

# Accreditation Certificate

## Forensic Science Ireland

Department of Justice, Equality and Law Reform, Garda Headquarters

Phoenix Park, Dublin 8

**Forensic Testing Laboratory**

**Registration number: 137T**

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 only be read in conjunction with the Annexed Schedule of Accreditation***)

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Date of award of accreditation: **07:04:2003**

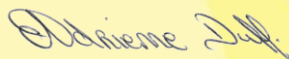
Date of last renewal of accreditation: **20:03:2018**

Expiry date of this certificate of accreditation: **20:03:2023**

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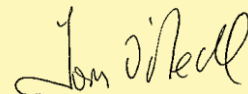
This Accreditation shall remain in force until further notice subject to continuing compliance with INAB accreditation criteria, ISO/IEC 17025 and any further requirements specified by the Irish National Accreditation Board.

Manager: \_\_\_\_\_



Dr Adrienne Duff

Chairperson: \_\_\_\_\_



Mr Tom O'Neill

Issued on 20 March 2018

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.

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

# Schedule of Accreditation



(Annex to Accreditation Certificate)

Permanent and Site Laboratory:  
Category A and C

## THE FORENSIC SCIENCE IRELAND

### Forensic Testing Laboratory

<b>Initial Registration Date :</b>	<b>7-April-2003</b>	<b>15-June-2010</b>
<b>Postal Address:</b>	Garda Headquarters	Site Lab
<b>(Address of other locations as they apply)</b>	Phoenix Park Dublin 8	Ratra House, Phoenix Park Dublin 8
<b>Telephone:</b>	+353 (1) 6662906	
<b>Fax:</b>	+353 (1) 6662929	
<b>E-mail:</b>	FTornton@fsl.ie	
<b>Contact Name:</b>	Fiona Thornton	
<b>Facilities:</b>	Normally not available for Public testing	

# Schedule of Accreditation



Permanent & Site Laboratory:  
Category A and C

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/IEC 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
- (a) portable test equipment
  - (b) a site laboratory
  - (c) a mobile laboratory or
  - (d) 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



## The Forensic Science Ireland

Permanent Laboratory:

Category A

### Forensic Testing Laboratory - Garda Headquarters

INAB Classification number (P9) Materials/products tested	Type of test/properties measured Range of measurement	Standard specifications Equipment/techniques used
1204 Forensic Biology  .02 Bloodstain pattern examination	Blood Pattern Analysis	FSIBTP154, FSIBTP156, FSIBTP157 Visual Inspection
.99 Miscellaneous <i>Blood</i>	Detection of Blood Using KM Solution  Detection of Human Blood	FSIBTP150 Kastle Meyer test  FSIBTP159 ABA card Hema Trace test
.99 Miscellaneous <i>Items of clothing and swabs relating to Sexual Assault Cases</i>	Detection of Acid Phosphatase (AP)  Identification of human spermatozoa  Extraction of spermatozoa using whole swab method	FSIBTP100 Brentamine test  FSIBTP101-102 Microscopy  FSIBTP109

# Scope of Accreditation



## The Forensic Science Ireland

### Forensic Testing Laboratory - Garda Headquarters

Permanent Laboratory:

Category A

INAB Classification number (P9) Materials/products tested	Type of test/properties measured Range of measurement	Standard specifications Equipment/techniques used
<b>1204 Forensic Biology</b> .99 Miscellaneous <i>Items of clothing and swabs relating to Sexual Assault Cases</i>	Extraction and detection of seminal fluid using RSID semen membrane test.  Extraction and detection of Salivary $\alpha$ -amylase using the RSID Saliva test  The Phadebas® Forensic Press test for the detection of salivary $\alpha$ -amylase  Extraction and detection of urine using the RSID <sub>tm</sub> Urine membrane test..	Documented in house methods based on RSID protocols FSIBTP110  FSIBTP111  FSIBTP211 and FSIBTP212  FSIBTP114
.99 Miscellaneous <i>Items of Clothing &amp; Fabric</i>	Identification/assessment of damage to clothing and fabric	Documented in house methods using visual examinations, low power microscopy and dimensional measurement  FSIBTP200 and FSIBTP201

# Scope of Accreditation



## The Forensic Science Ireland

Permanent Laboratory:

