

Varian Inc.
2700 Mitchell Drive
Walnut Creek, Ca 94598
Phone: 925.939.2400
Fax: 925.945.2360
<http://www.varianinc.com>



VARIAN

May 12, 2010

Ms. Krista Ferrell
State of West Virginia
Department of Administration
Purchasing Division, Building 15
2019 Washington Street, East
Charleston, WV 25305-0130

RE: RFQ-AGR1022
Liquid Chromotograph/Mass Spectrometer

Dear Ms. Ferrell:

Varian is pleased to be considered for the above referenced Bid. Varian's proposal and proposed price is predicated upon Varian Analytical Instruments Terms and Conditions which are included in our response. Varian is happy to discuss any questions or concerns the State of West Virginia may have to work toward mutually agreeable contract terms.

Included in our response are the following:

Request for Quotation
Specifications and Requirements
Varian's Quote
Varian Analytical Instruments Terms and Conditions of Sale

If awarded the contract, Varian, Inc. will be happy to provide a notarized copy of the Purchasing Affidavit. Thank you again for giving us the opportunity to provide a solution. If further information is required, please contact Varian's sales representative, Don Harrington at 925-393-2400 Ext. 3014. If you have any questions of a contractual nature, please do not hesitate to contact me at 925-939-2400 Ext. 6857 or via email at andrea.shipp@varianinc.com.

Sincerely,


Andrea Shipp
Contracts Manager

Enc.

RECEIVED

10 MAY 13 A 8:13

PURCHASING DIVISION
STATE OF WV



State of West Virginia
 Department of Administration
 Purchasing Division
 2019 Washington Street East
 Post Office Box 50130
 Charleston, WV 25305-0130

Request for Quotation

RFQ NUMBER
AGR1022

PAGE
1

ADDRESS CORRESPONDENCE TO ATTENTION OF
**KRISTA FERRELL
 304-558-2596**

RFQ COPY
 TYPE NAME/ADDRESS HERE
**VARIAN, INC.
 2700 MITCHELL DR.
 WALNUT CREEK, CA 94598**

DEPARTMENT OF AGRICULTURE
 ADMINISTRATIVE SERVICES
 BUILDING 2, ROOM 106
 4720 BRENDA LANE
 CHARLESTON, WV
 25312 304-558-2221

DATE PRINTED 05/05/2010	TERMS OF SALE	SHIP VIA	FOB <i>Dest.</i>	FREIGHT TERMS
BID OPENING DATE: 05/13/2010		BID OPENING TIME 01:30PM		

LINE	QUANTITY	UOP	CAT. NO.	ITEM NUMBER	UNIT PRICE	AMOUNT
0001	1	LS		493-99		
<p>LIQUID CHROMOTOGRAPH/MASS SPECTROMETER</p> <p>REQUEST FOR QUOTATION (RFQ)</p> <p>THE WEST VIRGINIA STATE PURCHASING DIVISION FOR THE AGENCY, THE WEST VIRGINIA DEPARTMENT OF AGRICULTURE, IS SOLICITING BIDS TO PROVIDE THE AGENCY WITH (1) LIQUID CHROMOTOGRAPH/MASS SPECTROMETER PER THE ATTACHED SPECIFICATIONS.</p> <p>NOTICE TO PROCEED: THE SYSTEM SHALL BE DELIVERED AND FULLY OPERATIONAL BY JUNE 30, 2010. WARRANTY/YEAR MAINTENANCE AND SUPPORT DATES SHALL BE ADDED TO THE CONTRACT BY CHANGE ORDER UPON THE SUCCESSFUL INSTALLATION AND ACCEPTANCE OF THE SYSTEM BY THE AGENCY.</p> <p>MAINTENANCE AND SUPPORT MAY BE RENEWED UPON MUTUAL WRITTEN CONCENT OF THE SPENDING UNIT AND THE VENDOR, SUBMITTED TO THE DIRECTOR OF PURCHASING THIRTY (30) DAYS PRIOR TO THE EXPIRATION DATE. SUCH RENEWAL SHALL BE IN ACCORDANCE WITH THE TERMS AND CONDITIONS OF THE ORIGINAL CONTRACT AND SHALL BE LIMITED TO THE NUMBER OF YEARS SELECTED BY THE AGENCY IN THE ATTACHED PRICE SCENARIOS.</p> <p>THE MODEL/BRAND/SPECIFICATIONS NAMED HEREIN ESTABLISH</p>						

SEE REVERSE SIDE FOR TERMS AND CONDITIONS

SIGNATURE *Anchea Shipp* TELEPHONE **725-939-2400** DATE **5-11-10**

TITLE **Contracts manager** FEIN **77-0501995** ADDRESS CHANGES TO BE NOTED ABOVE

WHEN RESPONDING TO RFQ, INSERT NAME AND ADDRESS IN SPACE ABOVE LABELED 'VENDOR'

except as noted in the attached cover letter

GENERAL TERMS & CONDITIONS
REQUEST FOR QUOTATION (RFQ) AND REQUEST FOR PROPOSAL (RFP)

1. Awards will be made in the best interest of the State of West Virginia.
2. The State may accept or reject in part, or in whole, any bid.
3. Prior to any award, the apparent successful vendor must be properly registered with the Purchasing Division and have paid the required \$125 fee.
4. All services performed or goods delivered under State Purchase Order/Contracts are to be continued for the term of the Purchase Order/Contracts, contingent upon funds being appropriated by the Legislature or otherwise being made available. In the event funds are not appropriated or otherwise available for these services or goods this Purchase Order/Contract becomes void and of no effect after June 30.
5. Payment may only be made after the delivery and acceptance of goods or services.
6. Interest may be paid for late payment in accordance with the *West Virginia Code*.
7. Vendor preference will be granted upon written request in accordance with the *West Virginia Code*.
8. The State of West Virginia is exempt from federal and state taxes and will not pay or reimburse such taxes.
9. The Director of Purchasing may cancel any Purchase Order/Contract upon 30 days written notice to the seller.
10. The laws of the State of West Virginia and the *Legislative Rules* of the Purchasing Division shall govern the purchasing process.
11. Any reference to automatic renewal is hereby deleted. The Contract may be renewed only upon mutual written agreement of the parties.
12. **BANKRUPTCY:** In the event the vendor/contractor files for bankruptcy protection, the State may deem this contract null and void, and terminate such contract without further order.
13. **HIPAA BUSINESS ASSOCIATE ADDENDUM:** The West Virginia State Government HIPAA Business Associate Addendum (BAA), approved by the Attorney General, is available online at www.state.wv.us/admin/purchase/vrc/hipaa.htm and is hereby made part of the agreement. Provided that the Agency meets the definition of a Cover Entity (45 CFR §160.103) and will be disclosing Protected Health Information (45 CFR §160.103) to the vendor.
14. **CONFIDENTIALITY:** The vendor agrees that he or she will not disclose to anyone, directly or indirectly, any such personally identifiable information or other confidential information gained from the agency, unless the individual who is the subject of the information consents to the disclosure in writing or the disclosure is made pursuant to the agency's policies, procedures, and rules. Vendor further agrees to comply with the Confidentiality Policies and Information Security Accountability Requirements, set forth in <http://www.state.wv.us/admin/purchase/privacy/noticeConfidentiality.pdf>.
15. **LICENSING:** Vendors must be licensed and in good standing in accordance with any and all state and local laws and requirements by any state or local agency of West Virginia, including, but not limited to, the West Virginia Secretary of State's Office, the West Virginia Tax Department, and the West Virginia Insurance Commission. The vendor must provide all necessary releases to obtain information to enable the director or spending unit to verify that the vendor is licensed and in good standing with the above entities.
16. **ANTITRUST:** In submitting a bid to any agency for the State of West Virginia, the bidder offers and agrees that if the bid is accepted the bidder will convey, sell, assign or transfer to the State of West Virginia all rights, title and interest in and to all causes of action it may now or hereafter acquire under the antitrust laws of the United States and the State of West Virginia for price fixing and/or unreasonable restraints of trade relating to the particular commodities or services purchased or acquired by the State of West Virginia. Such assignment shall be made and become effective at the time the purchasing agency tenders the initial payment to the bidder.

I certify that this bid is made without prior understanding, agreement, or connection with any corporation, firm, limited liability company, partnership, or person or entity submitting a bid for the same material, supplies, equipment or services and is in all respects fair and without collusion or fraud. I further certify that I am authorized to sign the certification on behalf of the bidder or this bid.

INSTRUCTIONS TO BIDDERS

1. Use the quotation forms provided by the Purchasing Division. Complete all sections of the quotation form.
2. Items offered must be in compliance with the specifications. Any deviation from the specifications must be clearly indicated by the bidder. Alternates offered by the bidder as **EQUAL** to the specifications must be clearly defined. A bidder offering an alternate should attach complete specifications and literature to the bid. The Purchasing Division may waive minor deviations to specifications.
3. Unit prices shall prevail in case of discrepancy. All quotations are considered F.O.B. destination unless alternate shipping terms are clearly identified in the quotation.
4. All quotations must be delivered by the bidder to the office listed below prior to the date and time of the bid opening. Failure of the bidder to deliver the quotations on time will result in bid disqualifications: Department of Administration, Purchasing Division, 2019 Washington Street East, P.O. Box 50130, Charleston, WV 25305-0130
5. Communication during the solicitation, bid, evaluation or award periods, except through the Purchasing Division, is strictly prohibited (W.Va. C.S.R. §148-1-6.6).



State of West Virginia
 Department of Administration
 Purchasing Division
 2019 Washington Street East
 Post Office Box 50130
 Charleston, WV 25305-0130

**Request for
 Quotation**

RFQ NUMBER
AGR1022

PAGE
2

ADDRESS CORRESPONDENCE TO ATTENTION OF
**KRISTA FERRELL
 304-558-2596**

**RFQ COPY
 TYPE NAME/ADDRESS HERE**

VENDOR

SHIP TO

**DEPARTMENT OF AGRICULTURE
 ADMINISTRATIVE SERVICES
 BUILDING 2, ROOM 106
 4720 BRENDA LANE
 CHARLESTON, WV
 25312 304-558-2221**

DATE PRINTED 05/05/2010	TERMS OF SALE	SHIP VIA	FOB	FREIGHT TERMS
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BID OPENING DATE: **05/13/2010** BID OPENING TIME **01:30PM**

LINE	QUANTITY	UOP	CAT NO	ITEM NUMBER	UNIT PRICE	AMOUNT
<p>THE ACCEPTABLE LEVEL OF QUALITY ONLY AND ARE NOT INTENDED TO REFLECT A PREFERENCE OR FAVOR ANY PARTICULAR BRAND OR VENDOR. VENDORS WHO ARE BIDDING ALTERNATES SHOULD SO STATE AND INCLUDE PERTINENT LITERATURE AND SPECIFICATIONS. FAILURE TO PROVIDE INFORMATION FOR ANY ALTERNATES MAY BE GROUNDS FOR REJECTION OF THE BID. THE STATE RESERVES THE RIGHT TO WAIVE MINOR IRREGULARITIES IN BIDS OR SPECIFICATIONS IN ACCORDANCE WITH SECTION 148-1-4(F) OF THE WEST VIRGINIA LEGISLATIVE RULES AND REGULATIONS.</p> <p style="text-align: center;">NOTICE</p> <p>A SIGNED BID MUST BE SUBMITTED TO:</p> <p style="text-align: center;">DEPARTMENT OF ADMINISTRATION PURCHASING DIVISION BUILDING 15 2019 WASHINGTON STREET, EAST CHARLESTON, WV 25305-0130</p> <p>THE BID SHOULD CONTAIN THIS INFORMATION ON THE FACE OF THE ENVELOPE OR THE BID MAY NOT BE CONSIDERED:</p> <p>SEALED BID</p> <p>BUYER: KRISTA FERRELL-FILE 21</p> <p>RFQ. NO.: AGR1022</p> <p>BID OPENING DATE: 05/13/2010</p>						

SEE REVERSE SIDE FOR TERMS AND CONDITIONS

SIGNATURE	TELEPHONE	DATE
TITLE	FEIN	ADDRESS CHANGES TO BE NOTED ABOVE

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State of West Virginia
 Department of Administration
 Purchasing Division
 2019 Washington Street East
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Request for Quotation

RFQ NUMBER:
AGR1022

PAGE:
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ADDRESS CORRESPONDENCE TO ATTENTION OF:
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05/05/2010				
BID OPENING DATE: 05/13/2010		BID OPENING TIME 01:30PM		

LINE	QUANTITY	UOP	CAT NO	ITEM NUMBER	UNIT PRICE	AMOUNT
BID OPENING TIME:				1:30 PM		
PLEASE PROVIDE A FAX NUMBER IN CASE IT IS NECESSARY TO CONTACT YOU REGARDING YOUR BID:						
				925-945-2360		
CONTACT PERSON (PLEASE PRINT CLEARLY):						
				Don Harrington		
***** THIS IS THE END OF RFQ AGR1022 ***** TOTAL:						<u>165,569-</u>

SEE REVERSE SIDE FOR TERMS AND CONDITIONS

SIGNATURE	TELEPHONE	DATE
TITLE	FEIN	ADDRESS CHANGES TO BE NOTED ABOVE

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Chromatograph/Mass Spectrometer (LC/MS) System

The West Virginia Department of Agriculture (WVDA) is soliciting responses for a Liquid Chromatograph/Mass Spectrometer (LC/MS) System for analysis of pesticides and antibiotics.

WVDA seeks to acquire the LC/MS system via a purchase with a Maintenance Agreement for a period of three to five years. Maintenance Agreement will go into effect after the initial first year warranty expires. Payments are yearly and will be paid in arrears on a quarterly basis for the agreed number of years. Effective dates for the warranty and first year's maintenance shall be added by change order upon the successful delivery, installation, training, and acceptance of the system by the agency. Subsequent year's maintenance selected by the agency shall be added to the contract on the anniversary of the effective date of the contract upon mutual written agreement of the vendor and the agency.

Vendor must provide data validating that their product meets the bid specifications, training, warranty, complete premium service for all equipment/instruments and software including all parts, repairs, labor, travel, special services, and preventative maintenance for the duration of the lease agreement / warranty period at no expense to the agency. References with point of contact verifying the product qualifications. Failure to provide documentation shall result in disqualification of the vendor's bid.

Vendor must provide 72-hour response time for on-site service/replacement.

Vendor must provide toll free telephone number for technical service/assistant.

Two (2) copies of all systems manuals (operations, training, technical, service maintenance, etc.) shall be included at no charge to the owner.

Vendor shall deliver and provide on-site installation (labor and supplies included) of the system at no charge to the purchaser.

Vendor will do on-site training (labor and non-consumable supplies included) for all instruments and software at no charge to the purchaser.

The following/attached specifications are to set the minimum standards of construction, performance, and test capability.

ADDITIONAL SPECIFICATIONS

Site Preparation: Vendor must provide documentation of recommended environmental conditions, power supplies and gas supplies that are required, and a list of samples and solvents required for installation. Operating the instrument in conformance with these conditions will enable the instrument to achieve its optimum performance. Failure to provide documentation shall result in disqualification of the vendor's bid.

Installation: The bid must include all parts and services necessary to render the system operational, including installation, calibration, basic hardware, software, troubleshooting and maintenance.

Warranty: The one year warranty must be complete premium service for all software/hardware, equipment/instruments including all parts, repairs, labor, travel, special services, and preventative maintenance at no expense to the agency. With the purchase you must provide warranty & maintenance.

Updates: Any and all updates that become available during the course of the purchase must be made available and properly installed along with additional on-site training at no cost to the agency.

Delivery Time Frame: It must be delivered and fully operational by June 30, 2010.

CUSTOMER SERVICE

- Manufacturer shall provide a 72 – hour or better on-site service response for the duration of the warranty/ maintenance.
- Lifetime 800 number for Technical Support
- Technical Assistance for Methods Development must be available for the duration of the warranty/ maintenance.
- Vendor must be able to provide free method development assistance for new methodology for the duration of the warranty/ maintenance

TRAINING: Must provide a minimum of 5 days of On-site Training to cover methods set-up and fine tuning, quantization, report generation, Full Scan and SIM combined methods development.

**RFQ: AGR1022
COST SHEET**

Equipment	Cost
Mass Chromotograph System with installation and training	
Equipment Includes 1 Year Warranty, Maintenance, and Support).	\$ 105,509
Additional Maintenance	
Year 1	\$ 0
Year 2	\$ 11,330
Year 3	\$ 17,126
Year 4	\$ 22,835
Year 5	\$ 28,544

Price Scenario 1: Equipment plus Year 1, 2, and 3 of Additional Maintenance \$ 182,295

Price Scenario 2: Equipment plus Year 1, 2, 3, and 4 of Additional Maintenance \$ 188,404

Price Scenario 3: Equipment plus all 5 years of Additional Maintenance \$ 194,113

***The price scenarios listed above are for bid evaluation purposes only. Agency will award based on lowest cost for the scenario.*

If bidding an "or equal" product, please list below the manufacturer and model. Additionally, the vendor must provide documentation which demonstrates the adherence to the specifications contained within this RFQ.

