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Tender

3325/JN - Sustainable Aviation Fuels - Innovation Centre: Further Aviation Characterisation Laboratory Equipment (14 Lots)

UNIVERSITY OF SHEFFIELD

F02: Contract notice

Notice identifier: 2022/S 000-016746

Procurement identifier (OCID): ocds-h6vhtk-03480f

Published 18 June 2022, 9:56pm

Section I: Contracting authority

I.1) Name and addresses

UNIVERSITY OF SHEFFIELD

Western Bank

SHEFFIELD

S102TN

Contact

James Noble

Email

james.noble@sheffield.ac.uk

Country

United Kingdom

NUTS code

UKE32 - Sheffield

Internet address(es)

Main address

https://in-tendhost.co.uk/sheffield/

I.3) Communication

The procurement documents are available for unrestricted and full direct access, free of charge, at

https://in-tendhost.co.uk/sheffield/

Additional information can be obtained from the above-mentioned address

Tenders or requests to participate must be submitted electronically via

https://in-tendhost.co.uk/sheffield/

I.4) Type of the contracting authority

Body governed by public law

I.5) Main activity

Education

Section II: Object

II.1) Scope of the procurement

II.1.1) Title

3325/JN - Sustainable Aviation Fuels - Innovation Centre: Further Aviation Characterisation Laboratory Equipment (14 Lots)

Reference number

3325/JN

II.1.2) Main CPV code

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

II.1.3) Type of contract

Supplies

II.1.4) Short description

The University of Sheffield (UoS) with funding from the European Regional Development Fund (ERDF) is establishing a Sustainable Aviation Fuels Innovation Centre (SAF-IC) to support and promote the production and characterisation of decarbonised and sustainable aviation fuel. Further to our previous tender (3073/JN) we are looking to complement our research capability and procure a range of test equipment approved to various ASTM (American Society for Testing and Materials) standards as well as other internationally recognised standards where appropriate.

II.1.5) Estimated total value

Value excluding VAT: £435,000

II.1.6) Information about lots

This contract is divided into lots: Yes

Tenders may be submitted for all lots

II.2) Description

II.2.1) Title

Jet Fuel Thermal Oxidation Test (JFTOT) Device in conformity with ASTM D3241

Lot No

1

II.2.2) Additional CPV code(s)

- 38400000 - Instruments for checking physical characteristics
- 38500000 - Checking and testing apparatus

II.2.3) Place of performance

NUTS codes

- UKE32 - Sheffield

Main site or place of performance

Sustainable Aviation Fuels - Innovation Centre (SAF-IC), Aviation Characterisation Laboratory, Europa Ave, Tinsley, Sheffield

II.2.4) Description of the procurement

Thermal Stability is a critical aviation fuel test and while competition among equipment manufacturers/suppliers is to be encouraged, aircraft safety must remain paramount. Commonly measured by the pressure drop p across a filter in units of L and presented here in millimeters of mercury (mmHg), thermal stability measurements utilize specialized test equipment, the JFTOT, which exposes the fuel to a heated aluminum alloy tube in a controlled way and passes it through a filter to collect any particulates that have formed. After the test is complete, the pressure drop across the filter and a visual inspection of the aluminum tube for discoloration are used to evaluate thermal stability of fuel.

We are looking for a robust, reliable, durable, compact, and user friendly JFTOT device for the Sustainable Aviation Fuel/Innovation Centre characterisation lab.

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: £30,000

II.2.7) Duration of the contract, framework agreement or dynamic purchasing system

Start date

1 November 2022

End date

2 November 2022

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.2.14) Additional information

This procurement is related to a project and/or programme financed by European Union funds: European Regional Development Fund (ERDF)

II.2) Description

II.2.1) Title

Ellipsometer Tube Reader, in conformity with ASTM D3241, Annex 3

Lot No

2

II.2.2) Additional CPV code(s)

- 38400000 - Instruments for checking physical characteristics
- 38500000 - Checking and testing apparatus

II.2.3) Place of performance

NUTS codes

- UKE32 - Sheffield

Main site or place of performance

Sustainable Aviation Fuels - Innovation Centre (SAF-IC), Aviation Characterisation Laboratory, Europa Ave, Tinsley, Sheffield

II.2.4) Description of the procurement

We are looking for an automated Elipsometer Tube reader for Sustainable Aviation Fuel/Innovation Centre (SAF/IC) characterisation lab, in order to determine average deposit thickness and the complete deposit volume for the ultimate in heater tube deposition measurement as designated in ASTM D3241 Annex 3. The device should be fully automated, completely enclosed laser light source with an optical detection system for safety.

