



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

## Solicitation

NUMBER
LBS14051

PAGE
1

ADDRESS CORRESPONDENCE TO ATTENTION OF:
ROBERTA WAGNER
304-558-0067

RFQ COPY

TYPE NAME/ADDRESS HERE

Agilent Technologies, Inc.  
Customer Sales and Service  
2850 Centerville Road, MS 3N3  
Wilmington, DE 19808

HEALTH AND HUMAN RESOURCES  
SIIS COMPONENT 2  
ROOM 319  
350 CAPITOL STREET  
CHARLESTON, WV  
25301-0000 304-558-2975

12/02/13 09:14:59AM  
West Virginia Purchasing Division

DATE PRINTED
10/25/2013

BID OPENING DATE: 12/03/2013

BID OPENING TIME 1:30PM

LINE	QUANTITY	UOP	CAT. NO.	ITEM NUMBER	UNIT PRICE	AMOUNT
THE WEST VIRGINIA PURCHASING DIVISION IS SOLICITING BIDS ON BEHALF OF THE WEST VIRGINIA DEPARTMENT OF HEALTH AND HUMAN RESOURCES (DHHR), OFFICE OF THE LABORATORY SERVICES, ENVIRONMENTAL CHEMISTRY SECTION TO ESTABLISH A CONTRACT FOR THE ONE-TIME PURCHASE OF ONE BENCH STYLE FLAME ATOMIC ABSORPTION SPECTROMETER INSTRUMENT SYSTEM FOR THE ANALYSIS OF SODIUM, IRON, MAGNESIUM AND MANGANESE IN DRINKING WATER SAMPLES PER THE ATTACHED SPECIFICATIONS & INSTRUCTIONS TO BIDDERS.						
0001	1	EA		998-53-97-000	36,003.30	36,003.30
				FLAME ATOMIC ABSORPTION SPECTROMETER		
0002	1	JB		998-53-97-000	included	included
				SETUP AND INSTALLATION		
0003	1	JB		924-35	4,920.00	4,920.00
				2 DAY TRAINING ONSITE		

SIGNATURE *	TELEPHONE 800-227-9770	DATE 11/27/2013
TITLE Business Sales Specialist	FEIN 77-0518772	ADDRESS CHANGES TO BE NOTED ABOVE

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



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

## Solicitation

NUMBER
LBS14051

PAGE
2

ADDRESS CORRESPONDENCE TO ATTENTION OF:
ROBERTA WAGNER 304-558-0067

RFQ COPY

TYPE NAME/ADDRESS HERE

V  
E  
N  
D  
O  
R

S  
H  
I  
P  
T  
O

HEALTH AND HUMAN RESOURCES  
SIIS COMPONENT 2  
ROOM 319  
350 CAPITOL STREET  
CHARLESTON, WV  
25301-0000 304-558-2975

DATE PRINTED
10/25/2013

BID OPENING DATE: 12/03/2013

BID OPENING TIME 1:30PM

LINE	QUANTITY	UOP	CAT. NO.	ITEM NUMBER	UNIT PRICE	AMOUNT
***** THIS IS THE END OF RFQ LBS14051 ***** TOTAL:						40,923.30
*Agilent is bidding in accordance with quotation 1489164, which is attached and hereby incorporated by reference. Please refer to our technical response letter, referenced materials, and 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. Please note that Agilent has added \$0.00 dollars to General Terms and conditions No. 12 (page 11) due to a lack of definition.						

SIGNATURE	TELEPHONE	DATE
TITLE	FEIN	ADDRESS CHANGES TO BE NOTED ABOVE

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

### **INSTRUCTIONS TO VENDORS SUBMITTING BIDS**

1. **REVIEW DOCUMENTS THOROUGHLY:** The attached documents contain a solicitation for bids. Please read these instructions and all documents attached in their entirety. These instructions provide critical information about requirements that if overlooked could lead to disqualification of a Vendor's bid. All bids must be submitted in accordance with the provisions contained in these instructions and the Solicitation. Failure to do so may result in disqualification of Vendor's bid.
2. **MANDATORY TERMS:** The Solicitation may contain mandatory provisions identified by the use of the words "must," "will," and "shall." Failure to comply with a mandatory term in the Solicitation will result in bid disqualification.
3. **PREBID MEETING:** The item identified below shall apply to this Solicitation.
  - ☒ A pre-bid meeting will not be held prior to bid opening.
  - ☐ A **NON-MANDATORY PRE-BID** meeting will be held at the following place and time:
  
  - ☐ A **MANDATORY PRE-BID** meeting will be held at the following place and time:

All Vendors submitting a bid must attend the mandatory pre-bid meeting. Failure to attend the mandatory pre-bid meeting shall result in disqualification of the Vendor's bid. No one person attending the pre-bid meeting may represent more than one Vendor.

An attendance sheet provided at the pre-bid meeting shall serve as the official document verifying attendance. The State will not accept any other form of proof or documentation to verify attendance. Any person attending the pre-bid meeting on behalf of a Vendor must list on the attendance sheet his or her name and the name of the Vendor he or she is representing. Additionally, the person attending the pre-bid meeting should include the Vendor's E-Mail address, phone number, and Fax number on the attendance sheet. It is the Vendor's responsibility to locate the attendance sheet and provide the required information. Failure to complete the attendance sheet as required may result in disqualification of Vendor's bid.

All Vendors should arrive prior to the starting time for the pre-bid. Vendors who arrive after the starting time but prior to the end of the pre-bid will be permitted to sign in, but are charged with knowing all matters discussed at the pre-bid.

Questions submitted at least five business days prior to a scheduled pre-bid will be discussed at the pre-bid meeting if possible. Any discussions or answers to questions at the pre-bid meeting are preliminary in nature and are non-binding. Official and binding answers to questions will be published in a written addendum to the Solicitation prior to bid opening.

4. **VENDOR QUESTION DEADLINE:** Vendors may submit questions relating to this Solicitation to the Purchasing Division. Questions must be submitted in writing. All questions must be submitted on or before the date listed below and to the address listed below in order to be considered. A written response will be published in a Solicitation addendum if a response is possible and appropriate. Non-written discussions, conversations, or questions and answers regarding this Solicitation are preliminary in nature and are non-binding.

Question Submission Deadline: November 13, 2013 - end of business

Submit Questions to: Roberta A. Wagner

2019 Washington Street, East  
Charleston, WV 25305  
Fax: 304-558-4115  
Email: [roberta.a.wagner@wv.gov](mailto:roberta.a.wagner@wv.gov)

5. **VERBAL COMMUNICATION:** Any verbal communication between the Vendor and any State personnel is not binding, including that made at the mandatory pre-bid conference. Only information issued in writing and added to the Solicitation by an official written addendum by the Purchasing Division is binding.
6. **BID SUBMISSION:** All bids must be signed and delivered by the Vendor to the Purchasing Division at the address listed below on or before the date and time of the bid opening. Any bid received by the Purchasing Division staff is considered to be in the possession of the Purchasing Division and will not be returned for any reason. The bid delivery address is:

Department of Administration, Purchasing Division  
2019 Washington Street East  
Charleston, WV 25305-0130



The bid should contain the information listed below on the face of the envelope or the bid may not be considered:

**SEALED BID**

BUYER: \_\_\_\_\_  
 SOLICITATION NO.: \_\_\_\_\_  
 BID OPENING DATE: \_\_\_\_\_  
 BID OPENING TIME: \_\_\_\_\_  
 FAX NUMBER: \_\_\_\_\_

In the event that Vendor is responding to a request for proposal, the Vendor shall submit one original technical and one original cost proposal plus \_\_\_\_\_ convenience copies of each to the Purchasing Division at the address shown above. Additionally, the Vendor should identify the bid type as either a technical or cost proposal on the face of each bid envelope submitted in response to a request for proposal as follows:

BID TYPE: ☐ Technical  
☐ Cost

7. **BID OPENING:** Bids submitted in response to this Solicitation will be opened at the location identified below on the date and time listed below. Delivery of a bid after the bid opening date and time will result in bid disqualification. For purposes of this Solicitation, a bid is considered delivered when time stamped by the official Purchasing Division time clock.

Bid Opening Date and Time: December 3, 2013 - Tuesday @ 1:30 P.M

Bid Opening Location: Department of Administration, Purchasing Division  
 2019 Washington Street East  
 Charleston, WV 25305-0130

8. **ADDENDUM ACKNOWLEDGEMENT:** Changes or revisions to this Solicitation will be made by an official written addendum issued by the Purchasing Division. Vendor should acknowledge receipt of all addenda issued with this Solicitation by completing an Addendum Acknowledgment Form, a copy of which is included herewith. Failure to acknowledge addenda may result in bid disqualification. The addendum acknowledgement should be submitted with the bid to expedite document processing.
9. **BID FORMATTING:** Vendor should type or electronically enter the information onto its bid to prevent errors in the evaluation. Failure to type or electronically enter the information may result in bid disqualification.

**GENERAL TERMS AND CONDITIONS:**

1. **CONTRACTUAL AGREEMENT:** Issuance of a Purchase Order signed by the Purchasing Division Director, or his designee, and approved as to form by the Attorney General's office constitutes acceptance of this Contract made by and between the State of West Virginia and the Vendor. Vendor's signature on its bid signifies Vendor's agreement to be bound by and accept the terms and conditions contained in this Contract.
2. **DEFINITIONS:** As used in this Solicitation/Contract, the following terms shall have the meanings attributed to them below. Additional definitions may be found in the specifications included with this Solicitation/Contract.
  - 2.1 **"Agency" or "Agencies"** means the agency, board, commission, or other entity of the State of West Virginia that is identified on the first page of the Solicitation or any other public entity seeking to procure goods or services under this Contract.
  - 2.2 **"Contract"** means the binding agreement that is entered into between the State and the Vendor to provide the goods and services requested in the Solicitation.
  - 2.3 **"Director"** means the Director of the West Virginia Department of Administration, Purchasing Division.
  - 2.4 **"Purchasing Division"** means the West Virginia Department of Administration, Purchasing Division.
  - 2.5 **"Purchase Order"** means the document signed by the Agency and the Purchasing Division, and approved as to form by the Attorney General, that identifies the Vendor as the successful bidder and Contract holder.
  - 2.6 **"Solicitation"** means the official solicitation published by the Purchasing Division and identified by number on the first page thereof.
  - 2.7 **"State"** means the State of West Virginia and/or any of its agencies, commissions, boards, etc. as context requires.
  - 2.8 **"Vendor" or "Vendors"** means any entity submitting a bid in response to the Solicitation, the entity that has been selected as the lowest responsible bidder, or the entity that has been awarded the Contract as context requires.

3. **CONTRACT TERM; RENEWAL; EXTENSION:** The term of this Contract shall be determined in accordance with the category that has been identified as applicable to this Contract below:

☐

**Term Contract**

**Initial Contract Term:** This Contract becomes effective on \_\_\_\_\_  
and extends for a period of \_\_\_\_\_ year(s).

**Renewal Term:** This Contract may be renewed upon the mutual written consent of the Agency, and the Vendor, with approval of the Purchasing Division and the Attorney General's office (Attorney General approval is as to form only). Any request for renewal must be submitted to the Purchasing Division Director thirty (30) days prior to the expiration date of the initial contract term or appropriate renewal term. A Contract renewal shall be in accordance with the terms and conditions of the original contract. Renewal of this Contract is limited to \_\_\_\_\_ successive one (1) year periods. Automatic renewal of this Contract is prohibited. Notwithstanding the foregoing, Purchasing Division approval is not required on agency delegated or exempt purchases. Attorney General approval may be required for vendor terms and conditions.

**Reasonable Time Extension:** At the sole discretion of the Purchasing Division Director, and with approval from the Attorney General's office (Attorney General approval is as to form only), this Contract may be extended for a reasonable time after the initial Contract term or after any renewal term as may be necessary to obtain a new contract or renew this Contract. Any reasonable time extension shall not exceed twelve (12) months. Vendor may avoid a reasonable time extension by providing the Purchasing Division Director with written notice of Vendor's desire to terminate this Contract 30 days prior to the expiration of the then current term. During any reasonable time extension period, the Vendor may terminate this Contract for any reason upon giving the Purchasing Division Director 30 days written notice. Automatic extension of this Contract is prohibited. Notwithstanding the foregoing, Purchasing Division approval is not required on agency delegated or exempt purchases, but Attorney General approval may be required.

**Release Order Limitations:** In the event that this contract permits release orders, a release order may only be issued during the time this Contract is in effect. Any release order issued within one year of the expiration of this Contract shall be effective for one year from the date the release order is issued. No release order may be extended beyond one year after this Contract has expired.

☐

**Fixed Period Contract:** This Contract becomes effective upon Vendor's receipt of the notice to proceed and must be completed within \_\_\_\_\_ days.

☒ **One Time Purchase:** The term of this Contract shall run from the issuance of the Purchase Order until all of the goods contracted for have been delivered, but in no event shall this Contract extend for more than one fiscal year.

☐ **Other:** See attached.

4. **NOTICE TO PROCEED:** Vendor shall begin performance of this Contract immediately upon receiving notice to proceed unless otherwise instructed by the Agency. Unless otherwise specified, the fully executed Purchase Order will be considered notice to proceed

5. **QUANTITIES:** The quantities required under this Contract shall be determined in accordance with the category that has been identified as applicable to this Contract below.

☐ **Open End Contract:** Quantities listed in this Solicitation are approximations only, based on estimates supplied by the Agency. It is understood and agreed that the Contract shall cover the quantities actually ordered for delivery during the term of the Contract, whether more or less than the quantities shown.

☐ **Service:** The scope of the service to be provided will be more clearly defined in the specifications included herewith.

☒ **Combined Service and Goods:** The scope of the service and deliverable goods to be provided will be more clearly defined in the specifications included herewith.

☒ **One Time Purchase:** This Contract is for the purchase of a set quantity of goods that are identified in the specifications included herewith. Once those items have been delivered, no additional goods may be procured under this Contract without an appropriate change order approved by the Vendor, Agency, Purchasing Division, and Attorney General's office.

6. **PRICING:** The pricing set forth herein is firm for the life of the Contract, unless specified elsewhere within this Solicitation/Contract by the State. A Vendor's inclusion of price adjustment provisions in its bid, without an express authorization from the State in the Solicitation to do so, may result in bid disqualification.

7. **EMERGENCY PURCHASES:** The Purchasing Division Director may authorize the Agency to purchase goods or services in the open market that Vendor would otherwise provide under this Contract if those goods or services are for immediate or expedited delivery in an emergency. Emergencies shall include, but are not limited to, delays in transportation or an unanticipated increase in the volume of work. An emergency purchase in the open market, approved by the Purchasing Division Director, shall not constitute of breach of this Contract and shall not entitle the Vendor to any form of compensation or damages. This provision does not excuse the State from fulfilling its obligations under a One Time Purchase contract.

8. **REQUIRED DOCUMENTS:** All of the items checked below must be provided to the Purchasing Division by the Vendor as specified below.

- ☐ **BID BOND:** All Vendors shall furnish a bid bond in the amount of five percent (5%) of the total amount of the bid protecting the State of West Virginia. The bid bond must be submitted with the bid.
- ☐ **PERFORMANCE BOND:** The apparent successful Vendor shall provide a performance bond in the amount of \_\_\_\_\_. The performance bond must be issued and received by the Purchasing Division prior to Contract award. On construction contracts, the performance bond must be 100% of the Contract value.
- ☐ **LABOR/MATERIAL PAYMENT BOND:** The apparent successful Vendor shall provide a labor/material payment bond in the amount of 100% of the Contract value. The labor/material payment bond must be issued and delivered to the Purchasing Division prior to Contract award.

In lieu of the Bid Bond, Performance Bond, and Labor/Material Payment Bond, the Vendor may provide certified checks, cashier's checks, or irrevocable letters of credit. Any certified check, cashier's check, or irrevocable letter of credit provided in lieu of a bond must be of the same amount and delivered on the same schedule as the bond it replaces. A letter of credit submitted in lieu of a performance and labor/material payment bond will only be allowed for projects under \$100,000. Personal or business checks are not acceptable.