Manufacturer: Varian Inc

Model: LC/MS Triple Quadrupole



Quotation

30230201412

03/30/2010

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VARIAN

Varian Inc.
 2700 Mitchell Drive
 Walnut Creek, CA 94598
 www.varianinc.com
 Phone: (800) 926-3000 Fax: (925) 945-2360
 Email: csb-salesupport@varianinc.com

Quotation For:
 Melissa D. Buckley
 West Virginia Department of Agriculture
 Plant Industries Division
 4720 Brenda Lane, Bldg.11
 Charleston, WV 25312
 (304) 558 - 2208 FAX: (304) 558 - 3594

Your Inquiry:	Varian Standard Terms & Conditions apply (see attached)
Payment Terms:	Quotation Expires: April 29, 2010
Shipping Method: Best Way, Prepaid & Add	Delivery Lead Time: FBD 6 weeks
FOB: ORIGIN Destination	Unit Price Basis: USD

All applicable taxes, freight insurance, and/or other handling charges will be added at invoicing.

LC/MS Triple Quadrupole system
 HPLC Autosampler and Column
 Onsite training 5 days
 Nitrogen Gas Generator for HPLC

Submitted by:

4E5

Don Harrington

Don Harrington

For Order Placement:

Please reference Quotation Number on all purchase orders.
 Please forward all Purchase Orders and Correspondence to:
 Varian Inc.
 2700 Mitchell Drive
 Walnut Creek, CA 94598
 (800) 926-3000 Fax (925) 945-2360



VARIAN

Quotation

30230201412

03/30/2010

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West Virginia Department of Agriculture, Charleston, WV

Item	Qty	Part Number	Product Description	Unit Price	Discount	Amount
Section 1 LC/MS Triple Quadrupole system						

1.01	1	0393795401	310-MS LCMSMS, TQ, ESI, 101-230V 310-MS Triple Quadrupole LC/MS, ESI, 230V	139,500.00	15.00%	118,575.00
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INCLUDES: 310-MS LC/MS triple quadrupole system (NO syringe pump or 6-port valve), API module and ESI housing; smaller capillary, control software, PC (no monitor), 1 MS40+ foreline pump, installation and 1-year warranty. The system CANNOT be upgraded to 320-MS performance or to a GC/MS configuration.

NOTE: System does NOT include HPLC pumps, autosamplers, etc.

LC Interface:

Ionization modes includes Electrospray Ionization (ESI). ESI allows full X-Y adjustment of the spray needle relative to the capillary inlet and fine adjustment of inner needle position and operates over flow range of 1 to 1000 µL/min. ESI and optional APCI spray chambers are hinged for easily and rapid switch between ionization techniques. Dual off-axis, capillary interface operates in positive or negative ionization mode.

MS Features:

310-MS modes includes full scan, Selected Ion Monitoring (SIM), Precursor (Parent) scan, Product (Daughter) scan, Neutral Loss scan, Single Reaction Monitoring (SRM), and Multiple Reaction Monitoring (MRM) with an upper operating m/z of 2000. High efficiency quadrupole mass filters (Q1 and Q3) incorporates pre- and post-filters. 180 degree path of Q2 places multiplier in true off-axis position from the source and provides a long (185 mm) collision path for efficient CID of precursor ions. Multiplier employs +/- 5kV post acceleration voltage for optimal ion collection. New extended dynamic range (EDR). Fast polarity switching. Electronic Pressure Control (EPC) for all API and CID gases. Dual stage, turbo molecular pump provides differential pumping for the source and analyzer compartments. Single foreline pump. SelecTemp programmable temperature control delivers optimum drying gas temperatures at every point in a complex analysis. The API interface with SelecTemp allows simplified setup, greater throughput, reduced contamination and improves detection of labile compounds.

SelecFlow, a programmable pressure control system, allows accurate control of gas flows by time segment to provide better sensitivity and area reproducibility for specific compounds. Both SelecTemp and SelecFlow parameters can be automatically recorded for GLP purposes.

Workstation Features:

The Varian MS Workstation software controls all MS functions and allows fully automated quantitative and qualitative analyses with standard and optional Custom Reports. The workstation also controls all HPLC options to include Varian autosamplers, pumps, and detectors.

Additional Software Available

- MassID – Spectral deconvolution of multiply charged species
- QuickAccess – Network access and functionality for multiple MS WorkStation systems for high-throughput analysis by expert or novice users.



VARIAN

Quotation

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03/30/2010

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West Virginia Department of Agriculture, Charleston, WV

Item	Qty	Part Number	Product Description	Unit Price	Discount	Amount									
			<p>OptiPlex 960 MiniTower Computer</p> <p>Base: Intel® Core 2 Duo E8400, 3.0 GHz, 6MB L2 cache, 1333MHz FSB</p> <p>Memory: 2GB (2 x 1GB) DDR2 Non-ECC SDRAM, 800MHz, (filling 2 of 4 slots; expandable to 8GB)</p> <p>Video: Video card in PCIe bus with 1 DVI (digital) 1920x1200 max. output</p> <p>Sound: Integrated sound card and chassis mounted speaker</p> <p>Network: Integrated Intel NIC (10/100/1000 Ethernet (Intel WG82567LM LOM))</p> <p>Hard Drive: SATA 250GB,3.0GB/s, 7200 RPM with 8 MB buffer (NTFS format)</p> <p>Removable Media Storage Device: 16X DVD+/-RW SATA Drive with Roxio Creator (Dell edition)</p> <p>Floppy Drive: 1.44MB 3.5 Inch Floppy Drive</p> <p>Card Slots: 4 PCI full height slots (2 standard PCI, 1 PCIe x16 graphics, 1 PCIe x1)</p> <p>Ports: 1 VGA; 1 serial port; 2 PS2; RJ-45 network port; 10 USB 2.0 ports (2 in front, 6 in rear)</p> <p>Keyboard & Mouse: Dell USB enhanced multimedia keyboard & USB premium optical 5-button scroll mouse</p> <p>Operating System: Microsoft® Windows® XP Professional, SP2</p> <p>Hardware Support Services: 3 Year Limited Warranty (Next Business Day On-Site Service)</p> <p>Resource CD: Resources CD contains Diagnostics and Driver for Dell OptiPlex Systems</p> <p>NOTE: Minitower dimensions: H:16.10 in. x W:7.32 in.; D:16.97 in. RoHS Compliant Lead Free</p> <p>Chassis and Motherboard. Monitor or printer NOT included.</p>												
			<p>LC/MS/MS Performance Specifications</p> <table border="1"> <thead> <tr> <th>Mode</th> <th>Test Standard</th> <th>S/N*</th> </tr> </thead> <tbody> <tr> <td>+ESI SIM</td> <td>5 pg Reserpine</td> <td>10:1</td> </tr> <tr> <td>+ESI MS/MS</td> <td>5 pg Reserpine</td> <td>20:1</td> </tr> </tbody> </table> <p>*Based on RMS noise; 0.7 PWHM res</p>	Mode	Test Standard	S/N*	+ESI SIM	5 pg Reserpine	10:1	+ESI MS/MS	5 pg Reserpine	20:1			
Mode	Test Standard	S/N*													
+ESI SIM	5 pg Reserpine	10:1													
+ESI MS/MS	5 pg Reserpine	20:1													
1.02	1	0391180001	<p>SYSTEM, MODEL 212 BINARY SOLVENT</p> <p>The Varian 212-LC chromatography pump is engineered to be the most stable and reliable analytical LC/MS pump in the laboratory today. This binary pumping system is the ideal liquid chromatography solution for environmental samples, small molecule pharmaceuticals and various industrial process samples.</p> <p>The pumping system features:</p> <ul style="list-style-type: none"> - Patented self-aligning pump seal design for long seal life - Self priming design for reliability and ease-of-use - Rugged, stackable metal boxes for small lab bench footprint - Controlled by MS Workstation Software (version 6.6 or higher) for full integration with Varian MS units, complete GLP-type run logs, and optional full Audit Trail (21CFR11) <p>The pumping system performance:</p> <ul style="list-style-type: none"> - Settable gradient flow rate range: 100 µL/min to 2.0 mL/min (0.001 mL/min increments) - Settable isocratic flow rate range: 0.001 mL/min to 2.0 mL/min (0.001 mL/min increments) - Maximum pressure: 400 Bar (6000 psi) 	18,900.00	15.00%	16,065.00									



VARIAN

Quotation

30230201412

03/30/2010

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West Virginia Department of Agriculture, Charleston, WV

Item	Qty	Part Number	Product Description	Unit Price	Discount	Amount
			<ul style="list-style-type: none"> - Flow precision: $\pm 1.5\%$ - Flow accuracy: $\pm 1\%$ or $\pm 1 \mu\text{L}/\text{min}$. whichever is greater - Gradient composition accuracy: $< \pm 1\%$ absolute (10% step test, water @ 200 $\mu\text{L}/\text{min}$ 2000 psi) - Gradient compositional precision: $< \pm 1\%$ absolute (10% step test, water @ 200 $\mu\text{L}/\text{min}$ 2000 psi) - Pressure pulsation: $< 1.0\%$ P/P (200 $\mu\text{L}/\text{min}$, 2000 psi) <p>Note: Unless otherwise indicated specified values apply from 100 to 400 $\mu\text{L}/\text{min}$.</p> <p>The 212-LC system includes: 2 Dual piston pumps, 150μL mixer, damper, 10μ inlet filters, communication cables, and connecting tubing.</p> <p>Required accessory (not included): Degasser</p>			
1.03	1	A6313	<p>in-line degasser, 2 channel, 1mL/min</p> <p>When stock=0; use p/n AL590500.</p>	2,420.00	15.00%	2,057.00
Section Total \$						136,697.00

Section 2 HPLC Autosampler and Column

2.01	1	9300014800	<p>460-LC Autosampler, 95-240V</p> <p>Varian 460-LC AutoSampler Includes: 84+3 sample tray; RS-422 cable; USA and Euro power cables, etc.</p> <p>The 460-LC AutoSampler for LC-MS systems offers many features for maximum laboratory productivity.</p> <ul style="list-style-type: none"> - Handles a variety of well plates and sample vials, open or sealed - Thorough sample cooling and heating - available as an option - Efficient needle wash for low carry-over <p>The compact, stackable design and its economic pricing make this the ideal autosampler for many laboratories!</p> <p>The 460-LC AutoSampler offers the best of both worlds. It is intelligent for research applications yet rugged enough for routine quality control work. With Pressure Assisted Sampling Aspiration (PASATM), the 460-LC AutoSampler applies pressure within the vial while the sample is withdrawn by a high resolution syringe. Air bubbles and in-vial vacuum problems are eliminated resulting in excellent reproducibility.</p> <p>Flexible and Reliable The 460-LC AutoSampler's three injection modes combine flexibility, available sample volume, and precision. Choose from: Full Loop - overfills the sample loop for maximum precision. Partial Loop - program variable injection volumes easily. Microliter Pickup - withdraws the exact amount to be injected without sample loss (with "84+3" standard sample tray).</p>	13,500.00	15.00%	11,475.00
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West Virginia Department of Agriculture, Charleston, WV

Item	Qty	Part Number	Product Description	Unit Price	Discount	Amount
			<p>Compact and Easy-to-Use</p> <p>The stackable design and compact design saves bench space. Access to the syringe, injector, and needle is easy with the lift-up front panel and removable top cover.</p> <p>Interchangeable Sample Trays</p> <p>The "84+3" sample tray holds 84 vials 2 mL vials + 3 vials 10 mL and is the standard autosampler tray. It is a double-wide tray and cannot be used with other trays. Other optional trays include: 48 Vials (2 mL), 12 Vials (10 mL), 96 High or Low Well Plates, and 384 Low Well Plates. The autosampler holds two sample trays (but is limited to one "84+3" tray).</p> <p>Auto Mix Sample Preparation</p> <p>Internal standard addition, sample dilution, or derivatization steps are easily programmed to reduce sample preparation time and errors associated with manual procedures when used in conjunction with the Adapter tray. Using vial-to-vial transfers or dedicated large volume reagent vials, the 460-LC AutoSampler accomplishes many types of sample preparation routines. The standard "84+3" sample tray accommodates both sample vials and reagent vials in one tray set.</p>			
2.02	1	A6002250X046	Pursuit XRs 10u C18 250 x 4.6mm *****	579.00	15.00%	492.00
Section Total \$						11,967.00

Section 3 Onsite training 5 days

3.01	1	CSBONSTZ05	<p>5 Days Training at Customer Site, Zone 1</p> <p>2nd Day Discount =33% - 3rd thru 5th Day >36%</p> <p>Purchase of consecutive days of onsite training includes significant savings. Training must be done on consecutive days in order for discount to apply. This cannot be combined with any other discounting offer.</p>	9,188.00	15.00%	7,810.00
Section Total \$						7,810.00

Section 4 Nitrogen Gas Generator for HPLC

4.01	1	DHUHPLCMS12W	<p>NITROGEN GAS GENERATOR w/ DOMNICK-HUNTER MODEL G4-510W.</p> <p>Nitrogen Generator w/ Built-in Air Compressor, 115V. Produces 12L/min of 99.5% nitrogen at 100 psig.</p> <p>Domnick Hunter LC/MS nitrogen generators are specifically designed to meet the gas flow, purity and pressure requirements of the latest generation of LC/MS instruments. Utilizing the pressure swing adsorption (PSA) technique, the generators provide a continuous stream of clean, dry nitrogen without the need for secondary purification</p>	10,700.00	15.00%	9,095.00
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Quotation

30230201412

03/30/2010

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VARIAN

West Virginia Department of Agriculture, Charleston, WV

Item	Qty	Part Number	Product Description	Unit Price	Discount	Amount
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and are fully compatible with all known APCI and ESI interfaces. This model features an integral oil-free compressor, giving increased security of supply, completely removing the reliance on external air supplies.

Features:

- Suitable for nebulizing, sheath and drying gas
- Integral oil-free compressor
- Fully regenerative, proven durability PSA technology
- Phthalate-free
- Soundproofed compressor box
- Digital interface
- CE, UL and CRN approved
- Global manufacturing support

Benefits:

- Improved instrument performance - Guaranteed consistent nitrogen purity improves stability and ensures greater reproducibility of results
- Low and stable gas supply costs - Payback in less than 18 months
- Security of supply - Integral oil-free compressors removes the reliance on dedicated compressed air supplies
- Reduced Health and Safety risks - No manual handling or high pressure gas storage
- Peace of mind - Service contracts and extended warranty available
- Effortless operation - Gas at the push of a button
- Space saving - Fits under bench
- Expert advice - Dornick Hunter has over 20 years experience of with PSA system designs

Section Total \$	9,095.00
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Quotation Total \$	165,569.00
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THIS IS NOT AN INVOICE

Terms & Conditions of Sale

This offer is subject to credit approval and is exclusive of any applicable sales taxes or duties.



Financing Alternatives

Varian is pleased to present an alternative finance package for your consideration in acquisition of this instrumentation. You may not be aware that leasing offers 100% financing including installation and taxes. We can also let your organization realize some important additional benefits such as improved cash flow, flexibility to expand or upgrade your system, as well as fixed rate financing with protection against inflation.

Below are estimated monthly payments for different leasing options based on Quotation: 30230201412

10% Purchase Options

36 Months	48 Months	60 Months
\$4,791	\$3,728	\$3,101

\$1.00 Purchase Options

36 Months	48 Months	60 Months
\$5,198	\$4,023	\$3,327

10% Purchase Option: Also known as a tax or operating lease, the intent is not necessarily to own, but to gain the benefits of the equipment in exchange for the low monthly payment. At the end of the lease term, your company has the option to purchase the equipment for 10% of the original finance amount. In addition, your company may expense 100% of each monthly payment off its pre-tax income, reducing tax liability.

\$1.00 Purchase Option: Also known as a capital lease, the intent is to own the equipment at the end of the lease term. The equipment is depreciated and your company owns it with the last monthly payment.

Additional Benefits

- Stay within your budget
- Conserve cash
- Finance 100% -including service, installation and taxes
- Quick and easy application process

If your organization is interested in these or other finance programs, contact the following:

Ameritech Leasing, Inc.
Bill Scopp
913-381-3344 x202

De Lage Landen Financial Services
Jeff Smith
845-897-2272

Lease World Corp.
Manny Licker
954-969-1965

Trinity Vendor Finance
Craig de Koning
800-841-4433 x177

WB Financial LLC
Bob Fode
714-915-9444

JB2 Funding Corp.
Jacob White
877-386-3522 x 333



Quotation

30230201414

04/02/2010

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VARIAN

Varian Inc.
 2700 Mitchell Drive
 Walnut Creek, CA 94598
 www.varianinc.com
 Phone: (800) 926-3000 Fax: (925) 945-2360
 Email: csb-salessupport@varianinc.com

Quotation For:
 Melissa D. Buckley
 West Virginia Department of Agriculture
 Plant Industries Division
 4720 Brenda Lane, Bldg.11
 Charleston, WV 25312
 (304) 558 - 2208 FAX: (304) 558 - 3594

Your Inquiry:	Varian Standard Terms & Conditions apply (see attached)
Payment Terms:	Quotation Expires: May 2, 2010
Shipping Method: Best Way, Prepaid & Add	Delivery Lead Time: FBD 6 weeks
FOB: ORIGIN Destination	Unit Price Basis: USD

All applicable taxes, freight insurance, and/or other handling charges will be added at invoicing.

