# FLORIDA AGRICULTURAL AND MECHANICAL UNIVERSITY SOLE SOURCE CERTIFICATION

In accordance with a	-	Bid #
		. & M University Regulation $6.005(10)$ (b), the following documentation is submitted as all only available from one vendor.
Vendor: TA Instr	uments	
Account Number Dept 060110 Fu		\$ <u>87,884.96</u>
Item(s): Discove	ry HR 20 Rheometer #	534002.901
	ibe efforts made, vendors contact election). See attached for justifi	ted, prices quoted, specifications required, availability, compatibility, ication.
Approximately	42% overall discount gi	ven by vendor.
Refer to attach	ed Quote & Memo with	detailed justification.
Satyaman	Assoc. Profe	essor & Chair, CAFS-Biological Systems Engineering 7/25/23
I, the undersigned de delegated the authori	ty as described in, hereby concu	Date  niversity Purchasing Office, as delegated in Regulation 6.005(10) (b), (or a designator {X do not concur { } with the above justification and recommend { } do not lessource. If applicable, the reason(s) for disapproval are:
delegated the authori	esignee of the Florida A & M Un ty as described in, <b>hereby conc</b>	Date  niversity Purchasing Office, as delegated in Regulation 6.005(10) (b), (or a designator { X do not concur { } with the above justification and recommend { } do not concur { } expression { } expre
I, the undersigned dedelegated the authori recommend { } the part of the part	signee of the Florida A & M Unity as described in, hereby concurrement of the above as a solution of t	Date  niversity Purchasing Office, as delegated in Regulation 6.005(10) (b), (or a designour {X do not concur { } } with the above justification and recommend { } do not le source. If applicable, the reason(s) for disapproval are:  Mattie Hood  Digitally signed by Mattie Hood Distribution of FAMU, our-Procurement Services, email-mattie hood effamue du. c-US Distribution of FAMU, our-Procurement Services, email-mattie hood effamue du. c-US Distribution of FAMU, our-Procurement Services, email-mattie hood effamue du. c-US Distribution of FAMU, our-Procurement Services, email-mattie hood effamue du. c-US Distribution of FAMU, our-Procurement Services, email-mattie hood effamue du. c-US Distribution of FAMU, our-Procurement Services, email-mattie hood effamue du. c-US Distribution of FAMU, our-Procurement Services (FAMU, our-Procurement Services) Distribution of FAMU, our-Procurement Services (FAMU, our-Procurement S
I, the undersigned dedelegated the authori recommend { } the part of the part	signee of the Florida A & M Unity as described in, hereby concurrement of the above as a solution of t	Date  miversity Purchasing Office, as delegated in Regulation 6.005(10) (b), (or a designator of the concur of the source. If applicable, the reason(s) for disapproval are:    Mattie Hood

FAILURE TO FILE A PROTEST WITHIN THE TIME PRESCRIBED IN REGULATION 6.005(9) (K), SHALL CONSTITUTE A WAIVER OF THE RIGHT TO PROCEEDINGS.



# Florida Agricultural and Mechanical University

TALLAHASSEE, FLORIDA 32307-6400

1409, Wahnish Way, Room 12 Telephone: (850) 561-2977 Fax: (850) 412-5004

E-Mail: satyanarayan.dev@famu.edu

Excellence with Caring
College of Agriculture and Food Sciences
Biological Systems Engineering

7/21/2023

The Procurement Officer Florida A&M University

Subject: Justification for the Sole Source Procurement of Discovery Hybrid Rheometer 20 (HR 20)

Dear Procurement Officer,

I am writing to justify the procurement of the Discovery Hybrid Rheometer 20 (HR 20) from TA Instruments as a sole source purchase. Our analysis indicates that the HR 20's unique features and capabilities are unmatched by any other products currently on the market, thus justifying it as a sole source procurement.

TA Instruments' Discovery Hybrid Rheometer 20 embodies numerous exclusive and patented features that make it a truly superior product:

Patented Magnetic Thrust Bearing: Unlike competitor's models that use air bearings, the HR 20 uses a magnetic thrust bearing that reduces system friction by 70%. This critical feature enhances our capacity to measure lower torques accurately and reliably and provides the instrument with a higher resistance to moisture or particulates that can damage air bearings.

