EUROPEAN COMMISSION
DIRECTORATE-GENERAL
JOINT RESEARCH CENTRE
Directorate G - Nuclear Safety and Security (Karlsruhe)
Unit G.II.8 – Nuclear Safeguards and Forensics

TENDER SPECIFICATIONS

Part 2 - Technical Specifications

Supply of double filament holders and extraction plates (used in Finnigan MAT26x, TI-Box and Triton mass spectrometers)

Procurement procedure No.	JRC/KRU/2021/OP/0157
Procurement procedure type	Open
Date	01.10.2020
Version	1.0
Annex	n/a

European Commission – JRC Karlsruhe

Postal address: P.O. Box 2340, 76125 Karlsruhe (Germany)

Delivery address: Hermann-von-Helmholtz-Platz 1, Building 811
76344 Eggenstein-Leopoldshafen (Germany)

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1 INTRODUCTION

1.1 The JRC Karlsruhe

JRC Karlsruhe is one of the six scientific sites of the European Commission's Joint Research Centre (JRC) and is the main seat of the scientific Directorate for Nuclear Safety and Security. It is located on the Campus Nord of the "Karlsruhe Institute of Technology" (KIT) in Karlsruhe, Germany.

As the European Commission's scientific service, the JRC addresses key societal challenges, providing EU policy makers with independent, evidence-based scientific and technical support required for EU policy making.

Within the nuclear work program of the JRC, the JRC Karlsruhe site is dedicated to nuclear safety and security to provide the scientific basis for the protection of the European citizen from the risks associated with the handling and storage of highly radioactive materials.

The mission of the scientific Directorate for Nuclear Safety and Security is the implementation of the JRC Euratom Research and Training Programme and the maintenance and dissemination of nuclear competences in Europe to serve both "nuclear" and "non-nuclear" Member States. It supports the relevant policy Directorate Generals of the European Commission with independent, technical and scientific evidence in the areas of nuclear safety, security, safeguards and non-energy nuclear science applications. Its scientific activities are conducted in state-of-the-art laboratories and facilities.

Furthermore, financial support services, ICT services and human resource services are provided on the site in support of the Directorate's work.

JRC Karlsruhe employs about 260 individuals working in different scientific, technical and administrative domains.

For more information regarding JRC mission, organisation, activities, competencies and deliverables refer to: https://ec.europa.eu/jrc/en.

1.2 Scope of the contract

The JRC Karlsruhe plans to purchase rhenium and tungsten double filament holders and extraction plates for the thermal ionisation mass spectrometers TI-Box, MAT26X and Triton.

The Joint Research Centre Karlsruhe site of the European Commission is using three types of Thermal Ionisation Mass Spectrometers (TIMS), a Finnigan MAT 26X; a TI-Box, and a Triton for routine uranium and plutonium isotope ratio measurements.

One MAT 26x is located in the on-site laboratory at La Hague, France (LSS). And one TI-Box and one Triton are installed in the JRC in Karlsruhe, Germany.

For each individual measurement with a thermal ionisation mass spectrometer a Re double filament holder, a W double filament holder and an extraction plate are necessary to perform the analysis.

Therefore it is necessary to conclude a framework contract with a reliable supplier in order to assure the timely delivery of the needed filaments to both sites.

2 ELEMENTS TO BE INCLUDED IN THE OFFER

2.1 Structure of the offer

The offer shall be established in accordance with the following technical specifications and shall include all the administrative and technical requirements, and all the transports to the two different sites described in this document. Failure to comply, the offer will not be taken into consideration.

The bidder is requested to provide details of the manufacturer, type and technical properties of the brands on offer.

The technical requirements are to be fulfilled by the offered material; otherwise the tender will not be taken into consideration and declared non-admissible. The quotation and other technical documentation (details of the manufacturer, type and technical properties of the brands) provided by the bidder serve the purpose of assessing the tender.

Other information provided by the bidder, going beyond the minimum requirements, serve the purpose of information only and are not taken into account in assessment of the quotation.

The validity of the offer shall be 6 months from the deadline date of the receipt of the tender.

2.2 Delivery period

Orders will be placed and distributed during the four years of the duration of the contract and will depend of the existing stock in the two different laboratories. Delivery to LSS and Karlsruhe shall be done within **2 months** after the order is placed.

The contractor must notify the contracting authority of the exact date of delivery at least 10 days in advance. All deliveries must be made between 08:00 hours and 15:30 hours on Commission's working days to Karlsruhe and on the French working days to La Hague.

