



सीएसआईआर-केन्द्रीय खनन एवं ईंधन अनुसंधान संस्थान

CSIR-CENTRAL INSTITUTE OF MINING & FUEL RESEARCH

(बरवा रोड परिसर, धनबाद-८२६०१५, झारखण्ड, भारत)

Barwa Road Campus, Dhanbad – 826 015 (Jharkhand), India

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आशय पत्र सह क्रय आदेश (LOI – cum - PURCHASE ORDER)

मिसिल सं०/ File No. CIMFR/PUR-14(04)2020

दिनांक/ Date: 18.12.2020

सेवा में/ To,

M/s CARL ZEISS INDIA BANGALORE PVT LTD.,
Plot No. 3, BOMMASANDRA JIGANI LINK ROAD,
BOMMASANDRA INDUSTRIAL AREA,
BANGALORE - 560 099, INDIA.

विषय: कोल पेट्रोलोजिकल माइक्रोस्कोप विथ एक्सेसरीज़ एंड सॉफ्टवेयर के क्रय हेतु/ Purchase of Coal Petrological Microscope with accessories and software.

सन्दर्भ: Your Quotation No.: CZI/CIMFR dt. 10.08.2020, Negotiated offer e-mail dt. 17.12.2020.

प्रिय महोदय/ Dear Sir,

With reference to your above offer, the competent authority has been pleased to place a Purchase Order towards the procurement of Coal Petrological Microscope with accessories and software.

Quotation No.: CZI/CIMFR dt. 10.08.2020, Negotiated offer e-mail dt. 17.12.2020.				
S. No.	Description of the Item/ Item No.	Qty.	Unit Rate	Total Amount
1.	Zeiss Fully Motorized Coal Petrological Microscope having specific correlation with FE-SEM facility and accessories & Software including 03 years of Comprehensive Warranty. HSN Code- 9973	01	INR 2,48,39,535.00	INR 2,48,39,535.00
Total Price				INR 2,48,39,535.00
Discount after Price negotiation dt. 16.12.2020				INR 38,39,535.00
Discounted Total Price				INR 2,10,00,000.00
Concessional GST @5%				Included
Transportation				Included
Insurance				Included
Installation & Commissioning charges				Included
Training charges				Included
Final Landing Cost at CSIR-CIMFR, Barwa Road Campus, Dhanbad				INR 2,10,00,000.00
(Rupees Two Crore Ten Lakh Only)				

Terms & Conditions:

- Price:** FOR CSIR-CIMFR Stores, Barwa Road campus, Dhanbad.
- Installation & Commissioning:** Free of cost by firm.
- Payment Terms:** 30% advance against equivalent amount of Bank Guarantee and 70% after receipt of goods, challan, inspection report, warranty certificate, satisfactory installation & commissioning, training completion certificate, final acceptance certificate of user, verification of PBG.
- Delivery Period:** Within 16-20 weeks from the date of Letter of Intent cum Purchase Order.
- Training:** Training for 07 days to 03 Scientific Staffs.
- Detailed terms & conditions are as per Annexure-I and detailed specifications are as per Annexure-II.

राकेश कुमार
18/12/2020

Signature

18/12/2020

Terms & Conditions:

1. General	Supplier has to submit acknowledgement within 15 days from the date of Purchase Order. CIMFR will not be responsible for payment without completion of contractual/ LOI cum PO liabilities. The ordered items must comply strictly with the specifications as mentioned in the LOI cum Purchase Order and your Offer.
2. Price	FOR CSIR- CIMFR Stores.
3. Destination	CSIR-CIMFR, Stores, Barwa Road Campus, Dhanbad.
4. Installation & Commissioning	Free of cost by the firm within 30 days from the date of receipt of the goods at CSIR-CIMFR, Stores, Barwa Road Campus, Dhanbad.
5. Payment Terms	30% advance payment against equivalent value of Bank Guarantee valid for 02 months beyond the Installation & Commissioning and 70% payment after receipt of goods, challan, inspection report, warranty certificate, satisfactory installation & commissioning, training completion certificate, final acceptance certificate of the user, verification of PBG.
6. Delivery Period	16-20 weeks from date of receiving LOI cum PO.
7. Training	Three scientific staffs must be trained in the operation of the software, the instrument correlativity with FE-SEM and routine maintenance at site for 07 working days.
8. AMC (For freezing purpose)	AMC charges of ₹2,10,000.00 (GST included) per annum for 04 years after the expiry of comprehensive warranty of 03 years. Payment will be made yearly after the completion of the service and receipt of satisfactory report from the user scientist. The AMC includes Three (03) planned preventive maintenance visits and break-down visits will be as and when required.
9. PBG	Performance Bank Guarantee (PBG) amount 10% of the ordered value i.e., ₹21,00,000.00 to be submitted within 21 days from date of PO and valid up to 38 months from the date of commissioning and acceptance of the user.

10. Supplier/ Principal's authorized representative has to sign an agreement on Rs. 100/- stamp paper (Dhanbad jurisdiction) on receipt of acknowledgement, PBG and PBG confirmation.

सामान्य नियम एवं शर्तें /GENERAL TERMS & CONDITIONS

- सामान्य: मुद्रित शर्तें, यदि कोई हो, जिसे दर सूची के साथ भेजा गया है, को मानने के लिए हम बाध्य नहीं होंगे। अनुबंध सम्बन्धी बाध्यता को उद्धृत विनिर्देशों, नियमों व शर्तों के अनुसार पूरा किया जाना होगा।
- General:** Printed conditions, if any, contained in or sent along with the quotation shall not be binding on us. Contractual Obligation may be completed strictly as per cited specifications and terms & conditions.
- इस आदेश की संख्या व तिथि बिल में और इस आपूर्ति से संबन्धित सभी समाचार पत्र में उद्धृत किया जाना चाहिए।
- The Number and Date of this order must be quoted in the bill and in all correspondences relating to this supply.
- कर: डीएसआईआर पंजीकरण प्रमाणपत्र के आधार पर सभी करों/ लेवी की लागू दरों का स्पष्ट उल्लेख होना चाहिए। यह कार्यालय रियायती कर/ चुंगी के लिए पात्र है।
- Taxes:** Applicable rates of all taxes/ levies should be mentioned clearly against DSIR Registration certificate. This office is eligible for concessional taxes/ duties/ levies against DSIR certificate.
- बिल व भुगतान: इस आदेश और क्रम की संख्या और तारीख एवं वस्तु की संख्या बिल में उद्धृत किया जाना चाहिए। आपूर्तिकर्ता का बिल स्याही में तैयार या टाइप किया हुआ, विधिवत पूर्वा रसीदी व राजस्व टिकट चिपका हुआ और तीन प्रतियों में प्रस्तुत किया जाना चाहिए। आपूर्तिकर्ता बिल में स्थायी खाता सं०/ टिन सं० जो आयकर एवं बिक्री कर विभाग से निर्गत हो संलग्न करें, अन्यथा बिल पर विचार नहीं किया जाएगा। नगर निगम की सीमा के भीतर चुगी शुल्क भुगतान नहीं किये जाएंगे। भाग बिलिंग सख्त वर्जित है, यद्यपि आपूर्ति एक से अधिक बार की गयी हो तो भी अंतिम आपूर्ति के पश्चात ही बिल दिया जाना चाहिए। बिल का भुगतान माल/ भंडार की प्राप्ति, परीक्षण/ निरीक्षण/ चालन और आदेश के समतुल्य गुणवत्ता, मात्रा और विनिर्देशों के संबन्ध में संतोषजनक पाये जाने के पश्चात आपूर्तिकर्ता को भुगतान किया जायेगा।

