

Order Acknowledgement

NPL Reference: 2021070207

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Acknowledgement Date	04/10/2021 09:37:46
Purchase Order No.	OB21/4320005
Customer Courier Account Reference	
Customer Reference	Tender No. N006/21/V00022567
Return Arrangement	NPL Arranged Shipping
Payment Terms	30 NET
Agreement Number	
Total Net Price	8,604.00 GBP
Total VAT <small>(*Calculated at today's VAT rate)</small>	0.00 GBP
NPL Total Price <small>(* Including VAT where applicable)</small>	8,604.00 GBP

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NPL Reference Number: 2021070207
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Hampton Road
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Certificate Address

Czech Hydrometeorological Institute
Ambient Air Quality Calibration Laboratory
Generala Sisky 942
143 00 Prague 4
Czech Republic

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The Schedule

Service Code: QE12-1030		PO Number: OB21/4320005		
Job No	Product/Service Description	Planned Start	Planned Completion	Price GBP
1	<p>Supply one NPL Primary Reference Material (NPL PRM): 30 component EU Directive Ozone Precursor Mixture Amount fractions are nominally 4 nmol/mol (molar parts per billion, ppb).</p> <p>Please see technical annex for more details.</p> <p>Estimated completion date: 8 weeks from receipt of your purchase order.</p> <p>Report Type: NPL - UKAS Accredited + MRA</p>	01-OCT-21	26-NOV-21	3,025.00
Delivery Address:		Czech Hydrometeorological Institute, Ambient Air Quality Calibration Laboratory, Generala Sisky 942, 143 00 Prague 4 - Kamyk, Czech Republic		

Service Code: QE11-2020		PO Number: OB21/4320005		
Job No	Product/Service Description	Planned Start	Planned Completion	Price GBP
2	<p>Supply of NPL Primary Reference Material (NPL PRM): Nominally 10 ppm Sulphur dioxide in synthetic air</p> <p>Please see technical annex for more details.</p> <p>Estimated completion date: 8 weeks from receipt of your purchase order.</p> <p>Report Type: NPL - UKAS Accredited + MRA</p>	01-OCT-21	26-NOV-21	1,985.00
Delivery Address:		Czech Hydrometeorological Institute, Ambient Air Quality Calibration Laboratory, Generala Sisky 942, 143 00 Prague 4 - Kamyk, Czech Republic		

Service Code: QE12-1030		PO Number: OB21/4320005		
Job No	Product/Service Description	Planned Start	Planned Completion	Price GBP
3	<p>Supply of NPL Primary Reference Material (NPL PRM): 6-component BTEX in Nitrogen Amount fractions are nominally 100 nmol/mol (molar parts per billion, ppb).</p> <p>Please see technical annex for more details.</p> <p>Estimated completion date: 8 weeks from receipt of your purchase order.</p> <p>Report Type: NPL - UKAS Accredited + MRA</p>	01-OCT-21	26-NOV-21	2,999.00
Delivery Address:		Czech Hydrometeorological Institute, Ambient Air Quality Calibration Laboratory, Generala Sisky 942, 143 00 Prague 4 - Kamyk, Czech Republic		

Service Code: ZZ01-FT01		PO Number: OB21/4320005		
Job No	Product/Service Description	Planned Start	Planned Completion	Price GBP

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4		TBA	TBA	595.00
<p>Estimated carriage cost for 3x10L (18 kg each) cylinders (UN1956) to Czech Republic.</p> <p>Incoterms (2010): DAP (Delivered at Place). The buyer is responsible for import clearance and any applicable local taxes or import duties.</p>				
Delivery Address:		Czech Hydrometeorological Institute, Ambient Air Quality Calibration Laboratory, Generala Sisky 942, 143 00 Prague 4 - Kamyk, Czech Republic		

Customer Invoice Address	
Czech Hydrometeorological Institute Na Sabatce 2050-17 143 06 Prague 4 Czech Republic	
E.U. Customers VAT Number (except UK): CZ00020699	

NPL Management Limited ("NPL") hereby offers to perform the programme of work specified in the Schedule above. NPL's standard terms of sale shall apply and are available upon request or may be viewed at: https://www.npl.co.uk/terms-conditions/npl-standard-terms-and-conditions-of-sale-v2_2 . In the event that the Customer purports to accept NPL's offer subject to alternative terms the Customer shall expressly notify NPL by way of letter and where such letter of notice is not received NPL's terms shall be deemed to apply.

