
**Netherlands-Leiden: Mass spectrometer
2023/S 183-570573**

Contract notice

Supplies

Legal Basis:

Directive 2014/24/EU

Section I: Contracting authority

I.1) **Name and addresses**

Official name: Universiteit Leiden

National registration number: 27368929

Postal address: Kolffpad 1

Town: Leiden

NUTS code: NL33 Zuid-Holland

Postal code: 2333BN

Country: Netherlands

Contact person: Govert Schipperheijn

E-mail:

Telephone: +31 715273304

Internet address(es):

Main address:

Address of the buyer profile:

I.3) **Communication**

The procurement documents are available for unrestricted and full direct access,

Additional information can be obtained from the abovementioned address

Tenders or requests to participate must be submitted electronically

I.4) **Type of the contracting authority**

Body governed by public law

I.5) **Main activity**

Other activity: Higher education and scientific research

Section II: Object

II.1) **Scope of the procurement**

II.1.1) **Title:**

Inductively Coupled Plasma Mass Spectrometer

II.1.2) **Main CPV code**

38433100 Mass spectrometer - FG11

II.1.3) **Type of contract**

Supplies

II.1.4) **Short description:**

The Leiden Institute of Chemistry wishes to purchase an ICP-MS setup (Inductively Coupled Plasma Mass Spectrometer) for its electrochemistry lab. The primary purpose of this setup is to detect and measure the concentration of ions and nanoparticles within the electrolyte of electrochemical cells very low concentrations (ppt-ppq). This requires unique capabilities and accuracy, that can only be provided by the highly sophisticated and state-of-the art design.

II.1.5) **Estimated total value**

Value excluding VAT: 260 000.00 EUR

II.1.6) **Information about lots**

This contract is divided into lots: no

II.2) **Description**

II.2.2) **Additional CPV code(s)**

38433000 Spectrometers - FG11

II.2.3) **Place of performance**

NUTS code: NL33 Zuid-Holland

Main site or place of performance:

Leiden, The Netherlands

II.2.4) **Description of the procurement:**

The Leiden Institute of Chemistry wishes to purchase an ICP-MS setup (Inductively Coupled Plasma Mass Spectrometer) for its electrochemistry lab. The primary purpose of this setup is to detect and measure the concentration of ions and nanoparticles within the electrolyte of electrochemical cells very low concentrations (ppt-ppq). This requires unique capabilities and accuracy, that can only be provided by the highly sophisticated and state-of-the art design.

Our ICP-MS instrument is intended to be used in series with an electrochemical flow cell, where it can measure and detect the concentrations of the metal ions being introduced into the electrolyte in real-time. The main application would be to measure very low concentrations of metal ions and nanoparticles that come off of the electrode during corrosion in aqueous electrolytes containing high concentration of salts/acids. For the instrument to produce consistent measurements in terms of both concentration of the investigated species as well as the nano-particle size, it should not only have very low and accurate detection limits (ppt-ppq), but also be able to eliminate interference from undesired species and water vapors as much as possible. In addition, the instrument should be able to deal with the high salt concentrations in the electrolytes with minimal maintenance requirements

In addition to that, the ICPMS setup will assist in a wide range of research areas performed by different research groups in the institute including Bio-organic synthesis to catalysis & surface chemistry and supramolecular & biomaterials chemistry. Keeping that in mind, the instrument to be procured is desired to be not only versatile but also user friendly and requiring minimum maintenance and downtime.

Regarding maintenance, the RF coil that ionizes the sample should be corrosion-resistant design, which is crucial for the strong acids and bases used in our application. Second, the instrument should be actively able to separate the uncharged species from the plasma to reduce interferences, contamination and deposits on sensitive surfaces of the ion optics.

The instrument should also be able to remove interferences with the same mass/charge ratio in the collision reaction cell. The instrument should function very well with pure gases (reducing the interference from undesired ions) as well as inert gases (for the removal of unknown spectral polyatomic interferences) at low gas loads in the collision reaction cell.

The instrument should have detection limits in the ppt-ppq concentration range, which is necessary for our research purposes, despite the high salt load from the background electrolyte in our application.

-
- II.2.5) **Award criteria**
Price is not the only award criterion and all criteria are stated only in the procurement documents
- II.2.6) **Estimated value**
Value excluding VAT: 260 000.00 EUR
- II.2.7) **Duration of the contract, framework agreement or dynamic purchasing system**
Duration in months: 3
This contract is subject to renewal: no
- II.2.10) **Information about variants**
Variants will be accepted: no
- II.2.11) **Information about options**
Options: no
- II.2.13) **Information about European Union funds**
The procurement is related to a project and/or programme financed by European Union funds: no
- II.2.14) **Additional information**
In 2022 we published our intention to acquire a Inductively Coupled Plasma Mass Spectrometer by means of a negotiated procedure. Representations were received, so that procedure was stopped.
A previous publication (sent on September 15, 2023) was rejected by the European Union for spurious reasons.
This is a repeat publication.

Section III: Legal, economic, financial and technical information

- III.1) **Conditions for participation**
- III.1.2) **Economic and financial standing**
Selection criteria as stated in the procurement documents
- III.1.3) **Technical and professional ability**
Selection criteria as stated in the procurement documents

Section IV: Procedure

- IV.1) **Description**
- IV.1.1) **Type of procedure**
Open procedure
- IV.1.3) **Information about a framework agreement or a dynamic purchasing system**
- IV.1.8) **Information about the Government Procurement Agreement (GPA)**
The procurement is covered by the Government Procurement Agreement: yes
- IV.2) **Administrative information**
- IV.2.2) **Time limit for receipt of tenders or requests to participate**
Date: 27/11/2023
Local time: 12:00
- IV.2.3) **Estimated date of dispatch of invitations to tender or to participate to selected candidates**
- IV.2.4) **Languages in which tenders or requests to participate may be submitted:**
English
- IV.2.6) **Minimum time frame during which the tenderer must maintain the tender**
Duration in months: 3 (from the date stated for receipt of tender)
- IV.2.7) **Conditions for opening of tenders**
Date: 27/11/2025
Local time: 12:01

Place:

Leiden, electronically

Section VI: Complementary information

VI.1) **Information about recurrence**

This is a recurrent procurement: no

VI.2) **Information about electronic workflows**

Electronic invoicing will be accepted

VI.3) **Additional information:**

VI.4) **Procedures for review**

VI.4.1) **Review body**

Official name: Rechtbank Den Haag

Town: Den Haag

Country: Netherlands

VI.4.3) **Review procedure**

Precise information on deadline(s) for review procedures:

Within 20 days of contract-award decision.

VI.5) **Date of dispatch of this notice:**

18/09/2023