राकेश सिंह
18/12/2020

18/12/2020

4. **Bills and Payment:** The No. and date of this order and Sl. No. of the article must be quoted in the bill. The supplier's bill should be prepared in ink or typed and submitted in triplicate, duly pre-receipted and affixed with revenue stamp. The supplier must furnish Permanent Account Number / TIN No. as allotted by the Income Tax, Sales Tax Department failing which the bill may not be entertained. No claim on account of payment of octroi duty within the limit of Municipal Corporation shall be accepted. Part Billing is strictly prohibited. Even if supply is made in more than one lot bill should be raised only once after making full or final supply. Bills for the supply will be paid after the items are received, tested/ inspected/ commissioned and found satisfactory with regard to quality, quantity and specifications ordered for suppliers.
५. सभी क्षतिग्रस्त या अस्वीकृत माल अपनी लागत पर लौटाये जायेंगे और जोखिम एवं आकस्मिक व्यय पर वसूली योग्य खर्च किया जाएगा।
5. All damaged or unapproved goods shall be returned at your cost & risk and the incidental expenses incurred thereon shall be recoverable from any of your bills.
६. बीमा के साथ सुपुर्दगी: सुपुर्दगी की तारीख का सख्ती से पालन किया जाना चाहिए, असफल होने पर क्रय आदेश रद्द किया जा सकता है। जुर्माना क्रय आदेश के नियम एवं शर्तों के अनुरूप होगा। सामान सुरक्षित रूप से और सक्षमता से आपूर्तिकर्ता के जोखिम पर निर्गत किया जाना चाहिए और इस आदेश के सन्दर्भ में उद्धृत भराई लागत सभी पार्सल में रखा जाना चाहिए। स्थानीय कंपनियों से अनुरोध किया जाता है कि समान कि सुपुर्दगी हमारे भंडारण में किसी भी कार्य दिवस को ०३ बजे अपराहन से पूर्व दिया जाए।
6. **Delivery with Insurance:** The date of delivery should be strictly adhered to failing which the purchase order is liable to be cancelled. Penalty may be imposed as per P.O. terms & conditions. Goods should be securely, safely and adequately packed & dispatched at the risk of supplier and packing costs quoting this order reference should be kept in all package. Local firms are requested to deliver the goods in our stores before 3.00 PM on any working day.
७. नष्ट क्षतिपूर्ति व विलंब दंड: उपयोगकर्ता/ मांगकर्ता करार के अवहेलना के कारण यदि नष्ट क्षतिपूर्ति सूचित करता है तो सक्षम पदाधिकारी द्वारा निर्धारित नष्ट क्षतिपूर्ति व दंड देय होगा। विलंब क्षतिपूर्ति - समय इस आदेश का सार है, अतः सुपुर्दगी की तारीख का सख्ती से पालन किया जाना चाहिए अन्यथा सम्पूर्ण व आंशिक सुपुर्दगी को स्वीकार नहीं किया जा सकता है और देर से सुपुर्दगी के लिए दंडस्वरूप कुल क्रय लागत का ०.५ प्रतिशत प्रति सप्ताह की दर से अधिकतम १० प्रतिशत तक निदेशक सिंफर के अनुमोदन से जुर्माना लिया जाएगा।
7. **Liquidated Damages & Late Penalty:** In case, any damage/ loss is intimated by the user/ indenter due to non compliance of contractual obligations and terms & conditions, same will be recovered with deemed fit penalty as ascertained by competent authority. **Late Penalty-** The time is essence of this order, the date of delivery should be strictly adhered to, otherwise the delivery in full or in part may not be accepted and penalty for late delivery will be imposed @ 0.5% per week subject to a maximum of 10% of the total value of supply order, beyond 10% subject to approval of Director CIMFR. In case of delay in installation the same rate of penalty shall be leviable.
८. जमानत/ आश्वस्ति: उपकरण की जमानत/ आश्वस्ति अवधि सफल स्थापना व चालू तिथि से निर्देशित अवधि या यदि निर्देशित न हो तो कम से कम मानक वारंटी/ गारंटी 01 साल होना चाहिए। यदि उपकरण के किसी भी हिस्से या पूरे उपकरण में जमानत/ आश्वस्ति अवधि के दौरान खराबी आई तो हमारे परिसर में ही इसका प्रतिस्थापन/ निःशुल्क मरम्मत करना होगा।
8. **Guarantee/ Warranty:** The equipment should be guaranteed/ under warranty for a specified period or if not specified, 01 year standard warranty/ guarantee from the date of successful installation as otherwise mentioned. In case any part or whole of the equipment is found to be defective during the guarantee period, then the same will have to be replaced/ repaired free of cost at our premises.
९. स्थापना और चालन: जहां भी स्थापना किया जाना आवश्यक है, उसी के अनुसार निर्धारित समय में क्रय आदेश रद्द किया जा सकता है/ क्रय आदेश के नियम एवं शर्तों के अनुरूप दंड लगाया जा सकता है। यदि क्रय आदेश केवल एक मशीन/ उपकरण के लिए है, को तुरंत सफलता से स्थापित और चालित किया जाना चाहिए लेकिन किसी भी परिस्थिति में पूर्ति के एक महीने बाद नहीं होना चाहिए। चालन में देरी १ महीने और जैसा की क्रय आदेश में उल्लेखित हों, नष्ट क्षतिपूर्ति क्रम संख्या ७ के अनुसार बिल/ दलाली से काटा जायेगा।
9. **Installation & Commissioning:** Wherever, installation is required to be done, the same should be done by the supplier as per schedule failing which purchase order is liable to cancelled/ penalty may be imposed as Purchase Order terms and conditions. In case the item ordered for is a machine/ equipment the same should be successfully installed and commissioned immediately but in no case later than one month of the supply or the same. For delay in commissioning beyond 1 month or otherwise mentioned in the P.O. liquidated damages as per Sl. No. 7 may be deducted from the Bill/ Agency Commission.