- 3 years of Service
- 4 years of Service
- 5 years of Service

Submitted by: 4E5

Don Harrington
 Don Harrington

For Order Placement:

Please reference Quotation Number on all purchase orders.
 Please forward all Purchase Orders and Correspondence to:
 Varian Inc.
 2700 Mitchell Drive
 Walnut Creek, CA 94598
 (800) 926-3000 Fax (925) 945-2360



VARIAN

Quotation

30230201414

04/02/2010

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West Virginia Department of Agriculture, Charleston, WV

Item	Qty	Part Number	Product Description	Unit Price	Discount	Amount
Section 1 3 years of Service						
1.01	1	MS310SUP2YR	2 yrs ExtendCare -310 Series MS only (excludes: GC,LC)	14,040.00		14,040.00
1.02	1	LC212SUP2YR	2 yrs ExtendCare-212 LC pump 3 yrs of ExtendCare	1,330.00		1,330.00
3 years total support when sold with the purchase of a new Varian system. Price includes a 20% discount on the second year. This cannot be combined with any other discounting offers.						
This ExtendCare Agreement provides and all Parts, Labor, Travel and Emergency visits within 101 miles of a Varian service center. A preventive maintenance (PM) visit is not included. Parts exclusions are noted in Terms & Conditions. Additional travel charges if applicable will be listed separately. All work is performed by Varian Factory-trained Field Support Representatives. Accessory support sold separately.						
1.03	1	LC410SUP2YR	2 yrs ExtendCare-410/400 3 yrs of ExtendCare	1,756.00		1,756.00
3 years total support when sold with the purchase of a new Varian system. Price includes a 20% discount on the second year. This cannot be combined with any other discounting offers.						
This RepairCare Agreement provides and all Parts, Labor, Travel and Emergency visits within 101 miles of a Varian service center. A preventive maintenance (PM) visit is not included. Parts exclusions are noted in Terms & Conditions. Additional travel charges if applicable will be listed separately. All work is performed by Varian Factory-trained Field Support Representatives. Accessory support sold separately.						
Section Total \$						17,126.00

Section 2 4 years of Service						
2.01	1	MS310SUP4YR	4 yrs ExtendCare-310 Series MS only (excludes: GC,LC)	23,400.00	20.00%	18,720.00
2.02	1	LC212SUP4YR	4 yrs ExtendCare-212 LC pump 5 yrs of ExtendCare	2,218.00	20.00%	1,774.00
5 years total support when sold with the purchase of a new Varian system. Price includes a 25% overall discount; 4 years for the price of 3. This cannot be combined with any other discounting offers.						
This RepairCare Agreement provides and all Parts, Labor, Travel and Emergency visits within 101 miles of a Varian service center. A preventive maintenance (PM) visit is not included. Parts exclusions are noted in Terms & Conditions. Additional travel charges if applicable will be listed separately. All work is performed by Varian Factory-trained Field Support Representatives. Accessory support sold separately.						



Quotation

30230201414

04/02/2010

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VARIAN

West Virginia Department of Agriculture, Charleston, WV

Item	Qty	Part Number	Product Description	Unit Price	Discount	Amount
2.03	1	LC410SUP4YR	4 yrs ExtendCare-410/400 5 yrs of ExtendCare	2,926.00	20.00%	2,341.00
<p>5 years total support when sold with the purchase of a new Varian system. Price includes a 25% overall discount; 4 years for the price of 3. This cannot be combined with any other discounting offers.</p> <p>This RepairCare Agreement provides and all Parts, Labor, Travel and Emergency visits within 101 miles of a Varian service center. A preventive maintenance (PM) visit is not included. Parts exclusions are noted in Terms & Conditions. Additional travel charges if applicable will be listed separately. All work is performed by Varian Factory-trained Field Support Representatives. Accessory support sold separately.</p>						
Section Total \$						22,835.00

Section 3 5 years of Service

3.01	1	MS310SUP4YR	4 yrs ExtendCare-310 Series MS only (excludes: GC,LC)	23,400.00		23,400.00
3.02	1	LC212SUP4YR	4 yrs ExtendCare-212 LC pump 5 yrs of ExtendCare	2,218.00		2,218.00
<p>5 years total support when sold with the purchase of a new Varian system. Price includes a 25% overall discount; 4 years for the price of 3. This cannot be combined with any other discounting offers.</p> <p>This RepairCare Agreement provides and all Parts, Labor, Travel and Emergency visits within 101 miles of a Varian service center. A preventive maintenance (PM) visit is not included. Parts exclusions are noted in Terms & Conditions. Additional travel charges if applicable will be listed separately. All work is performed by Varian Factory-trained Field Support Representatives. Accessory support sold separately.</p>						
3.03	1	LC410SUP4YR	4 yrs ExtendCare-410/400 5 yrs of ExtendCare	2,926.00		2,926.00
<p>5 years total support when sold with the purchase of a new Varian system. Price includes a 25% overall discount; 4 years for the price of 3. This cannot be combined with any other discounting offers.</p> <p>This RepairCare Agreement provides and all Parts, Labor, Travel and Emergency visits within 101 miles of a Varian service center. A preventive maintenance (PM) visit is not included. Parts exclusions are noted in Terms & Conditions. Additional travel charges if applicable will be listed separately. All work is performed by Varian Factory-trained Field Support Representatives. Accessory support sold separately.</p>						

Section Total \$ 28,544.00

Quotation Total \$ 68,505.00



VARIAN

Quotation

30230201414

04/02/2010

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West Virginia Department of Agriculture, Charleston, WV

Item	Qty	Part Number	Product Description	Unit Price	Discount	Amount
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Financing Alternatives

Varian is pleased to present an alternative finance package for your consideration in acquisition of this instrumentation. You may not be aware that leasing offers 100% financing including installation and taxes. We can also let your organization realize some important additional benefits such as improved cash flow, flexibility to expand or upgrade your system, as well as fixed rate financing with protection against inflation.

Below are estimated monthly payments for different leasing options based on Quotation: 30230201414

10% Purchase Options

36 Months	48 Months	60 Months
\$2,007	\$1,568	\$1,298

\$1.00 Purchase Options

36 Months	48 Months	60 Months
\$2,173	\$1,685	\$1,390

10% Purchase Option: Also known as a tax or operating lease, the intent is not necessarily to own, but to gain the benefits of the equipment in exchange for the low monthly payment. At the end of the lease term, your company has the option to purchase the equipment for 10% of the original finance amount. In addition, your company may expense 100% of each monthly payment off its pre-tax income, reducing tax liability.

\$1.00 Purchase Option: Also known as a capital lease, the intent is to own the equipment at the end of the lease term. The equipment is depreciated and your company owns it with the last monthly payment.

Additional Benefits

- Stay within your budget
- Conserve cash
- Finance 100% -including service, installation and taxes
- Quick and easy application process

If your organization is interested in these or other finance programs, contact the following:

Ameritech Leasing, Inc.
Bill Scopp
913-381-3344 x202

De Lage Landen Financial Services
Jeff Smith
845-897-2272

Lease World Corp.
Manny Licker
954-969-1965

Trinity Vendor Finance
Craig de Koning
800-841-4433 x177

WB Financial LLC
Bob Fode
714-915-9444

JB2 Funding Corp.
Jacob White
877-386-3522 x 333

**VARIAN ANALYTICAL INSTRUMENTS
TERMS AND CONDITIONS OF SALE**

1. GOVERNING TERMS. These Terms and Conditions of Sale ("Terms") shall apply to the sale by Varian, Inc. or its affiliated company ("Varian") of the products and/or services ("Products") described in the Quotation, Sales Order, Acknowledgment, Purchase Order, web page or other contract documentation to which these Terms are attached, incorporated by reference and made an integral part (the "Contract Documents"). Except as expressly agreed by authorized representatives of both parties in writing, no other terms and conditions, including any terms and conditions attached to Buyer's request for quotation, acknowledgment, purchase order or other contract documentation, shall apply to Varian's sale of the Products. Varian's shipment of any Product or performance of any purchase order or contract is expressly conditioned on Buyer's acceptance of these Terms. As used herein, "Contract" refers to the applicable order pursuant to which Varian is selling the Products to Buyer.

2. PRICE AND PAYMENT. Except as otherwise specified in the Contract Documents, Varian's prices exclude and Buyer is responsible for all sales, use, excise, value-added or other taxes and duties. Buyer's late payment shall constitute a fundamental breach of the Contract, shall result in a service charge against Buyer of the lesser of 2% per month of the Contract amount or the maximum amount permitted by law, and shall entitle Varian to cancel or delay performance under the Contract. Varian shall retain a purchase money security interest or similar lien or right of repossession in all Products shipped to Buyer under the Contract until paid in full. Buyer shall execute documents and make filings or recordings as requested by Varian for the perfection or other protection of such security interest. Buyer shall be responsible for any costs of collection incurred by Varian hereunder, including reasonable attorneys' fees.

3. DELIVERY. Unless otherwise specified in the Contract Documents, Buyer shall take title and risk of loss of the Products at point of delivery for Products shipped by Varian, Inc. to a non-U.S. destination and at point of shipment in all other cases. Training, if included in Products, must be taken by Buyer within one year following shipment of system.

4. INSTALLATION. If installation is included in Products, Buyer shall provide any necessary permits, facilities, and utilities, ensure compliance with regulatory requirements, and comply with Varian's reasonable pre-installation instructions in a timely fashion.

5. INFRINGEMENT INDEMNITY. Varian shall defend and indemnify Buyer from all third party claims alleging that Varian's design or manufacture of any Product infringes any third party patent or other intellectual property right, except to the extent such claims arise from or relate to (a) any Product or component thereof designed by Buyer, (b) modification of any Product without Varian's express written consent, (c) use of any Product in combination with any product, process, application, or material or system not designed or manufactured by Varian, or (d) products manufactured by Buyer using any Product.

6. SOFTWARE LICENSE. Title to all software provided as separate modules or embedded in the Products ("Software") shall remain the property of Varian or Varian's licensors. Varian grants to Buyer a non-exclusive, limited license to use the Software together with the Products. Buyer shall not decompile, disassemble or otherwise reverse engineer the Software, and may create derivative works only to the extent permitted by Varian. Buyer shall not sublicense, assign, copy, distribute or disclose any portion of the Software to a third party without the express written consent of Varian. Buyer may transfer or sell the Software only together with the Products. This license shall terminate when Buyer discontinues use of the Software.

7. WARRANTY. Varian warrants consumable laboratory supplies and Software sold under these Terms to be free from defects in material and workmanship and in substantial conformance with Varian's

published specifications for a period beginning upon delivery and ending fourteen (14) days thereafter, subject to any applicable license agreement. Varian warrants services sold under these Terms to be performed in a good and workmanlike manner for a period beginning upon performance and ending thirty (30) days thereafter. Varian warrants all other Products sold under these Terms to be free from defects in material and workmanship and in substantial conformance with Varian's published specifications for a period beginning upon delivery and ending ninety (90) days thereafter. Varian does not warrant the operation of any Software to be uninterrupted or error-free. The foregoing warranty periods shall be deemed extended to the extent required by any mandatory, non-waivable provision of applicable law. The foregoing warranties are void in the event of Product abuse, alteration, misuse, improper operation or maintenance, use in an unsuitable physical environment, or use with inadequate facilities or utilities, and these warranties do not cover products, components, or services warranted by another party. Buyer's sole and exclusive remedy for any defective or non-conforming Product after its warranty period begins shall be repair, replacement with either a new or refurbished Product, or credit, at Varian's sole option, and such remedy shall be available only during the applicable warranty period. Repaired or replaced Products shall be subject to the original warranty period, which shall not be extended due to such repair or replacement, except to the extent required by any mandatory, non-waivable provision of applicable law. **THE FOREGOING WARRANTIES ARE EXCLUSIVE AND IN LIEU OF ALL OTHER EXPRESS OR IMPLIED WARRANTIES, INCLUDING BUT NOT LIMITED TO ANY WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE.**

8. DAMAGES. In no event shall Varian or Buyer be liable to the other or their respective affiliates for incidental, consequential, indirect, punitive, or special loss or damages of any kind, including but not limited to lost revenues, lost profits, loss of goodwill or lost production, however caused, whether based on contract, tort (including negligence) or any other legal theory. Varian's total liability in damages or otherwise to Buyer and its affiliates shall not exceed payments received by Varian for the unit of Product furnished or to be furnished resulting in the loss or damage claimed.

9. FORCE MAJEURE. Neither Varian, nor Buyer shall be liable to the another for failure to perform any obligation under the Contract to the extent such failure to perform is due to labor unrest, riot, war, fire, accident, weather or other natural disasters, lack of energy supplies, supplier delays, compliance with law, failure to obtain all necessary licenses, permits or approvals after reasonable efforts, or any unforeseen circumstances or other causes beyond such party's reasonable control.

10. SOLE TERMS. These Terms and the Contract Documents of which they are a part set forth the entire agreement between Varian and Buyer with respect to their subject matter and supersede all previous written or oral agreements and understandings between Varian and Buyer. These Terms and the Contract Documents may not be amended nor may compliance with any provision herein or therein be waived, except by a written document duly and validly executed by both Varian and Buyer, or in the case of a waiver, the party waiving compliance. Any part of these Terms held to be void, invalid or unenforceable shall be treated as severable, leaving valid the remaining Terms.

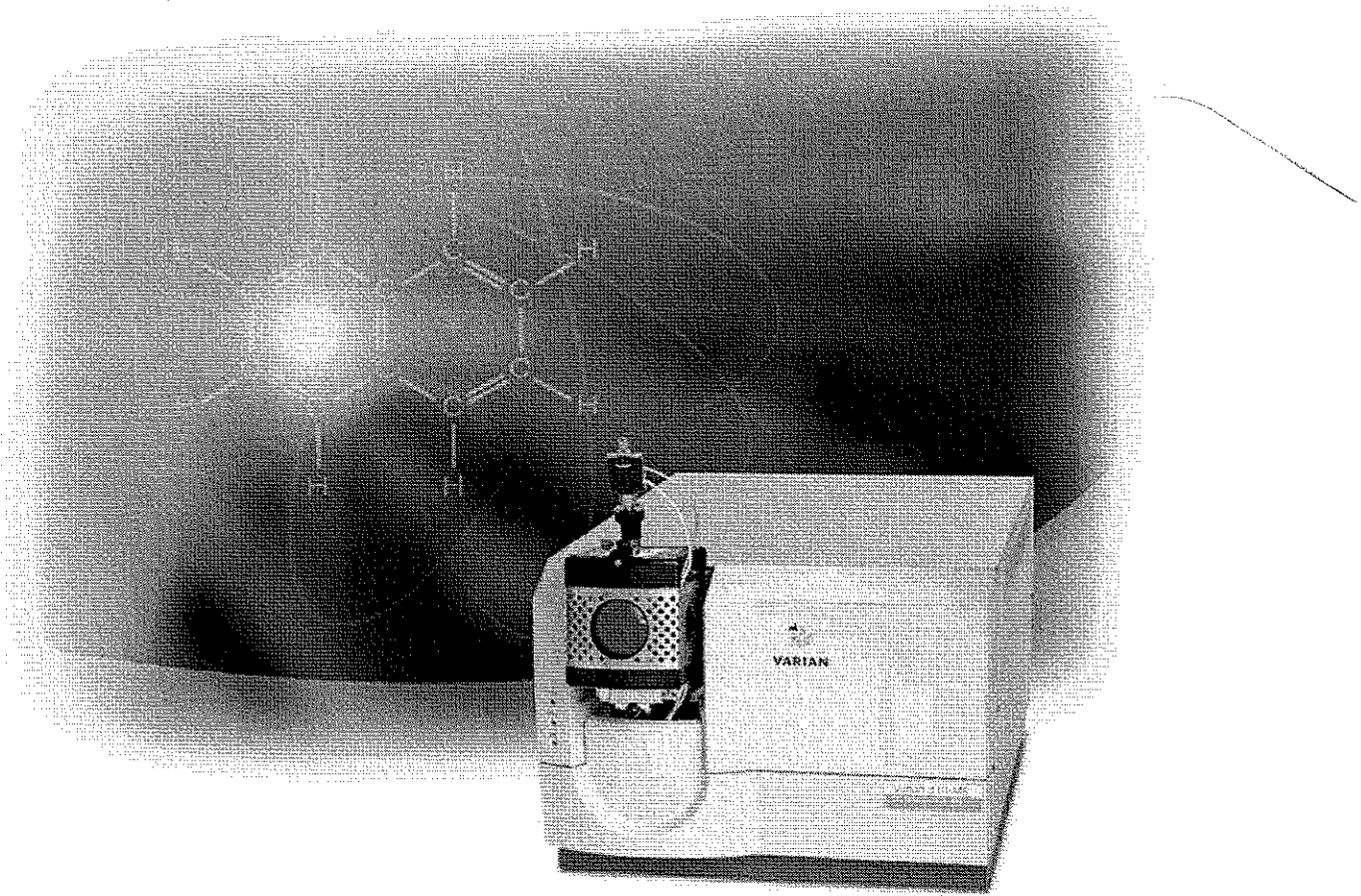
11. GOVERNING LAW; DISPUTES. If this Contract concerns the sale of Products to be delivered to U.S. destinations, it shall be governed by the laws of the State of California, U.S.A. (excluding choice of law rules and the provisions of the Convention for the International Sale of Goods (CISG)). Any dispute or claim arising out, relating to or in connection with such a Contract shall be resolved exclusively by final, binding arbitration pursuant to the American Arbitration Association, provided that, Varian may seek injunctive or other relief in any court of law in order to prevent any unauthorized copying, disclosure, use, retention or distribution of its intellectual property. If this Contract concerns the sale of Products to be delivered to non-U.S. destinations, it shall be governed by CISG and (for issues not addressed by CISG) by local law applied pursuant to choice of law rules or mutual agreement of the parties and any disputes or claims may be resolved in any court of competent jurisdiction.

