ITEM OPPORTUNITY SYNOPSIS

Scouting Number:	2024-008
Name of the item to be scouted:	Fluorescence Microscope for Algae Sample Analysis
State item to be used in:	North Carolina
Describe the Item:	
Please describe the item application/the end use of the item.	The U.S. Environmental Protection Agency, Watershed and Ecosystem Characterization Division located in Research Triangle Park, NC has a requirement for a microscope that has the ability to acquire sequentially fluorescence images with long pass blue light and long pass green light in addition to white transmitted light for contrast imaging. The microscope will be used for cyanobacteria and algae sample analysis. The system should have LED light sources for long hours of operation with easy or no maintenance.
Supplier Information:	
Type of Supplier Being Sought (select from the list below):	
Manufacturer	x
Contract Manufacturer	
Distributor	
Other (Please Specify)	
Reason for Scouting Submission (select from the list below)	
2nd Supplier	x
Price	
Re-Shore	
Past supplier no longer available	
New Product Startup	
BABA	
Other (Please Specify)	
Summary of Technical Specifications and Performance Requirements:	
Describe the manufacturing processes (elaborate to provide as much detail as possible)	Electronic instrument assembly and testing
Provide dimensions / size / tolerances / performance specifications of the item	- Microscope Stand to support optical components with 6 place nosepiece, coarse and fine-tuning knobs to adjust stage in the vertical position and a stage controller for x-y moving of the sample on the stage. - Rotating Microscope stage with capability to support two 3x1 slides. Knobs to position sample on stage. - Transmitted LED light illumination that is direct coupled with over 50000 hours of operation. - Condenser that contains 5 positions for phase and darkfield operation - Fluorescence LED Illuminator that is direct coupled that yields bright UV, blue, green and red fluorescent wavelengths. System specification is over 25000 hours of operation. - Fluorescence filters holder with five spots. - Two long pass filters that yield long pass green light and long pass blue light after excitation. These filters are designated as green fluorescent protein (GFP) and Texas red (TXR) filters. - Tube adaptor (19 mm) to support for sCMOS (scientific Complementary Metal–Oxide–Semiconductor) camera system in the future. - 10x Plan Eyepieces with 22mm field of view. - Four phase N plan microscope objectives: 5x, 10x, 20x, and 40x. Lenses should be able to be used for differential interference contrast (DIC) in the future.
List required materials needed to make the product, including materials of product components, if applicable	LEDs, optical components
Are there applicable certification requirements?	
Yes	
No	x
Please explain:	
Are there any applicable regulations that apply to the production of this item?	
Yes	
No	x
Please explain:	

Are there any other standards / requirements?	
Yes	
No	x
Please explain:	
Additional Comments:	
Additional technical comments:	https://www.leica-microsystems.com/products/light-microscopes/p/leica-dm2500/
Volume and Pricing:	
Estimated Potential Business Volume (i.e. #units per day, month, year):	1 microscope
Estimated Target Price/Unit Cost Information:	$160,000
Delivery Requirements:	
When is it needed by? (Immediate, 30 days, 6 months, etc.)	3 months
Describe packaging requirements (i.e. individually/group packaging, etc.)	Individually wrapped
Where will this item be shipped?	Durham, NC 27703
Additional Comments:	
Is there other information you would like to include?	

Technical Specifications

Fluorescence Microscope Technical Specifications

The U.S. Environmental Protection Agency, Watershed and Ecosystem Characterization Division located in Research Triangle Park, NC has a requirement for a microscope that has the ability to acquire sequentially fluorescence images with long pass blue light and long pass green light and have white light contrast imaging. LED light sources are required for long term light stability and reducing maintenance.

The microscope configuration shall include the following components:

1. Microscope Stand to support the optical components –contained course and fine controls to move the stage vertically and horizontally with 25mm Z-travel. Adjustable height stops, integrated state bracket and condenser holder with centering and height adjustments. Focusing drive is -2step. The nosepiece has places for 6 objectives. Focus knobs are rubber for easy adjustment.

2. Ergonomic features like height adjustable focus knobs, symmetrical operation of focus and coaxial drive, optional ergo tubes and a wide range of ergonomic accessories help to ensure fatigue-free work. Rotating stage ergonomic Stage with ceramic support plate. XY stage controller to move the stage in the x and y directions. Rotating stage should have slide holder that can hold two standard 3x1 microscope slides.

