

BIDDER'S NAME: PerkinElmer Health Sciences Inc.  
(Submit with Bid Proposal)

**BIDDER'S CHECKLIST**

PRODUCT PURCHASE CONTRACT FOR  
**NEXION 350D INDUCTIVELY COUPLED PLASMA – MASS SPECTROMETRY (ICP-MS)**  
Bid File No. 3424

**SUBMIT THIS BIDDER'S CHECKLIST WITH YOUR BID DOCUMENTS.** Bidders shall complete and submit all documents marked with an "X" in the "REQUIRED" column. Documents required on the checklist but not included may render your bid nonresponsive and ineligible for award. Bids received by the City by the scheduled bid opening time will be opened and publicly read but are subject to verification that all the required documents have been submitted.

REQUIRED

1. **BID PROPOSAL PAGES** 1.2 through 1.4.
2. **BID DEPOSIT** attached to front of Proposal in the form of:
- |   |  |
|---|--|
| <input type="checkbox"/> Certified Check        | <input checked="" type="checkbox"/> Bidder's Bond  |
| <input type="checkbox"/> Cashier's Check        | <input type="checkbox"/> Irrevocable Ltr of Credit |
| <input type="checkbox"/> Certificate of Deposit | <input type="checkbox"/> Annual Bidder's Bond      |

*NMIC # 13056*

**Note: Company Checks are NOT acceptable**

3. **CERTIFICATION FOR LOCAL PREFERENCE**, if applicable, page 1.5.
4. **SIGNATURE PAGES** 1.6 and 1.7.
- N/A*  5. **ADDENDA** - Signature page of all Addenda issued, if applicable. Addenda No. \_\_\_\_\_ to \_\_\_\_\_ (Enter numbers).
6. **LITERATURE/STANDARD WARRANTY.** As required on page 5.0, paragraph (d), any applicable manufacturer's Published Price List or website, and two copies of the manufacturer's descriptive literature and specifications or website, including a copy of the manufacturer's standard warranty.

**SUBMITTED BY:**

Name of Company PerkinElmer Health Sciences Inc. Contact Name DAVID JARVIS

Address 710 Bridgeport Avenue City Shelton State CT Zip 06484-4794

Phone No. +1-(916) 802-5555 Fax No. (203) 944-4914

E-Mail Address: DAVID.JARVIS@PERKINELMER.COM

**BID PROPOSAL**

BIDDER'S NAME: PerkinElmer Health Sciences Inc.  
(Submit with Bid Proposal)

**PRODUCT PURCHASE CONTRACT FOR  
NEXION 350D INDUCTIVELY COUPLED PLASMA – MASS SPECTROMETRY (ICP-MS)  
Bid File No. 3424**

TO: THE PURCHASING MANAGER OF THE CITY OF FRESNO

The undersigned Bidder hereby proposes to furnish to the City of Fresno, in accordance with the Specifications annexed hereto and made a part hereof, the following item(s) **delivered F.O.B. Destination, Freight Prepaid & Allowed, to the jobsite(s) as specified in the Special Conditions of these Specifications**, and at the prices set forth in the following bid item(s):

<u>BID ITEM</u>	<u>QTY</u>	<u>DESCRIPTION</u>	<u>UNIT PRICE</u>	<u>TOTAL PRICE</u>
1.	01	MANUFACTURER: <u>PerkinElmer</u> MODEL: <u>NexION 350D ICP-MS</u> or an approved equal (see Technical Specifications)	\$ <u>166,641.20</u>	\$ <u>166,641.20</u>
SUBTOTAL:				\$ <u>166,641.20</u>
Sales Tax 8.225%:				\$ <u>13,869.09</u>
<small>Estimated for CA State.</small>				
2.	01	Training	\$ <u>0</u>	\$ <u>0</u>
3.	01	Delivery	\$ <u>2,200.00</u>	\$ <u>1,980.00</u>
Total Net Bid Amount:				\$ <u>168,621.20</u>

The Total Net Bid Amount is ONE THOUSAND SIXTY EIGHT HUNDRED,

SIX HUNDRED TWENTY ONE Dollars and TWENTY Cents.

**Completion of Bid Proposal Form to be Eligible for Award.** Bidders must bid all bid items within a section (including any Alternates). The Bidder is non-responsive and ineligible for award in the event Bidder fails to initial this paragraph on the line provided and completely fill in the Bid Proposal Form including, without limitation, all dollar amounts and information called for on this Bid Proposal Form. By his/her initials to the right hereof, Bidder represents he/she has read and understands the consequences of not completely filling in this Bid Proposal Form.

JA  
Initial

BIDDER'S NAME: PerkinElmer Health Sciences Inc.  
(Submit with Bid Proposal)

**CONTRACT QUANTITIES.** The City reserves the right to increase or decrease quantities in accordance with available funds as appropriated by the City Council. If the City Council has not appropriated funds or sufficient funds are not available to complete the purchase, the City reserves the right to decrease quantities to stay within the budget limitations.

**ADDENDA.** The City makes a concentrated effort to ensure any addenda issued relating to these specifications are distributed to all interested parties. It shall be the Bidder's responsibility to inquire as to whether any addenda to the Specifications have been issued. Upon issuance by the City, all Addenda are part of the Bid Proposal. Signing the Bid Proposal on the signature page thereof shall also constitute signature on all Addenda.

**PRECEDENCE OF BID PRICES.** In the event of discrepancies between the bid total, summaries of totals and unit price extensions, the unit price correctly extended will control over the summaries of totals, and the summaries of totals correctly added will control over the total, whether the summaries of totals are extended unit prices or lump sums.

**RIGHT TO REJECT ANY AND ALL BIDS.** The City reserves the right to reject any and all bids.

**TIME PERIOD TO AWARD/REJECT BIDS.** The undersigned Bidder agrees that the City may have **90 DAYS** from the date bids are opened to accept or reject this Bid Proposal. It is further understood that if the Bidder to whom any award is made fails to enter into a Contract as provided in the Specifications, award may be made to the next lowest responsive and responsible Bidder, who shall be bound to perform as if he/she had received the award in the first instance. No Bid Proposal may be withdrawn prior to award within that time.

**AWARD OF CONTRACT.** When bids are submitted to the Council, the award will be made to the lowest responsive and responsible bidder, subject to the right to reject any and all bids, pursuant to Fresno Municipal Code section 4-102.

**MINOR IRREGULARITIES.** The City of Fresno reserves the right to waive any informality or minor irregularity that does not have a monetary consideration when it is in the best interest of the public and of the City to do so. A discrepancy that offers a Bidder an unfair advantage will cause the bid to be nonresponsive.

**TIEBREAKER.** In the event a tiebreaker is needed to establish the lowest responsive and responsible Bidder, the City shall, unless otherwise agreed upon by all participating parties, utilize a coin toss as a tiebreaker to be administered by a third party chosen by mutual consent of the participants. Such coin toss shall take place within 7 working days from the date of bid opening. If the City determines that a tiebreaker is necessary, each applicable Bidder agrees to participate or to indemnify the City in any litigation resulting from the utilization of the tiebreaker. If a Bidder refuses to timely participate, the City shall conduct the coin toss in a manner determined by the City to be fair to all and the results of such coin toss shall be final.

BIDDER'S NAME: PerkinElmer Health Sciences Inc.  
(Submit with Bid Proposal)

### BID DEPOSIT

Accompanying this bid proposal is a Bid Deposit in the amount of one thousand dollars (\$1,000) (or, in bids with Add Alternates, the highest possible combination of the Base Bid plus Add Alternates) in the following form:

- |   |   |
|---|---|
| <input type="checkbox"/> Certified Check        | <input checked="" type="checkbox"/> Bidder's Bond     |
| <input type="checkbox"/> Cashier's Check        | <input type="checkbox"/> Irrevocable Letter of Credit |
| <input type="checkbox"/> Certificate of Deposit | <input type="checkbox"/> Annual Bidder's Bond         |

**Note: Company Checks are NOT acceptable**

which is deposited by the undersigned Bidder with the City of Fresno as a guarantee that the Bidder, if awarded all or part of the Contract, will, within 15 calendar days (except in the event federal funding is applicable to this Contract, then 10 working days) from the date the Notice of Award is mailed to the Bidder, execute and return a Contract furnished by the City. If the Deposit is in the form of an Annual Bidder's Bond, the bond must be heretofore registered with the Purchasing Manager and must be in the amount of one thousand dollars (\$1,000) in the following form:

Such Deposit is made with the understanding that failure to execute such Contract will result in damage to the City, that the amount of such damage would be difficult to determine and that in the event of such default said Deposit shall become the property of the City; or, if a Bidder's Bond is deposited, the amount of the obligation thereof, but not more than the above stated amount, shall thereupon be due and payable to the City of Fresno as liquidated damages for such default, payment of said amount to be the joint and several obligation of the Bidder and the corporate surety.

### BUSINESS LOCATION

- ( x ) The undersigned Bidder does not maintain a place of business in the City of Fresno.
- ( ) The undersigned Bidder maintains a place of business in the City of Fresno at:  
\_\_\_\_\_ Fresno, CA \_\_\_\_\_.

