

CONTRACT NOTICE

on the purchase of Scanning Electron Microscope (SEM)

(indicate the object of the purchase)

by procurement procedure Open tender

(type of procurement procedure)

1. **Name of contracting authority:** I.P. Moldova State University
2. **IDNO:** 1006600064263
3. **Address:** mun.Chisinau, str. Alexei Mateevici, 60
4. **Telephone/fax number:** 022 241 240/060060045
5. **E-mail and Internet address of the contracting authority:** achizitii@usm.md/
https://usm.md/
6. **E-mail or internet address from which access to the award documentation will be obtained:**
the award documentation is annexed to the procedure in the MTender
7. **Type of contracting authority and main object of activity (if applicable, mention that the contracting authority is a central purchasing authority or that the procurement involves another form of joint procurement):** *public higher education institution*
8. **The purchaser invites interested economic operators who can meet its needs to participate in the procurement procedure for the supply/provision/performance of the following goods/services/works:**

No d/o	CPV Code	Name of goods/services/ work required	Unit of measure ment	Quan tity	Full technical specification required, Reference standards	Estimated value (to be indicated for each lot) Without VAT
		Lot 1				
1	38511100-1	<i>Scanning Electron Microscope (SEM)</i>	un	1	Scanning electron microscope with the following characteristics: -Computer-controlled microscope with tungsten filament or equivalent for both high vacuum and low vacuum applications -High vacuum resolution : min. 3nm at 30kV and min. 8nm at 3kV -Variable pressure resolution : 3.5nm at 30kV -Growth range from 3x or less to at least 1 000 000x -Viewing field of at least 7mm at 10mm working distance -Electron beam energy range : from 200eV or below to at least 30keV -Sampling current from 1pA or below to at least 2uA -Sampling rate continuously adjustable from the software interface, without the need for any mechanical intervention (centering) on the column by the user. -No aperture system required for the different imaging modes or if they are required then they are heated in order to avoid contamination -Software for real time calculation of spot size per sample	3 966 666,66

				<p>-Scanning speed of 20ns or less down to at least 10ms per pixel adjustable in steps and continuously</p> <p>-High vacuum mode and low vacuum mode up to at least 500Pa</p> <p>-Proof plate with motorized movement in X axis at least 60mm, in Y axis at least 60mm and continuous rotation 3600</p> <p>-Z-axis displacement of at least 50mm</p> <p>-Left-right tilt of at least 800 in each direction</p> <p>-Maximum sample height : at least 50mm</p> <p>-Detectors included in delivery:</p> <p>a. secondary electron detector</p> <p>b. picoammeter for measuring sample current</p> <p>c. touch alarm - stops movement if any touch occurs in the sample room</p> <p>-Maximum image size of at least 16k x 16k pixels</p> <p>-Automations such as: continuous spot size and current adjustment, focusing, astigmatism, contrast-illumination, filament heating and centering, cannon and column centering, etc.</p> <p>-Software : measurements, image processing, etc.</p> <p>-Includes PC with monitor, keyboard and mouse and UPS</p> <p>EDX specific features:</p> <p>-Liquid-nitrogen-free X-ray detector , resolution of 129eV or better, active range of at least little 30mm²</p> <p>X-ray detector software : to allow elemental analysis on a region, on a point, on a line and mapping, creation of analysis reports.</p> <p>EBL specific features:</p> <p>-Advanced electron lithography software that can generate geometric shapes, bitmap images, text, alignment markers</p> <p>-Minimum dwell time per pixel of 20ns/pixel or less for any shape</p> <p>-Multiple adjacent stitching fields</p> <p>-Proximity effect correlation</p> <p>-Import files in universal GDSII and DXF formats</p> <p>Electrostatic or equivalent Beam Blanker to block the electron beam between individual objects in the structure being written; Electrostatic or equivalent Beam Blanker could also be used to reduce the surface charge effect of non-conductive samples in SEM imaging by reducing the exposure time per pixel.</p> <p>-Beam Blanker The beam blanker will contain an electron beam blocking device (e.g. two electrode assembly) connected to a fast amplifier: 10MHz maximum.</p> <p>-Timing for beam blocking: <=50ns typical</p> <p>-Lighting time : <=50ns typical</p> <p>-Delay time : <=80ns typical</p> <p>-Additional electromagnetic blanker beam (using the SEM column coils) also included, so that by combining the electromagnetic blanker beam with the electrostatic blanker beam, the possibility of electrons reaching areas other than those of interest is avoided.</p> <p>-Special holder for lithography samples</p> <p>-Beam Blanker can be used for intermittent beam</p>
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				<p>blocking during image acquisition so as to reduce the exposure of the sample to electron radiation thus minimizing the electrostatic charging effect of the sample;</p> <p>-The microscope will control the beam blanker automatically so that the electron beam motion is synchronized with the beam blanker to achieve the effect of reducing electrostatic charge on the surface of non-conductive samples during SEM imaging.</p> <p>-Beam Blanker will be able to be used for electron lithography</p> <p>-Special lithography specimen holder with 3 positions: a. specimen position: will be able to accommodate specimens with lateral dimension $\geq 2"$; b. Faraday Cup position: will contain a permanently integrated Faraday cup to measure the specimen current and thus calculate the irradiation dose; c. standard specimen position: will contain a standard gold-on-carbon specimen permanently mounted to make all beam adjustments (focusing, astigmatism, etc.).</p> <p>-Microscope platen accuracy of $\pm 2\mu\text{m}$ is not affected.</p> <p>-Electron lithography accessories and consumables kit :</p> <p>-Special software for electron lithography - technical specifications: Can take control of SEM microscope to perform electron lithography</p> <p>Processing modes: EBL (electron beam lithography) Dwell time: $\leq 20\text{ns/pixel}$</p> <p>Possible figures: point/line/cross, rectangles (outline, filled rectangles, stairs, polygon), circle (outline, filled circle), polygons, bitmap or equivalent images, text, blank objects (rectangles, circles, polygons), alignment marks</p> <p>Objects arranged in layers, each layer having its own set of processing parameters</p> <p>Editing functions such as: undo/redo, cut/copy/insert/remove, clone objects, object groups, rotate and align objects, object and layer management</p> <p>UV coordinate systems, Z-axis levelling - tilt correction</p> <p>Multi-field stitching, plot navigation, proximity correction, import from universal files such as GDSII and DXF, automatic and manual figure alignment;</p> <p>Allows writing in equidistant fields and mirroring of objects</p> <p>The offer will include delivery to the installation site and installation of the product on site. The offer will include training for operators, minimum 3 days at the beneficiary's location. 24 months warranty.</p>	
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9. If the contract is divided into lots one economic operator may submit a tender (it will be selected):

