



Certificate of Registration

QUALITY MANAGEMENT SYSTEM - ISO 9001:2008

This is to certify that:

Starna Scientific Limited
52-54 Fowler Road
Hainault
Ilford
IG6 3UT
United Kingdom

Holds Certificate No: **FM 39003**

and operates a Quality Management System which complies with the requirements of ISO 9001:2008 for the following scope:

Manufacture and supply of accessories and components for analytical instruments including all types of photometer cells and specialised optical components in quartz and glass materials.

For and on behalf of BSI:

Managing Director, BSI EMEA

Originally registered: **27/02/1998**

Latest Issue: **20/07/2009**

Expiry Date: **06/09/2012**



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This certificate was issued electronically and remains the property of BSI and is bound by the conditions of contract. An electronic certificate can be authenticated [online](#). Printed copies can be validated at www.bsigroup.com/ClientDirectory

The British Standards Institution is incorporated by Royal Charter.
BSI (UK) Headquarters: P.O. Box 9000, Milton Keynes MK14 6WT. Tel: 0845 080 9000



United Kingdom Accreditation Service

ACCREDITATION CERTIFICATE



**CALIBRATION LABORATORY
NO. 0659**

Starna Scientific Ltd

is accredited in accordance with the recognised International Standard ISO/IEC 17025: 2005
General requirements for the competence of testing and calibration laboratories.

This accreditation demonstrates technical competence for a defined scope as detailed in and at the locations specified in the schedule to this certificate and the operation of a laboratory quality management system (refer joint ISO-ILAC-IAF communique dated 18 June 2005).

The schedule to this certificate is an essential accreditation document and from time to time may be revised and reissued by the United Kingdom Accreditation Service. The most recent issue of the schedule accreditation, which bears the same accreditation number as this certificate, is available from the UKAS website www.ukas.org.

This Accreditation is subject to continuing conformity with United Kingdom Accreditation Service requirements. The absence of a schedule on the UKAS website indicates that the accreditation is no longer in force.

A handwritten signature in blue ink, appearing to read 'W. Longman', is written over a horizontal line.

Accreditation Manager, United Kingdom Accreditation Service

**Initial Accreditation date
04 June 2001**

**This certificate issued on
02 March 2007**


The Department of Trade and Industry (DTI) has entered into a memorandum of understanding with the United Kingdom Accreditation Service (UKAS) through which UKAS is recognised as the national body responsible for assessing and accrediting the competence of organisations in the fields of calibration, testing, inspection and certification of systems, products and persons.

Schedule of Accreditation

issued by

United Kingdom Accreditation Service

21 - 47 High Street, Feltham, Middlesex, TW13 4UN, UK

 <p>UKAS CALIBRATION</p> <p>0659</p> <p>Accredited to ISO/IEC 17025:2005</p>	<p>Starna Scientific Ltd</p> <p>Issue No: 007 Issue date: 30 June 2010</p>	
	<p>52/54 Fowler Road Hainault Essex IG6 3UT</p>	<p>Contact: Mr J P Hammond , CSci CChem FRSC Tel: +44 (0)20-8500 1264 Fax: +44 (0)20-8500 1955 E-Mail: tech@starna.com Website: www.starna.com</p>
<p>Calibration performed at the above address only</p>		

DETAIL OF ACCREDITATION

Measured Quantity Instrument or Gauge	Range	Best Measurement Capability Expressed as an Expanded Uncertainty ($k=2$)	Remarks
<p>OPTICAL DENSITY (ABSORBANCE)</p> <p>at 213 and 261 nm</p> <p>Sealed liquid cells containing nicotinic acid solution prepared from AR grade material</p> <p>Solution concentration</p>	<p>0 to 3.6 A</p> <p>Absorbance in the range 0.050 to 1.090 dependent on concentration and wavelength</p>	<p>6 mg/l 0.0037 A 12 mg/l 0.0037 A 18 mg/l 0.0037 A 24 mg/l 0.0037 A</p>	
<p>at 235, 257, 313 and 350 nm</p> <p>Sealed liquid cells containing potassium dichromate solution prepared from NIST SRM 935a</p> <p>Solution concentration</p>	<p>Absorbance in the range 0.096 to 3.552 dependent on concentration and wavelength</p>	<p>20 mg/l 0.0037 A 40 mg/l 0.0045 A 60 mg/l 0.0049 A 80 mg/l 0.0058 A 100 mg/l 0.0068 A 120 mg/l 0.0084 A 140 mg/l 0.0091 A 160 mg/l 0.0098 A 180 mg/l 0.0106 A 200 mg/l 0.0115 A 240 mg/l 0.0132 A</p>	
<p>at 430 nm</p> <p>Sealed liquid cell containing potassium dichromate solution prepared from NIST SRM 935a</p> <p>Solution concentration</p>	<p>Absorbance value in the range 0.948 to 0.960 A</p> <p>600 mg/l</p>	<p>0.0043 A</p>	
<p>At 260, 280 and 330 nm</p>			



0659
Accredited to
ISO/IEC 17025:2005

Schedule of Accreditation
issued by
United Kingdom Accreditation Service
21 - 47 High Street, Feltham, Middlesex, TW13 4UN, UK

