Irish National Accreditation Board

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 2nd 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)***

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**

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: _____ **Chairperson:** _____

Dr Adrienne Duff 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

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

Schedule of Accreditation

ISO 17025 INAB ACCREDITED TESTING
DETAILED IN SCOPE REG NO.137T

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**		FSIBTP154, FSIBTP156, FSIBTP157
.02	Bloodstain pattern examination	Blood Pattern Analysis	Visual Inspection
.99	Miscellaneous *Blood*	Detection of Blood Using KM Solution Detection of Human Blood	FSIBTP150 Kastle Meyer test FSIBTP159 ABA card Hema Trace test
.99	Miscellaneous *Items of clothing and swabs relating to Sexual Assault Cases*	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

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**		
.99	Miscellaneous *Items of clothing and swabs relating to Sexual Assault Cases*	Extraction and detection of seminal fluid using RSID semen membrane test. Extraction and detection of Salivary α-amylase using the RSID Saliva test The Phadebas® Forensic Press test for the detection of salivary α-amalyse Extraction and detection of urine using the RSID$_{tm}$ Urine membrane test..	Documented in house methods based on RSID protocols FSIBTP110 FSIBTP111 FSIBTP211 and FSIBTP212 FSIBTP114
.99	Miscellaneous *Items of Clothing & Fabric*	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

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
1203	**Forensic Chemistry /Criminalistics**	Recovery of Glass fragments	FSICTP004 – Visual
.03	Glass (and other mineralogical materials)	Refractive Index Measurements	FSICTP006, FSICTP005, FSICTP008
	Glass fragments recovered from items compared with control/reference glass samples	Surface characteristics using interference microscopy	FSICTP009
		Thermal history by annealing and re-measuring refractive index	FSICTP006, FSCITP007
.04	General chemical and physical examinations	Identification and comparison of footwear and footwear marks	FSICTP051-FSICTP061(incl)
	Footwear and footwear impressions from suspected crime scenes	Enhancement of footwear marks using physical and chemical means	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
1203	**Forensic Chemistry /Criminalistics**	Identification of Chlorobenzylidenemalononitrile (CS), Capasaicin and Dihydocapsaicin in offensive sprays using GC-MS Product limit of detection for CS = 0.4 mg (.0004g) Product limit of detection for Capsaicin and Dilhydrocapsaicin = 0.7 mg (0.0007g) in each case.	FSICTP350 and FSICTP 352
.04	Offensive sprays		

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 *Accelerants*	Hydrocarbon fire accelerants analysis	Liquids: FSICTP103-105 – Gas chromatography flame ionization detector (GC-FID) Fire debris: FSICTP102, FSICTP104-105 – Gas chromatography mass spec detector (GC-MS)
	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)	FSICTP300-308 (incl) Technique used: GCMS FT-IR GC-ECD

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Permanent Laboratory:

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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
1203	**Forensic Chemistry/ Criminalistics**	Detection and identification of Firearm residues (FAR)	FSICTP250-252, FSICTP255-257 and FSICTP259
.01	Fire & explosions (including firearm discharge residues)	LOD 0.5 µm	
.02	Fibres Polymers (including paint, plastics and textile fibres) *Fibre identification and comparison*	Recovery and preparation of fibres for microscopic examination	FSICTP150
			FSICTP151
			FSICTP152
		Microscopic comparison of fibres	FSICTP153
		Micro-spectrophotometry of fibre samples	FSICTP154
		Infra red identification/comparison of fibres	FSICTP155
		Polarising microscopy of fibres	FSICTP156
		UV-Visible Micro-spectrophotometry	FSICTP160
			FSICTP161
.02	Paint comparison	Microscopic comparison of paints	FSICTP204
		Infra-red analysis and comparison of paints	FSICTP205
		Extraction of paint	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
1204 Forensic Biology .03 DNA analysis Human: *Blood* *Hair* *Semen* *Epithelial Cells* *Saliva* *Body Tissue*	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 EZI 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

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Permanent Laboratory:

Category A

Forensic Testing Laboratory - Garda Headquarters

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

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**		
.03	DNA analysis Human: *Blood* *Hair* *Semen* *Epithelial Cells* *Saliva* *Body Tissue*	Use of PCR Chemistry NGM Select to generate DNA profiles from crime-stain and reference material types	FSIBTP044, FSIBTP051
		Genetic characterisation of NGM Select profiles using3500xl genetic analyser	FSIBTP052, FSIBTP053
		Analysis of NGM Select profiles (Crime and Reference) using Genemapper ID X software	FSIBTP048

1204	**Forensic**	Quantifilier Trio DNA	ABI 7500 Real Time PCR System
.03	**Biology** DNA analysis *Human:* *Blood* *Hair* *Semen* *Epithelial* *Cells* *Saliva* *Body Tissue*	quantification Kit (Manual reference and crime samples):	FSIBTP550
		Promega Power Plex Y23 str Kit (Crime stain and reference samples)	ARKTIC Thermocycler: FSIBTP080
		NGM Select Express Kit (Reference FTA cards)	ARKTIC Thermocycler: FSIBTP044