- 1) For a single lot;
- 2) For more lots;

- 3) For all lots;
4) Other limitations on the number of lots that may be awarded to the same tenderer

10. Admission or prohibition of alternative offers: not allowed
(indicate whether admitted or not admitted)

11. Terms and conditions of delivery requested: within 120 days after signing the contract, at the address Institute of Applied Physics, 5 Academiei str., mun. Chisinau

12. Contract period: 31.12.2023

13. Procurement contract reserved for sheltered workshops or that it can only be executed under sheltered employment programmes (if applicable): no
(indicate yes or no)

14. The provision of the service is reserved to a particular profession by virtue of laws, regulations or administrative provisions (as appropriate): no
(mention the respective legal and administrative acts)

15. Brief description of the eligibility criteria for economic operators which may lead to their elimination and of the selection criteria; minimum level(s) of the requirement(s), if any, imposed; the information required (DUAE, documentation) is mentioned:

No d/o	Description of the criterion/question	How to demonstrate fulfilment of the criterion/question:	Minimum level/Obligatory
1	Request to participate	Completed in accordance with Annex 7 of the Standard Documentation, confirmed by applying the electronic signature of the SO.	Mandatory
2	DUAE	The DUAE form, approved by MF Order No 72/2020, completed according to the attached model, confirmed by applying the electronic signature of the EO.	Mandatory
3	Statement on the validity of the offer	Completed in accordance with Annex 8 of the Standard Documentation, confirmed by applying the electronic signature of the EO. Validity period of the tender - 60 days from the day of opening of the tenders.	Mandatory
4	Guarantee for the offer	Form of guarantee - 1%: a) The tender security by transfer to the account of the contracting authority, according to the following bank details, confirmed by the application of the electronic signature of the EO, as per Annex 9: Payee: <i>IP Moldova State University</i> Name of the Bank: <i>BC Victoriabank SA,</i> Branch No. <i>17 Chisinau</i> Fiscal code: <i>1006600064263</i> IBAN: <i>MD25VI000000225171710MDL</i> Bank code: <i>VICBMD2X457</i> or b) The offer shall be accompanied by a bank guarantee letter (issued by a licensed bank) according to Annex no.9 of the standard documentation approved by the Order of the Minister of Finance no.115 of 15.09.2021. *The validity period of the bank tender guarantee will be equal to the validity period of the tender.	Mandatory
5	Technical specifications	Completed in accordance with Annex 22, confirmed by the application of the electronic signature of the EO.	Mandatory

