



Discover® SP-D 80
Automated Microwave Digestion





Digest any sample in under 10 minutes.

The Discover SP-D 80 produces a clear aqueous digest for elemental analysis by ICP, ICP-MS, or AA. Since each vessel has its own method, you can mix and match samples and acids within the automation rack, providing your laboratory great flexibility. Digestion time is 10 minutes or less, providing rapid turnaround and the ability to accommodate rush samples. This automated system is sure to optimize your laboratory workflow.

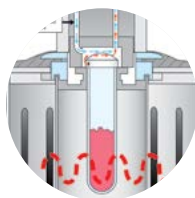
- Most digestions in under 10 minutes (including cool down)
- Automated system allows technician to tend to other tasks
- Temperature and pressure control of every sample
- Documentation of every sample
- Simple-to-use vessels with snap-on caps

Unique technologies that make your work easy.



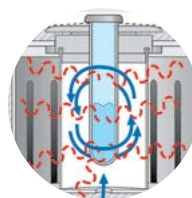
Focused™ Microwave Cavity **Precise & Efficient** **Energy Delivery**

The cavity produces a focused and extremely homogeneous microwave field. This enables the system to digest samples faster and with greater reproducibility than batch style systems.



Activent® Technology **No Loss of** **Volatile Elements**

The system actively controls pressure and vessel venting to eliminate loss of elements, including volatiles such as mercury and arsenic.



PowerMAX™ **Rapid Cooling,** **Faster Digestions**

The sample is cooled in less than one minute after digestion. In as little as ten minutes, you will have a digested sample in-hand ready for analysis.

Just weigh,
snap, load, &
you're done.

1. Weigh the sample and add acid
2. Snap on the cap and place in the system
3. Select the method(s) and press "Play"

You are now free to tend to other tasks.



The most versatile acid digestion
system ever made.



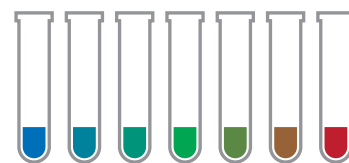
Digest most samples in 10 minutes, or less.

It couldn't be simpler. Get clear solutions in 10 minutes. Using CEM's Focused Microwave Technology and enhanced cooling, most routine samples are digested in 10 minutes or less — including cool down. Digest up to 48 samples in an 8-hour shift.



Digest a RUSH sample immediately.

The advanced Synergy-D™ software will allow you to interrupt a pre-programmed run to accommodate a rush sample. In just about 10 minutes you will have a digested sample in hand ready for analysis, then the software will resume running as programmed.



Discover SP-D 80 gives you total flexibility.

Digest up to 24 samples, completely unattended. Discover SP-D 80 gives you the flexibility to prepare different sample sizes, types and acids within one batch.

Any sample, any acid in the same run.

A Discover SP-D 80 system is fully automated. You can mix samples that use different acids in the same run. Once you set the preloaded methods and hit play, your work is done. The system finishes the digestion for you and produces a clear digest, ready for analysis.

- Varied sample sizes
- Combination of acids
- Full pressure and temperature control

To the right is an example of how a Discover SP-D 80 could be loaded with samples of different sizes, acids, and temperature requirements in the same run. The Discover SP-D 80 can handle it; giving you flexibility in your work.



LEGEND

● Aspirin	● Lipstick
● Dry Pet Food	● Milk Powder
● Excipient	● Oil
● HDPE	● Aluminum



