SCOPE

Shidmadzu Scientific shall provide for the purchase of an 8060 Liquid Chromatograph triple quadruple mass spectrometer (LCMS/MS) and Related Items, in conjunction with the needs of Miami-Dade County on an as needed when needed basis. The LCMS-8060 features a heated ESI probe for high sensitivity analysis and advanced electronics for ultra-fast multiple reaction monitoring (MRM) transitions, enabling data acquisition with up to 555 channels per second. The system is capable of ultrafast mass spectrum acquisition speeds up to 30,000 u/sec without sacrificing sensitivity or mass accuracy, and ultra-fast polarity switching (Smsec) for the most information without signal deterioration. The LCMS-8060 incorporates a newly developed UF-Qarray ion guide that increases ion signal intensity and reduces noise. By improving the ion sampling device, the ion guide, and the vacuum efficiency, the LCMS-8060 delivers a new level of sensitivity in LCMS analysis. The LCMS-8060 software includes unified control of LC and MS components providing seamless operation of the entire LCMS system, unmatched qualitative and quantitative analysis, increased productivity, and accelerated workflows for high throughput data analysis. MRM synchronization optimizes MRM cycle times for overlapping retention time windows and helps to simplify method development and routine analysis with multiple MRM experiments. In the quantitation browser, peak information, quantitative results, and statistical calculations of a series of data can be rapidly viewed in a single window.

PRODUCT PACKAGE DESCRIPTION AND FEATURES

Product No. 220-91621-01
LCMS-8060 Includes:
- LCMS-8060 triple quadruple detector
- Advanced data system Dell PC, 24” LCD monitor
- Lab solutions software and license
- Startup kit, rotary pump, oil return kit, and accessories.

Product No. 225-19605-58
DUIS Dual Probe Set for LCMS-8050/8060:
DUIS dual on source adds APCI capability to the standard ESI configuration. By adding APCI capability for non-polar molecules, the user benefits from faster method development and the ability to analyze more compounds in a single method.

Product No. 220-91600-52
LCMS-80S0/8060 Installation Kit:
This kit contains 100’ of 6m OD PTFE nitrogen gas tubing, 50’ of 1/8” cleaned copper argon gas tubing, 1 nitrogen regulator, 1 argon regulator, 1 1/8” swagelok fitting, 1 6mm swagelok union (6mm to 6mm), 1 6mm swagelok reducer (6mm to ¼” FNPD, and 1 6mm swagelok union (6mm to ¼”). This kit provides all of the necessary items to install the instrument to the facility’s electrical supply provided they have installed either an L6-20R or L6-30R and to the facility’s nitrogen system utilizing either a Dewar, nitrogen generator, or house gas system. Also included in this kit are the necessary items to connect the instruments to the argon supply cylinder. The kit provides the necessary items to attach the system to the combined nitrogen / air generator or to terminate with a ¼” swagelok fitting allowing connection to either an air compressor or house gas system for delivery of air to the LCMS unit.
Product No. 225-24420-92
Lab Solutions LCMS-2020 / LCMS-8030/40/50:
Lab solutions LCMS post run analysis kit for LCMS-2020/LCMS-8030/40/50.

Product No. 220-91398-20
CBM-20A with Network Switch:
Central communication and control module for the prominence and Nexera Series. System components shall connect via fiber optic cables for easy “plug and play” configuration internal web server shall offer convenient control and monitoring of the HPLC system through a web browser.

Product No. 228-45019-58
DGU-20ASR, ROHS Compliant:
Inline membrane degasser utilizing Teflon AF® for maintaining the degassed state of HPLC mobile phases. To be used in conjunction with preliminary degassing by vacuum aspiration/sonication. A convenient 5th channel is included for degassing the auto sampler rinse phase for optimum injection reproducibility performance.