### BUSINESS LICENSE

- ( ) The undersigned bidder has a current City of Fresno Business License Number:  
\_\_\_\_\_.

BIDDER'S NAME: PerkinElmer Health Sciences Inc.  
(Submit with Bid Proposal, if applicable)

**CERTIFICATION FOR LOCAL PREFERENCE**  
PRODUCT PURCHASE CONTRACT FOR:  
**NEXION 350D INDUCTIVELY COUPLED PLASMA – MASS SPECTROMETRY (ICP-MS)**  
Bid File No. 3424

We certify that we qualify as a local business pursuant to Fresno Municipal Code section 4-108(a).

**Location of Business:**  
Please provide street address  
(PO Box is not acceptable)

Primary Office [ ]  
Branch Office [ ]  
(Please mark as applicable)

Address: \_\_\_\_\_

\_\_\_\_\_

Phone: \_\_\_\_\_

\*\*\*\*\*

We certify that we qualify as a local business pursuant to Fresno Municipal Code sections 4-108(a) and (b).

**Location of Business:**  
Please provide street address  
(PO Box is not acceptable)

Primary Office [ ]  
Branch Office [ ]  
(Please mark as applicable)

Address: \_\_\_\_\_

\_\_\_\_\_

Phone: \_\_\_\_\_

Provide total number of employees (includes employees of fixed primary and any branch offices of Bidder): \_\_\_\_\_

The average annual gross receipts over the previous three calendar years to the city inviting bids herein (includes gross receipts of fixed primary and any branch offices of Bidder)  
\$ \_\_\_\_\_

Small Business Certification issued by the State of California  
Certification Number: \_\_\_\_\_ Date of expiration: \_\_\_\_\_

The undersigned Bidder hereby declares under penalty of perjury under the laws of the State of California that the information contained on this CERTIFICATION FOR LOCAL PREFERENCE is correct and complete.

**The above Certification is part of the Bid Proposal. Signing this Bid Proposal on the signature page thereof shall also constitute signature of this Certification.**

Bidders are cautioned that making a false certification may subject the certifier to criminal prosecution

(Submit with Bid Proposal)

**SIGNATURE PAGE**

By my signature on this Bid Proposal I certify, under penalty of perjury, that the foregoing statements, pages 1.1 through 1.5, and those contained herein are true and correct.

**BID SUBMITTED BY:**

(Please follow the instructions for each line, as explained below.)

- (1) PerkinElmer Health Sciences Inc. ( ) 1-800-762-4000 ( ) (203) 944-4914  
Bidding Firm Phone Fax
- (2)  Corp: State of Incorporation: DELAWARE  
 Individual  
 Partnership  
 Other: \_\_\_\_\_
- (3) 710 Bridgeport Avenue  
Business Address  
Shelton, CT 06484-4794  
City State Zip Code
- (4) By: JUDITH ALBRECHT  
Signature of Authorized Person  
ASSISTANT SECRETARY  
Type or Print Name of Authorized Person and Title  
Federal Tax I.D. No.: 04-3361624 Date: JAN 8TH, 2016

**INSTRUCTIONS FOR SIGNATURE PAGE**

- LINE 1: The name of the Bidder must be the same as that under which a license is issued, if a license is required. If the Bidder is a corporation, enter the exact name of the corporation under which it is incorporated; if Bidder is an individual, enter name; if Bidder is an individual operating under a trade name, enter name and dba (trade name in full); if a partnership, enter the correct trade style of the partnership; if a joint venture, enter exact names of entities joining in the venture.
- LINE 2: Identify here the character of the name shown under (1), i.e., corporation (including state of incorporation), individual, partnership, or joint venture.
- LINE 3: Enter the address to which all communications and notices regarding the Bid Proposal and any Contract awarded thereunder are to be addressed.
- LINE 4: (a) If the Bidder is a corporation, the Bid Proposal must be signed by an officer or employee authorized to sign Contracts on behalf of the corporation evidenced by inclusion of one of the following certified by the secretary of the corporation, authorizing the officer or employee to sign contracts (sample certification attached): a copy of the Articles of Incorporation, a copy of the Bylaws, a copy of the Board Resolution or Minutes authorizing the officer or employee to sign Contracts.

(Submit with Bid Proposal)

(b) If Bidder is an individual, he/she must sign the Bid Proposal, or if the Bid Proposal is signed by an employee or agent on behalf of the Bidder, a copy of a power of attorney must be on file with the City of Fresno prior to the time set for the opening of the bids or must be submitted with the Bid Proposal.

(c) If the Bidder is a partnership, the Bid Proposal must be signed by all general partners; or by a general partner(s) authorized to sign Contracts on behalf of the partnership evidenced by inclusion of either a copy of the Partnership Agreement or a recorded Statement of Partnership.

(d) If the Bidder is a joint venture, the Bid Proposal must be signed by all joint venturers; or by a joint venturer(s) authorized to sign Contracts on behalf of the joint venture evidenced by inclusion of either a copy of the Joint Venture Agreement or a recorded Statement of Joint Venture; and if the joint venturer(s) is a corporation or a partnership signing on behalf of the Joint Venture, then Paragraphs (a) and c) above apply respectively.

Where Bidder is a partnership or a corporation, the names of all other general partners, or the names of the president and secretary of the corporation, and their business addresses must be typewritten below:

NAME		ADDRESS	
<u>John L. Healy</u>	<u>Director, Vice President and Secretary</u>	<u>940 Winter Street, Waltham, MA 02451</u>	781-663-6900
<u>David C. Francisco</u>	<u>Director, Vice President and Treasurer</u>	<u>940 Winter Street, Waltham, MA 02451</u>	781-663-6900

NOTE: All addresses must be complete with street number, City, State and Zip Code.

**SAMPLE CERTIFICATION**

I, \_\_\_\_\_, certify that I am the secretary  
Name  
of the corporation named herein; that \_\_\_\_\_ who signed this  
Name  
Bid Proposal on behalf of the corporation, was then \_\_\_\_\_ of  
Title  
said corporation; that said Bid Proposal is within the scope of its corporate powers and was  
duly signed for and on behalf of said corporation by authority of its governing body, as evidenced  
by the attached true and correct copy of the \_\_\_\_\_  
Name of Corporate Document

By: \_\_\_\_\_  
Name: \_\_\_\_\_  
Title: Secretary  
Date: \_\_\_\_\_

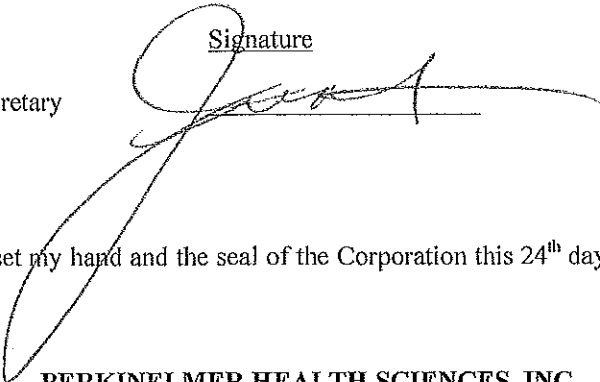


**PERKINELMER HEALTH SCIENCES, INC.**  
**Assistant Secretary's Certificate**

I, Daniel J. Dauerty, Assistant Secretary of PerkinElmer Health Sciences, Inc., a corporation duly organized and existing under the laws of the state of Delaware (the "Corporation"), do hereby certify that the following is a true and correct copy of a resolution which was duly adopted at a meeting of the Board of Directors of the Corporation on the 21<sup>st</sup> day of May, 2015, and that the same has not been rescinded or modified and remains in full force and effect as of the date hereof:

**FURTHER RESOLVED:** That the Officers of the Corporation are each authorized to execute, deliver and perform any and all agreements, instruments, certificates, governmental filings and documents as such officer or officers deem necessary or appropriate in connection with the operation of the Corporation; and

I further certify that at all times since April 6, 2009, Judith A. Albrecht has been an Assistant Secretary of the Corporation, and that the signature set forth opposite her name below is her true and genuine signature:

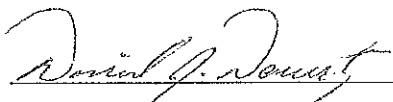
<u>Name</u>	<u>Office</u>	<u>Signature</u>
Judith A. Albrecht	Assistant Secretary	

This certificate expires May 19, 2016.

IN WITNESS WHEREOF, I have hereunto set my hand and the seal of the Corporation this 24<sup>th</sup> day of August, 2015.

**PERKINELMER HEALTH SCIENCES, INC.**

(SEAL.)

By: 

Name: Daniel J. Dauerty

Title: Assistant Secretary

State of Connecticut     )  
County of Fairfield, ss.    )

On this 24<sup>th</sup> day of August, 2015, before me personally appeared Daniel J. Dauerty, to me personally known, who, being by me duly affirmed, did say that he is the Assistant Secretary of PerkinElmer Health Sciences, Inc., and that said instrument was signed and sealed on behalf of said company by authority of its board of directors, and said Daniel J. Dauerty acknowledged said instrument to be the free act and deed of said company.