Advanced Drag Cup Motor: The HR 20's motor significantly reduces system inertia by 80% compared to DC motors. This enables us to measure a wider range of frequencies, material types, and experimental designs accurately, improving the breadth and depth of our research capabilities.

Optical Encoder Dual Reader: This exclusive feature improves phase angle precision by 70% compared to single-reader designs. It enables more accurate measurements of rheological properties and improves displacement resolution by a factor of five.

Normal Force Rebalance Transducer (FRT): FRT is the premium technology for precise force measurements. This feature works in conjunction with the magnetic thrust bearing to provide built-in axial DMA capability.

Smart Swap Geometries: This unique feature ensures fast and easy geometry and temperature system switching. It also offers greater storage and durability than chip-based systems.

True Position Sensor (TPS): The TPS, a high-resolution linear position sensor, measures and compensates for the effects of thermal expansion in real time, which eliminates errors associated with thermal expansion.

Quantification of Powder Flowability: The HR 20 provides the unique ability to quantify powder flowability and shear properties in a single powder accessory.

Acquiring the Discovery Hybrid Rheometer 20 will significantly enhance the educational and training opportunities for both graduate and undergraduate students in the College of Agriculture and Food Sciences, FAMU School of the Environment, as well as the College of Pharmacy and Pharmaceutical Sciences. By providing our students with access to state-of-the-art technology, we empower them to conduct advanced research and develop innovative solutions that could lead to new discoveries and advancements in their respective fields.

Furthermore, the acquisition of this advanced instrument will significantly bolster our Biological Systems Engineering Program. The HR 20's unparalleled features will not only attract qualified faculty members but also promote more sophisticated research, thus propelling the reputation and prestige of Florida A&M University in the scientific community.

For these reasons, we believe that the Discovery Hybrid Rheometer 20 from TA Instruments is an essential acquisition that warrants an exception to the usual requirement for multiple quotes. I kindly request your consideration and approval of this sole source purchase.

Thank you for your time and consideration.

Best Regards,

Satyanarayan Dev, PhD Associate Professor & Chair TA Instruments is the only supplier of the Discovery Hybrid Rheometer 20 (HR 20) with the unique capabilities and specifications below:

- Our Discovery Hybrid Rheometers include our patented magnetic thrust bearing. Other systems
  on the market use air bearings. The magnetic thrust bearing reduces system friction by 70% to
  accurately and reliably measure lower torques. The magnetic bearing is also not susceptible to
  damage from moisture or particulates present in the air supplied to air bearings.
- Our Discovery Hybrid Rheometers include our unique Advanced Drag Cup Motor. The low mass motor reduces system inertia by 80% compared to DC motors. This allows for a wider range of accurate measurement frequencies, material types, and experimental designs.
- The exclusive Optical Encoder Dual Reader on our HR 20 improves phase angle precision by 70% compared to single-reader designs. This leads to more accurate measurement of G', G'', and tandelta and allows for accurate measurement with low stresses, small strains, or samples with only trace amounts of damping or elasticity. The Dual Reader also provides a 5x improvement in displacement resolution to provide more accurate measurements at lower strains.
- Our Discovery Hybrid Rheometers have a normal force rebalance transducer (FRT) which is the
  premier technology for normal force measurements. The active, non-compliant device
  accurately measures normal and axial forces without deflection. Competitive capacitive or strain
  gauge sensors rely on physical movement of the device to sense a force, resulting in
  measurement error. The FRT works in conjunction with the magnetic thrust bearing to provide
  built-in axial DMA capability which is simply activated by a software key
- Smart Swap geometries provide automatic temperature system and geometry recognition for fast, easy geometry and temperature system switching. The system for optical information storage and transfer provides greater storage and durability than chip-based systems. The "drawrod" geometry connection minimizes any moment of inertia typical of bulky connectors with large radii.
- The HR includes the patented True Position Sensor (TPS) for true gap accuracy. The TPS is a highresolution linear position sensor that measures and compensates for the effects of thermal expansion in real time. Unlike competitive devices, the TPS eliminates errors associated with thermal expansion without the need for special high inertia iron core geometries.
- Our HR's provide the unique capability of being able to quantify powder flowability and shear properties all in one powder accessory.



