


Schedule of Accreditation

issued by

United Kingdom Accreditation Service

2 Pine Trees, Chertsey Lane, Staines-upon-Thames, TW18 3HR, UK

 <p>UKAS REFERENCE MATERIALS</p> <p>4183</p> <p>Accredited to ISO 17034:2016</p>	<p>BOC Ltd</p> <p>Issue No: 020 Issue date: 16 December 2025</p>	
	<p>Forge 43 Church Street West Woking Surrey GU21 6HT</p>	<p>Contact: Mrs Gautami Snewin Tel: +44 (0) 7990 089696 E-Mail: gautami.snewin@boc.com Website: www.boconline.co.uk</p>
<p>Reference material production performed by the locations specified below</p>		

Locations covered by the organisation and their relevant activities

Locations:

Location details	Activity	Location code
<p>Address Forge 43 Church Street West Woking Surrey GU21 6HT</p> <p>Local contact Mrs Gautami Snewin Tel: +44 (0) 7990 089696 Email: gautami.snewin@boc.com</p>	<p><u>Head Office</u></p>	<p>A Woking</p>
<p>Address 28 Deer Park Road London SW19 3UF</p> <p>Local contact Ms Prejeetha Jeyalohithen Tel: +44 (0) 7345 774614 Email: prejeetha.jeyalohithen@boc.com</p>	<p>MOT Mixture Binary Gas Mixtures Ethanol/Air Mixtures</p>	<p>B Morden</p>
<p>Address Hobson Way Stallingborough Immingham NE Lincolnshire DN41 8DZ</p> <p>Local contact Mr Walter Branowsky Tel: +44 (0)1469 577977 Fax: +44 (0)1469 576493 Email: walter.branowsky@boc.com</p>	<p>Natural Gas Mixtures Multi-component Gravimetric Gas Mixtures</p>	<p>C Immingham</p>



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DETAIL OF ACCREDITATION

Matrix / Artefact	Property Value(s) / Identity / Characterisation Range	Characterisation Procedure / Technique	Type* (CRM / RM)	Location Code
<u>GAS MIXTURES</u>				
MOT mixture (Volume Fraction)	Volume Fraction (% vol/vol) Carbon monoxide (3.5) Carbon dioxide (14)	Measurement by a single, primary, definitive method at BOC	CRM	B
Binary gas mixtures	Volume Fraction (µvol/vol, equivalent to ppm (v)) Propane (2000) Nitrogen (balance) Amount fraction (µmol/mol, equivalent to ppm) Propane/air (1.7 to 1000) Carbon monoxide/nitrogen (2 to 1000) Carbon monoxide/air (2 ppm to 1000) Nitric oxide/nitrogen (2 ppm to 1000) Sulphur dioxide/nitrogen (10 to 3000) Amount fraction (% mol/mol) Carbon monoxide/nitrogen (0.1 to 10) Carbon monoxide/air (0.1 to 6.25) Carbon dioxide/nitrogen (0.1 to 15) Nitric oxide/nitrogen (0.1 to 1) Oxygen/nitrogen (0.5 to 25)	Measurement by a single, primary, definitive method at BOC	CRM	B
Ethanol in air calibration standard for evidential breath testing	Ethanol/air 35 µg per 100 ml air (191.4 µmol/mol (ppm)) 22 µg per 100 ml air (120.3 µmol/mol (ppm)) 9 µg per 100 ml air (49.2 µmol/mol (ppm))	Measurement by a single, primary, definitive method at BOC	CRM	B



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<p><u>GAS MIXTURES</u> (cont'd)</p> <p>Gas mixtures</p>	<p>Calculated values for:</p> <p>Gross calorific value Molar basis (kJ/mol) Mass basis (MJ/kg) Volume basis (MJ/m³)</p> <p>Net calorific value Molar basis (kJ/mol) Mass basis (MJ/kg) Volume basis (MJ/m³)</p> <p>Relative density (air = 1) Density (kg/m³)</p> <p>Gross Wobbe index (MJ/m³) Net Wobbe index (MJ/m³)</p> <p>Mean molecular mass (kg/kmol) Compression factor</p>	<p>Values calculated in accordance with BS EN ISO 6976:2016 on a <i>real</i> or <i>ideal</i> basis assuming mixture is dry (free from water).</p> <p>Mass and volume basis calorific values and the Wobbe index can also be expressed in units of kilowatt hours (kWh/kg and kWh/m³).</p>	<p>CRM</p>	<p>C</p>



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<u>GAS MIXTURES</u> (cont'd) Gas mixtures	Amount fraction (% mol/mol) C ₁ to C ₃ (0.0008 to 100) C ₄ (0.001 to 50) C ₅ (0.001 to 9) C ₆ (0.001 to 1.5) C ₇ (0.001 to 0.5) C ₈ (0.001 to 0.2) C ₉ (0.001 to 0.2) C ₁₀ (0.001 to 0.05) Benzene (0.001 to 1) Toluene (0.001 to 0.4) Xylenes, m, p and o (0.001 to 0.1) Argon (0.1 to 100) Carbon dioxide (0.03 to 100) Carbon monoxide (0.001 to 100) Helium (0.1 to 100) Hydrogen (0.08 to 100) Nitrogen (0.1 to 100) Oxygen (0.05 to 100)	Measurement by a single, primary, definitive method at BOC Multi-component gaseous mixtures prepared by gravimetry in accordance with ISO 6142:2006 with analytical validation Where more than 5 components fall within the above scope for Natural gas, certification shall be using nationally traceable gas reference standards	CRM	C
END				

***Type**

CRM = Certified Reference Material(s)

RM = Reference Material(s)

Refer to ISO 17034 for full definitions