By:   
Name: Julia A Hamilton

Title: Notary Public

My commission expires: August 31, 2018

(SEAL)



**Quotation**

PerkinElmer Health Sciences Inc.  
710 Bridgeport Avenue  
Shelton, CT 06484-4794

Phone: 1-800-762-4000  
Fax: (203) 944-4914

To: LAURA RAPP  
CITY OF FRESNO  
BID 3424  
OFFICE OF THE PURCHASING MANAGER  
2600 FRESNO STREET RM 2156  
FRESNO CA 93721

QUOTE NO.: 21006871  
QUOTE VALID TO: 04/12/2016  
QUOTE DATE: 01/05/2016  
PAY. TERMS: Due Upon Receipt  
FREIGHT TERMS: FOB Destination - Frt Quoted  
ULTIMATE DEST.: UNITED STATES OF AMERICA

TELEPHONE NO. 559-621-1169

FAX NO.

YOUR REFERENCE

ITEM	MATERIAL	DESCRIPTION	QTY/EA	UNIT PRICE	TOTAL
1	N8140003	NexION 300/350D ICP-MS Material Discount NexION 350D ICP-MS System. The PerkinElmer NexION 350D is a fully computer controlled, bench top ICP Mass Spectrometer consisting of the NexION spectrometer and Syngistix for ICP-MS software which runs under the Windows 7® operating system. It includes an installation kit with installation solutions, gas lines, cooling lines, flexible vent tubing, waste container, and sample introduction, torch and interface spares kits. Some of the features include an cyclonic sample introduction system with a MEINHARD# concentric nebulizer; a built-in 40 MHz free-running Inductively Coupled Plasma source with patented PlasmaLok# interface to control ion energies; New cassette torch mount that provides one handed removal and replacement; a quadruple-stage vacuum system utilizing a triple inlet turbomolecular pump; a triple cone interface to collimate the ion beam; a ion deflector that reduces neutrals and polyatomics; a patented Universal Reaction Cell# with both Kinetic Energy Discrimination that uses collisions to reduce polyatomic interferences and Reaction Cell Technology with scanning quadrupole to chemically resolve polyatomic interferences from analyte species in typical matrices; a quadrupole made of a unique metal alloy, with exceptional thermal stability, producing hyperbolic fields for excellent abundance sensitivity and on-the-fly variable resolution; 2.5 MHz thermally stabilized quadrupole power supply for outstanding mass stability; and SimulScan# ion detection circuitry for automatic extended dynamic range in a single scan; an integrated 3-channel peristaltic pump; Computer-controlled dual-channel gas pneumatics (one with getter) are standard.	1	197,000.00	197,000.00 60,000.00-
<p>SEND PURCHASE ORDERS TO: PerkinElmer Health Sciences, Inc. 710 Bridgeport Ave. Shelton, CT 06484-4794 Phone: 1-800-762-4000 Fax: (203) 944-4904 Email: USInstrumentOrders@perkinelmer.com</p> <p>SALES REPRESENTATIVE: DAVE JARVIS PREPARED BY: Liliana Rodriguez</p>					



Quotation

PerkinElmer Health Sciences Inc.  
710 Bridgeport Avenue  
Shelton, CT 06484-4794

Phone: 1-800-762-4000  
Fax: (203) 944-4914

To: LAURA RAPP  
CITY OF FRESNO

QUOTE NO.: 21006871  
QUOTE VALID TO: 04/12/2016  
QUOTE DATE: 01/05/2016

ITEM	MATERIAL	DESCRIPTION	QTY/EA	UNIT PRICE	TOTAL
2	N8140504	KIT-SOLUTION NEXION CELL	1	0.00	0.00
3	N0772046	CHILLER-IHP 230V/60HZ TP QUIET Sales Discount IHP Whispercool# Chiller Cooling Capacity @ 20C: 2650 watts on 50Hz; 2900 watts on 60Hz Pump Flow: 3.5 gpm / 13.2 lpm Pump Pressure (adjustable): 90 psi maximum / 6.9 bar maximum (preset at 55 psi) Microprocessor-based temperature controller Large, easy to read digital temperature display (°C or °F) Cool Command# modulated refrigeration system for enhanced temperature stability and extended compressor life Chiller is designed for indoor installation in ambient temperatures between 5° and 30°C (41° and 86°F); relative humidity should not exceed 80% (non-condensing) Sound measurement @ 1 meter away: 65dBA (full load) / 62dBA (no load) Electrical Requirements: 50Hz: 240V / 1PH / 12.2 Amps Electrical Requirements: 60Hz: 208-230V/ 1PH / 12.2 Amps Dimensions: 27.6" L x 14.5" W x 22.6" H / 70.2cm L x 36.8cm W x 57.5cm H Shipping Weight: 99 lbs / 90 kgs Manufacturer's Warranty: 2 years parts & labor	1	5,100.00	5,100.00 1,020.00-
4	N0200193	NexION Operator Training New Inst Train Disc	1	3,150.00	3,150.00 3,150.00-
5	N8141230	NexION Bench with Vacuum Pump Dolly Sales Discount	1	3,648.00	3,648.00 729.60-
6	N0771726	Monitor Arm for Advanced Bench	1	869.00	869.00
7	N8145062	SC-2 DX FAST PC3 complete for NexION Sales Discount	1	23,100.00	23,100.00 4,620.00-
8	N0777206	STAND-SC2 Sales Discount	1	2,806.00	2,806.00 561.20-
9	09406439	PC-LENOVO M83(WIN 7-64BIT) Tower-USA	1	1,049.00	1,049.00



**Quotation**

PerkinElmer Health Sciences Inc.  
710 Bridgeport Avenue  
Shelton, CT 06484-4794

Phone: 1-800-762-4000  
Fax: (203) 944-4914

To: LAURA RAPP  
CITY OF FRESNO

QUOTE NO.: 21006871  
QUOTE VALID TO: 04/12/2016  
QUOTE DATE: 01/05/2016

ITEM	MATERIAL	DESCRIPTION	QTY/EA	UNIT PRICE	TOTAL
21	MASN8140003	POS0 Extd Wty - FINAL ASSY-NEXION-300D ICP-MS Promotional Discount	12	1,134.00	13,608.00 13,608.00-
22	REGDELMAS	Regular Delivery Sales Discount	1	2,200.00	2,200.00 220.00-
Total Net Price in USD:					168,621.20

Customized Financing Solutions are available - We offer competitive rates with a wide range of structures to assist in acquiring your PerkinElmer technology - Speak to your Sales Engineer.

Did you know that you can order selected products online at [www.perkinelmer.com/shop?](http://www.perkinelmer.com/shop?)

The amount displayed does not include tax charges.

\*

These charges will be added to the invoice if applicable.

\*

Includes installation and one year warranty (parts, labor and travel).

\*

Terms subject to credit approval.

\*

Please when submitting your order include our Quotation or Reference number.

\*

MATERIAL DISCOUNT REFLECTS A PROMOTIONAL DISCOUNT. PROMO NUMBER MAS031113 & MAS15071301

\*

TRADE IN FOR SCRAP

THIS QUOTATION INCLUDES THE TRADE IN OF: Model: Elan DRcE ,  
SN: XAH01007100601. PROCESSING OF ORDERS FOR REPLACEMENT PRODUCTS IS  
SUBJECT TO RECEIPT OF FULLY EXECUTED CERTIFICATE OF  
DECOMMISSIONING.

In consideration of the Trade-In Discount given for the noted  
equipment, per receipt of executed Certificate of Decommissioning, the



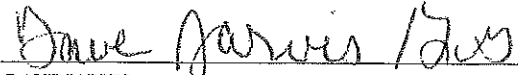
# Quotation

PerkinElmer Health Sciences Inc.  
710 Bridgeport Avenue  
Shelton, CT 06484-4794

Phone: 1-800-762-4000  
Fax: (203) 944-4914

To: LAURA RAPP  
CITY OF FRESNO

QUOTE NO.: 21006871  
QUOTE VALID TO: 04/12/2016  
QUOTE DATE: 01/05/2016

ITEM	MATERIAL	DESCRIPTION	QTY/EA	UNIT PRICE	TOTAL
		<p>buyer certifies that the noted trade-in equipment will be destroyed or rendered inoperable within 30 days after installation of the new product quoted. The Buyer agrees to indemnify and hold harmless PerkinElmer, its officers, employees and agents, from any claims, demands or liabilities whatsoever, arising out of the Buyer's failure to perform the certified action.</p>			
		<p> DAVE JARVIS</p>			

# TERMS AND CONDITIONS OF SALE

## 1. Delivery Dates and Prices

a) All delivery and shipment dates indicated on the face hereof are approximate and subject to Seller's availability schedule. Seller will make reasonable efforts to meet the delivery dates quoted. However, Seller will not be liable for its failure to meet the quoted delivery dates or for any delay in performance hereunder due to unforeseen circumstances or shortages, due to causes beyond its control, or due to its voluntary or mandatory compliance with any governmental act, regulation, or request. If, by reason of such circumstances, Seller's supplies of the equipment or service (hereinafter the "Product(s)") covered hereby are limited, Seller shall have the right to allocate the available supply among its customers in such manner as it, in its sole discretion, determines appropriate. b) All orders are priced on the basis of an estimated shipment date within ninety (90) days of the date of order to the stated destination. Should Buyer request a change in the estimated shipment date or otherwise cause delay in delivery beyond ninety (90) days from the date of order or request that the Products be shipped outside the country of original delivery, the prices established by this quote shall no longer apply, and Seller's list prices in effect on the actual date of shipment shall be used in determining the price to be paid. Except as provided above, if the price is stated by reference to a published price list, then the price shall be the price on the published price list in effect at the time Seller receives Buyer's purchase order, without regard to the requested delivery date. However, if any Product is ordered prior to the effective date of a published price change and the delivery date is rescheduled, the price in effect at the time of the initial delivery date shall apply. c) If Buyer requests shipment to a country other than the country originally requested, and if Seller elects not to cancel the order pursuant to Paragraph 12 hereof, Seller's applicable surcharge for the actual country of delivery shall be added to the price. d) Notwithstanding any provision to the contrary herein, all prices are subject to increase without notice to reflect changes in: (1) Federal or State laws taxing raw material or processed materials; (2) applicable laws or regulations governing working hours or compensation of labor; and/or (3) freight charges, insurance costs, duty or other factors affecting costs of shipment.