6	Price specifications	Completed in accordance with Annex No 23, confirmed by the application of the electronic signature of the EO.	Mandatory
Documents required by the SAD, according to Art. 20 para. (8), Law no. 131/2015, on public procurement, the first-placed bidder shall submit (by electronic means, with the application of electronic signature) within 3 (three) working days, the updated supporting documents, demonstrating the fulfilment of all qualification and selection criteria.			
7	Proof of registration of the legal entity	Certificate of registration/registration decision/extract issued by the authorised body, electronically signed copy;	Mandatory
8	Certificate of bank account assignment	Issued in the years 2019-2022 by the bank holding the account, original/copy electronically signed;	Mandatory
9	Financial report	Copy of the last financial report, confirmed by applying the electronic signature of the EO.	Mandatory
10	Certificate on the absence or existence of debts to the state budget	Copy, confirmed by applying the electronic signature of the EO.	Mandatory
11	Manufacturer's Authorization Form	The participant has the right to sell such equipment, confirmed by the participant's electronic signature.	Mandatory
12	Certificate of conformity of the product issued by an accredited assessment body or EC declaration of conformity issued by the manufacturer.	Copy confirmed by electronic signature of the EO	Mandatory
13	Declaration of the assurance of transport, unloading and installation of the goods at the premises indicated by the Buyer.	Confirmed by electronic signature of the EO	Mandatory
14	Statement of proposed specialist staff to implement the contract (relating to: delivery, microscope installation and operator training).	According to Annex 14 of the standard documentation, confirmed by electronic signature of the EO	Mandatory
15	Declaration confirming that the manufacturer/distributor of electrical and electronic equipment (EEE) is included in the List of manufacturers of products subject to extended producer responsibility regulations	in accordance with the Regulation on waste electrical and electronic equipment, approved by GD no. 212 of 07.03.2018 - by indicating the registration number in the mentioned List of Producers.	Mandatory
16	Declaration confirming the identity of the beneficial owners and that they have not been convicted of participating in the activities of a criminal organisation or group, corruption, fraud and/or money laundering.	Completed in accordance with the Form approved by MF Order No 145 of 24.11.2020 - in original electronically signed; <i>*To be submitted within 5 days by the successful bidder.</i>	Mandatory
17	Minimum 3 years of specific experience in the delivery of similar goods and/or services	Declaration of the list of the main deliveries/supplies carried out in the last 3 years of activity as per Annex 12.	Mandatory
18	Contract performance guarantee	Transfer to the account of the contracting authority confirmed by payment order, in the amount of 2% of the value of the tender proposed: Payee: IP Moldova State University Bank name: BC Victoriabank SA, Branch No. 17 Chisinau Fiscal code: 1006600064263 IBAN: MD25VI000000225171710MDL	Mandatory

	Bank code: VICBMD2X457 * <i>To be presented by the successful tenderer at the signing of the contract</i>	
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16. Tender guarantee - 1% of the tender value excluding VAT.

17. Contract performance guarantee - 2 % of contract value including VAT

18. Reason for use of the accelerated procedure (in the case of open, restricted and negotiated procedures), as appropriate: not applicable

19. Specific award techniques and instruments (if applicable specify whether framework agreement, dynamic purchasing system or electronic auction will be used): electronic auction, Number of rounds - 3. Minimum step - 1%.

20. Special conditions on which performance of the contract depends (indicate as appropriate): not applicable

21. Evaluation criterion applied for the award of the contract: lowest price

22. Factors for evaluating the most economically advantageous tender and their weightings: not applicable

No d/o	Name of assessment factor	Share %

23. Deadline for submission/opening of tenders:

- until: *[exact time]* You can find the information in the MTender
- on: *[date]* Information can be found in the MTender

24. Address to which tenders or requests to participate must be sent:

Tenders or requests to participate shall be submitted electronically via the MTender

25. Validity of tenders: *60 calendar days from the day of opening of tenders*

26. Place of opening of tenders: *Tenders or requests to participate shall be submitted electronically via the MTender. Late tenders will be rejected.*

27. Persons authorised to attend the opening of tenders:

Tenderers or their representatives are entitled to attend the opening of tenders, unless tenders have been submitted via the MTender.

28. Language(s) in which tenders or requests to participate must be drawn up: *Romanian*

29. This contract relates to a project and/or programme financed by European Union funds: *not applicable*

(specify the name of the project and/or programme)

30. Name and address of the competent appeal body:

National Agency for Dispute Resolution

Address: mun. Chisinau, bd. Ștefan cel Mare și Sfânt nr.124 (et.4), MD 2001;

Tel/Fax/email: 022-820 652, 022 820-651, contestatii@ansc.md

31. Date(s) and reference(s) of previous publication(s) in the Official Journal of the European Union of the contract(s) to which the notice relates (if applicable): *11.04.2023; OJS:2023/S 071-216641*

32. In the case of periodic purchases, the estimated timetable for the publication of future notices: *not applicable*

33. Date of publication of the notice of intention or, where appropriate, statement that no such notice has been published: *11.04.2023, BAP No 29*

34. Date of dispatch for publication of the contract notice: According to the information in the MTender.

35. In the public procurement procedure the following will be used/accepted:

Name of the electronic instrument	Will use/accept or not
Electronic submission of tenders or requests to participate	Accepted
Electronic control system	Not accepted
Electronic invoicing	Accepted
Electronic payments	Accepted

36. The contract is subject to the World Trade Organisation Agreement on Government Procurement (only for notices sent for publication in the Official Journal of the European Union): *yes*

(specify yes or no)

37. Other relevant information:

- *The economic operators participating in the procedure in question are obliged to submit relevant information and additional documents at the request of the contracting authority within 3 days, in accordance with the legal provisions;*
- *In accordance with Article 117 para. (12) of the Fiscal Code, from 01.01.2021, electronic tax invoices are to be issued by resident suppliers through the e-Factura SIA;*
- *Maximum number of days for signing and submitting the contract to the contracting authority - 6 days*

Working group leader:

Vice-Rector for Institutional Management,

Violeta COJOCARU