Technical Annex

Additional Information

NOTES:

1. The gas mixture is produced in a 10 litre (water volume) cylinder.
2. The cylinder is sold (rather than rented) and included in the price of the gas mixture. The outright purchase option is financially beneficial if the gas mixture is to remain on site for a significant period of time as it saves cylinders rental costs.
3. Not following recommended storage advice on the certificate could affect the validity of the mixture. For advice on recommended storage conditions of the mixture, including cases where conditions may have been exceeded please contact NPL.
4. As a result of the changes resulting from the UK leaving the EU please note that if the calibration and test reports are to be used as part of conformity assessments linked to EU Regulations and/or EU schemes within the meaning of Regulation No 765/2008, they might not be recognised across the EU. Contact us for more information before placing the order. Calibration and tests reports used for any other conformity assessments not linked to EU Regulations and/or EU schemes will continue to be valid.
5. For lines 1 and 2 cylinder discounts have been provided, mixtures will be supplied at refill prices. In future refill prices will only be given if the cylinder is within the refilling date, otherwise a full-price mixture will have to be purchased.

Job No. 1

This NPL Primary Reference Material (NPL PRM) contains all the hydrocarbons species listed within the EU Directive covering ambient air quality and cleaner air for Europe (2008/50/EC) as being ozone precursors requiring monitoring.

Nominal amount fractions: 4 nmol/mol (4 ppb)

Mixture Composition:

ethane
ethene (ethylene)
propane
propene (propylene)
2-methylpropane (i-butane)
n-butane
ethyne (acetylene)
trans-but-2-ene (trans-2-butene)
1-butene (but-1-ene)
cis-but-2-ene (cis-2-butene)
2-methylbutane (i-pentane)
n-pentane
1,3-butadiene
trans-pent-2-ene (trans-2-pentene)
pent-1-ene (1-pentene)
2-methylpentane (i-hexane)
n-hexane
2-methyl-1,3-butadiene (isoprene)
n-heptane
benzene
2,2,4-trimethylpentane (i-octane)
n-octane
toluene
ethylbenzene
m-xylene

p-xylene
o-xylene
1,2,3-trimethylbenzene
1,2,4-trimethylbenzene
1,3,5-trimethylbenzene
Balance Nitrogen

The Primary Reference Material is supplied with an NPL certificate stating the concentrations of the hydrocarbons and the uncertainty ascribed to these concentrations. The uncertainties of components will be $\pm 2 - 3 \%$ (95% confidence limit) for all compounds except for acetylene ($\pm 3 - 5 \%$), at the time that the cylinder is supplied.

Note: NPL will certify the total amount fraction of both m-xylene and p-xylene together as separation cannot be achieved.

Pressure: 100 bar
Stability: 5 years
Output valve: DIN477 No. 1

Job No. 2

Sulphur dioxide: 10 $\mu\text{mol/mol}$ (10 ppm)
Synthetic air: Balance

Relative uncertainty: 1 %
Volume/Pressure: 10 litre/100 bar
Stability: 5 years
Outlet Valve: DIN 477 No.1 valve

Job No. 3

Nominal amount fractions: 100 nmol/mol (100 ppb)

Mixture Composition:
benzene
toluene
ethylbenzene
m-xylene
p-xylene
o-xylene
Balance: nitrogen

Relative uncertainty: $\pm 2 - 3\%$
Stability: 5 years
Valve outlet: DIN1

Note: NPL will certify the total amount fraction of both m-xylene and p-xylene together as separation cannot be achieved.

Please attach this to your package when sending equipment to NPL

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NPL Contact: Mrs Angie Bulford