राकेश सिंह
18/12/2020

Signature

18/12/2020

१०. **निरस्तीकरण:** संस्थान के पास क्रय आदेश को निरस्त करने का अधिकार है यदि आपूर्तिकर्ता वितरण की समय सीमा को पूरा करने में विफल रहता है और अगर देरी प्रतिकूल संस्थान के उपयोगकर्ता वैज्ञानिक द्वारा दर्ज की गयी हो या संस्थान के अनुसंधान व विकास कार्यक्रम को प्रभावित किया हो। आदेश रद्द करने के मामले में कोई मुआवजा नहीं दिया जायेगा।
10. **Cancellation:** The institute reserves the right to cancel the order if party fails to meet the delivery deadline and if it is recorded by the user scientist that the late delivery has adversely affected the R&D Programme of the Institute. In case of cancellation of order no compensation will be paid towards progress of order/procurement.
११. **अप्रत्याशित घटना:** अप्रत्याशित घटना (Force Majeure) का अर्थ है कि जो घटना आपूर्तिकर्ता के नियंत्रण के परे हो, जिसमें आपूर्तिकर्ता की गलती या लापरवाही शामिल न हो। इस तरह की घटनाएँ यथा युद्ध या क्रांति, आग, बाढ़, महामारी, संगरोध प्रतिबंध और माल ढुलाई प्रतिबंध इत्यादि जिसमें क्रेता की संप्रभुता या संविदात्मक कार्य सीमित नहीं है। यदि कोई Force Majeure की स्थिति उत्पन्न होती है, तो आपूर्तिकर्ता ऐसी परिस्थितियों के लिखित रूप में क्रेता को तुरंत सूचित करेगा और उसका कारण भी देगा। जब तक लिखित रूप में क्रेता द्वारा निर्देशित नहीं किया जाता है, आपूर्तिकर्ता अनुबंध के तहत अपने दायित्वों का पालन करना जारी रखेगा, जहां तक यथोचित व्यावहारिक है और प्रदर्शन के लिए सभी उचित वैकल्पिक साधनों की तलाश करेगा जो Force Majeure की घटना से नहीं रुक रहा होगा। इस खंड का आशय है कि अगर प्रदर्शन में देरी या अनुबंध के तहत अपने दायित्वों को निभाने में विफल होने का कारण अप्रत्याशित घटना (Force Majeure) है तो आपूर्तिकर्ता का कार्य निष्पादन प्रतिभूति (performance security) के जब्ती, नष्ट क्षतिपूर्ति, विलंबदंड, स्वतः करार समाप्ती और निरस्तीकरण लागू नहीं होगा।
11. **Force Majeure:** "Force Majeure" means an even beyond the control of the supplier and not involving the supplier's fault or negligence and not foreseeable. Such events may include, but are not limited to, acts of the purchaser either in its sovereign or contractual capacity, wars or revolutions, fires, floods, epidemics, quarantine restrictions and freight embargoes. If a Force Majeure situation arises, the supplier shall promptly notify the purchaser in writing of such conditions and cause thereof. Unless otherwise directed by the purchaser in writing. The supplier shall continue to perform its obligations under the contract as far as is reasonably practical, and shall seek all reasonable alternative means for performance not prevented by the force majeure event. The supplier shall not be liable for forfeiture of its performance security, late penalty or liquidated damages or termination for default, if and to the extent that its delay in performance or other failure to perform its obligations under the contract is the result of an event of Force Majeure for purposes of this clause.
