EDGEEnergized Dispersive Guided Extraction
For Pesticide Residue Analysis
The new leading EDGE of sample preparation.

The EDGEm™ has revolutionized the extraction process for sample preparation. Extract up to 15 grams in only five minutes, including the filtering and cooling process; 6 times faster than the QuEChERS method.

- Five minute cycle time (the fastest technique available)
- 12 samples in an hour (includes washing, filtering, & cooling)
- Q-Cups are easily assembled and cleaned (sample holders)
- Small footprint (about the size of a analytical balance)

At Least 6 Times Faster than the QuEChERS method

12 Samples in an Hour includes washing, filtering & cooling

<table>
<thead>
<tr>
<th>Technique</th>
<th>Time (minutes)</th>
<th>Solvent Usage (mL)</th>
<th>Cost Effective</th>
</tr>
</thead>
<tbody>
<tr>
<td>EDGE</td>
<td>5</td>
<td>20</td>
<td>$</td>
</tr>
<tr>
<td>QuEChERS</td>
<td>20</td>
<td>23</td>
<td>$ $</td>
</tr>
<tr>
<td>Pressurized Fluid Extraction</td>
<td>30</td>
<td>21</td>
<td>$ $ $</td>
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<tr>
<td>Soxlet</td>
<td>360</td>
<td>150</td>
<td>$ $</td>
</tr>
<tr>
<td>Automated Soxlet</td>
<td>120</td>
<td>90</td>
<td>$ $ $</td>
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<tr>
<td>Ultrasonic</td>
<td>60</td>
<td>300</td>
<td>$ $</td>
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</table>
The Q-Cup is a simple solution to a complicated problem.

The reusable Q-Cup™ sample holder consists of three easy-to-assemble pieces. The unique open cell concept creates a dispersive effect, which promotes rapid extraction and filtration. No additional steps are required prior to analysis.

Load your samples in seconds.

Just add a Q-Disc™, screw on the bottom, and add your sample; it’s that simple.

Q-Cup Cylinder
- up to 30 g sample and 40 mL extract
- made of ultra-thin aluminum for efficient heating
- light-weight and easy to use

Cleaning
The simple design lends itself to easy cleaning.
A quick rinse is all you need.

Disposable
The Q-Discs are disposable, eliminating the need to clean.
Starting the EDGE

Right on the home screen, you have access to the One Touch™ methods. These are the pre-installed methods that make programming the EDGE quick and simple.

Just select a method and hit play.
1 Sample is Loaded

The Q-Cup is automatically loaded into the chamber by the auto sampler. The pressure cap then creates a pressurized seal on the top of the Q-Cup.

2 Solvent is Extracted

Solvent is first added through the bottom to fill the gap between the chamber and Q-Cup, this aids in heat transfer. Then, solvent is added through the top of the Q-Cup to wet the sample.

As the chamber walls are heated, the pressure in the gap increases. This overcomes the pressure inside the Q-Cup, forcing the solvent to disperse into the sample.

3 Extract is Collected

Once the sample reaches temperature, the solvent is dispensed through the Q-Disc, the cooling coil, and into a collection vial.
Food Samples

- Fruit
- Vegetables
- Meat
- Milk
- Nutraceuticals

Pesticides

- Insecticides
- Herbicides
- Rodenticides
- Bactericides
- Fungicides
- Larvicides

EDGE Results

<table>
<thead>
<tr>
<th>Pesticide</th>
<th>Rice</th>
<th>Avocado</th>
<th>Strawberries</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tokuthion</td>
<td>87</td>
<td>86</td>
<td>93</td>
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<tr>
<td>Guthion</td>
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<td>85</td>
<td>90</td>
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<tr>
<td>Dichlorvos</td>
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<td>116</td>
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<tr>
<td>Methyl Parathion</td>
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<td>Mocap</td>
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<td>103</td>
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</tbody>
</table>

Percent recovery of spiked pesticides in rice, avocado, and strawberries

Compact

Its small size is a big advantage.

- The EDGE is only 14.25” wide

You can extract 48 samples an hour with 4 EDGE systems, easily placed side-by-side on one bench top.
The EDGE makes it simple to extract fat from food samples. A major advantage provided by it’s patented Q-Cup, is preservation of the sample for further processing. Additional methods such as FAMEs analysis or determining total fat in the sample are made possible.
“Our passion is to disrupt markets with new solutions that provide speed and simplicity.”

Michael J. Collins PhD
President and CEO