2.3 Transport and Installation

The supplies shall be delivered under Incoterms DDP[1]. The contractor shall be responsible for the packaging, shipping and necessary transport insurances in order to deliver the equipment to the following addresses:

For JRC Karlsruhe, delivery address is:
European Commission – JRC Karlsruhe
Hermann-von-Helmholtz-Platz 1, Building 811
76344 Eggenstein-Leopoldshafen (Germany)

For the LSS, delivery address is:

Mainco

[1] Incoterms 2010 of the International Chamber of Commerce: DDP = Delivered Duty Paid = the contractor has to bear all costs and risks involved in delivering goods to destination.

Les Landes de Raumarais
Z.I. de Digulleville
Orano La Hague
LSS - Point de livraison 570
F-50440 La Hague-Digulleville
France

2.4 Terms of payment

Terms of payment are specified in Art. I.6 of the contract.

2.5 Factory acceptance

Not applicable.

2.6 Site acceptance

Not applicable

2.7 Final technical acceptance

The final technical acceptance takes place after the receipt of the ordered material. On arrival the physical appearance will be checked visually.

2.8 Training

Not applicable.

2.9 Documentation

Not applicable.

2.10 Warranty

In the event that the received goods are of insufficient quality, the Contracting Authority reserves the right to return the goods to the Contractor and to request a new shipment without supplementary costs.
Insufficient quality is given , if during the heating of the filaments in the thermal ionisation mass spectrometer the vacuum drops below $10e^{-6}$ and the Rhenium (RE) signal does not occur for Tungsten (W)-Re assemblies at a heating current of 5000 mA. If the quality is not given the material will be send back, except of course the ones used for testing (contaminated with U and Pu and go directly to nuclear waste).
The return transport costs have to be covered by the supplier.

2.11 Directives and norms to be followed

European norms and regulations are to be followed. Voltages to be used are to be on the European 230 Volt Standard. CE marking is to be placed on the equipment. A product's compliance with EU legislation is to be supplied and it shall detail the norms that have been followed in the construction of the equipment.

All safety regulations must be covered and all necessary safety devices must be included in the offer.

Technical norms are generally referred to in the following technical specification. Equivalent norms to EN, DIN, CE, ISO etc. are also accepted. The bidder is responsible for proving the equivalence.

The bidder is requested to provide details of the manufacturer, type and technical properties of the brands on offer.

The minimum technical requirements are to be fulfilled by the bidder; otherwise the quotation is declared to be invalid. The data to be completed by the bidder serve the purpose of assessing the quotation.

All details provided by the bidder in addition to the minimum requirements only provide information and are not taken into account in assessment of the quotations.

3 MAINTENANCE CONTRACT

Not applicable.

4 TECHNICAL SPECIFICATIONS

The following three articles have to fit onto the sample magazine of the Thermal Ionisation Mass Spectrometer (TIMS) Finnigan MAT 26X and Triton, Thermofisher, and the TIMS TI-Box, Spectromat as described in the Service Manuals. The amount is calculated as consumption per year and is only indicative.

Orders are expected to each site.

4.1. 250 boxes containing 15 pieces of double filament holder with a Rhenium filament attached (0.04 mm thick and 0.7 mm wide ±1%) Standard quality (99.8% Re)

- a total of 75 boxes with expected delivery to the LSS, France in partial deliveries (approx. twice per year)
- a total of 175 boxes with expected delivery to the JRC Karlsruhe, Germany in partial deliveries (approx. three times per year)

4.2. 250 Boxes containing 15 pieces of double filament holder with a Tungsten filament attached (0.04 mm thick and 0.7 mm wide ±1%)

- a total of 75 boxes with expected delivery to the LSS, France in partial deliveries (approx. twice per year)
- a total of 175 boxes with expected delivery to the JRC Karlsruhe, Germany in partial deliveries (approx. three times per year)

The transport boxes containing the Tungsten and Rhenium filaments have to be entered in glove boxes and therefore should not exceed a diameter of 165 mm, maximum length of 20 cm. The transport boxes should be easily stackable into each other for waste volume reduction purposes.

4.3. 250 Boxes containing 15 extraction plates

- a total of 75 boxes with expected delivery to the LSS, France in partial deliveries (approx. twice per year)
- a total of 175 boxes with expected delivery to the JRC Karlsruhe, Germany in partial deliveries (approx. three times per year)

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