

May 19, 2014

Tara Lyle
Department of Administration, Purchasing Department
2019 Washington Street
Chareston, WV 25305-0130
Phone #304-746-2141

Ref:Request for price quotation RFQ number RFQ-DPS1425

We have reviewed the information provided in the above referenced request and hereby submit our response for your consideration.

We appreciate your interest in Thermo Electron North America LLC. If you have any questions or require further assistance, please contact Sales Engineer Barry Zuk at 614-389-3742.

Sincerely,

Sales Administrator II

05/20/14 09:14:20AM
West Virginia Purchasing Division

This facsimile transmission may contain confidential information belonging to Thermo Electron North America LLC. The information is intended only for the use of the individual or entity named below. If you are not the intended recipient, you are hereby notified that any disclosure, copying, distribution, or the taking of any action in reliance on this information is strictly prohibited. If you have received this transmission in error, please immediately notify us by telephone to arrange for the return of the documents.



VENDOR

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

Thermo Electron North America, LLC

Solicitation

NUMBER

DPS1425

PAGE 1

ADDRESS CORRESPONDENCE TO ATTENTION OF

ADDRESS CHANGES TO BE NOTED ABOVE

TARA LYLE 304-558-2544

WEST VIRGINIA STATE POLICE

4124 KANAWHA TURNPIKE TO SOUTH CHARLESTON, WV 25309 304-746-2141

DATE PRINTED

RFQ COPY

5225 Verona Road

Madison, WI 53711

TYPE NAME/ADDRESS HERE

04/24/2014 BID OPENING DATE 05/21/2014 BID OPENING TIME 1:30PM CAT LINE QUANTITY UOP ITEM NUMBER UNIT PRICE AMOUNT THE WEST VIRGINIA STATE PURCHASING DIVISION ON BEHALF OF THE WEST VIRGINIA STATE POLICE, IS SOLICITING BIDS FOR A ONE-TIME PURCHASE OF AN INTEGRATED INFRARED MICROSCOPE AND OTHER RELATED ACCESSORIES, PER THE ATTACHED DOCUMENTATION. ATTACHMENTS INCLUDE: INSTRUCTIONS TO VENDORS SUBMITTING HIDS GENERAL TERMS AND CONDITIONS . DPS1425 SPECIFICATIONS . CERTIFICATION AND SIGNATURE PAGE . PURCHASING AFFIDAVIT VENDOR PREFERENCE CERTIFICATE THE MODEL/BRAND/SPECIFICATIONS NAMED HEREIN ESTABLISH THE ACCEPTABLE LEVEL OF QUALITY ONLY AND ARE NOT INTENDED TO REFLECT A PREFERENCE OR FAVOR ANY PARTICULAR BRAND OR VENDOR. VENDORS WHO ARE BIDDING ALTERNATES SHOULD SO STATE AND INCLUDE PERTINENT LITERATURE AND SPECIFICATIONS. FAILURE TO PROVIDE information for any alternates may be grounds for REJECTION OF THE BID. THE STATE RESERVES THE RIGHT O WAIVE MINOR IRREGULARITIES IN BIDS OR SPECIFICATIONS IN ACCORDANCE WITH SECTION 148-1-4(F) OF THE WEST TIRGINIA LEGISLATIVE RULES AND REGULATIONS. d001 490-58 HA \$60,536.12 1 \$65,800.13 INTEGRATED INFRARED MICROSCOPE SIGNATURE ELEPHONE 5/19/2014 800-680-2542 TITLE Sales Administrator

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

43-1992201



VEZDOR

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

RFQ COPY TYPE NAME/ADDRESS HERE

Thermo Electron North America, LLC 5225 Verona Road Madison, WI 53711

Solicitation

NUMBER

DPS1425

PAGE 2

ADDRESS CORRESPONDENCE TO ATTENTION OF:

1:30PM

TARA LYLE

04-558-2544

WEST VIRGINIA STATE POLICE

S 4124 KANAWHA TURNPIKE TO SOUTH CHARLESTON, WV 25309 304-746-2141

DATE PRINTED 04/24/2014 BID OPENING DATE: 05/21/2014 BID OPENING TIME

LINE	QUANTITY	UOP CAT.	ITEM NU	JMBER .	UNIT PRICE	AMOUNT
002	1 1 COMPUTER WORK		205-43		\$1,565.75	\$1,565.75
003	I 1 UTOMOTIVE PA		205-43	1	\$7,000.00	\$7,000.00
004	I ND YEAR SUPI		939-22 ENANCE		\$3,346.00	\$3,078.32
005	1 RD YEAR SUPE		39-22 NANCE		\$4,780.00	\$4,397.60
*	**** THIS	IS THE ENI	OF RFQ	DPS142	25 ***** TOI	FAL: \$76,577.79
ž						
GNATURE EJ X	ile ~			TELEPHONE 800-680-	2542	DATE 5/19/2014
TLE Sales Adminis		N 43-1992201	1			ANGES TO BE NOTED ABOVE

INSTRUCTIONS TO VENDORS SUBMITTING BIDS

- 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 applyto this Solicitation.				
	\checkmark	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: May 8, 2014 at 5:00 pm

Submit Questions to: Tara Lyle, File 32

2019 Washington Street, East Charleston, WV 25305 Fax: (304) 558-4115

(Vendors should not use this fax number for bid submission)

Email: Tara.L.Lyle@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 Purchasing Division will not accept bids, modification of bids, or addendum acknowledgment forms via e-mail. Acceptable delivery methods include hand delivery, delivery by courier, or facsimile. The bid delivery address is:

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

considered: Integrated Infrared Microscope SEALED BID: BUYER: Tara Lyle SOLICITATION NO.: DPS1425 5/21/2014 BID OPENING DATE: BID OPENING TIME: 1:30 PM FAX NUMBER: WV Fax: 304-558-4115 TENA LLC Fax: 412-200-6542 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 N/A 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: Technical Cost BID TYPE:

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

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

Bid Opening Date and Time: May 21, 2014 at 1:30 pm

time stamped by the official Purchasing Division time clock.

Bid Opening Location:

7. BID OPENING:

Department of Administration, Purchasing Division

Bids submitted in response to this Solicitation will be opened at the location

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:

- 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 ther 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.			

	Population of the Population o	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.
	V	Other: See attached.
4.	receiv	ICE TO PROCEED: Vendor shall begin performance of this Contract immediately upon ing notice to proceed unless otherwise instructed by the Agency. Unless otherwise specified, the xecuted Purchase Order will be considered notice to proceed
5.	_	NTITIES: The quantities required under this Contract shall be determined in accordance with tegory 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.
	\checkmark	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.
certific or irre same labor/r	of the Bid Bond, Performance Bond, and Labor/Material Payment Bond, the Vendor may provide ed checks, cashier's checks, or irrevocable letters of credit. Any certified check, cashier's check, vocable letter of credit provided in lieu of a bond must be of the same amount and delivered on the schedule as the bond it replaces. A letter of credit submitted in lieu of a performance and material payment bond will only be allowed for projects under \$100,000. Personal or business 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: or more. Builders Risk Insurance: builders risk – all risk insurance in an amount equal to
	100% of the amount of the Contract.

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

The annarent successful Vendor shall also furnish proof of any additional in-

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 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 Failure to comply with the foregoing requirements will result in public disclosure identifiable format. 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

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

income tax returns.

goods and services.

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.
- 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 expenditures by agency, etc.

 Ouarterly reports detailing the total quantity of purchases in units and dollars, along with a ligting

Vendor shall provide the Agency and/or the Purchasing Division with the

- 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.
- 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

50. REPORTS:

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.

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.

SPECIFICATIONS

- 1. Purpose and Scope: The West Virginia Purchasing Division is soliciting bids on behalf of the West Virginia state Police to establish a contract for the one-time purchase of an Integrated Infrared Microscope.
- 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 Integrated Infrared Microscope
 - **2.2 "Pricing Page"** means the pages upon which the Vendor should list its proposed price for the Contract Items in the manner requested. The Pricing Page is either included on the last page of this RFQ or attached hereto as Exhibit A.
 - **2.3** "RFQ" means the official request for quotation published by the Purchasing Division and identified as DPS 1425.

