

# Accreditation Certificate

## Air Scientific Limited

Unit 5, Caherdavin Business Centre, Caherdavin Park, Ennis Road,  
Limerick V94 NT63.

### Testing Laboratory

Registration number: 319T

is accredited by the Irish National Accreditation Board (INAB) to undertake testing as detailed in the Schedule bearing the Registration Number detailed above, in compliance with the International Standard **ISO/IEC 17025:2005 2<sup>nd</sup> Edition**  
*“General Requirements for the Competence of Testing and Calibration Laboratories”*  
*(This Certificate must be read in conjunction with the Annexed Schedule of Accreditation)*

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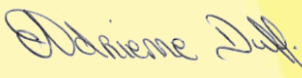
Date of award of accreditation: **03:12:2013**

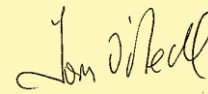
Date of last renewal of accreditation: **03:12:2013**

Expiry date of this certificate of accreditation: **03:12:2018**

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This Accreditation shall remain in force until further notice subject to continuing compliance with INAB accreditation criteria, ISO/IEC 17025 and any further requirements specified by the Irish National Accreditation Board.

Manager:   
Dr Adrienne Duff

Chairperson:   
Mr Tom O'Neill

Issued on 21 January 2016

Organisations are subject to annual surveillance and are re-assessed every five years. The renewal date on this Certificate confirms the latest date of renewal of accreditation. To confirm the validity of this Certificate, please contact the Irish National Accreditation Board.

INAB is a signatory of the European co-operation for Accreditation (EA) Multilateral Agreement (MLA) and the International Laboratory Accreditation Cooperation (ILAC) Mutual Recognition Arrangement, for Testing.

# Schedule of Accreditation



(Annex to Accreditation Certificate)

Site Laboratory:

Category D

## AIR SCIENTIFIC LIMITED

### Stack Emission Testing Laboratory

**Initial Registration Date :** 3-December-2013  
**Postal Address:** Unit 5,  
*(Address of other locations as they apply)* Caherdavin Business Centre,  
Caherdavin Park,  
Ennis Road,  
Limerick V9H NT63.

**Initial Registration Date :** 21-February 2016  
**Other Address:** Unit 32,  
De Granville Court,  
Dublin Road,  
Trim C15 EH51,  
Co. Meath

**Telephone:** +353 (61) 324587  
**Fax:** +353 (61) 324587  
**E-mail:** niamh@airscientific.ie  
**Contact Name:** Niamh McMahon  
**Facilities:** Public testing service

# Schedule of Accreditation



Site Laboratory:  
Category D

THE IRISH NATIONAL ACCREDITATION BOARD (INAB) is the Irish body for the accreditation of organisations including laboratories.

Laboratory accreditation is available to testing and calibration facilities operated by manufacturing organisations, government departments, educational institutions and commercial testing/calibration services. Indeed, any organisation involved in testing, measurement or calibration in any area of technology can seek accreditation for the work it is undertaking.

Each accredited laboratory has been assessed by skilled specialist assessors and found to meet criteria which are in compliance with ISO/IEC 17025 or ISO 15189 (medical laboratories). Frequent audits, together with periodic inter-laboratory test programmes, ensure that these standards of operation are maintained.

## Testing and Calibration Categories:

- Category A:** Permanent laboratory calibration and testing where the laboratory is erected on a fixed location for a period expected to be greater than three years.
- Category B:** Site calibration and testing that is performed by staff sent out on site by a permanent laboratory that is accredited by the Irish National Accreditation Board.
- Category C:** Site calibration and testing that is performed in a site/mobile laboratory or by staff sent out by such a laboratory, the operation of which is the responsibility of a permanent laboratory accredited by the Irish National Accreditation Board.
- Category D:** Site calibration and testing that is performed on site by individuals and organisations that do not have a permanent calibration/testing laboratory. Testing may be performed using
- portable test equipment
  - a site laboratory
  - a mobile laboratory or
  - equipment from a mobile or site laboratory

## Standard Specification or Test Procedure Used:

The standard specification or test procedure that is accredited is the issue that is current on the date of the most recent visit, unless otherwise stated.

## Glossary of Terms

### Facilities:

- Public calibration/testing service:** Commercial operations which actively seek work from others.
- Conditionally available for public calibration/testing:** Established for another primary purpose but, more commonly than not, is available for outside work.
- Normally not available for public calibration/testing:** Unavailable for public calibration/testing more often than not.

Laboratory users wishing to obtain assurance that calibration or test results are reliable and carried out to the Irish National Accreditation Board criteria should insist on receiving an accredited calibration certificate or test report. Users should contact the laboratory directly to ensure that this scope of accreditation is current. INAB will, on request, verify the status and scope.

# Scope of Accreditation



## Air Scientific Limited

Site Laboratory:

Category D

### Stack Emission Testing - Limerick & Trim

INAB Classification number (P9) Materials/products tested	Type of test/properties measured Range of measurement	Standard specifications Equipment/techniques used
770 Gases and Aerosols .04 Sampling and on-site analysis	Carbon Monoxide 1.7 to 1250 mg.m <sup>-3</sup>	EN 15058:2017 By (NDIR) Infra red analyser with continuous analysis SOP 2004
.04 Industrial fumes and mixtures Sampling and on-site analysis	Oxides of Nitrogen (NO) 1.8 to 2050 mg.m <sup>-3</sup>	EN 14792:2017 Chemi-luminescence with continuous analysis SOP 2002
	Sulphur dioxide (SO <sub>2</sub> ) 6.1 to 2860 mg.m <sup>-3</sup>	Based on Alternative method TGN M21 (NDIR) Non Infra red analyser with continuous analysis as per AG2:- SOP 2012
	Oxygen O <sub>2</sub> Range 0.1 to 26 vol%	EN 14789:2017 Paramagnetic continuous analyser and Zirconium oxide cell SOP 2008
	Water Vapour 0.10 to 40%	EN 14790:2017 Gravimetric SOP 2007