- ☐ **MAINTENANCE BOND:** The apparent successful Vendor shall provide a two (2) year maintenance bond covering the roofing system. The maintenance bond must be issued and delivered to the Purchasing Division prior to Contract award.
- ☒ **WORKERS' COMPENSATION INSURANCE:** The apparent successful Vendor shall have appropriate workers' compensation insurance and shall provide proof thereof upon request.
- ☒ **INSURANCE:** The apparent successful Vendor shall furnish proof of the following insurance prior to Contract award and shall list the state as a certificate holder:



**Commercial General Liability Insurance:**

\$1,000,000.00 or more.



**Builders Risk Insurance:** builders risk – all risk insurance in an amount equal to 100% of the amount of the Contract.



The apparent successful Vendor shall also furnish proof of any additional insurance requirements contained in the specifications prior to Contract award regardless of whether or not that insurance requirement is listed above.

- ☐ **LICENSE(S) / CERTIFICATIONS / PERMITS:** In addition to anything required under the Section entitled Licensing, of the General Terms and Conditions, the apparent successful Vendor shall furnish proof of the following licenses, certifications, and/or permits prior to Contract award, in a form acceptable to the Purchasing Division.

☐
☐
☐
☐

The apparent successful Vendor shall also furnish proof of any additional licenses or certifications contained in the specifications prior to Contract award regardless of whether or not that requirement is listed above.

9. **LITIGATION BOND:** The Director reserves the right to require any Vendor that files a protest of an award to submit a litigation bond in the amount equal to one percent of the lowest bid submitted or \$5,000, whichever is greater. The entire amount of the bond shall be forfeited if the hearing officer determines that the protest was filed for frivolous or improper purpose, including but not limited to, the purpose of harassing, causing unnecessary delay, or needless expense for the Agency. All litigation bonds shall be made payable to the Purchasing Division. In lieu of a bond, the protester may submit a cashier's check or certified check payable to the Purchasing Division. Cashier's or certified checks will be deposited with and held by the State Treasurer's office. If it is determined that the protest has not been filed for frivolous or improper purpose, the bond or deposit shall be returned in its entirety.
10. **ALTERNATES:** Any model, brand, or specification listed herein establishes the acceptable level of quality only and is not intended to reflect a preference for, or in any way favor, a particular brand or vendor. Vendors may bid alternates to a listed model or brand provided that the alternate is at least equal to the model or brand and complies with the required specifications. The equality of any alternate being bid shall be determined by the State at its sole discretion. Any Vendor bidding an alternate model or brand should clearly identify the alternate items in its bid and should include manufacturer's specifications, industry literature, and/or any other relevant documentation demonstrating the equality of the alternate items. Failure to provide information for alternate items may be grounds for rejection of a Vendor's bid.
11. **EXCEPTIONS AND CLARIFICATIONS:** The Solicitation contains the specifications that shall form the basis of a contractual agreement. Vendor shall clearly mark any exceptions, clarifications, or



other proposed modifications in its bid. Exceptions to, clarifications of, or modifications of a requirement or term and condition of the Solicitation may result in bid disqualification.

- 12. LIQUIDATED DAMAGES:** Vendor shall pay liquidated damages in the amount \$0.00 for

This clause shall in no way be considered exclusive and shall not limit the State or Agency's right to pursue any other available remedy.

- 13. ACCEPTANCE/REJECTION:** The State may accept or reject any bid in whole, or in part. Vendor's signature on its bid signifies acceptance of the terms and conditions contained in the Solicitation and Vendor agrees to be bound by the terms of the Contract, as reflected in the Purchase Order, upon receipt.
- 14. REGISTRATION:** Prior to Contract award, the apparent successful Vendor must be properly registered with the West Virginia Purchasing Division and must have paid the \$125 fee if applicable.
- 15. COMMUNICATION LIMITATIONS:** In accordance with West Virginia Code of State Rules §148-1-6.6, communication with the State of West Virginia or any of its employees regarding this Solicitation during the solicitation, bid, evaluation or award periods, except through the Purchasing Division, is strictly prohibited without prior Purchasing Division approval. Purchasing Division approval for such communication is implied for all agency delegated and exempt purchases.
- 16. FUNDING:** This Contract shall continue for the term stated herein, contingent upon funds being appropriated by the Legislature or otherwise being made available. In the event funds are not appropriated or otherwise made available, this Contract becomes void and of no effect beginning on July 1 of the fiscal year for which funding has not been appropriated or otherwise made available.
- 17. PAYMENT:** Payment in advance is prohibited under this Contract. Payment may only be made after the delivery and acceptance of goods or services. The Vendor shall submit invoices, in arrears, to the Agency at the address on the face of the purchase order labeled "Invoice To."
- 18. UNIT PRICE:** Unit prices shall prevail in cases of a discrepancy in the Vendor's bid.
- 19. DELIVERY:** All quotations are considered freight on board destination ("F.O.B. destination") unless alternate shipping terms are clearly identified in the bid. Vendor's listing of shipping terms that contradict the shipping terms expressly required by this Solicitation may result in bid disqualification.
- 20. INTEREST:** Interest attributable to late payment will only be permitted if authorized by the West Virginia Code. Presently, there is no provision in the law for interest on late payments.
- 21. PREFERENCE:** Vendor Preference may only be granted upon written request and only in accordance with the West Virginia Code § 5A-3-37 and the West Virginia Code of State Rules. A Resident Vendor Certification form has been attached hereto to allow Vendor to apply for the preference. Vendor's

failure to submit the Resident Vendor Certification form with its bid will result in denial of Vendor Preference. Vendor Preference does not apply to construction projects.

- 22. SMALL, WOMEN-OWNED, OR MINORITY-OWNED BUSINESSES:** For any solicitations publicly advertised for bid on or after July 1, 2012, in accordance with West Virginia Code §5A-3-37(a)(7) and W. Va. CSR § 148-22-9, any non-resident vendor certified as a small, women-owned, or minority-owned business under W. Va. CSR § 148-22-9 shall be provided the same preference made available to any resident vendor. Any non-resident small, women-owned, or minority-owned business must identify itself as such in writing, must submit that writing to the Purchasing Division with its bid, and must be properly certified under W. Va. CSR § 148-22-9 prior to submission of its bid to receive the preferences made available to resident vendors. Preference for a non-resident small, women-owned, or minority owned business shall be applied in accordance with W. Va. CSR § 148-22-9.
- 23. TAXES:** The Vendor shall pay any applicable sales, use, personal property or any other taxes arising out of this Contract and the transactions contemplated thereby. The State of West Virginia is exempt from federal and state taxes and will not pay or reimburse such taxes.
- 24. CANCELLATION:** The Purchasing Division Director reserves the right to cancel this Contract immediately upon written notice to the vendor if the materials or workmanship supplied do not conform to the specifications contained in the Contract. The Purchasing Division Director may cancel any purchase or Contract upon 30 days written notice to the Vendor in accordance with West Virginia Code of State Rules § 148-1-7.16.2.
- 25. WAIVER OF MINOR IRREGULARITIES:** The Director reserves the right to waive minor irregularities in bids or specifications in accordance with West Virginia Code of State Rules § 148-1-4.6.
- 26. TIME:** Time is of the essence with regard to all matters of time and performance in this Contract.
- 27. APPLICABLE LAW:** This Contract is governed by and interpreted under West Virginia law without giving effect to its choice of law principles. Any information provided in specification manuals, or any other source, verbal or written, which contradicts or violates the West Virginia Constitution, West Virginia Code or West Virginia Code of State Rules is void and of no effect.
- 28. COMPLIANCE:** Vendor shall comply with all applicable federal, state, and local laws, regulations and ordinances. By submitting a bid, Vendors acknowledge that they have reviewed, understand, and will comply with all applicable law.
- 29. PREVAILING WAGE:** On any contract for the construction of a public improvement, Vendor and any subcontractors utilized by Vendor shall pay a rate or rates of wages which shall not be less than the fair minimum rate or rates of wages (prevailing wage), as established by the West Virginia Division of Labor under West Virginia Code §§ 21-5A-1 et seq. and available at <http://www.sos.wv.gov/administrative-law/wagerates/Pages/default.aspx>. Vendor shall be responsible for ensuring compliance with prevailing wage requirements and determining when prevailing wage

requirements are applicable. The required contract provisions contained in West Virginia Code of State Rules § 42-7-3 are specifically incorporated herein by reference.

30. **ARBITRATION:** Any references made to arbitration contained in this Contract, Vendor's bid, or in any American Institute of Architects documents pertaining to this Contract are hereby deleted, void, and of no effect.
31. **MODIFICATIONS:** This writing is the parties' final expression of intent. Notwithstanding anything contained in this Contract to the contrary, no modification of this Contract shall be binding without mutual written consent of the Agency, and the Vendor, with approval of the Purchasing Division and the Attorney General's office (Attorney General approval is as to form only). **No Change shall be implemented by the Vendor until such time as the Vendor receives an approved written change order from the Purchasing Division.**
32. **WAIVER:** The failure of either party to insist upon a strict performance of any of the terms or provision of this Contract, or to exercise any option, right, or remedy herein contained, shall not be construed as a waiver or a relinquishment for the future of such term, provision, option, right, or remedy, but the same shall continue in full force and effect. Any waiver must be expressly stated in writing and signed by the waiving party.
33. **SUBSEQUENT FORMS:** The terms and conditions contained in this Contract shall supersede any and all subsequent terms and conditions which may appear on any form documents submitted by Vendor to the Agency or Purchasing Division such as price lists, order forms, invoices, sales agreements, or maintenance agreements, and includes internet websites or other electronic documents. Acceptance or use of Vendor's forms does not constitute acceptance of the terms and conditions contained thereon.
34. **ASSIGNMENT:** Neither this Contract nor any monies due, or to become due hereunder, may be assigned by the Vendor without the express written consent of the Agency, the Purchasing Division, the Attorney General's office (as to form only), and any other government agency or office that may be required to approve such assignments. Notwithstanding the foregoing, Purchasing Division approval may or may not be required on certain agency delegated or exempt purchases.
35. **WARRANTY:** The Vendor expressly warrants that the goods and/or services covered by this Contract will: (a) conform to the specifications, drawings, samples, or other description furnished or specified by the Agency; (b) be merchantable and fit for the purpose intended; and (c) be free from defect in material and workmanship.
36. **STATE EMPLOYEES:** State employees are not permitted to utilize this Contract for personal use and the Vendor is prohibited from permitting or facilitating the same.
37. **BANKRUPTCY:** In the event the Vendor files for bankruptcy protection, the State of West Virginia may deem this Contract null and void, and terminate this Contract without notice.

**38. [RESERVED]**

**39. CONFIDENTIALITY:** The Vendor agrees that it 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/default.html>.

**40. DISCLOSURE:** Vendor's response to the Solicitation and the resulting Contract are considered public documents and will be disclosed to the public in accordance with the laws, rules, and policies governing the West Virginia Purchasing Division. Those laws include, but are not limited to, the Freedom of Information Act found in West Virginia Code § 29B-1-1 et seq.

If a Vendor considers any part of its bid to be exempt from public disclosure, Vendor must so indicate by specifically identifying the exempt information, identifying the exemption that applies, providing a detailed justification for the exemption, segregating the exempt information from the general bid information, and submitting the exempt information as part of its bid but in a segregated and clearly identifiable format. Failure to comply with the foregoing requirements will result in public disclosure of the Vendor's bid without further notice. A Vendor's act of marking all or nearly all of its bid as exempt is not sufficient to avoid disclosure and WILL NOT BE HONORED. Vendor's act of marking a bid or any part thereof as "confidential" or "proprietary" is not sufficient to avoid disclosure and WILL NOT BE HONORED. In addition, a legend or other statement indicating that all or substantially all of the bid is exempt from disclosure is not sufficient to avoid disclosure and WILL NOT BE HONORED. Vendor will be required to defend any claimed exemption for nondisclosure in the event of an administrative or judicial challenge to the State's nondisclosure. Vendor must indemnify the State for any costs incurred related to any exemptions claimed by Vendor. Any questions regarding the applicability of the various public records laws should be addressed to your own legal counsel prior to bid submission.

**41. LICENSING:** In accordance with West Virginia Code of State Rules §148-1-6.1.7, Vendor 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, West Virginia Insurance Commission, or any other state agency or political subdivision. Upon request, the Vendor must provide all necessary releases to obtain information to enable the Purchasing Division Director or the Agency to verify that the Vendor is licensed and in good standing with the above entities.

**42. ANTITRUST:** In submitting a bid to, signing a contract with, or accepting a Purchase Order from any agency of the State of West Virginia, the Vendor agrees to 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 Vendor.

- 43. VENDOR CERTIFICATIONS:** By signing its bid or entering into this Contract, Vendor certifies (1) that its bid was made without prior understanding, agreement, or connection with any corporation, firm, limited liability company, partnership, person or entity submitting a bid for the same material, supplies, equipment or services; (2) that its bid is in all respects fair and without collusion or fraud; (3) that this Contract is accepted or entered into without any prior understanding, agreement, or connection to any other entity that could be considered a violation of law; and (4) that it has reviewed this RFQ in its entirety, understands the requirements, terms and conditions, and other information contained herein. Vendor's signature on its bid also affirms that neither it nor its representatives have any interest, nor shall acquire any interest, direct or indirect, which would compromise the performance of its services hereunder. Any such interests shall be promptly presented in detail to the Agency.

The individual signing this bid on behalf of Vendor certifies that he or she is authorized by the Vendor to execute this bid or any documents related thereto on Vendor's behalf; that he or she is authorized to bind the Vendor in a contractual relationship; and that, to the best of his or her knowledge, the Vendor has properly registered with any State agency that may require registration.

- 44. PURCHASING CARD ACCEPTANCE:** The State of West Virginia currently utilizes a Purchasing Card program, administered under contract by a banking institution, to process payment for goods and services. The Vendor must accept the State of West Virginia's Purchasing Card for payment of all orders under this Contract unless the box below is checked.

☐ Vendor is not required to accept the State of West Virginia's Purchasing Card as payment for all goods and services.

- 45. VENDOR RELATIONSHIP:** The relationship of the Vendor to the State shall be that of an independent contractor and no principal-agent relationship or employer-employee relationship is contemplated or created by this Contract. The Vendor as an independent contractor is solely liable for the acts and omissions of its employees and agents. Vendor shall be responsible for selecting, supervising, and compensating any and all individuals employed pursuant to the terms of this Solicitation and resulting contract. Neither the Vendor, nor any employees or subcontractors of the Vendor, shall be deemed to be employees of the State for any purpose whatsoever. Vendor shall be exclusively responsible for payment of employees and contractors for all wages and salaries, taxes, withholding payments, penalties, fees, fringe benefits, professional liability insurance premiums, contributions to insurance and pension, or other deferred compensation plans, including but not limited to, Workers' Compensation and Social Security obligations, licensing fees, *etc.* and the filing of all necessary documents, forms and returns pertinent to all of the foregoing. Vendor shall hold harmless the State, and shall provide the State and Agency with a defense against any and all claims including, but not limited to, the foregoing payments, withholdings, contributions, taxes, Social Security taxes, and employer income tax returns.

- 46. INDEMNIFICATION:** The Vendor agrees to indemnify, defend, and hold harmless the State and the Agency, their officers, and employees from and against: (1) Any claims or losses for services rendered

by any subcontractor, person, or firm performing or supplying services, materials, or supplies in connection with the performance of the Contract; (2) Any claims or losses resulting to any person or entity injured or damaged by the Vendor, its officers, employees, or subcontractors by the publication, translation, reproduction, delivery, performance, use, or disposition of any data used under the Contract in a manner not authorized by the Contract, or by Federal or State statutes or regulations; and (3) Any failure of the Vendor, its officers, employees, or subcontractors to observe State and Federal laws including, but not limited to, labor and wage and hour laws.