3. General Requirement:

- **3.1 Mandatory Contract Item Requirements:** Contract Item must meet or exceed the mandatory requirements listed below.
 - 3.1.1 Contract Item #1 Integrated Infrared Microscope, Nicolet iN10 or equal
 - 3.1.1.1 Integrated Infrared Microscope must be fully automated and software controlled, with the exception of the stage which can be manual or motorized. Simultaneous viewing and collection to ensure consistency between data and image, true view aperture. To include validation option to ensure system performance qualification in any sampling mode. To include OMNIC Picta (or equal) software compatible with OMNIC DS Data Security for 21 CFR Part 11 compliance.
 - **3.1.1.2** At a minimum, the system must include the following components or better:

Integrated FT-IT sealed and desiccated optics compartment
Dynamically aligned interferometer with KBr/Geranium optics
Spectral range 7800-450cm-1 (room temp detector) or 670 cm-1 (cooled)

REQUEST FOR QUOTATION DPS1425 – Integrated Infrared Microscope

Externally mounted, user replaceable high energy Ever-Glo infrared source

HeNe 633mm laser frequency calibration

High speed 24 bits ADC converter

Microscope optimized – Deuterated Trilicine Sulfate detector (7800-450 cm-1)

External port for desiccant replacement and humidity indicator window TruView, Continous view and collection in Reflection and Transmission

Full View motorized computer controlled aperture

Automated Reflectance/Transmission Sampling Modes

Automated Transmission infrared focus and park mode

Automated focus and software controlled manual focus

Automated ATR contact (crystal not included) with digital pressure readout

Automated selection between room temperature and optional cooled detector

Software controlled independent LED Reflectance illumination Software controlled independent LED Transmission illumination

Software controlled independent LED Aperture Illumination

Fully integrated permanently mounted Contact Alert electronics and sensors

Multi zone purge system including purge regulator

Objective and condenser telescopic purge baffles

Integrated color CCD digital USB2 XGA high resolution camera

15x 0.7 N.A. high-efficiency objective, with built in dovetail mount for optional ATR

15x 0.7 N.A. high-efficiency condenser, permanently aligned and motorized

Infrared microscopy optimized room temperature detector (does not require LN2)

Gold coated motorized mirror for optional cooled detector

Gold coated motorized mirror for optional external FT-IR module

Gold coated mirrors for transmission and reflection infrared beam paths

Infrared Microscope Training course for 1 person

English Language Kit

Power Cord North American 120v, 3 Conductor

2" x 5" high precision Motorized Stage w/Quick release Locking System Cooled Detector MCT-A option

Motorized Stage Joystick Validation Software FT-IR Microscope Polystyrene Standards Plate To include Standard System Warranty, One Year, parts, labor and travel

3.1.2 Contract Item #2 - Workstation, Dell Optiplex or equal

3.1.1.2 Workstation to include the following: Mini Tower Chassis, Intel Core i5-3550 Processor (3.3GHz), 8GB RAM 1600MHZ DDR 3, 1TB Hard Drive with 32MB DataBurst Cache, 16X DVD+/RW, Data Only, Integrated Audio and Internal Speaker, Audio Ports: Line-In, Line-Out, Comm Ports: Six External USB 2 ports, Four External USB 3 Ports, 1 Serial Port, 1 VGA Port, 2 Display Ports, 4 Expansion Slots, 1 full Height PCI, 1 Full Height PCIe x 1, 2 Full Height PCIe x 16, Chassis intrusion switch, RoHS Compliant Lead free chassis and motherboard, 3 year support plan, 22" flat panel widescreen monitor, signal input, DVI and VGA, 3 year support plan.

3.1.3. Contract Item #3 - Automotive Paint Chip Library, Biorad or equal

3.1.1.3 Automotive Paint Chip Library to be a minimum of 1,900 spectra

3.1.4 Contract Item #4 - OMNIC Spectra iS50 Edition or equal

3.1.1.4 Library must contain a minimum of 30,000 IR Spectra with the ability for multi component library searching.

- 3.1.5 Contract Item #5 Year Two Support/Maintenance parts, labor and travel
- 3.1.6 Contract Item #6 Year Three Support/Maintenance parts, labor and travel

REQUEST FOR QUOTATION DPS1425 – Integrated Infrared Microscope

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 Pages.
- **4.2 Pricing Pages:** Vendor should complete the Pricing Pages by filling in the Unit Price, the Extended Price and the Total Cost. Vendor should complete the Pricing Page in full as failure to complete the Pricing Page in its 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 Page 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.

6. Delivery and Shipment:

- 6.1 Shipment and Delivery: Vendor shall ship the Contract Items immediately after being awarded this Contract and receiving a purchase order or notice to proceed. Vendor shall deliver the Contract Items within thirty (30) working days after receiving a purchase order or notice to proceed. Contract items must be delivered to Agency at 4124 Kanawha Turnpike, South Charleston, WV 25309.
- 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.

REQUEST FOR QUOTATION DPS1425 – Integrated Infrared Microscope

- **6.3 Delivery Payment/Risk of Loss:** Vendor shall deliver the Contract 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 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.

DPS 1425 Pricing Page

Item #	Description		Quantity	Unit Price	Extended Price
3.1.1	Integrated Infrared or equal	d Microscope, Nicolet iN10	1 ea	\$ 65,800.13	\$ 60,536.12
3.1.2	Workstation, Dell C	optiplex or equal	1 ea	\$ 1,565.75	\$ 1,565.75 \$ 7,000.00 \$ included \$ 3,078.32 \$ 4,397.60
3.1.3	Automotive Paint C	Chil Library, Biorad or equal	1 ea	\$ 7,000.00	
3.1.4	OMNIC Spectra iS5	0 Edition ir Equal	1 ea	\$ included	
3.1.5	Year Two support/	maintenance	1 yr	\$ 3,346.00	
3.1.6	Year Three support	/maintenance	1 yr	\$ 4,780.00	
	Failure to use t	his form may result in di	squalification.	Total Cost:	\$ 76,577.7
	Address:	5225 Verona Road Madison, WI 53711	rth America, 1	LLC	
	Address: Phone #: Email Address:	5225 Verona Road			
	Phone #:	5225 Verona Road Madison, WI 53711 800-680-2542			
	Phone #: Email Address:	5225 Verona Road Madison, WI 53711 800-680-2542			
	Phone #: Email Address:	5225 Verona Road Madison, WI 53711 800-680-2542 usmadorderprocessi			
	Phone #: Email Address:	5225 Verona Road Madison, WI 53711 800-680-2542 usmadorderprocessi	ng@thermofish		
	Phone #: Email Address: Contact Coordinate Name:	5225 Verona Road Madison, WI 53711 800-680-2542 usmadorderprocessi nator Information: Ed Ridgeway	ng@thermofish		
	Phone #: Email Address: Contact Coordinate Name:	5225 Verona Road Madison, WI 53711 800-680-2542 usmadorderprocessi nator Information: Ed Ridgeway 5225 Verona Road	ng@thermofish		

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.

(Date)		***************************************	
5/19/2014			
(Phone Number)	(F	ax Number)	
800-680-2542	4	112-200-6	542
(Representative Name, 7	Title)		
Ed Ridgeway, Sales Admir	nistrator		
(Authorized Signature)			
Ed Kidg			
(Company)			
Thermo Electron	North	America,	LLC

	DPS1425
RFQ No.	0101123

STATE 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:

WITNESS THE FOLLOWING SIGNATURE:

"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 exceed 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.

Vendor's Name: Thermo Electron 1	lorth America LCC
Authorized Signature: Ed Rily	Date: 5-19-14
State of Wisconsin	
County of Dane, to-wit:	
Taken, subscribed, and sworn to before me this 19 day of	ay , 20 <u>14</u> .
My Commission expires July 21 , 20 /	Z.
AFFIX SEAL HERE M. MER M. MER	UBLIC Shi M. F
1 / 1 / 1 / 1 / 1 / 1 / 1 / 1 / 1 / 1 /	Purchasing Affidavit (Revised 07/01/2012

Rev. 04/14

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 Vendor Preference, if applicable.

