


Schedule of Accreditation

issued by

United Kingdom Accreditation Service

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

 Accredited to ISO/IEC 17025:2005	Scottish Police Authority Forensic Services	
	Issue No: 043 Issue date: 16 November 2018	
	Scottish Crime Campus Craignethan Drive Gartcosh Scotland G69 8AE	Contact: Craig Donnachie Tel: +44 (0) 1236 818108 E-Mail: craig.donnachie@spa.pnn.police.uk Website: www.spa.police.uk
Testing performed by the Organisation at the locations specified		

Locations covered by the organisation and their relevant activities

Laboratory locations:

Location details	Activity	Location code
Address Scottish Crime Campus Craignethan Drive Gartcosh Scotland G69 8AE	Contact: Craig Donnachie Tel: +44 (0) 1236 818108 E-Mail: Craig.donnachie@spa.pnn.police.uk Website: www.spa.police.uk Forensic Analysis Quality Management	G
Address Rushton Court 3 West Victoria Dock Road Dundee DD1 3JT	Contact: Craig Donnachie Tel: +44 (0) 1236 818108 E-Mail: Craig.donnachie@spa.pnn.police.uk Website: www.spa.police.uk Forensic Analysis	D
Address 11 Howden Hall Road Edinburgh EH16 6TL	Contact: Craig Donnachie Tel: +44 (0) 1236 818108 E-Mail: Craig.donnachie@spa.pnn.police.uk Website: www.spa.police.uk Forensic Analysis	E
Address Nelson Street Aberdeen AB24 5EQ	Contact: Craig Donnachie Tel: +44 (0) 1236 818108 E-Mail: Craig.donnachie@spa.pnn.police.uk Website: www.spa.police.uk Forensic Analysis	A



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DETAIL OF ACCREDITATION

Materials/Products tested	Type of test/Properties measured/Range of measurement	Standard specifications/ Equipment/Techniques used	Location Code
<p>BODY FLUIDS and TISSUES</p> <p>Blood</p> <ul style="list-style-type: none"> - Whole - Stains - FTA cards <p>Semen</p> <ul style="list-style-type: none"> - Whole - Azoospermic <p>Saliva</p> <ul style="list-style-type: none"> - Whole - Stains - Swabs (buccal cells) <p>Hair</p> <p>Cellular Material</p> <p>Touch DNA</p> <p>Body Tissue</p> <ul style="list-style-type: none"> - Muscle 	<p><u>Forensic Analysis</u></p> <p>DNA Profiling: Short Tandem Repeat (STR) DNA profiling for forensic analysis of:</p> <ul style="list-style-type: none"> - Crime Scene Samples - Subject Samples (Reference and Volunteer) - Elimination Database samples (VED/SED) - Crime Scene Samples meeting the requirements of the Custodian for the Purpose of Supply to the National DNA Database - Subject Samples (reference and Volunteer) meeting the requirements of the Custodian for the Purpose of Supply to the National DNA Database 	<p>Documented in house Methods using automated extraction</p> <ul style="list-style-type: none"> - Prefiler <p>Documented in house Methods using manual/automated quantification</p> <ul style="list-style-type: none"> - Quantifier <p>Documented in house Methods using manual/automated amplification (PCR) and the following chemistry:</p> <ul style="list-style-type: none"> - Globalfiler <p>Documented in house Methods using Electrophoresis Applied Biosystems 3500xL Genetic Analyser©</p>	<p>G, D</p>



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<p>BODY FLUIDS and TISSUES (cont'd)</p> <p><u>CJ Line</u> Saliva Swabs (buccal cells)</p>	<p><u>Forensic Analysis</u></p> <p>DNA Profiling: Short Tandem Repeat (STR) DNA profiling for forensic analysis of:</p> <ul style="list-style-type: none"> - Subject Samples - Elimination Database samples (VED/SED and PED) - Subject Samples meeting the requirements of the Custodian for the Purpose of Supply to the National DNA Database <p><u>Related Opinions and Interpretation</u> Interpretation of DNA profiles generated internally from crime stains (single source/major-minor mixtures/complex mixtures) and reference samples</p>	<p>Documented in house methods using manual/automated extraction</p> <ul style="list-style-type: none"> - Prep-n-go - Chelex (manual extraction – hairs only) <p>Documented in house Methods using manual/automated amplification (PCR) and the following chemistry:</p> <ul style="list-style-type: none"> - GlobalFiler Express PCR Amplification Kit (CJ) <p>Documented in house Methods using Electrophoresis</p> <p>Applied Biosystems 3500xL Genetic Analyser©</p> <p>Documented in house Methods using GMIDX v1.5</p>	<p>D</p> <p>D</p>