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: £25,000

II.2.7) Duration of the contract, framework agreement or dynamic purchasing system

Start date

1 November 2022

End date

2 November 2022

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.2.14) Additional information

This procurement is related to a project and/or programme financed by European Union funds: European Regional Development Fund (ERDF)

II.2) Description

II.2.1) Title

Micro-Separometer, in conformity with ASTM D3948

Lot No

3

II.2.2) Additional CPV code(s)

- 38400000 - Instruments for checking physical characteristics
- 38500000 - Checking and testing apparatus

II.2.3) Place of performance

NUTS codes

- UKE32 - Sheffield

Main site or place of performance

Sustainable Aviation Fuels - Innovation Centre (SAF-IC), Aviation Characterisation Laboratory, Europa Ave, Tinsley, Sheffield

II.2.4) Description of the procurement

We are looking for an automated Micro-Separometer test device for Sustainable Aviation Fuel/Innovation Centre (SAF/IC) characterisation lab.

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: £15,000

II.2.7) Duration of the contract, framework agreement or dynamic purchasing system

Start date

1 November 2022

End date

2 November 2022

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.2.14) Additional information

This procurement is related to a project and/or programme financed by European Union funds: European Regional Development Fund (ERDF)

II.2) Description

II.2.1) Title

Copper Corrosion test device, in conformity with ASTM D130

Lot No

4

II.2.2) Additional CPV code(s)

- 38400000 - Instruments for checking physical characteristics
- 38500000 - Checking and testing apparatus

II.2.3) Place of performance

NUTS codes

- UKE32 - Sheffield

Main site or place of performance

Sustainable Aviation Fuels - Innovation Centre (SAF-IC), Aviation Characterisation Laboratory, Europa Ave, Tinsley, Sheffield

II.2.4) Description of the procurement

The Copper strip testing evaluates the relative degree of corrosivity of aviation fuels. We are looking for an automated copper corrosion test device for Sustainable Aviation Fuel/Innovation Centre (SAF/IC) characterisation lab.

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: £115,000

II.2.7) Duration of the contract, framework agreement or dynamic purchasing system

Start date

1 November 2022

End date

2 November 2022

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.2.14) Additional information

This procurement is related to a project and/or programme financed by European Union funds: European Regional Development Fund (ERDF)

II.2) Description

II.2.1) Title

A test device for quantification of gum in aviation fuel, in conformity with ASTM D381

Lot No

5

II.2.2) Additional CPV code(s)

- 38400000 - Instruments for checking physical characteristics
- 38500000 - Checking and testing apparatus

II.2.3) Place of performance

NUTS codes

- UKE32 - Sheffield

Main site or place of performance

Sustainable Aviation Fuels - Innovation Centre (SAF-IC), Aviation Characterisation Laboratory, Europa Ave, Tinsley, Sheffield

II.2.4) Description of the procurement

Gum like materials formed during fuel storage can deposit on various parts of aviation fuel system, causing detrimental effects on fuel supply to the aero-engine. We are looking for a controlled test device for quantification of gum for Aviation Fuel/Innovation Centre (SAF/IC) characterisation lab.

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: £20,000

II.2.7) Duration of the contract, framework agreement or dynamic purchasing system

Start date

1 November 2022

End date

2 November 2022

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.2.14) Additional information

This procurement is related to a project and/or programme financed by European Union funds: European Regional Development Fund (ERDF)

II.2) Description

II.2.1) Title

A test device for quantification of smoke point in aviation fuels, in conformity with ASTM D1322

Lot No

6

II.2.2) Additional CPV code(s)

- 38400000 - Instruments for checking physical characteristics
- 38500000 - Checking and testing apparatus

II.2.3) Place of performance

NUTS codes

- UKE32 - Sheffield

Main site or place of performance

Sustainable Aviation Fuels - Innovation Centre (SAF-IC), Aviation Characterisation Laboratory, Europa Ave, Tinsley, Sheffield

II.2.4) Description of the procurement

This test method provides an indication of the relative smoke producing properties of kerosenes and aviation turbine fuels in a diffusion flame. The smoke point is related to the hydrocarbon type composition of such fuels. Generally the more aromatic the fuel the smokier the flame. A high smoke point indicates a fuel of low smoke producing tendency.

The smoke point is quantitatively related to the potential radiant heat transfer from the combustion products of the fuel. Because radiant heat transfer exerts a strong influence on the metal temperature of combustor liners and other hot section parts of gas turbines, the smoke point provides a basis for correlation of fuel characteristics with the life of these components.

We are looking for a controlled test device for measurement of smoke point for Aviation Fuel/Innovation Centre (SAF/IC) characterisation lab.