1.	Application is made for 2.5% vendor preference for the reason checked: Bidder is an individual resident vendor and has resided continuously in West Virginia for four (4) years immediately preced-
	ing 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% 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% 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% 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% 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% 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.
requirer against	understands if the Secretary of Revenue determines that a Bidder receiving preference has failed to continue to meet the nents for such preference, the Secretary may order the Director of Purchasing to: (a) reject the bid; or (b) assess a penalty such Bidder in an amount not to exceed 5% of the bid amount and that such penalty will be paid to the contracting agency cted from any unpaid balance on the contract or purchase order.
autnoriz the requ	nission of this certificate, Bidder agrees to disclose any reasonably requested information to the Purchasing Division and es the Department of Revenue to disclose to the Director of Purchasing appropriate information verifying that Bidder has paid ired business taxes, provided that such information does not contain the amounts of taxes paid nor any other information by the Tax Commissioner to be confidential.
and acc	penalty of law for false swearing (West Virginia Code, §61-5-3), Bidder hereby certifies that this certificate is true curate in all respects; and that if a contract is issued to Bidder and if anything contained within this certificate is during the term of the contract, Bidder will notify the Purchasing Division in writing immediately.
Bidder:	Signed:
Date:	Title:



Quote No.	Create Date	Exp. Delivery Time	Page
20463658	05/15/2014	* 4-6 wks ARO	1/
Contact Info	Phone No.	Payment Terms	Valid To
Barry Zuk	614-885-1603	NET 30 DAYS UPON INVOICE DATE	07/25/2014
Inco 1	Inco	2 Shipping	Method
Free on board	DESTINA	TION Con-	Way

Thermo Electron North America LLC

1400 Northpoint Pkwy Ste 50. West Palm Beach, FL 33407-1976 Please issue your PO to:

Thermo Electron North America LLC 5225 Verona Road, Madison, WI 53711 or

1400 Northpoint Parkway, West Palm Beach, FL 33407

FEIN 43-1992201 DUNS: 138388090

Include a copy of your tax exemption certificate if

claiming exempt status on your PO.

Submitted To:

RFQ DPS1425

1041939

STATE OF WEST VIRGINIA DEPT OF ADMINISTRATION PURCHASING DIVISION 2019 WASHINGTON STREET, EAST CHARLESTON WV 25311

To place an order

Contact Info Ed Ridgeway

Call: 608-276-6139 412-200-6542 Fax:

eMail: ed.ridgeway@thermofisher.com

This order is subject to instructions and Thermo Fisher's terms & conditions on

the last page

Item	Material No.	Description	Qty	Unit Price	Total Price			
10	912A0604	NICOLET IN10 MICROSCOPE	1 EA	46.865.00	46.865.00 USD			

The Nicolet iN10 integrated infrared microscope

includes:

- ~ Integrated FT-IR sealed and desiccated optics compartment
- ~ Dynamically aligned Michaelson interferometer with KBr/Germanium optics
- ~ Spectral range 7800 450 cm-1 (room temperature detector) or 670 cm-1 (cooled)
- ~ Externally mounted, user replaceable high-energy Ever-Glo™ infrared source
- ~ HeNe 633nm laser frequency calibration
- ~ High-speed 24 bits ADC converter
- ~ Microscopy optimized Deuterated Triglicine Sulfate detector (7800-450 cm-1)
- ~ External port for desiccant replacement and humidity indicator window
- ~ TruView, Continuous view and collection, in Reflection and Transmission
- ~ Full-View motorized, computer controlled aperture
- ~ Automated Reflectance / Transmission Sampling Modes
- ~ Automated Transmission infrared focus and park mode
- ~ Automated focus and software controlled manual focus
- ~ Automated ATR contact (crystal not included) with digital pressure readout
- ~ Automated selection between room temperature and optional cooled detector
- ~ Software controlled independent LED Reflectance Illumination
- ~ Software controlled independent LED Transmission Illumination
- ~ Software controlled independent LED Aperture Illumination
- ~ Fully integrated, permanently mounted Contact Alert electronics and sensors
- ~ Multi-zone purge system including purge regulator ~ Objective and condenser telescopic purge baffles
- ~ Integrated color CCD digital USB2 XGA high resolution camera
- ~ 15X 0.7 N.A. high-efficiency objective, with built-in dovetail mount for optional ATR
- ~ 15X 0.7 N.A. high-efficiency condenser, permanently aligned and motorized
- ~ Infrared microscopy optimized room temperature detector

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Thermo Electron North America LLC

1400 Northpoint Pkwy Ste 50, West Palm Beach, FL 33407-1976

To place an order

Contact Info Ed Ridgeway
Call: 608-276-6139
Fax: 412-200-6542

eMail:

ed.ridgeway@thermofisher.com

ltem	Material No.	Description	Qty	Unit Price	Total Price
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(does not require LN2)

- ~ Gold coated motorized mirror for optional cooled detector
- ~ Gold coated motorized mirror for optional Nicolet iZ10 external FT-IR module
- ~ Gold coated mirrors for transmission and reflection infrared beam paths
- ~ USA Only: 3-day Infrared Microscope Training Course for One user. Refer to Domestic Service Configuration Guide for other available training

OMNIC Picta™ infrared microscopy software includes:

- ~ Infrared spectra data collection and real time spectral previewing
- ~ Real-time automatic atmospheric suppression
- ~ Real-time spectral search previewing
- ~ Digital image display with multiple customizable camera settings for various samples
- ~ Digital image video capturing, text annotation and ruler tools
- ~ Independent LED illumination controls for Reflection, Transmission and aperture
- ~ Autofocus and software manual focus controls
- ~ Infrared condenser autofocus, autopark controls
- ~ Infrared aperture x-y adjustments and rotation control
- ~ Auto ATR contact/release controls w/customizable pressure threshold setting
- ~ Room temperature and optional cooled detector selection
- ~ Reflectance, Transmission and ATR mode selection
- ~ Nicolet iN10 or Nicolet iZ10 external module operation
- Visible polarizer (optional) insertion and rotation controls
- ~ Data Manipulation with proprietary Advanced ATR Correction
- ~ Search with high resolution library format capability
- ~ Unique Library Manager function
- ~ Electronic reporting functions
- ~ File & Library Conversion Utilities

OMNIC Picta™ motorized stage additional functionality:

- ~ Virtual (software interface) joystick operation
- ~ Slide-view and Eject quick load and eject user interface
- ~ Automatic location and collection of background in reflection
- ~ Dynamic user interface, dashboard and icon control panels
- Multi-functional standard operation procedures for most common microanalysis
- ~ Interlinked chemical imaging, spectral, video image, 3D and profiles display
- ~ Image analysis for video images, mosaics and maps to extract physical information
- ~ Continuous peak location, peak height/area and

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Item	Material No.	Description		Qty	Unit Price	Total	Price
		correlation chemical imaging ~ Advanced PCA, PCA recalculation, Multivariate Cur Regression chemical imaging ~ Learn function for SOP development with password protection					
20	699-113700	NICOLET IN10 ENGLISH LANGUAGE KIT Nicolet iN10 English Language Kit	1	EA	*Inc	cluded In Item 10	
30	085-703800	CORD/PWR NAM 2.5M 10A NM5- Power Cord North American 120v, 3 Conductor	1	EA	*Inc	cluded In Item 10	
40	840-198800	NICOLET IN10 MAPPING STAGE 2" x 5" high precision Motorized Stage w/Quick-release ~ Slide holder plate with built-in gold disk for automat background collection	se Locking	EA System	11,768.00	11,768.00	USD
50	840-199300	IN10 MCTA .25MM DETECTOR Cooled detector MCT-A option ~ Highest sensitivity for samples as small as 10 micro ~ Fastest operation with motorized stage mapping ~ Highest throughput and sensitivity for ATR collectio ~ Highest spatial resolution for layered samples and collection ~ Stainless steel proprietary dewar design, 16 hours hold-time ~ Anti-fog coating and long-life vacuum seals provide of hassle-free operation ~ Thermo Scientific MCT-A Detector (11,700-600 cm	ons on ATR LN2 e years	EA	5,099.00	5,099.00	USD
60	840-199800	NICOLET IN10 MAPPING STAGE JOYSTICK Nicolet iN10 Motorized Stage Joystick	1	EA	450.00	450.00	USD
70	833-035400	VALPRO LITE FOR NICOLET IN10 FOR OMNIC ValPro Lite Edition for Nicolet iN10	1	EA	588.13	588.13	USD

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eMail:

ed.ridgeway@thermofisher.com

Item	Material No.	Description	Qty	Unit Price	Total Price

~ ASTM E1421 based system performance verification

~ Configurable for manual stage microscope (fully manual) or semi-automated

~ Ideal for all regulated environments not requiring full system qualification

840-199900 80

NICOLET IN10 VALIDATION STANDARDS PLA

1 EA

1,030.00

1,030.00

USD

FT-IR Microscope Polystyrene Standards Plate

~ Serialized and certified validation plate for manual or semi-automated operation