Quote #: 23369119 Quote Date: 07.18.2023 Valid Until: 07.26.2023

# **This Quote Was Prepared For:**

Satyanarayan Dev Florida A&M University 1520 S Martin Luther King Jr Blvd Tallahassee FL 32307-3102

Phone: 850 296 4336

Email: satyanarayan.dev@famu.edu

# This Quote Was Prepared By:

Name: Jada Evers, Technical Sales Representative

Phone: 302-276-3437

Quote #: 23369119

Email: JADA\_EVERS@WATERS.COM

List Price :	USD 152,745.00
Discount:	USD 66,285.00
Net Price (Excl Tax) :	USD 86,460.00
(+) Freight Estimate :	USD 1,424.96
Total (Excl Tax) :	USD 87,884.96

All prices are offered in US Dollar Unless otherwise specified, shipping charges are not included in this Quote

# Quotation

**Discovery HR 20 Rheometer** 

**1.1 Part #**: RHEOMETER HR20 Unit Price: 96,900.00

534002.901 Qty: 1.000

Discount: 42,050.59

Ext Price : 54,849.41

HR 20 Discovery Hybrid Rheometer: The HR 20 Discovery Hybrid Rheometer delivers unmatched torque sensitivity and versatility in an easy-to-use platform, dedicated to performing rheological measurements in rotation and oscillation. It boasts unprecedented performance including torque range of 1 nN.m to 200 mN.m, ultra-high resolution of 2 nanoradians, elevated angular velocity to 300 rad/s, and normal force up to 50 N. The HR 20 delivers unsurpassed direct strain, direct rate, and direct stress control in all rotation and oscillation test modes, as well as fast sampling technology to characterize quickly evolving systems. Superior measurement sensitivity and dynamic data accuracy is driven by optimized proprietary measurement technologies, including the low-inertia Advanced Drag Cup Motor, patented magnetic thrust bearing, force rebalance transducer (FRT), optical encoder dual reader, and patented true position sensor (TPS). These technologies work in concert, enabling users to measure materials of varying stiffness and viscosities, including weak intermolecular forces, lower viscosities, and use smaller sample volumes with confidence.

Smart Swap<sup>™</sup> technology provides automatic recognition and configuration of geometries, temperature systems, and accessories, for quick and error-free operation. The HR 20 is capable of vertical axial testing and optional linear Dynamic Mechanical Analysis capabilities, which enables characterization of solids in dynamic tension, bending, and compression without additional motors or hardware.

Routine operations are accelerated with head movement up to 33 mm/s, integrated sample area lighting, and a tactile keypad. Every interaction is streamlined with the DHR thanks to the new innovative "app-style" touch screen, which brings key instrument & temperature control, test execution, and test progress only One-Touch-Away<sup>TM</sup>.

TRIOS software is included for complete instrument control, data analysis, data management, and data reporting. The TRIOS Express interface delivers simple test set-up, empowering all users to make great rheological measurements. As user confidence grows, testing protocols with increasing complexity can be easily built with TRIOS Unlimited, unleashing the full potential of the DHR.

1.2 Part #: FILTER/REGULATOR RHEOLOGY Unit Price: 2,040.00

250000.001 Qty: 1.000

**Discount:** 885.28

Ext Price : 1,154.72

HR x0, DHR & AR Rheometer Filter/Regulator

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# Quotation

1.3 Part #: DHR HR INSTALL & TRAINING FEE Unit Price: 2.900.00

999800.529 Qty: 1.000

Discount: 1,258.48

Ext Price : 1,641.52

HR Series Installation & Training Fee: Installation will be provided according to ISO 9000 procedure by one of our highly trained Service Engineers (average experience level of our field Service Engineers is over 15 years). The ISO 9000 procedure insures consistency and high quality throughout the installation process. IQ/OQ procedures are available for an additional fee. The installation will include calibration with a traceable standard and a certificate of calibration. Basic Operational Training is also provided on the equipment after it is installed in your laboratory. Note: Advanced Applications training/consulting is available for additional fee

#### **Advanced Peltier Plate**

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2.1 Part #: DHR AR SMART SWAP ADVANCED PELTIER PLATE Unit Price: 6,080.00

533209.901 Qty: 1.000

**Discount:** 2,638.47

Ext Price : 3,441.53

Plugs into any HR x0, DHR and automatically configures the software for immediate use. Maximum temperature is 200 °C.