Product No. 228-45162-42
Nexera LC-30AD HPLC Pump:
The LC-30AD utilizes micro-volume plungers (10 µL each) for pulse-free HPLC solvent delivery. The sapphire plunger has a specially engineered ultra-smooth surface which minimizes frictional heat for improved seal lifetime. An automatic rinse kit is included as a standard accessory. Flow rate range is 0.0001 to 5,000 ml, maximum pressure is 130 MPa (19,000 psi). The Nexera X2 LC-30AD is ideal for low flow rate (< 1 ml/min) and LCMS applications, and for analyses using small particle size columns (3 µm or less) that generate high back pressure.

Product No. 228-45168-41
Nexera LC-30AD Micro Mixer, 20 uL:
High efficiency mixer using micro reactor technology to thoroughly blend solvents in a small volume. Use for standard analytical (1-2 ML/min) and LCMS flow rates.

Product No. 220-91327-22
Nexera SIL-30AC Autosampler with Installation Kit:
The SIL-30AC provides high speed injections (10 sec for 10 µL) with ultra-low carryover achieved through advanced material technology and rinse options (if necessary) with up to 4 solvents. The standard configuration uses the needle in the flow path design for 0.1 to 50 µL injection volumes; an optional fixed-loop configuration (5 or 20 µL) is user-changeable to reduce delay volume and band broadening in isocratic separations. The sample compartment uses a Peltier cooler for temperature control from 4-40C. An external rinse pump is standard, and provides additional rinsing to the outer surface of the needle. Includes 1 05-position rack for 1.5 (2mL) vials and a control rack for 10 1.5 (2 mL) vials, 1.5 mL vial set, vial sample pack, and 2.1 x 50mm, 1.9 um C18 column and 4-component test mix. Sample capacity is 175 m L vials, 2 MTP (STD 96, DW 96, or STD 384). Maximum pressure is 130 MPa (19,000 psi).

Product No. 228-45010-42
CT0·20AC:
Full sized oven with forced air temperature control from 10C below ambient temperature to 85C. Can accommodate a manual injector, mixer, and 2 switching valves.
Product No. 228-45166-58  
**FCV-32AH 2-Position, 6-Port High Pressure Switching Valve, ROHS Compliant:**
High pressure 6-port, 2-position valve for automatic 2-column switching, online sample pretreatment, or flow line switching. When installed in the CT0-30A column oven, dual preheater 228-52597-42 is recommended, Maximum pressure is 130 MPa (19,000 psi).

Product No. 228-45013-41  
**FCV-12AH 2-Pos 6-Port Flow Switching Valve:**
High pressure (5000 psi) 6-port, 2-position valve for automatic 2-column switching, online sample pretreatment, or flow line switching.

Product No. 220-91494-01  
**HPLC Startup Kit #1W/ 2-GAL Poly Waste Can:**
Complete installation kit for HPLC that includes a solvent reservoir tray, set of 5 1-L bottles with 3-hole caps, PEEK tubing and fittings kit, and a 2-gallon (8L) PE waste can with polypropylene quick-disconnect manifold fittings.

Product No. 220-99204-04  
**Introduction to the LCMS-8030/8040/8050/8060:**
Shimadzu shall provide a three (3) day course taught at Shimadzu customer training and education center.

Product No. 220-99208-00  
**TRAINING COURSE, HPLC WITH TROUBLE SHOOTING:**
HPLC maintenance class with emphasis on evaluating performance and preventing, solving problems with the LC-2010, the LC-2010A, LC-10Avp series and or the LC-20 series injectors, auto samplers, pumps, and detectors.

Product No. 220-99204-00  
**TRAINING COURSE, HPLC FUNDAMENTALS:**
Introduces fundamental theory and practices of high pressure liquid chromatography (HPLC). Laboratory includes sample analysis with various Shimadzu HPLC systems, as well as, basic HPLC troubleshooting and maintenance using Shimadzu’s LC-10A/10Avp series, LC-20A series or the LC-2010.

Product No. 220-95315-05  
**HPLC VIRTUAL ADVISOR USB FOR PROMINENCE AND NEXERA SYSTEMS:**
HPLC Virtual advisor for prominence and Nexera systems includes two separate modules on an 8 GB USB drive. These modules cannot be run simultaneously installation instructions are included on zip files.