Luxon Ion Source®

Enter a new era of high-throughput mass spectrometry



Phytronix



Bring your lab up to speed

Based on the patented LDTD[®] technology

Couple the **Luxon Ion Source**[®] to your Sciex mass spectrometer and reach an analysis runtime of less than 1 second. This apparatus is the second-generation sample introduction and ionization source based on the **LDTD**[®] **technology** for mass spectrometry.



Your mass spec workflow has never been this fast

Here's what you get by switching your LC or immunoassay workflow to **Luxon Ion Source**®



Super fast ROI (days rather than months)



Plug-and-play

Cull

10x less solvents and consumables used



Robust process

(S)

Possibility for 24/7 runtime



Virtually no falses positives



As sensitive as your LC analysis

With that kind of speed...



A cooled Fiber-Coupled Laser Diode Array and a heatsink to disregard room temperature variations. The Fiber Optic Collimator allows unmatchable thermal uniformity at the back of the LazWell plate without having to directly interact with the sample.

... you'll be laughing your mass off!

A low-volume sample (50nl-10µl) is deposited on the LazWell plate and then fully dried. The patented LazWell design allows for the formation of a precisely centered nanolayer on the well surface.

> The thermally desorbed neutral molecules are carried into a corona discharge region to undergo ionization.

The rapid and robust pneumatic design ensures that the gas-phase neutral molecules are carried from the LazWell plate to the mass spectrometer inlet while sealing the transfer tube to avoid any sample loss. High-efficiency protonation and strong resistance to ionic suppression characterize this type of ionization and is the result of the absence of solvent and mobile phase.

Other features of Luxon Ion Source®



Traceability Luxon follows your samples for you

The Luxon Ion Source[®] contains an incorporated barcode reader for an optimal traceability of your samples which makes it an ideal solution for regulated environments. The Luxon Ion Source[®] driver is supported by most Sciex mass spectrometers.

Plug-and-play Light-weight and easy to use

With the Luxon Ion Source[®] you can now easily switch between your LC and Luxon within minutes! It is simple to install and remove which allows you to run your mass spectrometer and analyze your data as usual. The Luxon Ion Source[®] provides a robust walk away solution.

The Helm Diates are automatically scanned by Luxon to insue to contain the scanned by Luxon to contain the scanned by

24/7 Process for mass spectrometry Luxon takes care of your samples while you're away

The Luxon Ion Source[®] can be coupled with a robotic arm and a liquid handler for a completely automated solution, allowing you to run millions of samples without interruption and in a record time. It can also be delivered with a fully-integrated software workflow solution - from liquid handling batch files to the LIMS.



LazWell[™] plates

Our patented LazWell[™] plates work exclusively with the LDTD[®] technology to provide accurate and reproducible results at incredible speed with microvolumes to decrease the cost per sample dramatically. Manufactured in a highly controlled environment, all LazWell[™] models are barcoded on three sides ensuring a perfect fit with the volume-dispensing precision and sample traceability of conventional liquid handling systems.



LazWell™

The LazWell[™] plate is the standard model used in most analysis. As for all other types of plates, it is available in 96-, 384- and 1536-well formats.

LazWellAD Acid Desorption

The LazWellAD (Acid Desorption) plate is used to desorb acidic molecules found in loaded matrices. It is very efficient for drug tests.





LazWellDEC

Desorption Enhancing Coating

The LazWellDEC (Desorption Enhancing Coating) plate is designed to enhance analysis of polar compounds, whether acidic or basic.

Models	Lazwell™	LazWellAD	LazWellDEC
Luxon S-960 fits with	LazWell96	LazWell96-AD	LazWell96-DEC
Luxon S-3840 fits with	LazWell384	LazWell384-AD	LazWell384-DEC
Luxon S-HTS fits with	LazWell1536	LazWell1536-AD	LazWell1536-DEC

Combine the Luxon Ion Source® with Sciex® Triple Quad, TripleTOF® and QTRAP® systems - with or without SelexION® DMS

The Luxon Ion Source[®] is fully integrated on Sciex[®] mass spectrometers and is **the ultimate solution** for ultra highthroughput in quantitative and qualitative analyses.

