

# A New Way to Maximize Your Lab's Throughput

Multiplexing Your Food and Environmental Workflows



## Make Your Mass Spectrometer Work Up to Its Potential

Multiplexing using the MPX™ High-Throughput System can be an affordable solution for your company to significantly improve food or environmental testing throughput and turnaround time.

The MPX 2.0 solution leverages the productivity of two liquid chromatography (LC) systems coupled to a single mass spectrometer. The LC systems operate in tandem to reduce system idle time and boost throughput, so you can run up to twice as many samples.



## Reclaim Your Equilibration Time

On all LC systems, analytes typically elute during a smaller portion of the total LC runtime. During elution, your MS is busy quantitating analytes, but between the current elution and the next, the MS is left idle during the LC equilibration period.

The LC equilibration is crucial to achieving reproducible liquid chromatography, but reduces the productivity of your mass spectrometer. But what if your mass spectrometer could start analyzing your next sample whilst re-equilibrating? MPX makes this a reality. By adding a second LC and staggering the elution times, your mass spectrometer can be up to 2 times more productive.

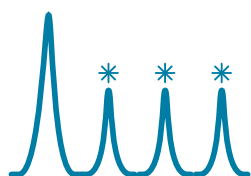


## Automated Carryover Detection

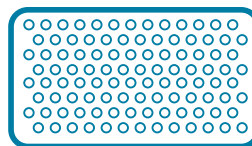
Sometimes, you will have samples with an abundance of a particular analyte such as a pesticide or an antibiotic. In some instances the amount of these compounds can be so high that they create carryover into the next sample run.

In most cases, carryover negatively impacts the results for samples that are analyzed after a sample with a high concentration of analytes. In a typical LC-MS/MS run, you might only be aware of carryover once your batch has completed and you are processing the data.

MPX 2.0 with carry over monitoring powered by **RTD<sup>3</sup>** technology, detects carryover and automatically injects blanks to clean the LC stream before running more samples. Once the stream is clean, the system continues to analyze samples and also re-injects any samples that might have been affected by carryover. The offending high concentration samples are flagged for the operator's attention.



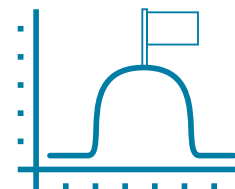
**Detects  
Carryover**



**Automatically  
Reruns Samples  
with Carryover**



**Cleans the  
System**



**Flags High  
Concentration  
Samples**

### With MPX 2.0 your lab can:

- Maximize throughput
- Save batches from carryover from saturated samples
- Attain a faster ROI on your Mass Spectrometer
- Save sample analysis time with automated carryover monitoring
- Increase sample capacity for extended—and unattended—operation
- Stay compliant with complete traceability and audit trails
- Run multiple LC-MS modes concurrently