# Scope of Accreditation



**Air Scientific Limited**

Site Laboratory:

**Stack Emission Testing - Limerick & Trim**

Category D

INAB Classification number (P9) Materials/products tested	Type of test/properties measured Range of measurement	Standard specifications Equipment/techniques used
<p><b>770 Gases and Aerosols</b>                      .04 Industrial fumes and mixtures                      Sampling and on-site analysis</p>	<p>Pressure: Range 0 to 8000Pa                      Temperature: Range 0 to 1200° C                      Velocity: Range 3.03 to 26.32 m.s<sup>-1</sup>                      Total Gaseous Organic Carbon (TOC/VOC)                      0.8 to 1600 mgC.m<sup>-3</sup></p>	<p>EN 16911-1:2013 L Type and S Type Pitot tube                      SOP 2005                      EN 12619:2013                      By flame ionisation detector                      SOP 2009</p>

# Scope of Accreditation



**Air Scientific Limited**

Site Laboratory:

**Stack Emission Testing - Limerick & Trim**

Category D

INAB Classification number (P9) Materials/products tested	Type of test/properties measured Range of measurement	Standard specifications Equipment/techniques used
770 Gases and Aerosols .71 Sampling	Total Particulate Matter 0.1 to 50mg/m <sup>3</sup> (with subsequent analysis by ISO 17025 accredited laboratory)	EN 13284-1:2002 ISO kinetic sampling SOP 2000
	Total Particulate Matter 20 to 1000 mg/m <sup>3</sup> (with subsequent analysis by ISO 17025 accredited laboratory)	ISO 9096:2003 ISO kinetic sampling method SOP 2001
	Dioxins and Furans 0.01 ng.m <sup>-3</sup> to 10 ng.m <sup>-3</sup> (with subsequent analysis by ISO 17025 accredited laboratory)	EN 1948-1:2006 ISO kinetic sampling method SOP 2006
	Sulphur dioxide (SO <sub>2</sub> ) (with subsequent analysis by ISO 17025 accredited laboratory) (0.1 TO 2600 mg.m <sup>-3</sup> )	EN 14791:2017 extraction and sampling SOP 2003

# Scope of Accreditation



**Air Scientific Limited**

Site Laboratory:

Category D

## Stack Emission Testing - Limerick & Trim

INAB Classification number (P9) Materials/products tested	Type of test/properties measured Range of measurement	Standard specifications Equipment/techniques used
770 Gases and Aerosols .71 Sampling	<p>Total emission of the following metals:</p> <ul style="list-style-type: none"> <li>Arsenic - As</li> <li>Cadmium - Cd</li> <li>Chromium - Cr</li> <li>Cobalt - Co</li> <li>Copper - Cu</li> <li>Manganese - Mn</li> <li>Nickel - Ni</li> <li>Lead - Pb</li> <li>Antimony -Sb</li> <li>Thallium - Tl</li> <li>Vanadium - V</li> </ul> <p>0.005 to 0.5mg/m<sup>3</sup> (per metal) with subsequent analysis by ISO 17025 accredited laboratory)</p> <p>Total emission of Mercury 0.001 to 0.5mg/m<sup>3</sup> (with subsequent analysis by ISO 17025 accredited laboratory)</p>	<p>EN 14385:2004 and Environmental Agency MID-14385 Isokinetic sampling SOP 2015</p> <p>EN 13211:2001 Isokinetic sampling SOP 2029</p>

# Scope of Accreditation



**Air Scientific Limited**

Site Laboratory:

Category D

## Stack Emission Testing - Limerick & Trim

INAB Classification number (P9) Materials/products tested	Type of test/properties measured Range of measurement	Standard specifications Equipment/techniques used
<p><b>770</b>     <b>Gases and Aerosols</b></p> <p>.71     Sampling</p>	<p>Total emission of Formaldehyde 0.05 mg/m<sup>3</sup> to 5000mg/m<sup>3</sup> (with subsequent analysis by ISO 17025 accredited laboratory)</p> <p>Total emission of gaseous chlorides expressed as HCL 0.05mg/m to 5000 mg/m<sup>3</sup> (with subsequent analysis by ISO 17025 accredited laboratory)</p> <p>Determination of the mass concentration of individual Gaseous Organic Compounds 0.05mg /m to 5000mg/m (with subsequent analysis by ISO 17025 accredited laboratory)</p> <p>Determination of Gaseous Fluoride with subsequent analysis by ISO 17025 accredited laboratory (0.1-500 mg.m3)</p>	<p>US EPA M316 ISO kinetic and non Isokinetic sampling SOP 2020</p> <p>EN 1911:2010 extraction and sampling method SOP 2014</p> <p>CEN/TS 13649:2014 extraction and sampling method SOP 2019</p> <p>EN 15713:2006/ SOP 2024 Extraction and sampling method</p>



# Scope of Accreditation



**Air Scientific Limited**

Site Laboratory:

Category D

**Stack Emission Testing - Limerick & Trim**

INAB Classification number (P9) Materials/products tested	Type of test/properties measured Range of measurement	Standard specifications Equipment/techniques used
770 Gases and Aerosols .71 Sampling	Determination of Mass Concentration of Ammonia (0.1-2200mg.m3) (with subsequent analysis by ISO 17025 accredited	EN 14791:2017/ SOP 2022 Extraction and sampling method