2. Packing and Loss or Damage in Transit. Products will be packed for shipment in a manner suitable to the method of shipment specified by Buyer, or to the method selected by Seller in the absence of instructions. Unless otherwise indicated on the face hereof, all sales hereunder are F.O.B. shipping point, and all risk of loss or damage to equipment in transit is upon Buyer. Payment will be made in accordance with Paragraph 5 below.

3. Payment Due For Partial Deliveries. Seller may, in its sole discretion, deliver any portion of the Products ordered, regardless of utility to Buyer in the absence of the undelivered portion, and all such partial deliveries shall be accepted and paid for in accordance with the terms of Paragraphs 4 and 5 below. Likewise, completion of any installation services shall not be a condition to Buyer's obligation to remit payment. The making of a partial delivery that, to any extent, is not in accordance with the contract of sale shall not affect the Buyer's obligation hereunder to remit payment.

4. Inspection, Acceptance and Return of Products or Trade-Ins. Buyer shall inspect the Products immediately upon receipt and shall, within five (5) business days after receipt, give written notice to Seller of any claim for shortage or that the Products do not conform with the terms of the contract of sale. If Buyer shall fail to give such notice, the Products shall be deemed accepted and to conform with the terms of the contract of sale, and Buyer shall be bound to pay for the Products in accordance with the terms of Paragraph 5 below. Return of Products, defective or otherwise, will not be accepted by Seller without (i) written notification from Buyer to Seller within 30 days of receipt of invoice and (ii) receipt of a return authorization number from Seller. Products authorized to be returned shall be shipped F.O.B. destination, freight pre-paid. When return of nonconforming goods has been accepted by Seller, conforming shipment may be made in accordance with Paragraph 1 above and Paragraph 8 below without further liability on Seller's part. Buyer will be liable for restocking charges in the event Products are returned to the Seller which are not defective and are in accordance with these terms. When a trade-in is authorized by Seller, Buyer shall ship, F.O.B. destination, freight pre-paid, the material or equipment so authorized for trade-in to Seller's specified location.

5. Payment and Credit Terms. Unless otherwise indicated on the face hereof, Buyer agrees to remit payment in full to the address provided on the face of Seller's invoice for all shipments, including shipments of any portion of the Products ordered, upon receipt of invoice. This obligation shall not be contingent upon the completion of any installation services included in the purchase price. No cash discounts will be granted. Account balances not paid in accordance with these terms are subject to the maximum prevailing legal interest rate calculated from date of delinquency. In the event Seller finds it necessary to refer an account to an attorney or an agent for collection of delinquent accounts, Buyer shall pay all costs of collection including, without limitation, reasonable attorneys' fees. Buyer agrees that Seller shall retain a security interest in the Products sold hereunder to secure any portion of the price not paid on delivery and will, on request, execute a security agreement in such form as is required by Seller, which, at Seller's option, may be filed with appropriate local, state, or other relevant authorities. Should Buyer become delinquent in the payment of any sum due hereunder, or if Buyer becomes insolvent, or if any proceedings are commenced under any bankruptcy or similar laws for Buyer's reorganization or other debt adjustment, Seller will not be obligated to continue performance. Seller reserves the right to change the credit terms provided herein without Seller's opinion, the financial condition or previous payment record of Buyer so warrants. If, within thirty (30) days of receipt of written notice of such change, Buyer fails to agree and comply with different terms of credit, and/or fails to give adequate assurance of due performance, Seller may (a) by notice to Buyer, treat such failure or refusal as a repudiation by Buyer of the portion of the purchase order not then fully performed, whereupon Seller may cancel all further deliveries and any amounts unpaid hereunder shall immediately become due and payable; or (b) make shipments under reservation of a demand for advance payment or payment against tender of documents of title. Buyer's acceptance of delivery of any Products shall constitute a representation that Buyer is solvent.

6. Taxes. Buyer is responsible for the ultimate payment of all taxes which may be assessed or levied on or on account of Products sold hereunder to Buyer, whether termed a gross receipts tax, use tax, property tax, sales tax or otherwise. Where Buyer claims that a transaction is not subject to any such tax, that Buyer is exempt, or that Seller is not required to collect such tax, Buyer agrees to provide Seller with any documentation necessary to support such a claim, to allow Seller to document its decision not to collect such tax(es), and to indemnify and hold Seller harmless from and against any and all fines, penalties, interest, taxes, and other expenses, including, without limitation, reasonable attorney's fees, incurred by Seller as a result of reliance upon Buyer's position.

7. Installation and Site Preparation. Installation services are included in the purchase price of the Products sold hereunder only if expressly

ed on the face of Seller's quotation or in Seller's applicable price list. Installation services for Products transferred outside the country of original delivery by Buyer's actions may be subject to additional charges based on the actual installation site location. For Products requiring installation by Seller's service personnel, it is the responsibility of Buyer to prepare the site environmentally and provide the required services, power, water, drain, air, bottled gases, permits, licenses, approvals, etc., as well as whatever is required to uncrate and transport the Product to its appropriate location for use. Failure to do so, prior to Seller's service personnel arriving at Buyer's site on the mutually agreed upon installation date, will result in a service charge by Seller to cover the lost time of its service personnel. Should Seller be unable to perform the required installation services within twelve months of a Product's shipment date as a result of Buyer's inability to prepare the site as required, Buyer may be responsible for additional costs associated with required hardware, software and firmware updates. Because Seller's service personnel may be required to enter upon Buyer's premises for the purpose of providing service to the Products sold hereunder, Buyer hereby undertakes to maintain its premises in a safe condition and to comply with all applicable laws, statutes and regulations governing workplace health and safety, and hereby accepts full responsibility for any harm or injury to, or liability arising from work performed by, Seller's personnel while on Buyer's premises, except to the extent caused solely by the gross negligence or willful misconduct of Seller's personnel. Seller's sales and service personnel are not authorized to enter into any indemnity or hold harmless agreements on behalf of Seller.

## 8. Limited Warranty.

a) Warranty. i) Seller warrants to Buyer that the Products sold to Buyer are, at the time of shipment to Buyer from Seller, free from defects in materials and workmanship.

ii) This warranty shall be valid for a period of 90 days from the date of shipment to Buyer, unless a different period is specified herein, or in Seller's applicable price list in which case such specified period shall apply. Notwithstanding anything to the contrary contained herein, the warranty period for data processing equipment, including data storage devices, processors, printers, terminals, communication interfaces, tape drives and all similar devices, is in all cases limited to ninety (90) days from the date of shipment to Buyer.

iii) Except in the case of an authorized distributor of Seller, authorized in writing by Seller to extend this warranty to distributor's customers, the warranty herein applies only to Buyer as the original purchaser from Seller and may not be assigned, sold or otherwise transferred to any third party.

iv) As Buyer's sole and exclusive remedy under this warranty, Seller agrees either to repair or replace, at Seller's sole option, any part or parts of such Products which, under proper and normal conditions of use, prove(s) to be defective within the applicable warranty period. Alternatively, Seller may at any time, in its sole discretion, elect to discharge its warranty obligation hereunder by accepting the return of any defective Product pursuant to the terms set forth herein and refunding the purchase price paid by Buyer.