~ NIST polystyrene for Transmission

~ NIST polystyrene for Reflection

~ NIST polystyrene for ATR

~ Gold reference disk for reflection background reference

~ NIST traceability certificate and protective case

90 702-014200 TRAINING VOUCHER: iN10

1 EA

iN10 Training Voucher

~ Includes enrollment for 1 student only

~ This voucher is good for enrollment in an iN10 Operations training class conducted at a Thermo Fisher Scientific

Training Institute facility

~ The voucher expires 12 months from the date of installation

912A0798 100

DELL OPTIPLEX WORKSTATION WIN 7 64 BIT

1 EA

1.160.00

1,160.00 USD

*Dell Optiplex Workstation Windows 7 Professional 64 Bit Loaded (or model with similar capabilities)

Includes:

~ Dell OptiPlex Mini Tower Chassis

~ Intel Core i5-3550 Processor (3.3GHz)

~ 8GB RAM 1600MHZ DDR3

~ 1TB Hard Drive with 32MB DataBurst Cache,

~ Keyboard and Mouse

~ 16X DVD+/-RW, Data Only

~ Integrated Audio and Internal Speaker

~ Audio Ports: Line-In, Line-Out

~ Comm Ports: Six External USB 2 Ports, Four External USB 3 Ports,

1 Serial Port, 1 VGA Port, 2 Display Ports

~ 4 Expansion Slots:1 Full Height PCI,1 Full Height PCIe x1, 2 Full

Height PCle x16

~ Chassis intrusion switch

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eMail:

ed.ridgeway@thermofisher.com

Item	Material No.	Description	C	Qty	Unit Price	Total	Price
		~ RoHS Compliant Lead Free Chassis and Motherboa ~ Dell 3 Year Economy Support Plan	ard				
110	840-223900	FLAT PANEL MONITOR 22 WIDE *22" Flat Panel Widescreen Monitor	1 E	ĒΑ	405.75	405.75	USD
		~ Dell UltraSharp 22" Widescreen Flat Panel Display (~ Signal Input, DVI and VGA ~ Dell 3 Year Economy Support Plan	or equivale	nt)			
120	298-485800	KnowltAll plus libraries KnowltAll plus libraries	1 8	ΞA	7,000.00	7,000.00	USD
		~ KnowItAll IR/NIR Edition ~ Automobile Paint Chip Library ~ KnowItAll Software DVD Media Pack ~ KnowItAll Manual License Key					
130	833-043000	OMNIC SPECTA NICOLET IS50 EDITION CAP Omnic Specta Nicolet IS50 Edition Cap	1 E	ĒΑ	*Incl	uded In Item 10	
140	701-768900	UNITY BASIC EXT WAR IN 10 Unity Basic Ext War iN10	1 E	ĒΑ	3,346.00	3,346.00	USD
		UNITY BASIC EXTENDED WARRANTY PLAN -FT-IF	₹				
		The Basic Extended Warranty Plan allows you to prop expenses related to unlimited emergency on-site visits resolution. Coverage is provided during normal busing week, 9 hours per day, excluding holidays. A 72-hour time is provided for the on-site emergency visits. The includes consumables as specified by a Thermo engir (non-consumable) for the on-site emergency visits, 2-support response time, automatic case logging, softwat access to available online support resources.	s for probler ess hours, s or less res plan also neer repair p hour technic	m 5 days a ponse parts cal			
		Basic Extended Warranty Features: ~ Unlimited number of demand on-site service visits w hour response ~ Engineer labor and travel is included ~ Priority status for technical support inquiries	vith a maxin	num 72-			

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Item	Material No.	Description	Qty	Unit Price	Total Price
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- ~ Factory-certified replacement parts included
- ~ Software updates and notifications

Base Coverage Exclusions:

Computers not provided by Thermo Scientific or computers with operating systems older than Windows XP. Buy-in parts and engineering specials. Consumable items such as cassettes, diskettes, external cables, gas cells, gaskets, grease, ink, light bulbs, o-rings, ribbons, temperature controllers and paper. Unless covered by a specific contract option, third party accessories, GC ovens, autosamplers, mapping stages, multiple Raman lasers, 960 Raman lasers and sampling accessories (including Spectra-Tech and Smart Accessories). Complete system replacement is not covered under contract.

Validation Service Notes:

When ValPro or Val-Q validation services are purchased as part of the support plan, the appropriate validation software package is required. If validation software is not currently installed on the system please contact your local Service Call Center to purchase the appropriate validation software package.

150 701-597500

NIC IN10 EXTD WARRANTY PLAN

NIC iN10 Extended Warranty Plan

1 EA 4,780.00

4,780.00 USD

UNITY EXTENDED WARRANTY PLAN -FT-IR

The Extended Warrantee Plan allows you to properly budget for the expenses related to one preventive maintenance visit and unlimited emergency on-site visits for problem resolution. Coverage is provided during normal business hours, 5 days a week, 9 hours per day, excluding holidays. A 72-hour or less response time is provided for the on-site emergency visits. The plan also includes consumables as specified by a Thermo engineer during the preventative maintenance visit, repair parts (Non-consumable) for the on-site emergency visits, 2-hour technical support response time, automatic case logging, software updates, and access to available online support resources.

Extended Warranty Features:

- ~ Unlimited number of demand on-site service visits with a maximum 72-hour response
- ~ Engineer labor and travel is included
- ~ Priority status for technical support inquiries
- ~ One (1) scheduled Preventative Maintenance visit
- ~ Kit of basic consumables required for routine Preventive Maintenance
- ~ Factory-certified replacement parts included
- ~ Software updates and notifications

Base Coverage Exclusions:

Computers not provided by Thermo Scientific or computers with operating

Thermo Electron North America LLC

Quote No.	Create Date	* 4-6 wks ARO Payment Terms NET 30 DAYS UPON INVOICE DATE		7 / Valid To 07/25/2014
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systems older than Windows XP. Buy-in parts and engineering specials. Consumable items such as cassettes, diskettes, external cables, gas cells, gaskets, grease, ink, light bulbs, o-rings, ribbons, temperature controllers and paper. Unless covered by a specific contract option, third party accessories, GC ovens, autosamplers, mapping stages, multiple Raman lasers, 960 Raman lasers iS50 ATR Module, iS50 Beamsplitter Exchanger and sampling accessories (including Spectra-Tech and Smart Accessories). Complete system replacement is not covered under contract.

Validation Service Notes:

When ValPro or Val-Q validation services are purchased as part of the support plan, the appropriate validation software package is required. If validation software is not currently installed on the system please contact your local Service Call Center to purchase the appropriate validation software package.

Quotation Sub-total:

82,491.88 USD

Discount:

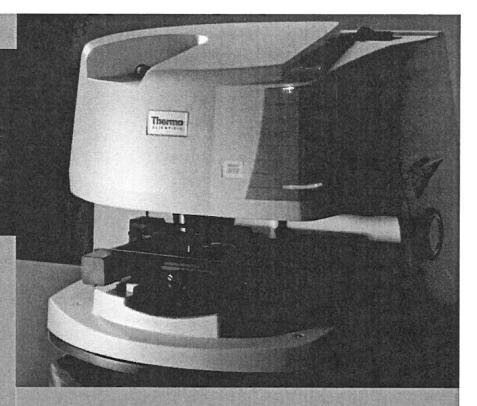
5,914.09 - USD

Quotation Total:

0,014.00 000

76,577.79 USD

Thermo Scientific Nicolet iN10 FT-IR Microscope



Infrared Microscopy with Confidence



iNtuitive



iNnovativ



Ntegrated



Thermo Scientific Nicolet iN10 FT-IR Microscope

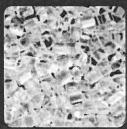
The Built-for-Purpose Infrared Microscope

- Analytical Services
- Quality Control
- Forensic Science
- Materials Science

The Ideal Instrument in Industrial and Investigative Applications

- Packaging and Laminates
- Coatings
- API Mixtures Distribution Mapping
- Contaminant Identification
- Failure Analysis
- Material Identification

You don't need to be an expert microscopist to evaluate even the smallest sample with the Nicolet in 10 infrared microscope.



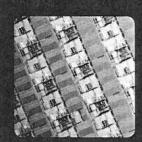
Polymers



Paints



Packaging



Microelectronics



Inks & Pigments

Infrared Microscopy with Confidence

The Thermo Scientific Nicolet[™] iN[™]10 is an intuitive, innovative and integrated infrared microscope that provides the simplicity of an FT-IR spectrometer with the ability to measure samples down to a few microns. The Nicolet iN10 infrared microscope redefines ease of use, and is unlike any other microscope on the market.

