



**State of West Virginia
Department of Administration
Purchasing Division**

NOTICE

Due to the size of this bid, it was impractical to scan every page for online viewing. We have made an attempt to scan and publish all pertinent bid information. However, it is important to note that some pages were necessarily omitted.

If you would like to review the bid in its entirety, please contact the buyer. Thank you.



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ORIGINAL

January 21, 2009

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PURCHASING DIVISION
STATE OF WV

RE: Proposal and Exceptions for the State of West Virginia RFQ CME90068

Agilent Technologies, Inc., (Agilent) is pleased to respond to RFQ CME90068 with the enclosed proposal for the LC Triple Quadrupole MS and the LC TOF systems. Agilent is bidding in accordance with Quote No. 809251, which is enclosed and hereby incorporated by reference. Please refer to our quotation for a complete product listing, descriptions, and individual prices. If Agilent should be the successful bidder, please reference our quote number on your purchase order. The Agilent models offered have equal or greater performance than the specifications set forth in the solicitation, with noted exceptions.

The Agilent proposal includes the 1200 RRLC systems for use with the QQQ and TOF MS systems. The Agilent 1200 RRLC system can replicate any UPLC separation for forensic toxicology applications. This system has equivalent performance to the specified Acquity system with the following exceptions/substitutions:

On page 7 item 7 and on page 14 item 7, the specification calls for the degasser to have six chambers. The Agilent G1379B degasser will accommodate four channels of degassing.

On page 7 item 10 and on page 14 item 10, the specification calls for the UPLC Pressure Requirement to operate at 15000 psi up to 1 mL/min and at 9000 psi up to 2 mL/min. The Agilent 1200 Rapid Resolution Liquid Chromatograph (RRLC) generates approximately 30% less backpressure than the Waters UPLC configured with same column, flow rate & mobile phase composition; therefore, the RRLC does not require the same pressure specification to achieve equivalent results. The maximum pressure of the 1200 RRLC is 600 bar (approx. 9000 psi). The engineering design of the Agilent RRLC columns also allows for operation at lower pressures based on a particle size distribution rather than a discrete particle size. This allows for enhanced performance based on comparable resolution with a decrease in system pressure.

The Agilent proposal includes the 1200 high performance autosampler as a component of the RRLC system. This module offers exceptional performance in a flow through design and meets or exceeds the specifications set forth in the solicitation with the following exceptions:

On page 8 item 1 and page 15 item 1, Agilent will take exception to the specification for sample capacity configurations and offers the following substitutions:



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Sample capacity:

- 2 well-plates (96 and 384) plus 10 additional 2 mL vials
- 108 x 2 mL vials in 2 x 54 vial plates plus 10 additional 2 mL vials
- 30 x 6 mL vials in 2 x 15 vial plates plus 10 additional 2 mL vials
- 54 Eppendorf tubes (0.5/1.5/2.0 mL) in 2 x 27 Eppendorf tube plates, plus 10 additional 2 mL vials

On page 8 item 4 and on page 15 item 4, Agilent will take exception to the injection volume range. The Agilent high performance autosampler range is specified at .1 - 40 uL.

The Agilent proposal includes the 6410B Triple Quadrupole MS system. This system meets or exceeds the specifications set forth in the solicitation with the following exceptions:

Page 11 Item 2 - the mass range of the 6410 is 15 – 2,000 m/z

Page 11 Item 3 - the maximum scan speed of the Model 6410B is 5,200 u/sec

Page 11 Item 6 - the switch from positive ion mode to negative ion mode is 500 ms on the Agilent 6410B

Page 11 Item 9 - the dimensions of the 6410B are 43.5" W x 26" D x 18.5" H

Page 13 Additional Requirements Item 6 - the combined length of the Model 6410B and the 1200 RRLC is 57".

6410BA Triple Quadrupole LCMSMS System:

The Agilent 6410B offers several significant analytical advantages over the competitive Waters equivalent system which include:

Dynamic MRM: This is a new feature to the Agilent Triple Quad portfolio, sometimes called 'Scheduled MRM' by other competitive systems. This feature is now available on all Agilent Triple Quad models, and is not yet available on any of the Waters systems. Simply explained, it allows for each MRM to have its own time segment rather than bunching MRMs into collective time segments. The impact of this is to greatly simplify method development and modifications, (i.e. adding new targets to existing methods) and potentially increases sensitivity for targets.

Calibrant Delivery System (CDS): This is an integrated fluidic delivery system that provides for tuning & calibration standards delivery to the ionization source without user intervention; that is, the user instructs the system to 'tune' itself from the data system. The data system takes over control of the instrument, automatically self configures to introduce tuning solution via the CDS, optimizes all ion optic and detection elements to find sensitivity, resolution and peak shape for the mass range specified.



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It prints out a report (print, e-copy or both) that can be entered into a logbook. This automated process can be initiated remotely via the internet or scheduled to be performed before the operator arrives. This obviates the need for a syringe pump or any re-plumbing of the analytical system at all. This feature is available on all LCMS systems.