3. Transmitted LED light source, holder and light guide coupler to connect LED light source for bright field illumination. Rated for 50,000 hours of operation. Lamphouse for transmitted LED should be direct coupled. Contrast light should provide images by phase objectives now and in the future be compatible with DIC light imaging. Adjust the intensity of LED light.

4. Condenser with 0.90 Numerical aperture -5 position turret-based condenser for darkfield and phase contrast. Set of light rings for phase objectives in the range of 5x to 40x.

5. Fluorescence illuminator, filter cubes (with Zero-Pixel-Shift for distinct multicolor experiments), and a fluorescence light source. 5 position filter cubes turret, neutral density filters N2, N4, N16 to reduce intensity of fluorescence. Direct coupled fluorescence illuminator capable of delivering excitation for DAPI, GFP, Texas red, Cy 5 probes.

6. Fluorescence LED light source to provide bight illumination with a direct coupler connecting this light source to microscope. Fluorescence LED light source delivers excitation in the UV (405nm), blue, green and red fluorescence light ranges. The system should contain at least 2 compatible long pass fluorescence filter cubes that deliver blue fluorescence light from part of the 400-500 nm range and green fluorescence light from part of the 520-600 nm range. These filters can be described as GFP -ET Long pass and Texas red ET long pass filters that deliver blue and green fluorescence wavelengths and are compatible with the LED fluorescence light source.

7. Filter holder should contain at least 5 spots for 5 filters : UV, blue, green, red and one open spot for white imaging. The holder has the ability to move filters manually without removing and

replacing them. The filter holder should allow one place for white light contrast applications with Phase or DIC objectives. Filters should be removable and exchangeable for future applications (not fixed). The light source should be able to adjust the intensity and select the individual excitation wavelength. All wavelengths can also be used simultaneously. The light source should be stable and have a lifetime specification of at least 25,000 hours.

8. Tube with 3 positions for future camera applications to have 3 positions 100% to eyepieces 50/50% to eyepieces and camera and 100% to camera. The tube to support the future camera should be a 19 mm size to gain the full imaging area of the sCMOS camera. HC Plan Eyepieces with 22mm field and 10x magnification. Tube diameter for camera port should be 19mm.

9. Phase objective with the following magnification 5x , 10x 20x and 40x . The lenses should have the following quality and following Numerical aperture or greater 5x NA 0.12; 10x 0.25 ;20x, 0.40 and 40x 0.65. The quality of the lenses should be N plan or greater for fluorescence applications. The lens should be able to be used for differential interference contrast (DIC) applications in the future.

10. Dust cover for protection

11. Capability to add a scientific sCMOS camera for imaging on a camera 19 mm trinocular port and image processing software to acquire images and combine sequential images. The camera and software must be the same brand as the microscope manufacturer to ensure compatibility.

12. New or less than a year old and only used by trained sales representatives for product demonstrations. The microscope will be evaluated by the manufacturer for damage or other issues and the microscope will be repaired before shipment to EPA. Any demo parts will have a full manufacturer warranty or 1yr electrical and 5yr mechanical.

From Eye to Insight

Quote #: QU-0743696-A
Date 12/20/2023
Valid Until 2/18/2024
Based on Contract GSAPrice=GS07F-139CA unless otherwise specified

NOT APPROVED

US Environmental Protection Agency
Biology

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DM2500 LED for transmitted light and fluorescence

See Online

DM2500 for transmitted light and fluorescence
Ergonomic system microscope Leica DM2500 LED with powerful LED transmitted light illumination delivers excellent optical performance for reliable results.
Extremely versatile microscope system for bright field and fluorescence, can be optionally equipped for dark field, phase contrast, polarization contrast, and DIC to suit the needs of modern laboratories. The extremely bright LED light source offers abundant light for applications like DIC that benefit from a substantial illumination.
The microscope configuration includes already the necessary fluorescence outfit like fluorescence illuminator, filter cubes (with Zero-Pixel-Shift for distinct multicolor experiments), and a fluorescence light source.
The ergonomic features like height adjustable focus knobs, symmetrical operation of focus and coaxial drive, optional ergotubes and a wide range of ergonomic accessories help to ensure fatigue-free work at the microscope.
Choice between 6- and 7-fold objective nosepiece offers plenty of positions for different

objectives to feature efficient work. The reliable 2- or the optional 3step focusing mechanism allows adaptation of the focusing to the properties of the specimen