Category A

### Forensic Testing Laboratory - Garda Headquarters

INAB Classification number (P9) Materials/products tested	Type of test/properties measured Range of measurement	Standard specifications Equipment/techniques used
<b>1203 Forensic Chemistry /Criminalistics</b>  .03 Glass (and other mineralogical materials)  <i>Glass fragments recovered from items compared with control/reference glass samples</i>	Recovery of Glass fragments  Refractive Index Measurements  Surface characteristics using interference microscopy  Thermal history by annealing and re-measuring refractive index	FSICTP004 - Visual  FSICTP006, FSICTP005, FSICTP008  FSICTP009  FSICTP006, FSCITP007
.04 General chemical and physical examinations  <i>Footwear and footwear impressions from suspected crime scenes</i>	Identification and comparison of footwear and footwear marks  Enhancement of footwear marks using physical and chemical means	FSICTP051-FSICTP061(incl)  Visual Comparison

# Scope of Accreditation



## The Forensic Science Ireland

Permanent Laboratory:

Category A

### Forensic Testing Laboratory - Garda Headquarters

INAB Classification number (P9) Materials/products tested	Type of test/properties measured Range of measurement	Standard specifications Equipment/techniques used
<p>1203 Forensic Chemistry /Criminalistics</p> <p>.04 Offensive sprays</p>	<p>Identification of Chlorobenzylidenemalononitrile (CS), Capsaicin and Dihydrocapsaicin in offensive sprays using GC-MS</p> <p>Product limit of detection for CS = 0.4 mg (.0004g)</p> <p>Product limit of detection for Capsaicin and Dihydrocapsaicin = 0.7 mg (0.0007g) in each case.</p>	<p>FSICTP350 and FSICTP 352</p>

# Scope of Accreditation



## The Forensic Science Ireland

Permanent Laboratory:

Category A

### Forensic Testing Laboratory - Garda Headquarters

INAB Classification number (P9) Materials/products tested	Type of test/properties measured Range of measurement	Standard specifications Equipment/techniques used
1205 Firearms .01 Fires and Explosions <i>Accelerants</i>	Hydrocarbon fire accelerants analysis  Identification of bulk material for the following compounds: - Nitrocellulose, PETN, RDX and Nitroxoglycerine, in suspect materials. Ranges:- LOD Nitroglycerine - 0.08 mg (LOD in Propellant Powder) Nitrocellulose - 0.1 mg (LOD in Propellant Powder) PETN 0.1 mg (LOD in typical sample of Semtex) RDX 0.05 mg (LOD in typical sample of semtex)	Liquids: FSICTP103-105 - Gas chromatography flame ionization detector (GC-FID)  Fire debris: FSICTP102, FSICTP104-105 - Gas chromatography mass spec detector (GC-MS)  FSICTP300-308 (incl) Technique used: GCMS FT-IR GC-ECD



# Scope of Accreditation



## The Forensic Science Ireland

Permanent Laboratory:

Category A

### Forensic Testing Laboratory - Garda Headquarters

INAB Classification number (P9) Materials/products tested	Type of test/properties measured Range of measurement	Standard specifications Equipment/techniques used
<b>1203 Forensic Chemistry/ Criminalistics</b>  .01 Fire & explosions (including firearm discharge residues)  .02 Fibres Polymers (including paint, plastics and textile fibres) <i>Fibre identification and comparison</i>	Detection and identification of Firearm residues (FAR)  LOD 0.5 µm  Recovery and preparation of fibres for microscopic examination  Microscopic comparison of fibres  Micro-spectrophotometry of fibre samples  Infra red identification/comparison of fibres  Polarising microscopy of fibres  UV-Visible Micro-spectrophotometry	FSICTP250-252, FSICTP255-257 and FSICTP259  FSICTP150 FSICTP151 FSICTP152  FSICTP153  FSICTP154  FSICTP155  FSICTP156  FSICTP160 FSICTP161
.02 Paint comparison	Microscopic comparison of paints  Infra-red analysis and comparison of paints  Extraction of paint	FSICTP204  FSICTP205  FSICTP201, 202, 203

# Scope of Accreditation



## The Forensic Science Ireland

Permanent Laboratory:

Category A

### Forensic Testing Laboratory - Garda Headquarters

INAB Classification number (P9) Materials/products tested	Type of test/properties measured Range of measurement	Standard specifications Equipment/techniques used
<b>1204 Forensic Biology</b> .03 DNA analysis Human: <i>Blood</i> <i>Hair</i> <i>Semen</i> <i>Epithelial Cells</i> <i>Saliva</i> <i>Body Tissue</i>	Analysis of Short Tandem Repeat (STR) DNA profiles using various human body fluid and tissue samples, and samples associated with crime scenes, involving:  Lysis and Automated purification of DNA using the EZ1 Advanced XL and the EZ1 Investigator Kit.  Extraction with Qia Amp DNA mini kit and the DNA Investigator kit	Documented in-house methods:  FSIBTP057  FSIBTP005, FSIBTP008, FSIBTP009

# Scope of Accreditation



## The Forensic Science Ireland

Permanent Laboratory:

Category A

### Forensic Testing Laboratory - Garda Headquarters

<p>1204 <b>Forensic Biology</b>          .03 DNA analysis          Human:  <i>Blood</i>  <i>Hair</i>  <i>Semen</i>  <i>Epithelial Cells</i>  <i>Saliva</i>  <i>Body Tissue</i></p>	<p>Quantification          Quantification of male DNA using the Quantifiler Duo KIT</p> <p>Lysis Automated DNA purification, quantification, PCR and sequencing set up using the Hamiltonstar and starlet instruments</p> <p>Robotic 96 well automated platform for the processing of buccal FTA samples</p> <p>Genetic Analyser &amp; Gene Mapper ID X software</p>	<p>Documented in-house methods:</p> <p>FSIB TP 039          Performing DNA quantification analysis on the ABI Prism 7500 real time polymerase chain reaction (PCR)</p> <p>FSIB TP058, FSIB TP061</p> <p>FSIB TP 044 and FSIBTP049</p> <p>FSIBTP048          Computer based</p>
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# Scope of Accreditation



## The Forensic Science Ireland

Permanent Laboratory:

Category A

### Forensic Testing Laboratory - Garda Headquarters

INAB Classification number (P9) Materials/products tested	Type of test/properties measured Range of measurement	Standard specifications Equipment/techniques used
<b>1204 Forensic Biology</b> .03 DNA analysis Human: <i>Blood</i> <i>Hair</i> <i>Semen</i> <i>Epithelial Cells</i> <i>Saliva</i> <i>Body Tissue</i>	Use of PCR Chemistry NGM Select to generate DNA profiles from crime-stain and reference material types  Genetic characterisation of NGM Select profiles using 3500xl genetic analyser  Analysis of NGM Select profiles (Crime and Reference) using Genemapper ID X software	FSIBTP044, FSIBTP051  FSIBTP052, FSIBTP053  FSIBTP048
<b>1204 Forensic Biology</b> .03 DNA analysis Human: <i>Blood</i> <i>Hair</i> <i>Semen</i> <i>Epithelial Cells</i> <i>Saliva</i> <i>Body Tissue</i>	Quantifiler Trio DNA quantification Kit (Manual reference and crime samples):  Promega Power Plex Y23 str Kit (Crime stain and reference samples)  NGM Select Express Kit (Reference FTA cards)	ABI 7500 Real Time PCR System FSIBTP550  ARKTIC Thermocycler: FSIBTP080  ARKTIC Thermocycler: FSIBTP044

# Scope of Accreditation



## The Forensic Science Ireland

Permanent Laboratory:

Category A

### Forensic Testing Laboratory - Garda Headquarters

INAB Classification number (P9) Materials/products tested	Type of test/properties measured Range of measurement	Standard specifications Equipment/techniques used
<b>1201</b> <b>Controlled Substances</b>  .01 <b>Drugs</b>  <i>Bulk Cannabis Resin</i>  <i>Herbal Material</i>  <i>Cannabis Plants</i>	The qualitative analysis of cannabis and cannabis products	Documented In-house methods: FSIDTP002 Microscopy  FSIDTP001, FSIDTP406 Thin Layer Chromatography  FSIDTP003 Duquenois Levine Test
.01 <b>Drugs</b>  <i>Samples submitted as wraps or packages containing:</i>  <i>Powders</i> <i>Illicit tablets</i> <i>Samples of liquid</i> <i>Pharmaceutical preparations</i>	Detection of controlled drugs Product limit of identification. <b>Narcotic Analgesics</b> Diamorphine                    1 % Dihydrocodeine                1 % Hydrocodone                    1 % Methadone                        2 % Morphine                         1 % Oxycodone                        1 %  <b>Stimulants</b> Amphetamines                    1 % Methylamphetamine            1 %	FSIDTP601 Visual Inspection  FSIDTP403, FSIDTP401 Gas Chromatography with Mass Spectrometry  FSIDTP406 Thin layer chromatography