१२. **विवाचन:** इस अनुबंध से उत्पन्न सभी विवाद मध्यस्थता का आयोजन दिल्ली इंटरनेशनल आर्बिट्रेशन सेन्टर (डीआईएसी), दिल्ली उच्च न्यायालय, नई दिल्ली होगा।
12. **Arbitration:** Any difference/ dispute arising out of the agreement shall be referred to Delhi International Arbitration Centre (DIAC), Delhi High Court, New Delhi.
१३. **न्यायक्षेत्र:** आपूर्तिकर्ता और खरीददार के बीच यह अनुबंध भारत के कानून द्वारा शासित होगा और इस अनुबंध के अंतर्गत, यदि कोई विवाद हो तो उस पार्टी द्वारा धनबाद क्षेत्र स्थित सक्षम न्यायालय में ही दाखिल किया जायेगा।
13. **Jurisdiction:** This contract between supplier and buyer shall be governed by the Laws of India and dispute under this contract shall be lodged by parties to the competent jurisdiction, in Dhanbad, India only.

डा. केशव सिंह
18/12/2020

[Signature]

Yours faithfully,

Stores & Purchase Officer
CSIR-CIMFR

[Signature] 18/12/2020

Copy to: (1) IO/PL: Dr. Bodhisatwa Hazra, Scientist, HoRG: Dr. Manoj K. Singh, Chief Scientist;
(2) Stores Section; (3) Accounts Section.
Budget Head: P-50 (Apparatus & Equipments)/ LRF.

DESCRIPTION	QTY	CAT NO.
"Axio Imager.Z2m" Automated Polarizing Microscope with Image Ananlysis System		
Axio Imager.Z2m microscope stand with TFT monitor incl. <u>Z-drive mot 10 nm step size basic</u> , , reflected light illumination with shutter, Light Control mot. incl. RS 232 interface, <u>Apochromatically corrected Optics</u> , stage/condenser carrier and adapter plate for tubes, with external 12V DC 100W power unit, stabilized, 100V...240V AC/ 50...60Hz/230VA and country specific line cable	1	430010-9902-000
10-position reflector turret mot. ACR for P&C module	1	424913-0000-000
6-position Centerable objective nosepiece, Pol M27 cod.	1	424503-0000-000
Reflector module Brightfield ACR P&C for reflected light	1	424928-9901-000
Transmitted-light/reflected-light stage carrier	1	430704-9901-000
Stop slider with centerable Mot. luminous-field diap'gm	1	423612-9901-000
FL attenuator, Mot. discrete Insert for the aperture stop plane	1	423617-0000-000
<u>Filter Wheel & Filtres</u>		
Double filter wheel, discrete, man., 2x4 positions	1	428300-9901-000
Neutral-density filter set D/A, d=25	1	487931-9901-000
Band Pass Interference Green Filter 546	1	467807-0000-000
White Balance Filter	1	000000-1155-789
Binocular phototube 30°/25 (100:0/30:70/0:100) mot. , reversed image with Mot. Eyepiece Shutter, Two camera ports for Dual Camera Attachment	1	425504-0000-000
5-position tube-lens turret, Mot., with Bertrand system	1	425302-9901-000

