

Double Your Mass Spec Sample Throughput

Multiplex LC-MS with Automated Carryover Monitoring

MPX™ 2.0

High Throughput
System



Get Up to 2x the Throughput with Your Mass Spectrometer

Today's labs are under constant pressure to increase capacity, while minimizing the time to deliver results.

SCIEX meets these demands with the MPX™ 2.0 High Throughput System – a must-have for labs that are continuously running hundreds of samples at a time. The MPX 2.0 High Throughput System takes advantage of the downtime between injections from your LC and multiplexes two LC systems into one mass spectrometer, doubling your throughput.

Featuring automated carryover management, the MPX 2.0 High Throughput System works to reduce carryover and highlights samples that may need retesting, decreasing your sample analysis time.

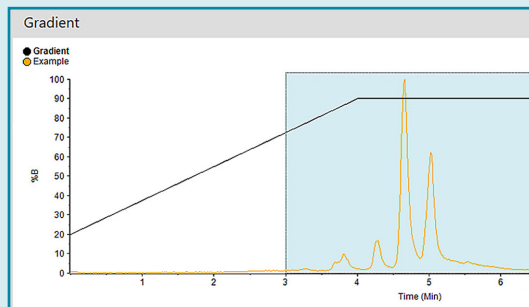
- Get up to twice the sample throughput from a single MS
- Save sample analysis time with automated carryover detection
- Increase sample capacity for extended and unattended operation
- Stay compliant with complete traceability and audit trails
- Run multiple LC-MS modes concurrently
- Maximize uptime with real-time system monitoring

When you need to maximize throughput, the MPX is your solution.



How Much Time Will You Save?

MPX Software lets you easily calculate time savings. Program your method, highlight acquisition time and MPX will calculate throughput improvement.



Load Example... Clear Example Set to Full Range

Acquisition Window: Start (min) 3.00 End (min) 7.00

Sample Throughput 2x

Loading Pump:

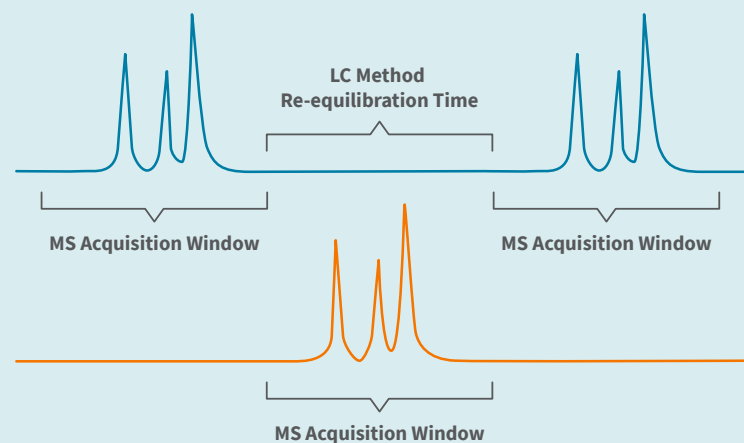
	Duration (sec)	Channel
Equilibration:	60.00	A
Loading / washing:	180.00	A

Time (min)	%B	Flow Rate (mL/min)
0	20	0.25
4	90	0.25
7.9	90	0.25
8	20	0.25
13	20	0.25

Maximize LC-MS/MS Throughput

The MPX™ 2.0 High Throughput System staggers injections to utilize the down time in your LC method – potentially doubling your throughput for swifter work flows. That's almost twice the speed with half the turnaround time per sample batch.