Luxon Ion Source[®] is completely integrated on :

• TripleTOF® System : The disruptive power and speed of Luxon Ion Source® redefines the high resolution accurate mass TripleTOF®. With Luxon Ion Source®, you no longer need to tune MRM transitions. The AutoCalibration feature is available with Luxon to maintain mass accuracy throughout your analysis.

• Triple Quad System : Combine the speed of the Luxon Ion Source® with the robustness of SCIEX® Triple Quad mass spectrometer and attain unmatchable runtime for your lab automation.

• **QTrap® System** : As the fastest and most sensitive QTRAP system, the QTRAP® 6500+ matches the Luxon Ion Source® perfectly for an enhanced quantitation of Iow-level compounds with or without SelexION® DMS at one second, sample to sample.





Our Direct Control software offers a fast track for manual tuning while developing a method. Watch your peak take shape in real time!



Complete integration within **Sciex**[®] Software

Luxon Ion Source[®] was not only designed to be compatible with Sciex's MS hardware, but also to be fully controlled by Sciex's software through our Luxon driver.



MultiQuant™ Software

MultiQuant[™] is the best companion software for Luxon Ion Source[®]. In fact, you can process 96, 384 or 1536 samples in a single file! It's the greatest solution on the market if you want a runtime below one second, sample to sample.

Luxon Ion Source[®] integration with MultiQuant[™] Software

Analyst[®] Software

Analyst® Software is the single point of control for the Luxon Ion Source®. Your Luxon batch sample launches will be identical to your HPLC's.







DiscoveryQuant[™] Software

The complete integration of Luxon Ion Source[®] with DiscoveryQuant[™] Software boosts mass spectrometry to a new level of automation.

Luxon Ion Source® integration with DiscoveryQuant^{\mbox{\scriptsize M}} Software

Luxon Ion Source[®] can be used for various applications such as:

Clinical Applications

Immunosuppressants, anti-retroviral, therapeutic drugs, biomarkers, etc.

The Luxon Ion Source[®] is a robust, rapid and precise solution with your Sciex® mass spectrometer for clinical applications.

It is capable of completing the quantification of hundreds of samples, in less than 30 minutes, of a multitude of molecules in various matrices such as :

- Testosterone in plasma
- Vitamins A, C and E in serum
- Cotinine in human plasma
- Biomarker creatinine in serum
- Immunosuppressant drugs

Exclusive to SelexION[®]

Using the ion mobility technology from Sciex, quantifying the following compounds is possible:

- Vitamin K1
- Vitamin D2 and D3
- Testosterone



Up to 3600

Nb of samples/hour

Less expensive per sample than EIA

Faster than EIA

2000%

Forensic and Toxicology Applications

Pain management, doping, forensic, newborn testing and more...

The Luxon Ion Source® is a quantitative solution for forensic and toxicology laboratories thanks to its many features such as traceability, runtime and low-volumes required for analysis.

Perform quantitative analysis of over 120 compounds with Luxon Ion Source[®] such as :

- Cannabinoids (Natural and Synthetic)
- Street Drugs (Heroin, Cocaine, etc.)
- Pain Management Drugs (Fentanyl, Oxycodone etc.)
- Antidepressant Drugs

"We have used the Phytronix LDTD source for several years and have reported out over a 1,000,000 combined tests on LDTD/MS-MS instruments, and of course have submitted many proficiency samples with never an error [...] it made a 16-hour run by LC decrease to a 15-minute run for 96 samples, and greatly decreased sample volumes required, so fewer QNS samples ..."

Director of Toxicology Lab

The more you know...