LC/MS/MS

VARIAN, INC.

310-MS

TRIPLE QUADRUPOLE LC MASS SPECTROMETER



VARIAN



VARIAN, INC

310-MS

Unsurpassed commitment to innovation

Varian, Inc. is an innovator and leader in mass spectrometry and vacuum technology, committed to providing Information Rich Detection (IRD) solutions.

Varian continues its commitment to develop and manufacture high performance, reliable, IRD solutions by strengthening our complete line of quadrupole and ion trap LC/MS and GC/MS systems.

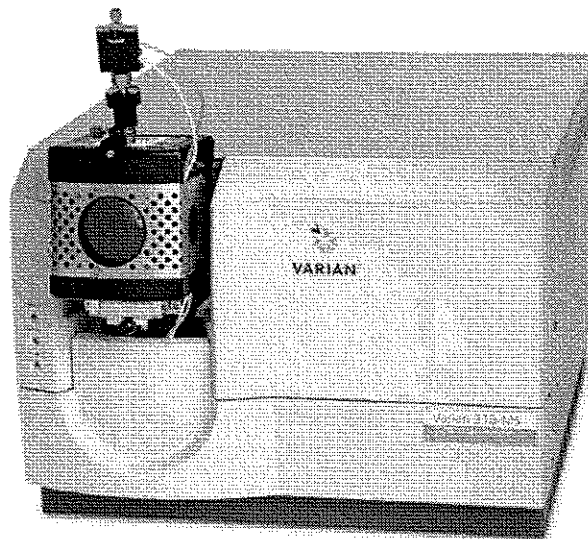
The Varian 300 Series is the next generation of Varian's triple quadrupole product line, delivering MS/MS selectivity at a price you can afford. The option to quickly change your LC source from ESI to APCI offers a flexible and robust quadrupole MS system that can deliver precisely the information you need.

Triple quad performance in a single quad size

The Varian 310-MS is a rugged, reliable tandem mass spectrometer to match your budget and your needs - all in less than 72 cm (28 inches) of linear bench space.

For high-throughput, routine analyses, structural confirmations or analyses involving challenging, complex matrices, the 310-MS delivers outstanding MS/MS performance for cost-conscious laboratories.

Varian's patent-pending, computer-controlled gas temperature (SelecTemp™) and flow (SelecFlow™) give you the flexibility to develop methods with greater ruggedness and sensitivity. And you get the flexibility and selectivity of a triple quadrupole instrument in the size of a single quad.



The Varian 310-MS LC/MS/MS offers the selectivity of tandem mass spectrometry in the size of a single quadrupole instrument.

VARIAN, INC.

310-MS LC/MS

Big performance in the smallest

Ultimate MS/MS Selectivity

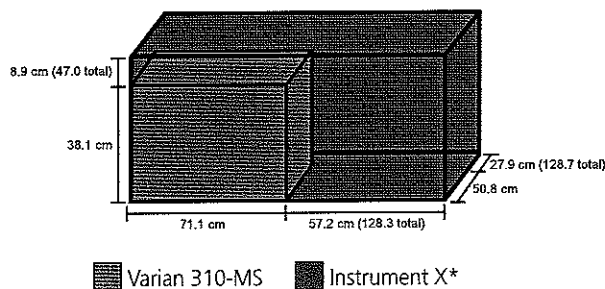
The multiple MS/MS scan modes available on the 310-MS offer several advantages over single quadrupole mass spectrometers. Selective Reaction Monitoring (SRM) provides greater sensitivity for demanding applications in complex matrices. Neutral loss and parent scan modes deliver increased sensitivity and specificity for high throughput structural confirmations.

The 310-MS also features:

- **High performance quadrupoles**
Pre- and post-ion guides improve transmission efficiency. The absence of lenses simplifies tuning and improves signal.
- **Single dual-stage, turbomolecular pump**
Split flow, differential pumping for the source and analyzer creates a compact, economical instrument.
- **Ultra-low noise detector**
Directly aligned with the ion path for better sensitivity and lower detection limits.
- **Long, 180° curved collision cell**
185 mm path ensures efficient dissociation for greater signal and reduced noise.

Compact Productivity

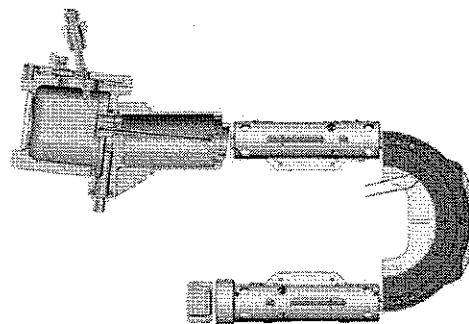
The linear footprint of the 310-MS is one of the smallest of any triple quad LC/MS – under 72 centimeters (28 inches). A smaller footprint means more space for a safer, less cluttered working environment or even another instrument to increase your productivity.



Robust Performance

The 310-MS delivers robust performance with low noise and less maintenance. The patented API interface, with its dual off-axis needle and capillary provides efficient desolvation with minimum contamination.

The superior design characteristics don't end at the ion source. Varian's patented 180° curved collision cell provides additional noise reduction for difficult matrices. You get the benefits of a detector that is off-axis to the source without the use of a conversion dynode. No dynode ensures better sensitivity, especially for negative ions.



The unique geometry of the 310-MS reduces noise and increases sensitivity.

Flexible, Rugged, Sensitive

By giving you more options for method development and increased sensitivity, SelecTemp and SelecFlow reduce sample preparation time. That means increased productivity for your laboratory.

Varian's SelecTemp programmable temperature control delivers optimum drying gas temperatures at every point in a complex analysis. The API interface with SelecTemp allows simplified setup, greater throughput, reduced contamination and improves detection of labile compounds.

SelecFlow, a programmable pressure control system, is the newest addition to Varian's quadrupole line. It allows accurate control of gas flows by time segment to provide better sensitivity and area reproducibility for specific compounds. Both SelecTemp and SelecFlow parameters can be automatically recorded for GLP purposes.

*Dimensions accurate as of 10/09/06. Diagram not necessarily to scale.

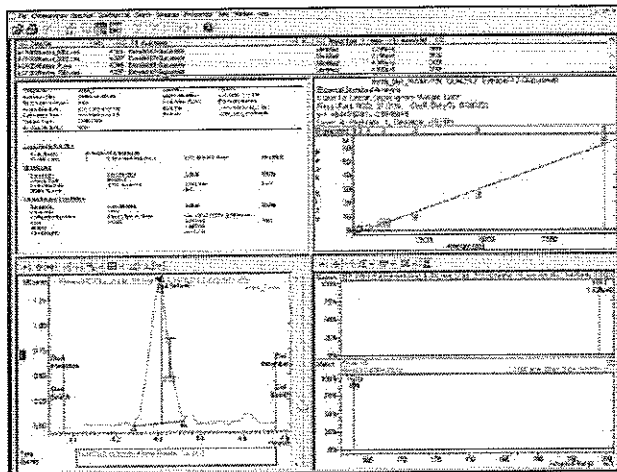
package

The complete solution...

More power with Varian MS workstation software

Instrument control and data processing are simple with the Varian MS Workstation software.

- Complete single point control of pumps, autosamplers, and other accessories
- Fully automated tuning and calibration
- Superior data transfer rate with dual processors
- Simple navigation for reviewing and processing results
- Full featured network compatibility for file management, printing, and remote access
- Extensive reporting for complete analyses



Varian HPLC pumps, detectors, autosamplers, and columns can be included to create a complete configuration.

HPLC Pumps

- **212-LC pumps** deliver pulse free flow at low flow rates, ideal for analyzing limited amounts of sample on a small (2 mm) diameter column. The low flow rates reduce maintenance on the spectrometer and increase the sensitivity for analyses of small samples.

HPLC Detectors

- **ProStar™ 300 Series** range from a standard, single-channel UV-Vis detector for basic analysis to multi-wavelength detectors for research applications. For the ultimate in UV-Vis detection, the powerful ProStar 335 Diode Array Detector provides full spectral information for every peak in a sample.

- **The PL-ELS 2100** Evaporative Light Scattering Detector is ideal when analyzing non-chromophoric components. This universal detector does not rely on optical properties of the analyte. Signal is proportional to concentration for all semi- and non-volatile compounds.

Autosamplers

- **HTS PAL** is a low loss, high speed, high capacity, robust autosampler offering outstanding flexibility and productivity.
- **ProStar 400 Series** are precise, versatile autosamplers delivering reliable results, particularly when sample volume is limited.

HPLC Columns

- **Pursuit® columns** are available in a variety of phases and deliver faster separations without sacrificing resolution. Pursuit Diphenyl offers unique pi-pi selectivity for aromatic and double bond containing analytes and improved LC/MS sensitivity. Pursuit PFP delivers optimal separation of polar analytes under high aqueous conditions.
- **Polaris® columns** provide unique bonded phases that maximize polar retention and selectivity, while virtually eliminating silanol activity. Polar-modified chemistries of this class are very effective for separations that are difficult on conventional alkyl-bonded phases, and they are stable in all commonly used HPLC and LC/MS eluents from pH 1.5 to 10.0.

VARIAN, INC.

310-MS

TRIPLE QUADRUPOLE LC MASS SPECTROMETER

Varian, Inc. – Supporting Customers Worldwide

All products are eligible for on-demand support from a worldwide network of specialists who can assist with any need. Varian, Inc. offers:

- **Comprehensive programs** that include a full range of services – from minor repairs, to complex applications development and training.
- **Factory-qualified Field Support Representatives and Specialists**, specifically chosen for each installation.
- **Global support teams** strategically located around the world.

To learn more about Varian's industry leading customer support, visit our Web site at www.varianinc.com/support

Varian, Inc. – Serving Markets Worldwide

Biosciences

Pharmaceuticals

Clinical Research and Forensics

Food and Agriculture

Chemical Analysis

Environmental

Fuels and Energy

Material Sciences

Varian, Inc.
www.varianinc.com

North America: 800.926.3000, 925.939.2400

Europe The Netherlands: 31.118.67.1000

Asia Pacific Australia: 613.9560.7133

Latin America Brazil: 55.11.3845.0444

Other sales offices and dealers throughout the world— check our Web site.

GC • LC • MS • GPC/SEC • AA • ICP • UV-Vis-NIR • FT-IR • Fluorescence • Dissolution • NMR • MRI • FTMS • Consumables • Data Systems



VARIAN



Varian 300 Series LC/MS Quadrupole Mass Spectrometer Pre-installation Instructions

Checklist

NOTE: Do not unpack the boxes.

Check off each box after satisfying each requirement as described in the instructions. All requirements must be met before requesting installation.

NOTE: If the site is not ready for installation when the Varian Representative arrives, Varian, Inc. reserves the right to invoice for the Representative's time.

Requirements	<input checked="" type="checkbox"/>
Installation site is in compliance with all relevant safety regulations.	<input type="checkbox"/>
User Representative will be available during the installation and Varian certification period.	<input type="checkbox"/>
Entrance to the installation site is at least 92 cm (36 in.) wide.	<input type="checkbox"/>
Bench space sufficient for all modules.	<input type="checkbox"/>
Bench can support system weight.	<input type="checkbox"/>
Bench does not vibrate.	<input type="checkbox"/>
Temperature maintained between 16 and 30 °C.	<input type="checkbox"/>
Relative humidity maintained between 20 and 80%.	<input type="checkbox"/>
Installation site is free of excessive particulate matter.	<input type="checkbox"/>
Exhaust system is suitable.	<input type="checkbox"/>
Specified electrical supply and power outlets are installed.	<input type="checkbox"/>
Nitrogen gas (at least 99% pure), regulator, and gas lines are installed.	<input type="checkbox"/>
Air (less than 0.1 ppm hydrocarbons), regulator, and gas lines are installed.	<input type="checkbox"/>
Argon (at least 99% pure), regulator, and gas lines are installed. Argon required only for triple quadrupole instruments.	<input type="checkbox"/>
Materials and solvents of specified grade are on site.	<input type="checkbox"/>
310-MS ONLY: Syringe pump similar to the Harvard syringe pump (Varian part number 2732070100).	<input type="checkbox"/>
Shipping cartons were inspected for damage. If there was any damage, the damaged shipping carton procedure was completed.	<input type="checkbox"/>

Requesting Installation

After preparing your site, contact the Customer Service office in your region to schedule installation.

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Introduction

The Pre-installation Instructions guide you through each requirement of the checklist. Follow these instructions to ensure that the installation requires no more than the usual three days. Have the completed checklist available when you call to schedule the installation. After the Varian Representative completes the installation, you can analyze your samples.

After meeting all of these requirements, contact the Customer Service office in your region to schedule the installation.

The LC/MS operates reliably under carefully controlled environmental conditions. You must provide suitable power sources, operating environment, materials, and solvents. Failures may occur if you use or maintain the system outside of the power and operating environment ranges and limits described in these instructions. The Varian Warranty and Service contract specifically excludes the repair of failures due to such causes.



CAUTION

All phases of preparing the installation site must conform to local safety, electrical, and building codes. These codes take precedence over any recommendations in these instructions. The customer is responsible for compliance.

Safety

Safety is the most important consideration for instrument use. Determine if the installation site complies with all relevant safety regulations.



Check off the checklist box: *Installation site is in compliance with all relevant safety regulations.*

Before the Installation

User Representative

Schedule the installation when the User Representative will be available. One of the important duties of the Varian Representative is to familiarize the User Representative with the basic functions of the 300 Series LC/MS.



Check off the checklist box: *User Representative will be available during the installation and Varian certification period.*

Entrance

Before arranging for delivery of the 300 Series LC/MS, determine that there is sufficient clearance to move the shipping container to the installation site. The shipping boxes are 72 cm (28 in.) wide by 92 cm (36 in.) long. If you move the instrument using the pallet, you need at least 92 cm (36 in.) clearance. Allow additional room for maneuvering the shipping containers around corners and through doors.



Check off the checklist box: *Entrance to the installation site is at least 92 cm (36 in.).*



CAUTION

The MS, foreline pump, and LC are heavy. To prevent personal injury, use appropriate moving and lifting techniques.

Bench Space and Load

Use the following information to plan the layout of your 300 Series LC/MS. The Varian Representative will unpack the boxes and put the modules on the bench. Although the figures show a 320-MS, the information also applies to a 310-MS.

Figure 1 and Figure 2 show suggested layouts for the 300 Series LC/MS with the 212-LC and different autosamplers.

The tables after the figures provide information about bench space and load. The bench must be strong enough to support the weight of all modules, wide enough for all modules, and at least 84 cm (33 in.) deep for the MS.

212-LC and ProStar 430

Figure 1 shows a possible layout for the 300 Series LC/MS with the 212-LC pumps and the ProStar 430 AutoSampler. The autosampler belongs on the side of the 212-LC pumps, not on top.

NOTE: Do not stack an autosampler on top of the 212-LC pumps.