- We have developed the Nicolet iN10 infrared microscope for analysts, technicians and scientists who know exactly what information they need, but do not have time to become a microscopist or a spectroscopist, and for experts looking to find better answers faster.
- The integrated design of an infrared microscope and FT-IR spectrometer saves you laboratory space and money.
- If you can see the sample area with your naked eye, you can analyze it with our room temperature system (no liquid nitrogen needed).
- As your microanalysis needs change, you can add capabilities for surface analysis, chemical
 mapping or the highest sensitivity experiments.
- The Nicolet iZ[™]10 FT-IR module expands your sampling capabilities from micro samples to bulk analysis with minimal investment. You can add the module at any time.

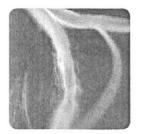
The Next Addition to Your FT-IR Lab

No matter what FT-IR spectrometer you use today, you can easily integrate the Nicolet iN10 microscope into your laboratory. The Nicolet iN10 is completely stand-alone and does not impact your FT-IR spectrometer workload. And, no matter what FT-IR software you use today, you'll be amazed by the speed with which OMNIC™ Picta™ software drives you to the answer.

The ideal instrument for analytical services, materials science, and academia

Polymers, rubbers, packaging, paints, coatings, compounding, microelectronics, pharmaceuticals, cement, cosmetics, textiles, fibers, pigments, paper chemicals, inks and adhesives are only a few of the materials that can be investigated by using the Nicolet iN10 FT-IR microscope.

Inspired by your recommendations, the Nicolet iN10 redefines what an infrared microscope is and how you use it.



Fibers



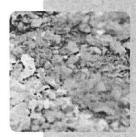
Pharmaceuticals



Cement



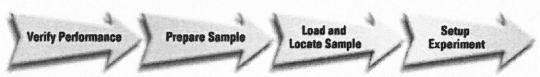
Rubbers



Cosmetics

These are only a few of the materials which can be investigated by using the Thermo Scientific Nicolet iN10 FT-IR microscope.

Sampling Made Easy



Sample Preparation

Every Nicolet iN10 comes standard with a sample preparation kit that includes:

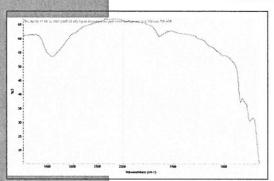
- · Slide holder plates with built-in locations for background collection
- Transmission slides and BaF₂ windows
- · Reflection slides with numbered spots
- · Microscopic particle handling tools
- · Blades, roller and knives for thin sections



The germanium Slide-On Micro-Tip ATR accessory expands the analytical capabilities of the Nicolet iN10 microscope to many types of samples including:

- Trace evidence
- · Coating, fibers and particles
- Cross sections embedded in resin
- Paper documents (ink analysis)
- · Particles in recessed areas

This ATR's germanium crystal is multi-coated to guarantee a minimum throughput of 50% and it has a robust design to allow surveys while in contact with the sample, as well as a practical slide mount for ease of cleaning. The precise and robust mechanism guarantees perfect repositioning of the crystal. The micro tip of 350 µm diameter offers a perfect balance between small contact area and high durability.



Germanium Tip ATR throughput versus reflection from gold.

Transmission Analysis with Micro-compression Cell

The compression cell is used to prepare samples for transmission analysis by reducing their thickness, while holding them firmly in place, including:

- · Laminate films and multilayer coatings
- · Fibers, particles and inclusions
- Powder crystals

The compression cell can be used with NaCl and BaF₂ windows, or with specially designed flat diamond windows. The compression ring uses a rotation-free design.

- Best performance in transmission analysis
- · Highest compression factor with diamond windows
- Maximum durability and hardness (diamond)
- · Flat surface for comfortable viewing through diamonds









Performance Verification





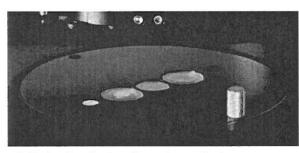
System Performance Verification

Performance verification is becoming more and more important in forensic science and industrial laboratories. The system performance verification option for the Nicolet iN10 microscope includes everything you need to verify the performance of your instrument.

The Nicolet iZ10 FT-IR module can be equipped with a fully independent validation wheel, for total system qualification and performance verification.

Verify System Performance, Consistently

- NIST traceable, serialized polystyrene standards for transmission, reflection and ATR
- ASTM validation method (ASTM E1421) automatic performance verification tests
- · Quick release validation plate for manual or motorized stage



The performance verification quick-release plate used with ValPro™ software and a motorized stage provides one-click confidence in even the most regulated environment.

- Gold mirror for reflection reference beam collection
- Transflectance polystyrene for reflection testing
- High thickness polystyrene for ATR testing
- Polystyrene film for transmission testing
- Transmission reference beam collection





Sample Loading and Location Made Easy

- Even if you are not familiar with infrared microscopy, there is no better way to start.
 The Nicolet iN10 ejects the stage to the most comfortable position so that you can easily load your sample slide.
- Click on the slide and the sample is there, focused just as well as if a trained microscopist
 had adjusted the microscope.
- And you can forget about background the Nicolet iN10 quietly takes care of that too.

Intelligent Experimental Set-up

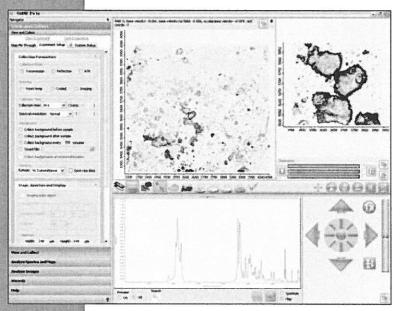
We built the Nicolet iN10 to let you set up experiments smoothly. Assisted by OMNIC Picta software, you will be able to drive your instrument with no guesswork. No matter what level of experience in FT-IR microscopy you may have, OMNIC Picta saves you valuable time.

- · Entirely software controlled optics
- · Error free operation
- · Simple user interface

Infrared Microscope Wizardry

If you are unsure where to start your analysis, simply follow the step-me-through suggestions offered by OMNIC Picta or choose the most appropriate "wizard" for your sample. Select a wizard for particles, random mixtures or laminates. See how we have shortened the gap between the ease of FT-IR sampling and intricacies of IR microscopy.

- · Step-me-through guidelines
- Wizards for particles, random mixtures
 or laminates
- Preview and Search for real-time sample surveys



Designed to be task-oriented, OMNIC Picta presents a highly visual interface of the microscope, and directs the Nicolet iN10 through a series of operations designed to get the analysis done logically, simply and quickly.









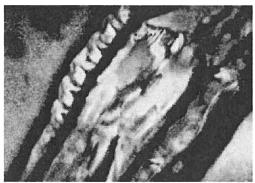


Functions and controls are simplified by intuitive visual interface graphics and icons.

Thanks to its intuitive interface, you don't need to be an expert microscopist to get answers with the Nicolet iN10.

Most infrared microscopes are fundamentally microscopy systems run by an infrared spectrometer. The Nicolet iN10 delivers truly useful IR microscopy into the everyday lab. It is a stand-alone FT-IR microscope with the power to analyze samples with the same simplicity of an FT-IR spectrometer, with performance verification capabilities, and with a seamless user interface that quickly provides all the answers and the confidence you need.

Designed to Provide Answers...



Let the Nicolet iN10 provide the best focus and illumination for you

- Load the sample and drive
 - View sample image on one monitor
 - Control IR microscope operations on a second monitor (similar to SEM operation)
- With one mouse click, drive the microscope straight to the sample area you want
- · A unique real-time microscopic experience
 - See the area of interest
 - Preview the spectral result
 - Search libraries in real time, even when the sample is moving
- · Get answers, not just results
 - Identify materials
- Measure sample dimensions
- Calculate distributions
- ...With a few clicks of the mouse

...With the Confidence You Need

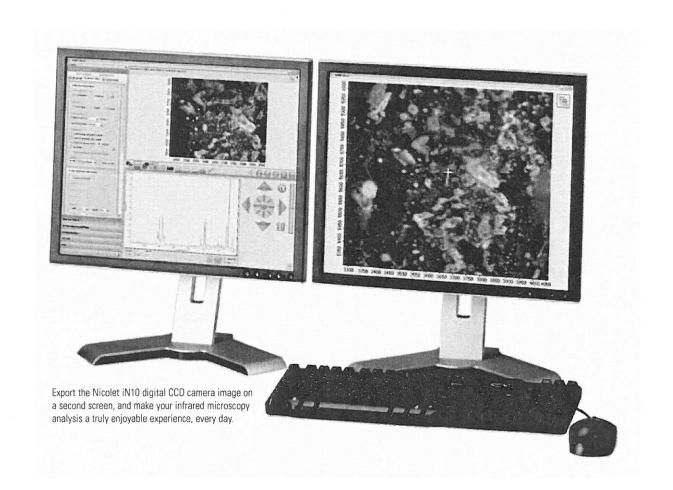
Forensics labs, pharmaceutical labs and all regulated laboratories must ensure with the utmost confidence that the answers they provide are the correct answers. The Nicolet iN10 FT-IR microscope is the perfect partner for any regulated and quality driven environment.