21/12/2020

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DESCRIPTION	QTY	CAT NO.
<u>Compensators</u>		
Compensator λ , 6x20	1	473704-0000-000
Compensator Wedge, 0-4 λ , 6x20	1	000000-1140-833
Compensator $\lambda/4$, 6x20	1	473714-0000-000
Compensator mount 6x20 with DF Stop	1	424706-0000-000
Dust protection Set M	1	434303-0000-000
<u>12V 100W halogen illuminator (Rfl.)</u>		
HAL 100 illuminator with Quartz collector fpr Rfl. Ill.	2	423000-9901-000
Halogen lamp 12V 100W	3	380059-9540-000
<u>Optical Equipment - Objectives</u>		
Objective EC "Plan-Neofluar" 2.5x/0.85 POL M27	1	420323-9902-000
Adapter M 27x0.75 / W 0.8 H "0"	1	000000-1095-168
Objective EC "Epiplan-Neofluar" 10x/0.25 POL M27	1	422043-9902-000
Objective EC "Plan-Neofluar" 20x/0.50 POL M27	1	420353-9900-000
Objective EC Plan-Neofluar 40x/0.9 Pol	1	440353-9902-000
Objective EC "Epiplan-Neofluar" 50x/0.70 POL M27	1	442063-9900-000
Objective EC "Epiplan-Neofluar" 50x/1.0 Oil POL M27	1	422373-9900-000
Objective EC "Plan-Neofluar" 100x/1.30 Oil POL M27	1	420493-9900-000
Eyepiece PL 10x/25, Br Foc	2	444034-9000-000
Eyepiece Eyecup	2	444801-0000-000
<u>Measuring Graticules & Spare Eyepiece</u>		
Crossline Micrometer 10 : 100, D = 28mm	1	474066-9901-000
Stage micrometer for transmitted light	1	474026-0000-000
Stage Micrometer RL	1	474027-0000-000
<u>Circular Pol. Stage With Mech. Movement:</u>		
Rotary stage Pol. 360° rotatable with Vernier	1	432007-0000-000
Object guide Pol. With X-Y Click stop	1	453560-0000-000
<u>Polarizer/ Analyser Attachments</u>		
Polarizer D, 90° rotatable, removable	1	427706-0000-000
Quartz depolarizer d=32 mm	1	453853-0000-000
Analyzer slider D/A with lambda-plate rotatable 360°	1	428102-0000-000
Reflector module DIC/Pol red I Lambda ACR P&C for reflected light suitable Polarization.	1	424938-0000-000