Microscope Platform

#	Items		Quantity	List Price	Net Price
10	**Leica DM2500 LED stand** 11888856 Open Market Origin: CN Tariff: 90119000 Leica DM2500 LED stand for Biology & Medicine, with LED transmitted light illumination with LED lamp housing for constant color temperature, with height-adjustable focus knobs, coaxial coarse-fine focusing with 25 mm z-travel, with adjustable height stop, with integrated stage bracket and condenser holder with centering and height adjustment (with right-and left-hand operation) and clamping screw for condenser. Supply voltage 100-240 V AC, frequency 50/60 Hz		1	2,113.00	2,113.00
20	**Focusing drive 2-step** 11888143 Open Market Origin: CN Tariff: 90119000 Focusing drive 2-step DM2000-3000 for coarse and fine focussing and adjustable focus stop and focus torque adjustment, including focus knobs coarse		1	872.00	872.00
30	**Rev. nosepiece 6-fold for DM2000/2500** 11888140 Open Market Origin: CN Tariff: 90119000 Objective nosepiece for DM2000/DM2500 for 6 objectives with M25 thread		1	697.00	697.00
40	**Rubber focus knobs for DM2000/2500/3000** 11888137 Open Market Origin: CN Tariff: 90119000 Set of focus knobs fine with rubber surface for DM2000-3000.		1	62.00	62.00
50	**Basic docu tube BDT, mech., 19 CIP** 11505296 Open Market Origin: CN Tariff: 90119000 Tube BDT 25+V100/50/0, mech. Mechanical documentation tube, with fixed viewing angle 30°, field of view 25, variable beam splitters, 3 beam splitter positions: 100% eyepieces, 50% eyepieces: 50% documentation port 100% documentation port and 19 mm CIP (Camera Imaging Port/ documentation port for full sCMOS chip support)		1	1,941.00	1,941.00

#	Items		Quantity	List Price	Net Price
60	**Eyepiece HC PLAN s 10x/22 Br. M** 11507820 Open Market Origin: CN Tariff: 90029000 Eyepiece HC PLAN s 10x/22 Br. M Eyepieces with 10x magnification and 22mm field of view. Ideal for fatigue-proof screening. Useable with or without glasses. Dioptric adjustment. A reticule can be added.		2	358.00	716.00
Section Net Subtotal					USD 6,401.00

Transmitted Light Illumination

#	Items		Quantity	List Price	Contract Price	Net Price
70	**Ground plate w/o filter DM2500/DM2700** 11888145 Open Market Origin: CN Tariff: 90119000 Stand ground for Leica DM2500 / DM2700 without filtermagazine		1	69.00		69.00
80	**Lamp housing LH113 LED** 11504199 Origin: DE Tariff: 90119000 Lamp housing LH113 LED Exchangeable LED Lamp housing with constant color temperature at 4500 K.		1	453.00	393.36	393.36
90	**Set of light rings UCL DF,PH 1/2/3** 11501069 Origin: DE Tariff: 90119000 Set of lightrings for darkfield and phase contrast PH1, PH2, PH3 for UCL/UCLP condenser.		1	206.00	179.05	179.05
100	**Condenser UCL 0.90/1.25 OIL S1** 11501159 Open Market Origin: CN Tariff: 90029000 Universal condenser UCL 0.90/1.25 OIL S1 for dry and immersion observation, with 5-position condenser disc (empty), for bright field, optional light rings for darkfield and phase contrast, or auxiliary lens for objective magnification 2.5x available.		1	1,556.00		1,556.00
Section Net Subtotal						USD 2,197.41

Incident Light Fluorescence

#	Items		Quantity	List Price	Contract Price	Net Price
110	**Fluo Illuminator LRF 4/22** 11505235 Origin: CN Tariff: 90119000 Fluorescence illuminator LRF 4/22 for incident fluorescence for DM2000, DM2500, and DM3000, up to eyepiece field of view 22, with 5-position filter cube turret for cubes size "k", cubes are easily exchangeable, with centerable aperture and field diaphragms, with three switchable neutral filters N2, N4 and N16 for intensity reduction, and shutter	Open Market	1	4,356.00		4,356.00
120	**Filter system I3; size 'k'** 11513878 Origin: DE Tariff: 90022000 Filter system I3 for blue excitation, excitation filter: BP 450/490, dichromatic mirror: 510, suppression filter: LP 515, size K.		1	1,563.00	1,357.33	1,357.33
130	**Filter system N2.1; size 'k'** 11513882 Origin: DE Tariff: 90022000 Filter system N2.1 for green excitation, excitation filter: BP 515-560, dichromatic mirror: 580, suppression filter: LP 590, size K.		1	1,563.00	1,357.33	1,357.33

