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â€œQuadrupole LCMS will continue to see robust demands in futureâ€?

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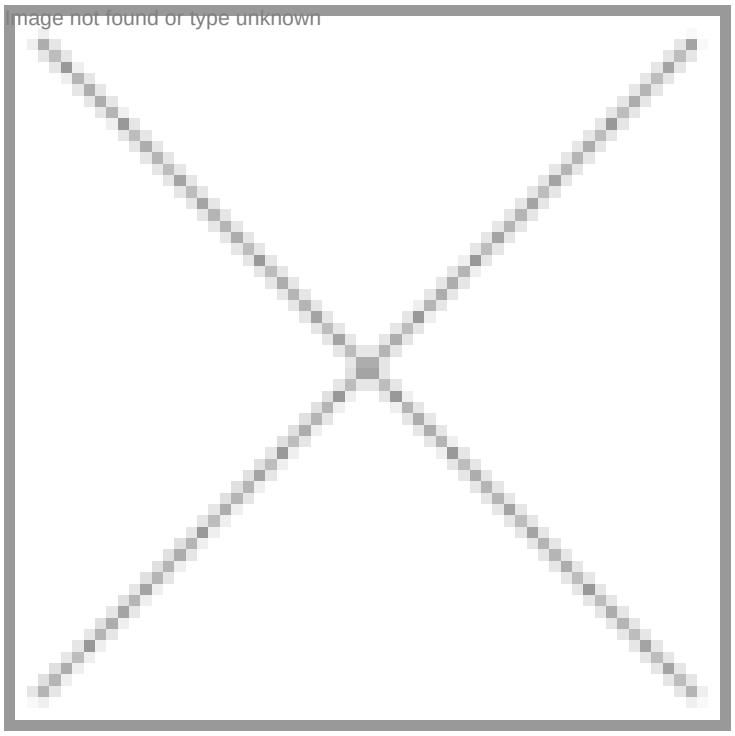
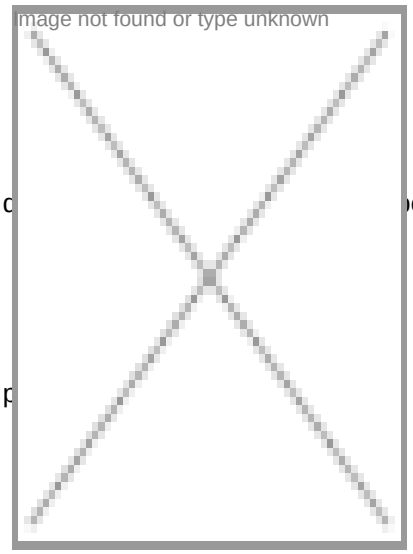


“Quadrupole LCMS will continue to see robust demands in future”
—Senya Imamichi, managing director, Shimadzu Analytical (India) Pvt Ltd



Not long ago Shimadzu pioneered the introduction of Photodiode array detectors which went on to replace the conventional UV-VIS detectors in HPLC. The launch of LCMS-2020 in 2009 by Shimadzu heralds a new era in desk top Mass Spectrometric Detectors for HPLC systems that have the capability to address the most demanding requirements in pharmaceutical and life sciences. The development of LCMS 2020 is based on Shimadzu’s proven Mass Spectrom etry platforms which adopted simple, easy-to-use d erformance.

Delivering the ultimate in measurement speed and sensitivity, the compact LCMS-2020 mass spectrometer offers faster measurements and higher detection sensitivity for quicker and more accurate analysis of trace impurities, environmental pollutants, and contaminants in different sample matrices. When combined with a Prominence ultra-fast LC (UFLC/UFLCXR) the system helps analysts achieve the ultimate in separation p

The single quadrupole system of LCMS-2020 uses a patented ultrafast(UF) technology providing significantly higher sensitivity than any other single quadrupole analyzer and offers unique cost effective solutions to a range of analytical requirements such as mass identification, process monitoring, mass based purification etc. The new UFscanning technology achieves measurement speeds of 15,000 u/sec without sacrificing sensitivity or resolution, thus obtaining the best chromatography for the fastest LC conditions.

UFSwitching technology of LCMS-2020 enables switching between positive and negative ion modes in 15 milliseconds so

even the fastest LC peaks can be analysed in both modes, thus increasing productivity. Innovative ion optics with the newly developed Qarray ion optical system provide superior sensitivity, repeatability, and linearity, achieving 50 percent to 300 percent greater sensitivity than any other single quadrupole analyzer for substances most commonly measured. Users can inject less and keep the analyzer cleaner, longer.

LCMS-2020 enables improved high mass operation with sensitivity increased by more than 500 percent for masses above 1,000. In addition to better performance, the LCMS-2020 allows easier maintenance, permitting users to replace the ionization unit and inlet capillary to the MS from the LC, without breaking the vacuum. The ESI method typically used for LCMS can be replaced with APCI, which is suitable for neutral compounds, or with a dual ionization source (DUIS) for simultaneous operation of both ionization modes, quickly and without tools.

The new Shimadzu LCMS-2020 with its breakthrough technology is the world's most sensitive, fastest scanning and fastest polarity switching single quadrupole mass spectrometric detector available. The launch of LCMS-2020 recently at Delhi attracted a large number of Mass Spectroscopists from the Pharmaceutical Industry.

The strength of single quadrupole mass spectrometric detectors lies not only in their adoption by HPLC users but also by the pharmaceutical industry as a whole. Applications on DMPK (Drug Metabolism and Pharmacokinetics) and compound screening are particularly well suited for single quadrupole LCMS. Besides its high resolution and accuracy, LCMS is also a high-throughput technique capable of meeting a number of pharmaceutical industry's needs from R&D from analytical services, to method development and quality control. With increases in Pharmaceutical R&D spending and advancements in drug development, single quadrupole LCMS will continue to see robust demands in future.