

Portugal-Braga: Miscellaneous compounds for microscopes

OJ S 115/2017 17/06/2017

Contract notice

Supplies

Directive 2004/18/EC

Section I: Contracting authority

I.1. Name and addresses

Official name: INL, International Iberian Nanotechnology Laboratory

Postal address: Avenida Mestre José Veiga

Town: Braga

Postal code: 4715 330

Country: Portugal

Contact person: <https://in-tendhost.co.uk/inl/asp/Home>

For the attention of: Adrian Watson

E-mail: adrian.watson@inl.int

Telephone: +351 253140112

Fax: +351 253140119

Internet address(es):General address of the contracting authority: www.inl.intAddress of the buyer profile: <http://inl.int/contractors/info>Electronic access to information: <https://in-tendhost.co.uk/inl/asp/Home>Electronic submission of tenders and requests to participate: <https://in-tendhost.co.uk/inl/asp/Home>**Additional information can be obtained from:**

the abovementioned address

Specifications and additional documents (including documents for competitive dialogue and a dynamic purchasing system) can be obtained from:

the abovementioned address

Tenders or requests to participate must be submitted: the abovementioned address**I.2. Type of the contracting authority**

European institution/agency or international organisation

I.3. Main activity

Other: Nanotechnology Research Laboratory

I.4. Contract award on behalf of other contracting authorities

The contracting authority is purchasing on behalf of other contracting authorities: no

Section II: Object of the contract

II.1. Description**II.1.1. Title attributed to the contract by the contracting authority**

Contract for the Supply and Installation of an Ion Milling System and a Cryo Ultramicrotome to the International Iberian Nanotechnology Laboratory

II.1.2. Type of contract and place of performance or delivery

Supplies

Main site or place of performance: Avenida Mestre José Veiga, Braga, Portugal

NUTS code PT112 Cávado

II.1.3. Information about a framework agreement or a dynamic purchasing system

The notice involves a public contract

II.1.4. Information about framework agreement

II.1.5. Short description of the contract or purchase(s)

Lot 1

Ion Milling system

General specifications:

- Ion milling system for TEM samples with 2 guns;
- Gun angle can be adjusted within $\pm 10^\circ$, for each gun independently, even during the milling process;
- Sector milling over a range of 5° and 90° ;
- Sector milling variation with increments of 0.1° ;
- 2 penning ion guns each independently adjustable gas control utilizing mass flow controllers to allow either rapid milling or slow precise ion polishing;
- Current in each gun can be adjusted within the range 0 to 100 μA ;
- 10" colour touch screen with control software and ability to create and save recipes with the different milling parameters during a process;
- Current should be measurable for each gun independently and measured at the gun and not a on a Faraday cup located past the sample;
- Airlock for sample change with automatic shutter to avoid contamination of the viewing window. Sample is illuminated in reflection and transmission with adjustable intensity through the touch screen;
- The microscope is compatible with a digital camera;
- Oil-free vacuum system, with a 2-stage diaphragm backing a turbo drag pump with a minimum capacity of 80l/s;
- Work chamber base pressure 5×10^{-6} Torr and operating pressure 8×10^{-5} Torr. Penning gauge shall monitor the chamber vacuum;
- XY stage for selecting the milling area;
- Cooling stage with electronic control of the temperature between -180°C up to 100°C ;
- Dewar and conductor rod should share the main vacuum system;
- Built in Dewar heater;
- 6-8 hour Dewar capacity;
- Sample holder and guns must allow milling above and below sample at the same time;
- Sample size: 3 or 2.3 mm.

Valuable specifications:

- Ion beam energy must have as a minimum 0.1keV and maximum of 8.0 keV;
- Spot size less then 2 mm in diameter at any energy of the guns;
- Beam modulation: single gun, double gun or off;
- Through the inactive sectors when using beam modulation rotation speed should be 12 rpm;
- Power consumption during operation less than 200 W and 100 W with guns off.