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DESCRIPTION	QTY	CAT NO.
<u>DIC & Circular DIC</u>		
Reflector module C-DIC/TIC ACR P&C	1	424941-9000-000
Analyzer module Pol ACR P&C for transmitted light	1	424937-9901-000
DIC slider C 6x20 for EC EPN 5x-20x/LD EC EPN 20x-50x/EC EP 5x-100x	1	000000-1105-192
DIC slider EC EP 5x/0.13, 10x/0.2, 20x/0.4 Epi+	1	426968-9020-000
<u>Scanning Mot. X-Y Stage(Sample Height Max 30mm)</u>		
Scan Stage 130 x 85 mm. DC, Accuracy +/- 3 μ m.	1	432032-9901-000
XY DC Stage Controller MCU	1	432929-9000-000
JoyStick XY Controller	1	432903-9902-000
Glass Insert Plate	1	432312-0000-000
<u>High Sensitivity Digital Camera Attachment</u>		
High Resolution Color Micro Camera AxioCam 506 ,Max resolution 6.0 MP (2752x2208),Pixel Size 4.54 μ mX4.54 μ m, Chip Size 1", USB 3 / USB 2, Peltier Cooling, Digitization 14Bit, Intrigration Time 1ms to 60 Sec. Optical interface- C Mount. Adjustable ROI. Max. Full Well Capacity: Approx. 15,000 e. Spectral range: with protection glass app. 400 nm to 1000 nm. Live Frame Rate - Normal 51 fps. & High Res. 19 fps.	1	426556-0000-000
Camera Adapter 60N-C 2/3" 0.63x	1	426113-0000-000
<u>Image Analysis Software</u>		
AxioVision Rel. 4.8 Software Basic (St. Lc.)	1	410130-1600-000
AxioVision 4 Module Phase Analysis (St. Lc.)	1	410132-1408-000
AxioVision 4 Module MosaiX		
AxioVision 4 Module Z-Stack	1	410133-0506-000
AxioVision 4 Module Auto Focus		
AxioVision 4 Module Particle Analysis	1	410131-0400-006
<u>Transmitted Illuminator Attachments</u>		
Condenser carrier w/ vertical adj.on both sides	1	430705-0000-000
Transmitted-light illumination Mot.	1	423901-9902-000
Achromatic-aplanatic universal condenser 0.9 H Pol	1	424212-9901-000
Double filter wheel,discrete,man.	1	428300-9901-000
Filter set transm. light with neutral-density and color filters, d=25	1	487935-9010-000
White Balance Filter, D=32x1.5	1	000000-1155-789
Specimen holder D Pol	1	453563-0000-000

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DESCRIPTION

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CAT NO.

100W HBO illuminator (Fluorescence)

HBO 100 illuminator with lamp mount and collector	1	423010-0000-000
Super Pressure Mercury Lamp HBO 103 W /2	1	380301-9350-000
Power Supply unit for HBO 100, 90-250V	1	432804-9901-000
Filter set 09 shift free Ex BP 450-490, BS FT 510 EM LP 515 (Blue)	1	488009-9901-000
Filter set 15 shift free EX BP 546/12,BS FT 580 EM LP 590 (Green)	1	488015-0000-000
Filter set 02 shift free EX G 365,BS FT 395 EM LP 420 (UV)	1	488002-9901-000
Switching Mirror for 2 illuminators	1	447230-9903-000

Hardware AutoFocus Unit :

Hardware AutoFocus	1	425131-9000-000
Installation kit for Auto Focus with tube lens and beam combiner 850nm UV/VIS	1	425131-9030-000
Camera path deflection on the left side, mot., interface 60N	1	425104-0000-000
Path deflecting mirror 100% for camera deflection,	1	425110-9110-000

508 PV Microscope Spectrophotometer (CCD Based)

Base system for collecting UV-visible-NIR range spectra from microscopic samples. 7 Position Pre-Calibrated variable Aperture. Mot. UV-VIS Microscope Spectrophotometer.	1	2MP-102
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Includes: - Optical interface for spectrophotometer and microscope, Permanently calibrated sample aperture system included (can be upgraded to Absolute Calibrated Variable Aperture System). C-mount port . Support electronics for spectrophotometer, camera and accessories - All required power supplies To be digital imaging system (selected separately). Permanently calibrated motorized sample aperture system with 8 apertures and 1 imaging blank .

Required spectral range Type of array detector and whether TE cooling (to reduce spectral noise and improve instrument stability) is required. C-mount Adapter to microscope.