- 47. PURCHASING AFFIDAVIT:** In accordance with West Virginia Code § 5A-3-10a, all Vendors are required to sign, notarize, and submit the Purchasing Affidavit stating that neither the Vendor nor a related party owe a debt to the State in excess of \$1,000. The affidavit must be submitted prior to award, but should be submitted with the Vendor's bid. A copy of the Purchasing Affidavit is included herewith.
- 48. ADDITIONAL AGENCY AND LOCAL GOVERNMENT USE:** This Contract may be utilized by and extends to other agencies, spending units, and political subdivisions of the State of West Virginia; county, municipal, and other local government bodies; and school districts ("Other Government Entities"). This Contract shall be extended to the aforementioned Other Government Entities on the same prices, terms, and conditions as those offered and agreed to in this Contract. If the Vendor does not wish to extend the prices, terms, and conditions of its bid and subsequent contract to the Other Government Entities, the Vendor must clearly indicate such refusal in its bid. A refusal to extend this Contract to the Other Government Entities shall not impact or influence the award of this Contract in any manner.
- 49. CONFLICT OF INTEREST:** Vendor, its officers or members or employees, shall not presently have or acquire any interest, direct or indirect, which would conflict with or compromise the performance of its obligations hereunder. Vendor shall periodically inquire of its officers, members and employees to ensure that a conflict of interest does not arise. Any conflict of interest discovered shall be promptly presented in detail to the Agency.
- 50. REPORTS:** Vendor shall provide the Agency and/or the Purchasing Division with the following reports identified by a checked box below:
- ☒ Such reports as the Agency and/or the Purchasing Division may request. Requested reports may include, but are not limited to, quantities purchased, agencies utilizing the contract, total contract expenditures by agency, etc.
  - ☐ Quarterly reports detailing the total quantity of purchases in units and dollars, along with a listing of purchases by agency. Quarterly reports should be delivered to the Purchasing Division via email at [purchasing.requisitions@wv.gov](mailto:purchasing.requisitions@wv.gov).
- 51. BACKGROUND CHECK:** In accordance with W. Va. Code § 15-2D-3, the Director of the Division of Protective Services shall require any service provider whose employees are regularly employed on the grounds or in the buildings of the Capitol complex or who have access to sensitive or critical information



to submit to a fingerprint-based state and federal background inquiry through the state repository. The service provider is responsible for any costs associated with the fingerprint-based state and federal background inquiry.

After the contract for such services has been approved, but before any such employees are permitted to be on the grounds or in the buildings of the Capitol complex or have access to sensitive or critical information, the service provider shall submit a list of all persons who will be physically present and working at the Capitol complex to the Director of the Division of Protective Services for purposes of verifying compliance with this provision.

The State reserves the right to prohibit a service provider's employees from accessing sensitive or critical information or to be present at the Capitol complex based upon results addressed from a criminal background check.

Service providers should contact the West Virginia Division of Protective Services by phone at (304)558-9911 for more information.

**52. PREFERENCE FOR USE OF DOMESTIC STEEL PRODUCTS:** Except when authorized by the Director of the Purchasing Division pursuant to W. Va. Code § 5A-3-56, no contractor may use or supply steel products for a State Contract Project other than those steel products made in the United States. A contractor who uses steel products in violation of this section may be subject to civil penalties pursuant to W. Va. Code § 5A-3-56. As used in this section:

- a. "State Contract Project" means any erection or construction of, or any addition to, alteration of or other improvement to any building or structure, including, but not limited to, roads or highways, or the installation of any heating or cooling or ventilating plants or other equipment, or the supply of and materials for such projects, pursuant to a contract with the State of West Virginia for which bids were solicited on or after June 6, 2001.
- b. "Steel Products" means products rolled, formed, shaped, drawn, extruded, forged, cast, fabricated or otherwise similarly processed, or processed by a combination of two or more or such operations, from steel made by the open heath, basic oxygen, electric furnace, Bessemer or other steel making process.

The Purchasing Division Director may, in writing, authorize the use of foreign steel products if:

- a. The cost for each contract item used does not exceed one tenth of one percent (.1%) of the total contract cost or two thousand five hundred dollars (\$2,500.00), whichever is greater. For the purposes of this section, the cost is the value of the steel product as delivered to the project; or
- b. The Director of the Purchasing Division determines that specified steel materials are not produced in the United States in sufficient quantity or otherwise are not reasonably available to meet contract requirements.

**53. PREFERENCE FOR USE OF DOMESTIC ALUMINUM, GLASS, AND STEEL:** In Accordance with W. Va. Code § 5-19-1 et seq., and W. Va. CSR § 148-10-1 et seq., for every contract or subcontract, subject to the limitations contained herein, for the construction, reconstruction, alteration, repair, improvement or maintenance of public works or for the purchase of any item of machinery or equipment to be used at sites of public works, only domestic aluminum, glass or steel products shall be supplied unless the spending officer determines, in writing, after the receipt of offers or bids, (1) that the cost of domestic aluminum, glass or steel products is unreasonable or inconsistent with the public interest of the State of West Virginia, (2) that domestic aluminum, glass or steel products are not produced in sufficient quantities to meet the contract requirements, or (3) the available domestic aluminum, glass, or steel do not meet the contract specifications. This provision only applies to public works contracts awarded in an amount more than fifty thousand dollars (\$50,000) or public works contracts that require more than ten thousand pounds of steel products.

The cost of domestic aluminum, glass, or steel products may be unreasonable if the cost is more than twenty percent (20%) of the bid or offered price for foreign made aluminum, glass, or steel products. If the domestic aluminum, glass or steel products to be supplied or produced in a "substantial labor surplus area", as defined by the United States Department of Labor, the cost of domestic aluminum, glass, or steel products may be unreasonable if the cost is more than thirty percent (30%) of the bid or offered price for foreign made aluminum, glass, or steel products.

This preference shall be applied to an item of machinery or equipment, as indicated above, when the item is a single unit of equipment or machinery manufactured primarily of aluminum, glass or steel, is part of a public works contract and has the sole purpose or of being a permanent part of a single public works project. This provision does not apply to equipment or machinery purchased by a spending unit for use by that spending unit and not as part of a single public works project.

All bids and offers including domestic aluminum, glass or steel products that exceed bid or offer prices including foreign aluminum, glass or steel products after application of the preferences provided in this provision may be reduced to a price equal to or lower than the lowest bid or offer price for foreign aluminum, glass or steel products plus the applicable preference. If the reduced bid or offer prices are made in writing and supersede the prior bid or offer prices, all bids or offers, including the reduced bid or offer prices, will be reevaluated in accordance with this rule.

REQUEST FOR QUOTATION  
LBS14051 - Flame Atomic Absorption Spectrometer Instrument System

---

**SPECIFICATIONS**

1. **PURPOSE AND SCOPE:** The West Virginia Purchasing Division is soliciting bids on behalf of West Virginia Department of Health and Human Resources, Office of Laboratory Services, Environmental Chemistry section to establish a contract for the one time purchase of one laboratory bench style Flame Atomic Absorption Spectrometer Instrument System for the analysis of sodium, iron, magnesium, and manganese in drinking water samples.

2. **DEFINITIONS:** The terms listed below shall have the meanings assigned to them below. Additional definitions can be found in section 2 of the General Terms and Conditions.

2.1 **"Contract Item"** means Flame Atomic Absorption Spectrometer Instrument System.

2.2 **"Pricing Page"** means the pages upon which Vendor should list its proposed price for the Contract Items in the manner requested. The Pricing Page is included on the last page of this RFQ.

2.3 **"RFQ"** means the official request for quotation published by the Purchasing Division and identified as LBS14051.

2.4 **"40CFR141, Subpart C, Appendix A"** means the Code of Federal Regulations for Alternative Testing Methods Approved for Analysis Under the Safe Drinking Water Act and is hereto attached as Exhibit A.

3. **GENERAL REQUIREMENTS:**

3.1 **Mandatory Contract Item Requirements:** Contract Item must meet or exceed the mandatory requirements listed below.

3.1.1 **Contract Item #1 – Quantity: 1 - Flame Atomic Absorption Spectrometer Instrument System**

3.1.1.1 Flame Atomic Absorption Spectrometer Instrument System must include a bench style spectrometer that meets the requirements for Iron, Manganese, Magnesium, and Sodium using the Flame Atomic Absorption methodology of the Code of Federal Regulations titled, *40CFR141, Subpart C, Appendix A, Alternative Testing Methods Approved for Analysis Under the*

REQUEST FOR QUOTATION  
**LBS14051 - Flame Atomic Absorption Spectrometer Instrument System**

---

*Safe Drinking Water Act.* 40CFR141, Subpart C, Appendix A is hereto attached as Exhibit A.

- 3.1.1.2** Flame Atomic Absorption Spectrometer Instrument System must have double-beam optics covering the wavelength range of a minimum of 190nm and a maximum of 900nm.
- 3.1.1.3** Flame Atomic Absorption Spectrometer Instrument System must have a deuterium background corrector with a wavelength range of 185-425nm.
- 3.1.1.4** Flame Atomic Absorption Spectrometer Instrument System must have automatic wavelength, and slit selection Slit shall be at a minimum 0.2, 0.5, and 1.0nm full height.
- 3.1.1.5** Flame Atomic Absorption Spectrometer Instrument System must include a hollow-cathode lamp for Sodium, Iron, Magnesium, and Manganese.
- 3.1.1.6** Flame Atomic Absorption Spectrometer Instrument System must have a minimum of a four fixed lamp position with automatic computer controlled lamp selection and automatic optimization of energy.
- 3.1.1.7** Flame Atomic Absorption Spectrometer Instrument System must measure a minimum of four analytes in a single solution before proceeding to the next solution.
- 3.1.1.8** Flame Atomic Absorption Spectrometer Instrument System must operate on a 110-120 V AC.
- 3.1.1.9** Flame Atomic Absorption Spectrometer Instrument System must include a computer, monitor, laser printer, and software necessary for System to operate properly.
- 3.1.1.10** Flame Atomic Absorption Spectrometer Instrument System must include a minimum one (1) year manufacturer warranty that covers the entire system, including all components of the spectrometer, software, computer, monitor, and laser printer.

REQUEST FOR QUOTATION  
**LBS14051 - Flame Atomic Absorption Spectrometer Instrument System**

---

**3.1.1.11** Flame Atomic Absorption Spectrometer Instrument System must include a minimum of one (1) year onsite service/maintenance that covers the entire system, including all components of the spectrometer, software, computer, monitor, and laser printer. Onsite service/maintenance will include 72 hour onsite response. Vendor will be responsible for all costs incurred for providing onsite maintenance; including parts, labor, travel expenses, lodging, and meals.

**3.1.1.12** Flame Atomic Absorption Spectrometer Instrument System must include telephone support for a minimum of one (1) year that covers the entire system, including all components of the spectrometer, software, computer, monitor, and laser printer. Telephone support must be available during Vendor's normal business hours.

**3.1.2 Contract Item #2 – Quantity: 1 - Setup and Installation**

**3.1.2.1** Vendor must setup and install Flame Atomic Absorption Spectrometer, including software, computer, monitor, and laser printer within 30 days of delivery at the Office of Laboratory Services, Environmental Chemistry Section, 4710 Chimney Drive, Suite G, Charleston, West Virginia 25302.

**3.1.3 Contract Item #3 – Quantity: 1 – One, 2-Day Onsite System Training Session**

**3.1.3.1** Vendor must provide one, 2-day onsite training session to Agency staff on the operation and maintenance requirements of the System at the Office of Laboratory Services, Environmental Chemistry Section, 4710 Chimney Drive, Suite G, Charleston, West Virginia 25302 following installation. Vendor will be responsible for all costs incurred for its staff to attend the training session; including travel expenses, lodging, and meals.

**4. CONTRACT AWARD:**

**4.1 Contract Award:** The Contract is intended to provide Agencies with a purchase price for the Contract Items. The Contract shall be awarded to the Vendor that provides the Contract Items meeting the required specifications for the lowest overall total cost as shown on the Pricing Page.

REQUEST FOR QUOTATION  
LBS14051 - Flame Atomic Absorption Spectrometer Instrument System

---

**4.2 Pricing Pages:** Vendor should complete the Pricing Pages by completing the Unit Price, Extended Price, and Grand Total fields. The Extended Price should be calculated by multiplying the Quantity by the Unit Price. The Grand Total should be calculated by adding the Extended Price Column. Vendor should complete the Pricing Pages in full as failure to complete the Pricing Pages in their entirety may result in Vendor's bid being disqualified. Notwithstanding the foregoing, the Purchasing Division may correct errors as it deems appropriate. Vendor should type or electronically enter the information into the Pricing Pages to prevent errors in the evaluation.

**5. PAYMENT:**

**5.1 Payment:** Vendor shall accept payment in accordance with the payment procedures of the State of West Virginia. Payment to Vendor will be made in arrears after delivery; setup & installation; and trainings are complete and 100% acceptance of Contract by Agency.

**6. DELIVERY AND RETURN:**

**6.1 Shipment and Delivery:** Vendor shall ship the Contract Items within 90 days after being awarded this Contract and receiving a purchase order or notice to proceed. Contract Items must be shipped to Agency location at: Office of Laboratory Services, Environmental Chemistry Section, 4710 Chimney Drive, Suite G, Charleston, West Virginia 25302. Contract Items must be shipped **INSIDE DELIVERY, F.O.B. DESTINATION**. Any shipping and handling requirements must be stated in the Vendor's quote.

**6.2 Late Delivery:** The Agency placing the order under this Contract must be notified in writing if the shipment of the Contract Items will be delayed for any reason. Any delay in delivery that could cause harm to an Agency will be grounds for cancellation of the Contract, and/or obtaining the Contract Items from a third party.

Any Agency seeking to obtain the Contract Items from a third party under this provision must first obtain approval of the Purchasing Division.

**6.3 Delivery Payment/Risk of Loss:** Vendor shall deliver the Contract Items F.O.B. destination to the Agency's location.

**6.4 Return of Unacceptable Items:** If the Agency deems the Contract Items to be unacceptable, the Contract Items shall be returned to Vendor at Vendor's expense and with no restocking charge. Vendor shall either make arrangements for the return within five (5) days of being notified that items are unacceptable, or permit



REQUEST FOR QUOTATION  
LBS14051 - Flame Atomic Absorption Spectrometer Instrument System

---

the Agency to arrange for the return and reimburse Agency for delivery expenses. If the original packaging cannot be utilized for the return, Vendor will supply the Agency with appropriate return packaging upon request. All returns of unacceptable items shall be F.O.B. the Agency's location. The returned product shall either be replaced, or the Agency shall receive a full credit or refund for the purchase price, at the Agency's discretion.

- 6.5 Return Due to Agency Error:** Items ordered in error by the Agency will be returned for credit within 30 days of receipt, F.O.B. Vendor's location. Vendor shall not charge a restocking fee if returned products are in a resalable condition. Items shall be deemed to be in a resalable condition if they are unused and in the original packaging. Any restocking fee for items not in a resalable condition shall be the lower of the Vendor's customary restocking fee or 5% of the total invoiced value of the returned items.
- 7. TRAVEL:** Vendor shall be responsible for all mileage and travel costs, including travel time, associated with performance of this Contract. Any anticipated mileage or travel costs must be included in Vendor's bid and Grand Total costs on the Pricing Page.
- 8. FACILITIES ACCESS:** Performance of Contract Services may require access cards and/or keys to gain entrance to Agency's facilities. In the event that access cards and/or keys are required:
- 8.1** Vendor must identify principal service personnel which will be issued access cards and/or keys to perform service.
  - 8.2** Vendor will be responsible for controlling cards and keys and will pay replacement fee, if the cards or keys become lost or stolen.
  - 8.3** Vendor shall notify Agency immediately of any lost, stolen, or missing card or key.
  - 8.4** Anyone performing under this Contract will be subject to Agency's security protocol and procedures.
  - 8.5** Vendor shall inform all staff of Agency's security protocol and procedures.