Ultrasonic disc cutter:

- Cuts simple holes, unique shapes or transmission electron microscope (TEM) discs from hard or brittle materials;
- Sample Size: < 1-10 mm;
- Sample Thickness: < 0.04-5 mm;

- XY stage for centering the sample;
- Manual tuned frequency driver.

Grinder system:

- Produces parallel sided samples in the microns range;
- Parallel sided discs of 50µm thickness;
- Specimen diameter.

Lot 2

Cryo Ultramicrotome

General specifications:

- High stability mechanical drive system for specimen advance and cutting;
- Cutting stroke from 0.1 mm to 15 mm;
- Numeric and digital displays of number of sections cut, total specimen feed advanced, section thickness, cutting speed and specimen feed remaining;
- Bright LED approach backlight with independent LED specimen transillumination/spotlight for specimen localization;
- Electronic stepping control for automatic specimen advance/return;
- 5 memory channels to store frequently used cutting and trimming parameters;
- Built-in diagnostic and set-up routines;
- Built-in report generator and data base with specimen parameter recall mode;
- On-screen measurements of specimen and knife with built-in VIA digital micrometer system;
- Auto thin sectioning from 5 nm;
- Auto thick sectioning to 15 µm;
- 1 nm incremental steps for ultra, semi thin sectioning and block facing;
- Dual footswitch control for switch control for semi thin (or trim) and ultra-thin sectioning;
- Cutting speed range from 0.1 – 99.9 mm/sec in 0.1 mm/sec. increments with digital display;
- Mechanical advance with digital linear scale control;
- Specimen auto feed 200 microns;
- Variable return speed over entire cutting speed range;
- High-precision, manually operated knife stage with positive micrometer control of the N-S, E-W knife position;
- Stereomicroscope 7.7:1 zoom range, 6.5x to 50x magnification with 10x WF (23 mm) eyepieces;
- Built-in ergonomic swivel away hand rest for restful section manipulation;
- Anti vibration table;
- Table-top 12 L Dewar for 5 hours operation;
- Cryochamber heaters are individually controlled by adjusting heater power levels for particular applications;
- Workstation surrounds without touching the cryo chamber. Hands do not get cold and sectioning is not disturbed;
- Invar metal specimen arm for thermal stability for improved sectioning consistency;
- Video option can be added at any time and can be controlled by the PC.

Valuable specifications:

- Power driven cutting stroke for the hardest specimen and largest block;
- Scan and tilt Single control knob for quickly scanning the entire knife edge and sectioning area;
- Ergonomic stereomicroscope system with constant radial focus, eucentric tilt control adjustment;
- PC controlled cryo-ultramicrotome supplied complete with all in one, slim design computer, "Touch Screen" control monitor 21.5'.

Knife maker:

- Compatible with commercial glass strips ranging from 6 to 8 mm in thickness;
- Able to produce glass knives for cryo ultramicrotomy;

II.1.6. CPV code(s)

38519000 Miscellaneous compounds for microscopes

II.1.7. Information about the Government Procurement Agreement (GPA)

The procurement is covered by the Government Procurement Agreement: no

II.1.8. Lots

This contract is divided into lots: yes

Tenders may be submitted for one or more lots

II.1.9. Information about variants

Variants will be accepted: no

II.2. Scope of the procurement

II.2.1. Total quantity or scope

1

Estimated value excluding VAT: 200 000 EUR

II.2.2. Information about options

Options: no

II.2.3. Information about renewals

This contract is subject to renewal: no

II.3. Duration of the contract or time limit for completion

Information about lots

Lot No: 1

Lot title: Lot 1: Ion Milling System

1) Short description

Ion Milling system

General specifications:

- Ion milling system for TEM samples with 2 guns;
- Gun angle can be adjusted within $\pm 10^\circ$, for each gun independently, even during the milling process;
- Sector milling over a range of 5° and 90° .
- Sector milling variation with increments of 0.1°
- 2 penning ion guns each independently adjustable gas control utilizing mass flow controllers to allow either rapid milling or slow precise ion polishing;
- Current in each gun can be adjusted within the range 0 to 100 μA ;
- 10" colour touch screen with control software and ability to create and save recipes with the different milling parameters during a process;
- Current should be measurable for each gun independently and measured at the gun and not a on a Faraday cup located past the sample;
- Airlock for sample change with automatic shutter to avoid contamination of the viewing window. Sample is illuminated in reflection and transmission with adjustable intensity through the touch screen;
- The microscope is compatible with a digital camera;
- Oil-free vacuum system, with a 2-stage diaphragm backing a turbo drag pump with a minimum capacity of 80l/s;

- Work chamber base pressure 5×10^{-6} Torr and operating pressure 8×10^{-5} Torr. Penning gauge shall monitor the chamber vacuum;
- XY stage for selecting the milling area;
- Cooling stage with electronic control of the temperature between -180°C up to 100°C ;
- Dewar and conductor rod should share the main vacuum system;
- Built in Dewar heater;
- 6-8 hour Dewar capacity;
- Sample holder and guns must allow milling above and below sample at the same time;
- Sample size: 3 or 2.3 mm.

Valuable specifications:

- Ion beam energy must have as a minimum 0.1 keV and maximum of 8.0 keV;
- Spot size less than 2 mm in diameter at any energy of the guns;
- Beam modulation: single gun, double gun or off;
- Through the inactive sectors when using beam modulation rotation speed should be 12 rpm;
- Power consumption during operation less than 200 W and 100 W with guns off.

Ultrasonic disc cutter:

- Cuts simple holes, unique shapes or transmission electron microscope (TEM) discs from hard or brittle materials;
- Sample Size: < 1-10 mm;
- Sample Thickness: < 0.04-5 mm;
- XY stage for centering the sample;
- Manual tuned frequency driver.

2) CPV code(s)

38519000 Miscellaneous compounds for microscopes

3) Quantity or scope

1

Estimated value excluding VAT: 115 000 EUR

4) Indication about different time frame or duration

5) Additional information about lots

Lot No: 2

Lot title: Lot 2; Cryo Ultramicrotome

1) Short description

Cryo Ultramicrotome

General specifications:

- High stability mechanical drive system for specimen advance and cutting;
- Cutting stroke from 0.1 mm to 15 mm;
- Numeric and digital displays of number of sections cut, total specimen feed advanced, section thickness, cutting speed and specimen feed remaining;
- Bright LED approach backlight with independent LED specimen transillumination/spotlight for specimen localization;
- Electronic stepping control for automatic specimen advance/return;
- 5 memory channels to store frequently used cutting and trimming parameters;
- Built-in diagnostic and set-up routines;
- Built-in report generator and data base with specimen parameter recall mode;
- On-screen measurements of specimen and knife with built-in VIA digital micrometer system;
- Auto thin sectioning from 5 nm;
- Auto thick sectioning to 15 μm ;

- 1 nm incremental steps for ultra, semi thin sectioning and block facing;
- Dual footswitch control for switch control for semi thin (or trim) and ultra-thin sectioning;
- Cutting speed range from 0.1 – 99.9 mm/sec in 0.1 mm/sec. increments with digital display;
- Mechanical advance with digital linear scale control;
- Specimen auto feed 200 microns;
- Variable return speed over entire cutting speed range;
- High-precision, manually operated knife stage with positive micrometer control of the N-S, E-W knife position;
- Stereomicroscope 7.7:1 zoom range, 6.5x to 50x magnification with 10x WF (23 mm) eyepieces;
- Built-in ergonomic swivel away hand rest for restful section manipulation.
- Anti vibration table;
- Table-top 12 L Dewar for 5 hours operation;
- Cryochamber heaters are individually controlled by adjusting heater power levels for particular applications;
- Workstation surrounds without touching the cryo chamber. Hands do not get cold and sectioning is not disturbed;
- Invar metal specimen arm for thermal stability for improved sectioning consistency;
- Video option can be added at any time and can be controlled by the PC.