## b) Exclusions and Limitations.

i) It is recognized that some parts by their nature may not function for the warranty period applicable to the Product. Therefore, expressly excluded from the warranty herein are chromatography columns, filaments, energy sources, lamps, power amplifier tubes, graphic tubes, sample cell holders, burner and furnace chambers, nebulizers, and other similar parts referenced in the Product's applicable operating manual.

ii) The warranty herein excludes any equipment or accessories which are identified on applicable price lists, quotations, special promotional materials, or on the face hereof, for which this limited warranty may be further limited. Included within this category are items produced by third party manufacturers (as to which Seller passes to Buyer the warranty it has been provided by the manufacturer) and items which are sold at specially reduced prices with reduced warranty protection (in some cases, extended warranty protection may be available at an increased price).

iii) This warranty does not cover loss, damage, or defects resulting from: transportation to the Buyer's facility, improper or inadequate maintenance by Buyer, Buyer-supplied software or interfacing, unauthorized modification or misuse, operation outside of the environmental specifications for the Product or improper site preparation or maintenance.

iv) No warranty is made with respect to used, reconstructed, refurbished or previously owned Products, which will be so marked on the face hereof and, unless otherwise indicated on the face hereof, shall be sold "As Is".

v) The warranty herein applies only to Products within the country of original delivery. Products transferred outside the country of original delivery, either by Seller at the direction of Buyer or by Buyer's actions subsequent to delivery, may be subject to additional charges prior to warranty repair or replacement of such Products based on the actual location of such Products and Seller's warranty and/or service surcharges for such locations).

c) Place of Service. Except when otherwise provided in Seller's current applicable price list, Seller shall use reasonable efforts to perform all warranty services hereunder at Buyer's facility, as soon as reasonably practicable after notification by Buyer of a possible defect; provided, however, that Seller reserves the right to require that Buyer return the Product to Seller's production facility, transportation charges prepaid, when necessary to provide proper warranty service.

d) Software and Firmware Products. The sale and exclusive warranty applicable to software and firmware products provided by Seller for use with a processor is as follows: Seller warrants that such software and firmware will conform to Seller's program manuals current at the time of shipment to Buyer when properly installed on the processor; provided, however, that Seller does not warrant that the operation of the processor or software or firmware will be uninterrupted or error-free.

SELLER MAKES NO OTHER WARRANTIES, WHETHER EXPRESS OR IMPLIED, WITH RESPECT TO THE PRODUCTS, INCLUDING, WITHOUT LIMITATION, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE.

## 9. Exclusive Remedies.

THE REMEDIES PROVIDED HEREIN ARE BUYER'S SOLE AND EXCLUSIVE REMEDIES. SELLER SHALL NOT BE LIABLE FOR ANY INDIRECT, SPECIAL, INCIDENTAL, CONSEQUENTIAL OR PUNITIVE DAMAGES, WHETHER BASED ON CONTRACT, TORT, STRICT LIABILITY OR OTHERWISE, ARISING OUT OF THE DESIGN, MANUFACTURE, SALE, DELIVERY, INSTALLATION, SERVICE OR USE OF THE PRODUCTS.

## 10. Patent Indemnity.

Seller agrees to defend, at its own expense, any suit or legal proceeding which may be brought against Buyer alleging infringement by Buyer of any

patent of the United States, as a result of Buyer's use of the Product sold hereunder for its intended purposes, provided that Buyer shall give Seller prompt written notice of any claim, threat, or institution of any such suit or legal proceeding, and provided further that Seller shall then have the sole right to control and conduct the defense and/or settlement of such claim, threat, suit or legal proceeding, either in the name of Seller or Buyer or both, and Buyer shall, at Seller's request and expense, provide relevant information and reasonable cooperation. Seller shall pay all final judgments and all costs and attorney's fees assessed against Buyer in any such suit or legal proceeding, provided Buyer has complied with the conditions hereof with respect to prompt notice and cooperation in connection with such suit or legal proceeding and given exclusive control thereof to Seller. Notwithstanding the foregoing, Seller shall not be liable for any attorney's fees or other legal expenses incurred by Buyer without the knowledge and prior written consent of Seller. Seller shall have the right, at its own expense, to procure for Buyer the right to continue using the Product claimed to infringe, replace said Product with an equally satisfactory non-infringing Product, modify said Product so that it becomes non-infringing, or remove such Product and refund the purchase price thereof less a reasonable amount for use, damage or obsolescence.

The foregoing indemnity fully defines Seller's obligation for patent infringement. Such obligations shall specifically not apply to:

a) an infringement claim resulting from additions or changes in or to the Product made by Buyer or any third party or from use in combination with other equipment; or b) an infringement claim which is settled without the prior written consent of Seller; or c) an infringement claim which results from compliance by Seller with specifications furnished by Buyer.

The total amount of Seller's obligation and liability under this Section shall not exceed the price paid by Buyer to Seller for the Product held to infringe, and in no event will Seller be held accountable for consequential damages under this indemnity, such as loss of business profits or goodwill. With respect to any infringement claim arising from Product manufactured in whole or in part to Buyer's specifications or from use of such Product in conjunction with any other goods, Buyer will indemnify and hold harmless Seller from and against all such claims for damages or profits arising from infringement of patents, designs, copyrights or trademarks.

## 11. Modification of Terms.

BUYER'S ACCEPTANCE OF ANY QUOTATION IS EXPRESSLY SUBJECT TO BUYER'S ASSENT TO EACH AND ALL OF THE TERMS AND CONDITIONS SET FORTH IN SELLER'S QUOTATION, AND BUYER'S ASSENT TO THESE TERMS AND CONDITIONS OF SALE SHALL BE CONCLUSIVELY PRESUMED FROM BUYER'S SUBMISSION OF ITS PURCHASE ORDER. NO ADDITION TO OR MODIFICATION OF SAID TERMS AND CONDITIONS SHALL BE BINDING UPON SELLER UNLESS SPECIFICALLY AGREED TO BY SELLER IN WRITING. IF BUYER'S PURCHASE ORDER OR OTHER CORRESPONDENCE CONTAINS TERMS OR CONDITIONS CONTRARY TO OR IN ADDITION TO THE TERMS AND CONDITIONS CONTAINED HEREIN OR IN SELLER'S QUOTATION, ACCEPTANCE OF ANY ORDER BY SELLER SHALL NOT BE CONSTRUED AS ASSENT TO SUCH CONTRARY OR ADDITIONAL TERMS AND CONDITIONS OR CONSTITUTE A WAIVER BY SELLER OF ANY OF THE TERMS AND CONDITIONS CONTAINED HEREIN OR IN SELLER'S QUOTATION. SELLER'S ACCEPTANCE OF BUYER'S PURCHASE ORDER IS EXPRESSLY CONDITIONED ON BUYER'S ASSENT TO THESE TERMS AND CONDITIONS. NO MODIFICATION OR WAIVER OF THESE TERMS AND CONDITIONS IS VALID, UNLESS CONFIRMED IN WRITING BY AN AUTHORIZED REPRESENTATIVE OF SELLER.

## 12. Authority to Export.

ALL ORDERS ACCEPTED FOR EXPORT (AND/OR RE-EXPORT) ARE SUBJECT TO: 1) UNITED STATES GOVERNMENT EXPORT REGULATIONS; AND 2) BUYER PROVIDING SELLER WITH ALL DOCUMENTATION NECESSARY FOR SHIPMENT TO THE DESTINATION COUNTRY.

## 13. Software Licenses and Copyrighted Material.

a) Seller provides software products by license only. The terms of the license are available from Seller and are deemed accepted by Buyer on delivery of licensed software.

b) Unless otherwise specified, Seller's copyrighted material (software, firmware, and printed documentation) will not be copied except for archive purposes, to replace a defective copy, or for program error verification by Buyer.

## 14. Miscellaneous.

a) Executable Delays. Seller shall not be liable for delays in delivery or failure to manufacture or deliver goods due to acts of God, acts or failures to act of Buyer, acts of civil military authority, fires, strikes, floods, epidemics, attack, war, delays in transportation or other causes beyond Seller's reasonable control, including, without limitation, delays in obtaining or inability to obtain necessary labor, materials, components, or manufacturing facilities. b) Governing Law. The contract of sale shall be governed by and construed in accordance with the laws of the Commonwealth of Massachusetts, U.S.A., without regard to its principles of conflict of laws. Any disputes relating to the contract of sale between Buyer and Seller shall be adjudicated in the state or federal courts in the Commonwealth of Massachusetts, U.S.A., and both parties hereby consent to the exclusive jurisdiction of said courts for purposes of any such litigation. The parties expressly agree to waive application of the United Nations Convention on Contracts for the International Sale of Goods. c) Confidential Data and Information. If, in connection with the sale, purchase, use, or maintenance of the Products, Seller is requested, required, or deems it advisable to furnish data or information which it, in its sole discretion, deems proprietary, confidential, or both, Seller shall not, in any event, submit or be required to furnish such data or information unless Buyer enters into an agreement concerning the handling, use, copying, retention and return of such information, the form of which agreement is available to Buyer on request. Seller does not agree to accept any proprietary or confidential information of Buyer in the absence of such a written agreement signed by an authorized representative of Seller. d) Assignment. Buyer may not assign, transfer or delegate any of its rights or obligations herein without the prior written consent of Seller, and any purported assignment of such rights or obligations without such consent shall be null and void. e) Severability. If any provision herein is deemed unenforceable by a court of competent jurisdiction, the other provisions shall remain in full force and effect as if the unenforceable provision had not been included.

