrep	51
USP 232/233 (Pharmaceuticals)	52
Vitamin B-12	53
Vitamin C (ground)	54
Vitamin C (whole)	55
Vitamin D	56
Vitamin D3	57
Vitamin E	58
Vitamins	59
Zinc Sulfate	60

Plastics, Polymers, & Oils

Mineral Oil	62
-------------	----

Discover[®] SP-D 80

Consumer Products

Suppository	64
Vaseline	65
Wax (candle)	66

Nutraceuticals

Ginko (Ground)	68
Ginko (Whole Pill)	69
Kelp	70

Pharmaceutical & Biotech

Allergy Pill (ground)	72
Allergy Pill (whole pill)	73
Antioxidant (Ground)	74
Antioxidant (whole pill)	75
Aspirin (Ground)	76
Aspirin (Whole)	77
Calpan Pantothenic Acid	78
Cephalexin	79
Chromium Chelate	80
Cold and Flu Medicine (liquid)	81
Diclofenac K	82
Empty Capsule	83
Fish Oil (No Capsule)	84
Folic Acid	85
Ginko (Ground)	86
Ginko (Whole Pill)	87

Kelp	88
Losataran K	89
Magnesium Oxide	90
Manganese Carbonate	91
Metaformin	92
Multivitamin (ground)	93
Multivitamin (whole)	94
Stearic Acid	95
Thiamine	96
USP 232/233	97
Vitamin C (ground)	98
Vitamin C (whole)	99
Vitamin D3	100
Zinc Sulfate	101

MARS™ 6

Consumer Products

Microwave Digestion of Suppository (Capsule)

Procedure

Weigh 1 Capsule (approx. 1.0 g) into the digestion vessel. Add 12 mL of HNO₃. Gently swirl the mixture and wait approximately 15 minutes before closing the vessel.

Notes

Ensure that the capsule is completely covered with reagent before sealing the vessel.

Recommended Equipment

MARS 6
MARS 6 iWave

Recommended Vessels

Xpress
XpressPlus
EasyPrep
EasyPrep Plus

Reagents

HNO₃

Max Sample Weight

1 Capsule (approx 1 g)

Sample Type

Organic

Control Type

Ramp to Temperature

Method Type

One Touch

Heating Program

Stage	Temp (°C)	* Ramp (mm:ss)	Hold (mm:ss)	Pressure (psi)	* Power (W)	Stirring
1	200	15:00	15:00	800	900-1050	Off

* Ramp times and power may vary depending on type and number of vessels.

Results

Sample was clear, colorless, and particle free upon dilution to 50 mL.

General Precautions

- This procedure is a reference point for sample digestion using a CEM system and may need to be modified or changed to obtain the required results on your sample.
- If using a vessel other than the recommended choice, adjust sample size and pressure limit to values appropriate for the vessel chosen.
- The control / reference vessel must contain the largest and most reactive sample.
- Manual venting of CEM vessels should be performed when wearing hand/eye/body protection and when the vessel contents are at or below room temperature to avoid the potential for chemical burns. Always point the vent hole away from the operator.
- If programming as One Touch, the ramp time and power will be automatically determined based on the number and type of vessels detected.

Microwave Digestion of Vaseline

Procedure

Weigh 0.5 g of the sample into the digestion vessel. Add 10 mL of HNO₃. Gently swirl the mixture and wait approximately 15 minutes before closing the vessel.

Notes

The use of HF may be required to digest any silicates found in the sample.

Recommended Equipment

MARS 6
MARS 6 iWave

Recommended Vessels

Xpress
XpressPlus
EasyPrep
EasyPrep Plus

Reagents

HNO₃

Max Sample Weight

0.5 g

Sample Type

Organic

Control Type

Ramp to Temperature

Method Type

One Touch

Heating Program

Stage	Temp (°C)	* Ramp (mm:ss)	Hold (mm:ss)	Pressure (psi)	* Power (W)	Stirring
1	200	15:00	15:00	800	900-1050	Off

* Ramp times and power may vary depending on type and number of vessels.

Results

Sample was clear, colorless, and particle free upon dilution to 50 mL.

General Precautions

- This procedure is a reference point for sample digestion using a CEM system and may need to be modified or changed to obtain the required results on your sample.
- If using a vessel other than the recommended choice, adjust sample size and pressure limit to values appropriate for the vessel chosen.
- The control / reference vessel must contain the largest and most reactive sample.
- Manual venting of CEM vessels should be performed when wearing hand/eye/body protection and when the vessel contents are at or below room temperature to avoid the potential for chemical burns. Always point the vent hole away from the operator.
- If programming as One Touch, the ramp time and power will be automatically determined based on the number and type of vessels detected.

Microwave Digestion of Wax (Candle)

Procedure

Weigh 0.5 g of the sample into the digestion vessel. Add 10 mL of HNO₃. Gently swirl the mixture and wait approximately 15 minutes before closing the vessel.

Notes

Recommended Equipment

MARS 6
MARS 6 iWave

Recommended Vessels

Xpress
XpressPlus
EasyPrep
EasyPrep Plus

Reagents

HNO₃

Max Sample Weight

0.5 g

Sample Type

Organic

Control Type

Ramp to Temperature

Method Type

One Touch

Heating Program

Stage	Temp (°C)	* Ramp (mm:ss)	Hold (mm:ss)	Pressure (psi)	* Power (W)	Stirring
1	200	15:00	15:00	800	900-1050	Off

* Ramp times and power may vary depending on type and number of vessels.

Results

Sample was clear, colorless, and particle free upon dilution to 50 mL.

General Precautions

- This procedure is a reference point for sample digestion using a CEM system and may need to be modified or changed to obtain the required results on your sample.
- If using a vessel other than the recommended choice, adjust sample size and pressure limit to values appropriate for the vessel chosen.
- The control / reference vessel must contain the largest and most reactive sample.
- Manual venting of CEM vessels should be performed when wearing hand/eye/body protection and when the vessel contents are at or below room temperature to avoid the potential for chemical burns. Always point the vent hole away from the operator.
- If programming as One Touch, the ramp time and power will be automatically determined based on the number and type of vessels detected.

MARS™ 6

Nutraceuticals

Microwave Digestion of Biotin

Procedure

Weigh 0.5 g of the sample into the digestion vessel. Add 9 ml of HNO₃, and 1 ml of HCl. Gently swirl the mixture and wait approximately 15 minutes before closing the vessel.

Notes

The addition of Conc. HCl (0-4mL) is appropriate for the stabilization of Ag, Ba and Sb, and high concentrations of Fe and Al in solution. The amount of HCl will vary depending on the matrix and the concentration of the analytes. The addition of HCl may, however, limit the techniques or increase the difficulties of analysis.

Recommended Equipment

MARS 6
MARS 6 iWave

Recommended Vessels

EasyPrep
EasyPrep Plus
Xpress
Xpress Plus

Reagents

HNO₃
HCl

Max Sample Weight

0.5 g

Sample Type

Organic

Control Type

Ramp to Temperature

Method Type

One Touch

Heating Program

Stage	Temp (°C)	* Ramp (mm:ss)	Hold (mm:ss)	Pressure (psi)	* Power (W)	Stirring
1	210	20:00	15:00	800	900-1050	Off

* Ramp times and power may vary depending on type and number of vessels.

Results

Sample was clear, colorless, and particle free upon dilution to 50 ml.

General Precautions

- This procedure is a reference point for sample digestion using a CEM system and may need to be modified or changed to obtain the required results on your sample.
- If using a vessel other than the recommended choice, adjust sample size and pressure limit to values appropriate for the vessel chosen.
- The control / reference vessel must contain the largest and most reactive sample.
- Manual venting of CEM vessels should be performed when wearing hand/eye/body protection and when the vessel contents are at or below room temperature to avoid the potential for chemical burns. Always point the vent hole away from the operator.
- If programming as One Touch, the ramp time and power will be automatically determined based on the number and type of vessels detected.

Microwave Digestion of Ginko (Ground)

Procedure

Weigh 0.5 g of the sample into the digestion vessel. Add 10 mL of HNO₃. Gently swirl the mixture and wait approximately 15 minutes before closing the vessel.

Notes

The addition of Conc. HCl (0-4 ml) is appropriate for the stabilization of Ag, Ba and Sb, and high concentrations of Fe and Al in solution. The amount of HCl will vary depending on the matrix and the concentration of the analytes. The addition of HCl may, however, limit the techniques or increase the difficulties of analysis.

Recommended Equipment

MARS 6
MARS 6 iWave

Recommended Vessels

Xpress
XpressPlus
EasyPrep
EasyPrep Plus

Reagents

HNO₃

Max Sample Weight

0.5 g

Sample Type

Organic

Control Type

Ramp to Temperature

Method Type

One Touch

Heating Program

Stage	Temp (°C)	* Ramp (mm:ss)	Hold (mm:ss)	Pressure (psi)	* Power (W)	Stirring
1	200	15:00	15:00	800	900-1050	Off

* Ramp times and power may vary depending on type and number of vessels.

Results

Sample was clear, colorless, and particle free upon dilution to 50 mL.

General Precautions

- This procedure is a reference point for sample digestion using a CEM system and may need to be modified or changed to obtain the required results on your sample.
- If using a vessel other than the recommended choice, adjust sample size and pressure limit to values appropriate for the vessel chosen.
- The control / reference vessel must contain the largest and most reactive sample.
- Manual venting of CEM vessels should be performed when wearing hand/eye/body protection and when the vessel contents are at or below room temperature to avoid the potential for chemical burns. Always point the vent hole away from the operator.
- If programming as One Touch, the ramp time and power will be automatically determined based on the number and type of vessels detected.

Microwave Digestion of Ginko (Whole Pill)

Procedure

Weigh 1 pill (approx 1.0 g) into the digestion vessel. Add 10 mL of HNO₃ and 2 mL of H₂O₂. Gently swirl the mixture and wait approximately 15 minutes before closing the vessel.

Notes

The addition of Conc. HCl (0-4 ml) is appropriate for the stabilization of Ag, Ba and Sb, and high concentrations of Fe and Al in solution. The amount of HCl will vary depending on the matrix and the concentration of the analytes. The addition of HCl may, however, limit the techniques or increase the difficulties of analysis.

Recommended Equipment

MARS 6
MARS 6 iWave

Recommended Vessels

Xpress
XpressPlus
EasyPrep
EasyPrep Plus

Reagents

HNO₃
H₂O₂

Max Sample Weight

1 pill (Approx 1.0 g)

Sample Type

Organic

Control Type

Ramp to Temperature

Method Type

One Touch

Heating Program

Stage	Temp (°C)	* Ramp (mm:ss)	Hold (mm:ss)	Pressure (psi)	* Power (W)	Stirring
1	210	15:00	15:00	800	900-1050	Off

* Ramp times and power may vary depending on type and number of vessels.

Results

Sample was clear, colorless, and particle free upon dilution to 50 mL.

General Precautions

- This procedure is a reference point for sample digestion using a CEM system and may need to be modified or changed to obtain the required results on your sample.
- If using a vessel other than the recommended choice, adjust sample size and pressure limit to values appropriate for the vessel chosen.
- The control / reference vessel must contain the largest and most reactive sample.
- Manual venting of CEM vessels should be performed when wearing hand/eye/body protection and when the vessel contents are at or below room temperature to avoid the potential for chemical burns. Always point the vent hole away from the operator.
- If programming as One Touch, the ramp time and power will be automatically determined based on the number and type of vessels detected.

Microwave Digestion of Kelp

Procedure

Weigh 0.5 g of the sample into the digestion vessel. Add 9 mL of HNO₃ and 1 mL of HCl. Gently swirl the mixture and wait approximately 15 minutes before closing the vessel.

Notes

The addition of Conc. HCl (0-4 ml) is appropriate for the stabilization of Ag, Ba and Sb, and high concentrations of Fe and Al in solution. The amount of HCl will vary depending on the matrix and the concentration of the analytes. The addition of HCl may, however, limit the techniques or increase the difficulties of analysis.

Recommended Equipment

MARS 6
MARS 6 iWave

Recommended Vessels

Xpress
XpressPlus
EasyPrep
EasyPrep Plus

Reagents

HNO₃
HCl

Max Sample Weight

0.5 g

Sample Type

Organic

Control Type

Ramp to Temperature

Method Type

One Touch

Heating Program

Stage	Temp (°C)	* Ramp (mm:ss)	Hold (mm:ss)	Pressure (psi)	* Power (W)	Stirring
1	200	15:00	15:00	800	900-1050	Off

* Ramp times and power may vary depending on type and number of vessels.

Results

Sample was clear, colorless, and particle free upon dilution to 50 mL.

General Precautions

- This procedure is a reference point for sample digestion using a CEM system and may need to be modified or changed to obtain the required results on your sample.
- If using a vessel other than the recommended choice, adjust sample size and pressure limit to values appropriate for the vessel chosen.
- The control / reference vessel must contain the largest and most reactive sample.
- Manual venting of CEM vessels should be performed when wearing hand/eye/body protection and when the vessel contents are at or below room temperature to avoid the potential for chemical burns. Always point the vent hole away from the operator.
- If programming as One Touch, the ramp time and power will be automatically determined based on the number and type of vessels detected.

Microwave Digestion of Whey Powder

Procedure

Weigh 0.5 g of the sample into the digestion vessel. Add 10 ml of HNO₃. Gently swirl the mixture and wait approximately 15 minutes before closing the vessel.

Notes

The addition of Conc. HCl (0-4mL) is appropriate for the stabilization of Ag, Ba and Sb, and high concentrations of Fe and Al in solution. The amount of HCl will vary depending on the matrix and the concentration of the analytes. The addition of HCl may, however, limit the techniques or increase the difficulties of analysis.

Recommended Equipment

MARS 6
MARS 6 iWave

Recommended Vessels

Xpress
XpressPlus
EasyPrep
EasyPrep Plus

Reagents

HNO₃

Max Sample Weight

0.5 g

Sample Type

Organic

Control Type

Ramp to Temperature

Method Type

One Touch

Heating Program

Stage	Temp (°C)	* Ramp (mm:ss)	Hold (mm:ss)	Pressure (psi)	* Power (W)	Stirring
1	210	15:00	15:00	800	900-1050	Off

* Ramp times and power may vary depending on type and number of vessels.

Results

Sample was clear, colorless, and particle free upon dilution to 50 ml.

General Precautions

- This procedure is a reference point for sample digestion using a CEM system and may need to be modified or changed to obtain the required results on your sample.
- If using a vessel other than the recommended choice, adjust sample size and pressure limit to values appropriate for the vessel chosen.
- The control / reference vessel must contain the largest and most reactive sample.
- Manual venting of CEM vessels should be performed when wearing hand/eye/body protection and when the vessel contents are at or below room temperature to avoid the potential for chemical burns. Always point the vent hole away from the operator.
- If programming as One Touch, the ramp time and power will be automatically determined based on the number and type of vessels detected.

MARS™ 6

Pharmaceutical & Biotech

Microwave Digestion of (4-Fluorophenyl)diphenylsulfonium Triflate

Procedure

Add 0.25 g of the sample into the digestion vessel. Add 9 mL of HNO₃, and 1 mL of HCl. Gently swirl the mixture and wait approximately 15 minutes before closing the vessel.

Notes

This application can only be run in the iPrep vessel.

This chemical compound is also known as Sudan Orange.

The addition of Conc. HCl (0-4 ml) is appropriate for the stabilization of Ag, Ba and Sb, and high concentrations of Fe and Al in solution. The amount of HCl will vary depending on the matrix and the concentration of the analytes.

Recommended Equipment

MARS 6 iWave

Recommended Vessels

iPrep

Reagents

HNO₃

HCl

Max Sample Weight

0.25 g

Sample Type

Organic

Control Type

Ramp to Temperature

Method Type

One Touch

Heating Program

Stage	Temp (°C)	* Ramp (mm:ss)	Hold (mm:ss)	Pressure (psi)	* Power (W)	Stirring
1	250	30:00	25:00	N/A	1800	Off

* Ramp times and power may vary depending on type and number of vessels.

Results

Sample was clear, gold colored, and particle free upon dilution to 50 mL.

General Precautions

- This procedure is a reference point for sample digestion using a CEM system and may need to be modified or changed to obtain the required results on your sample.
- If using a vessel other than the recommended choice, adjust sample size and pressure limit to values appropriate for the vessel chosen.
- Manual venting of CEM vessels should be performed when wearing hand/eye/body protection and when the vessel contents are at or below room temperature to avoid the potential for chemical burns. Always point the vent hole away from the operator.
- If programming as One Touch, the ramp time and power will be automatically determined based on the number and type of vessels detected.

Microwave Digestion of Allergy Pill (Ground)

Procedure

Weigh 0.25 g of the sample into the digestion vessel. Add 9 mL of HNO₃ and 1 mL of HCl. Gently swirl the mixture and wait approximately 15 minutes before closing the vessel.

Notes

The addition of Conc. HCl (0-4 ml) is appropriate for the stabilization of Ag, Ba and Sb, and high concentrations of Fe and Al in solution. The amount of HCl will vary depending on the matrix and the concentration of the analytes. The addition of HCl may, however, limit the techniques or increase the difficulties of analysis.

Recommended Equipment

MARS 6
MARS 6 iWave

Recommended Vessels

Xpress
XpressPlus
EasyPrep
EasyPrep Plus

Reagents

HNO₃
HCl

Max Sample Weight

0.25 g

Sample Type

Organic

Control Type

Ramp to Temperature

Method Type

One Touch

Heating Program

Stage	Temp (°C)	* Ramp (mm:ss)	Hold (mm:ss)	Pressure (psi)	* Power (W)	Stirring
1	200	15:00	15:00	800	900-1050	Off

* Ramp times and power may vary depending on type and number of vessels.

Results

Sample was clear, colorless, and particle free upon dilution to 50 mL.