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: £30,000

II.2.7) Duration of the contract, framework agreement or dynamic purchasing system

Start date

1 November 2022

End date

2 November 2022

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.2.14) Additional information

This procurement is related to a project and/or programme financed by European Union funds: European Regional Development Fund (ERDF)

II.2) Description

II.2.1) Title

A test device for quantification of mercaptane sulfur in aviation fuels, in conformity with ASTM D3227

Lot No

7

II.2.2) Additional CPV code(s)

- 38400000 - Instruments for checking physical characteristics
- 38500000 - Checking and testing apparatus

II.2.3) Place of performance

NUTS codes

- UKE32 - Sheffield

Main site or place of performance

Sustainable Aviation Fuels - Innovation Centre (SAF-IC), Aviation Characterisation Laboratory, Europa Ave, Tinsley, Sheffield

II.2.4) Description of the procurement

Mercaptan sulfur has an objectionable odor, an adverse effect on fuel system elastomers, and is corrosive to fuel system components.

We are looking for a controlled test device for quantification of mercaptan sulfur in aviation fuels for Aviation Fuel/Innovation Centre (SAF/IC) characterisation lab. Please note that organic sulfur compounds such as sulfides, disulfides, and thiophene, should not interfere in this test. In addition, elemental sulfur in amounts less than 0.0005 % by mass should not interfere in this test.

We are looking for a controlled test device for measurement of mercaptane sulfurs in

Aviation for Fuel/Innovation Centre (SAF/IC) characterisation lab.

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: £10,000

II.2.7) Duration of the contract, framework agreement or dynamic purchasing system

Start date

1 November 2022

End date

2 November 2022

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.2.14) Additional information

This procurement is related to a project and/or programme financed by European Union funds: European Regional Development Fund (ERDF)

II.2) Description

II.2.1) Title

An Automated Test Device for Quantification of Aromatic Compounds, Using Fluorescent Indicator Absorption Apparatus, in Conformity with ASTM D1319

Lot No

8

II.2.2) Additional CPV code(s)

- 38400000 - Instruments for checking physical characteristics
- 38500000 - Checking and testing apparatus

II.2.3) Place of performance

NUTS codes

- UKE32 - Sheffield

Main site or place of performance

Sustainable Aviation Fuels - Innovation Centre (SAF-IC), Aviation Characterisation Laboratory, Europa Ave, Tinsley, Sheffield

II.2.4) Description of the procurement

This test method covers the determination of hydrocarbon types of total aromatics, total olefins, and total saturates in petroleum fractions that distill below 315 °C. Samples containing dark-colored components that interfere in reading the chromatographic bands cannot be analyzed. Typically, fuel is percolated through a column of silica gel containing special fluorescent dyes. When desorbed by alcohol, the fuel separates into three layers of hydrocarbon types that become visible under ultraviolet light. The hydrocarbon groups are olefins, aromatics and saturates (paraffins and naphthenes). The relative length of each band is translated into the volume percent of each hydrocarbon type.

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: £10,000

II.2.7) Duration of the contract, framework agreement or dynamic purchasing system

Start date

1 November 2022

End date

2 November 2022

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.2.14) Additional information

This procurement is related to a project and/or programme financed by European Union funds: European Regional Development Fund (ERDF)

II.2) Description

II.2.1) Title

An Apparatus for Measuring Net Heat of Combustion of Aviation Fuels, in Conformity with ASTM D4809

Lot No

9

II.2.2) Additional CPV code(s)

- 38400000 - Instruments for checking physical characteristics

- 38500000 - Checking and testing apparatus

II.2.3) Place of performance

NUTS codes

- UKE32 - Sheffield

Main site or place of performance

Sustainable Aviation Fuels - Innovation Centre (SAF-IC), Aviation Characterisation Laboratory, Europa Ave, Tinsley, Sheffield

II.2.4) Description of the procurement

The net heat of combustion per unit weight is important to aircraft performance. Also, it is used to compare fuels by relative energy content that a kilogram of fuel could release through complete and perfect combustion. We are looking for a controlled test device for measurement of net heat of combustion for aviation fuels for our Fuel/Innovation Centre (SAF/IC) characterisation lab.

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: £40,000

II.2.7) Duration of the contract, framework agreement or dynamic purchasing system

Start date

1 November 2022

End date

2 November 2022

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.2.14) Additional information

This procurement is related to a project and/or programme financed by European Union funds: European Regional Development Fund (ERDF)

II.2) Description

II.2.1) Title

An Automated Device for Determining Heat Capacity of Aviation Fuel, in Conformity with ASTM E1269

Lot No

10

II.2.2) Additional CPV code(s)

- 38400000 - Instruments for checking physical characteristics
- 38500000 - Checking and testing apparatus

II.2.3) Place of performance

NUTS codes

- UKE32 - Sheffield

Main site or place of performance

Sustainable Aviation Fuels - Innovation Centre (SAF-IC), Aviation Characterisation Laboratory, Europa Ave, Tinsley, Sheffield

II.2.4) Description of the procurement

We are looking for a controlled test device for measurement of determining Heat Capacity of Aviation Fuel for aviation fuels for our Fuel/Innovation Centre (SAF/IC) characterisation lab.