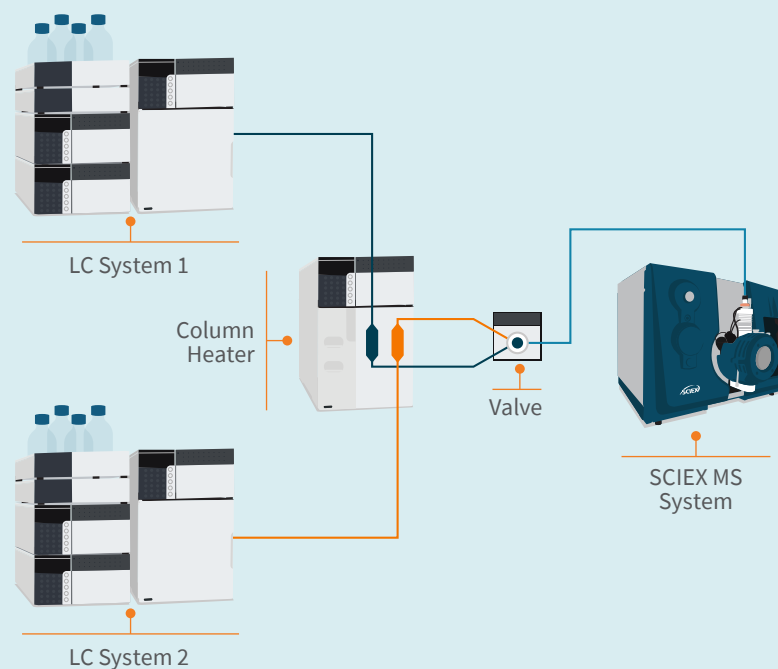
- 100 injections, singleplex >6 hr 30 min
- 100 injections, multiplex run time, 3 hr 30 min
- Time saved: 3 hours



One System – Three Possible Workflows

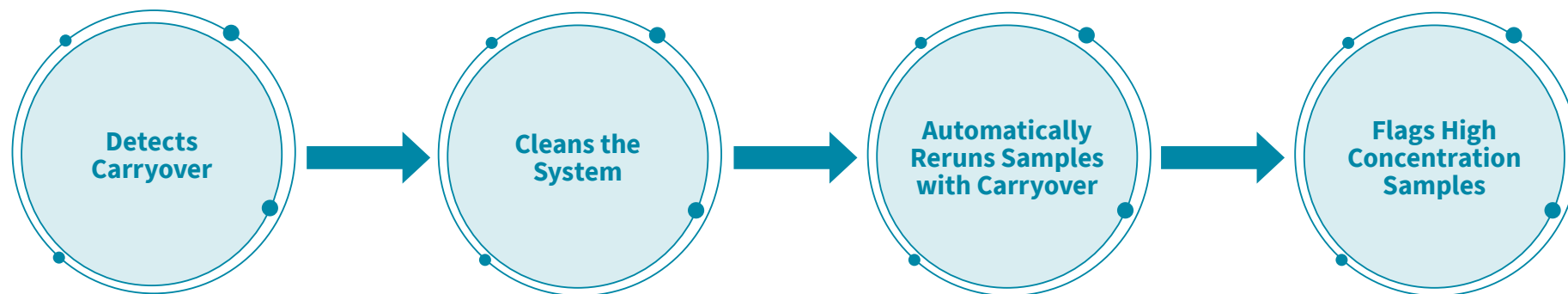
There are three different ways to run samples on the MPX 2.0 High Throughput System:

1. Stagger injections from each of two HPLC systems running the same method
2. Stagger injections from two HPLC systems running two different methods
3. Run two sequential sample batches from two HPLC systems



Minimize Data Review and Reanalysis Time

Dramatically reduce the amount of reinjection and reanalysis time with automated carryover monitoring. The MPX™ 2.0 High Throughput System detects carryover and automatically injects solvent blanks to clean the stream. Once the stream is clean, the system continues analyzing samples and automatically reinjects any samples that could have been affected by carryover. The MPX Software also flags any high concentration samples (> Upper Level of Quantitation) so you can easily find those that need to be rerun.



MPX batch table showing carryover messages									
Status	#	Time Started	Time Completed	Sample Name	Stream	Assigned Stream	Plate Position	Vial Position	Message
✓	551	2017/08/02 17:15:27	2017/08/02 17:16:27	triazine	2	2	2	7	
▲	552	2017/08/02 17:17:39	2017/08/02 17:18:40	triazine 500	1	1	2	9	Above upper concentration was detected.
▲	553	2017/08/02 17:19:23	2017/08/02 17:20:24	triazine 5b	2	2	2	7	Carryover was detected.
✓	554	2017/08/02 17:21:37	2017/08/02 17:22:38	blank (re-inject 1)	1	1	2	5	
✓	555	2017/08/02 17:23:22	2017/08/02 17:24:23	blank (re-inject 1)	2	2	2	5	
✓	556	2017/08/02 17:26:36	2017/08/02 17:27:37	blank (re-inject)	2	2	2	5	
✓	557	2017/08/02 17:29:53	2017/08/02 17:30:53	triazine 5b (re-inject)	2	2	2	7	

With Complete Traceability and Audit Trails

With the MPX™ 2.0 High Throughput System, you get detailed start to finish sample tracking, including flow rate, pump pressure and temperature, for each LC stream. The MPX 2.0 High Throughput System takes advantage of the 21 CFR Part 11 functionality of Analyst® Software to provide audit trails and traceability, both of which are vital to regulated environments.