General Precautions

- This procedure is a reference point for sample digestion using a CEM system and may need to be modified or changed to obtain the required results on your sample.
- If using a vessel other than the recommended choice, adjust sample size and pressure limit to values appropriate for the vessel chosen.
- The control / reference vessel must contain the largest and most reactive sample.
- Manual venting of CEM vessels should be performed when wearing hand/eye/body protection and when the vessel contents are at or below room temperature to avoid the potential for chemical burns. Always point the vent hole away from the operator.
- If programming as One Touch, the ramp time and power will be automatically determined based on the number and type of vessels detected.

Microwave Digestion of Allergy Pill (Whole Pill)

Procedure

Weigh 1 pill (Approx 1.0 g) into the digestion vessel. Add 10 mL of HNO₃ and 2 mL of H₂O₂ (30%). Gently swirl the mixture and wait approximately 15 minutes before closing the vessel.

Notes

The addition of Conc. HCl (0-4 ml) is appropriate for the stabilization of Ag, Ba and Sb, and high concentrations of Fe and Al in solution. The amount of HCl will vary depending on the matrix and the concentration of the analytes. The addition of HCl may, however, limit the techniques or increase the difficulties of analysis.

Recommended Equipment

MARS 6
MARS 6 iWave

Recommended Vessels

Xpress
XpressPlus
EasyPrep
EasyPrep Plus

Reagents

HNO₃
H₂O₂ (30%)

Max Sample Weight

1 pill (Approx 1.0 g)

Sample Type

Organic

Control Type

Ramp to Temperature

Method Type

One Touch

Heating Program

Stage	Temp (°C)	* Ramp (mm:ss)	Hold (mm:ss)	Pressure (psi)	* Power (W)	Stirring
1	200	15:00	15:00	800	900-1050	Off

* Ramp times and power may vary depending on type and number of vessels.

Results

Sample was clear, colorless, and particle free upon dilution to 50 mL.

General Precautions

- This procedure is a reference point for sample digestion using a CEM system and may need to be modified or changed to obtain the required results on your sample.
- If using a vessel other than the recommended choice, adjust sample size and pressure limit to values appropriate for the vessel chosen.
- The control / reference vessel must contain the largest and most reactive sample.
- Manual venting of CEM vessels should be performed when wearing hand/eye/body protection and when the vessel contents are at or below room temperature to avoid the potential for chemical burns. Always point the vent hole away from the operator.
- If programming as One Touch, the ramp time and power will be automatically determined based on the number and type of vessels detected.

Microwave Digestion of Antioxidant (Ground)

Procedure

Weigh 0.5 g of the sample into the digestion vessel. Add 9 mL of HNO₃ and 1 mL of HCl. Gently swirl the mixture and wait approximately 15 minutes before closing the vessel.

Notes

The addition of Conc. HCl (0-4 ml) is appropriate for the stabilization of Ag, Ba and Sb, and high concentrations of Fe and Al in solution. The amount of HCl will vary depending on the matrix and the concentration of the analytes. The addition of HCl may, however, limit the techniques or increase the difficulties of analysis.

Recommended Equipment

MARS 6
MARS 6 iWave

Recommended Vessels

Xpress
XpressPlus
EasyPrep
EasyPrep Plus

Reagents

HNO₃
HCl

Max Sample Weight

0.5 g

Sample Type

Organic

Control Type

Ramp to Temperature

Method Type

One Touch

Heating Program

Stage	Temp (°C)	* Ramp (mm:ss)	Hold (mm:ss)	Pressure (psi)	* Power (W)	Stirring
1	200	15:00	15:00	800	900-1050	Off

* Ramp times and power may vary depending on type and number of vessels.

Results

Sample was clear, colorless, and particle free upon dilution to 50 mL.

General Precautions

- This procedure is a reference point for sample digestion using a CEM system and may need to be modified or changed to obtain the required results on your sample.
- If using a vessel other than the recommended choice, adjust sample size and pressure limit to values appropriate for the vessel chosen.
- The control / reference vessel must contain the largest and most reactive sample.
- Manual venting of CEM vessels should be performed when wearing hand/eye/body protection and when the vessel contents are at or below room temperature to avoid the potential for chemical burns. Always point the vent hole away from the operator.
- If programming as One Touch, the ramp time and power will be automatically determined based on the number and type of vessels detected.

Microwave Digestion of Antioxidant (Whole Pill)

Procedure

Weigh 1 pill (approx 1.4 g) into the digestion vessel. Add 10 mL of HNO₃ and 2 mL of H₂O₂ (30%). Gently swirl the mixture and wait approximately 15 minutes before closing the vessel.

Notes

The addition of Conc. HCl (0-4 ml) is appropriate for the stabilization of Ag, Ba and Sb, and high concentrations of Fe and Al in solution. The amount of HCl will vary depending on the matrix and the concentration of the analytes. The addition of HCl may, however, limit the techniques or increase the difficulties of analysis.

Recommended Equipment

MARS 6
MARS 6 iWave

Recommended Vessels

Xpress
XpressPlus
EasyPrep
EasyPrep Plus

Reagents

HNO₃
H₂O₂ (30%)

Max Sample Weight

1 pill (Approx 1.4 g)

Sample Type

Organic

Control Type

Ramp to Temperature

Method Type

One Touch

Heating Program

Stage	Temp (°C)	* Ramp (mm:ss)	Hold (mm:ss)	Pressure (psi)	* Power (W)	Stirring
1	200	15:00	15:00	800	900-1050	Off

* Ramp times and power may vary depending on type and number of vessels.

Results

Sample was clear, colorless, and particle free upon dilution to 50 mL.

General Precautions

- This procedure is a reference point for sample digestion using a CEM system and may need to be modified or changed to obtain the required results on your sample.
- If using a vessel other than the recommended choice, adjust sample size and pressure limit to values appropriate for the vessel chosen.
- The control / reference vessel must contain the largest and most reactive sample.
- Manual venting of CEM vessels should be performed when wearing hand/eye/body protection and when the vessel contents are at or below room temperature to avoid the potential for chemical burns. Always point the vent hole away from the operator.
- If programming as One Touch, the ramp time and power will be automatically determined based on the number and type of vessels detected.

Microwave Digestion of APIs with Aromatic Ring Structures

Procedure

Weigh 0.1 g - 0.5 g of the sample into the digestion vessel. Add 9 ml of HNO₃ and 1 ml of HCl. Gently swirl the mixture and wait approximately 15 minutes before closing the vessel.

Notes

This application can only be run in the iPrep vessel.

The addition of Conc. HCl (0-4 ml) is appropriate for the stabilization of Ag, Ba and Sb, and high concentrations of Fe and Al in solution. The amount of HCl will vary depending on the matrix and the concentration of the analytes. The addition of HCl may, however, limit the techniques or increase the difficulties of analysis.

Recommended Equipment

MARS 6 iWave

Recommended Vessels

iPrep

Reagents

HNO₃

HCl

Max Sample Weight

0.1 g - 0.5 g

Sample Type

Organic

Control Type

Ramp to Temperature

Method Type

One Touch

Heating Program

Stage	Temp (°C)	* Ramp (mm:ss)	Hold (mm:ss)	Pressure (psi)	* Power (W)	Stirring
1	250	30:00	25:00	N/A	1800	N/A

* Ramp times and power may vary depending on type and number of vessels.

Results

Sample was clear, colorless, and particle free upon dilution to 50 ml. If the sample contains precious metals the diluted sample may be the color associated with the metals.

General Precautions

- This procedure is a reference point for sample digestion using a CEM system and may need to be modified or changed to obtain the required results on your sample.
- If using a vessel other than the recommended choice, adjust sample size and pressure limit to values appropriate for the vessel chosen.
- Manual venting of CEM vessels should be performed when wearing hand/eye/body protection and when the vessel contents are at or below room temperature to avoid the potential for chemical burns. Always point the vent hole away from the operator.
- If programming as One Touch, the ramp time and power will be automatically determined based on the number and type of vessels detected.

Microwave Digestion of Ascorbic Acid

Procedure

Weigh 0.5 g of the sample into the digestion vessel. Add 9 ml of HNO₃, and 1 ml of HCl. Gently swirl the mixture and wait approximately 15 minutes before closing the vessel.

Notes

The addition of Conc. HCl (0-4mL) is appropriate for the stabilization of Ag, Ba and Sb, and high concentrations of Fe and Al in solution. The amount of HCl will vary depending on the matrix and the concentration of the analytes. The addition of HCl may, however, limit the techniques or increase the difficulties of analysis.

Recommended Equipment

MARS 6
MARS 6 iWave

Recommended Vessels

EasyPrep
EasyPrep Plus
Xpress Plus
Xpress

Reagents

HNO₃
HCl

Max Sample Weight

0.5 g

Sample Type

Organic

Control Type

Ramp to Temperature

Method Type

One Touch

Heating Program

Stage	Temp (°C)	* Ramp (mm:ss)	Hold (mm:ss)	Pressure (psi)	*Power (W)	Stirring
1	210	20:00	15:00	800	900-1050	Off

* Ramp times and power may vary depending on type and number of vessels.

Results

Sample was clear, colorless, and particle free upon dilution to 50 ml.

General Precautions

- This procedure is a reference point for sample digestion using a CEM system and may need to be modified or changed to obtain the required results on your sample.
- If using a vessel other than the recommended choice, adjust sample size and pressure limit to values appropriate for the vessel chosen.
- The control / reference vessel must contain the largest and most reactive sample.
- Manual venting of CEM vessels should be performed when wearing hand/eye/body protection and when the vessel contents are at or below room temperature to avoid the potential for chemical burns. Always point the vent hole away from the operator.
- If programming as One Touch, the ramp time and power will be automatically determined based on the number and type of vessels detected.

Microwave Digestion of Aspirin (Ground)

Procedure

Weigh 0.25 g of the sample into the digestion vessel. Add 9 mL of HNO₃ and 1 mL of HCl. Gently swirl the mixture and wait approximately 15 minutes before closing the vessel.

Notes

The addition of Conc. HCl (0-4 ml) is appropriate for the stabilization of Ag, Ba and Sb, and high concentrations of Fe and Al in solution. The amount of HCl will vary depending on the matrix and the concentration of the analytes. The addition of HCl may, however, limit the techniques or increase the difficulties of analysis.

Recommended Equipment

MARS 6
MARS 6 iWave

Recommended Vessels

Xpress
XpressPlus
EasyPrep
EasyPrep Plus

Reagents

HNO₃
HCl

Max Sample Weight

0.25 g

Sample Type

Organic

Control Type

Ramp to Temperature

Method Type

One Touch

Heating Program

Stage	Temp (°C)	* Ramp (mm:ss)	Hold (mm:ss)	Pressure (psi)	* Power (W)	Stirring
1	200	15:00	15:00	800	900-1050	Off

* Ramp times and power may vary depending on type and number of vessels.

Results

Sample was clear, colorless, and particle free upon dilution to 50 mL.

General Precautions

- This procedure is a reference point for sample digestion using a CEM system and may need to be modified or changed to obtain the required results on your sample.
- If using a vessel other than the recommended choice, adjust sample size and pressure limit to values appropriate for the vessel chosen.
- The control / reference vessel must contain the largest and most reactive sample.
- Manual venting of CEM vessels should be performed when wearing hand/eye/body protection and when the vessel contents are at or below room temperature to avoid the potential for chemical burns. Always point the vent hole away from the operator.
- If programming as One Touch, the ramp time and power will be automatically determined based on the number and type of vessels detected.

Microwave Digestion of Aspirin (Whole)

Procedure

Weigh 1 pill (Approx 1.0 g) into the digestion vessel. Add 10 mL of HNO₃. Gently swirl the mixture and wait approximately 15 minutes before closing the vessel.

Notes

The addition of Conc. HCl (0-4 ml) is appropriate for the stabilization of Ag, Ba and Sb, and high concentrations of Fe and Al in solution. The amount of HCl will vary depending on the matrix and the concentration of the analytes. The addition of HCl may, however, limit the techniques or increase the difficulties of analysis.

Recommended Equipment

MARS 6
MARS 6 iWave

Recommended Vessels

Xpress
XpressPlus
EasyPrep
EasyPrep Plus

Reagents

HNO₃

Max Sample Weight

1 pill (Approx 1.0 g)

Sample Type

Organic

Control Type

Ramp to Temperature

Method Type

One Touch

Heating Program

Stage	Temp (°C)	* Ramp (mm:ss)	Hold (mm:ss)	Pressure (psi)	* Power (W)	Stirring
1	200	15:00	15:00	800	900-1050	Off

* Ramp times and power may vary depending on type and number of vessels.

Results

Sample was clear, colorless, and particle free upon dilution to 50 mL.

General Precautions

- This procedure is a reference point for sample digestion using a CEM system and may need to be modified or changed to obtain the required results on your sample.
- If using a vessel other than the recommended choice, adjust sample size and pressure limit to values appropriate for the vessel chosen.
- The control / reference vessel must contain the largest and most reactive sample.
- Manual venting of CEM vessels should be performed when wearing hand/eye/body protection and when the vessel contents are at or below room temperature to avoid the potential for chemical burns. Always point the vent hole away from the operator.
- If programming as One Touch, the ramp time and power will be automatically determined based on the number and type of vessels detected.

Microwave Digestion of Beta Carotene

Procedure

Weigh 0.5 g of the sample into the digestion vessel. Add 9 ml of HNO₃, and 1 ml of HCl. Gently swirl the mixture and wait approximately 15 minutes before closing the vessel.

Notes

The addition of Conc. HCl (0-4mL) is appropriate for the stabilization of Ag, Ba and Sb, and high concentrations of Fe and Al in solution. The amount of HCl will vary depending on the matrix and the concentration of the analytes. The addition of HCl may, however, limit the techniques or increase the difficulties of analysis.

Recommended Equipment

MARS 6 iWave
MARS 6

Recommended Vessels

EasyPrep
EasyPrep Plus
Xpress
Xpress Plus

Reagents

HNO₃
HCl

Max Sample Weight

0.5 g

Sample Type

Organic

Control Type

Ramp to Temperature

Method Type

One Touch

Heating Program

Stage	Temp (°C)	* Ramp (mm:ss)	Hold (mm:ss)	Pressure (psi)	* Power (W)	Stirring
1	210	20:00	15:00	800	900-1050	Off

* Ramp times and power may vary depending on type and number of vessels.

Results

Sample was clear, colorless, and particle free upon dilution to 50 ml.

General Precautions

- This procedure is a reference point for sample digestion using a CEM system and may need to be modified or changed to obtain the required results on your sample.
- If using a vessel other than the recommended choice, adjust sample size and pressure limit to values appropriate for the vessel chosen.
- The control / reference vessel must contain the largest and most reactive sample.
- Manual venting of CEM vessels should be performed when wearing hand/eye/body protection and when the vessel contents are at or below room temperature to avoid the potential for chemical burns. Always point the vent hole away from the operator.
- If programming as One Touch, the ramp time and power will be automatically determined based on the number and type of vessels detected.

Microwave Digestion of Biotin

Procedure

Weigh 0.5 g of the sample into the digestion vessel. Add 9 ml of HNO₃, and 1 ml of HCl. Gently swirl the mixture and wait approximately 15 minutes before closing the vessel.

Notes

The addition of Conc. HCl (0-4mL) is appropriate for the stabilization of Ag, Ba and Sb, and high concentrations of Fe and Al in solution. The amount of HCl will vary depending on the matrix and the concentration of the analytes. The addition of HCl may, however, limit the techniques or increase the difficulties of analysis.

Recommended Equipment

MARS 6
MARS 6 iWave

Recommended Vessels

EasyPrep
EasyPrep Plus
Xpress
Xpress Plus

Reagents

HNO₃
HCl

Max Sample Weight

0.5 g

Sample Type

Organic

Control Type

Ramp to Temperature

Method Type

One Touch

Heating Program

Stage	Temp (°C)	* Ramp (mm:ss)	Hold (mm:ss)	Pressure (psi)	* Power (W)	Stirring
1	210	20:00	15:00	800	900-1050	Off

* Ramp times and power may vary depending on type and number of vessels.

Results

Sample was clear, colorless, and particle free upon dilution to 50 ml.

General Precautions

- This procedure is a reference point for sample digestion using a CEM system and may need to be modified or changed to obtain the required results on your sample.
- If using a vessel other than the recommended choice, adjust sample size and pressure limit to values appropriate for the vessel chosen.
- The control / reference vessel must contain the largest and most reactive sample.
- Manual venting of CEM vessels should be performed when wearing hand/eye/body protection and when the vessel contents are at or below room temperature to avoid the potential for chemical burns. Always point the vent hole away from the operator.
- If programming as One Touch, the ramp time and power will be automatically determined based on the number and type of vessels detected.

Microwave Digestion of Calcium Carbonate

Procedure

Weigh 0.5 g of the sample into the digestion vessel. Slowly add 9 ml of HNO₃, and 1 ml of HCl. Gently swirl the mixture and wait approximately 15 minutes before closing the vessel.

Notes

The addition of Conc. HCl (0-4mL) is appropriate for the stabilization of Ag, Ba and Sb, and high concentrations of Fe and Al in solution. The amount of HCl will vary depending on the matrix and the concentration of the analytes. The addition of HCl may, however, limit the techniques or increase the difficulties of analysis.

Allow initial reaction to subside before sealing vessel.

Recommended Equipment

MARS 6
MARS 6 iWave

Recommended Vessels

EasyPrep
EasyPrep Plus
Xpress
Xpress Plus

Reagents

HNO₃
HCl

Max Sample Weight

0.5 g

Sample Type

Organic

Control Type

Ramp to Temperature

Method Type

One Touch

Heating Program

Stage	Temp (°C)	* Ramp (mm:ss)	Hold (mm:ss)	Pressure (psi)	*Power (W)	Stirring
1	210	20:00	15:00	800	900-1050	Off

* Ramp times and power may vary depending on type and number of vessels.

Results

Sample was clear, colorless, and particle free upon dilution to 50 ml.