The Contact Alert gauge prevents any damage to your ATR crystal, and applies constant pressure across the sample location, ensuring data consistency and better quality results.



The virtual joystick provides better flexibility and operating ease. Speed and acceleration are continuously variable, matching how you survey the sample.



Take Advantage of the Nicolet iN10 Microscope's Integrated Design

- Integrated infrared optics provide more IR energy to your sample (compared with spectrometer-based systems).
- Optical efficiency allows you to analyze samples as small as 50 microns with a room temperature detector (liquid nitrogen not required).
- Your microscope is always ready to use, even when a liquid nitrogen system becomes depleted.

Optimize Your Laboratory Needs

- When you add the Nicolet iN10 microscope to your lab, its integrated design saves bench space and protects your budget.
- If you decide to add an FT-IR spectrometer, you now have two options: Get a a fully
 dedicated spectrometer, or add the Nicolet iZ10 FT-IR module to take advantage of
 the microscope's integrated infrared engine.

Focus on Your Tasks, Not the Instrument

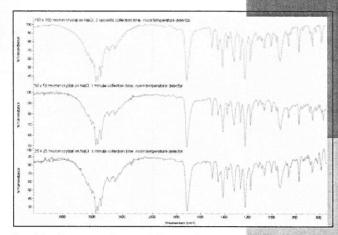
The Nicolet iN10 is not just fully automated, it also does all those things a microscopist would do to get the best results, leaving your time free to focus on the answers. And the answers the Nicolet iN10 can provide are way beyond your expectations. The Nicolet iN10 and OMNIC Picta provide chemical, physical and distribution information as never before seen in infrared microscopy.



If your analytical needs are growing and require a full-sized FT-IR spectrometer capability, add the Nicolet iZ10 external module, quickly, economically and at any time.



- Machine-intelligence to free your time learning to use the instrument
- Error-free assisted operation so simple you will not believe it
- Choose an experiment type and don't worry about the rest
- Unbeatable sensitivity to quickly pay back your investment

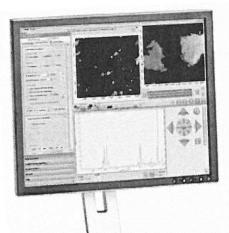


If particles, fibers, contaminants, or defects can be seen with the naked eye, they are large enough to be measured in seconds with no need for liquid nitrogen using the Nicolet iN10 exclusive room-temperature infrared detector.



View with Comfort and Confidence

Good quality video capture in infrared microscopy is essential for comfortable viewing, sample observation, and data archiving.

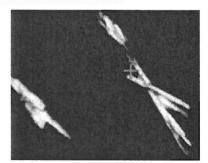


With this in mind, we have combined the latest digital imaging technology with an intuitive hardware and software interface.

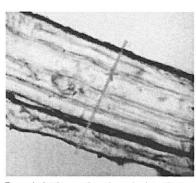
Crisp, detailed and vivid color image capturing:

Color CCD digital video camera with independent reflection and transmission illuminations.

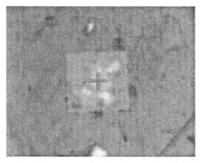
Simultaneous viewing and collection of the sample: Ensures that data is consistent with the measured area, as you can confidently see on the display.



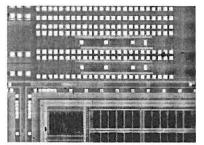
Pharmaceutical crystals illuminated in transmission with visible polarizer. This method aids in the identification of structures and crystalline forms.



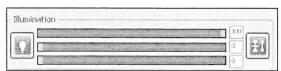
Transmission image of a polymer laminate film on a salt window (BaF₂).



The Nicolet iN10 aperture is always delineated in the user interface — before and during collection of samples. This ensures that the infrared information is collected exactly from what is seen. The aperture is independently illuminated, never masking the field of view, nor obscuring the sample image.



Reflection image of a microelectronic device.



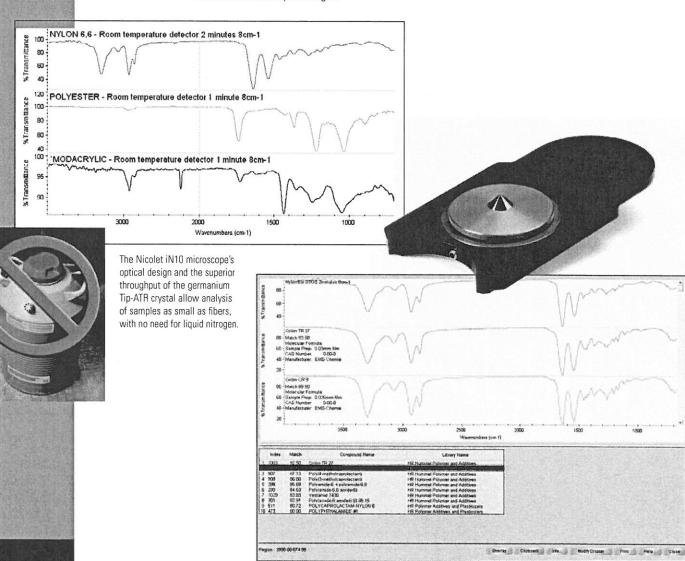
Separate illuminators, software controlled and self optimized for reflection, transmission and aperture.

Measure with Power

If You Can See It, You Can Do It — Anytime and at No Extra Cost

The optimized design and built-in FT-IR optics of the Nicolet iN10 deliver unparalleled infrared optical efficiency. This design provides you with all the analytical power you need to eliminate the time, expense and hazards associated with liquid nitrogen cooling.

Samples down to 50 microns can be measured with a room temperature detector in transmission, reflection and by ATR. If you can see the sample with the naked eye, you can measure it without liquid nitrogen.



The spectral quality delivered by the room temperature detector and the accurate ATR correction of OMNIC Picta allow material identification with high confidence even in the absence of liquid nitrogen.

Unparalleled infrared microscopy with no need for liquid nitrogen, just like an FT-IR spectrometer.

Beyond Typical Limits

Analyze Particles Smaller than 10 Microns

The optional liquid nitrogen-cooled MCT detector enables you to measure particles or sections smaller than 10 microns. Using the motorized stage option, and OMNIC Picta software gives you top speed, spatial resolution and sensitivity for challenging samples. This configuration is the preferred choice for busy labs running several larger samples every day.

Combining the MCT Detector and Motorized Stage Gives You:

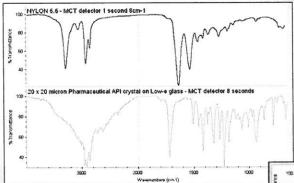
- · Cost effective high spatial resolution sampling
- · Highest sensitivity, for samples as small as 10 micron, or less
- Fast mapping data collection

Merging the Exceptional Sensitivity of MCT Detector and Micro ATR Provides:

- · Exceptional quality spectra in only a few seconds
- · Sensitivity for smaller sample sizes, down to 3 microns
- · ATR mapping surface analysis speed

The Nicolet iN10 Micro ATR is a slide-on germanium tip with extraordinary sensitivity for your smallest samples, beyond diffraction limits. Its patented design also provides robustness, ease of cleaning, and high throughput, which translates into impeccable spectra in just few seconds.

- · Robustness for ATR survey, moving the sample while in contact
- Ease of cleaning, essential in ATR sampling, achieved by patented Slide-On technology



Top: spectrum of a single Nylon 6,6 fiber collected in only one second with micro ATR and MCT detector.