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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**		Documented In-house methods:
		The qualitative analysis of	FSIDTP002
.01	Drugs	cannabis and cannabis products	Microscopy
	Bulk Cannabis Resin		FSIDTP001, FSIDTP406
			Thin Layer Chromatography
	Herbal Material		
	Cannabis Plants		FSIDTP003
			Duquenois Levine Test
.01	Drugs	Detection of controlled drugs	FSIDTP601
		Product limit of identification.	Visual Inspection
	Samples submitted as	**Narcotic Analgesics**	
	wraps or packages	Diamorphine 1 %	FSIDTP403, FSIDTP401
	containing:	Dihydrocodeine 1 %	Gas Chromatography with Mass
		Hydrocodone 1 %	Spectrometry
	Powders	Methadone 2 %	
	Illicit tablets	Morphine 1 %	
	Samples of liquid	Oxycodone 1%	
	Pharmaceutical		FSIDTP406
	preparations	**Stimulants**	Thin layer chromatography
		Amphetamines 1 %	
		Methylamphetamine 1 %	

Scope of Accreditation

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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**	Qualitative Identification of Zopiclone	FSIDTP301, FSIDTP302, FSIDTP403 GCMS
.01	Drugs	Limit of identification in Matrix (LOI) = 4%.	
		Qualitative Identification of Trifluoromethylphenylpiperazine (tfmpp) Limit of identification in Matrix (LOI) = 1%.	FSIDTP301, FSIDTP302, FSIDTP403 GCMS
		Qualitative Identification of Pyrrolidinovaler-ophenane 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

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Permanent Laboratory:

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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 *Samples submitted as wraps or packages containing:* *Powders* *Illicit tablets* *Samples of liquid* *Pharmaceutical preparations*	**Ecstasy type Compounds** **Product limit of identification** MDMA MDEA MDA DOB **Benzodiazepines** Alprazolam Diazepam Flunitrazepam Flurazepam Nitrazepam Temazepam **Miscellaneous** Cocaine Ketamine	 1 % 1 % 1 % >3 % 3 % 1 % 1 % 2 % 2 % 1 % 0.5 % 1 %	FSIDTP403 Gas Chromatography with Mass Spectrometry FSIDTP401

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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	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 **Flexible Scope:** 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	**LOI** LSD 16µg	FSIDTP607, FSIDTP406, FSIDTP401, FSIDTP403 Gas Chromatography with Mass Spectrometry Thin Layer Chromatography
1201 Controlled Substances .01 Drugs	Quantitative analysis of cocaine 0.4 - 1.5 mg/ml	FSIDTP710 Gas Chromatography with Mass Spectrometry

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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
1202			
.01	Blood alcohol	Alcohol quantification 5 to 400mg%	FSIDTP201, 202, 205, 207, 208, 211 and 212 Gas chromatography with flame ionization detector
		Alcohol identification	FSIDTP215 Gas chromatography flame ionization detector
751	**Foods**		
.12	Alcoholic beverages (other than wine)	Alcohol quantification	FSIDTP201, 202, 205, 207, 208, 211 and 212 Gas chromatography with flame ionization detector
.21	Others *Alcohol (Ethanol) Identification and quantification in beverage samples*	Alcohol identification	FSIDTP215 Gas chromatography flame ionization detector

Scope of Accreditation

ISO 17025 INAB ACCREDITED TESTING
DETAILED IN SCOPE REG NO.137T

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	**Controlled Substances**		Documented In-house methods: FSIDTP002
.01	Drugs	The qualitative analysis of cannabis and cannabis products	Microscopy
	Bulk Cannabis Resin		FSIDTP001, FSIDTP406 Thin Layer Chromatography
	Herbal Material *Cannabis Plants*		FSIDTP003 Duquenois Levine Test

.01	Drugs	Detection of controlled drugs Product limit of identification	FSIDTP601 Visual Inspection
	Samples submitted as wraps or packages containing:	**Narcotic Analgesics**	
		Diamorphine 1 %	FSIDTP403, FSIDTP401
		Dihydrocodeine 1 %	Gas Chromatography with Mass
		Hydrocodone 1 %	Spectrometry
	Powders	Methadone 2 %	
	Illicit tablets	Morphine 1 %	
	Samples of liquid Pharmaceutical preparations	Oxycodone 1 %	
			FSIDTP406
		Stimulants	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) Materials/products tested		Type of test/properties measured Range of measurement		Standard specifications Equipment/techniques used
.01	Drugs *Samples submitted as wraps or packages containing:* *Powders* *Illicit tablets* *Samples of liquid* *Pharmaceutical preparations*	**Ecstasy type Compounds** **Product limit of identification** MDMA MDEA MDA DOB **Benzodiazepines** Alprazolam Diazepam Flunitrazepam Flurazepam Nitrazepam Temazepam **Miscellaneous** Cocaine Ketamine	 1 % 1 % 1 % >3 % 3 % 1 % 1 % 2 % 2 % 1 % 0.5 % 1 %	FSIDTP403 Gas Chromatography with Mass Spectrometry FSIDTP401
.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
.01 Drugs *Powers*	Quantative analysis of Amphetamine Range of measurement 0.15 – 1.7 mg/ml	FSIDTP701 AND FSIDTP702 FSIDTP708 by HPLC –DAD