General Precautions

- This procedure is a reference point for sample digestion using a CEM system and may need to be modified or changed to obtain the required results on your sample.
- If using a vessel other than the recommended choice, adjust sample size and pressure limit to values appropriate for the vessel chosen.
- The control / reference vessel must contain the largest and most reactive sample.
- Manual venting of CEM vessels should be performed when wearing hand/eye/body protection and when the vessel contents are at or below room temperature to avoid the potential for chemical burns. Always point the vent hole away from the operator.
- If programming as One Touch, the ramp time and power will be automatically determined based on the number and type of vessels detected.

Microwave Digestion of Calpan Pantothenic Acid

Procedure

Weigh 0.5 g of the sample into the digestion vessel. Add 9 mL of HNO₃ and 1 mL of HCl. Gently swirl the mixture and wait approximately 15 minutes before closing the vessel.

Notes

The addition of Conc. HCl (0-4 ml) is appropriate for the stabilization of Ag, Ba and Sb, and high concentrations of Fe and Al in solution. The amount of HCl will vary depending on the matrix and the concentration of the analytes. The addition of HCl may, however, limit the techniques or increase the difficulties of analysis.

Recommended Equipment

MARS 6
MARS 6 iWave

Recommended Vessels

Xpress
XpressPlus
EasyPrep
EasyPrep Plus

Reagents

HNO₃
HCl

Max Sample Weight

0.5 g

Sample Type

Organic

Control Type

Ramp to Temperature

Method Type

One Touch

Heating Program

Stage	Temp (°C)	* Ramp (mm:ss)	Hold (mm:ss)	Pressure (psi)	* Power (W)	Stirring
1	200	15:00	15:00	800	900-1050	Off

* Ramp times and power may vary depending on type and number of vessels.

Results

Sample was clear, colorless, and particle free upon dilution to 50 mL.

General Precautions

- This procedure is a reference point for sample digestion using a CEM system and may need to be modified or changed to obtain the required results on your sample.
- If using a vessel other than the recommended choice, adjust sample size and pressure limit to values appropriate for the vessel chosen.
- The control / reference vessel must contain the largest and most reactive sample.
- Manual venting of CEM vessels should be performed when wearing hand/eye/body protection and when the vessel contents are at or below room temperature to avoid the potential for chemical burns. Always point the vent hole away from the operator.
- If programming as One Touch, the ramp time and power will be automatically determined based on the number and type of vessels detected.

Microwave Digestion of Cephalexin

Procedure

Weigh 0.5 g of the sample into the digestion vessel. Add 10 mL of HNO₃. Gently swirl the mixture and wait approximately 15 minutes before closing the vessel.

Notes

The addition of Conc. HCl (0-4 ml) is appropriate for the stabilization of Ag, Ba and Sb, and high concentrations of Fe and Al in solution. The amount of HCl will vary depending on the matrix and the concentration of the analytes. The addition of HCl may, however, limit the techniques or increase the difficulties of analysis.

Recommended Equipment

MARS 6
MARS 6 iWave

Recommended Vessels

Xpress
XpressPlus
EasyPrep
EasyPrep Plus

Reagents

HNO₃

Max Sample Weight

0.5 g

Sample Type

Organic

Control Type

Ramp to Temperature

Method Type

One Touch

Heating Program

Stage	Temp (°C)	* Ramp (mm:ss)	Hold (mm:ss)	Pressure (psi)	* Power (W)	Stirring
1	200	15:00	15:00	800	900-1050	Off

* Ramp times and power may vary depending on type and number of vessels.

Results

Sample was clear, colorless, and particle free upon dilution to 50 mL.

General Precautions

- This procedure is a reference point for sample digestion using a CEM system and may need to be modified or changed to obtain the required results on your sample.
- If using a vessel other than the recommended choice, adjust sample size and pressure limit to values appropriate for the vessel chosen.
- The control / reference vessel must contain the largest and most reactive sample.
- Manual venting of CEM vessels should be performed when wearing hand/eye/body protection and when the vessel contents are at or below room temperature to avoid the potential for chemical burns. Always point the vent hole away from the operator.
- If programming as One Touch, the ramp time and power will be automatically determined based on the number and type of vessels detected.

Microwave Digestion of Chromium Chelate

Procedure

Weigh 0.5 g of the sample into the digestion vessel. Add 9 mL of HNO₃ and 1 mL of HCl. Gently swirl the mixture and wait approximately 15 minutes before closing the vessel.

Notes

The addition of Conc. HCl (0-4 ml) is appropriate for the stabilization of Ag, Ba and Sb, and high concentrations of Fe and Al in solution. The amount of HCl will vary depending on the matrix and the concentration of the analytes. The addition of HCl may, however, limit the techniques or increase the difficulties of analysis.

Recommended Equipment

MARS 6
MARS 6 iWave

Recommended Vessels

Xpress
XpressPlus
EasyPrep
EasyPrep Plus

Reagents

HNO₃
HCl

Max Sample Weight

0.5 g

Sample Type

Organic

Control Type

Ramp to Temperature

Method Type

One Touch

Heating Program

Stage	Temp (°C)	* Ramp (mm:ss)	Hold (mm:ss)	Pressure (psi)	* Power (W)	Stirring
1	200	15:00	15:00	800	900-1050	Off

* Ramp times and power may vary depending on type and number of vessels.

Results

Sample was clear, colorless, and particle free upon dilution to 50 mL.

General Precautions

- This procedure is a reference point for sample digestion using a CEM system and may need to be modified or changed to obtain the required results on your sample.
- If using a vessel other than the recommended choice, adjust sample size and pressure limit to values appropriate for the vessel chosen.
- The control / reference vessel must contain the largest and most reactive sample.
- Manual venting of CEM vessels should be performed when wearing hand/eye/body protection and when the vessel contents are at or below room temperature to avoid the potential for chemical burns. Always point the vent hole away from the operator.
- If programming as One Touch, the ramp time and power will be automatically determined based on the number and type of vessels detected.

Microwave Digestion of Cold and Flu Medicine (Liquid)

Procedure

Add 0.75 mL of the sample into the digestion vessel. Add 9 mL of HNO₃ and 1 mL of HCl. Gently swirl the mixture and wait approximately 15 minutes before closing the vessel.

Notes

The addition of Conc. HCl (0-4 ml) is appropriate for the stabilization of Ag, Ba and Sb, and high concentrations of Fe and Al in solution. The amount of HCl will vary depending on the matrix and the concentration of the analytes. The addition of HCl may, however, limit the techniques or increase the difficulties of analysis.

Recommended Equipment

MARS 6
MARS 6 iWave

Recommended Vessels

Xpress
XpressPlus
EasyPrep
EasyPrep Plus

Reagents

HNO₃
HCl

Max Sample Weight

0.75 mL

Sample Type

Organic

Control Type

Ramp to Temperature

Method Type

One Touch

Heating Program

Stage	Temp (°C)	* Ramp (mm:ss)	Hold (mm:ss)	Pressure (psi)	* Power (W)	Stirring
1	200	15:00	15:00	800	900-1050	Off

* Ramp times and power may vary depending on type and number of vessels.

Results

Sample was clear, colorless, and particle free upon dilution to 50 mL.

General Precautions

- This procedure is a reference point for sample digestion using a CEM system and may need to be modified or changed to obtain the required results on your sample.
- If using a vessel other than the recommended choice, adjust sample size and pressure limit to values appropriate for the vessel chosen.
- The control / reference vessel must contain the largest and most reactive sample.
- Manual venting of CEM vessels should be performed when wearing hand/eye/body protection and when the vessel contents are at or below room temperature to avoid the potential for chemical burns. Always point the vent hole away from the operator.
- If programming as One Touch, the ramp time and power will be automatically determined based on the number and type of vessels detected.

Microwave Digestion of Cupric Sulfate

Procedure

Weigh 0.5 g of the sample into the digestion vessel. Add 9 ml of HNO₃, and 1 ml of HCl. Gently swirl the mixture and wait approximately 15 minutes before closing the vessel.

Notes

The addition of Conc. HCl (0-4mL) is appropriate for the stabilization of Ag, Ba and Sb, and high concentrations of Fe and Al in solution. The amount of HCl will vary depending on the matrix and the concentration of the analytes. The addition of HCl may, however, limit the techniques or increase the difficulties of analysis.

Recommended Equipment

MARS 6
MARS 6 iWave

Recommended Vessels

EasyPrep
EasyPrep Plus
Xpress
Xpress Plus

Reagents

HNO₃
HCl

Max Sample Weight

0.5 g

Sample Type

Organic

Control Type

Ramp to Temperature

Method Type

One Touch

Heating Program

Stage	Temp (°C)	* Ramp (mm:ss)	Hold (mm:ss)	Pressure (psi)	* Power (W)	Stirring
1	210	20:00	15:00	800	900-1050	Off

* Ramp times and power may vary depending on type and number of vessels.

Results

Sample was clear, blue in color, and particle free upon dilution to 50 ml.

General Precautions

- This procedure is a reference point for sample digestion using a CEM system and may need to be modified or changed to obtain the required results on your sample.
- If using a vessel other than the recommended choice, adjust sample size and pressure limit to values appropriate for the vessel chosen.
- The control / reference vessel must contain the largest and most reactive sample.
- Manual venting of CEM vessels should be performed when wearing hand/eye/body protection and when the vessel contents are at or below room temperature to avoid the potential for chemical burns. Always point the vent hole away from the operator.
- If programming as One Touch, the ramp time and power will be automatically determined based on the number and type of vessels detected.

Microwave Digestion of Diclofenac K

Procedure

Weigh 0.5 g of the sample into the digestion vessel. Add 10 mL of HNO₃ and 2 mL of H₂O₂ (30%). Gently swirl the mixture and wait approximately 15 minutes before closing the vessel.

Notes

The addition of Conc. HCl (0-4 ml) is appropriate for the stabilization of Ag, Ba and Sb, and high concentrations of Fe and Al in solution. The amount of HCl will vary depending on the matrix and the concentration of the analytes. The addition of HCl may, however, limit the techniques or increase the difficulties of analysis.

Recommended Equipment

MARS 6
MARS 6 iWave

Recommended Vessels

Xpress
XpressPlus
EasyPrep
EasyPrep Plus

Reagents

HNO₃
H₂O₂ (30%)

Max Sample Weight

0.5 g

Sample Type

Organic

Control Type

Ramp to Temperature

Method Type

One Touch

Heating Program

Stage	Temp (°C)	* Ramp (mm:ss)	Hold (mm:ss)	Pressure (psi)	* Power (W)	Stirring
1	200	15:00	15:00	800	900-1050	Off

* Ramp times and power may vary depending on type and number of vessels.

Results

Sample was clear, colorless, and particle free upon dilution to 50 mL.

General Precautions

- This procedure is a reference point for sample digestion using a CEM system and may need to be modified or changed to obtain the required results on your sample.
- If using a vessel other than the recommended choice, adjust sample size and pressure limit to values appropriate for the vessel chosen.
- The control / reference vessel must contain the largest and most reactive sample.
- Manual venting of CEM vessels should be performed when wearing hand/eye/body protection and when the vessel contents are at or below room temperature to avoid the potential for chemical burns. Always point the vent hole away from the operator.
- If programming as One Touch, the ramp time and power will be automatically determined based on the number and type of vessels detected.

Microwave Digestion of Empty Capsule (gel)

Procedure

Weigh 1 capsule (Approx 0.1 g) into the digestion vessel. Add 10 mL of HNO₃. Gently swirl the mixture and wait approximately 15 minutes before closing the vessel.

Notes

The addition of Conc. HCl (0-4 ml) is appropriate for the stabilization of Ag, Ba and Sb, and high concentrations of Fe and Al in solution. The amount of HCl will vary depending on the matrix and the concentration of the analytes. The addition of HCl may, however, limit the techniques or increase the difficulties of analysis.

Recommended Equipment

MARS 6
MARS 6 iWave

Recommended Vessels

Xpress
XpressPlus
EasyPrep
EasyPrep Plus

Reagents

HNO₃

Max Sample Weight

1 capsule (Approx 0.1 g)

Sample Type

Organic

Control Type

Ramp to Temperature

Method Type

One Touch

Heating Program

Stage	Temp (°C)	* Ramp (mm:ss)	Hold (mm:ss)	Pressure (psi)	* Power (W)	Stirring
1	200	15:00	15:00	800	900-1050	Off

* Ramp times and power may vary depending on type and number of vessels.

Results

Sample was clear, colorless, and particle free upon dilution to 50 mL.

General Precautions

- This procedure is a reference point for sample digestion using a CEM system and may need to be modified or changed to obtain the required results on your sample.
- If using a vessel other than the recommended choice, adjust sample size and pressure limit to values appropriate for the vessel chosen.
- The control / reference vessel must contain the largest and most reactive sample.
- Manual venting of CEM vessels should be performed when wearing hand/eye/body protection and when the vessel contents are at or below room temperature to avoid the potential for chemical burns. Always point the vent hole away from the operator.
- If programming as One Touch, the ramp time and power will be automatically determined based on the number and type of vessels detected.

Microwave Digestion of Fish Oil (No Capsule)

Procedure

Weigh 0.25 g of the sample into the digestion vessel. Add 10 mL of HNO₃. Gently swirl the mixture and wait approximately 15 minutes before closing the vessel.

Notes

The addition of Conc. HCl (0-4 ml) is appropriate for the stabilization of Ag, Ba and Sb, and high concentrations of Fe and Al in solution. The amount of HCl will vary depending on the matrix and the concentration of the analytes. The addition of HCl may, however, limit the techniques or increase the difficulties of analysis.

Recommended Equipment

MARS 6
MARS 6 iWave

Recommended Vessels

Xpress
XpressPlus
EasyPrep
EasyPrep Plus

Reagents

HNO₃

Max Sample Weight

0.25 g

Sample Type

Organic

Control Type

Ramp to Temperature

Method Type

One Touch

Heating Program

Stage	Temp (°C)	* Ramp (mm:ss)	Hold (mm:ss)	Pressure (psi)	* Power (W)	Stirring
1	200	15:00	15:00	800	900-1050	Off

* Ramp times and power may vary depending on type and number of vessels.

Results

Sample was clear, colorless, and particle free upon dilution to 50 mL.

General Precautions

- This procedure is a reference point for sample digestion using a CEM system and may need to be modified or changed to obtain the required results on your sample.
- If using a vessel other than the recommended choice, adjust sample size and pressure limit to values appropriate for the vessel chosen.
- The control / reference vessel must contain the largest and most reactive sample.
- Manual venting of CEM vessels should be performed when wearing hand/eye/body protection and when the vessel contents are at or below room temperature to avoid the potential for chemical burns. Always point the vent hole away from the operator.
- If programming as One Touch, the ramp time and power will be automatically determined based on the number and type of vessels detected.

Microwave Digestion of Folic Acid

Procedure

Weigh 0.5 g of the sample into the digestion vessel. Add 9 mL of HNO₃ and 1 mL of HCl. Gently swirl the mixture and wait approximately 15 minutes before closing the vessel.

Notes

The addition of Conc. HCl (0-4 ml) is appropriate for the stabilization of Ag, Ba and Sb, and high concentrations of Fe and Al in solution. The amount of HCl will vary depending on the matrix and the concentration of the analytes. The addition of HCl may, however, limit the techniques or increase the difficulties of analysis.

Recommended Equipment

MARS 6
MARS 6 iWave

Recommended Vessels

Xpress
XpressPlus
EasyPrep
EasyPrep Plus

Reagents

HNO₃
HCl

Max Sample Weight

0.5 g

Sample Type

Organic

Control Type

Ramp to Temperature

Method Type

One Touch

Heating Program

Stage	Temp (°C)	* Ramp (mm:ss)	Hold (mm:ss)	Pressure (psi)	* Power (W)	Stirring
1	200	15:00	15:00	800	900-1050	Off

* Ramp times and power may vary depending on type and number of vessels.

Results

Sample was clear, colorless, and particle free upon dilution to 50 mL.

General Precautions

- This procedure is a reference point for sample digestion using a CEM system and may need to be modified or changed to obtain the required results on your sample.
- If using a vessel other than the recommended choice, adjust sample size and pressure limit to values appropriate for the vessel chosen.
- The control / reference vessel must contain the largest and most reactive sample.
- Manual venting of CEM vessels should be performed when wearing hand/eye/body protection and when the vessel contents are at or below room temperature to avoid the potential for chemical burns. Always point the vent hole away from the operator.
- If programming as One Touch, the ramp time and power will be automatically determined based on the number and type of vessels detected.

Microwave Digestion of Ginko (Ground)

Procedure

Weigh 0.5 g of the sample into the digestion vessel. Add 10 mL of HNO₃. Gently swirl the mixture and wait approximately 15 minutes before closing the vessel.

Notes

The addition of Conc. HCl (0-4 ml) is appropriate for the stabilization of Ag, Ba and Sb, and high concentrations of Fe and Al in solution. The amount of HCl will vary depending on the matrix and the concentration of the analytes. The addition of HCl may, however, limit the techniques or increase the difficulties of analysis.

Recommended Equipment

MARS 6
MARS 6 iWave

Recommended Vessels

Xpress
XpressPlus
EasyPrep
EasyPrep Plus

Reagents

HNO₃

Max Sample Weight

0.5 g

Sample Type

Organic

Control Type

Ramp to Temperature

Method Type

One Touch

Heating Program

Stage	Temp (°C)	* Ramp (mm:ss)	Hold (mm:ss)	Pressure (psi)	* Power (W)	Stirring
1	200	15:00	15:00	800	900-1050	Off

* Ramp times and power may vary depending on type and number of vessels.

Results

Sample was clear, colorless, and particle free upon dilution to 50 mL.

General Precautions

- This procedure is a reference point for sample digestion using a CEM system and may need to be modified or changed to obtain the required results on your sample.
- If using a vessel other than the recommended choice, adjust sample size and pressure limit to values appropriate for the vessel chosen.
- The control / reference vessel must contain the largest and most reactive sample.
- Manual venting of CEM vessels should be performed when wearing hand/eye/body protection and when the vessel contents are at or below room temperature to avoid the potential for chemical burns. Always point the vent hole away from the operator.
- If programming as One Touch, the ramp time and power will be automatically determined based on the number and type of vessels detected.