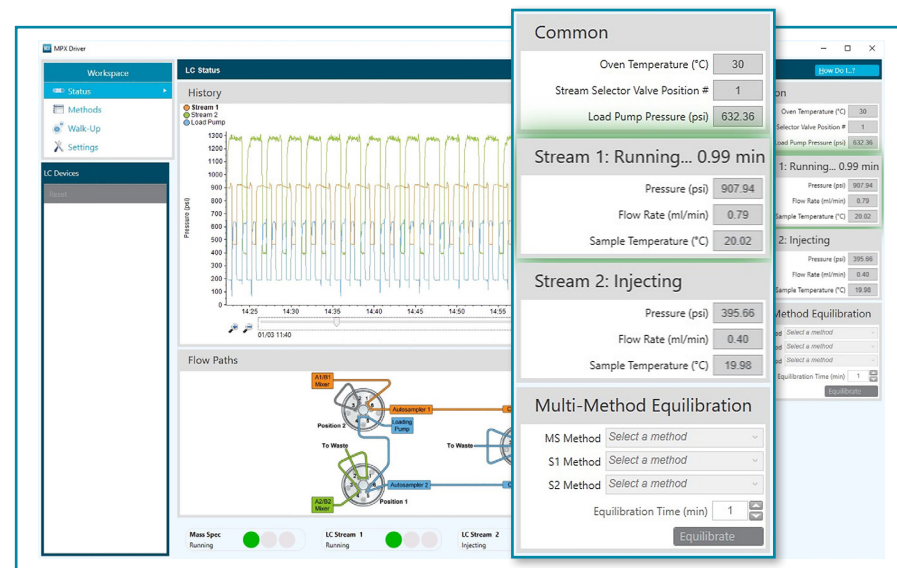
Example – Sample Information

The screenshot displays the 'MPX Driver' section within the 'Log Info' category of the software interface. The left sidebar shows a tree view with 'MPX Driver' selected. The main content area is divided into several sections: 'MPX™ Driver version 2.0', 'Sample was Scheduled By user 'SWDS-XP-T160\'newAdmin' through MPX Walk-Up.', 'System Info.', 'Stream 1 Info.', and 'Stream 2 Info.'. Each section contains key-value pairs for various parameters.

Section	Parameter	Value
MPX™ Driver version 2.0	Stream Injected	2
	Oven Temp.	30
	Autosampler Vendor	Shimadzu_Shimadzu
	Loading Pump Type	Four Solvents Selection
System Info.	Online SPE	No
	Stream 1 Info.	
	Flow Rate	0.79 mL/min
Stream 1 Info.	Pump A Pressure	898.65 (psi)
	Pump B Pressure	1098.37 (psi)
	Cooler Temp.	20.02 degrees Celsius
	Rack Changer Temp.	20 degrees Celsius
	Stream 2 Info.	
Stream 2 Info.	Flow Rate	0.4 mL/min
	Pump A Pressure	471.52 (psi)
	Pump B Pressure	723.01 (psi)
	Cooler Temp.	19.97 degrees Celsius
	Rack Changer Temp.	20 degrees Celsius

Monitor in Real Time for Maximum Uptime

Check system performance at a glance. MPX™ 2.0 High Throughput System takes its cue from Analyst® Software which displays dynamic screen views of individual pressure traces, column temperature, and color-coded fault alerts for each HPLC stream. The screen also shows you which stream is flowing into the mass spectrometer and which stream is being diverted to waste. To maximize system uptime, you can use fault recovery settings to automatically shut down the system when over pressure, or you can divert samples to another stream to maintain performance.



Run up to 2,300 Samples Unattended.

The MPX 2.0 High Throughput System is customizable to deliver the sample capacity you need. The standard configurations allow you to run batches of 768 or 1152 samples.