Use with range of Quick Change Plates of different materials of construction and surface finishes; requires Quick Change Plates Holder P/N: 402751.902.

Also used with various Quick Change Disposable Plates; requires Quick Change Disposable Plates Holder P/N: 402751.901.

NOTE: Upper Peltier Plate recommended for testing above 40 °C or sub-ambient temperatures.

2.2 Part #: RHEOLOGY HEAT EXCHANGER PELTIER Unit Price: 2,120.00

403209.901 Qty: 1.000

**Discount :** 919.99

Ext Price : 1,200.01

Air Cooled Peltier Circulator (110 / 220V, 50 / 60 Hz): for HR x0, DHR & AR-Series and ARES Series Peltier Temperature Control Systems. Obtainable Temperature ranges when using air cooled circulator as follows: HR x0, DHR & AR-Series Peltier Plate = 0 to 200 °C; HR x0, DHR & AR-Series Peltier Concentric Cylinder = 0 to 150 °C; ARES-G2 and ARES CLASSIC Peltier Plate = -20 to 140 °C; ARES-G2 Advance Peltier System = -10 to 120 °C.

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2.3 Part #: INSULATED SOLVENT TRAP -ADV. PELT. KIT Unit Price: 3,110.00

531035.901 Qty: 1.000

Discount: 1,349.61

Ext Price : 1,760.39

Insulated Solvent Trap for Advanced Peltier Plate: Insulated Solvent Trap Cover and Location Ring for Advanced Peltier Plate: Provides effective inhibition of solvent loss when used with solvent trap geometries and improves temperature uniformity. Includes location ring and spacer for use with Quick Change Plates.

2.4 Part #: QUICK CHANGE PLATE HOLDER Unit Price: 455.00

402751.902 Qty: 1.000

**Discount:** 197.45

**Ext Price :** 257.55

HR x0, DHR, ARES-G2, APS, Quick Change Plate Holder: For use with HR x0, DHR, ARES-G2, APS Quick Change Plates on Smart Swap Bayonet Peltier Plate (PN: 533209.901).

2.5 Part #: GEOM APS SST SNDBLSTD 20MM QIC CHG PLT Unit Price: 540.00

402494.901 Qty: 1.000

Ext Price : 305.66

**Discount:** 

234.34

HR x0, DHR, ARES-G2, APS, Stainless Steel, Sandblasted, 20 mm, Quick Change Plate

2.6 Part #: PLATE 20MM SST ST SAND-BLAST SM-SW HRXO Unit Price: 2,140.00

519200.945 Qty: 1.000

**Discount:** 928.67

Ext Price : 1,211.33

HR x0, Stainless Steel, Sandblasted, 20 mm Plate: Upper plate for use with lower Peltier plate. Smart Swap 2 geometry for use with HR x0 instruments only (Surface Finish: 80 - 84 RMS in micro inches or Ra value of 1.8 to 2.0 microns).

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Quotation

2.7 Part #: GEOM APS 25MM QUICK CHANGE PLATE SST Unit Price: 425.00

402624.901

Discount: 184.43

1.000

**Ext Price : 240.57** 

Qty:

HR x0, DHR, ARES-G2, APS, Stainless Steel, 25 mm, Quick Change Plate: For use with HR x0/DHR Advanced Peltier Plate and ARES-G2 Advanced Peltier System with the Standard Flat Plate.

2.8 Part #: PLATE SST 25MM SMART-SWAP HRX0 Unit Price: 1,580.00

511250.946 Qty: 1.000

**Discount:** 685.65

**Ext Price :** 894.35

HR x0, Stainless Steel, 25 mm Plate, NST: Upper plate for use with lower Peltier plate. Smart Swap 2 geometry for use with HR x0 instruments only.