Microwave Digestion of Ginko (Whole Pill)

Procedure

Weigh 1 pill (approx 1.0 g) into the digestion vessel. Add 10 mL of HNO₃ and 2 mL of H₂O₂. Gently swirl the mixture and wait approximately 15 minutes before closing the vessel.

Notes

The addition of Conc. HCl (0-4 ml) is appropriate for the stabilization of Ag, Ba and Sb, and high concentrations of Fe and Al in solution. The amount of HCl will vary depending on the matrix and the concentration of the analytes. The addition of HCl may, however, limit the techniques or increase the difficulties of analysis.

Recommended Equipment

MARS 6
MARS 6 iWave

Recommended Vessels

Xpress
XpressPlus
EasyPrep
EasyPrep Plus

Reagents

HNO₃
H₂O₂

Max Sample Weight

1 pill (Approx 1.0 g)

Sample Type

Organic

Control Type

Ramp to Temperature

Method Type

One Touch

Heating Program

Stage	Temp (°C)	* Ramp (mm:ss)	Hold (mm:ss)	Pressure (psi)	* Power (W)	Stirring
1	210	15:00	15:00	800	900-1050	Off

* Ramp times and power may vary depending on type and number of vessels.

Results

Sample was clear, colorless, and particle free upon dilution to 50 mL.

General Precautions

- This procedure is a reference point for sample digestion using a CEM system and may need to be modified or changed to obtain the required results on your sample.
- If using a vessel other than the recommended choice, adjust sample size and pressure limit to values appropriate for the vessel chosen.
- The control / reference vessel must contain the largest and most reactive sample.
- Manual venting of CEM vessels should be performed when wearing hand/eye/body protection and when the vessel contents are at or below room temperature to avoid the potential for chemical burns. Always point the vent hole away from the operator.
- If programming as One Touch, the ramp time and power will be automatically determined based on the number and type of vessels detected.

Microwave Digestion of Kelp

Procedure

Weigh 0.5 g of the sample into the digestion vessel. Add 9 mL of HNO₃ and 1 mL of HCl. Gently swirl the mixture and wait approximately 15 minutes before closing the vessel.

Notes

The addition of Conc. HCl (0-4 ml) is appropriate for the stabilization of Ag, Ba and Sb, and high concentrations of Fe and Al in solution. The amount of HCl will vary depending on the matrix and the concentration of the analytes. The addition of HCl may, however, limit the techniques or increase the difficulties of analysis.

Recommended Equipment

MARS 6
MARS 6 iWave

Recommended Vessels

Xpress
XpressPlus
EasyPrep
EasyPrep Plus

Reagents

HNO₃
HCl

Max Sample Weight

0.5 g

Sample Type

Organic

Control Type

Ramp to Temperature

Method Type

One Touch

Heating Program

Stage	Temp (°C)	* Ramp (mm:ss)	Hold (mm:ss)	Pressure (psi)	* Power (W)	Stirring
1	200	15:00	15:00	800	900-1050	Off

* Ramp times and power may vary depending on type and number of vessels.

Results

Sample was clear, colorless, and particle free upon dilution to 50 mL.

General Precautions

- This procedure is a reference point for sample digestion using a CEM system and may need to be modified or changed to obtain the required results on your sample.
- If using a vessel other than the recommended choice, adjust sample size and pressure limit to values appropriate for the vessel chosen.
- The control / reference vessel must contain the largest and most reactive sample.
- Manual venting of CEM vessels should be performed when wearing hand/eye/body protection and when the vessel contents are at or below room temperature to avoid the potential for chemical burns. Always point the vent hole away from the operator.
- If programming as One Touch, the ramp time and power will be automatically determined based on the number and type of vessels detected.

Microwave Digestion of Losataran K

Procedure

Weigh 0.5 g of the sample into the digestion vessel. Add 10 mL of HNO₃ and 2 mL of H₂O₂ (30%). Gently swirl the mixture and wait approximately 15 minutes before closing the vessel.

Notes

The addition of Conc. HCl (0-4 ml) is appropriate for the stabilization of Ag, Ba and Sb, and high concentrations of Fe and Al in solution. The amount of HCl will vary depending on the matrix and the concentration of the analytes. The addition of HCl may, however, limit the techniques or increase the difficulties of analysis.

Recommended Equipment

MARS 6
MARS 6 iWave

Recommended Vessels

Xpress
XpressPlus
EasyPrep
EasyPrep Plus

Reagents

HNO₃
H₂O₂ (30%)

Max Sample Weight

0.5 g

Sample Type

Organic

Control Type

Ramp to Temperature

Method Type

One Touch

Heating Program

Stage	Temp (°C)	* Ramp (mm:ss)	Hold (mm:ss)	Pressure (psi)	* Power (W)	Stirring
1	200	15:00	15:00	800	900-1050	Off

* Ramp times and power may vary depending on type and number of vessels.

Results

Sample was clear, colorless, and particle free upon dilution to 50 mL.

General Precautions

- This procedure is a reference point for sample digestion using a CEM system and may need to be modified or changed to obtain the required results on your sample.
- If using a vessel other than the recommended choice, adjust sample size and pressure limit to values appropriate for the vessel chosen.
- The control / reference vessel must contain the largest and most reactive sample.
- Manual venting of CEM vessels should be performed when wearing hand/eye/body protection and when the vessel contents are at or below room temperature to avoid the potential for chemical burns. Always point the vent hole away from the operator.
- If programming as One Touch, the ramp time and power will be automatically determined based on the number and type of vessels detected.

Microwave Digestion of Magnesium Carbonate

Procedure

Weigh 0.5 g of the sample into the digestion vessel. Add 9 ml of HNO₃, and 1 ml of HCl. Gently swirl the mixture and wait approximately 15 minutes before closing the vessel.

Notes

Allow any reaction to subside before sealing the vessel.

The addition of Conc. HCl (0-4mL) is appropriate for the stabilization of Ag, Ba and Sb, and high concentrations of Fe and Al in solution. The amount of HCl will vary depending on the matrix and the concentration of the analytes. The addition of HCl may, however, limit the techniques or increase the difficulties of analysis.

Recommended Equipment

MARS 6
MARS 6 iWave

Recommended Vessels

EasyPrep
EasyPrep Plus
Xpress
Xpress Plus

Reagents

HNO₃
HCl

Max Sample Weight

0.5 g

Sample Type

Organic

Control Type

Ramp to Temperature

Method Type

One Touch

Heating Program

Stage	Temp (°C)	* Ramp (mm:ss)	Hold (mm:ss)	Pressure (psi)	* Power (W)	Stirring
1	210	20:00	15:00	800	900-1050	Off

* Ramp times and power may vary depending on type and number of vessels.

Results

Sample was clear, colorless, and particle free upon dilution to 50 ml.

General Precautions

- This procedure is a reference point for sample digestion using a CEM system and may need to be modified or changed to obtain the required results on your sample.
- If using a vessel other than the recommended choice, adjust sample size and pressure limit to values appropriate for the vessel chosen.
- The control / reference vessel must contain the largest and most reactive sample.
- Manual venting of CEM vessels should be performed when wearing hand/eye/body protection and when the vessel contents are at or below room temperature to avoid the potential for chemical burns. Always point the vent hole away from the operator.
- If programming as One Touch, the ramp time and power will be automatically determined based on the number and type of vessels detected.

Microwave Digestion of Magnesium Oxide

Procedure

Weigh 0.5 g of the sample into the digestion vessel. Add 9 mL of HNO₃ and 1 mL of HCl. Gently swirl the mixture and wait approximately 15 minutes before closing the vessel.

Notes

The addition of Conc. HCl (0-4 ml) is appropriate for the stabilization of Ag, Ba and Sb, and high concentrations of Fe and Al in solution. The amount of HCl will vary depending on the matrix and the concentration of the analytes. The addition of HCl may, however, limit the techniques or increase the difficulties of analysis.

Recommended Equipment

MARS 6
MARS 6 iWave

Recommended Vessels

Xpress
XpressPlus
EasyPrep
EasyPrep Plus

Reagents

HNO₃
HCl

Max Sample Weight

0.5 g

Sample Type

Organic

Control Type

Ramp to Temperature

Method Type

One Touch

Heating Program

Stage	Temp (°C)	* Ramp (mm:ss)	Hold (mm:ss)	Pressure (psi)	* Power (W)	Stirring
1	200	15:00	15:00	800	900-1050	Off

* Ramp times and power may vary depending on type and number of vessels.

Results

Sample was clear, colorless, and particle free upon dilution to 50 mL.

General Precautions

- This procedure is a reference point for sample digestion using a CEM system and may need to be modified or changed to obtain the required results on your sample.
- If using a vessel other than the recommended choice, adjust sample size and pressure limit to values appropriate for the vessel chosen.
- The control / reference vessel must contain the largest and most reactive sample.
- Manual venting of CEM vessels should be performed when wearing hand/eye/body protection and when the vessel contents are at or below room temperature to avoid the potential for chemical burns. Always point the vent hole away from the operator.
- If programming as One Touch, the ramp time and power will be automatically determined based on the number and type of vessels detected.

Microwave Digestion of Manganese Carbonate

Procedure

Weigh 0.5 g of the sample into the digestion vessel. Add 9 mL of HNO₃ and 1 mL of HCl. Gently swirl the mixture and wait approximately 15 minutes before closing the vessel.

Notes

The addition of Conc. HCl (0-4 ml) is appropriate for the stabilization of Ag, Ba and Sb, and high concentrations of Fe and Al in solution. The amount of HCl will vary depending on the matrix and the concentration of the analytes. The addition of HCl may, however, limit the techniques or increase the difficulties of analysis.

Recommended Equipment

MARS 6
MARS 6 iWave

Recommended Vessels

Xpress
XpressPlus
EasyPrep
EasyPrep Plus

Reagents

HNO₃
HCl

Max Sample Weight

0.5 g

Sample Type

Organic

Control Type

Ramp to Temperature

Method Type

One Touch

Heating Program

Stage	Temp (°C)	* Ramp (mm:ss)	Hold (mm:ss)	Pressure (psi)	* Power (W)	Stirring
1	200	15:00	15:00	800	900-1050	Off

* Ramp times and power may vary depending on type and number of vessels.

Results

Sample was clear, colorless, and particle free upon dilution to 50 mL.

General Precautions

- This procedure is a reference point for sample digestion using a CEM system and may need to be modified or changed to obtain the required results on your sample.
- If using a vessel other than the recommended choice, adjust sample size and pressure limit to values appropriate for the vessel chosen.
- The control / reference vessel must contain the largest and most reactive sample.
- Manual venting of CEM vessels should be performed when wearing hand/eye/body protection and when the vessel contents are at or below room temperature to avoid the potential for chemical burns. Always point the vent hole away from the operator.
- If programming as One Touch, the ramp time and power will be automatically determined based on the number and type of vessels detected.

Microwave Digestion of Metaformin (ground)

Procedure

Weigh 0.5 g of the sample into the digestion vessel. Add 9 mL of HNO₃ and 1 mL of HCl. Gently swirl the mixture and wait approximately 15 minutes before closing the vessel.

Notes

The addition of Conc. HCl (0-4 ml) is appropriate for the stabilization of Ag, Ba and Sb, and high concentrations of Fe and Al in solution. The amount of HCl will vary depending on the matrix and the concentration of the analytes. The addition of HCl may, however, limit the techniques or increase the difficulties of analysis.

Recommended Equipment

MARS 6
MARS 6 iWave

Recommended Vessels

Xpress
XpressPlus
EasyPrep
EasyPrep Plus

Reagents

HNO₃
HCl

Max Sample Weight

0.5 g

Sample Type

Organic

Control Type

Ramp to Temperature

Method Type

One Touch

Heating Program

Stage	Temp (°C)	* Ramp (mm:ss)	Hold (mm:ss)	Pressure (psi)	* Power (W)	Stirring
1	200	15:00	15:00	800	900-1050	Off

* Ramp times and power may vary depending on type and number of vessels.

Results

Sample was clear, colorless, and particle free upon dilution to 50 mL.

General Precautions

- This procedure is a reference point for sample digestion using a CEM system and may need to be modified or changed to obtain the required results on your sample.
- If using a vessel other than the recommended choice, adjust sample size and pressure limit to values appropriate for the vessel chosen.
- The control / reference vessel must contain the largest and most reactive sample.
- Manual venting of CEM vessels should be performed when wearing hand/eye/body protection and when the vessel contents are at or below room temperature to avoid the potential for chemical burns. Always point the vent hole away from the operator.
- If programming as One Touch, the ramp time and power will be automatically determined based on the number and type of vessels detected.

Microwave Digestion of Multivitamin (Ground)

Procedure

Weigh 0.5 g of the sample into the digestion vessel. Add 9 mL of HNO₃ and 1 mL HCl. Gently swirl the mixture and wait approximately 15 minutes before closing the vessel.

Notes

The addition of Conc. HCl (0-4 ml) is appropriate for the stabilization of Ag, Ba and Sb, and high concentrations of Fe and Al in solution. The amount of HCl will vary depending on the matrix and the concentration of the analytes. The addition of HCl may, however, limit the techniques or increase the difficulties of analysis.

Recommended Equipment

MARS 6
MARS 6 iWave

Recommended Vessels

Xpress
XpressPlus
EasyPrep
EasyPrep Plus

Reagents

HNO₃
HCl

Max Sample Weight

0.5 g

Sample Type

Organic

Control Type

Ramp to Temperature

Method Type

One Touch

Heating Program

Stage	Temp (°C)	* Ramp (mm:ss)	Hold (mm:ss)	Pressure (psi)	* Power (W)	Stirring
1	200	15:00	15:00	800	900-1050	Off

* Ramp times and power may vary depending on type and number of vessels.

Results

Sample was clear, colorless, and particle free upon dilution to 50 mL.

General Precautions

- This procedure is a reference point for sample digestion using a CEM system and may need to be modified or changed to obtain the required results on your sample.
- If using a vessel other than the recommended choice, adjust sample size and pressure limit to values appropriate for the vessel chosen.
- The control / reference vessel must contain the largest and most reactive sample.
- Manual venting of CEM vessels should be performed when wearing hand/eye/body protection and when the vessel contents are at or below room temperature to avoid the potential for chemical burns. Always point the vent hole away from the operator.
- If programming as One Touch, the ramp time and power will be automatically determined based on the number and type of vessels detected.

Microwave Digestion of Multivitamin (Whole)

Procedure

Weigh 1 pill (Approx 2.5 g) into the digestion vessel. Add 10 mL of HNO₃ and 2 mL of HCl. Gently swirl the mixture and wait approximately 15 minutes before closing the vessel.

Notes

The addition of Conc. HCl (0-4 ml) is appropriate for the stabilization of Ag, Ba and Sb, and high concentrations of Fe and Al in solution. The amount of HCl will vary depending on the matrix and the concentration of the analytes. The addition of HCl may, however, limit the techniques or increase the difficulties of analysis.

Recommended Equipment

MARS 6
MARS 6 iWave

Recommended Vessels

EasyPrep
EasyPrep Plus

Reagents

HNO₃
HCl

Max Sample Weight

1 pill (Approx 2.5 g)

Sample Type

Organic

Control Type

Ramp to Temperature

Method Type

One Touch

Heating Program

Stage	Temp (°C)	* Ramp (mm:ss)	Hold (mm:ss)	Pressure (psi)	* Power (W)	Stirring
1	200	15:00	15:00	800	900-1050	Off

* Ramp times and power may vary depending on type and number of vessels.

Results

Sample was clear, colorless, and particle free upon dilution to 50 mL.

General Precautions

- This procedure is a reference point for sample digestion using a CEM system and may need to be modified or changed to obtain the required results on your sample.
- If using a vessel other than the recommended choice, adjust sample size and pressure limit to values appropriate for the vessel chosen.
- The control / reference vessel must contain the largest and most reactive sample.
- Manual venting of CEM vessels should be performed when wearing hand/eye/body protection and when the vessel contents are at or below room temperature to avoid the potential for chemical burns. Always point the vent hole away from the operator.
- If programming as One Touch, the ramp time and power will be automatically determined based on the number and type of vessels detected.

Microwave Digestion of Niacinamide

Procedure

Weigh 0.5 g of the sample into the digestion vessel. Add 9 ml of HNO₃, and 1 ml of HCl. Gently swirl the mixture and wait approximately 15 minutes before closing the vessel.

Notes

The addition of Conc. HCl (0-4mL) is appropriate for the stabilization of Ag, Ba and Sb, and high concentrations of Fe and Al in solution. The amount of HCl will vary depending on the matrix and the concentration of the analytes. The addition of HCl may, however, limit the techniques or increase the difficulties of analysis.

Recommended Equipment

MARS 6
MARS 6 iWave

Recommended Vessels

EasyPrep
EasyPrep Plus
Xpress
Xpress Plus

Reagents

HNO₃
HCl

Max Sample Weight

0.5 g

Sample Type

Organic

Control Type

Ramp to Temperature

Method Type

One Touch

Heating Program

Stage	Temp (°C)	* Ramp (mm:ss)	Hold (mm:ss)	Pressure (psi)	* Power (W)	Stirring
1	210	20:00	15:00	800	900-1050	Off

* Ramp times and power may vary depending on type and number of vessels.

Results

Sample was clear, colorless, and particle free upon dilution to 50 ml.

General Precautions

- This procedure is a reference point for sample digestion using a CEM system and may need to be modified or changed to obtain the required results on your sample.
- If using a vessel other than the recommended choice, adjust sample size and pressure limit to values appropriate for the vessel chosen.
- The control / reference vessel must contain the largest and most reactive sample.
- Manual venting of CEM vessels should be performed when wearing hand/eye/body protection and when the vessel contents are at or below room temperature to avoid the potential for chemical burns. Always point the vent hole away from the operator.
- If programming as One Touch, the ramp time and power will be automatically determined based on the number and type of vessels detected.