Ionization Sources: All Agilent LCMS systems utilize identical hardware mounts. This enables users to swap or share sources among Agilent LCMS systems. For example, the sources in this procurement for the two systems could be shared resources for the two LCMS systems. Each source has an RFID tag that identifies that source to the system and allows the system to self-configure for that specific source. In addition to the sources specified in this procurement, Agilent also offers the APPI, MALDI, Nanospray, Chip Nanospray, DESI & NanoMate sources.

Mass Hunter Software: This software features 'Batch-at-a-Glance' architecture that provides a 'sample centric' view of quantitative data and allows for fast processing and approval of sample data sets using outlier filters and visual cues to draw the reviewer's attention to only those data points that are suspect. 'Parameter Free Integration' (Agilent Patent Pending) which was designed specifically for MRM data, obviates the need for manual integration, saving hours of tedious re-integration of peaks.

The Agilent proposal includes the 6224 TOF MS system. This system meets or exceeds the specifications set forth in the solicitation with the following exceptions:

Page 19 item 4 - the cycle time for switching between one positive scan measurement to one negative scan measurement and back to positive scan mode is one cycle per second

Page 20 item 3 - the foot print of the Agilent 6224 TOF is 52" H x 33" W x 29" D; the footprint of the Agilent 1200 RRLC is 29" H x 14" W x 17" D.

6224 Time-of-Flight (TOF) LCMS System:

The Agilent 6224 TOF offers significant analytical advantages over the competitive equivalent system. The following are some examples:

Mass Accuracy: The Agilent TOF has superior mass accuracy. Typically, the Agilent mass accuracy is specified less than two ppm, but typically less than one ppm mass accuracy is achieved compared to the typical 3 – 5 ppm mass error observed on the competitive product. This translates into dramatically fewer candidate identifications on unknown compounds and more confidence on identifications. The Agilent Empirical Formula Generator (EFG) takes advantage of the excellent mass accuracy, utilizing both the isotope spacing (mass defect spacing) and response ratios (isotope ratios) to score candidate identifications.

Mass Resolution: The Agilent TOF has superior mass resolution without utilizing "W" optics which greatly reduces instrument sensitivity and ion statistics. This translates into greater ability to mine complex data sets for trace quantities of toxic or forensically significant compounds among endogenous



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compounds. This also makes it possible for the Agilent system to differentiate nearly isobaric compounds, differing by only a few millidalton.

Dynamic Range: The Agilent TOF is superior in scan dynamic range. The Agilent TOF features 5 decades of in-scan dynamic range. The competitive product has only 2 or 3 orders of magnitude dynamic range inherent in the detector. This necessitates the utilization of an alternating attenuation of their signal (called 'pDRE') to overcome this limitation, however it works only at the expense of their ion statistics and contributes greatly to the competitive product's poorer mass accuracy specification.

Universal Internal Reference Mass: The Agilent TOF comes standard with a uIRM source (patent pending). The Agilent TOF uses an internal reference mass to dynamically micro-correct mass measurements. The competitive product uses an alternating mode of introduction of this internal reference mass. This alternation degrades the analytical signal per unit time because of its divided attention. The Agilent system transparently and constantly introduces reference mass into the sealed source chamber that co-ionizes with the analytical spray. This precludes any ion suppression and includes reference masses into every spectrum. This has the collateral benefit of permitting any Agilent LCMS Source or any third party source to be mounted on the Agilent TOF.

Temperature Stability: The Agilent mass accuracy is independent of any temperature fluctuations in the laboratory. This precludes your laboratory from undertaking expensive retrofitting to your HVAC facilities to accommodate your new TOF instrument.

Mass Hunter Software: When included with the Agilent TOF system, this software offers powerful data mining utilities that provide for 'targeted' find by molecular formulae searching, or find by molecular feature extraction unbiased searching. In a matter of seconds, Mass Hunter can interrogate a chromatogram, finding thousands of trace components in a sample, then in a matter of minutes, turn those into molecular formulas which can be searched against private or public databases for identification.

Mass Hunter Personal Forensic & Toxicology Database: This database includes over 7,000 known toxic substances, poisons, drugs of abuse, therapeutic drugs and their respective metabolites. The data base is annotated with molecular structures, formula, structures, and CAS Nos. for each entry. Also included are hot links to public databases for each compound like PubChem, ChemSpider, etc. Further, the database can be user annotated for retention time for retention time indexing.

Agilent appreciates the opportunity to provide this response. This letter and the following list of enclosures make up Agilent's complete offer.

- Signed RFQ Form
- Signed Addendum
- Quote 809251



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- Descriptive Technical Documentation

Please consider the Agilent LC/MS Triple Quadrupole and LC/MS TOF systems to meet the needs of your analytical laboratory. If you have any questions regarding our products, please call Michael P. Scott toll-free at (866) 793-4962. If you have any questions regarding our response, please call me at (800) 227-9770 x 8173.

Sincerely,


Jeff Harrigan