Section Net Subtotal USD 7,070.66

Microscope Stage

#	Items		Quantity	List Price	Net Price
140*	**Rotating stage for DM2000/2500/3000** 11888188 Origin: CN Tariff: 90119000 Rotatable stage for DM1000-DM3000 with right hand operation x/y control, 2 slides option, travel range 76x52mm, with ceramic stage plate, rotatable 110°	Open Market	1	750.00	750.00
150*	**Slide holder f. rotating stage, 2 slides** 11505242 Origin: CN Tariff: 90119000 Slide holder for rotating stage DM1000/DM2000/DM2500/DM3000, for two standard slides or one double size slide, easy operation, one hand slide exchange	Open Market	1	121.00	121.00

#	Items		Quantity	List Price	Net Price
160	**XY-stage control standard** 11888153 Origin: CN Tariff: 90119000 X/Y stage control standard for ergostages DM1000/DM2000/DM2500/DM3000 with removable rubber covers	Open Market	1	107.00	107.00
Section Net Subtotal					USD 978.00

Accessories

#	Items	Quantity	List Price	Contract Price	Net Price
170	**Dust cover DML/2000/2500/3000 Fluo/Photo** 11501074 Origin: SG Tariff: 39269097 Dust cover for DM2000/DM2500/DM3000/DM LB with fluorescence or photography / TV	1	98.00	85.01	85.01
Section Net Subtotal					USD 85.01

Leica N Plan Objectives for BF, Phase Contrast and DIC

#	Items		Quantity	List Price	Net Price
180*	**Obj. N PLAN 5x/0.12 PH0** 11506303 Origin: CN Tariff: 90021900 Objective N PLAN 5x/0.12 PH0 Free working distance: 14.0 mm For use with and without Cover Glass Not suitable for Incident Light, except Fluorescence Suitable for Phase Contrast Suitable for DIC (B1,B2)	Open Market	1	649.00	649.00
190	**Obj. N PLAN 10x/0.25 PH1** 11506406 Origin: CN Tariff: 90021900 Objective N PLAN 10x/0.25 PH1 Achromatic corrected objective for phase contrast	Open Market	1	709.00	709.00
200*	**Obj. N PLAN 20x/0.40 PH1** 11506098 Origin: CN Tariff: 90021900	Open Market	1	812.00	812.00

#	Items		Quantity	List Price	Net Price
	Objective N PLAN 20x/0.40 PH1 Free working distance: 0.39 mm For use with a 0.17 mm Cover Glass (DIN/ISO) Suitable for Phase Contrast Useful and recommended for Integrated Leica Modulation Contrast (IMC)				
210	**Obj. N PLAN 40x/0.65 PH2** 11506099 Origin: CN Tariff: 90021900 Objective N PLAN 40x/0.65 PH2 Free working distance: 0.36 mm For use with a 0.17 mm Cover Glass (DIN/ISO) Suitable for Phase Contrast Useful and recommended for Integrated Leica Modulation Contrast (IMC)	Open Market	1	1,382.00	1,382.00
Section Net Subtotal					USD 3,552.00

DM2500 LED for transmitted light and fluorescence

Product Net Subtotal USD 20,284.08

Cool LED

#	Items		Quantity	List Price	Net Price
220*	**CoolLED pE300W for DM and DMi Series** 11533125 Origin: GB Tariff: 85395200 CoolLED pE300W for DM and DMi Series CoolLEDpE-300-W main unit configured for single band filter sets, Incl. control pad, power supply + cable adapter for Leica DM5-6k series or DMi3-6k series	Open Market	1	7,945.00	7,945.00
Section Net Subtotal					USD 7,945.00

Cool LED

Product Net Subtotal USD 7,945.00

Quotation Totals

Sub Total	**USD 28,229.08**
Leica End-of-Year Demo Sell off Promo	-12,229.08
Grand Total Excluding Taxes	**USD 16,000.00**

Terms and Conditions

Currency: USD
Payment Terms: 30 days from date of invoice
Shipping Terms: Ship Point PREPAY & ADD
Origin: DE,SG,CN,GB
Lead Time: 45 Working Days
Valid Until: 2/18/2024
Based on Contract GSAPrice=GS07F-139CA unless otherwise specified
* * : DEMO PARTS SUBJECT TO AVAILABILITY

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This Quotation is Acknowledged and Agreed:

Signature of Authorization Buyer Representative:		Date:	
Print Name:		Title:	

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