Microwave Digestion of Pantothenic Acid

Procedure

Weigh 0.5 g of the sample into the digestion vessel. Add 9 ml of HNO₃, and 1 ml of HCl. Gently swirl the mixture and wait approximately 15 minutes before closing the vessel.

Notes

The addition of Conc. HCl (0-4mL) is appropriate for the stabilization of Ag, Ba and Sb, and high concentrations of Fe and Al in solution. The amount of HCl will vary depending on the matrix and the concentration of the analytes. The addition of HCl may, however, limit the techniques or increase the difficulties of analysis.

Recommended Equipment

MARS 6
MARS 6 iWave

Recommended Vessels

EasyPrep
EasyPrep Plus
Xpress
Xpress Plus

Reagents

HNO₃
HCl

Max Sample Weight

0.5 g

Sample Type

Organic

Control Type

Ramp to Temperature

Method Type

One Touch

Heating Program

Stage	Temp (°C)	* Ramp (mm:ss)	Hold (mm:ss)	Pressure (psi)	* Power (W)	Stirring
1	210	20:00	15:00	800	900-1050	Off

* Ramp times and power may vary depending on type and number of vessels.

Results

Sample was clear, colorless, and particle free upon dilution to 50 ml.

General Precautions

- This procedure is a reference point for sample digestion using a CEM system and may need to be modified or changed to obtain the required results on your sample.
- If using a vessel other than the recommended choice, adjust sample size and pressure limit to values appropriate for the vessel chosen.
- The control / reference vessel must contain the largest and most reactive sample.
- Manual venting of CEM vessels should be performed when wearing hand/eye/body protection and when the vessel contents are at or below room temperature to avoid the potential for chemical burns. Always point the vent hole away from the operator.
- If programming as One Touch, the ramp time and power will be automatically determined based on the number and type of vessels detected.

Microwave Digestion of Potassium Chelate

Procedure

Weigh 0.5 g of the sample into the digestion vessel. Add 9 ml of HNO₃, and 1 ml of HCl. Gently swirl the mixture and wait approximately 15 minutes before closing the vessel.

Notes

The addition of Conc. HCl (0-4mL) is appropriate for the stabilization of Ag, Ba and Sb, and high concentrations of Fe and Al in solution. The amount of HCl will vary depending on the matrix and the concentration of the analytes. The addition of HCl may, however, limit the techniques or increase the difficulties of analysis.

Recommended Equipment

MARS 6
MARS 6 iWave

Recommended Vessels

EasyPrep
EasyPrep Plus
Xpress
Xpress Plus

Reagents

HNO₃
HCl

Max Sample Weight

0.5 g

Sample Type

Organic

Control Type

Ramp to Temperature

Method Type

One Touch

Heating Program

Stage	Temp (°C)	* Ramp (mm:ss)	Hold (mm:ss)	Pressure (psi)	* Power (W)	Stirring
1	210	20:00	15:00	800	900-1050	Off

* Ramp times and power may vary depending on type and number of vessels.

Results

Sample was clear, colorless, and particle free upon dilution to 50 ml.

General Precautions

- This procedure is a reference point for sample digestion using a CEM system and may need to be modified or changed to obtain the required results on your sample.
- If using a vessel other than the recommended choice, adjust sample size and pressure limit to values appropriate for the vessel chosen.
- The control / reference vessel must contain the largest and most reactive sample.
- Manual venting of CEM vessels should be performed when wearing hand/eye/body protection and when the vessel contents are at or below room temperature to avoid the potential for chemical burns. Always point the vent hole away from the operator.
- If programming as One Touch, the ramp time and power will be automatically determined based on the number and type of vessels detected.

Microwave Digestion of Pyridoxine

Procedure

Weigh 0.5 g of the sample into the digestion vessel. Add 9 ml of HNO₃, and 1 ml of HCl. Gently swirl the mixture and wait approximately 15 minutes before closing the vessel.

Notes

The addition of Conc. HCl (0-4mL) is appropriate for the stabilization of Ag, Ba and Sb, and high concentrations of Fe and Al in solution. The amount of HCl will vary depending on the matrix and the concentration of the analytes. The addition of HCl may, however, limit the techniques or increase the difficulties of analysis.

Recommended Equipment

MARS 6
MARS 6 iWave

Recommended Vessels

EasyPrep
EasyPrep Plus
Xpress
Xpress Plus

Reagents

HNO₃
HCl

Max Sample Weight

0.5 g

Sample Type

Organic

Control Type

Ramp to Temperature

Method Type

One Touch

Heating Program

Stage	Temp (°C)	* Ramp (mm:ss)	Hold (mm:ss)	Pressure (psi)	* Power (W)	Stirring
1	210	20:00	15:00	800	900-1050	Off

* Ramp times and power may vary depending on type and number of vessels.

Results

Sample was clear, colorless, and particle free upon dilution to 50 ml.

General Precautions

- This procedure is a reference point for sample digestion using a CEM system and may need to be modified or changed to obtain the required results on your sample.
- If using a vessel other than the recommended choice, adjust sample size and pressure limit to values appropriate for the vessel chosen.
- The control / reference vessel must contain the largest and most reactive sample.
- Manual venting of CEM vessels should be performed when wearing hand/eye/body protection and when the vessel contents are at or below room temperature to avoid the potential for chemical burns. Always point the vent hole away from the operator.
- If programming as One Touch, the ramp time and power will be automatically determined based on the number and type of vessels detected.

Microwave Digestion of Riboflavin

Procedure

Weigh 0.25 g of the sample into the digestion vessel. Add 9 ml of HNO₃, and 1 ml of HCl. Gently swirl the mixture and wait approximately 15 minutes before closing the vessel.

Notes

The addition of Conc. HCl (0-4mL) is appropriate for the stabilization of Ag, Ba and Sb, and high concentrations of Fe and Al in solution. The amount of HCl will vary depending on the matrix and the concentration of the analytes. The addition of HCl may, however, limit the techniques or increase the difficulties of analysis.

Recommended Equipment

MARS 6
MARS 6 iWave

Recommended Vessels

EasyPrep
EasyPrep Plus

Reagents

HNO₃
HCl

Max Sample Weight

0.25 g

Sample Type

Organic

Control Type

Ramp to Temperature

Method Type

One Touch

Heating Program

Stage	Temp (°C)	* Ramp (mm:ss)	Hold (mm:ss)	Pressure (psi)	*Power (W)	Stirring
1	230	20:00	30:00	800	900-1050	Off

* Ramp times and power may vary depending on type and number of vessels.

Results

Sample was clear, colorless, and particle free upon dilution to 50 ml.

General Precautions

- This procedure is a reference point for sample digestion using a CEM system and may need to be modified or changed to obtain the required results on your sample.
- If using a vessel other than the recommended choice, adjust sample size and pressure limit to values appropriate for the vessel chosen.
- The control / reference vessel must contain the largest and most reactive sample.
- Manual venting of CEM vessels should be performed when wearing hand/eye/body protection and when the vessel contents are at or below room temperature to avoid the potential for chemical burns. Always point the vent hole away from the operator.
- If programming as One Touch, the ramp time and power will be automatically determined based on the number and type of vessels detected.

Microwave Digestion of Selenium Chelate

Procedure

Weigh 0.5 g of the sample into the digestion vessel. Add 9 ml of HNO₃, and 1 ml of HCl. Gently swirl the mixture and wait approximately 15 minutes before closing the vessel.

Notes

The addition of Conc. HCl (0-4mL) is appropriate for the stabilization of Ag, Ba and Sb, and high concentrations of Fe and Al in solution. The amount of HCl will vary depending on the matrix and the concentration of the analytes. The addition of HCl may, however, limit the techniques or increase the difficulties of analysis.

Recommended Equipment

MARS 6
MARS 6 iWave

Recommended Vessels

EasyPrep
EasyPrep Plus
Xpress
Xpress Plus

Reagents

HNO₃
HCl

Max Sample Weight

0.5 g

Sample Type

Organic

Control Type

Ramp to Temperature

Method Type

One Touch

Heating Program

Stage	Temp (°C)	* Ramp (mm:ss)	Hold (mm:ss)	Pressure (psi)	* Power (W)	Stirring
1	210	20:00	15:00	800	900-1050	Off

* Ramp times and power may vary depending on type and number of vessels.

Results

Sample was clear, colorless, and particle free upon dilution to 50 ml.

General Precautions

- This procedure is a reference point for sample digestion using a CEM system and may need to be modified or changed to obtain the required results on your sample.
- If using a vessel other than the recommended choice, adjust sample size and pressure limit to values appropriate for the vessel chosen.
- The control / reference vessel must contain the largest and most reactive sample.
- Manual venting of CEM vessels should be performed when wearing hand/eye/body protection and when the vessel contents are at or below room temperature to avoid the potential for chemical burns. Always point the vent hole away from the operator.
- If programming as One Touch, the ramp time and power will be automatically determined based on the number and type of vessels detected.

Microwave Digestion of Stearic Acid

Procedure

Weigh 0.25 g of the sample into the digestion vessel. Add 10 mL of HNO₃. Gently swirl the mixture and wait approximately 15 minutes before closing the vessel.

Notes

The addition of Conc. HCl (0-4 ml) is appropriate for the stabilization of Ag, Ba and Sb, and high concentrations of Fe and Al in solution. The amount of HCl will vary depending on the matrix and the concentration of the analytes. The addition of HCl may, however, limit the techniques or increase the difficulties of analysis.

Recommended Equipment

MARS 6
MARS 6 iWave

Recommended Vessels

EasyPrep
EasyPrep Plus

Reagents

HNO₃

Max Sample Weight

0.25 g

Sample Type

Organic

Control Type

Ramp to Temperature

Method Type

One Touch

Heating Program

Stage	Temp (°C)	* Ramp (mm:ss)	Hold (mm:ss)	Pressure (psi)	*Power (W)	Stirring
1	210	15:00	15:00	800	900-1050	Off

* Ramp times and power may vary depending on type and number of vessels.

Results

Sample was clear, colorless, and particle free upon dilution to 50 mL.

General Precautions

- This procedure is a reference point for sample digestion using a CEM system and may need to be modified or changed to obtain the required results on your sample.
- If using a vessel other than the recommended choice, adjust sample size and pressure limit to values appropriate for the vessel chosen.
- The control / reference vessel must contain the largest and most reactive sample.
- Manual venting of CEM vessels should be performed when wearing hand/eye/body protection and when the vessel contents are at or below room temperature to avoid the potential for chemical burns. Always point the vent hole away from the operator.
- If programming as One Touch, the ramp time and power will be automatically determined based on the number and type of vessels detected.

Microwave Digestion of Thiamine

Procedure

Weigh 0.5 g of the sample into the digestion vessel. Add 9 mL of HNO₃ and 1 mL of HCl. Gently swirl the mixture and wait approximately 15 minutes before closing the vessel.

Notes

The addition of Conc. HCl (0-4 ml) is appropriate for the stabilization of Ag, Ba and Sb, and high concentrations of Fe and Al in solution. The amount of HCl will vary depending on the matrix and the concentration of the analytes. The addition of HCl may, however, limit the techniques or increase the difficulties of analysis.

Recommended Equipment

MARS 6
MARS 6 iWave

Recommended Vessels

Xpress
XpressPlus
EasyPrep
EasyPrep Plus

Reagents

HNO₃
HCl

Max Sample Weight

0.5 g

Sample Type

Organic

Control Type

Ramp to Temperature

Method Type

One Touch

Heating Program

Stage	Temp (°C)	* Ramp (mm:ss)	Hold (mm:ss)	Pressure (psi)	* Power (W)	Stirring
1	200	15:00	15:00	800	900-1050	Off

* Ramp times and power may vary depending on type and number of vessels.

Results

Sample was clear, colorless, and particle free upon dilution to 50 mL.

General Precautions

- This procedure is a reference point for sample digestion using a CEM system and may need to be modified or changed to obtain the required results on your sample.
- If using a vessel other than the recommended choice, adjust sample size and pressure limit to values appropriate for the vessel chosen.
- The control / reference vessel must contain the largest and most reactive sample.
- Manual venting of CEM vessels should be performed when wearing hand/eye/body protection and when the vessel contents are at or below room temperature to avoid the potential for chemical burns. Always point the vent hole away from the operator.
- If programming as One Touch, the ramp time and power will be automatically determined based on the number and type of vessels detected.

Microwave Digestion of Trixie Phosphate in iPrep

Procedure

Weigh 0.1 g of the sample into the digestion vessel. Add 4 mL of HNO₃ and 1 mL of HCl. Gently swirl the mixture and wait approximately 15 minutes to pre-digest before closing the vessel.

Notes

This application can only be run in the iPrep vessel.

The addition of Conc. HCl (0-4 ml) is appropriate for the stabilization of Ag, Ba and Sb, and high concentrations of Fe and Al in solution. The amount of HCl will vary depending on the matrix and the concentration of the analytes. The addition of HCl may, however, limit the techniques or increase the difficulties of analysis.

Recommended Equipment

MARS 6 iWave

Recommended Vessels

iPrep

Reagents

HNO₃
HCl

Max Sample Weight

0.1 - 0.5 g

Sample Type

Organic

Control Type

Ramp to Temperature

Method Type

Classic

Heating Program

Stage	Temp (°C)	* Ramp (mm:ss)	Hold (mm:ss)	Pressure (psi)	* Power (W)	Stirring
1	260	30:00	25:00	N/A	1800	Off

* Ramp times and power may vary depending on type and number of vessels.

Results

Sample was clear, colorless and particle free upon dilution to 50 mL.

General Precautions

- This procedure is a reference point for sample digestion using a CEM system and may need to be modified or changed to obtain the required results on your sample.
- If using a vessel other than the recommended choice, adjust sample size and pressure limit to values appropriate for the vessel chosen.
- Manual venting of CEM vessels should be performed when wearing hand/eye/body protection and when the vessel contents are at or below room temperature to avoid the potential for chemical burns. Always point the vent hole away from the operator.
- If programming as One Touch, the ramp time and power will be automatically determined based on the number and type of vessels detected.

Microwave Digestion of USP 232/233 (Pharmaceuticals)

Procedure

Weigh 0.2 g of the sample into the digestion vessel. Add 9 ml of HNO₃, and 1 ml HCl. Gently swirl the mixture before closing the vessel.

Notes

The addition of Conc. HCl (0-4mL) is appropriate for the stabilization of Ag, Ba and Sb, and high concentrations of Fe and Al in solution. The amount of HCl will vary depending on the matrix and the concentration of the analytes. The addition of HCl may, however, limit the techniques or increase the difficulties of analysis.

Recommended Equipment

MARS 6
MARS 6 iWave

Recommended Vessels

Xpress
Xpress Plus
EasyPrep
EasyPrep Plus

Reagents

HNO₃
HCl

Max Sample Weight

0.2 g

Sample Type

Organic

Control Type

Ramp to Temperature

Method Type

One Touch

Heating Program

Stage	Temp (°C)	* Ramp (mm:ss)	Hold (mm:ss)	Pressure (psi)	* Power (W)	Stirring
1	210	20:00	15:00	800	900-1050	Off

* Ramp times and power may vary depending on type and number of vessels.

Results

Sample was clear, colorless, and particle free upon dilution to 50 ml.

General Precautions

- This procedure is a reference point for sample digestion using a CEM system and may need to be modified or changed to obtain the required results on your sample.
- If using a vessel other than the recommended choice, adjust sample size and pressure limit to values appropriate for the vessel chosen.
- The control / reference vessel must contain the largest and most reactive sample.
- Manual venting of CEM vessels should be performed when wearing hand/eye/body protection and when the vessel contents are at or below room temperature to avoid the potential for chemical burns. Always point the vent hole away from the operator.
- If programming as One Touch, the ramp time and power will be automatically determined based on the number and type of vessels detected.

Microwave Digestion of Vitamin B-12

Procedure

Weigh 0.5 g of the sample into the digestion vessel. Add 9 ml of HNO₃, and 1 ml of HCl. Gently swirl the mixture and wait approximately 15 minutes before closing the vessel.

Notes

The addition of Conc. HCl (0-4mL) is appropriate for the stabilization of Ag, Ba and Sb, and high concentrations of Fe and Al in solution. The amount of HCl will vary depending on the matrix and the concentration of the analytes. The addition of HCl may, however, limit the techniques or increase the difficulties of analysis.

Recommended Equipment

MARS 6
MARS 6 iWave

Recommended Vessels

EasyPrep
EasyPrep Plus
Xpress
Xpress Plus

Reagents

HNO₃
HCl

Max Sample Weight

0.5 g

Sample Type

Organic

Control Type

Ramp to Temperature

Method Type

One Touch

Heating Program

Stage	Temp (°C)	* Ramp (mm:ss)	Hold (mm:ss)	Pressure (psi)	* Power (W)	Stirring
1	210	20:00	15:00	800	900-1050	Off

* Ramp times and power may vary depending on type and number of vessels.

Results

Sample was clear, colorless, and particle free upon dilution to 50 ml.

General Precautions

- This procedure is a reference point for sample digestion using a CEM system and may need to be modified or changed to obtain the required results on your sample.
- If using a vessel other than the recommended choice, adjust sample size and pressure limit to values appropriate for the vessel chosen.
- The control / reference vessel must contain the largest and most reactive sample.
- Manual venting of CEM vessels should be performed when wearing hand/eye/body protection and when the vessel contents are at or below room temperature to avoid the potential for chemical burns. Always point the vent hole away from the operator.
- If programming as One Touch, the ramp time and power will be automatically determined based on the number and type of vessels detected.

Microwave Digestion of Vitamin C (ground)

Procedure

Weigh 0.5 g of the sample into the digestion vessel. Add 10 mL of HNO₃. Gently swirl the mixture and wait approximately 15 minutes before closing the vessel.

Notes

The addition of Conc. HCl (0-4 ml) is appropriate for the stabilization of Ag, Ba and Sb, and high concentrations of Fe and Al in solution. The amount of HCl will vary depending on the matrix and the concentration of the analytes. The addition of HCl may, however, limit the techniques or increase the difficulties of analysis.

