

Netherlands-Leiden: Mass spectrometer
OJ S 242/2023 15/12/2023
Contract award 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: inkoop@ufb.leidenuniv.nl

Telephone: +31 715273304

Internet address(es):

Main address: <https://www.universiteitleiden.nl>

Address of the buyer profile: <https://s2c.mercell.com/buyer/19549>

I.4. Type of the contracting authority

Body governed by public law

I.5. Main activity

Other activity: Scientific research and higher education

Section II: Object

II.1. Scope of the procurement

II.1.1. Title

Mass Spectrometer Orbitrap

II.1.2. Main CPV code

38433100 Mass spectrometer

II.1.3. Type of contract

Supplies

II.1.4. Short description

The Leiden Institute of Chemistry (LIC) seeks to purchase a state-of-the-art ultra high performance liquid chromatography coupled to mass spectrometry (UHPLC-MS) system for the performance of specific proteomic and chemical proteomic experiments

II.1.6. Information about lots

This contract is divided into lots: no

II.1.7. Total value of the procurement

Value excluding VAT: 991 732,04 EUR

II.2. Description

II.2.3. Place of performance

NUTS code: NL33 Zuid-Holland

Main site or place of performance: Leiden

II.2.4. Description of the procurement

The Leiden Institute of Chemistry (LIC) seeks to purchase a state-of-the-art ultra high performance liquid chromatography coupled to mass spectrometry (UHPLC-MS) system for the performance of specific proteomic and chemical proteomic experiments.

II.2.5. Award criteria

Price

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

Section IV: Procedure

IV.1. Description

IV.1.1. Type of procedure

Award of a contract without prior publication of a call for competition in the Official Journal of the European Union in the cases listed below

- The works, supplies or services can be provided only by a particular economic operator for the following reason:
 - absence of competition for technical reasons

Explanation:

The Leiden Institute of Chemistry (LIC) seeks to purchase a state-of-the-art ultra high-performance liquid chromatography coupled to mass spectrometry (UHPLC-MS) system for the performance of specific proteomic and chemical proteomic experiments.

At our institute diverse (chemical) proteomic workflows need to be performed for our research in the field of Chemical Biology. The newly purchased instrument must allow detecting labile peptide modifications and allow streamlining of our mass spectrometric experiments by enabling a high degree of sample multiplexing. Specifically, we need to perform the following experiments:

- Analysis of modified peptides: Our groups are working on the detection of modified peptides, which often contain labile modification. For their analysis, different fragmentation methods give complementary information and often different fragmentation technologies need to be explored to study a certain modification. For this reason, we need to be able to perform fragmentation both with CID, HCD and ETD fragmentation methods.

- Dose-response experiments in one single injection: We have methods in hand to profile the target engagement of inhibitors proteome-wide. In order to get the best information out of these experiments, we need to perform dose- response experiments of eight concentrations plus a control in duplicate. Due to time-constraints and to achieve the best possible data completeness, these need to be performed in a single injection. For this reason, 18-plex multiplexing is required for these experiments.

- Thermal proteome profiling experiments: The melting curves of proteins can be assessed on a proteome-wide scale and can give important insights into e.g. the interactions of proteins with each other and with small molecules. In order to perform these experiments, the soluble proteome needs to be assessed after treatment at a variety of different temperatures. To perform this with high throughput and most reliably in one single injection, high degrees of multiplexing (11-plex and upwards) are required.

For all of these applications, highly accurate quantification is needed. In order to allow for accurate quantification of samples with high degrees of multiplexing, high resolution of the mass spectrometer is needed and analysis needs to be possible up to at least MS3 to minimize co-isolated ion interference. For this, real-time database searching needs to also be possible to perform optimized ion selection to increase coverage and quantification accuracy. For all experiments, a UHPLC is needed to separate the underlying peptides regarding the sample amounts available and the flowrates compatible with subsequent mass spectrometric analysis. To further increase the flexibility and allow higher throughput a wide range of flow rates needs to be possible.

Specifically, the following features for an UHPLC-MS are all needed to perform the applications for our research:

- Capability of data-dependent acquisition and data-independent acquisition and
- Possibility to measure MS, MS2 and MS3 spectra and
- Resolution sufficient to perform 18-plex multiplexing on MS2 and MS3 level and
- Possibility to perform fragmentation by CID, HCD and ETD methods and
- Ability to perform real-time database searching for precursor selection in isobaric experiments and
- An UHPLC covering flow rates between 200 nL/min and 100 µl/min and
- Full compatibility of the UHPLC and mass spectrometer in the same software environment and
- Full compatibility with our currently used data analysis softwares Skyline, MaxQuant and FragPipe

In conclusion, the Thermo Eclipse mass spectrometer coupled to a Vanquish neo UHPLC is the only system that offers all of these features, which are necessary for the successful completion of all of these experiments for our diverse research projects.

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.2.1. Previous publication concerning this procedure

Notice number in the OJ S: [2023/S 195-610258](#)

IV.2.8. Information about termination of dynamic purchasing system

IV.2.9. Information about termination of call for competition in the form of a prior information notice

The contracting authority will not award any further contracts based on the above prior information notice

Section V: Award of contract

Contract No: 1

Lot No: 1

Title:

Mass Spectrometer Orbitrap

A contract/lot is awarded: yes

V.2. Award of contract

V.2.1. Date of conclusion of the contract

16/11/2023

V.2.2. Information about tenders

Number of tenders received: 1

Number of tenders received from SMEs: 0

Number of tenders received from tenderers from other EU Member States: 0

Number of tenders received from tenderers from non-EU Member States: 0

Number of tenders received by electronic means: 0

The contract has been awarded to a group of economic operators: no

V.2.3. Name and address of the contractor

Official name: Thermo Fisher Scientific BV

National registration number: 32059695

Postal address: Takkebijsters 1

Town: Breda

NUTS code: NL41 Noord-Brabant

Postal code: 4817 BL

Country: Netherlands

The contractor is an SME: no

V.2.4. Information on value of the contract/lot

Initial estimated total value of the contract/lot: 1 199 995,77 EUR

Total value of the contract/lot: 991 732,04 EUR

V.2.5. Information about subcontracting

Section VI: Complementary information

VI.3. Additional information

After our previous publication, no representations were received and the contract was awarded. The initial contract value was including VAT.

VI.4. Procedures for review

VI.4.1. Review body

Official name: Rechtbank Den Haag

Town: Den Haag

Country: Netherlands

VI.5. Date of dispatch of this notice

11/12/2023