2.9 Part #: GEOM APS 50MM QUICK CHANGE PLATE SST Unit Price: 425.00

402622.901 Qty: 1.000

**Discount:** 184.43

**Ext Price : 240.57** 

HR x0, DHR, ARES-G2, APS, Stainless Steel, 50 mm, Quick Change Plate: For use with ARES-G2, APS, Standard Flat Plate (P/N: 402619.901).

2.10 Part #: PLATE SST ST 50MM SMART SWAP HRX0 Unit Price: 2,050.00

511500.945 Qty: 1.000

**Discount:** 889.62

Ext Price : 1,160.38

HR x0, Stainless Steel, 50 mm Plate: Upper plate for use with lower Standard Peltier Plate and Advanced Peltier Plate. Smart Swap 2 geometry for use with HR x0 instruments only.

# Quotation

**Powder Accessory** 

3.1 Part #: HRX0 POWDER RHEOLOGY TOP LEVEL KIT Unit Price: 18,500.00

534690.901 Qty: 1.000

**Discount:** 8,028.23

Ext Price : 10,471.77

Powder Rheology testing solution for HR-10, HR-20, and HR-30 rheometers.

Kit includes base fixture, interchangeable Shear and Flow cups, SmartSwap2 upper Shear plate geometry, SmartSwap2 upper Flow impeller geometry, and sample loading tools.

3.2 Part #: POWDER RHEOLOGY TRIOS Unit Price: 5,820.00

926026.001 Qty: 1.000

**Discount:** 2,525.64

Ext Price : 3,294.36

The Powder Analysis Software key for TRIOS provides a one-click automated analysis of powder rheology data. Note: Requires P/N 534690.901 - HRx0 Powder Rheology Accessory.

Calculated parameters include Cohesion, Unconfined Yield Strength, Major Principal Stress, Flow Function, Angle of Internal Friction, Confined and Unconfined Flow Energy, Stability Index, Variable Rate Index, and more.

#### **Academic Support Plan**

Quote #: 23369119

4.1 Part #: ACADEMIC SPRT PLAN HR RHEOMETERS Unit Price: 3,830.00

999800.794 Qty: 1.000

**Discount:** 1,662.06

Ext Price : 2,167.94

Academic Support Plan (ASP) for HR Rheometers: The ASP provides a way to extend TA Instruments' partnership with academic users to maintain our mutual investment in instruments and expertise. This comprehensive support plan and its highly subsidized pricing are designed specifically to meet the unique needs and capabilities of academic customers.

For a modest annual subscription fee, subscribers receive exclusive access to TA Instruments virtual Theory and Applications courses, remote diagnosis, service parts, labor & travel (should it be needed), accessory coverage, and a 10% discount on consumable purchases. The ASP is available only to academic institutions who are willing to partner, working together with TA Instruments service experts to support their instrument(s).

Note: When sold to TA Instruments' distributors, this Support Plan covers parts and shipment only.

Quote #: 23369119

# Quotation

4.2 Part #: ACADEMIC SPRT PLAN HR RHEOMETERS **Unit Price:** 3,830,00

999800.794 1.000 Qty: **Discount:** 

1,662,06

Ext Price: 2,167.94

Academic Support Plan (ASP) for HR Rheometers: The ASP provides a way to extend TA Instruments' partnership with academic users to maintain our mutual investment in instruments and expertise. This comprehensive support plan and its highly subsidized pricing are designed specifically to meet the unique needs and capabilities of academic customers.