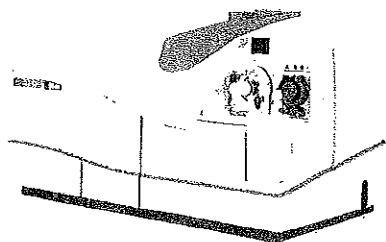


**Perkin** precisely.  
710 Bridgeport Avenue  
Shelton, CT 06484-1794

HUMAN HEALTH

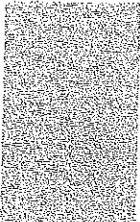
ENVIRONMENTAL HEALTH

MAXIMIZE  
LAB EFFICIENCY WITH  
UNPARALLELED  
SPEED & STABILITY

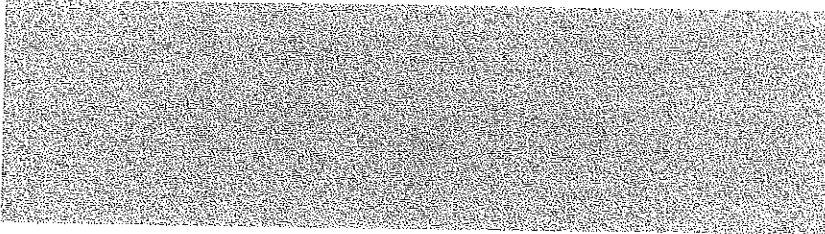


**NexION 350 ICP-MS**  
Maximum throughput. Minimum downtime. Optimum insight.

  
**PerkinElmer**<sup>®</sup>  
For the Better



# GET MORE OUT OF YOUR ICP-MS



When your instrument is more efficient and productive, so too are your scientists and your lab. And nothing puts the flow in your workflow better than the NexION® 350 ICP-MS.

Operation is simple. Virtually any sample can be analyzed. And results are faster and more accurate for greater confidence.

Three modes of operation—Standard, Collision and Reaction—give you ultimate application flexibility and allow you to select the level of sensitivity you need without compromising speed.

## **The Speed To See New Things**

With a data acquisition rate 10 times faster than any other ICP-MS on the market, the NexION 350 opens up a whole new world of efficiency and opportunity:

- 100,000 data points per second
- Ideal for applications that require fast transient signal analysis, such as speciation and laser ablation
- Complete characterization of nanoparticles

In addition to the exceptional application flexibility afforded by its speed, the instrument also offers simple operation with a workflow-based software and delivers superior uptime and productivity with a variety of unique features engineered to enhance signal stability.

## **Unrivalled Stability For Unparalleled Productivity**

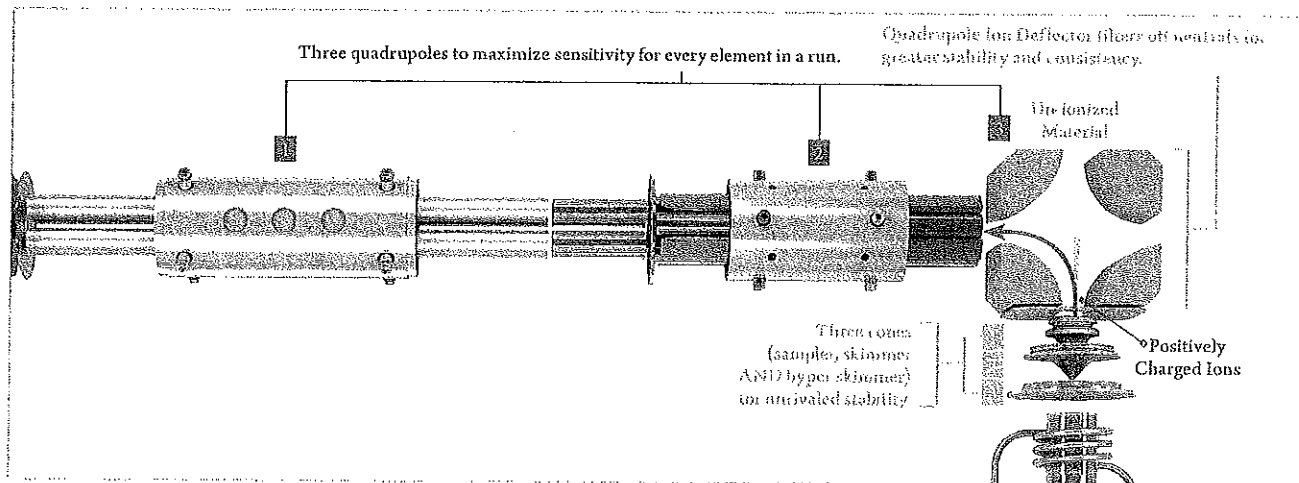
The NexION 350 ICP-MS is built upon the belief that scientists—and laboratories—would rather be running samples than cleaning instruments. Which is why the system includes an array of technical innovations that reduce background and interferences, optimize signal stability, minimize maintenance requirements and downtime, and generate better results.

- Triple Cone Interface produces the industry's most tightly focused ion beam and prevents sample deposition on internal components
- Quadrupole Ion Deflector turns positively charged ions 90° into the Universal Cell and filters off neutrals
- Analyzing Quadrupole made of a unique steel alloy for negligible thermal expansion
- No extraction lenses to clean for minimized maintenance



# THE PATH TO MORE CONFIDENT RESULTS

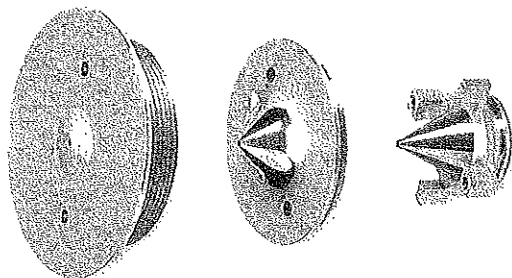
The unique ion path in the NexION 350 ICP-MS creates the cleanest, most stable environment of any instrument for more accurate and consistent results. From its robust sample introduction systems all the way through to its industry-leading detector, every component has been designed for greater flexibility, optimum performance, and superior laboratory efficiency.



## Triple Cone Interface

In addition to the sampler cone and skimmer cone typically found on other systems, the NexION 350 ICP-MS also features a unique hyper skimmer cone for the most tightly focused ion beam available.

Pressure within this unique Triple Cone Interface is reduced in smaller steps than in other instruments, providing less dispersion of ions and preventing sample deposition on internal surfaces. Voltages never need adjusting and all three cones are outside the vacuum area so they can be quickly and easily removed, cleaned and replaced to simplify maintenance and minimize downtime.



Unique Triple Cone Interface delivers both sensitivity AND stability. Easily accessible, the interface is the only component that requires cleaning so instrument maintenance is faster and simpler compared to other systems.

## Quadrupole Ion Deflector

Complementing the Triple Cone Interface to enhance stability and eliminate drift is the first of three quadrupoles in the NexION 350 ICP-MS: the Quadrupole Ion Deflector.

This breakthrough filtering feature turns the ion beam 90 degrees before it enters the patented Universal Cell and analyzing quadrupole, providing unparalleled stability, and reducing background and interferences for the most accurate results. The Quadrupole Ion Deflector is the only filter of its kind that allows you to adjust your mass bandpass on the fly, automatically, to maximize sensitivity for every element in a run.

The path through the Quadrupole Ion Deflector is aligned with the tightly defined ion beam leaving the Triple Cone Interface. This ensures ions and neutrals never impact the component's surfaces, keeping it clean for exceptional signal stability—hour after hour—even when running the most challenging matrices. The beam-focusing efficiency of the three cones and their exact alignment with the Quadrupole Ion Deflector eliminates the need for extraction lenses, further minimizing maintenance requirements and preventing elevated Background Equivalent Concentrations (BECs) for a more constant and consistent analytical environment.

The instrument is so effective at removing ionized material that it is the only ICP-MS with a cell that never needs cleaning or replacing, maximizing instrument uptime and return on investment.

# OPTIMIZE AND PERSONALIZE YOUR INTERFERENCE REMOVAL

PerkinElmer was the first company to bring together the simplicity and convenience of a collision cell and the exceptional detection limits of a true reaction cell in a single ICP-MS instrument. Not only does the NexION 350 give you the choice of these two most powerful polyatomic interference-removal techniques, it also features a Standard setting as part of its patented Universal Cell Technology™ (UCT), allowing the instrument to be run in three different modes to suit your required level of interference removal and detection limits.

## Three Modes—Complete Flexibility

With its three modes of operation, the NexION 350 ICP-MS lets you minimize analysis times without compromising your desired level of interference removal or detection limits. The instrument's Universal Cell Technology also enhances laboratory productivity by delivering the easiest, most customizable operator experience with:

- No restrictions on which gases you can use
- No compromises on how you choose to work
- No hassles switching from one mode to another (Active venting allows the system to switch between Helium and non-Helium modes in <10 seconds)

## The World's Most Effective, Reliable And Flexible Reaction Cell

Unlike other instruments that produce inconsistent, unreliable results in Reaction mode due to reaction byproducts in the cell, the NexION 350 ICP-MS gives you complete control over the chemistry inside the cell for absolute confidence in your data.