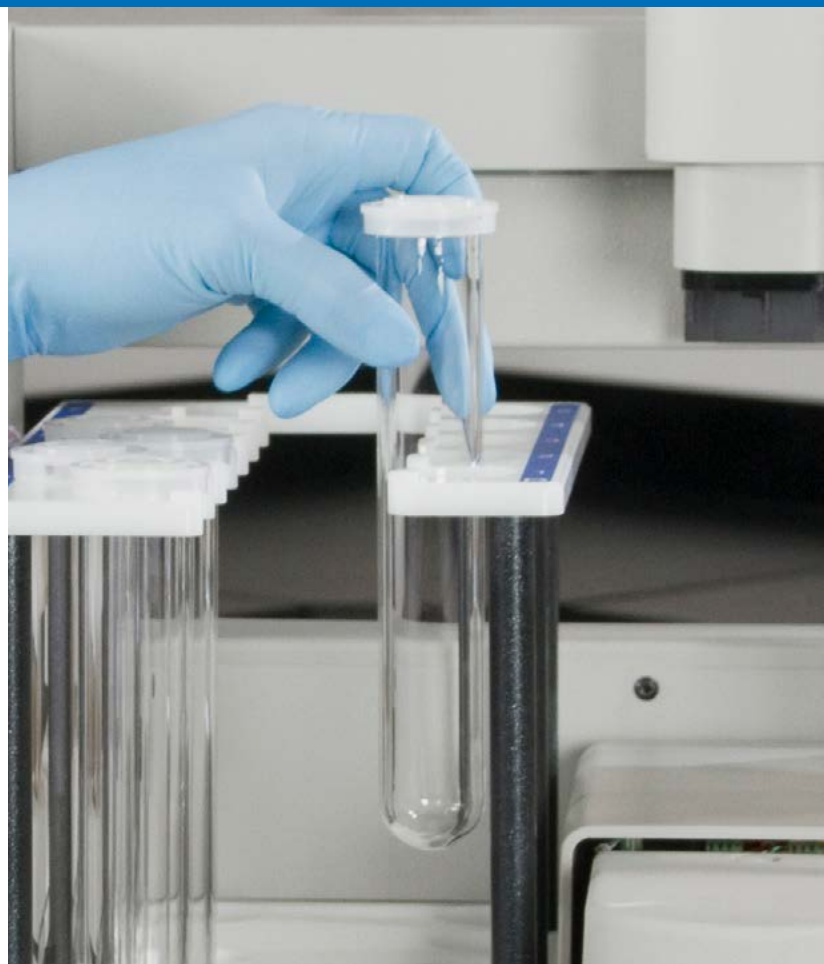
No clamps or torque wrenches.

Our patented and easy-to-use snap-on caps eliminate the need for clamps or torque wrenches. With just the push of a thumb the caps will be safely secured and ready for digestion.

Strength, cleanliness, & clarity in one vessel.

The Discover SP-D 80's unique quartz vessels let you see your sample and digest without opening it. The robust vessel is strong enough to safely digest samples at high temperatures and pressures. The high purity quartz is low in contaminants, so that your digestions can be analyzed at low ppb levels.

Optional TFM liners are available for applications requiring HF.



Process samples completely unattended.

The Discover SP-D 80 is more than the latest technology for microwave digestion: it is a new concept in sample preparation. Discover SP-D 80 is a sequential, pressurized microwave digestion system that processes samples completely unattended, allowing laboratory staff to tend to other tasks. Just load the autosampler, press play, and walk away. The Discover SP-D 80 will do the rest.



Applications

Many of these applications come preloaded on every Discover SP-D 80 system. To view the Method Notes for more samples, go to www.cem.com.

Animal

- Beef Tallow
- Bone
- Bovine Liver
- Bovine Muscle
- Bovine Serum
- Chicken
- Fish Tissue
- Pork

Environmental & Regulatory

- AOAC 200603
- CPST
- EPA 3051a
- Paint Chips
- RoHS
- Sediment
- Sludge

Metallurgical & Mining

- Aluminum
- Aluminum Oxide
- Coal
- Copper
- Gold Nanopowder
- Nickel
- Platinum Carbon
- Steel

Pharmaceutical

- Allergy Pill
- Aspirin
- Claritin
- Diclofenac K
- Losartan K
- Metformin
- Magnesium Carbonate
- Magnesium Oxide
- Pyridoxine HCL

Clinical & Forensic

- Blood
- Bone
- Hair
- Human Lung Tissue
- Urine

Food

- Cereal
- Cheese
- Coffee
- Milk Powder
- Olive Oil
- Peanut Butter
- Soda
- Sugar

Nutraceutical

- Antioxidant
- Beta Carotene
- Calcium Carbonate
- Fish Oil
- Folic Acid
- Ginko
- Herbal Supplement
- Multivitamin
- Whey Powder

Plant

- Alfalfa
- Apple
- Asparagus
- Banana Leaves
- Blueberry
- Broccoli
- Carrot
- Citrus Leaves
- Tea Leaves
- Tobacco