Starna Scientific Ltd
Issue No:007 Issue date: 30 June 2010

Calibration performed at main address only

Measured Quantity Instrument or Gauge	Range	Best Measurement Capability Expressed as an Expanded Uncertainty (k=2)	Remarks
OPTICAL DENSITY (ABSORBANCE) (cont'd)			
Sealed liquid cells containing DNA CON 260/280®	Absorbance value in the range 0.0 to 1.0 A	0.0043 A	
At peak/trough values in the range 265 to 270 nm	Absorbance values in the range 0.1 to 0.5 A	0.0049 A	
Toluene/Hexane matrix			
at 440, 465, 546.1, 590 and 635 nm			
Neutral density glass filters	Nominal transmittance, T%		
	92% (0.063 A)	0.0027 A	
	79% (0.100 A)	0.0027 A	
	73% (0.137 A)	0.0027 A	
	60% (0.222 A)	0.0027 A	
	56.5% (0.148 A)	0.0027 A	
	50% (0.301 A)	0.0027 A	
	30% (0.523 A)	0.0027 A	
	25% (0.602 A)	0.0027 A	
	20% (0.699 A)	0.0027 A	
	10% (1.000 A)	0.0027 A	
	6% (1.222 A)	0.0052 A	
	3% (1.523 A)	0.0052 A	
	1.5% (1.824 A)	0.0052 A	
	1% (2.000 A)	0.0059 A	
	0.3% (2.523 A)	0.0107 A	
	0.1% (3.000 A)	0.0190 A	
At 1100, 1700, 2210, 2500 and 2850 nm			
Neutral density glass filters	Nominal transmittance, T%		
	61 – 19% (0.215 – 0.721 A)	0.0035 A	
	5.7% (1.244 A)	0.0046 A	
	2.9% (1.538 A)	0.0072 A	
	1.5% (1.824 A)	0.0112 A	
WAVELENGTH			
Sealed liquid cells containing "Rare Earth" (RE) solution. Multiple peak wavelengths reported.	200 to 300 nm	0.2 nm	
Sealed liquid cells containing Rare Earth solution. Multiple peak wavelengths reported.	240 to 870 nm	0.1 nm	
Rare Earth glass filters. Multiple peak wavelengths reported.	240 to 880 nm	0.1 nm	



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21 - 47 High Street, Feltham, Middlesex, TW13 4UN, UK

Starna Scientific Ltd
Issue No:007 Issue date: 30 June 2010

Calibration performed at main address only

Measured Quantity Instrument or Gauge	Range	Best Measurement Capability Expressed as an Expanded Uncertainty ($k=2$)	Remarks
WAVELENGTH (cont'd) Sealed liquid cells containing TS5 Organic matrix solution. Multiple peak wavelengths reported. Sealed liquid cells containing inorganic "cut-off" solutions with reference transition wavelengths. Transition wavelength at 1.0 T% reported.	990 to 2540 nm 190 to 385 nm	0.5 nm 0.1 nm	
END			

United Kingdom Accreditation Service

ACCREDITATION CERTIFICATE



**REFERENCE MATERIAL PRODUCER
NO. 4001**

Starna Scientific Ltd

is accredited in accordance with the recognised International Guide ISO 34:2000 *General requirements for the competence of reference material producers* through the assessment against this Guide and against ISO/IEC 17025: 2005 as appropriate for the related laboratory activities.

This accreditation demonstrates technical competence for a defined scope as detailed in and at the locations specified in the schedule to this certificate.

The schedule to this certificate is an essential accreditation document and from time to time may be revised and reissued by the United Kingdom Accreditation Service. The most recent issue of the schedule accreditation, which bears the same accreditation number as this certificate, is available from the UKAS website www.ukas.com

This Accreditation is subject to continuing conformity with United Kingdom Accreditation Service requirements. The absence of a schedule on the UKAS website indicates that the accreditation is no longer in force.



Accreditation Manager, United Kingdom Accreditation Service

**Initial Accreditation date
30 June 2006**

**This certificate issued on
05 April 2007**


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Schedule of Accreditation

issued by

United Kingdom Accreditation Service

21 - 47 High Street, Feltham, Middlesex, TW13 4UN, UK

 <p>4001</p> <p>Accredited to ISO Guide 34:2000</p>	<p>Starna Scientific Ltd</p> <p>Issue No: 004 Issue date: 30 June 2010</p>	
	<p>52/54 Fowler Road Hainault Essex IG6 3UT</p>	<p>Contact: John Hammond, CSci CChem FRSC Tel: +44 (0) 20 8500 1264 Fax: +44 (0) 20 8500 1955 E-Mail: tech@starna.com Website: www.starna.com</p>
<p>Reference material production at the above address</p>		

DETAIL OF ACCREDITATION

Matrix / Artefact	Property Value(s) / Identity / Characterisation Range	Characterisation Procedure / Technique
<p><u>Reference Materials with Optical Properties</u></p> <p>Holmium Oxide Solutions Didymium Solutions Samarium Solutions Rare Earth Oxide Solutions Inorganic Salt Stray Light Solutions Holmium Glass Filters Didymium Glass Filters Organic Matrix Solutions</p> <p>Potassium Dichromate Solutions Neutral Density Filters Nicotinic Acid Organic Matrix Solutions</p>	<p>Wavelength (at specific spectral bandwidths)</p> <p>Visible and Ultraviolet and NIR Absorbance/Transmittance (at specific wavelengths)</p>	<p>Measurement by a single, primary, definitive method at Starna Scientific (UV/Vis/NIR Spectrometry)</p> <p>Measurement by a single, primary, definitive method at Starna Scientific (UV/Vis/NIR Spectrometry)</p>
<p>END</p>		