### Dynamic Bandpass Tuning

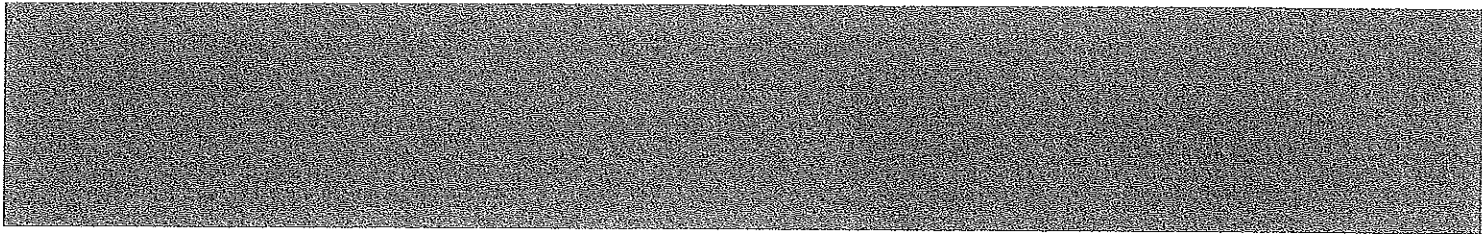
NexION's unique Dynamic Bandpass Tuning (DBT) feature efficiently screens out interferences while maximizing analyte transmission. The DBT function ejects the precursor ions before they can react to form new interferences.

### Mass Shift

For analyses in which your analyte is reactive but your interference is not, the NexION 350 ICP-MS allows you to shift the measurement of your target to a mass free from the interferent.

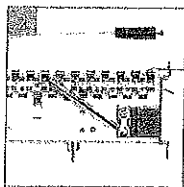
Running in Reaction mode, the NexION 350 ICP-MS offers the ultimate detection limits for difficult elements, including:

- Iron
- Arsenic
- Potassium
- Chromium
- Calcium
- Selenium
- Magnesium
- Vanadium



	STANDARD MODE	COLLISION MODE— WITH KINETIC ENERGY DISCRIMINATION (KED)	REACTION MODE— WITH A SCANNING QUADRUPOLE
INTERFERENCE REMOVAL	LOW	LOWER	LOWEST
DETECTION LIMITS	GOOD	BETTER	BEST
HOW IT WORKS	The cell gas is turned off and the system works like a non-cell instrument, providing a level of sensitivity equal to Collision or Reaction mode for elements not requiring interference correction.	A non-reactive gas is introduced into the cell to collide with interfering ions with larger diameters, reducing their kinetic energy so they may be removed through Kinetic Energy Discrimination.	A highly reactive gas (or gasses) is introduced into the cell to create predictable chemical reactions. Any side reactions and resulting new interferences are instantly removed by a scanning quadrupole so only the element of interest is passed to the analyzing quadrupole and detector.
WHY NEXION IS BETTER	A unique, actively vented cell design quickly and completely removes residual gases, allowing the NexION 350 ICP-MS to be run in true Standard mode—with the cell turned off—for optimum sensitivity. Without being able to quickly vent their cells, other ICP-MS instruments are forced to use Kinetic Energy Discrimination (KED) even in Standard mode because of potential interferences, decreasing sensitivity and limiting their operation to a single gas.	With its Extended Dynamic Range (EDR) capabilities, the NexION 350 ICP-MS allows you to selectively attenuate the signal of specific masses so you can measure elements with both low and high concentrations in the same sample in the same run—no need to use other techniques such as GFAA or ICP-OES.	Patented Dynamic Bandpass Tuning (DBT) removes all masses within a range of 20 amu—on both the low end (RPq) and high end (RPa)—eliminating the possibility of reactions and the formation of new products. Ions outside the boundaries of your defined stability region are unstable in the quadrupole and are ejected from the cell, enabling the use of reactive gases such as ammonia, oxygen and methane for superior, more targeted interference removal.
IDEAL USES	Routine applications requiring high throughput that have few interferences, making it popular in geochemical laboratories.	Applications that may be susceptible to interferences, or analyses where you simply want to remove any unknown interferences. Simple yet effective, Collision mode is commonly used for semi-quantitative analysis, environmental testing, as well as the testing of unknown samples.	Applications demanding the very best performance and an unprecedented level of interference removal. Ideal for industries ranging from semiconductor to biomonitoring and renewable energy.

# ENHANCING EFFICIENCY FROM THE INSIDE OUT



**Simultaneous dual mode detector**—Provides over 10 orders of dynamic range and measures both high- and low-level analytes simultaneously. Also delivers the fastest data acquisition rates of any ICP-MS instrument (100,000 data points per second to keep up with the scan speed of

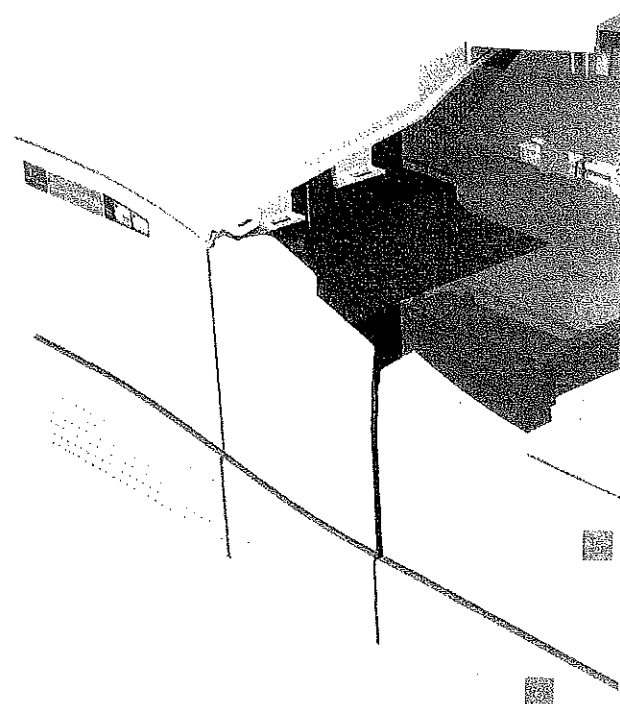
the analyzing quadrupole), making the NexION 350 ideal for the nanomaterials field.

- **Large, open, easily accessible sample introduction area**—Accommodates a wide variety of sample introduction systems that can be quickly and easily switched out to suit a particular application or matrix:
  - ◆ Laser ablation for solid samples
  - ◆ Liquid and ion-chromatography for speciation analysis
  - ◆ Peltier cooled organic sample introduction system
  - ◆ Glass or quartz cyclonic sample introduction systems

- **Low liquid uptake nebulizer**—Saves money by reducing sample consumption and minimizing lab waste. Every NexION 350 ships with a concentric nebulizer and cyclonic spray chamber and can be user-defined for specific applications.

- **Free-running RF plasma generator**—Unlike other systems, the NexION 350's RF generator features no moving parts for reliable, robust performance, and instantly changes to accommodate any plasma—ideal for petrochemical applications and speciation solvents.

- **Analyzing Quadrupole**—Offers the highest analytical mass range available (all the way up to 285 amu) and exceptionally fast scanning for rapid peak hopping.



- **Benchtop design with no rear connections**—Saves valuable laboratory space and allows operation and installation up against a wall.

## Pioneered By PerkinElmer. Adopted By The Industry.

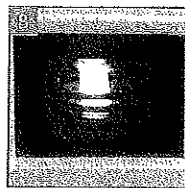
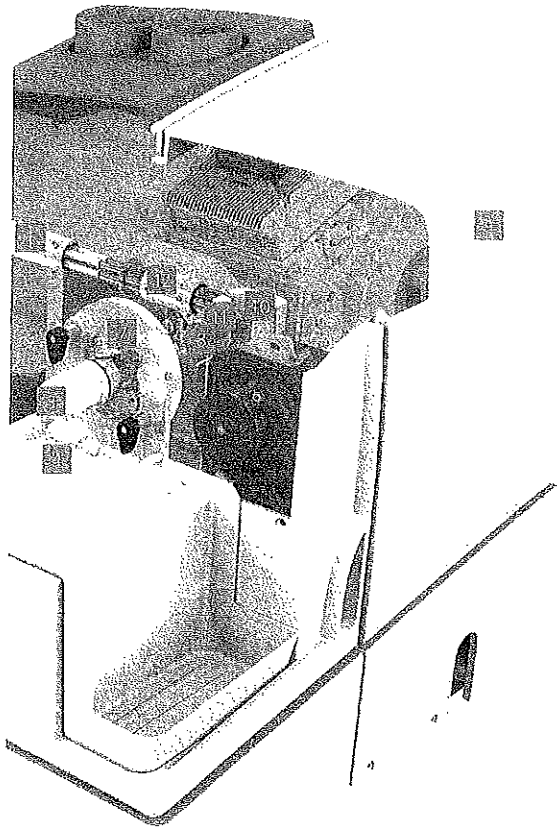
With a long history in ICP-MS, PerkinElmer has been at the forefront of industry innovation with breakthroughs ranging from the free-running generator to Dynamic Reaction Cell™ technology, Universal Cell Technology to the fastest data acquisition rates for true Single Particle ICP-MS.

■ **Universal Cell Technology**—Offers three modes of operation (Standard, Collision or Reaction) depending on the level of performance required. Switching modes is quick and easy so users can select their required level of performance without compromising speed.

■ **Triple Cone Interface**—Produces the most tightly focused ion beam in the industry, reducing build-up on internal components (particularly the Quadrupole Ion Deflector) so maintenance and cleaning are virtually eliminated.

■ **Quadrupole Ion Deflector**—Allows only ions of a specified mass range to pass into the Universal Cell, enhancing sensitivity while keeping the cell clean—making it the only ICP-MS on the market with a cell that never needs cleaning or replacing.