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: £35,000

II.2.7) Duration of the contract, framework agreement or dynamic purchasing system

Start date

1 November 2022

End date

2 November 2022

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.2.14) Additional information

The procurement is related to a project and/or programme financed by European Union funds: European Regional Development Fund (ERDF)

II.2) Description

II.2.1) Title

A Test Device for Determining Dielectric Constant of Aviation Fuel, In Conformity with ASTM D924

Lot No

11

II.2.2) Additional CPV code(s)

- 38400000 - Instruments for checking physical characteristics
- 38500000 - Checking and testing apparatus

II.2.3) Place of performance

NUTS codes

- UKE32 - Sheffield

Main site or place of performance

Sustainable Aviation Fuels - Innovation Centre (SAF-IC), Aviation Characterisation Laboratory, Europa Ave, Tinsley, Sheffield

II.2.4) Description of the procurement

We are looking for a controlled test device for determining dielectric constant of aviation fuel for our Fuel/Innovation Centre (SAF/IC) characterisation lab.

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: £40,000

II.2.7) Duration of the contract, framework agreement or dynamic purchasing system

Start date

1 November 2022

End date

2 November 2022

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.2.14) Additional information

The procurement is related to a project and/or programme financed by European Union funds: European Regional Development Fund (ERDF)

II.2) Description

II.2.1) Title

A Test Device for Flammability Limits of Aviation Fuels, in Conformity with ASTM E681

Lot No

12

II.2.2) Additional CPV code(s)

- 38400000 - Instruments for checking physical characteristics
- 38500000 - Checking and testing apparatus

II.2.3) Place of performance

NUTS codes

- UKE32 - Sheffield

Main site or place of performance

Sustainable Aviation Fuels - Innovation Centre (SAF-IC), Aviation Characterisation Laboratory, Europa Ave, Tinsley, Sheffield

II.2.4) Description of the procurement

We are looking for a controlled test device for determining flammability limits of aviation fuels for our Fuel/Innovation Centre (SAF/IC) characterisation lab.

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: £15,000

II.2.7) Duration of the contract, framework agreement or dynamic purchasing system

Start date

1 November 2022

End date

2 November 2022

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.2.14) Additional information

The procurement is related to a project and/or programme financed by European Union funds: European Regional Development Fund (ERDF)

II.2) Description

II.2.1) Title

A Test Device for Autoignition Temperature of Aviation Fuels, in Conformity with ASTM E659

Lot No

13

II.2.2) Additional CPV code(s)

- 38400000 - Instruments for checking physical characteristics
- 38500000 - Checking and testing apparatus

II.2.3) Place of performance

NUTS codes

- UKE32 - Sheffield

Main site or place of performance

Sustainable Aviation Fuels - Innovation Centre (SAF-IC), Aviation Characterisation Laboratory, Europa Ave, Tinsley, Sheffield

II.2.4) Description of the procurement

We are looking for a controlled test device for determining autoignition temperature of aviation fuels for our Fuel/Innovation Centre (SAF/IC) characterisation lab.

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: £35,000

II.2.7) Duration of the contract, framework agreement or dynamic purchasing system

Start date

1 November 2022

End date

2 November 2022

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.2.14) Additional information

The procurement is related to a project and/or programme financed by European Union funds: European Regional Development Fund (ERDF)

II.2) Description

II.2.1) Title

An automated Test Device for Determining Saybolt Color of Aviation Fuels, in conformity with ASTM D156

Lot No

14

II.2.2) Additional CPV code(s)

- 38400000 - Instruments for checking physical characteristics
- 38500000 - Checking and testing apparatus

II.2.3) Place of performance

NUTS codes

- UKE32 - Sheffield

Main site or place of performance

Sustainable Aviation Fuels - Innovation Centre (SAF-IC), Aviation Characterisation Laboratory, Europa Ave, Tinsley, Sheffield

II.2.4) Description of the procurement

We are looking for a controlled an automated test device for determining Saybolt Color for our Fuel/Innovation Centre (SAF/IC) characterisation lab.

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: £15,000

II.2.7) Duration of the contract, framework agreement or dynamic purchasing system

Start date

1 November 2022

End date

2 November 2022

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.2.14) Additional information

The procurement is related to a project and/or programme financed by European Union funds: European Regional Development Fund (ERDF)

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.1.8) 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

29 July 2022

Local time

12:00pm

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

29 July 2022

Local time

12:01pm

Section VI. Complementary information

VI.1) Information about recurrence

This is a recurrent procurement: No

VI.2) Information about electronic workflows

Electronic ordering will be used

Electronic invoicing will be accepted

Electronic payment will be used

VI.4) Procedures for review

VI.4.1) Review body

The University of Sheffield

Sheffield

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Country

United Kingdom