Recommended Equipment

MARS 6
MARS 6 iWave

Recommended Vessels

Xpress
XpressPlus
EasyPrep
EasyPrep Plus

Reagents

HNO₃

Max Sample Weight

0.5 g

Sample Type

Organic

Control Type

Ramp to Temperature

Method Type

One Touch

Heating Program

Stage	Temp (°C)	* Ramp (mm:ss)	Hold (mm:ss)	Pressure (psi)	* Power (W)	Stirring
1	200	15:00	15:00	800	900-1050	Off

* Ramp times and power may vary depending on type and number of vessels.

Results

Sample was clear, colorless, and particle free upon dilution to 50 mL.

General Precautions

- This procedure is a reference point for sample digestion using a CEM system and may need to be modified or changed to obtain the required results on your sample.
- If using a vessel other than the recommended choice, adjust sample size and pressure limit to values appropriate for the vessel chosen.
- The control / reference vessel must contain the largest and most reactive sample.
- Manual venting of CEM vessels should be performed when wearing hand/eye/body protection and when the vessel contents are at or below room temperature to avoid the potential for chemical burns. Always point the vent hole away from the operator.
- If programming as One Touch, the ramp time and power will be automatically determined based on the number and type of vessels detected.

Microwave Digestion of Vitamin C (whole)

Procedure

Weigh 1 pill (Approx 1.4 g) into the digestion vessel. Add 10 mL of HNO₃. Gently swirl the mixture and wait approximately 15 minutes before closing the vessel.

Notes

The addition of Conc. HCl (0-4 ml) is appropriate for the stabilization of Ag, Ba and Sb, and high concentrations of Fe and Al in solution. The amount of HCl will vary depending on the matrix and the concentration of the analytes. The addition of HCl may, however, limit the techniques or increase the difficulties of analysis.

Recommended Equipment

MARS 6
MARS 6 iWave

Recommended Vessels

Xpress
XpressPlus
EasyPrep
EasyPrep Plus

Reagents

HNO₃

Max Sample Weight

1 pill (Approx 1.4 g)

Sample Type

Organic

Control Type

Ramp to Temperature

Method Type

One Touch

Heating Program

Stage	Temp (°C)	* Ramp (mm:ss)	Hold (mm:ss)	Pressure (psi)	* Power (W)	Stirring
1	200	15:00	15:00	800	900-1050	Off

* Ramp times and power may vary depending on type and number of vessels.

Results

Sample was clear, colorless, and particle free upon dilution to 50 mL.

General Precautions

- This procedure is a reference point for sample digestion using a CEM system and may need to be modified or changed to obtain the required results on your sample.
- If using a vessel other than the recommended choice, adjust sample size and pressure limit to values appropriate for the vessel chosen.
- The control / reference vessel must contain the largest and most reactive sample.
- Manual venting of CEM vessels should be performed when wearing hand/eye/body protection and when the vessel contents are at or below room temperature to avoid the potential for chemical burns. Always point the vent hole away from the operator.
- If programming as One Touch, the ramp time and power will be automatically determined based on the number and type of vessels detected.

Microwave Digestion of Vitamin D

Procedure

Weigh 0.5 g of the sample into the digestion vessel. Add 9 ml of HNO₃, and 1 ml of HCl. Gently swirl the mixture and wait approximately 15 minutes before closing the vessel.

Notes

The addition of Conc. HCl (0-4mL) is appropriate for the stabilization of Ag, Ba and Sb, and high concentrations of Fe and Al in solution. The amount of HCl will vary depending on the matrix and the concentration of the analytes. The addition of HCl may, however, limit the techniques or increase the difficulties of analysis.

Recommended Equipment

MARS 6
MARS 6 iWave

Recommended Vessels

EasyPrep
EasyPrep Plus
Xpress
Xpress Plus

Reagents

HNO₃
HCl

Max Sample Weight

0.5 g

Sample Type

Organic

Control Type

Ramp to Temperature

Method Type

One Touch

Heating Program

Stage	Temp (°C)	* Ramp (mm:ss)	Hold (mm:ss)	Pressure (psi)	* Power (W)	Stirring
1	210	20:00	15:00	800	900-1050	Off

* Ramp times and power may vary depending on type and number of vessels.

Results

Sample was clear, colorless, and particle free upon dilution to 50 ml.

General Precautions

- This procedure is a reference point for sample digestion using a CEM system and may need to be modified or changed to obtain the required results on your sample.
- If using a vessel other than the recommended choice, adjust sample size and pressure limit to values appropriate for the vessel chosen.
- The control / reference vessel must contain the largest and most reactive sample.
- Manual venting of CEM vessels should be performed when wearing hand/eye/body protection and when the vessel contents are at or below room temperature to avoid the potential for chemical burns. Always point the vent hole away from the operator.
- If programming as One Touch, the ramp time and power will be automatically determined based on the number and type of vessels detected.

Microwave Digestion of Vitamin D3

Procedure

Weigh 0.5 g of the sample into the digestion vessel. Add 9 mL of HNO₃ and 1 mL of HCl. Gently swirl the mixture and wait approximately 15 minutes before closing the vessel.

Notes

The addition of Conc. HCl (0-4 ml) is appropriate for the stabilization of Ag, Ba and Sb, and high concentrations of Fe and Al in solution. The amount of HCl will vary depending on the matrix and the concentration of the analytes. The addition of HCl may, however, limit the techniques or increase the difficulties of analysis.

Recommended Equipment

MARS 6
MARS 6 iWave

Recommended Vessels

Xpress
XpressPlus
EasyPrep
EasyPrep Plus

Reagents

HNO₃
HCl

Max Sample Weight

0.5 g

Sample Type

Organic

Control Type

Ramp to Temperature

Method Type

One Touch

Heating Program

Stage	Temp (°C)	* Ramp (mm:ss)	Hold (mm:ss)	Pressure (psi)	* Power (W)	Stirring
1	200	15:00	15:00	800	900-1050	Off

* Ramp times and power may vary depending on type and number of vessels.

Results

Sample was clear, colorless, and particle free upon dilution to 50 mL.

General Precautions

- This procedure is a reference point for sample digestion using a CEM system and may need to be modified or changed to obtain the required results on your sample.
- If using a vessel other than the recommended choice, adjust sample size and pressure limit to values appropriate for the vessel chosen.
- The control / reference vessel must contain the largest and most reactive sample.
- Manual venting of CEM vessels should be performed when wearing hand/eye/body protection and when the vessel contents are at or below room temperature to avoid the potential for chemical burns. Always point the vent hole away from the operator.
- If programming as One Touch, the ramp time and power will be automatically determined based on the number and type of vessels detected.

Microwave Digestion of Vitamin E

Procedure

Weigh 0.25 g of the sample into the digestion vessel. Add 9 ml of HNO₃, and 1 ml of HCl. Gently swirl the mixture and wait approximately 15 minutes before closing the vessel.

Notes

The addition of Conc. HCl (0-4mL) is appropriate for the stabilization of Ag, Ba and Sb, and high concentrations of Fe and Al in solution. The amount of HCl will vary depending on the matrix and the concentration of the analytes. The addition of HCl may, however, limit the techniques or increase the difficulties of analysis.

Recommended Equipment

MARS 6
MARS 6 iWave

Recommended Vessels

EasyPrep
EasyPrep Plus

Reagents

HNO₃
HCl

Max Sample Weight

0.25 g

Sample Type

Organic

Control Type

Ramp to Temperature

Method Type

One Touch

Heating Program

Stage	Temp (°C)	* Ramp (mm:ss)	Hold (mm:ss)	Pressure (psi)	*Power (W)	Stirring
1	230	20:00	30:00	800	900-1050	Off

* Ramp times and power may vary depending on type and number of vessels.

Results

Sample was clear, colorless, and particle free upon dilution to 50 ml.

General Precautions

- This procedure is a reference point for sample digestion using a CEM system and may need to be modified or changed to obtain the required results on your sample.
- If using a vessel other than the recommended choice, adjust sample size and pressure limit to values appropriate for the vessel chosen.
- The control / reference vessel must contain the largest and most reactive sample.
- Manual venting of CEM vessels should be performed when wearing hand/eye/body protection and when the vessel contents are at or below room temperature to avoid the potential for chemical burns. Always point the vent hole away from the operator.
- If programming as One Touch, the ramp time and power will be automatically determined based on the number and type of vessels detected.

Microwave Digestion of Vitamins

Procedure

Weigh 0.5 g (0.25 g w/Xpress Vessels) of the sample into the digestion vessel. Add 9 ml of HNO₃, 1 ml HCl, and 1 ml of HF. Gently swirl the mixture and wait approximately 15 minutes before closing the vessel.

Notes

This procedure uses hydrofluoric acid. If it is necessary to complex the residual hydrofluoric acid or redissolve insoluble fluorides formed, an additional complexation step with boric acid should be used. This procedure can be found in the One Touch Method note entitled "Boric Acid HF Neutralization".

The addition of Conc. HCl (0-4mL) is appropriate for the stabilization of Ag, Ba and Sb, and high concentrations of Fe and Al in solution. The amount of HCl will vary depending on the matrix and the concentration of the analytes. The addition of HCl may, however, limit the techniques or increase the difficulties of analysis.

Recommended Equipment

MARS 6
MARS 6 iWave

Recommended Vessels

MARSXpress
MARSXpress Plus
EasyPrep
EasyPrep Plus

Reagents

HNO₃
HF
HCl

Max Sample Weight

0.5 g

Sample Type

Organic

Control Type

Ramp to Temperature

Method Type

One Touch

Heating Program

Stage	Temp (°C)	* Ramp (mm:ss)	Hold (mm:ss)	Pressure (psi)	* Power (W)	Stirring
1	210	15:00	30:00	800	900-1050	Off

* Ramp times and power may vary depending on type and number of vessels.

Results

Sample was clear, colorless and particle free upon dilution to 50 ml.

General Precautions

- This procedure is a reference point for sample digestion using a CEM system and may need to be modified or changed to obtain the required results on your sample.
- If using a vessel other than the recommended choice, adjust sample size and pressure limit to values appropriate for the vessel chosen.
- The control / reference vessel must contain the largest and most reactive sample.
- Manual venting of CEM vessels should be performed when wearing hand/eye/body protection and when the vessel contents are at or below room temperature to avoid the potential for chemical burns. Always point the vent hole away from the operator.
- If programming as One Touch, the ramp time and power will be automatically determined based on the number and type of vessels detected.

Microwave Digestion of Zinc Sulfate

Procedure

Weigh 0.5 g of the sample into the digestion vessel. Add 9 mL of HNO₃ and 1 mL of HCl. Gently swirl the mixture and wait approximately 15 minutes before closing the vessel.

Notes

The addition of Conc. HCl (0-4 ml) is appropriate for the stabilization of Ag, Ba and Sb, and high concentrations of Fe and Al in solution. The amount of HCl will vary depending on the matrix and the concentration of the analytes. The addition of HCl may, however, limit the techniques or increase the difficulties of analysis.

Recommended Equipment

MARS 6
MARS 6 iWave

Recommended Vessels

Xpress
XpressPlus
EasyPrep
EasyPrep Plus

Reagents

HNO₃
HCl

Max Sample Weight

0.5 g

Sample Type

Organic

Control Type

Ramp to Temperature

Method Type

One Touch

Heating Program

Stage	Temp (°C)	* Ramp (mm:ss)	Hold (mm:ss)	Pressure (psi)	* Power (W)	Stirring
1	200	15:00	15:00	800	900-1050	Off

* Ramp times and power may vary depending on type and number of vessels.

Results

Sample was clear, colorless, and particle free upon dilution to 50 mL.

General Precautions

- This procedure is a reference point for sample digestion using a CEM system and may need to be modified or changed to obtain the required results on your sample.
- If using a vessel other than the recommended choice, adjust sample size and pressure limit to values appropriate for the vessel chosen.
- The control / reference vessel must contain the largest and most reactive sample.
- Manual venting of CEM vessels should be performed when wearing hand/eye/body protection and when the vessel contents are at or below room temperature to avoid the potential for chemical burns. Always point the vent hole away from the operator.
- If programming as One Touch, the ramp time and power will be automatically determined based on the number and type of vessels detected.

MARS™ 6

Plastics, Polymers, & Oils

Microwave Digestion of Mineral Oil

Procedure

Weigh 0.25 g of the sample into the digestion vessel. Add 10 mL of HNO₃. Gently swirl the mixture and wait approximately 15 minutes before closing the vessel.

Notes

Recommended Equipment

MARS 6
MARS 6 iWave

Recommended Vessels

Xpress
XpressPlus
EasyPrep
EasyPrep Plus

Reagents

HNO₃

Max Sample Weight

0.25 g

Sample Type

Organic

Control Type

Ramp to Temperature

Method Type

One Touch

Heating Program

Stage	Temp (°C)	* Ramp (mm:ss)	Hold (mm:ss)	Pressure (psi)	* Power (W)	Stirring
1	200	15:00	15:00	800	900-1050	Off

* Ramp times and power may vary depending on type and number of vessels.

Results

Sample was clear, colorless, and particle free upon dilution to 50 mL.

General Precautions

- This procedure is a reference point for sample digestion using a CEM system and may need to be modified or changed to obtain the required results on your sample.
- If using a vessel other than the recommended choice, adjust sample size and pressure limit to values appropriate for the vessel chosen.
- The control / reference vessel must contain the largest and most reactive sample.
- Manual venting of CEM vessels should be performed when wearing hand/eye/body protection and when the vessel contents are at or below room temperature to avoid the potential for chemical burns. Always point the vent hole away from the operator.
- If programming as One Touch, the ramp time and power will be automatically determined based on the number and type of vessels detected.

Discover[®] SP-D 80

Consumer Products

Microwave Digestion of Suppository

Procedure

Weigh 1 Capsule (approx. 1 g) of the sample into the digestion vessel. Add 12 mL of HNO₃. Gently swirl the mixture and wait approximately 15 minutes before capping the vessel.

Notes

The use of HF may be required to digest any silicates found in the sample.

Recommended Equipment

Discover SP-D 80 mL

Recommended Vessels

Quartz
Quartz with Teflon liner

Reagents

HNO₃

Max Sample Weight

1 capsule

Sample Type / Vent Program

Organic

Control Type

Ramp to Temperature

Heating Program

Stage	Temp (°C)	Ramp (mm:ss)	Hold (mm:ss)	Pressure (psi)	Power (W)	Stirring
1	200	5:00	3:00	400	300	Med

Results

Sample was clear, colorless, and particle free upon dilution to 50 mL.

General Precautions

- This procedure is a reference point for sample digestion using a CEM system and may need to be modified or changed to obtain the required results on your sample.
- If using a vessel other than the recommended choice, adjust sample size and pressure limit to values appropriate for the vessel chosen.
- If using HF follow restrictions listed in HF addendum.

Microwave Digestion of Vaseline

Procedure

Weigh 0.5 g of the sample into the digestion vessel. Add 8 mL of HNO₃ and 2 mL of HF. Gently swirl the mixture and wait approximately 15 minutes before capping the vessel.

Notes

This procedure uses hydrofluoric acid. If it is necessary to complex the residual hydrofluoric acid or redissolve insoluble fluorides formed, an additional complexation step with boric acid should be used. This procedure can be found in the method note entitled "Boric Acid HF Neutralization".

Recommended Equipment

Discover SP-D 80 mL

Recommended Vessels

Quartz with Teflon liner

Reagents

HNO₃
HF

Max Sample Weight

0.5 g

Sample Type / Vent Program

Organic

Control Type

Ramp to Temperature

Heating Program

Stage	Temp (°C)	Ramp (mm:ss)	Hold (mm:ss)	Pressure (psi)	Power (W)	Stirring
1	200	5:00	3:00	400	300	Med

Results

Sample was clear, colorless, and particle free upon dilution to 50 mL.

General Precautions

- This procedure is a reference point for sample digestion using a CEM system and may need to be modified or changed to obtain the required results on your sample.
- If using a vessel other than the recommended choice, adjust sample size and pressure limit to values appropriate for the vessel chosen.
- If using HF follow restrictions listed in HF addendum.

Microwave Digestion of Wax (candle)

Procedure

Weigh 0.5 g of the sample into the digestion vessel. Add 8 mL of HNO₃ and 2 mL of HF. Gently swirl the mixture and wait approximately 15 minutes before capping the vessel.

Notes

This procedure uses hydrofluoric acid. If it is necessary to complex the residual hydrofluoric acid or redissolve insoluble fluorides formed, an additional complexation step with boric acid should be used. This procedure can be found in the method note entitled "Boric Acid HF Neutralization".

Recommended Equipment

Discover SP-D 80 mL

Recommended Vessels

Quartz with Teflon liner

Reagents

HNO₃
HF

Max Sample Weight

0.5 g

Sample Type / Vent Program

Organic

Control Type

Ramp to Temperature

Heating Program

Stage	Temp (°C)	Ramp (mm:ss)	Hold (mm:ss)	Pressure (psi)	Power (W)	Stirring
1	200	5:00	5:00	400	300	Med

Results

Sample was clear, colorless, and particle free upon dilution to 50 mL.

General Precautions

- This procedure is a reference point for sample digestion using a CEM system and may need to be modified or changed to obtain the required results on your sample.
- If using a vessel other than the recommended choice, adjust sample size and pressure limit to values appropriate for the vessel chosen.
- If using HF follow restrictions listed in HF addendum.

Discover[®] SP-D 80

Nutraceuticals

Microwave Digestion of Ginko (Ground)

Procedure

Weigh 0.5 g of the sample into the digestion vessel. Add 10 mL HNO₃. Gently swirl the mixture and wait approximately 15 minutes before capping the vessel.

Notes

Recommended Equipment

Discover SP-D 80 mL

Recommended Vessels

Quartz

Reagents

HNO₃

Max Sample Weight

0.5 g

Sample Type / Vent Program

Organic

Control Type

Ramp to Temperature

Heating Program

Stage	Temp (°C)	Ramp (mm:ss)	Hold (mm:ss)	Pressure (psi)	Power (W)	Stirring
1	200	5:00	3:00	400	300	Med

Results

Sample was clear, colorless, and particle free upon dilution to 50 mL.