■ **Custom-designed, four-stage vacuum system**—Features the highest capacity turbo and roughing pumps and allows the use of any collision or reaction gas in the Universal Cell. Pump down can be achieved in a fraction of the time of other systems, allowing users to get back to running samples 2-3 times faster than with other ICP-MS instruments.



■ **Full color plasma view**—Allows the visual inspection of the cones, torch and load coil without opening the instrument. Enables the easy optimization of plasma sampling depth and simplifies analysis of organics.

■ **Fully automated X, Y, Z torch positioning**—Computer-controlled for maximum ion transmission. Offers automatic one-touch optimization which, when combined with PerkinElmer's patented PlasmaLok™ technology (for secondary discharges), completely eliminates the need for costly consumable parts (like shields) required on other instruments.

# SOFTWARE DESIGNED AROUND THE WAY YOU WORK

With a simple, clear, intuitive interface that mirrors your workflow, Syngistix™ for ICP-MS Software simplifies every interaction with the NexION 350 ICP-MS.

The left-to-right, icon-based design offers easy navigation, walking you through every step of an analysis, starting the instrument, optimizing the system, creating methods and sample lists, performing the run, and reviewing results. So no matter what your analysis type—qualitative, semi-quantitative, quantitative or specialized (isotope-ratio, isotope-dilution)—Syngistix for ICP-MS Software offers all the tools to help you generate faster, more actionable information. Pre-set methods and application-specific templates are also available to simplify and accelerate many of today's most commonly performed analyses.

For those who prefer a more traditional window-based design, Syngistix for ICP-MS Software also offers a Classic view so you can leverage the capabilities of the latest instrumentation while working in a familiar software environment.

Component	Alerts	Status	Amount Remaining
Injection Valve	Oil Change	OK	124.4 hrs
Injection Valve	Oil Change	OK	92.821 hrs
Sample Tray	Oil Change	OK	101.4 hrs
Detector	Oil Change	OK	325.0 hrs
RF Power Tube	Tube Replace	OK	3750 hours
Ion Optics	Oil Change	OK	325.0 hrs
Pump Oil	Oil Change	OK	0.0 hrs
Technician - Air Filter	Oil Change	OK	0.0 hrs
Technician - Fluid	Oil Change	OK	83.7 hrs
Technician - Fluid Filter	Oil Change	OK	282.0 hrs
ICP - Detector - Air Filter	Oil Change	OK	482.0 hrs
Technician - Air Filter	Oil Change	OK	142.0 hrs
Technician - Fluid	Oil Change	OK	2.0 hrs

## Routine Maintenance Alerts

To keep the instrument running at peak performance, alarms may be set to remind you when it's time for simple preventative maintenance tasks, such as oil changes and tubing replacement. The system will even display how many hours of use you have received to date from various components and when they may need attention. One alert you will never see is for routine cleaning of the cell—something not required with the advanced design of the NexION 350 ICP-MS.

The maintenance tab in the instrument window allows you to set up and customize alerts.

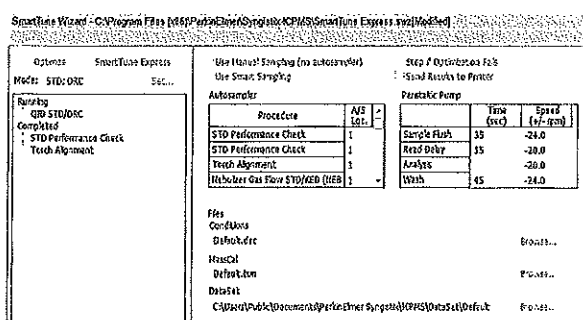
## Simple Method Development

Method development has never been easier than with the NexION 350 ICP-MS. Simply select the elements you need to measure and the software will help you pick the appropriate mass based on abundance and potential interferences. Pre-set methods eliminate the need for method development in many environmental and biomonitoring applications.

Syngistix for ICP-MS Software also features TotalQuant™, a useful tool for quickly estimating the concentration of all elements in a sample simultaneously.

## Flexible Quality Control Checks

Monitoring calibration, checking standard responses and taking action to correct any problems with an analysis can all be done using the software's automated quality control checking feature. Flexible and customizable, it ensures good quality data even when the instrument is being run unattended.



## SmartTune Express

Designed for maximum productivity and effortless operation, SmartTune™ Express automatically sets up all your tuning procedures and specs before a run, initiating the analysis if all parameters are met, or performing a system optimization if not. Programmed with a series of customized and specialized algorithms, SmartTune Express ensures you're not only up and running faster but are also generating robust, reliable data.

With SmartTune Express, all system specifications are checked and optimized before a run, eliminating inefficiencies like torch alignment failures and ensuring more accurate results.

## Scheduler

By allowing labs to automatically schedule instrument optimizations and procedures—including auto-start and shut down, warm-ups, instrument tuning and analysis of samples using multiple methods—the Scheduler feature increases workflow efficiency, while reducing operator intervention for improved data reliability.

## Reporter™ Function

Syngistix for ICP-MS Software features a unique calibration reporting function that lets you see real-time updates of detection limits and background equivalent concentrations during a run. The software displays single or multi-view calibrations, giving you the information you need to make faster decisions and generate more reliable data.

## Logbook

This convenient software feature lets you review your complete instrument performance history in a single panel, displaying previous optimization data and changes made to conditions. Using Logbook, you can quickly check parameters used on a specific day and have a constant resource against which to correlate everything from sensitivity to results, and to track current comparative performance data in real time.

## Review Files

A convenient dialog box that displays all the files in your workspace, allowing you to see everything at a glance—from your method and sample list to your optimized files—before the start of a run.

## Application-Specific Environments

To further tailor the NexION 350 ICP-MS to your specific workflow, Syngistix for ICP-MS Software features a series of application-specific plug-ins and integration with a variety of external software packages to simplify everything from nanoparticle analysis to speciation.

## Speciation Analysis—For The Most Accurate Elemental Separation And Detection

The NexION 350 ICP-MS can be easily integrated with liquid chromatography (LC), gas chromatography (GC) and ion chromatography (IC) systems to deliver a complete solution for the separation and determination of individual metal compounds. Coupled with—and seamlessly controlled by—PerkinElmer's specialized Chromera® software, these integrated systems deliver the simplest, most streamlined operator experience while providing the most flexible and accurate speciation analysis available, allowing you to pinpoint the exact toxicity, bioavailability, metabolism and environmental mobility of elements.

# FAST, ACCURATE NANOPARTICLE CHARACTERIZATION

The emerging and rapidly growing field of nanotechnology has two application areas, both of which can benefit from the unique capabilities of the NexION 350 ICP-MS.

## Nanoparticle Detection

With the increased use of nanotechnology in consumer products, industrial applications and healthcare technology, nanoparticles are becoming ever more prevalent in the environment and it is becoming increasingly important to assess their fate, transformation and transportation in different matrices, whether soils, potable water and wastewater, and their resulting impact on the food supply.

## Nanomaterial Research

Because they can exhibit everything from greater physical strength to enhanced magnetic properties compared to their bulk namesakes, engineered nanomaterials (ENMs) are attracting significant attention in the R&D arena. This is leading to an increasing need to monitor their lifecycle, from creation through recycling or safe disposal.

## Unique Challenges Require Unique Solutions

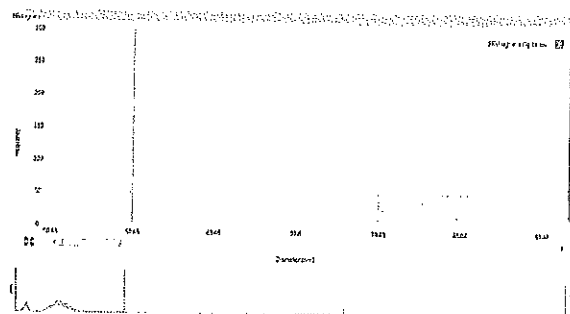
To effectively characterize nanoparticles, researchers need to determine their inorganic composition, concentration, size, surface charge, structure, agglomeration and size distribution. ICP-MS is proving to be an invaluable tool to help overcome these challenges, delivering the specificity, resolution and sensitivity required to deliver fast, accurate results.

The NexION 350 ICP-MS takes it a step further, offering the flexibility and capability of true Single Particle ICP-MS. By combining the world's fastest scanning speed and data acquisition with a proprietary software-based algorithm, the NexION 350 ICP-MS is the only instrument capable of completely characterizing your sample—and differentiating between dissolved and particulate (key for toxicology) content—in less than a minute.

## Specialized Software—Simplified Screening

Syngistix for ICP-MS Software features an optional Nano Application Module, the industry's first dedicated application for nanoparticle analysis.

This specialized software combines real-time single particle acquisition with fast data processing for routine analyses, delivering unparalleled speed, flexibility, automation and ease-of-use. Everything from particle composition and concentration to size and size distribution can be determined in a single run in less than one minute without the need for subsequent labor-intensive data processing.



The Syngistix Nano Application Module displays data in real time as it is being acquired, allowing individual nanoparticle events to be viewed as the intensity histogram builds.