REQUEST FOR QUOTATION  
LBS14051 - Flame Atomic Absorption Spectrometer Instrument System

---

**9. MISCELLANEOUS:**

- 9.1 Contract Manager:** During its performance of this Contract, Vendor must designate and maintain a primary contract manager responsible for overseeing Vendor's responsibilities under this Contract. The Contract manager must be available during normal business hours to address any customer service or other issues related to this Contract. Vendor should list its Contract manager and his or her contact information below.

**Contract Manager:** Max Keough  
**Telephone Number:** 513-732-9610  
**Fax Number:** 302-993-5941  
**Email Address:** LSCABIDS@AGILENT.COM

REQUEST FOR QUOTATION  
LBS14051 - Flame Atomic Absorption Spectrometer Instrument System

**PRICING PAGE**

<b>Contract Item #</b>	<b>Quantity</b>	<b>Description</b>	<b>Unit Price</b>	<b>Extended Price</b>
<b>3.1.1</b>	<b>1 Each</b>	Flame Atomic Absorption Spectrometer Instrument System that meets the mandatory requirements described in Section 3.1.1.1 through 3.1.1.12 herein.	36,003.30	36,003.30
<b>3.1.2</b>	<b>1 Each</b>	Setup and Installation of Flame Atomic Absorption Instrument System, including spectrometer, software, computer, monitor, and laser printer within 30 days of delivery at the Office of Laboratory Services, Environmental Chemistry Section, 4710 Chimney Drive, Suite G, Charleston, West Virginia 25302.	included	included
<b>3.1.3</b>	<b>One, 2-Day Session</b>	One, 2-Day Onsite Flame Atomic Absorption Instrument System Training Session at the Office of Laboratory Services, Environmental Chemistry Section, 4710 Chimney Drive, Suite G, Charleston, West Virginia 25302. Vendor will be responsible for all costs incurred for its staff to attend the training session; including travel expenses, lodging, and meals.	4,920.00	4,920.00
<b>GRAND TOTAL COST:</b>				40,923.30

**REQUEST FOR QUOTATION**  
**LBS14051 - Flame Atomic Absorption Spectrometer Instrument System**

---

The Contract will be awarded to the Vendor that provides the Contract Items meeting the required specifications at the lowest grand cost.

**VENDOR'S SECTION:**

Vendor Name: Agilent Technologies, Inc.

Vendor Address: 2850 Centerville Road, MS 3N3  
Wilmington, DE 19808

Vendor Telephone Number: 800-227-9770

Vendor Fax Number: 302-993-5941

Vendor Email: LSCABIDS@AGILENT.COM

Vendor Authorized Representative: Jeff Harrigan  
(Please Print)

Vendor Authorized Representative Signature: \_\_\_\_\_

Date: 11/27/2013

## APPENDIX A

Appendix A to Subpart C of Part 141 - Alternative Testing Methods Approved for Analyses Under the Safe Drinking Water Act. Only the editions stated in the following table are approved.

Alternative testing methods for contaminants listed at 40 CFR 141.21(f)(3)			
Organism	Methodology	SM 21 <sup>st</sup> Edition <sup>1</sup>	Other
Total Coliforms	Total Coliform Fermentation Technique	9221 A, B	
	Total Coliform Membrane Filter Technique	9222 A, B, C	
	Presence-Absence (P-A) Coliform Test	9221 D	
	ONPG-MUG Test	9223	
	Colitag™		Modified Colitag™ <sup>13</sup>

Alternative testing methods for contaminants listed at 40 CFR 141.21(f)(6)					
Organism	Methodology	SM 20 <sup>th</sup> Edition <sup>6</sup>	SM 21 <sup>st</sup> Edition <sup>1</sup>	SM Online <sup>3</sup>	Other
<i>E.coli</i>	ONPG-MUG Test	9223 B	9223 B	9223 B-97	
					Modified Colitag™ <sup>13</sup>

Alternative testing methods for contaminants listed at 40 CFR 141.23 (k)(1)						
Contaminant	Methodology	EPA Method	SM 21 <sup>st</sup> Edition <sup>1</sup>	SM Online <sup>3</sup>	ASTM <sup>4</sup>	Other
Alkalinity	Titrimetric		2320 B			
Antimony	Hydride – Atomic Absorption				D 3697-07	
	Atomic Absorption; Furnace		3113 B			
	Axially viewed inductively coupled plasma-atomic emission spectrometry (AVICP-AES)	200.5, Revision 4.2 <sup>2</sup>				

Alternative testing methods for contaminants listed at 40 CFR 141.23 (k)(1)						
Contaminant	Methodology	EPA Method	SM 21 <sup>st</sup> Edition <sup>1</sup>	SM Online <sup>3</sup>	ASTM <sup>4</sup>	Other
Arsenic	Atomic Absorption; Furnace		3113 B		D 2972-08 C	
	Hydride Atomic Absorption		3114 B		D 2972-08 B	
	Axially viewed inductively coupled plasma-atomic emission spectrometry (AVICP-AES)	200.5, Revision 4.2				
Barium	Inductively Coupled Plasma		3120 B			
	Atomic Absorption; Direct		3111 D			
	Atomic Absorption; Furnace		3113 B			
	Axially viewed inductively coupled plasma-atomic emission spectrometry (AVICP-AES)	200.5, Revision 4.2				
Beryllium	Inductively Coupled Plasma		3120 B			
	Atomic Absorption; Furnace		3113 B		D 3645-08 B	
	Axially viewed inductively coupled plasma-atomic emission spectrometry (AVICP-AES)	200.5, Revision 4.2				
Cadmium	Atomic Absorption; Furnace		3113 B			
	Axially viewed inductively coupled plasma-atomic emission spectrometry (AVICP-AES)	200.5, Revision 4.2				



Alternative testing methods for contaminants listed at 40 CFR 141.23 (k)(1)						
Contaminant	Methodology	EPA Method	SM 21 <sup>st</sup> Edition <sup>1</sup>	SM Online <sup>3</sup>	ASTM <sup>4</sup>	Other
Calcium	EDTA titrimetric		3500-Ca B		D 511-09 A	
	Atomic Absorption; Direct Aspiration		3111 B		D 511-09 B	
	Inductively Coupled Plasma		3120 B			
	Axially viewed inductively coupled plasma-atomic emission spectrometry (AVICP-AES)	200.5, Revision 4.2				
Chromium	Inductively Coupled Plasma		3120 B			
	Atomic Absorption; Furnace		3113 B			
	Axially viewed inductively coupled plasma-atomic emission spectrometry (AVICP-AES)	200.5, Revision 4.2				
Copper	Atomic Absorption; Furnace		3113 B		D 1688-07 C	
	Atomic Absorption; Direct Aspiration		3111 B		D 1688-07 A	
	Inductively Coupled Plasma		3120 B			
	Axially viewed inductively coupled plasma-atomic emission spectrometry (AVICP-AES)	200.5, Revision 4.2				
Conductivity	Conductance		2510 B			

Alternative testing methods for contaminants listed at 40 CFR 141.23 (k)(1)						
Contaminant	Methodology	EPA Method	SM 21 <sup>st</sup> Edition <sup>1</sup>	SM Online <sup>3</sup>	ASTM <sup>4</sup>	Other
Cyanide	Manual Distillation followed by Spectrophotometric, Amenable		4500-CN <sup>-</sup> G		D2036-06 A	
	Spectrophotometric Manual		4500-CN <sup>-</sup> E		D2036-06 A	
	Selective Electrode		4500-CN <sup>-</sup> F			
	Gas Chromatography/Mass Spectrometry Headspace					ME355.01 <sup>7</sup>
Fluoride	Ion Chromatography		4110 B			
	Manual Distillation; Colorimetric SPADNS		4500-F <sup>-</sup> B, D			
	Manual Electrode		4500-F <sup>-</sup> C		D1179-04 B	
	Automated Alizarin		4500-F <sup>-</sup> E			
Lead	Atomic Absorption; Furnace		3113 B		D 3559-08 D	
	Axially viewed inductively coupled plasma-atomic emission spectrometry (AVICP-AES)	200.5, Revision 4.2				
Magnesium	Atomic Absorption		3111 B		D 511-09 B	
	Inductively Coupled Plasma		3120 B			
	Complexation Titrimetric Methods		3500-Mg B		D 511-09 A	
	Axially viewed inductively coupled plasma-atomic emission spectrometry (AVICP-AES)	200.5, Revision 4.2				
Mercury	Manual, Cold Vapor		3112 B			

Alternative testing methods for contaminants listed at 40 CFR 141.23 (k)(1)						
Contaminant	Methodology	EPA Method	SM 21 <sup>st</sup> Edition <sup>1</sup>	SM Online <sup>3</sup>	ASTM <sup>4</sup>	Other
Nickel	Inductively Coupled Plasma		3120 B			
	Atomic Absorption; Direct		3111 B			
	Atomic Absorption; Furnace		3113 B			
	Axially viewed inductively coupled plasma-atomic emission spectrometry (AVICP-AES)	200.5, Revision 4.2				
Nitrate	Ion Chromatography		4110 B			
	Automated Cadmium Reduction		4500-NO <sub>3</sub> <sup>-</sup> F			
	Manual Cadmium Reduction		4500-NO <sub>3</sub> <sup>-</sup> E			
	Ion Selective Electrode		4500-NO <sub>3</sub> <sup>-</sup> D			
	Reduction/Colorimetric					Systea Easy (1-Reagent) <sup>8</sup>
Nitrite	Ion Chromatography		4110 B			
	Automated Cadmium Reduction		4500-NO <sub>3</sub> <sup>-</sup> F			
	Manual Cadmium Reduction		4500-NO <sub>3</sub> <sup>-</sup> E			
	Spectrophotometric		4500-NO <sub>2</sub> <sup>-</sup> B			
	Reduction/Colorimetric					Systea Easy (1-Reagent) <sup>8</sup>

Alternative testing methods for contaminants listed at 40 CFR 141.23 (k)(1)						
Contaminant	Methodology	EPA Method	SM 21 <sup>st</sup> Edition <sup>1</sup>	SM Online <sup>3</sup>	ASTM <sup>4</sup>	Other
Orthophosphate	Ion Chromatography		4110 B			
	Colorimetric, ascorbic acid, single reagent		4500-P E	4500-P E-99		
	Colorimetric, Automated, Ascorbic Acid		4500-P F	4500-P F-99		
pH	Electrometric		4500-H <sup>+</sup> B			
Selenium	Hydride-Atomic Absorption		3114 B		D 3859-08 A	
	Atomic Absorption; Furnace		3113 B		D 3859-08 B	
	Axially viewed inductively coupled plasma-atomic emission spectrometry (AVICP-AES)	200.5, Revision 4.2				
Silica	Colorimetric				D859-05	
	Molybdosilicate		4500-SiO <sub>2</sub> C			
	Heteropoly blue		4500-SiO <sub>2</sub> D			
	Automated for Molybdate-reactive Silica		4500-SiO <sub>2</sub> E			
	Axially viewed inductively coupled plasma-atomic emission spectrometry (AVICP-AES)	200.5, Revision 4.2				
	Inductively Coupled Plasma		3120 B			

Alternative testing methods for contaminants listed at 40 CFR 141.23 (k)(1)						
Contaminant	Methodology	EPA Method	SM 21 <sup>st</sup> Edition <sup>1</sup>	SM Online <sup>3</sup>	ASTM <sup>4</sup>	Other
Sodium	Atomic Absorption; Direct Aspiration		3111 B			
	Axially viewed inductively coupled plasma-atomic emission spectrometry (AVICP-AES)	200.5, Revision 4.2				
Temperature	Thermometric		2550			

Alternative testing methods for contaminants listed at 40 CFR 141.24 (e)(1)				
Contaminant	Methodology	EPA Method	SM 21 <sup>st</sup> Edition <sup>1</sup>	SM Online <sup>3</sup>
Benzene	Purge & Trap/Gas Chromatography/Mass Spectrometry	524.3 <sup>9</sup>		
Carbon tetrachloride	Purge & Trap/Gas Chromatography/Mass Spectrometry	524.3		
Chlorobenzene	Purge & Trap/Gas Chromatography/Mass Spectrometry	524.3		
1,2-Dichlorobenzene	Purge & Trap/Gas Chromatography/Mass Spectrometry	524.3		
1,4-Dichlorobenzene	Purge & Trap/Gas Chromatography/Mass Spectrometry	524.3		
1,2-Dichloroethane	Purge & Trap/Gas Chromatography/Mass Spectrometry	524.3		
cis-Dichloroethylene	Purge & Trap/Gas Chromatography/Mass Spectrometry	524.3		
Trans-Dichloroethylene	Purge & Trap/Gas Chromatography/Mass Spectrometry	524.3		
Dichloromethane	Purge & Trap/Gas Chromatography/Mass Spectrometry	524.3		
1,2-Dichloropropane	Purge & Trap/Gas Chromatography/Mass Spectrometry	524.3		
Ethylbenzene	Purge & Trap/Gas Chromatography/Mass Spectrometry	524.3		
Styrene	Purge & Trap/Gas Chromatography/Mass Spectrometry	524.3		
Tetrachloroethylene	Purge & Trap/Gas Chromatography/Mass Spectrometry	524.3		
1,1,1-Trichloroethane	Purge & Trap/Gas Chromatography/Mass Spectrometry	524.3		

Alternative testing methods for contaminants listed at 40 CFR 141.24 (e)(1)				
Contaminant	Methodology	EPA Method	SM 21 <sup>st</sup> Edition <sup>1</sup>	SM Online <sup>3</sup>
Trichloroethylene	Purge & Trap/Gas Chromatography/Mass Spectrometry	524.3		
Toluene	Purge & Trap/Gas Chromatography/Mass Spectrometry	524.3		
1,2,4-Trichlorobenzene	Purge & Trap/Gas Chromatography/Mass Spectrometry	524.3		
1,1-Dichloroethylene	Purge & Trap/Gas Chromatography/Mass Spectrometry	524.3		
1,1,2-Trichloroethane	Purge & Trap/Gas Chromatography/Mass Spectrometry	524.3		
Vinyl chloride	Purge & Trap/Gas Chromatography/Mass Spectrometry	524.3		
Xylenes (total)	Purge & Trap/Gas Chromatography/Mass Spectrometry	524.3		
Carbofuran	High-performance liquid chromatography (HPLC) with post-column derivatization and fluorescence detection		6610 B	6610 B-04
Dalapon	Ion Chromatography Electrospray Ionization Tandem Mass Spectrometry (IC-ESI-MS/MS)	557 <sup>14</sup>	6640 B	6640 B-01
Dibromochloropropane (DBCP)	Purge & Trap/Gas Chromatography/Mass Spectrometry	524.3		
Ethyl dibromide (EDB)	Purge & Trap/Gas Chromatography/Mass Spectrometry	524.3		
Oxamyl	High-performance liquid chromatography (HPLC) with post-column derivatization and fluorescence detection		6610 B	6610 B-04
Total Trihalomethanes	Purge & Trap/Gas Chromatography/Mass Spectrometry	524.3		

Alternative testing methods for contaminants listed at 40 CFR 141.25(a)			
Contaminant	Methodology	SM 21 <sup>st</sup> Edition <sup>1</sup>	ASTM <sup>4</sup>
Naturally Occurring:			
Gross alpha and beta	Evaporation	7110 B	
Gross alpha	Coprecipitation	7110 C	
Radium 226	Radon emanation	7500-Ra C	D3454-05
	Radiochemical	7500-Ra B	D2460-07



Alternative testing methods for contaminants listed at 40 CFR 141.25(a)			
Contaminant	Methodology	SM 21 <sup>st</sup> Edition <sup>1</sup>	ASTM <sup>4</sup>
Radium 228	Radiochemical	7500-Ra D	
Uranium	Radiochemical	7500-U B	
	ICP-MS		D5673-05
	Alpha spectrometry	7500-U C	
	Laser Phosphorimetry		D5174-07
Man-Made:			
Radioactive Cesium	Radiochemical	7500-Cs B	
	Gamma Ray Spectrometry	7120	D3649-06
Radioactive Iodine	Radiochemical	7500-I B	D3649-06
		7500-I C	
		7500-I D	
	Gamma Ray Spectrometry	7120	D4785-08
Radioactive Strontium 89, 90	Radiochemical	7500-Sr B	
Tritium	Liquid Scintillation	7500- <sup>3</sup> H B	D4107-08
Gamma Emitters	Gamma Ray Spectrometry	7120	D3649-06
		7500-Cs B	D4785-08
		7500-I B	