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<p>BODY FLUIDS and TISSUES (cont'd)</p> <p><u>HID Samples</u></p> <p>Blood</p> <ul style="list-style-type: none"> - Whole - Stains <p>Hair</p> <p>Body Tissue</p> <ul style="list-style-type: none"> - Muscle - Bone - Teeth 	<p><u>Relationship Analysis</u></p> <p>Short Tandem Repeat (STR) DNA profiling for relationship testing for:</p> <ul style="list-style-type: none"> - Paternity - Maternity <p>Statistical analysis and comparison of DNA profiles generated from crime stains with compatible reference DNA profiles (internally generated or from other accredited laboratories)</p>	<p>Documented in house Methods using manual extraction</p> <ul style="list-style-type: none"> - QIAMP DNA Mini kit and QIAMP DNA Blood maxi kit <p>Documented in house Methods using manual quantification</p> <ul style="list-style-type: none"> - Quantifiler <p>Documented in house Methods using manual amplification and the following chemistry:</p> <ul style="list-style-type: none"> - Globalfiler - Applied Biosystems 3500xL Genetic Analyser© <p>Documented in house Methods using</p> <ul style="list-style-type: none"> - GMIDX v1.5 	<p>D</p> <p>D</p>



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BODY FLUIDS and TISSUES (cont'd)	<u>Forensic Analysis (cont'd)</u>		
Any material	Searching for: - Blood - Semen - Saliva - Hairs	Documented in house Methods using - visual examination - Low power microscopy - High power microscopy - Chemical testing (see below)	G, D, A, E
Any Material	Recovery and preparation, including for contingency purposes, for subsequent DNA analysis by an ISO/IEC 17025 accredited laboratory of the following from searched materials and swabs - Blood - Semen - Saliva - Hairs - Cellular Material	Documented in house Methods using - cutting - swabs and swabbing - extraction of stained materials - extraction of swabs - taping - mini-taping - Proteinase K	G, D, A, E
Blood	Presumptive testing for Blood via detection of - Peroxidase	Documented in house Methods using: - visual examination - KM (Kastle Meyer)	G, D, A, E
	<u>Related Opinions and Interpretations</u> Identification, interpretation and recording of blood patterns (BPA) on clothing and other items examined at the laboratory	Documented in house Methods using: - visual examination - Low power microscopy	G, D, A, E
Semen	Presumptive testing for seminal fluid via detection of: - Acid Phosphatase	Documented in house Methods using: - visual examination - Acid Phosphatase detection (colour reaction)	G, D, A, E



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BODY FLUIDS and TISSUES (cont'd)	<u>Forensic Analysis (cont'd)</u>		
Semen	Confirmatory testing for seminal fluid via identification of Spermatozoa	Documented in house methods using - High power microscopy - Haematoxylin and Eosin staining (H&E)	G, D, A, E
Saliva	Presumptive testing for saliva via detection of: - Amylase	Documented in house method using - visual examination - Phadebas tube test - Phadebas paper test	G, D, A, E
DAMAGE	<u>Forensic Analysis</u>		
Damage (Clothing and Fabric material)	<u>Related Opinions and Interpretations</u> Examination, assessment and evaluation of a damage item, comparison of damage with suspected instrument (excluding firearms) to determine the likelihood the suspected instrument caused the damage	Documented in house Methods using: - visual examination - Microscopy	G, D, A, E
DOCUMENTS	<u>Forensic Analysis</u>		
Handwriting (Roman Script)	The examination of submitted items to compare handwriting from known and suspect sources to establish links and/or authorship	Documented in house method using - visual examination - low power microscopy	G
Signatures	The examination of submitted items to compare signatures from known and suspect sources to establish links and/or authorship	Documented in house method using - visual examination - low power microscopy	G



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DOCUMENTS (cont'd)	<u>Forensic Analysis (cont'd)</u>		
Paper and other material	Detection and enhancement of indented marks made by handwriting	Documented in house method using <ul style="list-style-type: none"> - oblique lighting - low power microscopy - ESDA 	G
Documents	Detection of alterations and decipherment of altered or obliterated entries <ul style="list-style-type: none"> - Paper examinations - Photocopying 	Documented in house method using <ul style="list-style-type: none"> - visual examination - lighting techniques - microscopy - VSC6000 	G
DRUGS (and materials suspected of containing drugs)	<u>Forensic Analysis</u> Legal classification of controlled drugs (Misuse of Drugs Act 1971)		G
	Identification of Cannabis and cannabis resin	Documented in house method using <ul style="list-style-type: none"> - microscopy - thin-layer chromatography (TLC) - gas chromatography mass spectrometry GC-MS 	G, D
	Identification of <ul style="list-style-type: none"> - Amphetamine - Cocaine - Diamorphine - MDMA - Codeine (D only) - LAMPA (D only) - LSD (D only) - Methamphetamine (D only) - MDA(D only) - MDEA (D only) - Mono-acetylmorphine (6-MAM) (D only) - Morphine (D only) 	Documented in house method using <ul style="list-style-type: none"> - spot tests (Marquis reagent/Cobalt thiocyanate) - GC-MS - HPLC 	G, D