# Scope of Accreditation



## The Forensic Science Ireland

Permanent Laboratory:

Category A

### Forensic Testing Laboratory - Garda Headquarters

INAB Classification number (P9) Materials/products tested		Type of test/properties measured Range of measurement	Standard specifications Equipment/techniques used
1201 .01	Controlled Substances Drugs	Qualitative Identification of Zopiclone Limit of identification in Matrix (LOI) = 4%.	FSIDTP301, FSIDTP302, FSIDTP403 GCMS
		Qualitative Identification of Trifluoromethylphenylpiperazine (tfmpp) Limit of identification in Matrix (LOI) = 1%.	FSIDTP301, FSIDTP302, FSIDTP403 GCMS
		Qualitative Identification of Pyrrolidinovaler-o-phenane Limit of identification in Matrix (LOI) = 1%.	FSIDTP301, FSIDTP302, FSIDTP403 GCMS
		Qualitative Identification of Methylethcathinone (MEC) Limit of identification in Matrix (LOI) = 1%.	FSIDTP301, FSIDTP302, FSIDTP403 GCMS

# Scope of Accreditation



## The Forensic Science Ireland

Permanent Laboratory:

Category A

### Forensic Testing Laboratory - Garda Headquarters

INAB Classification number (P9) Materials/products tested	Type of test/properties measured Range of measurement	Standard specifications Equipment/techniques used
1201 Controlled Substances .01 Drugs		
.01 Drugs <i>Samples submitted as wraps or packages containing:</i>  <i>Powders</i> <i>Illicit tablets</i> <i>Samples of liquid</i> <i>Pharmaceutical preparations</i>	<b>Ecstasy type Compounds</b> <b>Product limit of identification</b> MDMA 1 % MDEA 1 % MDA 1 % DOB >3 % <b>Benzodiazepines</b> Alprazolam 3 % Diazepam 1 % Flunitrazepam 1 % Flurazepam 2 % Nitrazepam 2 % Temazepam 1 % <b>Miscellaneous</b> Cocaine 0.5 % Ketamine 1 %	FSIDTP403 Gas Chromatography with Mass Spectrometry FSIDTP401

# Scope of Accreditation



## The Forensic Science Ireland

Permanent Laboratory:

Category A

### Forensic Testing Laboratory - Garda Headquarters

INAB Classification number (P9) Materials/products tested		Type of test/properties measured Range of measurement	Standard specifications Equipment/techniques used
1201 .01	Controlled Substances Drugs	Qualitative Identification of 1-methyl-4 (phenylmethyl) piperazine (MBZP) - LOD (Product) = 0.75% w:w drug: matrix Qualitative Identification of 4-Methylmethcathinone (4-Mephedrone) Product LOD = 3.0% w/w drug: matrix Qualitative indentification of Phenazepan LOD = 2% w/w drug: matrix	FSIDTP403 Gas Chromatography with Mass Spectrometry  <b>Flexible Scope:</b> Additional controlled drugs may be added of the active compound in accordance with the laboratory's approved and documented procedures, FSIDTP301 "flexible scope" and FSIA FSIAP054. For details refer to the laboratory's List of Additional tests, available from the laboratory.
.01	Drugs	LSD  <b>LOI</b> 16µg	FSIDTP607, FSIDTP406, FSIDTP401, FSIDTP403 Gas Chromatography with Mass Spectrometry Thin Layer Chromatography
1201 .01	Controlled Substances Drugs	Quantitative analysis of cocaine 0.4 - 1.5 mg/ml	FSIDTP710 Gas Chromatography with Mass Spectrometry