General Precautions

- This procedure is a reference point for sample digestion using a CEM system and may need to be modified or changed to obtain the required results on your sample.
- If using a vessel other than the recommended choice, adjust sample size and pressure limit to values appropriate for the vessel chosen.

Microwave Digestion of Ginko (Whole Pill)

Procedure

Weigh 1 pill (approx 1 g) of the sample into the digestion vessel. Add 10 mL HNO₃ and 2 mL H₂O₂ (30%). Gently swirl the mixture and wait approximately 15 minutes before capping the vessel.

Notes

Recommended Equipment

Discover SP-D 80 mL

Recommended Vessels

Quartz

Reagents

HNO₃

H₂O₂ (30%)

Max Sample Weight

1 pill

Sample Type / Vent Program

Organic

Control Type

Ramp to Temperature

Heating Program

Stage	Temp (°C)	Ramp (mm:ss)	Hold (mm:ss)	Pressure (psi)	Power (W)	Stirring
1	210	5:00	5:00	400	300	Med

Results

Sample was clear, colorless, and particle free upon dilution to 50 mL.

General Precautions

- This procedure is a reference point for sample digestion using a CEM system and may need to be modified or changed to obtain the required results on your sample.
- If using a vessel other than the recommended choice, adjust sample size and pressure limit to values appropriate for the vessel chosen.

Microwave Digestion of Kelp

Procedure

Weigh 0.5 g of the sample into the digestion vessel. Add 9 mL HNO₃ and 1 mL HCl. Gently swirl the mixture and wait approximately 15 minutes before capping the vessel.

Notes

The addition of Conc. HCl (0-4 ml) is appropriate for the stabilization of Ag, Ba and Sb, and high concentrations of Fe and Al in solution. The amount of HCl will vary depending on the matrix and the concentration of the analytes. The addition of HCl may, however, limit the techniques or increase the difficulties of analysis.

Recommended Equipment

Discover SP-D 80 mL

Recommended Vessels

Quartz

Reagents

HNO₃

HCl

Max Sample Weight

0.5 g

Sample Type / Vent Program

Organic

Control Type

Ramp to Temperature

Heating Program

Stage	Temp (°C)	Ramp (mm:ss)	Hold (mm:ss)	Pressure (psi)	Power (W)	Stirring
1	200	5:00	5:00	400	300	Med

Results

Sample was clear, colorless, and particle free upon dilution to 50 mL.

General Precautions

- This procedure is a reference point for sample digestion using a CEM system and may need to be modified or changed to obtain the required results on your sample.
- If using a vessel other than the recommended choice, adjust sample size and pressure limit to values appropriate for the vessel chosen.

Discover[®] SP-D 80

Pharmaceutical & Biotech

Microwave Digestion of Allergy Pill (ground)

Procedure

Weigh 0.25 g of the sample into the digestion vessel. Add 9 mL HNO₃ and 1 mL H₂O₂ (30%). Gently swirl the mixture and wait approximately 15 minutes before capping the vessel.

Notes

Recommended Equipment

Discover SP-D 80 mL

Recommended Vessels

Quartz

Reagents

HNO₃

H₂O₂ (30%)

Max Sample Weight

0.25 g

Sample Type / Vent Program

Organic

Control Type

Ramp to Temperature

Heating Program

Stage	Temp (°C)	Ramp (mm:ss)	Hold (mm:ss)	Pressure (psi)	Power (W)	Stirring
1	200	5:00	3:00	400	300	Med

Results

Sample was clear, colorless, and particle free upon dilution to 50 mL.

General Precautions

- This procedure is a reference point for sample digestion using a CEM system and may need to be modified or changed to obtain the required results on your sample.
- If using a vessel other than the recommended choice, adjust sample size and pressure limit to values appropriate for the vessel chosen.

Microwave Digestion of Allergy Pill (whole pill)

Procedure

Weigh 1 pill (approx 1 g) into the digestion vessel. Add 10 mL HNO₃ and 2 mL H₂O₂ (30%). Gently swirl the mixture and wait approximately 15 minutes before capping the vessel.

Notes

Recommended Equipment

Discover SP-D 80 mL

Recommended Vessels

Quartz

Reagents

HNO₃

H₂O₂ (30%)

Max Sample Weight

1 pill

Sample Type / Vent Program

Organic

Control Type

Ramp to Temperature

Heating Program

Stage	Temp (°C)	Ramp (mm:ss)	Hold (mm:ss)	Pressure (psi)	Power (W)	Stirring
1	200	5:00	3:00	400	300	Med

Results

Sample was clear, colorless, and particle free upon dilution to 50 mL.

General Precautions

- This procedure is a reference point for sample digestion using a CEM system and may need to be modified or changed to obtain the required results on your sample.
- If using a vessel other than the recommended choice, adjust sample size and pressure limit to values appropriate for the vessel chosen.

Microwave Digestion of Antioxidant (Ground)

Procedure

Weigh 0.5 g of the sample into the digestion vessel. Add 9 mL HNO₃ and 1 mL HCl. Gently swirl the mixture and wait approximately 15 minutes before capping the vessel.

Notes

The addition of Conc. HCl (0-4 ml) is appropriate for the stabilization of Ag, Ba and Sb, and high concentrations of Fe and Al in solution. The amount of HCl will vary depending on the matrix and the concentration of the analytes. The addition of HCl may, however, limit the techniques or increase the difficulties of analysis.

Recommended Equipment

Discover SP-D 80 mL

Recommended Vessels

Quartz

Reagents

HNO₃

HCl

Max Sample Weight

0.5 g

Sample Type / Vent Program

Organic

Control Type

Ramp to Temperature

Heating Program

Stage	Temp (°C)	Ramp (mm:ss)	Hold (mm:ss)	Pressure (psi)	Power (W)	Stirring
1	200	5:00	5:00	400	300	Med

Results

Sample was clear, colorless, and particle free upon dilution to 50 mL.

General Precautions

- This procedure is a reference point for sample digestion using a CEM system and may need to be modified or changed to obtain the required results on your sample.
- If using a vessel other than the recommended choice, adjust sample size and pressure limit to values appropriate for the vessel chosen.

Microwave Digestion of Antioxidant (whole pill)

Procedure

Weigh 1 pill (approx 1.4 g) of the sample into the digestion vessel. Add 10 mL HNO₃ and 2 mL H₂O₂ (30%). Gently swirl the mixture and wait approximately 15 minutes before capping the vessel.

Notes

Recommended Equipment

Discover SP-D 80 mL

Recommended Vessels

Quartz

Reagents

HNO₃
H₂O₂ (30%)

Max Sample Weight

1 pill

Sample Type / Vent Program

Organic

Control Type

Ramp to Temperature

Heating Program

Stage	Temp (°C)	Ramp (mm:ss)	Hold (mm:ss)	Pressure (psi)	Power (W)	Stirring
1	200	5:00	3:00	400	300	Med

Results

Sample was clear, colorless, and particle free upon dilution to 50 mL.

General Precautions

- This procedure is a reference point for sample digestion using a CEM system and may need to be modified or changed to obtain the required results on your sample.
- If using a vessel other than the recommended choice, adjust sample size and pressure limit to values appropriate for the vessel chosen.

Microwave Digestion of Aspirin (Ground)

Procedure

Weigh 0.25 g of the sample into the digestion vessel. Add 9 mL HNO₃ and 1 mL H₂O₂ (30%). Gently swirl the mixture and wait approximately 15 minutes before capping the vessel.

Notes

Recommended Equipment

Discover SP-D 80 mL

Recommended Vessels

Quartz

Reagents

HNO₃
H₂O₂ (30%)

Max Sample Weight

0.25 g

Sample Type / Vent Program

Organic

Control Type

Ramp to Temperature

Heating Program

Stage	Temp (°C)	Ramp (mm:ss)	Hold (mm:ss)	Pressure (psi)	Power (W)	Stirring
1	200	5:00	3:00	400	300	Med

Results

Sample was clear, colorless, and particle free upon dilution to 50 mL.

General Precautions

- This procedure is a reference point for sample digestion using a CEM system and may need to be modified or changed to obtain the required results on your sample.
- If using a vessel other than the recommended choice, adjust sample size and pressure limit to values appropriate for the vessel chosen.

Microwave Digestion of Aspirin (Whole)

Procedure

Weigh 1 pill (approx 1 g) of the sample into the digestion vessel. Add 10 mL HNO₃. Gently swirl the mixture and wait approximately 15 minutes before capping the vessel.

Notes

Recommended Equipment

Discover SP-D 80 mL

Recommended Vessels

Quartz

Reagents

HNO₃

Max Sample Weight

1 pill

Sample Type / Vent Program

Organic

Control Type

Ramp to Temperature

Heating Program

Stage	Temp (°C)	Ramp (mm:ss)	Hold (mm:ss)	Pressure (psi)	Power (W)	Stirring
1	200	5:00	3:00	400	300	Med

Results

Sample was clear, colorless, and particle free upon dilution to 50 mL.

General Precautions

- This procedure is a reference point for sample digestion using a CEM system and may need to be modified or changed to obtain the required results on your sample.
- If using a vessel other than the recommended choice, adjust sample size and pressure limit to values appropriate for the vessel chosen.

Microwave Digestion of Calpan Pantothenic Acid

Procedure

Weigh 0.5 g of the sample into the digestion vessel. Add 9 mL HNO₃ and 1 mL HCl. Gently swirl the mixture and wait approximately 15 minutes before capping the vessel.

Notes

The addition of Conc. HCl (0-4 ml) is appropriate for the stabilization of Ag, Ba and Sb, and high concentrations of Fe and Al in solution. The amount of HCl will vary depending on the matrix and the concentration of the analytes. The addition of HCl may, however, limit the techniques or increase the difficulties of analysis.

Recommended Equipment

Discover SP-D 80 mL

Recommended Vessels

Quartz

Reagents

HNO₃

HCl

Max Sample Weight

0.5 g

Sample Type / Vent Program

Organic

Control Type

Ramp to Temperature

Heating Program

Stage	Temp (°C)	Ramp (mm:ss)	Hold (mm:ss)	Pressure (psi)	Power (W)	Stirring
1	200	5:00	5:00	400	300	Med

Results

Sample was clear, colorless, and particle free upon dilution to 50 mL.

General Precautions

- This procedure is a reference point for sample digestion using a CEM system and may need to be modified or changed to obtain the required results on your sample.
- If using a vessel other than the recommended choice, adjust sample size and pressure limit to values appropriate for the vessel chosen.

Microwave Digestion of Cephalexin

Procedure

Add 1 mL of the sample into the digestion vessel. Add 10 mL HNO₃. Gently swirl the mixture and wait approximately 15 minutes before capping the vessel.

Notes

Recommended Equipment

Discover SP-D 80 mL

Recommended Vessels

Quartz

Reagents

HNO₃

Max Sample Weight

1 mL

Sample Type / Vent Program

Organic

Control Type

Ramp to Temperature

Heating Program

Stage	Temp (°C)	Ramp (mm:ss)	Hold (mm:ss)	Pressure (psi)	Power (W)	Stirring
1	210	5:00	3:00	400	300	Med

Results

Sample was clear, colorless, and particle free upon dilution to 50 mL.

General Precautions

- This procedure is a reference point for sample digestion using a CEM system and may need to be modified or changed to obtain the required results on your sample.
- If using a vessel other than the recommended choice, adjust sample size and pressure limit to values appropriate for the vessel chosen.

Microwave Digestion of Chromium Chelate

Procedure

Weigh 0.5 g of the sample into the digestion vessel. Add 9 mL HNO₃ and 1 mL HCl. Gently swirl the mixture and wait approximately 15 minutes before capping the vessel.

Notes

The addition of Conc. HCl (0-4 ml) is appropriate for the stabilization of Ag, Ba and Sb, and high concentrations of Fe and Al in solution. The amount of HCl will vary depending on the matrix and the concentration of the analytes. The addition of HCl may, however, limit the techniques or increase the difficulties of analysis.

Recommended Equipment

Discover SP-D 80 mL

Recommended Vessels

Quartz

Reagents

HNO₃

HCl

Max Sample Weight

0.5 g

Sample Type / Vent Program

Organic

Control Type

Ramp to Temperature

Heating Program

Stage	Temp (°C)	Ramp (mm:ss)	Hold (mm:ss)	Pressure (psi)	Power (W)	Stirring
1	200	5:00	5:00	400	300	Med

Results

Sample was clear, colorless, and particle free upon dilution to 50 mL.

General Precautions

- This procedure is a reference point for sample digestion using a CEM system and may need to be modified or changed to obtain the required results on your sample.
- If using a vessel other than the recommended choice, adjust sample size and pressure limit to values appropriate for the vessel chosen.

Microwave Digestion of Cold and Flu Medicine (liquid)

Procedure

Add 0.75 mL of the sample into the digestion vessel. Add 9 mL HNO₃ and 1 mL H₂O₂ (30%) Gently swirl the mixture and wait approximately 15 minutes before capping the vessel.

Notes

Recommended Equipment

Discover SP-D 80 mL

Recommended Vessels

Quartz

Reagents

HNO₃
H₂O₂ (30%)

Max Sample Weight

0.75 mL

Sample Type / Vent Program

Organic

Control Type

Ramp to Temperature

Heating Program

Stage	Temp (°C)	Ramp (mm:ss)	Hold (mm:ss)	Pressure (psi)	Power (W)	Stirring
1	200	5:00	3:00	400	300	Med

Results

Sample was clear, colorless, and particle free upon dilution to 50 mL.

General Precautions

- This procedure is a reference point for sample digestion using a CEM system and may need to be modified or changed to obtain the required results on your sample.
- If using a vessel other than the recommended choice, adjust sample size and pressure limit to values appropriate for the vessel chosen.

Microwave Digestion of Diclofenac K

Procedure

Weigh 0.5 g of the sample into the digestion vessel. Add 10 mL HNO₃ and 2 mL H₂O₂ (30%) Gently swirl the mixture and wait approximately 15 minutes before capping the vessel.

Notes

Recommended Equipment

Discover SP-D 80 mL

Recommended Vessels

Quartz

Reagents

HNO₃

H₂O₂ (30%)

Max Sample Weight

0.5 g

Sample Type / Vent Program

Organic

Control Type

Ramp to Temperature

Heating Program

Stage	Temp (°C)	Ramp (mm:ss)	Hold (mm:ss)	Pressure (psi)	Power (W)	Stirring
1	200	5:00	3:00	400	300	Med

Results

Sample was clear, colorless, and particle free upon dilution to 50 mL.

General Precautions

- This procedure is a reference point for sample digestion using a CEM system and may need to be modified or changed to obtain the required results on your sample.
- If using a vessel other than the recommended choice, adjust sample size and pressure limit to values appropriate for the vessel chosen.

Microwave Digestion of Empty Capsule

Procedure

Weigh 0.1 g of the sample into the digestion vessel. Add 10 mL HNO₃. Gently swirl the mixture and wait approximately 15 minutes before capping the vessel.

Notes

Recommended Equipment

Discover SP-D 80 mL

Recommended Vessels

Quartz

Reagents

HNO₃

Max Sample Weight

0.1 g

Sample Type / Vent Program

Organic

Control Type

Ramp to Temperature

Heating Program

Stage	Temp (°C)	Ramp (mm:ss)	Hold (mm:ss)	Pressure (psi)	Power (W)	Stirring
1	200	5:00	3:00	400	300	Med

Results

Sample was clear, colorless, and particle free upon dilution to 50 mL.

General Precautions

- This procedure is a reference point for sample digestion using a CEM system and may need to be modified or changed to obtain the required results on your sample.
- If using a vessel other than the recommended choice, adjust sample size and pressure limit to values appropriate for the vessel chosen.

Microwave Digestion of Fish Oil (No Capsule)

Procedure

Weigh 0.25 g of the sample into the digestion vessel. Add 10 mL HNO₃. Gently swirl the mixture and wait approximately 15 minutes before capping the vessel.

Notes

Recommended Equipment

Discover SP-D 80 mL

Recommended Vessels

Quartz

Reagents

HNO₃

Max Sample Weight

0.25 g

Sample Type / Vent Program

Organic

Control Type

Ramp to Temperature

Heating Program

Stage	Temp (°C)	Ramp (mm:ss)	Hold (mm:ss)	Pressure (psi)	Power (W)	Stirring
1	200	5:00	3:00	400	300	Med

Results

Sample was clear, colorless, and particle free upon dilution to 50 mL.

General Precautions

- This procedure is a reference point for sample digestion using a CEM system and may need to be modified or changed to obtain the required results on your sample.
- If using a vessel other than the recommended choice, adjust sample size and pressure limit to values appropriate for the vessel chosen.

Microwave Digestion of Folic Acid

Procedure

Weigh 0.5 g of the sample into the digestion vessel. Add 9 mL HNO₃ and 1 mL HCl. Gently swirl the mixture and wait approximately 15 minutes before capping the vessel.

Notes

The addition of Conc. HCl (0-4 ml) is appropriate for the stabilization of Ag, Ba and Sb, and high concentrations of Fe and Al in solution. The amount of HCl will vary depending on the matrix and the concentration of the analytes. The addition of HCl may, however, limit the techniques or increase the difficulties of analysis.

Recommended Equipment

Discover SP-D 80 mL

Recommended Vessels

Quartz

Reagents

HNO₃

HCl

Max Sample Weight

0.5 g

Sample Type / Vent Program

Organic

Control Type

Ramp to Temperature

Heating Program

Stage	Temp (°C)	Ramp (mm:ss)	Hold (mm:ss)	Pressure (psi)	Power (W)	Stirring
1	200	5:00	5:00	400	300	Med

Results

Sample was clear, colorless, and particle free upon dilution to 50 mL.