Alternative testing methods for contaminants listed at 40 CFR 141.74(a)(1)			
Organism	Methodology	SM 21 <sup>st</sup> Edition <sup>1</sup>	Other
Total Coliform	Total Coliform Fermentation Technique	9221 A, B, C	
	Total Coliform Membrane Filter Technique	9222 A, B, C	
	ONPG-MUG Test	9223	
Fecal Coliforms	Fecal Coliform Procedure	9221 E	

Alternative testing methods for contaminants listed at 40 CFR 141.74(a)(1)			
Organism	Methodology	SM 21 <sup>st</sup> Edition <sup>1</sup>	Other
	Fecal Coliform Filter Procedure	9222 D	
Heterotrophic bacteria	Pour Plate Method	9215 B	
Turbidity	Nephelometric Method	2130 B	
	Laser Nephelometry (on-line)		Mitchell M5271 <sup>10</sup>
	LED Nephelometry (on-line)		Mitchell M5331 <sup>11</sup>
	LED Nephelometry (on-line)		AMI Turbiwell <sup>15</sup>
	LED Nephelometry (portable)		Orion AQ4500 <sup>12</sup>

Alternative testing methods for disinfectant residuals listed at 40 CFR 141.74(a)(2)				
Residual	Methodology	SM 21 <sup>st</sup> Edition <sup>1</sup>	ASTM <sup>4</sup>	Other
Free Chlorine	Amperometric Titration	4500-CI D	D 1253-08	
	DPD Ferrous Titrimetric	4500-CI F		
	DPD Colorimetric	4500-CI G		
	Syringaldazine (FACTS)	4500-CI H		
	On-line Chlorine Analyzer			EPA 334.0 <sup>16</sup>
	Amperometric Sensor			ChloroSense <sup>17</sup>
Total Chlorine	Amperometric Titration	4500-CI D	D 1253-08	
	Amperometric Titration (Low level measurement)	4500-CI E		
	DPD Ferrous Titrimetric	4500-CI F		
	DPD Colorimetric	4500-CI G		
	Iodometric Electrode	4500-CI I		
	On-line Chlorine Analyzer			EPA 334.0 <sup>16</sup>

Alternative testing methods for disinfectant residuals listed at 40 CFR 141.74(a)(2)				
Residual	Methodology	SM 21 <sup>st</sup> Edition <sup>1</sup>	ASTM <sup>4</sup>	Other
	Amperometric Sensor			ChloroSense <sup>17</sup>
Chlorine Dioxide	Amperometric Titration	4500-ClO <sub>2</sub> C		
	Amperometric Titration	4500-ClO <sub>2</sub> E		
Ozone	Indigo Method	4500-O <sub>3</sub> B		

Alternative testing methods for contaminants listed at 40 CFR 141.131(b)(1)				
Contaminant	Methodology	EPA Method	ASTM <sup>4</sup>	SM 21 <sup>st</sup> Edition <sup>1</sup>
TTHM	P&T/GC/MS	524.3 <sup>9</sup>		
HAA5	LLE (diazomethane)/GC/ECD			6251 B
	Ion Chromatography Electrospray Ionization Tandem Mass Spectrometry (IC-ESI-MS/MS)	557 <sup>14</sup>		
Bromate	Two-Dimensional Ion Chromatography (IC)	302.0 <sup>18</sup>		
	Ion Chromatography Electrospray Ionization Tandem Mass Spectrometry (IC-ESI-MS/MS)	557 <sup>14</sup>		
	Chemically Suppressed Ion Chromatography		D 6581-08 A	
	Electrolytically Suppressed Ion Chromatography		D 6581-08 B	
Chlorite	Chemically Suppressed Ion Chromatography		D 6581-08 A	
	Electrolytically Suppressed Ion Chromatography		D 6581-08 B	
Chlorite – daily monitoring as prescribed in 40 CFR 141.132(b)(2)(i)(A)	Amperometric Titration			4500-ClO <sub>2</sub> E

Alternative testing methods for disinfectant residuals listed at 40 CFR 141.131(c)(1)				
Residual	Methodology	SM 21 <sup>st</sup> Edition <sup>1</sup>	ASTM <sup>4</sup>	Other

Alternative testing methods for disinfectant residuals listed at 40 CFR 141.131(c)(1)				
Residual	Methodology	SM 21 <sup>st</sup> Edition <sup>1</sup>	ASTM <sup>4</sup>	Other
Free Chlorine	Amperometric Titration	4500-Cl D	D 1253-08	
	DPD Ferrous Titrimetric	4500-Cl F		
	DPD Colorimetric	4500-Cl G		
	Syringaldazine (FACTS)	4500-Cl H		
	Amperometric Sensor			ChloroSense <sup>17</sup>
	On-line Chlorine Analyzer			EPA 334.0 <sup>16</sup>
Combined Chlorine	Amperometric Titration	4500-Cl D	D 1253-08	
	DPD Ferrous Titrimetric	4500-Cl F		
	DPD Colorimetric	4500-Cl G		
Total Chlorine	Amperometric Titration	4500-Cl D	D 1253-08	
	Low level Amperometric Titration	4500-Cl E		
	DPD Ferrous Titrimetric	4500-Cl F		
	DPD Colorimetric	4500-Cl G		
	Iodometric Electrode	4500-Cl I		
	Amperometric Sensor			ChloroSense <sup>17</sup>
	On-line Chlorine Analyzer			EPA 334.0 <sup>16</sup>
Chlorine Dioxide	Amperometric Method II	4500-ClO <sub>2</sub> E		

Alternative testing methods for disinfectant residuals listed at 40 CFR 141.131(c)(2), if approved by the State		
Residual	Methodology	Method
Free Chlorine	Test Strips	Method D99-003 <sup>3</sup>

Alternative testing methods for parameters listed at 40 CFR 141.131(d)			
Parameter	Methodology	SM 21 <sup>st</sup> Edition <sup>1</sup>	EPA

Alternative testing methods for parameters listed at 40 CFR 141.131(d)			
Parameter	Methodology	SM 21 <sup>st</sup> Edition <sup>1</sup>	EPA
Total Organic Carbon (TOC)	High Temperature Combustion	5310 B	415.3, Rev 1.2 <sup>19</sup>
	Persulfate-Ultraviolet or Heated Persulfate Oxidation	5310 C	415.3, Rev 1.2
	Wet Oxidation	5310 D	415.3, Rev 1.2
Specific Ultraviolet Absorbance (SUVA)	Calculation using DOC and UV <sub>254</sub> data		415.3, Rev 1.2
Dissolved Organic Carbon (DOC)	High Temperature Combustion	5310 B	415.3, Rev 1.2
	Persulfate-Ultraviolet or Heated Persulfate Oxidation	5310 C	415.3, Rev 1.2
	Wet Oxidation	5310 D	415.3, Rev 1.2
Ultraviolet absorption at 254 nm (UV <sub>254</sub> )	Spectrophotometry	5910 B	415.3, Rev 1.2

Alternative testing methods with MRL $\leq 0.0010$ mg/L for monitoring listed at 40 CFR 141.132(b)(3)(ii)(B)		
Contaminant	Methodology	EPA Method
Bromate	Two-Dimensional Ion Chromatography (IC)	302.0 <sup>18</sup>
	Ion Chromatography Electrospray Ionization Tandem Mass Spectrometry (IC-ESI-MS/MS)	557 <sup>14</sup>

Alternative testing methods for contaminants listed at 40 CFR 141.402(c)(2)					
Organism	Methodology	SM 20 <sup>th</sup> Edition <sup>6</sup>	SM 21 <sup>st</sup> Edition <sup>1</sup>	SM Online <sup>3</sup>	Other
<i>E. coli</i>	Colilert		9223 B	9223 B-97	
	Colisure		9223 B	9223 B-97	
	Colilert-18	9223 B	9223 B	9223 B-97	
	ReadyCult®				ReadyCult® <sup>20</sup>

Alternative testing methods for contaminants listed at 40 CFR 141.402(c)(2)					
Organism	Methodology	SM 20 <sup>th</sup> Edition <sup>6</sup>	SM 21 <sup>st</sup> Edition <sup>1</sup>	SM Online <sup>3</sup>	Other
	Colitag				Modified Colitag™ <sup>13</sup>
	Chromocult®				Chromocult® <sup>21</sup>
Enterococci	Multiple-Tube Technique			9230 B-04	

Alternative testing methods for contaminants listed at 40 CFR 141.704(b)		
Organism	Methodology	SM 20 <sup>th</sup> Edition <sup>6</sup>
<i>E. coli</i>	Membrane Filtration, Two Step	9222 D/9222 G

Alternative testing methods for contaminants listed at 40 CFR 143.4(b)					
Contaminant	Methodology	EPA Method	ASTM <sup>4</sup>	SM 21 <sup>st</sup> Edition <sup>1</sup>	SM Online <sup>3</sup>
Aluminum	Axially viewed inductively coupled plasma-atomic emission spectrometry (AVICP-AES)	200.5, Revision 4.2 <sup>2</sup>			
	Atomic Absorption; Direct			3111 D	
	Atomic Absorption; Furnace			3113 B	
	Inductively Coupled Plasma			3120 B	
Chloride	Silver Nitrate Titration		D 512-04 B	4500-Cl <sup>-</sup> B	
	Ion Chromatography			4110 B	
	Potentiometric Titration			4500-Cl <sup>-</sup> D	
Color	Visual Comparison			2120 B	
Foaming Agents	Methylene Blue Active Substances (MBAS)			5540 C	
Iron	Axially viewed inductively coupled plasma-atomic emission spectrometry (AVICP-AES)	200.5, Revision 4.2			
	Atomic Absorption; Direct			3111 B	



Alternative testing methods for contaminants listed at 40 CFR 143.4(b)					
Contaminant	Methodology	EPA Method	ASTM <sup>4</sup>	SM 21 <sup>st</sup> Edition <sup>1</sup>	SM Online <sup>3</sup>
Manganese	Atomic Absorption; Furnace			3113 B	
	Inductively Coupled Plasma			3120 B	
	Axially viewed inductively coupled plasma-atomic emission spectrometry (AVICP-AES)	200.5, Revision 4.2			
	Atomic Absorption; Direct			3111 B	
	Atomic Absorption; Furnace			3113 B	
Odor	Inductively Coupled Plasma			3120 B	
	Threshold Odor Test			2150 B	
Silver	Axially viewed inductively coupled plasma-atomic emission spectrometry (AVICP-AES)	200.5, Revision 4.2			
	Atomic Absorption; Direct			3111 B	
	Atomic Absorption; Furnace			3113 B	
	Inductively Coupled Plasma			3120 B	
Sulfate	Ion Chromatography			4110 B	
	Gravimetric with ignition of residue			4500-SO <sub>4</sub> <sup>-2</sup> C	4500-SO <sub>4</sub> <sup>-2</sup> C-97
	Gravimetric with drying of residue			4500-SO <sub>4</sub> <sup>-2</sup> D	4500-SO <sub>4</sub> <sup>-2</sup> D-97
	Turbidimetric method		D 516-07	4500-SO <sub>4</sub> <sup>-2</sup> E	4500-SO <sub>4</sub> <sup>-2</sup> E-97
	Automated methylthymol blue method			4500-SO <sub>4</sub> <sup>-2</sup> F	4500-SO <sub>4</sub> <sup>-2</sup> F-97
Total Dissolved Solids	Total Dissolved Solids Dried at 180 deg C			2540 C	
Zinc	Axially viewed inductively coupled plasma-atomic emission spectrometry (AVICP-AES)	200.5, Revision 4.2			
	Atomic Absorption; Direct Aspiration			3111 B	
	Inductively Coupled Plasma			3120 B	

<sup>1</sup> Standard Methods for the Examination of Water and Wastewater, 21<sup>st</sup> edition (2005). Available from American Public Health Association, 800 I Street, NW, Washington, DC 20001-3710.

<sup>2</sup> EPA Method 200.5, Revision 4.2. "Determination of Trace Elements in Drinking Water by Axially Viewed Inductively Coupled Plasma-Atomic Emission Spectrometry." 2003. EPA/600/R-06/115. (Available at <http://www.epa.gov/ncrlcwww/ordmeth.htm>.)

<sup>3</sup> Standard Methods Online are available at <http://www.standardmethods.org>. The year in which each method was approved by the Standard Methods Committee is designated by the last two digits in the method number. The methods listed are the only online versions that may be used.

<sup>4</sup> Available from ASTM International, 100 Barr Harbor Drive, West Conshohocken, PA 19428-2959 or <http://astm.org>. The methods listed are the only alternative versions that may be used.

<sup>5</sup> Method D99-003, Revision 3.0. "Free Chlorine Species (HOCl<sup>-</sup> and OCl<sup>-</sup>) by Test Strip," November 21, 2003. Available from Industrial Test Systems, Inc., 1875 Langston St., Rock Hill, SC 29730.

<sup>6</sup> Standard Methods for the Examination of Water and Wastewater, 20<sup>th</sup> edition (1998). Available from American Public Health Association, 800 I Street, NW, Washington, DC 20001-3710.

<sup>7</sup> Method ME355.01, Revision 1.0. "Determination of Cyanide in Drinking Water by GC/MS Headspace," May 26, 2009. Available at <http://www.ncmi.gov> or from James Eaton, H & E Testing Laboratory, 221 State Street, Augusta, ME 04333. (207) 287-2727.

<sup>8</sup> Syssta Easy (1-Reagent). "Syssta Easy (1-Reagent) Nitrate Method," February 4, 2009. Available at <http://www.ncmi.gov> or from Syssta Scientific, LLC., 900 Jorie Blvd., Suite 35, Oak Brook, IL 60523.

<sup>9</sup> EPA Method 524.3, Version 1.0. "Measurement of Purgeable Organic Compounds in Water by Capillary Column Gas Chromatography/Mass Spectrometry," June 2009. EPA 815-B-09-009. Available at [http://epa.gov/safewater/methods/analyticalmethods\\_ogwdw.html](http://epa.gov/safewater/methods/analyticalmethods_ogwdw.html).

<sup>10</sup> Mitchell Method M5271, Revision 1.1. "Determination of Turbidity by Laser Nephelometry," March 5, 2009. Available at <http://www.ncmi.gov> or from Leck Mitchell, Ph.D., PE, 656 Independence Valley Dr., Grand Junction, CO 81507.

<sup>11</sup> Mitchell Method M5331, Revision 1.1. "Determination of Turbidity by LED Nephelometry," March 5, 2009. Available at <http://www.nemi.gov> or from Leck Mitchell, Ph.D., PE, 656 Independence Valley Dr., Grand Junction, CO 81507.

<sup>12</sup> Orion Method AQ4500, Revision 1.0. "Determination of Turbidity by LED Nephelometry," May 8, 2009. Available at <http://www.nemi.gov> or from Thermo Scientific, 166 Cummings Center, Beverly, MA 01915, <http://www.thermo.com>.

<sup>13</sup> Modified Colitag™ Method. "Modified Colitag™ Test Method for the Simultaneous Detection of *E. coli* and other Total Coliforms in Water (ATP D05-0035)," August 28, 2009. Available at <http://www.nemi.gov> or from CPI International, 5580 Skylane Boulevard, Santa Rosa, CA 95403.

<sup>14</sup> EPA Method 557. "Determination of Haloacetic Acids, Bromate, and Dalapon in Drinking Water by Ion Chromatography Electrospray Ionization Tandem Mass Spectrometry (IC-ESI-MS/MS)," September 2009. EPA 815-B-09-012. Available at [http://epa.gov/safewater/methods/analyticalmethods\\_ogwdw.html](http://epa.gov/safewater/methods/analyticalmethods_ogwdw.html).