# Scope of Accreditation



## The Forensic Science Ireland

Permanent Laboratory:

Category A

### Forensic Testing Laboratory - Garda Headquarters

INAB Classification number (P9) Materials/products tested	Type of test/properties measured Range of measurement	Standard specifications Equipment/techniques used
<b>1202</b> .01 Blood alcohol	Alcohol quantification 5 to 400mg%  Alcohol identification	FSIDTP201, 202, 205, 207, 208, 211 and 212 Gas chromatography with flame ionization detector  FSIDTP215 Gas chromatography flame ionization detector
<b>751 Foods</b> .12 Alcoholic beverages (other than wine)  .21 Others  <i>Alcohol (Ethanol) Identification and quantification in beverage samples</i>	Alcohol quantification   Alcohol identification	FSIDTP201, 202, 205, 207, 208, 211 and 212 Gas chromatography with flame ionization detector  FSIDTP215 Gas chromatography flame ionization detector

# Scope of Accreditation



## The Forensic Science Ireland

Site Laboratory:

Category C

### Forensic Testing Laboratory Site Lab - Ratra House

INAB Classification number (P9) Materials/products tested		Type of test/properties measured Range of measurement	Standard specifications Equipment/techniques used
1201	<b>Controlled Substances</b>		Documented In-house methods: FSIDTP002
.01	Drugs	The qualitative analysis of cannabis and cannabis products	Microscopy
	<i>Bulk Cannabis Resin</i>		FSIDTP001, FSIDTP406 Thin Layer Chromatography
	<i>Herbal Material</i>		
	<i>Cannabis Plants</i>		FSIDTP003 Duquenois Levine Test
.01	Drugs	Detection of controlled drugs Product limit of identification	FSIDTP601 Visual Inspection
	<i>Samples submitted as wraps or packages containing:</i>	<b>Narcotic Analgesics</b>	
		Diamorphine 1 %	FSIDTP403, FSIDTP401
		Dihydrocodeine 1 %	Gas Chromatography with Mass Spectrometry
		Hydrocodone 1 %	
	<i>Powders</i>	Methadone 2 %	
	<i>Illicit tablets</i>	Morphine 1 %	
	<i>Samples of liquid</i>	Oxycodone 1 %	
	<i>Pharmaceutical preparations</i>	<b>Stimulants</b>	FSIDTP406 Thin layer chromatography
		Amphetamines 1 %	
		Methylamphetamine 1 %	

# Scope of Accreditation



## The Forensic Science Ireland

Site Laboratory:

Category C

### Forensic Testing Laboratory Site Lab - Ratra House

INAB Classification number (P9)	Type of test/properties measured	Standard specifications
Materials/products tested	Range of measurement	Equipment/techniques used
.01 Drugs <i>Samples submitted as wraps or packages containing:</i>  <i>Powders</i> <i>Illicit tablets</i> <i>Samples of liquid</i> <i>Pharmaceutical preparations</i>	<b>Ecstasy type Compounds</b>	FSIDTP403
	<b>Product limit of identification</b>	Gas Chromatography with Mass Spectrometry
	MDMA 1 %	FSIDTP401
	MDEA 1 %	
	MDA 1 %	
	DOB >3 %	
	<b>Benzodiazepines</b>	
	Alprazolam 3 %	
	Diazepam 1 %	
	Flunitrazepam 1 %	
	Flurazepam 2 %	
	Nitrazepam 2 %	
	Temazepam 1 %	
	<b>Miscellaneous</b>	
Cocaine 0.5 %		
Ketamine 1 %		
.01 Drugs	LSD  LOI 16µg	FSIDTP607, FSIDTP406, FSIDTP401, FSIDTP403 Gas Chromatography with Mass Spectrometry Thin Layer Chromatography

# Scope of Accreditation



## The Forensic Science Ireland

Site Laboratory:

Category C

### Forensic Testing Laboratory Site Lab - Ratra House

INAB Classification number (P9) Materials/products tested	Type of test/properties measured Range of measurement	Standard specifications Equipment/techniques used
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.01 Drugs <i>Powers</i>	Quantative analysis of Amphetamine Range of measurement 0.15 - 1.7 mg/ml	FSIDTP701 AND FSIDTP702 FSIDTP708 by HPLC -DAD
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