Consumer Products

- Cotton
- Deodorant
- Makeup
- Shampoo
- Suppository

Industrial Hygiene

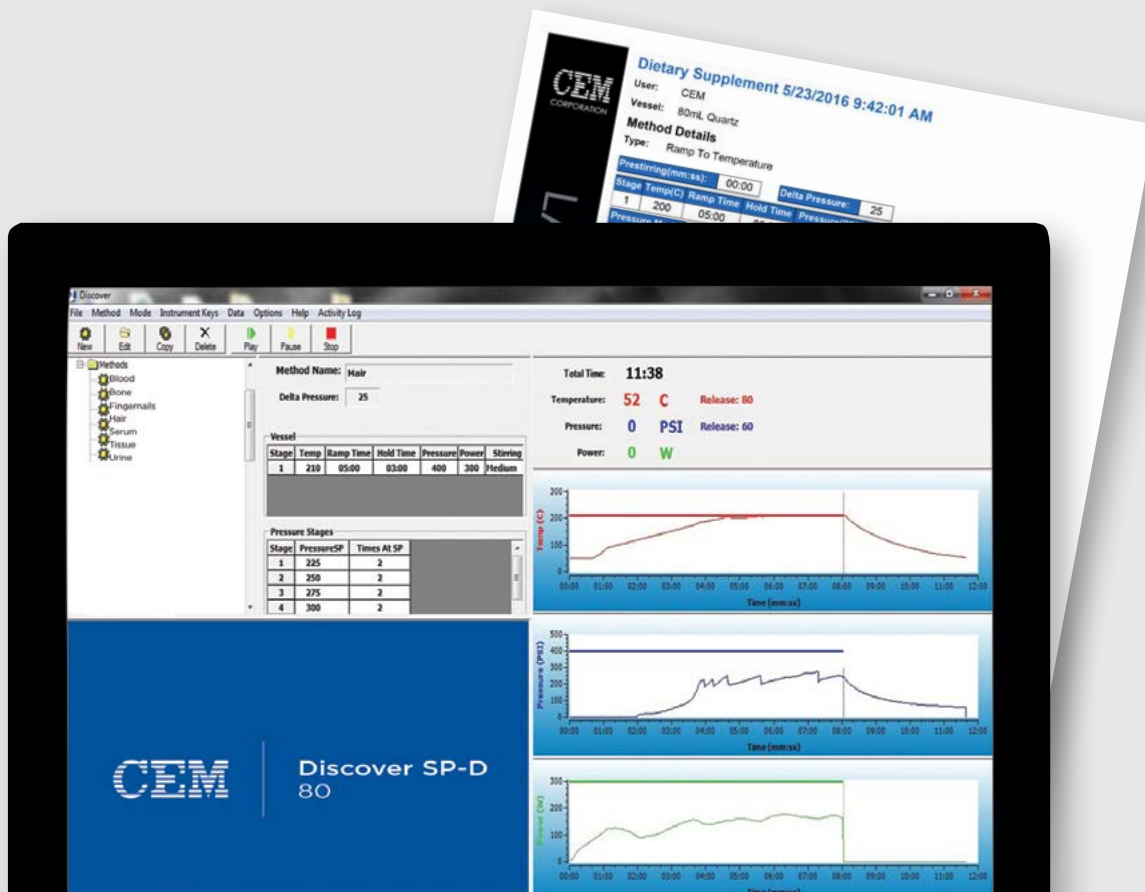
- 37 mm Filter Paper
- 47 mm Filter Paper
- Filter Paper Cellulose
- Polycarbonate Filter
- Paint Chips
- Ghost Wipes

Oil

- Crude Oil
- Mineral Oil
- Motor Oil
- Petrolatum
- Petroleum Wax

Plastic & Polymer

- ABS
- HDPE
- Polymer
- Polypropylene
- PPS
- PVC
- Tire Rubber
- Kevlar
- Nylon
- PET



Software that does the hard work for you.

- Real-time display of temperature, pressure, and microwave power
- Pre-installed methods for many sample types
- Sample queues that mix methods and sample types in a single run
- 21 CFR Part 11 Compliant
- Automatically generate a report of run conditions for every sample, not the batch

Documentation

The Discover SP-D 80 system automatically generates a lab report to verify digestion conditions were met for each individual sample, not the batch. Temperature, pressure, and power graphs are documented, as well as the maximum temperature and pressure during the digestion.



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