You can use the Luxon Ion Source to analyze a variety of matrices:

- Hair
 - **Umbilical** Cord
 - Blood

- Swabbed Surfaces
- Urine
 - Nails
 - Meconium

Pharmaceutical Applications

Drug discovery and development

The Luxon Ion Source is a quantitative solution for **High-Throughput Screening** environments thanks to its sub-second runtime.



Perform both In Vitro and In Vivo assays such as :

- CYP Inhibition Assays
- Permeability Assays
- Microsomal and Plasma Stability
- Pharmacokinetic Studies (ADME Assays)
- Dried Blood Spot Analysis



Food and Environment Applications

Pesticides, pharmaceuticals, steroidal hormones in waste water, trace analysis of explosives in soil and more...

The Luxon Ion Source[®] meets the industrial needs for quality control in terms of robustness, reproducibility and absence of carryover.

"In one day, a single analyst can prepare over 50 beverage samples (regulatory samples,calibrants, and quality control samples), analyse all samples in triplicate, and have analytical results by the end of the day. Moreover, LDTDMS/MS method results are consistent with AOAC 979.08 Official Method of Analysis results, allowing accurate results to be obtained with much higher regulatory sample capacity."

Andersen, W.C., et al. (2019) Food Addit. Contam. Part A, 36:11, 1616-1625



Analyze pathogens in complex matrices such as :

- Boar taint related compounds in pork fat
- Neonicotinoids in honey or water
- Emerging contaminants in wastewater
- Antibiotics in meat
- Mycotoxins in animal feed

Bring on data!

With Luxon Ion Source, you can amass millions of data entries in a couple of weeks. Perfect for ...

- The detection of metabolome patterns with machine learning
- DMPK studies
- Clinical trials
- Optimization of bioreactions in food

Specifications



Dimensions

Dimensions		Electrical Require	ments	
Weight	116 lbs (52.5 kg)	Voltage	100-240 V~	
Height	 Max: 57.5" (146 cm) Min: 50.25" (128 cm) 	Frequency	50/60 Hz	
Width	19.5" (50 cm)	Power	120 VA (W)	
Depth	 18" (46 cm) Int. Sciex: 4.75" (12 cm) 	Power cable	Supplied with cable for your country	
Positioning				
Height adjustments	Touchscreen: Units can be changed between cm. and in., store 3 heights in memory			
Connection to the MS	Uses the Sciex interface, moves on 4 lockable wheels			
Loader Capacity		Analysis Speed		
Quantity	10 or ∞ if automated	Can be reduced to le sample-to-sample	Can be reduced to less than one second sample-to-sample	



Environmental Conditions		Computer Requirements		
Operating temperature	15 to 35 °C(59 to 95 °F)	Ethernet port(s)	1 available	
Max relative humidity	80%	Windows 7 (32-bit or 6	Windows 7 (32-bit or 64-bit)	
Gas Requirements		Windows 10 (32-bit or	64-bit)	
Coo	Oil-free compressed air			
Gas		Software Requirem	ents	
Water content	Between 3 and 1800 ppm	<u>.</u>	 Analyst 1.6 or later Analyst TF 1.7 or later DiscoveryQuant 3.0 or later 	
Pressure	60-120 psi	Sciex		
Consumption	If left at 3L/min. for the workday: 1440 L.			

Automate your workflow with Luxon Ion Source®



In a single step, open the sample list with the Luxon Batch Creator-Azeo add-on directly in Analyst™





Phytronix Technologies Inc.

Quebec Area 4535, Boul.Wilfrid-Hamel, suite 120 Quebec, QC, Canada G1P 2J7

Phone418.692.1414Fax418.692.4940

Phytronix

in linkedin.com/company/phytronix phytronix.com

🖂 Info@phytronix.com

For Research Use Only. Not for use in diagnostic procedures.

All product and company names mentioned herein may be the trademarks or registered trademarks of their respective owners. Phytronix shall not be liable for errors contained herein of for incidental or consequential damages in connection with the use of this material. Information, description and specifications in this publication are subject to change without notice.