Lightblades Near UV-Visible-NIR Spectrophotometer - TE Cooling.	1	3DS-012
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Near UV-Visible-NIR spectrophotometer package with High resolution CCD array Spectrophotometer spectral range of 350 to 900 nm (depending upon appropriate light sources & optics)

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DESCRIPTION	QTY	CAT NO.
CRAIC CoalPro III Vitrinite Coal Analysis Software Software to operate and calibrate the microspectrophotometer, to measure vitrinite coal reflectance and to generate ISO/ASTM standardized reports. Integrates instrument control and vitrinite coal analysis in one easy-to-use package. Automatic optimization of microspectrophotometer. Automatic calibration checking of microspectrophotometer with (optional) CRAIC vitrinite standards. Acquire vitrinite reflectance data per ISO 7404 and ASTM D2798 standardized methodologies. Creates standard vitrinite coal reflectance reports as per ISO and ASTM methodologies. Additionally: Can acquire full range reflectance, transmittance and fluorescence spectra with properly configured microscope. Includes spectral viewing features such as interactive cursor, autoscaling, peak marking and more. Includes spectral analysis features such as averaging, smoothing, and more. compatible with 32/ 64-bit Windows. Software is Y2K and ISO 7404 compliant.	1	5SW-030
1.3 MP High Sensitivity Digital Imaging System High resolution color imaging, 1.3 megapixel 1/2" CCD sensor, 15 FPS, Integrated and optimized for CRAIC optics, ImageUV imaging software required .	1	3A150
Calibrated Variable Spectrophotometer Aperture Package Six different size apertures, -Each aperture is calibrated and absolutely reproducible spectral sampling area, Seventh position is for imaging with no visible aperture.	1	1A220
GeoImage Vitrinite Reflectance Analysis Software	1	5SW-040
GeoImage/Maceral Automated Collection Upgrade user input required for analysis of data and report generation Standards	1	5SW-042
ImageUV Software - Single License For capturing and processing images with CRAIC digital imaging system. for the UV, visible regions.	1	
Reflectance Standards for Vitrinite Coal Analysis Conforms with ISO 7404 standard methodology-Consists of a set of three standards, All reflectance levels are calibrated. Reflectance levels of the three standards are 0.4% - Spinel, 0.6% - Sapphire, 0.9% - YAG, 1.7% - GGG and 3.2% - Cubic Zirconium, absolute at 548 nm.	1	4SC-002-007

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DESCRIPTION	QTY	CAT NO.
Microspectrometer Fluorescence Standards	1	4SM-201/2/3
Solid state and inorganic for Orange, Green & Blue excitation, Set of three with emission at 451, 510 and ~650 nm.		
C-Mount adapter Spectrophotometer 1X	1	1MC-000
Three spatial axis adjustment for Percentrality & Parfocality.Spectral range 200 to 3000 nm.Dovetail adapter to attach with Microscope phototube.		
Dovetail to C-Mount adapter - Zeiss	1	1MC-001
<u>Co-Relative Acc. To Hook Up with Zeiss FESEM "Marlin Compact VP"</u>		
Specimen holder CorrMic Universal B	1	432335-9101-000
Adapter plate CorrMic with SEM interface	1	432335-9180-000
SEM Adapter for Specimen holder CorrMic	1	432335-9151-000
AxioVision 4 Module LM-EM Correl. Microsc. Shuttle & Find Site Licence	1	410132-1521-000
AxioVision Rel. 4.8.2 Software Site Licence	1	410130-1600-000
AxioVision 4 Module LM-EM Correlative Microscopy Shuttle & Find	1	410132-0521-000
Calibration Marker CorrMic (Stub.) 3 Pc.	1	432335-9190-000
SEM Stubs with 1/2" surface & 1/8" pin	1	432335-9210-000
<u>Automatic Point Counting Stage</u>		
Mot. Point Counting Stage - "PETROG LITE" with Software	1	
<u>Consumables & Spares :</u>		
Super Pressure Mercury Lamp HBO 103 W /2	3	380301-9350-000
Halogen lamp 12V 100W	6	380059-1660-000
Immersion Oil, 518 N, 250ml	1	000000-1111-808
<u>Additional Items :</u>		
HP Work Station with 27" LED Monitor	1	
Tool Kit	1	
UPS Unit - 1.5 KVA /2 KVA with Battery (APC / Powerone)	1	

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Yours faithfully,

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Stores & Purchase Officer
CSIR-CIMFR