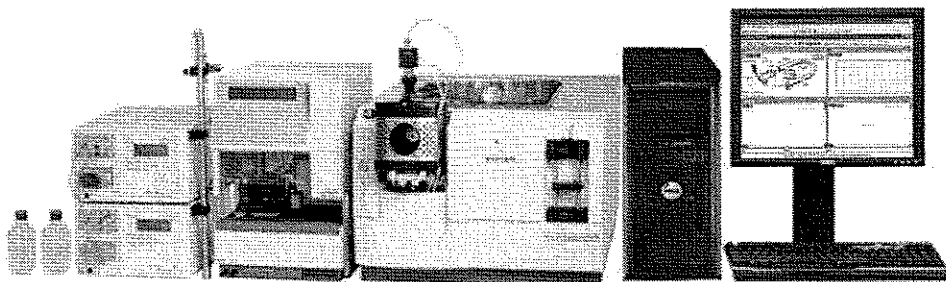


Figure 1 Suggested Layout with 212-LC and ProStar 430

Table 1 and Table 2 list the dimensions and weights of the modules in Figure 1.

Table 1 Bench Space

Bench Width	Solvents	212-LC	ProStar 430	320-MS or 310-MS	CPU	Monitor and Keyboard	Total
cm	30.5	26	28	53.5	18.6	43.8	200.4 cm
in.	12	10.5	11	21	7.4	17.25	79.15 in.

Table 2 Bench Load

Bench Load	Solvents	212-LC	ProStar 430	320-MS or 310-MS	Monitor, CPU and Keyboard	Total
kg	8	14.5	21	61	17.9	122.4 kg
lb	18	32	46	134	39.4	269.4 lb

212-LC and HTS PAL

Figure 2 shows a possible layout for the 300 Series LC/MS with 212-LC pumps and CTC HTS PAL Autosampler.

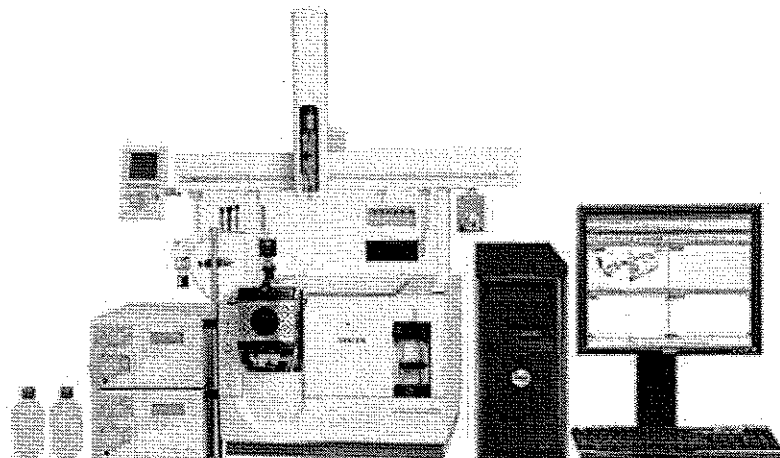


Figure 2 Suggested Layout with 212-LC and HTS PAL

Table 3 and Table 4 give the dimensions and weights of the modules in Figure 2.

Table 3 Bench Space

Bench Width	Solvents	212-LC	320-MS or 310-MS with HTS PAL	CPU	Monitor and Keyboard	Total
cm	30.5	26	53.5	18.6	43.8	172.4 cm
in.	12	10.5	21	7.4	17.25	68.15 in.

Table 4 Bench Load

Bench Load	Solvents	212-LC	320-MS or 310-MS with HTS PAL	Monitor, CPU, and Keyboard	Total
kg	8	14.5	71	17.9	111.4 kg
lb	18	32	162	39.4	251.4 lb

The modules of your system require a clean, flat bench, except for the foreline pump(s), which are put under the bench. The bench must be strong enough to support the weight of the modules. The bench must have enough space on the surface for all modules and allow space for the mouse, solvent bottles, and such. Each vacuum line connecting the MS to a foreline pump is 2.4 m (8 ft) long. The serial cables that connect each pump to the rear panel of the MS are 2.7 m (9 ft) long. If the bench is higher than 92 cm (36 in.), place a vibration-isolation bench under the pump. The vibration-isolation bench must be capable of supporting the 33 kg (73 lb) pump. If the bench is against a wall, drill a 3.8 cm (1.5 in.) diameter hole through the rear of the bench for the vacuum hose.

Refer to the Varian LC Systems Pre-installation Instructions, part number 391483100, for information about LC modules.

Plan to put the monitor and keyboard on the same bench as the LC/MS. If you plan to use a separate bench, position them within 3 m (10 ft) of the rear of the LC/MS. The CPU can go on or under the bench.

The 310-MS has one HS 652 foreline pump and the 320-MS has two. Each pump is 17.8 cm (7 in.) wide by 48.3 cm (19 in.) high, and 52.1 cm (20.5 in.) deep. Each pump weighs 33 kg (73 lb). The area under the bench must be big enough for the foreline pump(s).

Table 5 lists additional bench space requirements.

Table 5 Additional Bench Space Requirements

Purpose	Space Allowance
Provide space for air circulation, gas lines, and electrical connections.	15 to 30 cm (6 to 12 in.) behind the system.
Dissipate room heat room and allow for routine maintenance.	At least 76 cm (30 in.) above the system.
Analytical Systems only: Provide space for Solvent bottles.	At least 30 cm (12 in.) to side of the LC.

Decide how you will arrange your modules. Use Table 6 and Table 7 to determine the width of the bench and the load the bench must support. The bench must be at least 84 cm (33 in.) deep for the MS.

Table 6 Bench Width Calculation Worksheet for Your System

Bench Width	___-LC	Auto-sampler	Other Components	320-MS or 310-MS	CPU	Monitor and Keyboard	Total
cm	_____	_____	_____	53.5	18.6	43.8	___cm
in.	_____	_____	_____	21	7.4	17.25	___in.

Table 7 Bench Load Calculation Worksheet for Your System

Bench Load	___-LC	Auto-sampler	Other Components	320-MS or 310-MS	Monitor, CPU, and Keyboard	Total
kg	_____	_____	_____	61	17.9	___kg
lb	_____	_____	_____	134	39.4	___lb

Check off the checklist box: *Bench space sufficient for all modules.*

Check off the checklist box: *Bench can support system weight.*

Vibration

Ensure that the installation site benches are free from vibrations, especially those caused by equipment in adjoining locations. Because the foreline pump vibrates during operation, it belongs on the floor not on the bench.

Check off the checklist box: *Bench does not vibrate.*

Temperature

The optimal operating temperature is between 16 and 30 °C (61-86 °F).

NOTE: As installation site temperature increases, system reliability decreases due to heat generated by electronic components during operation. This heat must dissipate to the surrounding air for reliable operation.

The airflow around the system must be adequate. The air-conditioning system must maintain a constant temperature (within the operational limits) around the system. Do not place the system near air ducts, windows, or heating and cooling systems. The average steady-state heat load for the MS alone is 6,000 Btu, with a possible short-term heat dissipation of 15,000 Btu during startup.



Check off the checklist box: *Temperature maintained between 16 and 30 °C.*

Humidity

The relative humidity of the operating environment must be between 20 and 80%, with no condensation. Operating the LC/MS at a very low humidity may result in the accumulation and discharge of static electricity, which shortens the life of electronic components. Operating the system at high humidity may create condensation and result in short circuits.

Varian recommends using a combination temperature and humidity monitor in your installation site.



Check off the checklist box: *Relative humidity maintained between 20 and 80%.*

Particulate Matter

Your installation site must not have excessive dust, smoke, or other particulate matter. Particulate matter may block airflow vents causing the electronics to overheat.



Check off the checklist box: *Installation site is free of excessive particulate matter.*

Exhaust System

The foreline pump exhausts most compounds introduced into the MS, along with small amounts of oil vapor from the pump.

Provide an adequate fume exhaust system for the outlet of each foreline vacuum pump. The foreline pump(s) must be vented at least 2 L/min. The API spray chamber must be vented at least 12 L/min to a separate vent line. Ensure that the exhaust system does not pull a vacuum on the API chamber. Consult local regulations for the proper method of exhausting the fumes.



Check off the checklist box: *Exhaust system is suitable.*

Power Requirements

212-LC

Power Input: 85 – 264V ac; 47 – 63 Hz; 60 Watts 100VA

216-LC

115V ac; +15/-20%; 50/60 Hz; 250VA

230V ac; +15/-20%; 50/60 Hz; 250VA

(For UPS, assume 250W)

For 115V ac: one 5.0 AT-fuse (5 x 20 mm, IEC 127)

For 230V ac: one 2.5 AT-fuse

All fuses supplied with the 216-LC instrument are UL-listed and CSA-certified.

The 216-LC must be used with appliances and power sources that have the proper protective grounding.

310-MS or 320-MS

The 300 Series MS requires a separate circuit, and the outlet must have adequate amperage capacity and a reliable ground. The power source must be clean and capable of providing up to 100-240V ac, 50/60 Hz \pm 3 Hz, 1.0 kW.

300 Series LC/MS

The 300 Series LC/MS requires the following:

- One circuit for the mass spectrometer, computer, and monitor. 20A, 100-115V ac, or 10A, 200-240V ac.
- One circuit for the foreline pump(s), with outlets for each pump 20A, 100-115V ac, or 10A, 200-240V ac. If the facility requires a GFCI (Ground Fault Circuit Interrupter) in the foreline pump, circuit, use a separate circuit for each pump.
- Circuits and outlets for other modules.

Table 8 has the power requirements for modules of the 300 Series LC/MS.

Table 8 LC/MS Power Requirements

Module	Max Current Draw 100-115V (Amps)	Max Current Draw 200-240V (Amps)
320-MS or 310-MS	10	5
HS 652 Foreline pumps 1 for the 310-MS and 2 for the 320-MS	10 per pump	5 per pump

Use a separate dedicated power source for HPLC modules and additional instruments and equipment. Never plug the mass spectrometer and the chromatograph into the same power source or the power source may overload. Never use the free outlet on any of the power sources for equipment that draws more than 2A.

The instrument ships with three power cables. One power cable is for the MS and the other two are for the foreline pumps. Figure 3 illustrates the outlets and plugs.

For 100 to 120V systems, use National Electronics Manufacturers Association (NEMA) 5-15P power plugs.

- For 200 to 240V systems, use CEE 7/7 plugs.

The power cable of the mass spectrometer is approximately 2.5 m (8 ft) long. The power cable of each foreline pump is approximately 2 m (6.5 ft) long.

The power cables for the computer, monitor, and printer are approximately 2.13 m (7 ft) long. They have NEMA 5-15P plugs.



CAUTION

Replacing or substituting power cords or plugs must be done with strict compliance with all regulations, including electrical codes, power cord color coding, and appropriate regulatory agency certification marks.

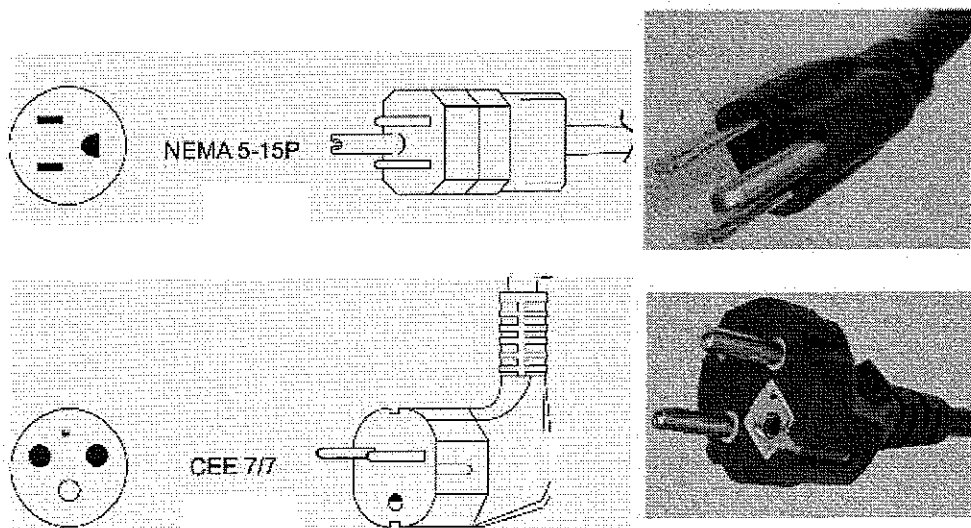


Figure 3 NEMA 5-15P and CEE 7/7 Outlets and Plugs

Installation Site Power

The power supply to the installation site must be either 100-120V ac or 200-240V ac, and be stable (free of fluctuations due to slow changes in the average voltage or to changes resulting from surges, sags, or transients). The voltage must meet IEC 1000-4-5 and IEC 1000-4-11 standards for voltage stability. A measured ground to neutral potential of greater than 3 volts ac or dc indicates grounding problems that may need correction before connecting an instrument module to the power source. Evaluate any power source suspected of having noise problems with a recording-type power line monitor before operating the system.

NOTE: If you are concerned about the quality of your power, install an uninterrupted power supply or a power conditioner or both. Table 9 has more information.

Table 9 Maximum Power Consumption

Module	Maximum Power Consumption
320-MS or 310-MS without pumps	1200VA
320-MS with 2 HS 652 foreline pumps	3200VA
310-MS with 1 HS 652 foreline pumps	2200VA



Check the checklist box: *Specified electrical supply and power outlets are installed.*

Qualified Computer Equipment

If you need to install the Varian MS Workstation software on a computer not purchased from Varian, you are responsible to ensure that the computer is adequately equipped and compatible with the operation of the data system and its communication interfaces. Please check the current list of requirements, available at the following web site.

http://www.varianinc.com/cgi-bin/nav?products/chrom/gcms/msws_computer_req

Varian does not guarantee the function of the Varian MS Workstation software on computer hardware or operating systems that do not meet the specified requirements.

NOTE: Contact your Sales Representative for a list of qualified equipment or for more information.

Gas Requirements

Nitrogen

If you have one LC/MS system, a nitrogen gas supply that can provide up to a maximum of 12 L/min of gas regulated at 80 psi is sufficient for ESI or APCI operation. If you have more than one LC/MS system, use a nitrogen supply that can deliver a maximum of 18 L/min. The nitrogen must be at least 99% pure with less than 0.1 ppm hydrocarbons, and less than 1% oxygen. It must be clean and dry with a -40 °C dew point. Use a nitrogen generator, or a liquid nitrogen boil-off to supply the nitrogen gas. All nitrogen generators require regular maintenance. You are responsible for setting up the preventive maintenance procedures and schedules (contact the nitrogen generator manufacturer). Any MS problems caused by poor gas quality are not covered by the Varian Warranty. It is your responsibility to conform to all regulations regarding the installation and operation of the gas system. The nitrogen supply uses ¼ in. connectors.



Check the checklist box: *Nitrogen gas (at least 99% pure), regulator, and gas lines are installed.*

Air

A compressed air gas supply, capable of providing up to 2 L/min of gas regulated to 80 psi with a two-stage regulator, is required as a nebulizing gas for negative ESI. It is your responsibility to conform to all regulations about the installation and operation of the gas system. The air must be clean and dry, with less than 0.1 ppm total hydrocarbons, including methane, and a -40 °C dew point. The air supply uses ¼ in connectors



Check the checklist box: *Air (less than 0.1 ppm hydrocarbons), regulator, and gas lines are installed.*

CID Gas (triple quadrupole only)

Argon is required as collision gas for MS/MS work with triple quadrupole instruments. The argon supply uses 1/8 in. connectors. Use a two-stage 0-100 psi pressure regulator with a stainless steel diaphragm. The purity of the argon must be greater than 99%.



Check the checklist box: *Argon (at least 99% pure), regulator, and gas lines are installed. Argon required only for triple quadrupole instruments.*

Materials and Solvents

The Varian Representative will prepare solutions to tune and evaluate your 300 Series LC/MS. Please supply the materials on Table 10 and Table 11.

Table 10 Materials

Materials	
Quantity	Item
2	50 mL clean and new volumetric flasks
2	1 L clean and new bottles for mobile phase reservoirs
1	1 L or larger bottle for LC/MS waste
2	10 mL clean and new volumetric flask
2	100 mL clean and new volumetric flask
1	Pipette 100 to 1000 μ L and tips
1	Pipette 20 to 200 μ L and tips
1	50 mL clean and new volumetric flask (for optional APCI)
1	500 mL clean and new volumetric flask (for optional APCI)
1	310-MS ONLY: Syringe pump similar to the Harvard syringe pump (Varian part number 2732070100).

Table 11 Solvents for ESI or APCI

Solvents for ESI or APCI	
Quantity	Solvent
2 each 4-liter bottles	HPLC grade or better water, new and unopened
2 each 4-liter bottles	HPLC grade or better, acetonitrile, new and unopened

Additional tubing is required to complete the installation of your system. Most of this tubing is included in the accessory kits of the LC modules. Additional tubing (PEEK® or stainless steel) may be required for installation of special valves or modules. For most analytical HPLC systems, use 1/16 in. tubing with an ID of 0.005 in. Use 0.005 in. ID or smaller tubing downstream of the sample injector and autosampler to prevent peak broadening. Keep tubing as short as possible to prevent peak broadening and to minimize run time.