<sup>15</sup> AMI Turbiwell, "Continuous Measurement of Turbidity Using a SWAN AMI Turbiwell Turbidimeter," August 2009. Available at <http://www.nemi.gov> or from Markus Bernasconi, SWAN Analytische Instrumente AG, Studbachstrasse 13, CH-8340 Hinwil, Switzerland.

<sup>16</sup> EPA Method 334.0. "Determination of Residual Chlorine in Drinking Water Using an On-line Chlorine Analyzer," September 2009. EPA 815-B-09-013. Available at [http://epa.gov/safewater/methods/analyticalmethods\\_ogwdw.html](http://epa.gov/safewater/methods/analyticalmethods_ogwdw.html).

<sup>17</sup> ChloroSense. "Measurement of Free and Total Chlorine in Drinking Water by Palintest ChloroSense," August 2009. Available at <http://www.nemi.gov> or from Palintest Ltd, 21 Kenton Lands Road, PO Box 18395, Erlanger, KY 41018.

<sup>18</sup> EPA Method 302.0. "Determination of Bromate in Drinking Water using Two-Dimensional Ion Chromatography with Suppressed Conductivity Detection," September 2009. EPA 815-B-09-014. Available at [http://epa.gov/safewater/methods/analyticalmethods\\_ogwdw.html](http://epa.gov/safewater/methods/analyticalmethods_ogwdw.html).

<sup>19</sup> EPA 415.3, Revision 1.2. "Determination of Total Organic Carbon and Specific UV Absorbance at 254 nm in Source Water and Drinking Water," August 2009. EPA/600/R-09/122. Available at <http://www.epa.gov/nrlcwww/ordmeth.htm>.

<sup>20</sup> ReadyCult® Method, "ReadyCult® Coliforms 100 Presence/Absence Test for Detection and Identification of Coliform Bacteria and *Escherichia coli* in Finished Waters," January, 2007. Version 1.1. Available from EMD Chemicals (affiliate of Merck KGaA,

Darmstadt, Germany), 480 S. Democrat Road, Gibbstown, NJ 08027-1297.

<sup>21</sup> Chromocult® Method, "Chromocult® Coliform Agar Presence/Absence Membrane Filter Test Method for Detection and Identification of Coliform Bacteria and *Escherichia coli* in Finished Waters," November, 2000. Version 1.0. EMD Chemicals (affiliate of Merck KGaA, Darmstadt, Germany), 480 S. Democrat Road, Gibbstown, NJ 08027-1297.

RFQ No. LBS14051STATE OF WEST VIRGINIA  
Purchasing Division**PURCHASING AFFIDAVIT**

**MANDATE:** Under W. Va. Code §5A-3-10a, 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: (1) the debt owed is an amount greater than one thousand dollars in the aggregate; or (2) the debtor is in employer default.

**EXCEPTION:** The prohibition listed above does not apply where a vendor has contested any tax administered pursuant to chapter eleven of the W. Va. 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.

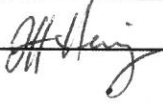
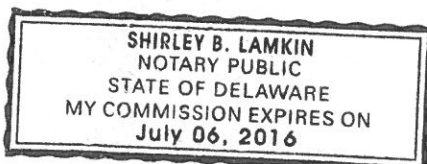
**DEFINITIONS:**

**"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.

**"Employer default"** means having an outstanding balance or liability to the old fund or to the uninsured employers' fund or being in policy default, as defined in W. Va. Code § 23-2c-2, failure to maintain mandatory workers' compensation coverage, or failure to fully meet its obligations as a workers' compensation self-insured employer. An employer is not in employer default if it has entered into a repayment agreement with the Insurance Commissioner and remains in compliance with the obligations under the repayment agreement.

**"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.

**AFFIRMATION:** By signing this form, the vendor's authorized signer affirms and acknowledges under penalty of law for false swearing (W. Va. Code §61-5-3) that neither vendor nor any related party owe a debt as defined above and that neither vendor nor any related party are in employer default as defined above, unless the debt or employer default is permitted under the exception above.

**WITNESS THE FOLLOWING SIGNATURE:**Vendor's Name: Agilent Technologies, Inc.Authorized Signature:  Date: 11/27/2013State of DelawareCounty of New Castle, to-wit:Taken, subscribed, and sworn to before me this 27 day of November, 2013.My Commission expires July 6, 2016.**AFFIX SEAL HERE**NOTARY PUBLIC. *Purchasing Affidavit (Revised 07/01/2012)*

**CERTIFICATION AND SIGNATURE PAGE**

By signing below, I certify that I have reviewed this Solicitation in its entirety; understand the requirements, terms and conditions, and other information contained herein; that I am submitting this bid or proposal for review and consideration; that I am authorized by the bidder to execute this bid or any documents related thereto on bidder's behalf; that I am authorized to bind the bidder in a contractual relationship; and that to the best of my knowledge, the bidder has properly registered with any State agency that may require registration.

Agilent Technologies, Inc.  
(Company)

  
(Authorized Signature)

Jeff Harrigan, Business Sales Specialist  
(Representative Name, Title)

800-227-9770      302-993-5941  
(Phone Number)                      (Fax Number)

11/27/2013  
(Date)





Rev. 07/12

## State of West Virginia

# 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.

**7. Application is made for preference as a non-resident small, women- and minority-owned business, in accordance with West Virginia Code §5A-3-59 and West Virginia Code of State Rules.**

\_\_\_\_ Bidder has been or expects to be approved prior to contract award by the Purchasing Division as a certified small, women- and minority-owned business.

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:** Agilent Technologies, Inc.

**Signed:** 

**Date:** 11/27/2013

**Title:** Business Sales Specialist

**ADDENDUM ACKNOWLEDGEMENT FORM**  
**SOLICITATION NO.: LBS14051**

**Instructions:** Please acknowledge receipt of all addenda issued with this solicitation by completing this addendum acknowledgment form. Check the box next to each addendum received and sign below. Failure to acknowledge addenda may result in bid disqualification.

**Acknowledgment:** I hereby acknowledge receipt of the following addenda and have made the necessary revisions to my proposal, plans and/or specification, etc.

**Addendum Numbers Received:**

(Check the box next to each addendum received)

- |   |  |
|---|--|
| <input type="checkbox"/> Addendum No. 1 | <input type="checkbox"/> Addendum No. 6  |
| <input type="checkbox"/> Addendum No. 2 | <input type="checkbox"/> Addendum No. 7  |
| <input type="checkbox"/> Addendum No. 3 | <input type="checkbox"/> Addendum No. 8  |
| <input type="checkbox"/> Addendum No. 4 | <input type="checkbox"/> Addendum No. 9  |
| <input type="checkbox"/> Addendum No. 5 | <input type="checkbox"/> Addendum No. 10 |

I understand that failure to confirm the receipt of addenda may be cause for rejection of this bid. I further understand that any verbal representation made or assumed to be made during any oral discussion held between Vendor's representatives and any state personnel is not binding. Only the information issued in writing and added to the specifications by an official addendum is binding.

Agilent Technologies, Inc.

Company

None Recd.

Authorized Signature

11/27/2013

Date

**NOTE:** This addendum acknowledgment should be submitted with the bid to expedite document processing.



**Agilent Technologies**

Agilent Technologies, Inc. 800 227 9770 telephone  
Customer Sales and Service, LSCA Bids 302 993 5941 facsimile  
2850 Centerville Road, MS 3N3 www.agilent.com  
Wilmington, DE 19808

November 27, 2013

Roberta Wagner  
State of West Virginia  
Department of Administration  
Purchasing Division  
2019 Washington Street East  
Charleston, WV 25305

Attention: Roberta Wagner

Reference: Solicitation LBS 14051 due 12/3/13  
Agilent Technologies, Inc. Quotation 1489164

Agilent Technologies, Inc. (Agilent) is pleased to respond to the above referenced solicitation. We are bidding in accordance with the attached quotation number 1489164 which is hereby incorporated by reference.

Agilent's bid meets or exceeds all of the specifications as listed in this solicitation. Please refer to the referenced quotation and enclosed product literature for details of our offer.

If you have technical questions regarding the products listed on the quotation, please contact Max Keough, your Agilent Product Specialist, at (513) 732-9610 or by e-mail at [max.keough@agilent.com](mailto:max.keough@agilent.com). If you have other questions regarding Agilent's response, please contact the undersigned at 302-633-8173.

Sincerely,

Agilent Technologies, Inc.

Jeff Harrigan  
Business Sales Specialist



## Agilent Technologies

Roberta Wagner  
State of West Virginia  
Department of Administration  
Purchasing Division  
2019 Washington Street East  
Charleston WV 25305

TEL: 3045580067 FAX: 3045584115

## Quotation

Quote No.	Create Date	Delivery Time	Page
1489164	11/07/2013	3 Weeks	1 of 7
Contact	Phone no.	Valid to	
Max Keough	513-732-9610	01/06/2014	
To place an order: Call 1-800-227-9770 Option 1			
For Instruments Fax : 302-633-8953			
For Consumables Fax : 302-633-8901			
Email : LSCAinstrumentsales@agilent.com			
For Genomics Fax : 512-321-3128			
Email : orders@agilent.com			
For additional instructions, see last page			

Product/Description	Qty/Unit	Unit List Price	Discount Amount	Extended Net Price
<b>G8432AA</b> The 240FS AA Spectrometer supports Fast Sequential operation, enabling multiple elements to be measured in rapid sequence in a single sample measurement. Includes integrated SIPS power supply  With the following configuration: Ship-to Country : USA Delete Printer Installation (44K) Familiarization at Installation (44L)  Special discount of 20.00 % is applied.	1.000 EA	39,009.00 USD	7,801.80-	31,207.20
<b>5610105300</b> Sodium - Na, Coded HC Lamp, 1/pk. Coded single element hollow cathode lamp. Easier to use - element coded for automatic lamp recognition, preventing errors.  Special discount of 20.00 % is applied.	1.000 EA	508.00 USD	101.60-	406.40



## Agilent Technologies

Roberta Wagner  
State of West Virginia  
Department of Administration  
Purchasing Division  
2019 Washington Street East  
Charleston WV 25305

TEL: 3045580067 FAX: 3045584115

## Quotation

Quote No.	Create Date	Delivery Time	Page
1489164	11/07/2013	3 Weeks	2 of 7
Contact	Phone no.	Valid to	
Max Keough	513-732-9610	01/06/2014	
To place an order: Call 1-800-227-9770 Option 1			
For Instruments Fax : 302-633-8953			
For Consumables Fax : 302-633-8901			
Email : LSCAinstrumentsales@agilent.com			
For Genomics Fax : 512-321-3128			
Email : orders@agilent.com			

Product/Description	Qty/Unit	Unit List Price	Discount Amount	Extended Net Price
<b>5610102700</b> Iron - Fe, Coded HC Lamp, 1/pk. Coded single element hollow cathode lamp. Easier to use - element coded for automatic lamp recognition, preventing errors.	1.000 EA	508.00 USD	101.60-	406.40
Special discount of 20.00 % is applied.				
<b>5610103200</b> Magnesium - Mg, Coded HC Lamp, 1/pk. Coded single element hollow cathode lamp. Easier to use - element coded for automatic lamp recognition, preventing errors.	1.000 EA	508.00 USD	101.60-	406.40
Special discount of 20.00 % is applied.				



## Agilent Technologies

## Quotation

Roberta Wagner  
State of West Virginia  
Department of Administration  
Purchasing Division  
2019 Washington Street East  
Charleston WV 25305

TEL: 3045580067 FAX: 3045584115

Quote No.	Create Date	Delivery Time	Page
1489164	11/07/2013	3 Weeks	3 of 7
Contact	Phone no.	Valid to	
Max Keough	513-732-9610	01/06/2014	
To place an order: Call 1-800-227-9770 Option 1 For Instruments Fax : 302-633-8953 For Consumables Fax : 302-633-8901 Email : LSCAinstrumentsales@agilent.com For Genomics Fax : 512-321-3128 Email : orders@agilent.com			

Product/Description	Qty/Unit	Unit List Price	Discount Amount	Extended Net Price
<b>5610103300</b> Manganese - Mn, Coded HC Lamp, 1/pk. Coded single element hollow cathode lamp. Easier to use - element coded for automatic lamp recognition, preventing errors.	1.000 EA	508.00 USD	101.60-	406.40

Special discount of 20.00 % is applied.

<b>SYS-AA-280-E</b> AA 240/280 System Enhanced Features	1.000 EA	3,204.00 USD	801.00-	2,403.00
--	----------	--------------	---------	----------

With the following configuration:  
Ship-to Country : USA

Extended Warranty 2 years total

Promotion discount of  
5.00% is applied based upon conditions which can be reviewed on  
request.  
Special discount of 20.00 % is applied.





## Agilent Technologies

## Quotation

Roberta Wagner  
State of West Virginia  
Department of Administration  
Purchasing Division  
2019 Washington Street East  
Charleston WV 25305

TEL: 3045580067 FAX: 3045584115

Quote No.	Create Date	Delivery Time	Page
1489164	11/07/2013	3 Weeks	4 of 7
Contact	Phone no.	Valid to	
Max Keough	513-732-9610	01/06/2014	
To place an order: Call 1-800-227-9770 Option 1			
For Instruments Fax : 302-633-8953			
For Consumables Fax : 302-633-8901			
Email : LSCAinstrumentsales@agilent.com			
For Genomics Fax : 512-321-3128			
Email : orders@agilent.com			

Product/Description	Qty/Unit	Unit List Price	Discount Amount	Extended Net Price
<b>H2149A</b> Chemical Analysis Application Consulting Provides on-site assistance. For consulting, training, documentation and implementation services. Requires option.  With the following configuration: Ship-to Country : USA Two Day On-site (Includes Travel)	1.000 EA	6,150.00 USD	1,230.00-	4,920.00
<b>NON AGILENT PROD</b> Laserjet Printer HP LaserJet Enterprise P3015n - Printer - monochrome - laser - Legal - 1200 dpi - up to 42 ppm - capacity: 600 sheets - USB, Gigabit LAN Hewlett Packard - Part#: CE527A#ABA	1.000 EA	767.50 USD		767.50

Please note that above product Laserjet Printer is not manufactured by Agilent Technologies which hereby disclaims any liability for the performance, quality, reliability or delivery of the items. The standard warranty, INCLUDING INDEMNIFICATION FOR INTELLECTUAL PROPERTY INFRINGEMENT, is to be supplied by manufacturer unless otherwise specified on the Agilent Technologies quotation.



## Agilent Technologies

Roberta Wagner  
State of West Virginia  
Department of Administration  
Purchasing Division  
2019 Washington Street East  
Charleston WV 25305

TEL: 3045580067 FAX: 3045584115

## Quotation

Quote No.	Create Date	Delivery Time	Page
1489164	11/07/2013	3 Weeks	5 of 7
Contact	Phone no.	Valid to	
Max Keough	513-732-9610	01/06/2014	
To place an order: Call 1-800-227-9770 Option 1			
For Instruments Fax : 302-633-8953			
For Consumables Fax : 302-633-8901			
Email : LSCAinstrumentsales@agilent.com			
For Genomics Fax : 512-321-3128			
Email : orders@agilent.com			

Product/Description	Qty/Unit	Unit List Price	Discount Amount	Extended Net Price
---------------------	----------	-----------------------	--------------------	--------------------------

Gross Amount	:	\$	51,162.50
Total Discount	:	\$	10,239.20
Net Amount	:	\$	40,923.30

<b>Total</b>	:	<b>\$</b>	<b>40,923.30</b>
--------------	---	-----------	------------------



## Agilent Technologies

Roberta Wagner  
State of West Virginia  
Department of Administration  
Purchasing Division  
2019 Washington Street East  
Charleston WV 25305

TEL: 3045580067 FAX: 3045584115

## Quotation

Quote No.	Create Date	Delivery Time	Page
1489164	11/07/2013	3 Weeks	6 of 7
Contact	Phone no.	Valid to	
Max Keough	513-732-9610	01/06/2014	
To place an order: Call 1-800-227-9770 Option 1			
For Instruments Fax : 302-633-8953			
For Consumables Fax : 302-633-8901			
Email : LSCAinstrumentsales@agilent.com			
For Genomics Fax: 512-321-3128			
Email : orders@agilent.com			

TO PLACE AN ORDER, Agilent offers several options:

- 1) Visit <http://www.agilent.com/chem/supplies> to place online orders using a purchase order or credit card.
- 2) Call 1-800-227-9770 (option 1) any weekday between 8am and 8 pm Eastern time in the U.S., Canada & Puerto Rico.
- 3) To place an order for Consumables, please fax the order to 302-633-8901.  
To place an instrument and/or software order, please fax the order to 302-633-8953.  
To place an order for Genomics, please fax the order to 512-321-3128, or email to orders@agilent.com
- 4) Or you can mail your order to:  
Agilent Technologies  
North American Customer Contact Center  
2850 Centerville Road BU3-2  
Wilmington, DE 19808-1610

To place an order, the following information is required:

- Purchase order number or credit card, delivery date, ship to, invoice to, end user, and quote number.
- GSA customers please provide GSA contract #.