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List Price :	USD 152,745.00
Discount :	USD 66,285.00
Net Price (Excl Tax) :	USD 86,460.00
(+) Freight Estimate :	USD 1,424.96
Total (Excl Tax) :	USD 87,884.96

All prices are offered in US Dollar Unless otherwise specified, shipping charges are not included in this Quote

#### **General Notes**

- 1. All prices are offered in US Dollar.
- 2. The system described above requires a computer/controller that meets the minimum specifications as described in the appropriate TA Instruments installation requirements document. To view the requirements document, please visit <a href="http://www.tainstruments.com/support/installation-requirements/">http://www.tainstruments.com/support/installation-requirements/</a>.
- 3. Estimated shipping date (after receipt of formal purchase order and credit approval) is 30 Days.
- 4. This offer also includes at no additional charge the following items:
  - i. Guaranteed response times for phone calls, shipment of parts, and equipment repair
  - ii. Free Hotline Telephone support from 8:30 am to 4:30pm (EST) Monday through Friday provided by our Applications Lab Staff
  - iii. Free technical support at http://www.tainstruments.com/support/applications/applications-hotline/
  - iv. Theory & Applications course and various e-training Quickstart course options. For more information, and to register, please visit <a href="http://www.tainstruments.com/training/">http://www.tainstruments.com/training/</a>
- 5. Review the attached Terms & Conditions for information about the warranty for the instrument(s) on this quote.

6. Payment Terms: NET 30 DAYS7. Incoterms: FCA - Prepaid & Added

8. Ship Via: BEST WAY

The amount displayed does not include tax charges; these will be added to your invoice as applicable. If your organization qualifies as tax-exempt, please submit your tax-exempt certificate with your order.

To Place An Order, Please Contact:

Email: purchaseorders-ta@waters.com

TA Instruments - Waters L.L.C. 159 Lukens Dr. New Castle, DE 19720 USA

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### **TA General Sales Terms and Conditions**