Valuable specifications:

- Power driven cutting stroke for the hardest specimen and largest block;
- Scan and tilt Single control knob for quickly scanning the entire knife edge and sectioning area;
- Ergonomic stereomicroscope system with constant radial focus, eucentric tilt control adjustment;
- PC controlled cryo-ultramicrotome supplied complete with all in one, slim design computer, "Touch Screen" control monitor 21.5'.

Knife maker:

- Compatible with commercial glass strips ranging from 6 to 8 mm in thickness;
- Able to produce glass knives for cryo ultramicrotomy;

2) CPV code(s)

38000000 Laboratory, optical and precision equipments (excl. glasses)

3) Quantity or scope

1

Estimated value excluding VAT: 85 000 EUR

4) Indication about different time frame or duration

5) Additional information about lots

Section III: Legal, economic, financial and technical information

III.1. Conditions related to the contract

III.1.1. Deposits and guarantees required

A 10% bank guarantee is required by the INL for the duration of the warranty period.

III.1.2. Main financing conditions and payment arrangements and/or reference to the relevant provisions governing them

III.1.3. Legal form to be taken by the group of economic operators to whom the contract is to be awarded

III.1.4. Contract performance conditions

The performance of the contract is subject to particular conditions: no

III.2. Conditions for participation

III.2.1. Suitability to pursue the professional activity, including requirements relating to enrolment on professional or trade registers

III.2.2. Economic and financial ability

III.2.3. Technical and professional ability

III.2.4. Information about reserved contracts

III.3. Conditions specific to services contracts

III.3.1. Information about a particular profession

III.3.2. Information about staff responsible for the performance of the contract

Section IV: Procedure

IV.1. Type of procedure

IV.1.1. Type of procedure

Open

IV.1.2. Information about the limits on the number of candidates to be invited

IV.1.3. Information about reduction of the number of solutions or tenders during negotiation or dialogue

IV.2. Award criteria

IV.2.1. Award criteria

The most economically advantageous tender in terms of Price is not the only award criterion and all criteria are stated only in the procurement documents

IV.2.2. Information about electronic auction

An electronic auction will be used: no

IV.3. Administrative information

IV.3.1. File reference number attributed by the contracting authority

AW/PF

IV.3.2. Previous publication concerning this procedure

no

IV.3.3. Conditions for obtaining specifications and additional documents or descriptive document

IV.3.4. Time limit for receipt of tenders or requests to participate

17.7.2017 - 17:00

IV.3.5. Estimated date of dispatch of invitations to tender or to participate to selected candidates

IV.3.6. Languages in which tenders or requests to participate may be submitted
English.

IV.3.7. Minimum time frame during which the tenderer must maintain the tender

IV.3.8. Conditions for opening of tenders

Section VI: Complementary information

VI.1. Information about recurrence

This is a recurrent procurement: no

VI.2. Information about European Union funds

The procurement is related to a project and/or programme financed by European Union funds:
yes

Identification of the project: This project will be co-financed by PT2020, POCI - Programa Operacional Competitividade e Internacionalização, Projetos de Investigação Científica e Desenvolvimento Tecnológico (IC&DT) - Convite

01/SAICT/2016 - Sistema de Apoio à Investigação Científica e Tecnológica (SAICT) - Projetos de Infraestruturas de Investigação inseridas no Roteiro Nacional de Infraestruturas de Investigação de Interesse Estratégico

Network of Micro and Nano Fabrication Research Facilities in Portugal

LISBOA-01-0145-FEDER-022090

VI.3. Additional information

VI.4. Procedures for review

VI.4.1. Review body

VI.4.2. Review procedure

VI.4.3. Service from which information about the review procedure may be obtained

VI.5. Date of dispatch of this notice

15.6.2017