Bottom: 20 x 20 micron crystal of a pharmaceutical active ingredient collected in 8 seconds with MCT detector. Sample prepared on low-e glass slide, measured in reflection.



The sensitivity of the Nicolet iN10 microscope with MCT detector allows accurate identification of materials quickly prepared on reflective slides, in only a few seconds.

Answers, Not Just Spectra

The Day-to-Day Challenge

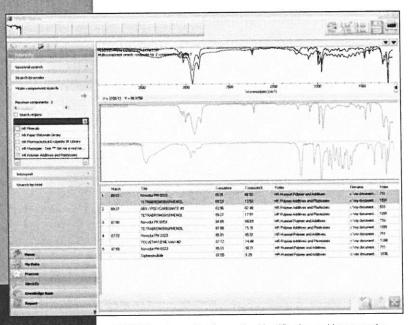
When defects occur in your manufacturing process, when suspected counterfeit goods threaten your brand, or when your quality control laboratory rejects a product — your analytical services day has begun.

Tough Questions...

- Q What's this "spot?"
- What caused this material to fail?
- Why doesn't this material pass final inspection?

Getting to the core of these questions requires an investment in spectral data, the ability to identify mixtures, and the confidence to justify your results. Just getting a good quality infrared spectrum from your sample is not enough!

The Nicolet iN10 with OMNIC Specta™ software creates a unique combination of infrared microanalysis and spectral identification, guiding you through locating the analysis area, identifying the material, and certifying your assumptions.



OMNIC Specta provides innovative identification and interpretation tools and an unique expert knowledge base. It converts all of the data on your hard disk into an always-ready database and includes a standard collection of 9000 spectra that enables you to efficiently and effectively identify materials. And when even the microscope spatial resolution reaches its limits, OMNIC Specta adds the power of identifying mixed compounds with a mouse click.

...Definitive Answers

- OMNIC Specta improves your lab's problemsolving skills and maximizes the Nicolet iN10 microscope's analytical power.
- A OMNIC Specta protects and improves the satisfaction of your customers.
- A The Nicolet iN10 and OMNIC Specta reduce inconsistent product quality and assist in mitigating product recalls and their related costs.

...Secure Answers

Standard on your Nicolet iN10 microscope is a collection of over 9000 spectra. Using OMNIC Specta, you now have the ability to confidently find answers with:

- Automated qualitative and semi-quantitative analysis of pure compounds and mixtures
- · Comprehensive search and interpretation functionality
- Expert knowledge base
- · A database of every spectrum collected and stored on your computer

Get the highest confidence from infrared identification.

Answers, Not Just Maps

Beyond Automation

Automation helps speed up data collection, but when we discussed building the next IR microscope with our customers, they said they needed a simpler way to get to answers. Automation without logic doesn't answer all your questions. The Nicolet iN10 microscope and its OMNIC Picta interface, equipped with a motorized stage, drives your equipment straight to the trouble spot – hands free. Then OMNIC Specta software provides you with unequivocal answers.

Particle Analysis

How many particles are there? How large are the particles? Are they all of the same nature?

Only the Nicolet iN10 infrared microscope can do this:

- · Find the particles by sieving according to size
- · Measure the particle's dimensions
- · Set the appropriate aperture to collect data
- · Collect data and reference backgrounds
- · Identify particles and classify them
- Regroup the information as materials distribution percentage, number and size

Do you still think automation is enough?

Multiple Compound Structures

How many compounds are there? How are they distributed? What is the relative percentage of each one?

Once your map acquisition is complete OMNIC Specta:

- · Finds similarities within your map
- · Creates chemical maps for each class identified
- · Calculates the total area of each class
- Identifies the compound of each class in your libraries

Still think simple mapping is the answer?

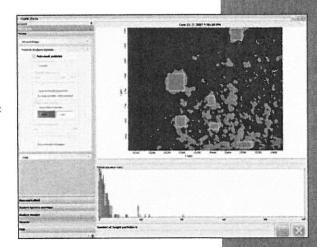
Inclusions

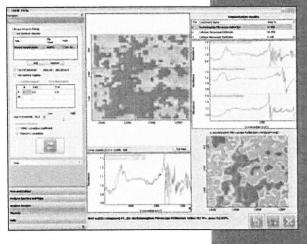
How to identify them? How to remove the bulk information? Need to delaminate?

Let the Nicolet iN10 do all the work:

- . Measure the bulk and the inclusions
- Extract spectra of inclusions
- Identify the compound of each embedded species

Do you want to minimize your sample preparation chores, including delamination?





Get the full picture from particle and multi-compound analyses.

Nicolet iN10 – Microscopy Redefined

The Thermo Scientific Nicolet iN10 FT-IR microscope is integrated, innovative and intuitive beyond what you have come to expect from an infrared microscope. The Nicolet iN10 redefines microscopy, because the instrument is entirely inspired by you.





- · Integrated design for best performance with no need for an external FT-IR
- Compact footprint, saves laboratory space and budget
- Lowest cost of ownership, no need for liquid nitrogen on samples down to 50 microns

Innovative Microscopy Tools

- · Full computer control, even the joystick is now virtual
- · Dual monitor operation, for maximum viewing
- System performance verification, fully automated for maximum confidence

Intuitive OMNIC Picta User Interface

- · Simplified operation and automated routines for most common micro analysis routines
- Spectral identification of pure and mixture compounds with OMNIC Specta software

In addition to these offices, Thermo Fisher Scientific maintains a network of representative organizations throughout the world.

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Thermo Scientific Nicolet iN10 Infrared Microscope

Beyond automation – a breakthrough in infrared microscopy simplicity

The Thermo Scientific Nicolet iN10 infrared microscope sets the benchmark for modern, productive and cost-effective infrared microanalysis. The efficient optical design of the integrated Nicolet iN10 and a novel approach to instrument operation provides users of all skill levels greater access to this valuable technique.





The Thermo Scientific Nicolet iN10 infrared microscope features an efficient optical design for optimum performance. Its integrated design allows the analysis of microscope samples without the need for an FT-IR spectrometer.

With its intuitive Thermo Scientific OMNIC Picta user interface, users with little prior experience in microscopy or spectroscopy are able to quickly and effectively collect sample data to characterize microscopic materials. OMNIC™ Picta™ assists users in driving to the proper sample area, while "wizard" software guides users through common processes.

Nicolet™ iN™10 Infrared Microscope Benefits

The Nicolet iN10 is an integrated infrared microscope, where an innovative optical design and intuitive operation bring tangible benefits and cost savings to infrared microscopy. It provides the simplicity of an FT-IR spectrometer with the ability to measure samples down to a few microns. The Nicolet iN10 provides these benefits:

- Samples as small as 50 microns can be analyzed with no need for liquid nitrogen (LN), anytime, safely and at lowered operating costs.
- With no need for an FT-IR spectrometer, you save valuable laboratory space, and budget.

- Built-in intelligence minimizes the learning process, automates instrument validation, and provides chemical, physical and distribution information through easyto-follow procedures, letting you focus on the answers.
- When speed, resolution, and more analytical power become critical, the Nicolet iN10 infrared microscope grows with you.
 Using an MCT detector, motorized stage or Micro ATR enables you to identify materials as small as 3 microns.
- Add the Thermo Scientific Nicolet iZ10 FT-IR module to get full spectrometer capabilities, at minimal cost.

The superior video capturing technology built into the Nicolet iN10 microscope, the integral computer controlled automation, and the dual monitor capability, allow you to access all system settings from the computer. Even the joystick for the motorized stage is controlled through the OMNIC Picta interface, to let you save space, time and focusing on your tasks.