- 1. Unless otherwise provided for on the face of this document, title to the goods shall pass to Buyer and the Seller's liability as to delivery, shall cease upon making delivery of goods to the carrier at the shipping point in good condition, the carrier acting as Buyer's agent.
- 2. SELLER HEREBY DISCLAIMS ALL WARRANTIES, EXPRESSED OR IMPLIED (INCLUDING ANY WARRANTY OF FITNESS OR MERCHANTABILITY), EXCEPT AS EXPRESSLY STATED HEREIN AND IN ANY WARRANTY POLICY STATEMENTS ATTACHED HERETO. IN THE EVENT OF A BREACH OF ANY SUCH WARRANTIES, BUYER'S EXCLUSIVE REMEDIES SHALL BE THE REMEDIES SET FORTH HEREIN AND IN ANY SUCH WARRANTY STATEMENT. Subject to the exceptions and upon the conditions specified herein or on the face hereof or in any warranty policy statement(s) attached hereto. Seller agrees to correct, either by repair or, at its election by replacement, any defects of material or workmanship which develop within one (1) year after installation, or 18 months from shipment (whichever comes first), of the instrument to the original purchaser, provided that investigation and factory inspection by the Seller discloses that such defect developed under normal and proper use. The exceptions and conditions mentioned above are the following.
  - a. Some components and accessories by their nature are not intended to and will not function for the warranty period. If any such component or accessory manufactured by Seller and part of the item sold fails to give reasonable service for a reasonable period of time, Seller will, at its election replace or repair such component or accessory. What constitutes reasonable service and what constitutes a reasonable period of time shall be determined solely by Seller after Seller is in possession of all the facts concerning operation conditions and other pertinent factors and after such component or accessory has been returned to Seller, transportation prepaid.
  - b. With respect to consumables and supplies for the equipment, Seller shall replace at its expense any consumables or supplies that are or become unsuitable for use prior to the expiration date stated on the package (or, if no expiration date is stated, a reasonable period after shipment, as determined solely by Seller), provided that such consumables and supplies were shipped, handled and stored in accordance with Seller's instructions.
  - c. All items claimed defective must be returned to Seller, transportation charges prepaid, and will be returned to Buyer with the transportation charges prepaid. Seller will be released from all obligations under its warranty in the event repairs or modifications are made by persons other than its own, or service personnel authorized by it, unless such repairs by others are made with the written consent of Seller.
  - d. The Seller is not obliged to incorporate into the equipment any design, engineering, or performance change development after delivery of equipment to the original purchaser.
- 3. Seller expressly disclaims any liability to its customers, dealers and representatives, and to users of its products, and to any other person or persons for special or consequential damages of any kind and from any cause whatsoever arising out of or in any way connected with the sale, handling, repair, maintenance or replacement or arising out of or in any way connected with the use of said products.
- 4. No employee, agent or representative of Seller is authorized to make any written or oral statements on behalf of Seller that are inconsistent or in conflict with, or would modify or expand, any warranty made or remedy described herein [or any warranty policy statement] and purchaser is not entitled to rely on any such statements unless they are reduced to writing and signed by the Seller.
- 5. No claim of any kind, whether as to goods delivered or for non-delivery of goods, shall be greater in amount than the purchase price of the goods in respect of which such damages are claimed, and failure to give notice of claim within ninety (90) days from date of delivery or the date fixed for delivery, or as otherwise provided herein, in paragraph 2, shall constitute waiver by Buyer of all claims in respect to such goods. No charges or expenses incident to any claims will be allowed unless approved by an authorized representative of Seller. Goods shall not be returned to Seller without Seller's permission.
- 6. The terms of payment applicable to this order are Seller's regular terms of those specifically quoted to Buyer. In the event Buyer fails to fulfill the terms of payment, or in case Seller shall have any doubt at any time as to Buyer's financial responsibility, Seller may decline to make further deliveries except upon receipt of cash or satisfactory security. All bills not paid at maturity will be subject to a late payment service charge of the 18% per annum on the outstanding amount owing.
- 7. Buyer shall reimburse Seller for all taxes, excise duties, or other charges which Seller may be required to pay to any Government (national, state or local) upon the sale, production or transportation of the products sold hereunder.
- 8. No liability on part of the Seller shall result from delay in performance of this agreement, directly or indirectly caused by fire, explosion, accidents, flood, labor trouble or shortage, war, act of or authorized by any Government, inability to obtain suitable material, equipment, fuel, power or transportation, or act of God or arising from contingencies, happenings, or causes beyond the control of the party affected. Items so affected by any such circumstances may be eliminated without liability, but this agreement shall otherwise remain unaffected.
- 9. Seller warrants that the use or sale of the product delivered hereunder will not infringe the claims of any United States patent covering the product itself, but does not warrant against infringement by reason of the use thereof in combination with other products or in the operation of any process, and does not warrant against infringement that may arise from conforming the warranted product to specification furnished by Buyer to Seller.
- 10. This contract is not assignable or transferable by Buyer, in whole or in part, except with the written consent of Seller. Seller may assign its rights under this Agreement.
- 11. Seller warrants that all goods covered hereunder will have been produced in compliance with the requirements of the Fair Labor Standards Act of 1938, as amended.
- 12. Upon request and at its discretion the Seller will furnish such technical advice or assistance as is available in reference to the use of its product by Buyer. However, Seller does so solely on the condition that qualified persons employed by Buyer will evaluate such advice or assistance with regard to suitability for Buyer's purposes. It therefore is expressly understood that Buyer use of such advice or assistance will be at Buyer's own risk. Seller assumes no obligation or liability for such use or the results obtained.
- 13. The laws of the State of Delaware shall govern this contract.

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- 14. In the event of inability for any reason to supply the total demands for the material specified herein, Seller may allocate its available supply among any or all purchasers, as well as departments and divisions of the Seller, on such basis as it may deem fair and practical, without liability for any failure of performance which may result there from
- 15. In the event that an annual purchase contract covering the goods to be purchased hereunder is in effect between the Seller and Buyer at the date of this transaction, the terms and conditions contained therein will control this transaction with respect to those goods so covered to the extent that the terms and conditions contained in such annual purchase agreement are inconsistent with the terms and conditions of this Agreement or contain terms and conditions that are in addition to those contained in this Agreement.
- 16. Except as otherwise provided in paragraph 13, this agreement [and any warranty policy statement attached hereto] contain all the terms and conditions with respect to the sale and purchase of the material named herein, and no modification of these terms and conditions shall be of any force unless such modification is reduced to writing and signed by the party claimed to be bound thereby.
  - TA Instruments Waters L.L.C. 159 Lukens Drive, New Castle, DE 19720 302 427 4050 www.tainstruments.com This quotation is expressly conditioned upon, and subject to all terms and conditions set forth within