EXCLUSIVE OFFERS FOR NEW INSTRUMENT CUSTOMERS, go to [www.agilent.com/chem/exclusiveoffers](http://www.agilent.com/chem/exclusiveoffers)

TO CHECK THE STATUS OF AN ORDER:

- 1) Visit <http://www.agilent.com/chem/supplies> to check the status of your order.
- 2) Call 1-800-227-9770 (option 1) any weekday between 8 am and 8 pm Eastern time, in the U.S., Canada & Puerto Rico. You will need to know the purchase order or credit card number the order was placed on.

FINANCING AND LEASING - A wide range of options are available from Agilent's preferred financing partner, Leasing Group Inc. (LGI).

For more information or to discuss how monthly payments could suit your operational or budgetary requirements, contact your Agilent Account Manager or contact LGI at 800-944-1370.

### TERMS AND CONDITIONS:

- Pricing: Web prices are provided only for the U.S. in U.S. dollars. All phone prices are in local currency and for end use. Applicable local taxes are applied.
  - All Sales Tax is subject to change at the time of order.
  - Shipping and Handling Charges: Orders with a value less than \$4000 or those requiring special services such as overnight delivery may be subject to additional shipping & handling fees. Some of these charges may be avoided by ordering via the Web
  - Payment Terms: Net 30 days from invoice date, subject to credit approval.
  - \* Quotation Validity: This quotation is valid for 60 days unless otherwise indicated.
  - \* Warranty period for instrumentation is 1 year. The Warranty period for columns and consumables is 90 days.
- Visit [www.agilent.com/chem](http://www.agilent.com/chem)
- For Training course information and registration including e-Seminars, select [Education](#).
  - For Literature, Application notes, and other information, select [Library](#).
  - For Online Technical Support including the Technical Support Assistant and Frequently Asked Questions, select [Technical Support](#).

It is Agilent Technologies intent to ship product at the earliest available date unless specified otherwise.



**Agilent Technologies**

## Quotation

Roberta Wagner  
State of West Virginia  
Department of Administration  
Purchasing Division  
2019 Washington Street East  
Charleston WV 25305

TEL: 3045580067 FAX: 3045584115

Quote No.	Create Date	Delivery Time	Page
1489164	11/07/2013	3 Weeks	7 of 7
Contact	Phone no.	Valid to	
Max Keough	513-732-9610	01/06/2014	
To place an order: Call 1-800-227-9770 Option 1 For Instruments Fax : 302-633-8953 For Consumables Fax : 302-633-8901 Email : LSCAinstrumentsales@agilent.com For Genomics Fax : 512-321-3128 Email : orders@agilent.com			

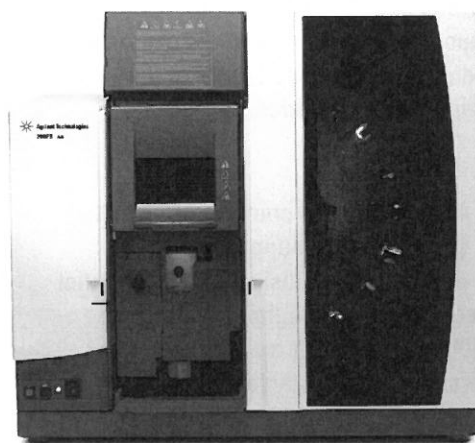
The sale of standard Products and Services referenced in this quotation is subject to the then current version of Agilent's Terms of Sale, and any LSCA Supplemental Terms or other applicable terms referenced herein. If any Products or Services are manufactured, configured or adapted to meet Customer's requirements, the sale of all Products and Services referenced in this quotation is subject to the then current version of Agilent's Terms of Sale for Custom Products and any LSCA Supplemental Terms or other applicable terms referenced herein. A copy of Agilent's Terms of Sale, Agilent's Terms of Sale for Custom Products and the LSCA Supplemental Terms is either attached or has been previously provided to you. Please contact us if you have not received a copy or require an additional copy. If you have a separate agreement in effect with Agilent covering the sale of Products and Services referenced in this quotation, the terms of that agreement will apply to those Products and Services. Agilent expressly objects to any different or additional terms in your purchase/sales order documentation, unless agreed to in writing by Agilent. Product and Service availability dates are estimated at the time of the quotation. Actual delivery dates or delivery windows will be specified at the time Agilent acknowledges and accepts your purchase order. The above conditions shall apply to the fullest extent permitted by the law. You may have other statutory or legal rights available. Commodities, technology or software exported from the United States of America ("U.S.") or from other exporting countries will be subject to the U.S. Export Administration Regulations and all exporting countries' export laws and regulations. Diversion contrary to U.S. law and the applicable export laws and regulations is prohibited.



## Agilent 240/280 Series AA Spectrometers

Productive. Precise. Reliable.

### Specifications



#### Design overview

The Agilent 240/280 Series AA comprises:

- 240 Series AA
- 240FS/280FS AA with Fast Sequential capability
- 240Z/280Z AA with Zeeman GFAA capability
- Duo AA with simultaneous flame/furnace capability

Agilent 240/280 Series AA spectrometers are manufactured according to a quality management system certified to ISO 9001.



## Design overview

### 240 AA

The 240 AA is an external computer controlled atomic absorption spectrometer fitted with four lamp positions, automatic lamp selection and automatic gas control. The 240 AA is a true double-beam spectrometer, ensuring a stable baseline. Supplied with Agilent SpectrAA Base software. The 240 AA is suitable for manual flame analyses and vapor generation using the Agilent VGA 77 Vapor Generation Accessory. Automated flame analyses and graphite furnace analyses are supported with additional accessories.

### 240FS/280FS AA

The 240FS/280FS AA are external computer-controlled atomic absorption spectrometers supporting multi-element flame AA determinations using Fast Sequential analysis for improved sample throughput with flame AA. The 240FS/280FS AA are both true double-beam spectrometers, ensuring a stable baseline. Supplied with SpectrAA Base and Pro software. The 240FS/280FS AA are suitable for manual flame analyses and vapor generation using the VGA 77 Vapor Generation Accessory. Automated flame analyses and graphite furnace analyses are supported with additional accessories.

### 240Z/280Z AA

The 240Z/280Z AA are external computer-controlled atomic absorption spectrometers dedicated to Zeeman graphite furnace AA determinations using the Agilent GTA 120 Graphite Tube Atomizer and Agilent PSD 120 Programmable Sample Dispenser. The 240Z AA is supplied with SpectrAA Base software. The 280Z AA is supplied with SpectrAA Base and Pro software. Automated vapor generation determinations are supported with additional accessories.

### AA Duo

Agilent AA Duo systems are external computer-controlled atomic absorption spectrometers supporting multi-element flame AA determinations using Fast Sequential analysis for improved sample throughput with flame AA (55B is suitable for manual flame

analyses) and dedicated Zeeman graphite furnace AA determinations using the GTA 120 Graphite Tube Atomizer and PSD 120 Programmable Sample Dispenser. Simultaneous flame and furnace operation is supported. The flame AA module is fitted with the integrated Agilent SIPS power supply (except the 55B AA). The Zeeman AA module is fitted with an integrated Agilent UltrAA Lamp Control Module supporting UltrAA lamp operation in two lamp positions, and an integrated furnace viewing camera facilitating real-time viewing inside the graphite tube. AA Duo systems are supplied with SpectrAA Base and Pro software. Automated flame AA and vapor generation determinations are supported with additional accessories.

## Instrument hardware

### Optics

Narrow beam optics match flame and furnace profiles. Optics are mounted on a reinforced flat plate with a fitted cover for protection from dust and vapor. Mirror surfaces are quartz overcoated for enhanced protection. The 240/240FS/280FS AA features a single beamsplitter plus a Rotating Beam Combiner, which alternately passes the sample or reference beam into the monochromator for maximum light transmission. Wavelength range is 185–900 nm.

### Monochromator (240/240FS/240Z AA)

Automated self-calibrating 250 mm focal length Czerny-Turner monochromator with microstepping driver for enhanced resolution. Features a holographic diffraction grating with 1200 lines/mm blazed at 240 nm. Dispersion 3.1–2.3 nm/mm. Software-controlled wavelength selection and peaking. Wavelength slew rate 2000 nm/min (240FS AA only). Wavelength repeatability:  $\pm 0.04$  nm. Selected wide range photomultiplier tube detector (type R446) for best signal-to-noise performance. Automated slit selection. Settings: 0.2, 0.5 and 1.0 nm plus reduced height slit of 0.5 nm for graphite furnace operation.

# Agilent 240/280 Series AA

---

## Monochromator (280FS/280Z AA)

Automated self-calibrating 330 mm focal length Czerny-Turner monochromator with microstepping driver for enhanced resolution. Features holographic diffraction grating with 1800 lines/mm blazed at 240 nm. Dispersion 1.6–0.8 nm/mm. Software-controlled wavelength selection and peaking. Wavelength slew rate 2025 nm/min (280FS AA only). Wavelength repeatability:  $\pm 0.035$  nm. Selected high sensitivity wide range photomultiplier tube detector (type R955 covering 185–900 nm) for best signal-to-noise performance. Automated slit selection. Settings: 0.1, 0.2, 0.5 and 1.0 nm plus reduced height slit of 0.5 nm for graphite furnace operation.

## Lamps

Support for four lamps (240/240FS/240Z AA) or eight lamps (280FS/280Z AA). Lamps mounted in fixed positions. Fast lamp selection using mirror with automated selection. Compatible with coded, uncoded or high intensity UltrAA lamps. 240FS AA requires optional looming for UltrAA lamps. 280FS AA features factory-installed looming supporting up to four UltrAA lamps. Both 240FS AA and 280FS AA require one external control module per pair of UltrAA lamps used.

240Z/280Z AA support up to four UltrAA lamps. 280Z AA integrates an internal control module (optional on 240Z AA) that can operate two UltrAA lamps. Optional external control modules are required to operate further pairs of UltrAA lamps up to the maximum four UltrAA lamps. Lamps secured by the base without restraining clips or power cables. Lamps automatically switched off at the end of analysis. Automated pre-warming of next lamp in sequence.

## Background correction (240/240FS/280FS AA)

High intensity deuterium background corrector covering wavelength range 185–425 nm. Corrects up to 2.5 background absorbance. 2 ms response. Electronic modulation with automatic gain attenuation for improved beam balance. Deuterium lamp easily aligned and replaced by the user. Optimized electronic control ensures long lamp lifetime.

## Background correction (240Z/280Z AA)

Zeeman background correction available across full wavelength range. Features electronically modulated (twice mains frequency) transverse AC electromagnet with peak field-on strength of 0.8 Tesla during Read period. Less than 5 ms response time between background and atomic measurements with three point polynomial interpolation of background signals for enhanced correction capability with rapidly changing background signals. Corrects up to 2.5 background absorbance. Magnetic field strength computer-controlled over range 0.1–0.8 Tesla, enabling optimization of background correction for enhanced sensitivity and reduced interferences. Magnet field strength locked during measurement minimizing effect of mains voltage variations. Coil sealed against moisture and corrosive vapors and fitted with a magnet temperature interlock for over-temperature protection. Complies with International Commission on Non-Ionizing Radiation Protection (ICNIRP) guidelines for exposure to time-varying magnetic fields.

## Internal air purge

Barb fitting on rear of spectrometer enables connection to a clean, dry air supply for purging the instrument internally. This excludes dust and corrosive vapors, enhancing corrosion protection in rigorous conditions.

## Gas control (240/240FS/280FS AA)

Automatic gas control (240 AA standard) has preset oxidant flow and manual fuel flow control with flow display using a flow meter. Ignition on air/acetylene with automatic oxidant change-over. Interlocked safety system prevents selection of the nitrous oxide flame if the nitrous oxide burner is not fitted.

Hammer programmable gas control (240FS/280FS AA standard) features software-controlled gas flows with automatic setting of gas flows for each element. Ignition on air/acetylene with automatic oxidant change-over. Interlocked safety system prevents selection of the nitrous oxide flame if the nitrous oxide burner is not fitted. Fast response Hammer solenoid valve selects gas flow within 30 ms for rapid regulation and stabilization of selected gas flow.



**Flame safety system (240/240FS/280FS AA)**

Separate ignite and flame-off buttons. Ignition occurs only when the ignite button is held. Eight safety interlocks monitor burner type, burner correctly fitted, liquid trap, pressure relief bung, flame shield, flame operation, mains power, oxidant pressure within safety reservoir and deuterium lamp cover. Gas connections to atomization system made directly — there are no loose gas hoses. Separate upper and lower flame shields and a chimney protect the operator against heat and UV radiation from the flame. External adjustment of all burner and spray chamber controls. Violation of any safety interlock either inhibits flame ignition or extinguishes existing flame.

**Flame atomization (240/240FS/280FS AA)**

Universal Mark 7 atomization system supplied as standard. Features a fluorinated high density polyethylene spray chamber compatible with acidic and organic solutions (requires optional organic o-ring kit). 'Twist and lock' assembly ensures simple maintenance. Features a pressure relief bung at the rear of the spray chamber. Removable twin-headed mixing paddles can be positioned in the spray chamber to improve mixing and extend operation with high dissolved solids solutions. An externally adjustable glass impact bead provides tuneable performance for optimum sensitivity and best precision. Optional Teflon bead for use with HF solutions. Integral nebulizer with adjustable flow, inert platinum/iridium capillary and PEEK venturi for corrosion resistance. Integral liquid trap with magnetic float liquid level interlock. Burner constructed from Incoloy alloy with Teflon base for corrosion resistance. Choice of air-acetylene or nitrous oxide-acetylene burner. Manual adjustment of burner height and burner rotation. 280FS AA features automated setting of burner height for each element.

**Typical performance (240/240FS/280FS AA)**

>0.9 Absorbance with precision of < 0.5% RSD from ten 5 second integrations for 5 mg/L Cu standard.

**Graphite furnace (240Z/280Z AA)**

GTA 120 Graphite Tube Atomizer features Constant Temperature Zone design for rapid atomization and reduced interferences. Features Dynamic Feedback

Temperature Control with cooling water temperature compensation for enhanced temperature accuracy without external sensors. Up to 20 temperature steps per program with temperature programmable from 40–3000 °C. Heating rate is software-controlled with maximum ramp rate of 2000 °C/s. Choice of two inert gases with computer-controlled flows. Separate internal and external gas flows. Internal flow is software-controlled over range 0–0.3 L/min. Fixed external gas flow of 0.5 L/min. with computer-controlled boost flow of 3.0 L/min during atomization. Two stage external flows reduce gas consumption and improve tube lifetimes. Typical tube lifetimes exceed 5000 firings for Cu using an atomization temperature of 2300 °C. Graphite tube enclosed in an inert gas atmosphere by a one-piece graphite shroud. Solid titanium furnace workhead features quartz end windows for high light transmission. Rapid release mechanism for easy tube replacement. Tube and electrode firing counters provided.