Check the checklist box: **Materials and solvents of specified grade are on site.**

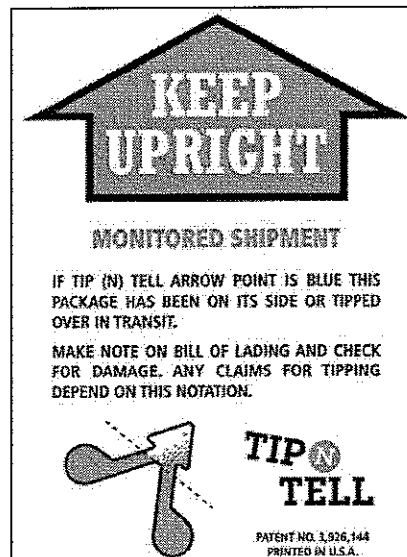
When the LC/MS Arrives

Inspecting the Shipping Cartons

After the 300 Series LC/MS arrives, carefully inspect the exterior of the shipping cartons for evidence of any damage that might have occurred during shipment. Inspect the cartons for the following:

- Water stains.
- Cuts, punctures, or deep indentations.
- Crushed corners or excessively abraded edges.
- Blue beads in the Tip (N) Tell arrow point.

Two Tip (N) Tell indicators and labels are affixed to the exterior of the shipping boxes. Read and follow the instructions on the label. If the Tip (N) Tell arrow point is blue, the box was on its side or tipped in transit and instrument damage may have occurred.



If no external damage is apparent, sign the receiving documents, "*Received but not inspected*" to indicate that the boxes were not opened.

If you receive obviously damaged materials without noting the damage on the receiving documents, Varian will not accept the liability

Do not open any boxes. The Varian Representative opens them during installation. Move the shipping containers to a warm, dry, and secure area near the installation site.

If a shipping carton shows evidence of damage, do the following procedure:

1. Report the conditions to the carrier when you receive the shipment.
2. Note the damage on all copies of the shipping documents.
3. Write a brief description of the damage.
4. Ask driver to sign next to your comments to signify agreement with the observations.
5. Contact the appropriate Varian office to report the damage.

Systems are shipped either **FOB Varian** or **FOB Destination**. The manner of shipment determines who is responsible for filing a claim against the carrier if the system was damaged in transit. Most systems are shipped **FOB Varian**, so any damages incurred in shipment are the responsibility of the purchaser and the carrier. Contact the Varian office for assistance with filing claims and billing repairs. If the system ships **FOB Destination**, contact the Varian office, and that office files a claim against the carrier.



Check the checklist box: *Shipping cartons inspected for damage. The damaged shipping carton procedure was completed for any observed damage.*

Unpacking and Installing

The Varian Representative will review the Pre-installation Checklist with you to ensure that you satisfy all of the site requirements. The Varian Representative will unpack and install the instrument and demonstrate the fundamental operation and maintenance procedures. The User Representative must be present during the installation.

The Varian Representative will demonstrate that your system meets the performance specifications, which are on the data sheet, and any additional criteria explicitly written into your sales contract.

Plan to analyze your samples only after the installation is complete and you accept the conditions of delivery. The process requires at least three days.

Spare Parts

The *300 Series LC/MS and GC/MS Quadrupole Hardware Manual*, part number 395417900, has a list of spare parts for routine operation.

Preventive Maintenance

You are responsible for performing routine and preventive maintenance of the LC, autosampler, MS, and data system. If using a nitrogen generator, you must do the required preventive maintenance that ensures that the nitrogen supply is clean and dry. Any instrument problems resulting from a contaminated gas supply are billable and not included in the Varian Warranty.

Perform regular preventive maintenance to increase the life of the system, to maximize system uptime, and to optimize system performance. Refer to the *300 Series LC/MS and GC/MS Quadrupole Hardware Manual* for details. Your Varian Representative will describe and demonstrate these procedures during the installation.

Trademark Acknowledgment

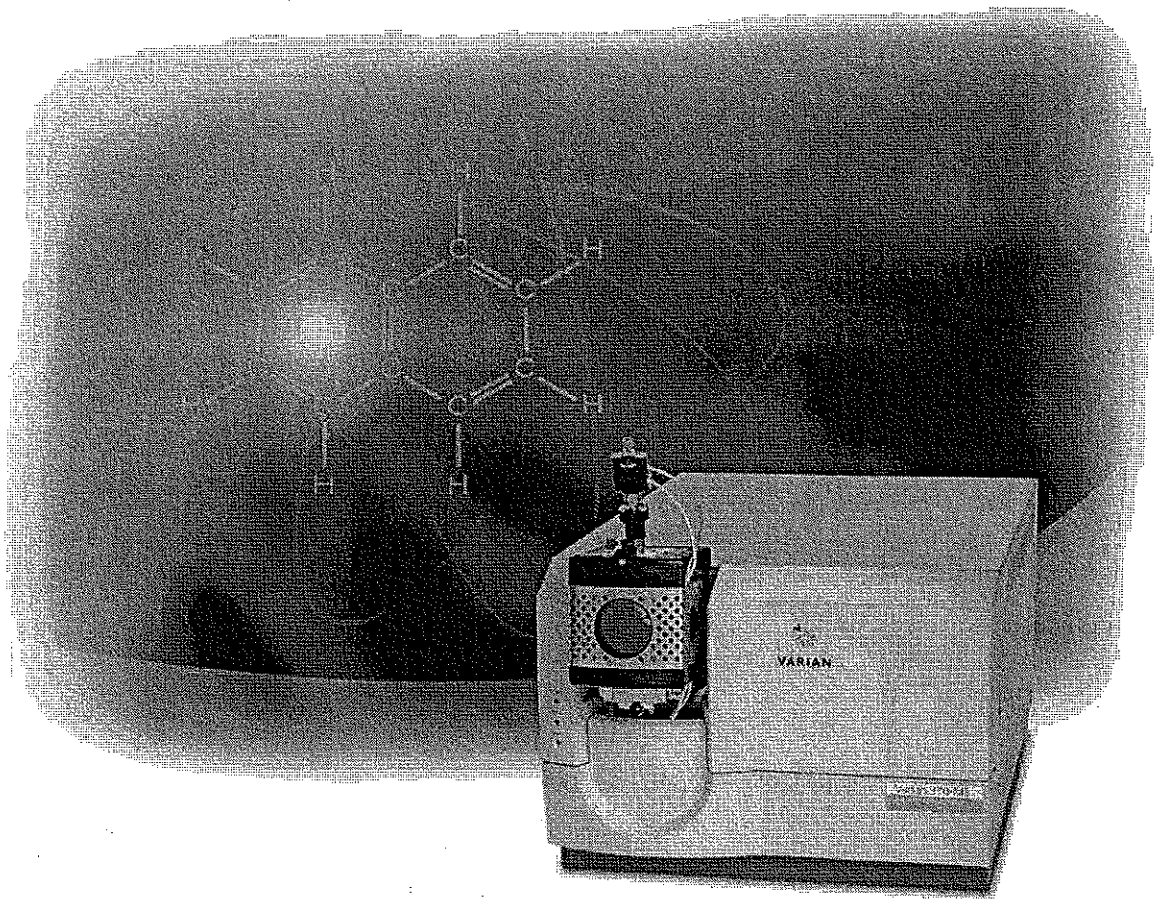
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LC/MS/MS

VARIAN, INC.

310-MS

TRIPLE QUADRUPOLE LC MASS SPECTROMETER



VARIAN



VARIAN, INC

310-MS

Information Rich Detection
IRD
Information Rich Detection

Unsurpassed commitment to innovation

Varian, Inc. is an innovator and leader in mass spectrometry and vacuum technology, committed to providing Information Rich Detection (IRD) solutions.

Varian continues its commitment to develop and manufacture high performance, reliable, IRD solutions by strengthening our complete line of quadrupole and ion trap LC/MS and GC/MS systems.

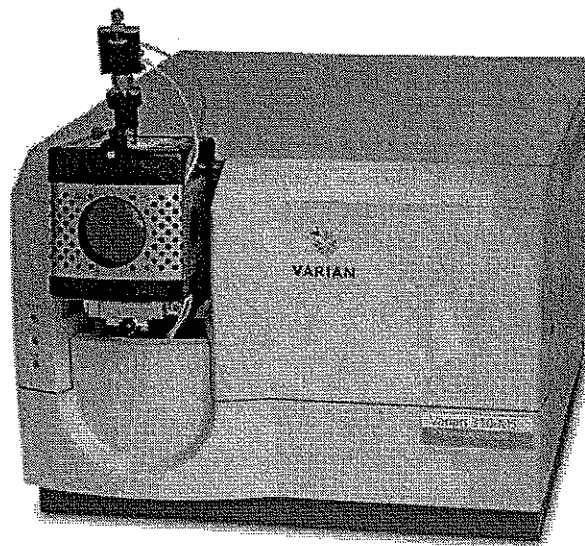
The Varian 300 Series is the next generation of Varian's triple quadrupole product line, delivering MS/MS selectivity at a price you can afford. The option to quickly change your LC source from ESI to APCI offers a flexible and robust quadrupole MS system that can deliver precisely the information you need.

Triple quad performance in a single quad size

The Varian 310-MS is a rugged, reliable tandem mass spectrometer to match your budget and your needs - all in less than 72 cm (28 inches) of linear bench space.

For high-throughput, routine analyses, structural confirmations or analyses involving challenging, complex matrices, the 310-MS delivers outstanding MS/MS performance for cost-conscious laboratories.

Varian's patent-pending, computer-controlled gas temperature (SelecTemp™) and flow (SelecFlow™) give you the flexibility to develop methods with greater ruggedness and sensitivity. And you get the flexibility and selectivity of a triple quadrupole instrument in the size of a single quad.



The Varian 310-MS LC/MS/MS offers the selectivity of tandem mass spectrometry in the size of a single quadrupole instrument.

VARIAN, INC.

310-MS LC/MS

Big performance in the smallest

Ultimate MS/MS Selectivity

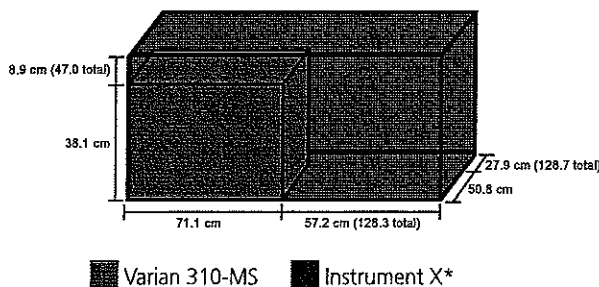
The multiple MS/MS scan modes available on the 310-MS offer several advantages over single quadrupole mass spectrometers. Selective Reaction Monitoring (SRM) provides greater sensitivity for demanding applications in complex matrices. Neutral loss and parent scan modes deliver increased sensitivity and specificity for high throughput structural confirmations.

The 310-MS also features:

- **High performance quadrupoles**
Pre- and post-ion guides improve transmission efficiency. The absence of lenses simplifies tuning and improves signal.
- **Single dual-stage, turbomolecular pump**
Split flow, differential pumping for the source and analyzer creates a compact, economical instrument.
- **Ultra-low noise detector**
Directly aligned with the ion path for better sensitivity and lower detection limits.
- **Long, 180° curved collision cell**
185 mm path ensures efficient dissociation for greater signal and reduced noise.

Compact Productivity

The linear footprint of the 310-MS is one of the smallest of any triple quad LC/MS – under 72 centimeters (28 inches). A smaller footprint means more space for a safer, less cluttered working environment or even another instrument to increase your productivity.

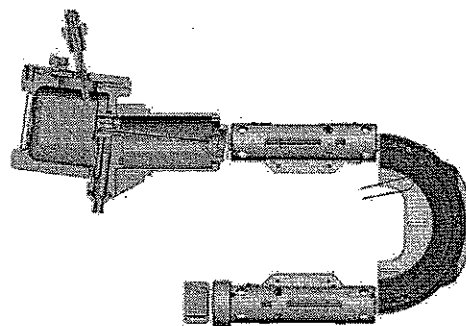


*Dimensions accurate as of 10/09/06. Diagram not necessarily to scale.

Robust Performance

The 310-MS delivers robust performance with low noise and less maintenance. The patented API interface, with its dual off-axis needle and capillary provides efficient desolvation with minimum contamination.

The superior design characteristics don't end at the ion source. Varian's patented 180° curved collision cell provides additional noise reduction for difficult matrices. You get the benefits of a detector that is off-axis to the source without the use of a conversion dynode. No dynode ensures better sensitivity, especially for negative ions.



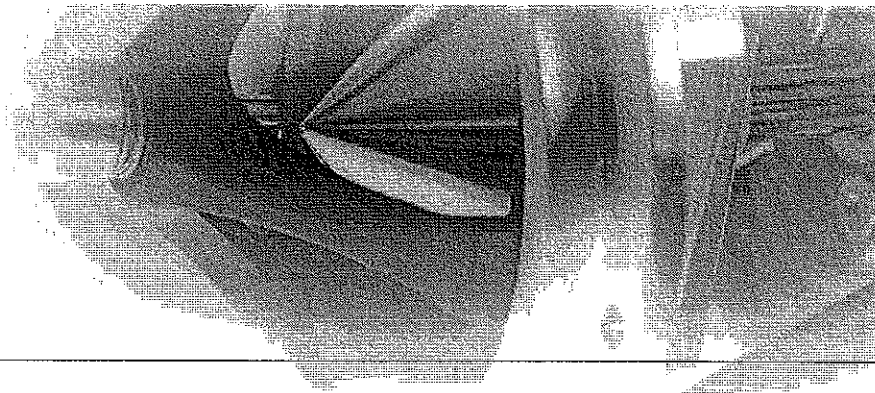
The unique geometry of the 310-MS reduces noise and increases sensitivity.

Flexible, Rugged, Sensitive

By giving you more options for method development and increased sensitivity, SelecTemp and SelecFlow reduce sample preparation time. That means increased productivity for your laboratory.

Varian's SelecTemp programmable temperature control delivers optimum drying gas temperatures at every point in a complex analysis. The API interface with SelecTemp allows simplified setup, greater throughput, reduced contamination and improves detection of labile compounds.

SelecFlow, a programmable pressure control system, is the newest addition to Varian's quadrupole line. It allows accurate control of gas flows by time segment to provide better sensitivity and area reproducibility for specific compounds. Both SelecTemp and SelecFlow parameters can be automatically recorded for GLP purposes.



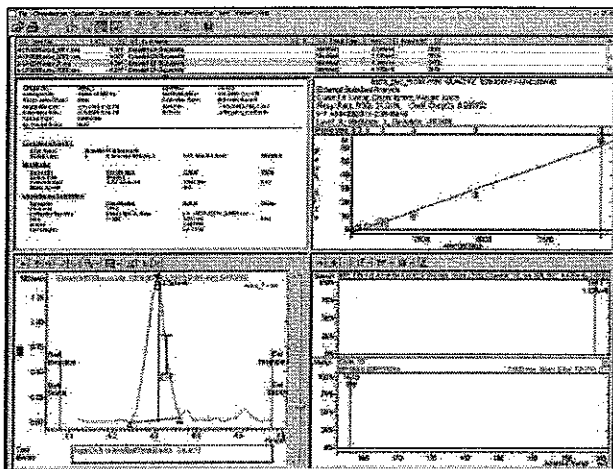
package

The complete solution...

More power with Varian MS workstation software

Instrument control and data processing are simple with the Varian MS Workstation software.

- Complete single point control of pumps, autosamplers, and other accessories
- Fully automated tuning and calibration
- Superior data transfer rate with dual processors
- Simple navigation for reviewing and processing results
- Full featured network compatibility for file management, printing, and remote access
- Extensive reporting for complete analyses



Varian HPLC pumps, detectors, autosamplers, and columns can be included to create a complete configuration.

HPLC Pumps

- **212-LC** pumps deliver pulse free flow at low flow rates, ideal for analyzing limited amounts of sample on a small (2 mm) diameter column. The low flow rates reduce maintenance on the spectrometer and increase the sensitivity for analyses of small samples.

HPLC Detectors

- **ProStar™ 300 Series** range from a standard, single-channel UV-Vis detector for basic analysis to multi-wavelength detectors for research applications. For the ultimate in UV-Vis detection, the powerful ProStar 335 Diode Array Detector provides full spectral information for every peak in a sample.

- **The PL-ELS 2100** Evaporative Light Scattering Detector is ideal when analyzing non-chromophoric components. This universal detector does not rely on optical properties of the analyte. Signal is proportional to concentration for all semi- and non-volatile compounds.

Autosamplers

- **HTS PAL** is a low loss, high speed, high capacity, robust autosampler offering outstanding flexibility and productivity.
- **ProStar 400 Series** are precise, versatile autosamplers delivering reliable results, particularly when sample volume is limited.