If you need even more throughput, simply upgrade the system with additional plate stacks or rack changers to run up to 2300 samples in a batch.

System Options and Specifications

MPX™ 2.0 Software Specifications

Operating System	Win 7 64 bit or Win 10
Analyst® Software	Version 1.7 or higher
MultiQuant™ Software	Version 3.0.3 or higher
Hardware Compatibility	ExionLC™ AC Shimadzu Prominence Shimadzu Nexera XR CTC PAL3 RSI 850 CTC PAL-xt



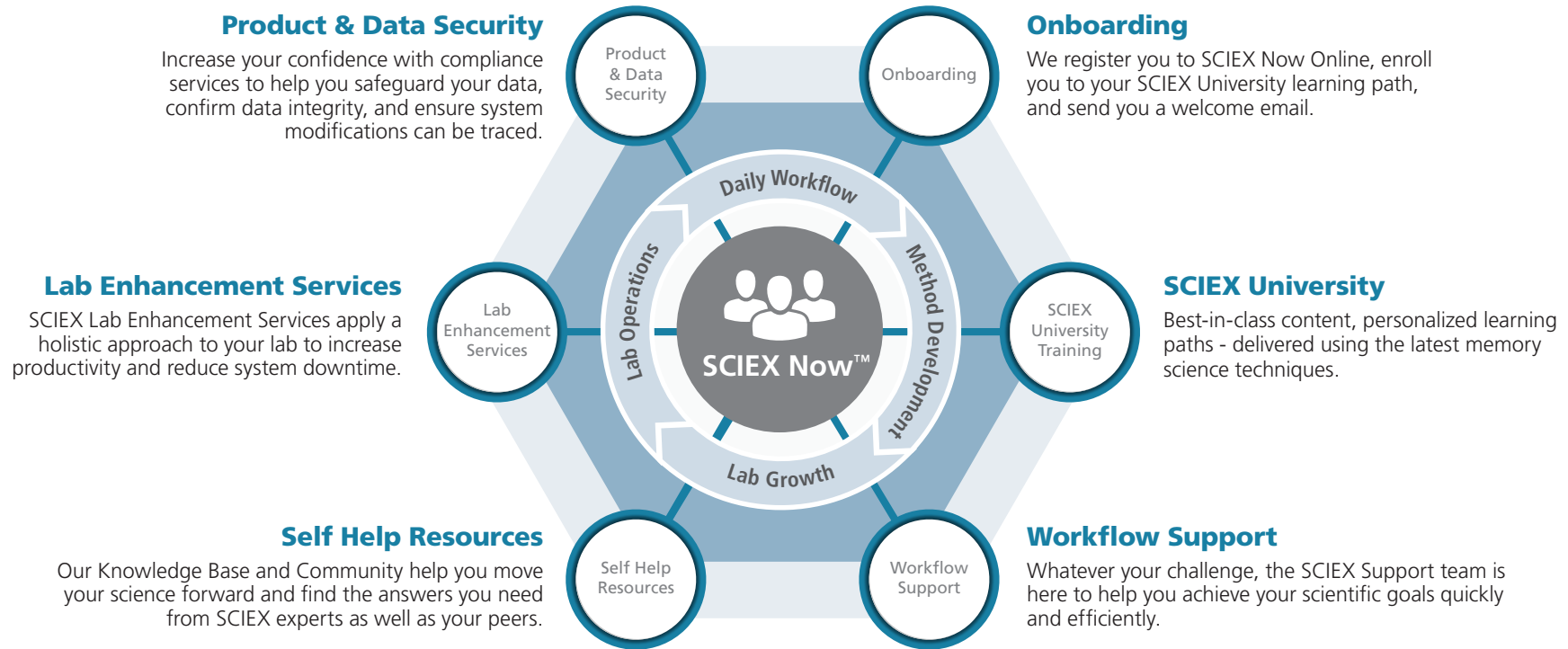
Pairs with These Industry-leading SCIEX Mass Spectrometers:

QTRAP® 4500	Triple Quad™ 3500	Triple Quad™ 6500
QTRAP® 5500	Triple Quad™ 4500	Triple Quad™ 6500+
QTRAP® 6500	Triple Quad™ 5500	
QTRAP® 6500+	Triple Quad™ 5500+	



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RUO-MKT-03-6974-B

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