Configure Your Nicolet iN10 to Meet Your Requirements

- Direct contact sampling with MicroTip ATR
- Sensitivity enhancement with LN-cooled MCT detector
- Manual or motorized stage
- Best viewing comfort with dual monitor operation
- Enhanced viewing with motorized visible polarizer



	Specification	Benefit
Sample Viewing Illumination	Independent reflection and transmission electronic LED illuminators, software controlled. Separate LED illumination for aperture.	Uniformly illuminated wide field of view. Allows viewing in reflection and collection of non transparent materials in transmission. Separate illumination for the aperture allows error-free operation.
Video image	High resolution 1/3 inch color digital camera USB2 with 1024 x 768 XGA low-noise CCD. Real-time 500 micron field of view.	Crisp, vivid color, high definition video imaging and mosaic acquisition. Image can be exported to a second monitor for best viewing comfort.
Sample view	Thermo Scientific TruView — simultaneous view of sample while collecting data. Full view of the sample area with aperture positioned, even during collection	Observe sample and spectrum, and related masked area, in real time, for total confidence in results
Microscope Optics Gold coated optics	Gold coating of infrared beam conditioning, reflection/ transmission, detectors and aperture mirrors	Superior sensitivity and maximum efficiency in any infrared sampling mode allows room temperature liquid-nitrogen free analysis
Aperture	Metal blades, off axis motorized	Computer controlled and separately illuminated, for aperture visualization before and during acquisition of data
IR/Visible objective and condenser	Permanently aligned 15×, 0.7 N.A. (half angle range 20° to 43.5°). Objective with built-in purge collar ring and dovetail mount for Slide-On ATR crystal. Working distance 16 mm.	High numerical aperture provides best performance with light scattering samples. No need for X-Y condenser centering; automatic focus adjustment for transmission analysis and auto-park.
Sample thickness	Up to 20 mm with standard sample holders	Allows the analysis in reflection and ATR of samples as thick as 20 mm with no need to remove condenser. Over 20 mm samples can be measured, depending on the overall size.
ATR option	Slide-On MicroTip Ge ATR crystal. Microscopy optimized multi-coated crystal design (throughput > 50%) – 27° average angle.	Precise mounting allows ease of cleaning and ATR-survey. Enables sampling of 3 microns, or less sample-size.
Integrated FT-IR Optics Interferometer	Dynamically aligned high-speed interferometer. High speed collection up to 10 scans per second @ 16 cm¹ 0.4 cm¹ maximum resolution (with Nicolet iZ™10 external module)	Provides best short and long-term stability, moving mirror tilt and share errors-free. High throughput for best sensitivity in any sampling mode and detector. Ultrafast collection of data.
Beamsplitter	Multi-coated KBr/germanium	Spectral range 7600-375 cm ⁻¹
Infrared source	EverGlo air-cooled long lasting source, externally mounted	High throughput and easy to replace
Optics	Sealed and desiccated, optionally purged	Dessicants and humidity indicator side panel, for easy user replacement. System can be optionally purged.
Calibration laser	HeNe with built-in power supply	Best wavelength calibration
External beam	Right side external beam	Allows the combination of the Nicolet iZ10 full-features FT-IR module
Detectors		
Standard	Microscopy optimized room temperature DTGS. Spectral range 7600-450 cm ⁻¹	Specifically designed for infrared microscopy, allows collection of data in any sampling mode (transmission, reflection and ATR), with no need for liquid nitrogen and samples as small as 50 microns. Extended range allows analysis of inorganics and fillers.
Optional	Exclusive design liquid nitrogen cooled MCT-A. Spectral range 7800-650 cm ⁻¹	Long lasting vacuum lifetime, 16 hours liquid nitrogen hold time provides, overnight acquisition of large maps. MCT allows collection of samples as small as 10 microns.

Standard sample plate with gold disc and transmission locations for automated background collection





Thermo Scientific ValPro system performance verification plate with transmission, reflection and ATR traceable standards; gold disk and transmission locations for background collection

	Specification	Benefit
Automations Aperture	Standard	Fully automated, computer controlled
Condenser focus/park	Standard	Automatic adjustment in transmission, auto-park in reflection and ATR modes to enable up to 20 mm sample thickness analysis and simplify system setup
Sample focus	Standard	Fully automated, computer controlled
Reflection/Transmission	Standard	Fully automated, computer controlled
ATR contact alert	Standard	Integrated, with digital display readout of applied pressure and custom selectable threshold for highest ATR mapping uniformity
Infrared/Viewing Mode	Not required	Simultaneous view and collection through dichroic mirrors does not require automation or user selection
Detector selection	Standard	Fully automated, computer controlled
Motorized stage	Optional	High speed 2.75 x 5 inch motorized stage and virtual joystick software control provide precision and ergonomic design. Includes slide plate holder with built-in gold mirror and void position for automatic background collection in reflection and transmission
Visible polarizer	Optional	Fully automated, computer controlled
ValPro™ system performance verification	Optional	Fully automated, computer controlled
Stages Manual		Quick-release mount 2 x 3" X-Y stage
Motorized		Quick-release mount 2.75 x 5" X-Y stage (hardware joystick optionally available)
Performance Features Signal-to-noise @ 100 um, 2100-2000 cm ⁻¹ , 4 cm ⁻¹ resolution, 2 minutes	Better than 25000:1 with cooled detector	Most samples require just few seconds of collection time. Superior sensitivity for challenging samples and smallest particles.
Spectral range	7600-650 cm ⁻¹	Mid-band MCT-A detector allows superior sensitivity in any sampling mode, and optimal spectral range
Validation and Performance Qualifications ASTM method	Transmission, Reflection and ATR	Ensures confidence in results, in any sampling mode in compliance to internationally accepted FT-IR performance verification method
European Pharmacopoeia methods	Transmission, Reflection and ATR	Ensures confidence in results, in any sampling mode in compliance to European Pharmacopoeia FT-IR performance verification method
Reference standards	NIST Traceable polystyrene standards. Standards plate in protective case and traceability documentation.	Ensure traceability to internationally accepted references
Validation mode	Manual	Convenient validation kit, for manual stage
	Fully automated (requires motorized stage)	Validation kit and procedure for transmission and reflection operation. If ATR test is included, requires manual displacement of crystal in place and removal of background acquisition.



Product Specifications



Eject button and Slide-View of OMNIC Picta allow simple and fast sample loading

	Specification	Benefit
OMNIC Picta w/Manual Stage Real time spectral preview	Preview sample spectrum, sample image and aperture, while scanning	Survey sample to find best location to collect final data; ensures results and location consistency; allows continuous sample screening while moving the stage (manual or motorized)
Real time preview and search	Adds search real-time capability	Enables real-time identification of samples, while in preview mode
Automations	Focus, condenser focus and park, dual detector, reflection/transmission, aperture, external beam, illuminations	Total control of the microscope from workstation PC
Autofocus and autoillumination	Adjusts focus and illumination for best viewing	Lowers optimal sample viewing setting skills, increases speed
Dual screen operation	Allows export of the video image or the mosaic image to a second monitor. Detachable joystick interface can be exported as well.	Improves comfort in viewing and magnifies sample for easier observation of details
Infrared energy optimizer	Adjusts optics for infrared reflection or transmission analysis	Eliminates the need for condenser adjustment or parking by user; lowers infrared microscopy skills requirement
ATR contact control	Built-in pressure monitoring sensor device with custom adjustable maximum pressure	Eliminates crystal damages; standardizes the pressure applied to multiple points increasing spectral uniformity; adjustable pressure to fit wide range of samples
Polarizer control	Motorized polarizer and motorized rotatable analyzer	(Optional) Allows insertion and control of visible polarization viewing enhancement from workstation PC
Operating system	Windows® XP or Vista™	
Patented OMNIC Picta Wizards¹ (requires motorized stage) Sample loading	Stage eject and slide view	Lowers microscopy skill requirements. Greatly improves sample loading on the stage and location under the microscope through graphical interface of most commonly used slides.
Mapping controls	Discrete, line and map scans	Multiple random points, cross sections and areas map collection. No need to specify reference location for reflection or transmissior background collection minimizes infrared microscopy skill requirements.
Particle wizard	Measures particle(s) size, sets best fit aperture, collects spectrum and background, search spectrum against library	Provides material identification, size, percentage of distribution and chemical image of particles within an area, automatically. Simplifies particle analysis for any type of use.
Inclusions wizard	Similar to particle analyzer but designed to remove spectral contribution from embedding material	Minimizes or removes the need for delamination or particles extraction from bulk. Improves microscope usability lowering skills requirement.
Random mixtures wizard	Extracts multiple chemical maps from a raw map	Provides self extraction of distribution information of multiple materials within an area. Displays material identification, total area and distribution, for each material identified. Enables chemical mapping usability to any type of user.
Laminates wizard	Applicable to line maps, identifies layers and calculates thicknesses by spectral match	Provides thickness and material identification of laminates and paint chips by chemical properties. In conjunction with image analysis, provides dual thickness confirmation (video image and chemical image).
Other Power requirements	100-240V AC 47-63 Hz 3.2 amp.	
Regulatory approvals	CE, ETL CE	
Dimensions	622 mm x 653 mm x 533 mm (W x D x H)	4
Warranty	12 month, full warranty, complete system	

1. U.S. Patent No. 7,496,220

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