HPLC Columns

- **Pursuit® columns** are available in a variety of phases and deliver faster separations without sacrificing resolution. Pursuit Diphenyl offers unique pi-pi selectivity for aromatic and double bond containing analytes and improved LC/MS sensitivity. Pursuit PFP delivers optimal separation of polar analytes under high aqueous conditions.
- **Polaris® columns** provide unique bonded phases that maximize polar retention and selectivity, while virtually eliminating silanol activity. Polar-modified chemistries of this class are very effective for separations that are difficult on conventional alkyl-bonded phases, and they are stable in all commonly used HPLC and LC/MS eluents from pH 1.5 to 10.0.

VARIAN, INC.

310-MS

TRIPLE QUADRUPOLE LC MASS SPECTROMETER

Varian, Inc. – Supporting Customers Worldwide

All products are eligible for on-demand support from a worldwide network of specialists who can assist with any need. Varian, Inc. offers:

- **Comprehensive programs** that include a full range of services – from minor repairs, to complex applications development and training.
- **Factory-qualified Field Support Representatives and Specialists**, specifically chosen for each installation.
- **Global support teams** strategically located around the world.

To learn more about Varian's industry leading customer support, visit our Web site at www.varianinc.com/support

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Chemical Analysis

Environmental

Fuels and Energy

Material Sciences

Varian, Inc.

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VARIAN



Varian 300 Series LC/MS Quadrupole Mass Spectrometer Pre-installation Instructions

Checklist

NOTE: Do not unpack the boxes.

Check off each box after satisfying each requirement as described in the instructions. All requirements must be met before requesting installation.

NOTE: If the site is not ready for installation when the Varian Representative arrives, Varian, Inc. reserves the right to invoice for the Representative's time.

Requirements	<input checked="" type="checkbox"/>
Installation site is in compliance with all relevant safety regulations.	<input type="checkbox"/>
User Representative will be available during the installation and Varian certification period.	<input type="checkbox"/>
Entrance to the installation site is at least 92 cm (36 in.) wide.	<input type="checkbox"/>
Bench space sufficient for all modules.	<input type="checkbox"/>
Bench can support system weight.	<input type="checkbox"/>
Bench does not vibrate.	<input type="checkbox"/>
Temperature maintained between 16 and 30 °C.	<input type="checkbox"/>
Relative humidity maintained between 20 and 80%.	<input type="checkbox"/>
Installation site is free of excessive particulate matter.	<input type="checkbox"/>
Exhaust system is suitable.	<input type="checkbox"/>
Specified electrical supply and power outlets are installed.	<input type="checkbox"/>
Nitrogen gas (at least 99% pure), regulator, and gas lines are installed.	<input type="checkbox"/>
Air (less than 0.1 ppm hydrocarbons), regulator, and gas lines are installed.	<input type="checkbox"/>
Argon (at least 99% pure), regulator, and gas lines are installed. Argon required only for triple quadrupole instruments.	<input type="checkbox"/>
Materials and solvents of specified grade are on site.	<input type="checkbox"/>
310-MS ONLY: Syringe pump similar to the Harvard syringe pump (Varian part number 2732070100).	<input type="checkbox"/>
Shipping cartons were inspected for damage. If there was any damage, the damaged shipping carton procedure was completed.	<input type="checkbox"/>

Requesting Installation

After preparing your site, contact the Customer Service office in your region to schedule installation.

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Introduction

The Pre-installation Instructions guide you through each requirement of the checklist. Follow these instructions to ensure that the installation requires no more than the usual three days. Have the completed checklist available when you call to schedule the installation. After the Varian Representative completes the installation, you can analyze your samples.

After meeting all of these requirements, contact the Customer Service office in your region to schedule the installation.

The LC/MS operates reliably under carefully controlled environmental conditions. You must provide suitable power sources, operating environment, materials, and solvents. Failures may occur if you use or maintain the system outside of the power and operating environment ranges and limits described in these instructions. The Varian Warranty and Service contract specifically excludes the repair of failures due to such causes.



All phases of preparing the installation site must conform to local safety, electrical, and building codes. These codes take precedence over any recommendations in these instructions. The customer is responsible for compliance.

Safety

Safety is the most important consideration for instrument use. Determine if the installation site complies with all relevant safety regulations.



Check off the checklist box: *Installation site is in compliance with all relevant safety regulations.*

Before the Installation

User Representative

Schedule the installation when the User Representative will be available. One of the important duties of the Varian Representative is to familiarize the User Representative with the basic functions of the 300 Series LC/MS.



Check off the checklist box: *User Representative will be available during the installation and Varian certification period.*

Entrance

Before arranging for delivery of the 300 Series LC/MS, determine that there is sufficient clearance to move the shipping container to the installation site. The shipping boxes are 72 cm (28 in.) wide by 92 cm (36 in.) long. If you move the instrument using the pallet, you need at least 92 cm (36 in.) clearance. Allow additional room for maneuvering the shipping containers around corners and through doors.



Check off the checklist box: *Entrance to the installation site is at least 92 cm (36 in.).*



CAUTION

The MS, foreline pump, and LC are heavy. To prevent personal injury, use appropriate moving and lifting techniques.

Bench Space and Load

Use the following information to plan the layout of your 300 Series LC/MS. The Varian Representative will unpack the boxes and put the modules on the bench. Although the figures show a 320-MS, the information also applies to a 310-MS.

Figure 1 and Figure 2 show suggested layouts for the 300 Series LC/MS with the 212-LC and different autosamplers.

The tables after the figures provide information about bench space and load. The bench must be strong enough to support the weight of all modules, wide enough for all modules, and at least 84 cm (33 in.) deep for the MS.

212-LC and ProStar 430

Figure 1 shows a possible layout for the 300 Series LC/MS with the 212-LC pumps and the ProStar 430 AutoSampler. The autosampler belongs on the side of the 212-LC pumps, not on top.

NOTE: Do not stack an autosampler on top of the 212-LC pumps.

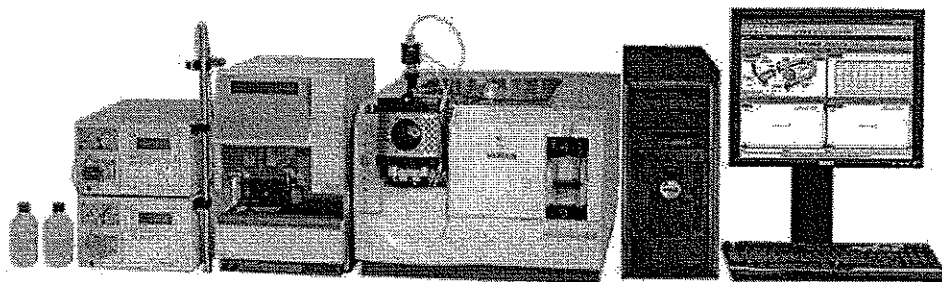


Figure 1 Suggested Layout with 212-LC and ProStar 430

Table 1 and Table 2 list the dimensions and weights of the modules in Figure 1.

Table 1 Bench Space

Bench Width	Solvents	212-LC	ProStar 430	320-MS or 310-MS	CPU	Monitor and Keyboard	Total
cm	30.5	26	28	53.5	18.6	43.8	200.4 cm
in.	12	10.5	11	21	7.4	17.25	79.15 in.

Table 2 Bench Load

Bench Load	Solvents	212-LC	ProStar 430	320-MS or 310-MS	Monitor, CPU and Keyboard	Total
kg	8	14.5	21	61	17.9	122.4 kg
lb	18	32	46	134	39.4	269.4 lb

212-LC and HTS PAL

Figure 2 shows a possible layout for the 300 Series LC/MS with 212-LC pumps and CTC HTS PAL Autosampler.

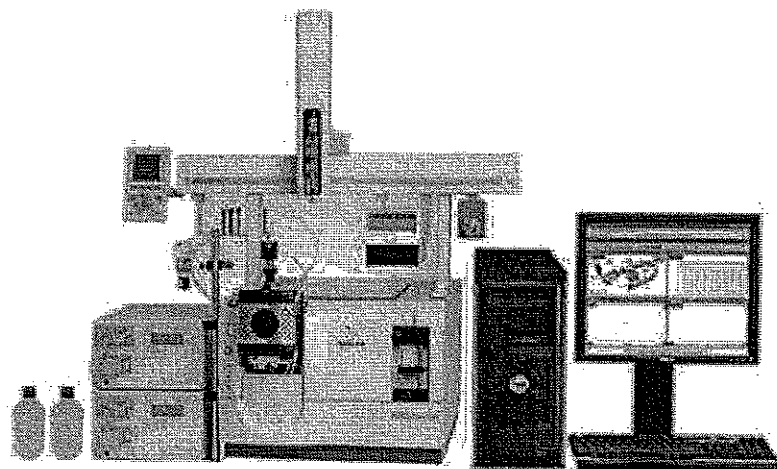


Figure 2 Suggested Layout with 212-LC and HTS PAL

Table 3 and Table 4 give the dimensions and weights of the modules in Figure 2.

Table 3 Bench Space

Bench Width	Solvents	212-LC	320-MS or 310-MS with HTS PAL	CPU	Monitor and Keyboard	Total
cm	30.5	26	53.5	18.6	43.8	172.4 cm
in.	12	10.5	21	7.4	17.25	68.15 in.

Table 4 Bench Load

Bench Load	Solvents	212-LC	320-MS or 310-MS with HTS PAL	Monitor, CPU, and Keyboard	Total
kg	8	14.5	71	17.9	111.4 kg
lb	18	32	162	39.4	251.4 lb

The modules of your system require a clean, flat bench, except for the foreline pump(s), which are put under the bench. The bench must be strong enough to support the weight of the modules. The bench must have enough space on the surface for all modules and allow space for the mouse, solvent bottles, and such. Each vacuum line connecting the MS to a foreline pump is 2.4 m (8 ft) long. The serial cables that connect each pump to the rear panel of the MS are 2.7 m (9 ft) long. If the bench is higher than 92 cm (36 in.), place a vibration-isolation bench under the pump. The vibration-isolation bench must be capable of supporting the 33 kg (73 lb) pump. If the bench is against a wall, drill a 3.8 cm (1.5 in.) diameter hole through the rear of the bench for the vacuum hose.

Refer to the Varian LC Systems Pre-installation Instructions, part number 391483100, for information about LC modules.

Plan to put the monitor and keyboard on the same bench as the LC/MS. If you plan to use a separate bench, position them within 3 m (10 ft) of the rear of the LC/MS. The CPU can go on or under the bench.

The 310-MS has one HS 652 foreline pump and the 320-MS has two. Each pump is 17.8 cm (7 in.) wide by 48.3 cm (19 in.) high, and 52.1 cm (20.5 in.) deep. Each pump weighs 33 kg (73 lb). The area under the bench must be big enough for the foreline pump(s).

Table 5 lists additional bench space requirements.

Table 5 Additional Bench Space Requirements

Purpose	Space Allowance
Provide space for air circulation, gas lines, and electrical connections.	15 to 30 cm (6 to 12 in.) behind the system.
Dissipate room heat room and allow for routine maintenance.	At least 76 cm (30 in.) above the system.
Analytical Systems only: Provide space for Solvent bottles.	At least 30 cm (12 in.) to side of the LC.

Decide how you will arrange your modules. Use Table 6 and Table 7 to determine the width of the bench and the load the bench must support. The bench must be at least 84 cm (33 in.) deep for the MS.

Table 6 Bench Width Calculation Worksheet for Your System

Bench Width	___-LC	Auto-sampler	Other Components	320-MS or 310-MS	CPU	Monitor and Keyboard	Total
cm	_____	_____	_____	53.5	18.6	43.8	___cm
in.	_____	_____	_____	21	7.4	17.25	___in.

Table 7 Bench Load Calculation Worksheet for Your System

Bench Load	___-LC	Auto-sampler	Other Components	320-MS or 310-MS	Monitor, CPU, and Keyboard	Total
kg	_____	_____	_____	61	17.9	___kg
lb	_____	_____	_____	134	39.4	___lb

Check off the checklist box: *Bench space sufficient for all modules.*

Check off the checklist box: *Bench can support system weight.*

Vibration

Ensure that the installation site benches are free from vibrations, especially those caused by equipment in adjoining locations. Because the foreline pump vibrates during operation, it belongs on the floor not on the bench.

Check off the checklist box: *Bench does not vibrate.*

Temperature

The optimal operating temperature is between 16 and 30 °C (61-86 °F).

NOTE: As installation site temperature increases, system reliability decreases due to heat generated by electronic components during operation. This heat must dissipate to the surrounding air for reliable operation.

The airflow around the system must be adequate. The air-conditioning system must maintain a constant temperature (within the operational limits) around the system. Do not place the system near air ducts, windows, or heating and cooling systems. The average steady-state heat load for the MS alone is 6,000 Btu, with a possible short-term heat dissipation of 15,000 Btu during startup.



Check off the checklist box: *Temperature maintained between 16 and 30 °C.*

Humidity

The relative humidity of the operating environment must be between 20 and 80%, with no condensation. Operating the LC/MS at a very low humidity may result in the accumulation and discharge of static electricity, which shortens the life of electronic components. Operating the system at high humidity may create condensation and result in short circuits.

Varian recommends using a combination temperature and humidity monitor in your installation site.



Check off the checklist box: *Relative humidity maintained between 20 and 80%.*

Particulate Matter

Your installation site must not have excessive dust, smoke, or other particulate matter. Particulate matter may block airflow vents causing the electronics to overheat.



Check off the checklist box: *Installation site is free of excessive particulate matter.*

Exhaust System

The foreline pump exhausts most compounds introduced into the MS, along with small amounts of oil vapor from the pump.

Provide an adequate fume exhaust system for the outlet of each foreline vacuum pump. The foreline pump(s) must be vented at least 2 L/min. The API spray chamber must be vented at least 12 L/min to a separate vent line. Ensure that the exhaust system does not pull a vacuum on the API chamber. Consult local regulations for the proper method of exhausting the fumes.



Check off the checklist box: *Exhaust system is suitable.*

Power Requirements

212-LC

Power Input: 85 – 264V ac; 47 – 63 Hz; 60 Watts 100VA

216-LC

115V ac; +15/-20%; 50/60 Hz; 250VA

230V ac; +15/-20%; 50/60 Hz; 250VA

(For UPS, assume 250W)

For 115V ac: one 5.0 AT-fuse (5 x 20 mm, IEC 127)

For 230V ac: one 2.5 AT-fuse

All fuses supplied with the 216-LC instrument are UL-listed and CSA-certified.

The 216-LC must be used with appliances and power sources that have the proper protective grounding.

310-MS or 320-MS

The 300 Series MS requires a separate circuit, and the outlet must have adequate amperage capacity and a reliable ground. The power source must be clean and capable of providing up to 100-240V ac, 50/60 Hz \pm 3 Hz, 1.0 kW.

300 Series LC/MS

The 300 Series LC/MS requires the following:

- One circuit for the mass spectrometer, computer, and monitor. 20A, 100-115V ac, or 10A, 200-240V ac.
- One circuit for the foreline pump(s), with outlets for each pump 20A, 100-115V ac, or 10A, 200-240V ac. If the facility requires a GFCI (Ground Fault Circuit Interrupter) in the foreline pump, circuit, use a separate circuit for each pump.
- Circuits and outlets for other modules.

Table 8 has the power requirements for modules of the 300 Series LC/MS.

Table 8 LC/MS Power Requirements

Module	Max Current Draw 100-115V (Amps)	Max Current Draw 200-240V (Amps)
320-MS or 310-MS	10	5
HS 652 Foreline pumps 1 for the 310-MS and 2 for the 320-MS	10 per pump	5 per pump

Use a separate dedicated power source for HPLC modules and additional instruments and equipment. Never plug the mass spectrometer and the chromatograph into the same power source or the power source may overload. Never use the free outlet on any of the power sources for equipment that draws more than 2A.

The instrument ships with three power cables. One power cable is for the MS and the other two are for the foreline pumps. Figure 3 illustrates the outlets and plugs.

For 100 to 120V systems, use National Electronics Manufacturers Association (NEMA) 5-15P power plugs.

- For 200 to 240V systems, use CEE 7/7 plugs.

The power cable of the mass spectrometer is approximately 2.5 m (8 ft) long. The power cable of each foreline pump is approximately 2 m (6.5 ft) long.

The power cables for the computer, monitor, and printer are approximately 2.13 m (7 ft) long. They have NEMA 5-15P plugs.



CAUTION

Replacing or substituting power cords or plugs must be done with strict compliance with all regulations, including electrical codes, power cord color coding, and appropriate regulatory agency certification marks.