**Furnace autosampling (240Z/280Z AA)**

PSD 120 Programmable Sample Dispenser provides capacity for up to 50 samples in 2 mL microvials, plus five central 10 mL vessels for blank, standard and modifiers. Automatically prepares up to a 10 point concentration or standard additions calibration from one bulk standard. Premix mode provided for use with manually prepared standards. Automatic addition of up to three chemical modifiers with pre/post or co-injection of the modifier. Automatic over-range volume reduction reduces sample volume by a user determined dilution factor enabling re-determination of over-range samples. Automatic Tube Condition option to remove contamination when over-range samples occur. Preconcentrate samples for enhanced sensitivity using multiple injection up to 99 times. 'Hot Injection' allows injection into a heated tube for faster programs and enhanced precision with organic solvents. Injection temperature programmable from 40–200 °C with programmable injection rate. Dispensing volume variable from 1–70 µL with < 1% repeatability (5–70 µL). Air segmented solution pick-up. 1 L pressurized rinse vessel. Flow-through capillary rinse after each injection. Ultra stable mounting mechanism with position lock. Optional high capacity carousel increases capacity up

# Agilent 240/280 Series AA

---

to 130 samples using smaller 1.1 mL microvials, plus up to five central 10 mL vessels for blank, standard and modifiers.

## Furnace safety system (240Z/280Z AA)

Three instrument safety interlocks monitor mains power, magnet connected and magnet temperature. Five additional furnace safety interlocks monitor inert gas pressure, cooling water pressure and temperature, graphite tube presence and transformer temperature. Violation of any safety interlock either inhibits Zeeman furnace operation or terminates furnace firing.

## Furnace viewing (240Z/280Z AA)

Tube-CAM option (factory-fitted into the instrument) allows real-time viewing inside the graphite tube. This enables optimization of the dispensing height and allows you to confirm the optimum drying and ashing temperatures during method development, capture still images or record videos during analysis.

## SpectrAA software

### SpectrAA Base software

Based on the award winning worksheet concept, SpectrAA Base software completes an easy-to-use instrument software package. Features wizards that guide users through method and sequence development and method templates for rapid development of commonly used methods.

### Methods

- All data, signals (when selected), method and sequence parameters are stored in one worksheet file.
- Default conditions for each element recalled automatically on entry of the element symbol.
- Measure in Absorption or flame emission using PROMT, Integration, Integrate Repeat, peak height or area, furnace PROMT height or area. Pre-read delay variable from 0–999 s. Up to 20 replicates with read time from 0.1–30 s.
- Minimum Signal Facility skips to the next sample if the first measurement is less than the specified minimum reading.

- Select a different number of replicates for samples and standards.
- Eight least squares calibration algorithms provided including New Rational, Linear, Quadratic and Cubic Fits (through zero or non zero) using up to 10 standards, Calibration Blank and multiple Reagent Blanks. Bracketing Standards and Standard Additions modes also provided.
- Calibrations are tested for excess curvature using inflection tests with defined error actions including Stop, Continue in Abs or Switch to Next Method.
- Verify calibration fit using goodness of fit data or overlay a Reference Calibration to compare shape and sensitivity.
- Programmable recalibration and reslope rates. Reslopes eliminate need for full recalibration.
- Signal expansion factor of 0.1–100 available in all calibration modes.
- Surface Response Methodology (SRM) auto-optimization routine allows fast, easy auto-optimization of the GFAA ashing and atomization temperatures.
- Pre-emptive sampling allows the software to move the probe to the next sample while a reading is in progress to improve productivity by up to 15% using flame autosampling.
- Smart Rinse optimizes the rinse time between samples by monitoring washout, improving productivity with flame autosampling.
- Ten QC tests provided including QC Blank, QC Standard, QC Spike, Matrix Spike, Lab Control Sample, Duplicate, Precision (replicate %RSD), Correlation Coefficient and Detection Limit tests. Selectable error actions include Stop, Flag and Continue; Retry, Flag and Continue; Recalibrate and Repeat or Switch to Next Method. All data is date and time-stamped.
- Programmable measurement rate for QC tests (counted using solution or replicates).
- Optional Pro software provides extended capabilities designed to meet US EPA and other international compliance standards plus a simple equation editor enabling custom test definition.

## Sequences

- Weight/volume and dilution correction provided. Correction factors can be applied before or during analysis.
- Fully editable sample label list allowing random selection of samples by element with option to manually schedule QC tests.
- Programmable delay before start of any method for system stabilization.
- Optional tube condition or tube clean facility at start of each furnace method.
- Initiate a sequence with measurement of a full calibration, Calibration blank, Reslope or sample.
- Sequence options include graphics storage and end of run actions for lamps, flame and alarm.
- Measure up to 999 randomly selected samples for up to 30 methods.
- Pause autorun at any time and restart from any method/sample.
- Run priority samples immediately by interrupting the current sequence for measurement of any element/sample combination — the sequence automatically resumes.

## Analysis and reporting

- Live data display during analysis selectable from Worksheet, Signal graphics (real-time display), Calibration graph or Data log with options to display toolbar, status block and live readout displays for concentration, mean absorbance, mean background and precision (%RSD).
- Datalog maintains a time-based history of all events including instrument parameters, results and any status messages.
- Graphic displays support overlay and zoom functions plus cursor readout for absorbance/intensity with time/concentration and temperature.
- Wavelength scanning capability using scan rate variable from 5–250 nm/min.
- Post-run processing of GFAA data provided, enabling switching between peak height and area measurements.
- Post-run retrospective data editing by masking replicate or solution results for both samples

and standards, with option to switch calibration algorithms.

- Unit conversion facilities provided enabling calibration using one set of units and sample reporting with user-defined units.
- LIMS support includes data export to a serial port/file in real-time or after run using ASCII and PRN formats. Option to upload sample labels and correction factors prior to analysis.
- Support for remote control of the AA by using Microsoft™ Active X/OLE technology for bidirectional flow of data directly into other applications running on the desktop.
- Wide variety of reporting options with user-defined selections including sequential or multi-element formats, calibration data, method parameters, concentration, absorbance, precision, replicate data, background, date/time, correction factors and signal graphics

## Administration

- Usage counters monitor lamp operating hours, sample measurements, furnace firings and SIPS tubing usage to assist with GLP compliance.
- Custom Rack Wizard allows definition of custom racks for use with the Agilent SPS 3 Sample Preparation System.
- Optional security system to secure adding/deleting methods, editing methods and sequence parameters, data editing, result deletion, rack definition and software configuration settings using administrator-defined password.
- Context sensitive help with extensive indexing and multimedia content including video demonstrations for ease of use.

## SpectrAA Pro software

Provides additional capabilities for AA Duo operation (simultaneous flame and furnace operation), Fast Sequential AA operation for fast multi-element flame AA determinations, on-line internal standard correction capability and additional QC capabilities including the capability to customize QC tests.

# Agilent 240/280 Series AA

---

## Optional software

CFR version software assists users to achieve compliance with the requirements of the US FDA 21 CFR Part 11 ruling covering audit trails, electronic records and electronic signatures.

## Accessories

### Flame autosampling

SPS 3 high-throughput autosampler with fast, random access, X, Z, theta arm movement. Capacity for one dedicated standards rack and up to three sample racks. Racks may be exchanged during analysis for unlimited sample capacity. Choice of two standards racks for 11 x 16 mm od tubes or 6 x 29 mm od centrifuge tubes. Supplied with 3 x 60 position sample racks for 16 mm od tubes. A range of low-cost, autoclavable, polypropylene sample racks are available for tubes of other dimensions. Custom Rack Wizard allow customization of rack configurations enabling you to use your own rack types. Integral peristaltic pump with speed control provides on-demand rinsing of the probe, eliminating carryover. Autosampler setup includes a visual display showing location of all standards, samples and QC solutions. Optional cover available to prevent contamination or to remove fumes or vapors. The cover can be purged, or connected to an exhaust outlet.

### Diluter

Optional precision syringe based Diluter for SPS 3. Performs premixing of samples prior to analysis to reduce settling. Provides automatic on-line over-range sample dilution with user-definable dilution and mixing options. Dilutes samples serially until in range, or three dilutions completed with result still over-range. Optional RoboPrep software enhances capabilities with off-line sample dilution, reagent addition and preparation of single and multi-element calibration standards. Typical dilution error < 2% for a 1:20 dilution to 20 mL

### SIPS on-line dilution

Single pump Agilent SIPS 10 and dual pump Agilent SIPS 20 provide on-line multipoint calibration for flame AA by dilution of a single bulk standard. Immediate dilution of over-range samples with 'Smart Rinse' to eliminate memory effects. SIPS 20 totally automates

flame standard addition analyses, adds modifiers, spikes samples on-line and introduces internal standard for on-line correction in Fast Sequential mode.

### Enhanced flame sensitivity

Agilent ACT 80 Atom Concentrator Tube increases sensitivity of flame AA by 2–3 times for air/acetylene elements.

### Lower detection limits

High intensity UltrAA lamps are used instead of conventional lamps where improved detection limits are required. The boost discharge increases emission intensity up to five times and increases sensitivity by up to 40%. UltrAA lamps are powered by a separate external control module, which can support operation of two lamps simultaneously. Fixed boost current eliminates any optimization. 240FS and 240Z instruments require optional external control module.

### Hydride generation

Modular continuous flow VGA 77 Vapor Generation Accessory allows fast determination of Hg, As, Se, Sb, Te, Bi and Sn at µg/L concentrations. Typical precision 1–2% RSD with sample throughput of 60–70 samples/hour. Compatible with the SPS 3 Sample Preparation System for automated sampling and unattended analyses with the ETC 60. 'Plug-in' modules can be dedicated to specific hydride chemistries. By changing modules when switching between elements, you can eliminate cross-contamination.

### Unattended hydride analyses

Couple the Agilent ETC 60 Electrothermal Temperature Controller with the VGA 77 and the SPS 3 Sample Preparation System to enable unattended hydride determinations and increase sensitivity by up to 30% compared with flame hydride determinations. Consists of a control unit with built-in touch panel keyboard and workhead with user-replaceable cell. Control unit provides element-specific temperature programs, which can be edited and saved. Thermocouple temperature control from ambient to 999 °C.

**Graphite furnace, furnace autosampling and furnace viewing**

Available as accessories for the 240/240FS/280FS AA. Refer to specifications on page 4 for details.

**Fume extraction**

Furnace viewing and exhaust option mounts on the rear of the sample compartment and removes fumes produced during furnace operation when connected to an exhaust. Features two LEDs and mirror to assist tube and sampler alignment and improve viewing. Safety interlock inhibits furnace operation if mirror is exposed.

**Recommended environmental conditions****Instrument storage**

5–45 °C at 20–80 % relative humidity, non condensing.

**Instrument operation**

<853 m, 10–35 °C, 8–80 % relative humidity, non condensing.

853–2133 m, 10–25 °C, 8–80 % relative humidity, non condensing.

**Electrical requirements (240/240FS,280FS AA)**

Single phase AC supply with three-wire system terminated at an appropriate receptacle.

100/120/220/240 VAC  $\pm 10\%$ , 230 VAC  $+14\%$   $-6\%$ , 230 VAC  $+6\%$   $-14\%$  50/60 Hz.

**Electrical requirements (240Z,280Z AA)**

Single phase AC supply with three-wire system terminated at an appropriate receptacle. 208, 220 or 240 VAC  $\pm 10\%$  50/60 Hz. Rated current 15 A. Surge current in excess of the nominal rating (up to 28 A) for up to 10 s, perhaps repeating every 1–2 min. The power supply should be on a separate mains circuit protected by delayed action fuses and/or circuit breakers.

**Gas requirements for flame operation**

Air supply: Clean, dry, oil-free at pressure of 350 kPa (50 psi). Typical consumption 11–20 L/min.

Acetylene supply: Instrument grade (99.0% pure) packaged in acetone at pressure of 75 kPa (11 psi). Typical consumption 1.5–10 L/min.

Nitrous oxide: Instrument grade (99.5% pure) at pressure of 350 kPa (50 psi). Typical consumption 11–20 L/min.

**Fume extraction**

Spectrometer must be located under an extraction system ducted to an external vent. Minimum flow required is 6 cubic metres/min (200 cfm).

**Gas requirements for VGA 77**

Argon or nitrogen (dry 99.99% argon preferred) at pressure of 300 kPa (42 psi). Required consumption 0.1 L/min.

**Gas requirements for GTA 120**

Argon or nitrogen (dry 99.99% argon preferred) at pressure of 140 kPa (20 psi). Required consumption 0.5–3.8 L/min.

**Power requirements for GTA 120**

Single phase AC supply with three-wire system terminated at an appropriate receptacle. 208, 220 or 240 VAC  $\pm 10\%$  50/60 Hz. Rated current 15 A. Surge current in excess of the nominal rating (up to 35 A) for approximately 1 s, reducing to about 20 A for up to 10 s, perhaps repeating every 1–2 min. The power supply should be on a separate mains circuit protected by delayed action fuses and/or circuit breakers.

**Cooling water for GTA 120**

Mains supply or recirculated with flow of 1.5 L/min at 180 kPa (27 psi) and temperature of 25 °C (70 °F). A refrigerated water cooler may be used.



# Agilent 240/280 Series AA

## Weights, dimensions and power requirements

Instrument	Weight	Dimensions	Power consumption
	Unpacked, kg (lb)	W x D x H, cm (in.)	VA
240 AA	56 (123)	79 x 58 x 59 (31 x 23 x 23)	170
240FS AA	56 (123)	79 x 58 x 59 (31 x 23 x 23)	170
280FS AA	75 (165)	79 x 58 x 74 (31 x 23 x 30)	225
240Z AA	56 (123)	79 x 58 x 59 (31 x 23 x 23)	3500*
280Z AA	61 (134)	79 x 58 x 74 (31 x 23 x 30)	3500*
GTA 120	41 (90)	24 x 60 x 59 (10 x 24 x 23)	3500*
GTA 120 for 240Z/280Z AA	52 (115)	24 x 60 x 59 (10 x 24 x 23)	3500*
PSD 120	6 (13.2)	30 x 38 x 31 (12 x 15 x 12.4)	Incl. with GTA
VGA 77	5.5 (12)	32 x 21 x 27 (13 x 8 x 11)	20
ETC 60	5 (11)	26 x 26 x 8 (10 x 10 x 3)	550 max.
SIPS 10/20	9 (20)	28 x 29 x 22 (11 x 11 x 8.5)	80
SIPS electronic control module **		22.5 x 38.5 x 10 (9 x 15.5 x 4)	
UltrAA lamp control module	7.5 (16.5)	24 x 14.5 x 35.5 (9.5 x 5.7 x 14)	150

\* The GTA will draw surge currents in excess of the nominal rating (refer to the site preparation guide, publication number 8510119300 for further details).

\*\* Installed on rear of spectrometer (not required when instrument has an integrated SIPS power supply)

## Support and training

Agilent is renowned for providing expert applications and service support. Agilent has a global network of factory-trained specialists ready to provide support for hardware, software, or applications wherever you are located. Services include:

- Full 12-month warranty support
- Seven (7) year hardware support period from date of last unit manufacture. After this time, parts and supplies will be provided if available.
- Preventive maintenance to deliver consistent operation and minimize downtime
- Troubleshooting, maintenance and repair
- Software support services
- Comprehensive warranty extension and service contracts, including peripherals
- Classroom training and onsite training delivered by experts

## Further details

For further information please consult your Agilent office or supplier, or our website at [www.agilent.com](http://www.agilent.com)

## Installation requirements

### System installation

For full details of AA installation requirements, refer to the site preparation guide.

**[www.agilent.com/chem](http://www.agilent.com/chem)**

Agilent shall not be liable for errors contained herein or for incidental or consequential damages in connection with the furnishing, performance or use of this material.

Information, descriptions, and specifications in this publication are subject to change without notice.

© Agilent Technologies, Inc. 2010, 2012-2013

Published September 5, 2013

Publication number: 5990-6707EN

The Measure of Confidence



**Agilent Technologies**