General Precautions

- This procedure is a reference point for sample digestion using a CEM system and may need to be modified or changed to obtain the required results on your sample.
- If using a vessel other than the recommended choice, adjust sample size and pressure limit to values appropriate for the vessel chosen.

Microwave Digestion of Ginko (Ground)

Procedure

Weigh 0.5 g of the sample into the digestion vessel. Add 10 mL HNO₃. Gently swirl the mixture and wait approximately 15 minutes before capping the vessel.

Notes

Recommended Equipment

Discover SP-D 80 mL

Recommended Vessels

Quartz

Reagents

HNO₃

Max Sample Weight

0.5 g

Sample Type / Vent Program

Organic

Control Type

Ramp to Temperature

Heating Program

Stage	Temp (°C)	Ramp (mm:ss)	Hold (mm:ss)	Pressure (psi)	Power (W)	Stirring
1	200	5:00	3:00	400	300	Med

Results

Sample was clear, colorless, and particle free upon dilution to 50 mL.

General Precautions

- This procedure is a reference point for sample digestion using a CEM system and may need to be modified or changed to obtain the required results on your sample.
- If using a vessel other than the recommended choice, adjust sample size and pressure limit to values appropriate for the vessel chosen.

Microwave Digestion of Ginko (Whole Pill)

Procedure

Weigh 1 pill (approx 1 g) of the sample into the digestion vessel. Add 10 mL HNO₃ and 2 mL H₂O₂ (30%). Gently swirl the mixture and wait approximately 15 minutes before capping the vessel.

Notes

Recommended Equipment

Discover SP-D 80 mL

Recommended Vessels

Quartz

Reagents

HNO₃

H₂O₂ (30%)

Max Sample Weight

1 pill

Sample Type / Vent Program

Organic

Control Type

Ramp to Temperature

Heating Program

Stage	Temp (°C)	Ramp (mm:ss)	Hold (mm:ss)	Pressure (psi)	Power (W)	Stirring
1	210	5:00	5:00	400	300	Med

Results

Sample was clear, colorless, and particle free upon dilution to 50 mL.

General Precautions

- This procedure is a reference point for sample digestion using a CEM system and may need to be modified or changed to obtain the required results on your sample.
- If using a vessel other than the recommended choice, adjust sample size and pressure limit to values appropriate for the vessel chosen.

Microwave Digestion of Kelp

Procedure

Weigh 0.5 g of the sample into the digestion vessel. Add 9 mL HNO₃ and 1 mL HCl. Gently swirl the mixture and wait approximately 15 minutes before capping the vessel.

Notes

The addition of Conc. HCl (0-4 ml) is appropriate for the stabilization of Ag, Ba and Sb, and high concentrations of Fe and Al in solution. The amount of HCl will vary depending on the matrix and the concentration of the analytes. The addition of HCl may, however, limit the techniques or increase the difficulties of analysis.

Recommended Equipment

Discover SP-D 80 mL

Recommended Vessels

Quartz

Reagents

HNO₃

HCl

Max Sample Weight

0.5 g

Sample Type / Vent Program

Organic

Control Type

Ramp to Temperature

Heating Program

Stage	Temp (°C)	Ramp (mm:ss)	Hold (mm:ss)	Pressure (psi)	Power (W)	Stirring
1	200	5:00	5:00	400	300	Med

Results

Sample was clear, colorless, and particle free upon dilution to 50 mL.

General Precautions

- This procedure is a reference point for sample digestion using a CEM system and may need to be modified or changed to obtain the required results on your sample.
- If using a vessel other than the recommended choice, adjust sample size and pressure limit to values appropriate for the vessel chosen.

Microwave Digestion of Losataran K

Procedure

Weigh 0.5 g of the sample into the digestion vessel. Add 10 mL HNO₃ and 2 mL H₂O₂ (30%). Gently swirl the mixture and wait approximately 15 minutes before capping the vessel.

Notes

Recommended Equipment

Discover SP-D 80 mL

Recommended Vessels

Quartz

Reagents

HNO₃

H₂O₂ (30%)

Max Sample Weight

0.5 g

Sample Type / Vent Program

Organic

Control Type

Ramp to Temperature

Heating Program

Stage	Temp (°C)	Ramp (mm:ss)	Hold (mm:ss)	Pressure (psi)	Power (W)	Stirring
1	200	5:00	3:00	400	300	Med

Results

Sample was clear, colorless, and particle free upon dilution to 50 mL.

General Precautions

- This procedure is a reference point for sample digestion using a CEM system and may need to be modified or changed to obtain the required results on your sample.
- If using a vessel other than the recommended choice, adjust sample size and pressure limit to values appropriate for the vessel chosen.

Microwave Digestion of Magnesium Oxide

Procedure

Weigh 0.5 g of the sample into the digestion vessel. Add 9 mL HNO₃ and 1 mL HCl. Gently swirl the mixture and wait approximately 15 minutes before capping the vessel.

Notes

The addition of Conc. HCl (0-4 ml) is appropriate for the stabilization of Ag, Ba and Sb, and high concentrations of Fe and Al in solution. The amount of HCl will vary depending on the matrix and the concentration of the analytes. The addition of HCl may, however, limit the techniques or increase the difficulties of analysis.

Recommended Equipment

Discover SP-D 80 mL

Recommended Vessels

Quartz

Reagents

HNO₃

HCl

Max Sample Weight

0.5 g

Sample Type / Vent Program

Organic

Control Type

Ramp to Temperature

Heating Program

Stage	Temp (°C)	Ramp (mm:ss)	Hold (mm:ss)	Pressure (psi)	Power (W)	Stirring
1	200	5:00	5:00	400	300	Med

Results

Sample was clear, colorless, and particle free upon dilution to 50 mL.

General Precautions

- This procedure is a reference point for sample digestion using a CEM system and may need to be modified or changed to obtain the required results on your sample.
- If using a vessel other than the recommended choice, adjust sample size and pressure limit to values appropriate for the vessel chosen.

Microwave Digestion of Manganese Carbonate

Procedure

Weigh 0.5 g of the sample into the digestion vessel. Add 9 mL HNO₃ and 1 mL HCl. Gently swirl the mixture and wait approximately 15 minutes before capping the vessel.

Notes

The addition of Conc. HCl (0-4 ml) is appropriate for the stabilization of Ag, Ba and Sb, and high concentrations of Fe and Al in solution. The amount of HCl will vary depending on the matrix and the concentration of the analytes. The addition of HCl may, however, limit the techniques or increase the difficulties of analysis.

Recommended Equipment

Discover SP-D 80 mL

Recommended Vessels

Quartz

Reagents

HNO₃

HCl

Max Sample Weight

0.5 g

Sample Type / Vent Program

Organic

Control Type

Ramp to Temperature

Heating Program

Stage	Temp (°C)	Ramp (mm:ss)	Hold (mm:ss)	Pressure (psi)	Power (W)	Stirring
1	200	5:00	5:00	400	300	Med

Results

Sample was clear, colorless, and particle free upon dilution to 50 mL.

General Precautions

- This procedure is a reference point for sample digestion using a CEM system and may need to be modified or changed to obtain the required results on your sample.
- If using a vessel other than the recommended choice, adjust sample size and pressure limit to values appropriate for the vessel chosen.

Microwave Digestion of Metaformin

Procedure

Weigh 0.5 g of the sample into the digestion vessel. Add 10 mL HNO₃ and 2 mL H₂O₂ (30%). Gently swirl the mixture and wait approximately 15 minutes before capping the vessel.

Notes

Recommended Equipment

Discover SP-D 80 mL

Recommended Vessels

Quartz

Reagents

HNO₃

H₂O₂ (30%)

Max Sample Weight

0.5 g

Sample Type / Vent Program

Organic

Control Type

Ramp to Temperature

Heating Program

Stage	Temp (°C)	Ramp (mm:ss)	Hold (mm:ss)	Pressure (psi)	Power (W)	Stirring
1	200	5:00	3:00	400	300	Med

Results

Sample was clear, colorless, and particle free upon dilution to 50 mL.

General Precautions

- This procedure is a reference point for sample digestion using a CEM system and may need to be modified or changed to obtain the required results on your sample.
- If using a vessel other than the recommended choice, adjust sample size and pressure limit to values appropriate for the vessel chosen.

Microwave Digestion of Multivitamin (ground)

Procedure

Weigh 0.5 g of the sample into the digestion vessel. Add 10 mL HNO₃ and 2 mL H₂O₂ (30%). Gently swirl the mixture and wait approximately 15 minutes before capping the vessel.

Notes

Recommended Equipment

Discover SP-D 80 mL

Recommended Vessels

Quartz

Reagents

HNO₃

H₂O₂ (30%)

Max Sample Weight

0.5 g

Sample Type / Vent Program

Organic

Control Type

Ramp to Temperature

Heating Program

Stage	Temp (°C)	Ramp (mm:ss)	Hold (mm:ss)	Pressure (psi)	Power (W)	Stirring
1	200	5:00	3:00	400	300	Med

Results

Sample was clear, colorless, and particle free upon dilution to 50 mL.

General Precautions

- This procedure is a reference point for sample digestion using a CEM system and may need to be modified or changed to obtain the required results on your sample.
- If using a vessel other than the recommended choice, adjust sample size and pressure limit to values appropriate for the vessel chosen.

Microwave Digestion of Multivitamin (whole)

Procedure

Weigh 1 pill (approx 2.5 g) of the sample into the digestion vessel. Add 10 mL HNO₃ and 2 mL H₂O₂ (30%). Gently swirl the mixture and wait approximately 30 minutes before capping the vessel.

Notes

Recommended Equipment

Discover SP-D 80 mL

Recommended Vessels

Quartz

Reagents

HNO₃

H₂O₂ (30%)

Max Sample Weight

1 pill

Sample Type / Vent Program

Organic

Control Type

Ramp to Temperature

Heating Program

Stage	Temp (°C)	Ramp (mm:ss)	Hold (mm:ss)	Pressure (psi)	Power (W)	Stirring
1	200	5:00	3:00	400	300	Med

Results

Sample was clear, colorless, and particle free upon dilution to 50 mL.

General Precautions

- This procedure is a reference point for sample digestion using a CEM system and may need to be modified or changed to obtain the required results on your sample.
- If using a vessel other than the recommended choice, adjust sample size and pressure limit to values appropriate for the vessel chosen.

Microwave Digestion of Stearic Acid

Procedure

Weigh 0.25 g of the sample into the digestion vessel. Add 10 mL HNO₃. Gently swirl the mixture and wait approximately 15 minutes before capping the vessel.

Notes

Recommended Equipment

Discover SP-D 80 mL

Recommended Vessels

Quartz

Reagents

HNO₃

Max Sample Weight

0.25 g

Sample Type / Vent Program

Organic

Control Type

Ramp to Temperature

Heating Program

Stage	Temp (°C)	Ramp (mm:ss)	Hold (mm:ss)	Pressure (psi)	Power (W)	Stirring
1	210	10:00	10:00	400	300	Med

Results

Sample was clear, colorless, and particle free upon dilution to 50 mL.

General Precautions

- This procedure is a reference point for sample digestion using a CEM system and may need to be modified or changed to obtain the required results on your sample.
- If using a vessel other than the recommended choice, adjust sample size and pressure limit to values appropriate for the vessel chosen.

Microwave Digestion of Thiamine

Procedure

Weigh 0.5 g of the sample into the digestion vessel. Add 9 mL HNO₃ and 1 mL HCl. Gently swirl the mixture and wait approximately 15 minutes before capping the vessel.

Notes

The addition of Conc. HCl (0-4 ml) is appropriate for the stabilization of Ag, Ba and Sb, and high concentrations of Fe and Al in solution. The amount of HCl will vary depending on the matrix and the concentration of the analytes. The addition of HCl may, however, limit the techniques or increase the difficulties of analysis.

Recommended Equipment

Discover SP-D 80 mL

Recommended Vessels

Quartz

Reagents

HNO₃

HCl

Max Sample Weight

0.5 g

Sample Type / Vent Program

Organic

Control Type

Ramp to Temperature

Heating Program

Stage	Temp (°C)	Ramp (mm:ss)	Hold (mm:ss)	Pressure (psi)	Power (W)	Stirring
1	200	5:00	5:00	400	300	Med

Results

Sample was clear, colorless, and particle free upon dilution to 50 mL.

General Precautions

- This procedure is a reference point for sample digestion using a CEM system and may need to be modified or changed to obtain the required results on your sample.
- If using a vessel other than the recommended choice, adjust sample size and pressure limit to values appropriate for the vessel chosen.

Microwave Digestion of USP 232/233

Procedure

Weigh 0.5 g of the sample into the digestion vessel. Add 9 mL of HNO₃ and 1 mL of HCl . Gently swirl the mixture and wait approximately 15 minutes before capping the vessel.

Notes

Recommended Equipment

Discover SP-D 80 mL

Recommended Vessels

Quartz

Reagents

HNO₃
HCl

Max Sample Weight

0.5 g

Sample Type / Vent Program

Organic

Control Type

Ramp to Temperature

Heating Program

Stage	Temp (°C)	Ramp (mm:ss)	Hold (mm:ss)	Pressure (psi)	Power (W)	Stirring
1	200	5:00	3:00	400	300	Med

Results

Sample was clear, colorless, and particle free upon dilution to 50 mL.

General Precautions

- This procedure is a reference point for sample digestion using a CEM system and may need to be modified or changed to obtain the required results on your sample.
- If using a vessel other than the recommended choice, adjust sample size and pressure limit to values appropriate for the vessel chosen.

Microwave Digestion of Vitamin C (ground)

Procedure

Weigh 0.5 g of the sample into the digestion vessel. Add 10 mL HNO₃. Gently swirl the mixture and wait approximately 15 minutes before capping the vessel.

Notes

Recommended Equipment

Discover SP-D 80 mL

Recommended Vessels

Quartz

Reagents

HNO₃

Max Sample Weight

0.5 g

Sample Type / Vent Program

Organic

Control Type

Ramp to Temperature

Heating Program

Stage	Temp (°C)	Ramp (mm:ss)	Hold (mm:ss)	Pressure (psi)	Power (W)	Stirring
1	200	5:00	3:00	400	300	Med

Results

Sample was clear, colorless, and particle free upon dilution to 50 mL.

General Precautions

- This procedure is a reference point for sample digestion using a CEM system and may need to be modified or changed to obtain the required results on your sample.
- If using a vessel other than the recommended choice, adjust sample size and pressure limit to values appropriate for the vessel chosen.

Microwave Digestion of Vitamin C (whole)

Procedure

Weigh 1 pill (approx 1.4 g) of the sample into the digestion vessel. Add 10 mL HNO₃ and 2 mL H₂O₂ (30%). Gently swirl the mixture and wait approximately 15 minutes before capping the vessel.

Notes

Recommended Equipment

Discover SP-D 80 mL

Recommended Vessels

Quartz

Reagents

HNO₃

H₂O₂ (30%)

Max Sample Weight

1 pill

Sample Type / Vent Program

Organic

Control Type

Ramp to Temperature

Heating Program

Stage	Temp (°C)	Ramp (mm:ss)	Hold (mm:ss)	Pressure (psi)	Power (W)	Stirring
1	200	5:00	3:00	400	300	Med

Results

Sample was clear, colorless, and particle free upon dilution to 50 mL.

General Precautions

- This procedure is a reference point for sample digestion using a CEM system and may need to be modified or changed to obtain the required results on your sample.
- If using a vessel other than the recommended choice, adjust sample size and pressure limit to values appropriate for the vessel chosen.

Microwave Digestion of Vitamin D3

Procedure

Weigh 0.5 g of the sample into the digestion vessel. Add 9 mL HNO₃ and 1 mL HCl. Gently swirl the mixture and wait approximately 15 minutes before capping the vessel.

Notes

The addition of Conc. HCl (0-4 ml) is appropriate for the stabilization of Ag, Ba and Sb, and high concentrations of Fe and Al in solution. The amount of HCl will vary depending on the matrix and the concentration of the analytes. The addition of HCl may, however, limit the techniques or increase the difficulties of analysis.

Recommended Equipment

Discover SP-D 80 mL

Recommended Vessels

Quartz

Reagents

HNO₃

HCl

Max Sample Weight

0.5 g

Sample Type / Vent Program

Organic

Control Type

Ramp to Temperature

Heating Program

Stage	Temp (°C)	Ramp (mm:ss)	Hold (mm:ss)	Pressure (psi)	Power (W)	Stirring
1	200	5:00	5:00	400	300	Med

Results

Sample was clear, colorless, and particle free upon dilution to 50 mL.

General Precautions

- This procedure is a reference point for sample digestion using a CEM system and may need to be modified or changed to obtain the required results on your sample.
- If using a vessel other than the recommended choice, adjust sample size and pressure limit to values appropriate for the vessel chosen.

Microwave Digestion of Zinc Sulfate

Procedure

Weigh 0.5 g of the sample into the digestion vessel. Add 9 mL HNO₃ and 1 mL HCl. Gently swirl the mixture and wait approximately 15 minutes before capping the vessel.

Notes

The addition of Conc. HCl (0-4 ml) is appropriate for the stabilization of Ag, Ba and Sb, and high concentrations of Fe and Al in solution. The amount of HCl will vary depending on the matrix and the concentration of the analytes. The addition of HCl may, however, limit the techniques or increase the difficulties of analysis.

Recommended Equipment

Discover SP-D 80 mL

Recommended Vessels

Quartz

Reagents

HNO₃

HCl

Max Sample Weight

0.5 g

Sample Type / Vent Program

Organic

Control Type

Ramp to Temperature

Heating Program

Stage	Temp (°C)	Ramp (mm:ss)	Hold (mm:ss)	Pressure (psi)	Power (W)	Stirring
1	200	5:00	5:00	400	300	Med

Results

Sample was clear, colorless, and particle free upon dilution to 50 mL.

General Precautions

- This procedure is a reference point for sample digestion using a CEM system and may need to be modified or changed to obtain the required results on your sample.
- If using a vessel other than the recommended choice, adjust sample size and pressure limit to values appropriate for the vessel chosen.



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