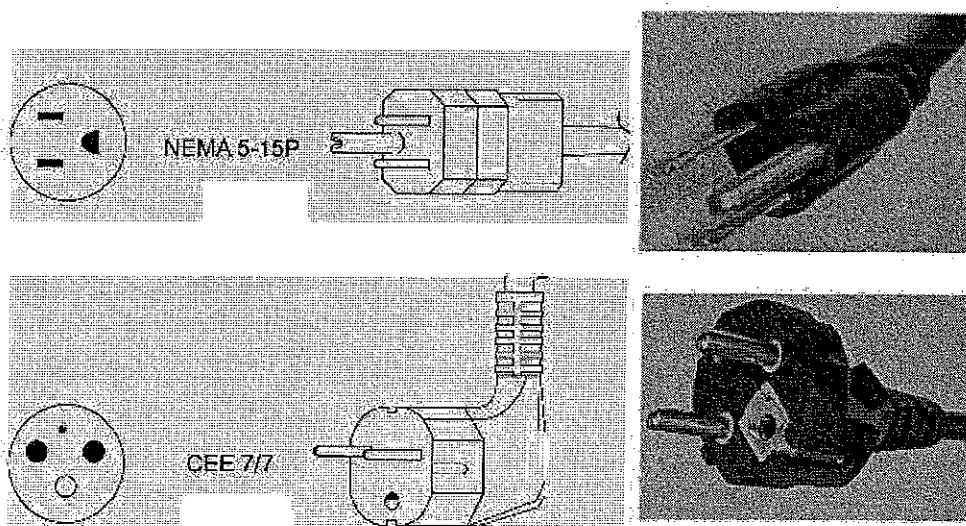


Figure 3 NEMA 5-15P and CEE 7/7 Outlets and Plugs

Installation Site Power

The power supply to the installation site must be either 100-120V ac or 200-240V ac, and be stable (free of fluctuations due to slow changes in the average voltage or to changes resulting from surges, sags, or transients). The voltage must meet IEC 1000-4-5 and IEC 1000-4-11 standards for voltage stability. A measured ground to neutral potential of greater than 3 volts ac or dc indicates grounding problems that may need correction before connecting an instrument module to the power source. Evaluate any power source suspected of having noise problems with a recording-type power line monitor before operating the system.

NOTE: If you are concerned about the quality of your power, install an uninterruptible power supply or a power conditioner or both. Table 9 has more information.

Table 9 Maximum Power Consumption

Module	Maximum Power Consumption
320-MS or 310-MS without pumps	1200VA
320-MS with 2 HS 652 foreline pumps	3200VA
310-MS with 1 HS 652 foreline pumps	2200VA



Check the checklist box: *Specified electrical supply and power outlets are installed.*

Qualified Computer Equipment

If you need to install the Varian MS Workstation software on a computer not purchased from Varian, you are responsible to ensure that the computer is adequately equipped and compatible with the operation of the data system and its communication interfaces. Please check the current list of requirements, available at the following web site.

http://www.varianinc.com/cgi-bin/nav?products/chrom/qcms/msws_computer_req

Varian does not guarantee the function of the Varian MS Workstation software on computer hardware or operating systems that do not meet the specified requirements.

NOTE: Contact your Sales Representative for a list of qualified equipment or for more information.

Gas Requirements

Nitrogen

If you have one LC/MS system, a nitrogen gas supply that can provide up to a maximum of 12 L/min of gas regulated at 80 psi is sufficient for ESI or APCI operation. If you have more than one LC/MS system, use a nitrogen supply that can deliver a maximum of 18 L/min. The nitrogen must be at least 99% pure with less than 0.1 ppm hydrocarbons, and less than 1% oxygen. It must be clean and dry with a -40 °C dew point. Use a nitrogen generator, or a liquid nitrogen boil-off to supply the nitrogen gas. All nitrogen generators require regular maintenance. You are responsible for setting up the preventive maintenance procedures and schedules (contact the nitrogen generator manufacturer). Any MS problems caused by poor gas quality are not covered by the Varian Warranty. It is your responsibility to conform to all regulations regarding the installation and operation of the gas system. The nitrogen supply uses ¼ in. connectors.

- Check the checklist box: *Nitrogen gas (at least 99% pure), regulator, and gas lines are installed.*

Air

A compressed air gas supply, capable of providing up to 2 L/min of gas regulated to 80 psi with a two-stage regulator, is required as a nebulizing gas for negative ESI. It is your responsibility to conform to all regulations about the installation and operation of the gas system. The air must be clean and dry, with less than 0.1 ppm total hydrocarbons, including methane, and a -40 °C dew point. The air supply uses ¼ in connectors

- Check the checklist box: *Air (less than 0.1 ppm hydrocarbons), regulator, and gas lines are installed.*

CID Gas (triple quadrupole only)

Argon is required as collision gas for MS/MS work with triple quadrupole instruments. The argon supply uses 1/8 in. connectors. Use a two-stage 0-100 psi pressure regulator with a stainless steel diaphragm. The purity of the argon must be greater than 99%.

- Check the checklist box: *Argon (at least 99% pure), regulator, and gas lines are installed. Argon required only for triple quadrupole instruments.*

Materials and Solvents

The Varian Representative will prepare solutions to tune and evaluate your 300 Series LC/MS. Please supply the materials on Table 10 and Table 11.

Table 10 Materials

Materials	
Quantity	Item
2	50 mL clean and new volumetric flasks
2	1 L clean and new bottles for mobile phase reservoirs
1	1 L or larger bottle for LC/MS waste
2	10 mL clean and new volumetric flask
2	100 mL clean and new volumetric flask
1	Pipette 100 to 1000 μ L and tips
1	Pipette 20 to 200 μ L and tips
1	50 mL clean and new volumetric flask (for optional APCI)
1	500 mL clean and new volumetric flask (for optional APCI)
1	310-MS ONLY: Syringe pump similar to the Harvard syringe pump (Varian part number 2732070100).

Table 11 Solvents for ESI or APCI

Solvents for ESI or APCI	
Quantity	Solvent
2 each 4-liter bottles	HPLC grade or better water, new and unopened
2 each 4-liter bottles	HPLC grade or better, acetonitrile, new and unopened

Additional tubing is required to complete the installation of your system. Most of this tubing is included in the accessory kits of the LC modules. Additional tubing (PEEK® or stainless steel) may be required for installation of special valves or modules. For most analytical HPLC systems, use 1/16 in. tubing with an ID of 0.005 in. Use 0.005 in. ID or smaller tubing downstream of the sample injector and autosampler to prevent peak broadening. Keep tubing as short as possible to prevent peak broadening and to minimize run time.



Check the checklist box: *Materials and solvents of specified grade are on site.*

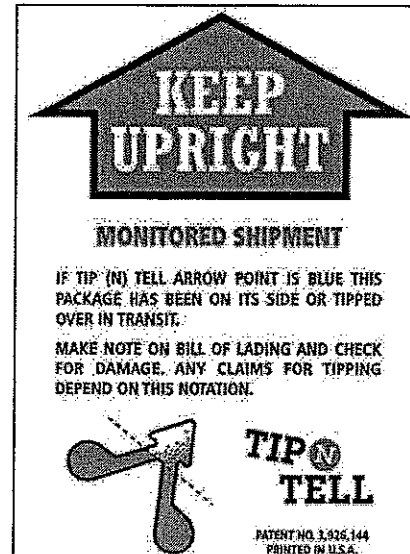
When the LC/MS Arrives

Inspecting the Shipping Cartons

After the 300 Series LC/MS arrives, carefully inspect the exterior of the shipping cartons for evidence of any damage that might have occurred during shipment. Inspect the cartons for the following:

- Water stains.
- Cuts, punctures, or deep indentations.
- Crushed corners or excessively abraded edges.
- Blue beads in the Tip (N) Tell arrow point.

Two Tip (N) Tell indicators and labels are affixed to the exterior of the shipping boxes. Read and follow the instructions on the label. If the Tip (N) Tell arrow point is blue, the box was on its side or tipped in transit and instrument damage may have occurred.



If no external damage is apparent, sign the receiving documents, "*Received but not inspected*" to indicate that the boxes were not opened.

If you receive obviously damaged materials without noting the damage on the receiving documents, Varian will not accept the liability

Do not open any boxes. The Varian Representative opens them during installation. Move the shipping containers to a warm, dry, and secure area near the installation site.

If a shipping carton shows evidence of damage, do the following procedure:

1. Report the conditions to the carrier when you receive the shipment.
2. Note the damage on all copies of the shipping documents.
3. Write a brief description of the damage.
4. Ask driver to sign next to your comments to signify agreement with the observations.
5. Contact the appropriate Varian office to report the damage.

Systems are shipped either **FOB Varian** or **FOB Destination**. The manner of shipment determines who is responsible for filing a claim against the carrier if the system was damaged in transit. Most systems are shipped **FOB Varian**, so any damages incurred in shipment are the responsibility of the purchaser and the carrier. Contact the Varian office for assistance with filing claims and billing repairs. If the system ships **FOB Destination**, contact the Varian office, and that office files a claim against the carrier.



Check the checklist box: *Shipping cartons inspected for damage. The damaged shipping carton procedure was completed for any observed damage.*

Unpacking and Installing

The Varian Representative will review the Pre-installation Checklist with you to ensure that you satisfy all of the site requirements. The Varian Representative will unpack and install the instrument and demonstrate the fundamental operation and maintenance procedures. The User Representative must be present during the installation.

The Varian Representative will demonstrate that your system meets the performance specifications, which are on the data sheet, and any additional criteria explicitly written into your sales contract.

Plan to analyze your samples only after the installation is complete and you accept the conditions of delivery. The process requires at least three days.

Spare Parts

The *300 Series LC/MS and GC/MS Quadrupole Hardware Manual*, part number 395417900, has a list of spare parts for routine operation.

Preventive Maintenance

You are responsible for performing routine and preventive maintenance of the LC, autosampler, MS, and data system. If using a nitrogen generator, you must do the required preventive maintenance that ensures that the nitrogen supply is clean and dry. Any instrument problems resulting from a contaminated gas supply are billable and not included in the Varian Warranty.

Perform regular preventive maintenance to increase the life of the system, to maximize system uptime, and to optimize system performance. Refer to the *300 Series LC/MS and GC/MS Quadrupole Hardware Manual* for details. Your Varian Representative will describe and demonstrate these procedures during the installation.

Trademark Acknowledgment

Microsoft® and Windows® are registered trademarks of Microsoft Corporation. PEEK™ is a registered trademark of the Victrex PLC Company, Lancashire, England. Other brand and product names are trademarks or registered trademarks of their respective holders.

Not Applicable to
Varian, Inc.

VENDOR PREFERENCE CERTIFICATE

Certification and application* is hereby made for Preference in accordance with *West Virginia Code*, §5A-3-37. (Does not apply to construction contracts.) *West Virginia Code*, §5A-3-37, provides an opportunity for qualifying vendors to request (at the time of bid) preference for their residency status. Such preference is an evaluation method only and will be applied only to the cost bid in accordance with the *West Virginia Code*. This certificate for application is to be used to request such preference. The Purchasing Division will make the determination of the Resident Vendor Preference, if applicable.

- 1. **Application is made for 2.5% resident vendor preference for the reason checked:**
 Bidder is an individual resident vendor and has resided continuously in West Virginia for four (4) years immediately preceding the date of this certification; **or,**
 Bidder is a partnership, association or corporation resident vendor and has maintained its headquarters or principal place of business continuously in West Virginia for four (4) years immediately preceding the date of this certification; **or,** 80% of the ownership interest of Bidder is held by another individual, partnership, association or corporation resident vendor who has maintained its headquarters or principal place of business continuously in West Virginia for four (4) years immediately preceding the date of this certification; **or,**
 Bidder is a nonresident vendor which has an affiliate or subsidiary which employs a minimum of one hundred state residents and which has maintained its headquarters or principal place of business within West Virginia continuously for the four (4) years immediately preceding the date of this certification; **or,**
- 2. **Application is made for 2.5% resident vendor preference for the reason checked:**
 Bidder is a resident vendor who certifies that, during the life of the contract, on average at least 75% of the employees working on the project being bid are residents of West Virginia who have resided in the state continuously for the two years immediately preceding submission of this bid; **or,**
- 3. **Application is made for 2.5% resident vendor preference for the reason checked:**
 Bidder is a nonresident vendor employing a minimum of one hundred state residents or is a nonresident vendor with an affiliate or subsidiary which maintains its headquarters or principal place of business within West Virginia employing a minimum of one hundred state residents who certifies that, during the life of the contract, on average at least 75% of the employees or Bidder's affiliate's or subsidiary's employees are residents of West Virginia who have resided in the state continuously for the two years immediately preceding submission of this bid; **or,**
- 4. **Application is made for 5% resident vendor preference for the reason checked:**
 Bidder meets either the requirement of both subdivisions (1) and (2) or subdivision (1) and (3) as stated above; **or,**
- 5. **Application is made for 3.5% resident vendor preference who is a veteran for the reason checked:**
 Bidder is an individual resident vendor who is a veteran of the United States armed forces, the reserves or the National Guard and has resided in West Virginia continuously for the four years immediately preceding the date on which the bid is submitted; **or,**
- 6. **Application is made for 3.5% resident vendor preference who is a veteran for the reason checked:**
 Bidder is a resident vendor who is a veteran of the United States armed forces, the reserves or the National Guard, if, for purposes of producing or distributing the commodities or completing the project which is the subject of the vendor's bid and continuously over the entire term of the project, on average at least seventy-five percent of the vendor's employees are residents of West Virginia who have resided in the state continuously for the two immediately preceding years.

Bidder understands if the Secretary of Revenue determines that a Bidder receiving preference has failed to continue to meet the requirements for such preference, the Secretary may order the Director of Purchasing to: (a) reject the bid; or (b) assess a penalty against such Bidder in an amount not to exceed 5% of the bid amount and that such penalty will be paid to the contracting agency or deducted from any unpaid balance on the contract or purchase order.

By submission of this certificate, Bidder agrees to disclose any reasonably requested information to the Purchasing Division and authorizes the Department of Revenue to disclose to the Director of Purchasing appropriate information verifying that Bidder has paid the required business taxes, provided that such information does not contain the amounts of taxes paid nor any other information deemed by the Tax Commissioner to be confidential.

Under penalty of law for false swearing (West Virginia Code, §61-5-3), Bidder hereby certifies that this certificate is true and accurate in all respects; and that if a contract is issued to Bidder and if anything contained within this certificate changes during the term of the contract, Bidder will notify the Purchasing Division in writing immediately.

Bidder: _____ Signed: _____

Date: _____ Title: _____

*Check any combination of preference consideration(s) indicated above, which you are entitled to receive.

RFQ No. ARG 1022

STATE OF WEST VIRGINIA
Purchasing Division

PURCHASING AFFIDAVIT

West Virginia Code §5A-3-10a states: No contract or renewal of any contract may be awarded by the state or any of its political subdivisions to any vendor or prospective vendor when the vendor or prospective vendor or a related party to the vendor or prospective vendor is a debtor and the debt owed is an amount greater than one thousand dollars in the aggregate.

DEFINITIONS:

"Debt" means any assessment, premium, penalty, fine, tax or other amount of money owed to the state or any of its political subdivisions because of a judgment, fine, permit violation, license assessment, defaulted workers' compensation premium, penalty or other assessment presently delinquent or due and required to be paid to the state or any of its political subdivisions, including any interest or additional penalties accrued thereon.

"Debtor" means any individual, corporation, partnership, association, limited liability company or any other form or business association owing a debt to the state or any of its political subdivisions. "Political subdivision" means any county commission; municipality; county board of education; any instrumentality established by a county or municipality; any separate corporation or instrumentality established by one or more counties or municipalities, as permitted by law; or any public body charged by law with the performance of a government function or whose jurisdiction is coextensive with one or more counties or municipalities. "Related party" means a party, whether an individual, corporation, partnership, association, limited liability company or any other form or business association or other entity whatsoever, related to any vendor by blood, marriage, ownership or contract through which the party has a relationship of ownership or other interest with the vendor so that the party will actually or by effect receive or control a portion of the benefit, profit or other consideration from performance of a vendor contract with the party receiving an amount that meets or exceeds five percent of the total contract amount.

EXCEPTION: The prohibition of this section does not apply where a vendor has contested any tax administered pursuant to chapter eleven of this code, workers' compensation premium, permit fee or environmental fee or assessment and the matter has not become final or where the vendor has entered into a payment plan or agreement and the vendor is not in default of any of the provisions of such plan or agreement.

Under penalty of law for false swearing (*West Virginia Code §61-5-3*), it is hereby certified that the vendor affirms and acknowledges the information in this affidavit and is in compliance with the requirements as stated.

WITNESS THE FOLLOWING SIGNATURE

Vendor's Name: _____

Authorized Signature: _____ Date: _____

State of _____

County of _____, to-wit:

Taken, subscribed, and sworn to before me this ____ day of _____, 20__.

My Commission expires _____, 20__.

AFFIX SEAL HERE

NOTARY PUBLIC _____