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DRUGS (cont'd) (and materials suspected of containing drugs)	<u>Forensic Analysis (cont'd)</u> Quantification of - Amphetamine - Diamorphine - Cocaine (D only)	Documented in house method using - HPLC	G, D
	Identification of characteristically marked proprietary pharmaceuticals, illicit copies and other drugs products	Documented in house method using - visual comparison of appearance, markings - dimensions with reference materials, data collections and descriptions in authoritative texts - TICTAC - GCMS	G, D
FIREARMS Ammunition	<u>Forensic Analysis</u> Examination of discharged ammunition components to determine the number of guns used	Documented in house method using - comparison microscopy	G
	Examination of cartridges to determine if ammunition has been loaded into a firearm	Documented in house method using - comparison microscopy	G
	Comparison of spent ammunition to suspect guns	Documented in house method using - comparison microscopy	G
	Ammunition and component identification and legal classification	Documented in house method using - weighing - microscopy - length measurement - use of known samples or standard reference data	G



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FIREARMS (cont'd)	<u>Forensic Analysis</u>		
	Firearm and firearm component part identification and legal classification (Firearms Act 1968)	Documented in house method using comparison with known samples, reference standards and publications	G
	Trigger pull measurement	Documented in house method using - dead weights	G
	Trigger travel determination	Documented in house method using - length measurement	G
	Determination of Kinetic Energy of projectiles	Documented in house method using - balance and chronograph	G
	Accidental discharge	Documented in house method using - impact and drop tests	G
	Range of fire determination	Documented in house method using test firing with appropriate weapon/ammunition combination and target material to assess range of fire. Comparison of test patterns to exhibits/productions	G
	Test firing to assess the functionality of weapons and/or ammunition	Documented in house method using suspect or reference guns and ammunition	G
	Test firing to generate test samples of ammunition for comparison to exhibits/productions	Documented in house method using suspect or reference guns and ammunition	G
Electric Shock Devices	Identification, classification and function test	Documented in house method using visual examination, function testing and measurement of spark gap	G



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FIREARMS (cont'd) Ammunition	<u>Forensic Analysis</u> Comparison of spent ammunition to suspect guns	Supplier to NABIS using documented in house methods using <ul style="list-style-type: none"> - IBIS bullet Trax HD3D - IBIS Brass TRax - IBIS Matchpoint Plus 	G
GUN SHOT RESIDUE (GSR/FDR) Clothing/items from both subjects and loci, FDR Recovery Kits, cartridge cases and bullets	<u>Forensic Analysis</u> Recovery of in-organic gun shot residues (primer)	Documented in house method using <ul style="list-style-type: none"> - carbon coated aluminium stubs - taping - swabbing 	G
Recovered material	Identification of in-organic gun shot residues (primer)	Documented in house method using <ul style="list-style-type: none"> - SEM/EDX 	G
FLAMMABLE LIQUIDS (FIRE ACCELERANTS) Material recovered from and associated with Fire Scenes	<u>Forensic Analysis</u> Examination and analysis of the following flammable liquids <ul style="list-style-type: none"> - Petrol - Paraffin - Turpentine substitute - White spirit - Diesel - Alcohols (ethanol) 	Documented in house methods using <ul style="list-style-type: none"> - ATD-GCMS 	G
GLASS	<u>Forensic Analysis</u> Search and Recovery of glass fragments from clothing and objects	Documented in house methods using <ul style="list-style-type: none"> - visual examination - recovery using brushing and packaging blanks 	G



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GLASS (cont'd)	<u>Forensic Analysis</u> Characterisation of glass fragments	Documented in house method using <ul style="list-style-type: none"> - Refractive index determination by oil immersion (GRIM) - Low power microscopy - Reannealing by tube furnace 	G
	Comparison of recovered glass fragments to control samples recovered from crime scenes	Documented in house method	G
MARKS AND IMPRESSIONS	<u>Forensic Analysis</u>		
Footwear mark	Assessment, Comparison and evaluation of footwear with scene marks	Documented in house methods using visual comparison	G
Fingermarks Any material which is capable of retaining friction ridge marks	Enhancement of fingermarks and palm marks	Documented In-House Methods using chemical enhancement and lighting techniques (method numbers provided in brackets) : <ul style="list-style-type: none"> - Acid Treatments: Acid Black 1, Acid Violet 17, Acid Yellow 7 - Cyanoacrylate (CNA) Fuming (including Poly UV CNA) - Basic Yellow 40 (BY40) - Ninhydrin - Powdering Techniques: black and white magnetic powder - Powder suspension (Iron oxide black and white powder suspension) 	G, D



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MARKS AND IMPRESSIONS (cont'd)	<u>Forensic Analysis (cont'd)</u>		
Fingermarks Any material which is capable of retaining friction ridge marks (cont'd)	Enhancement of fingermarks and palm marks (cont'd)	Documented In-House Methods using: - visual examination - White and filtered light - High energy light sources	G, D
Developed fingerprint marks	Determination of the presence of friction ridge characteristics for the purpose of subsequent comparison	Documented In-House Methods for imaging / digital capture	G, D
Images of fingermark and palm mark friction ridge detail	Visual analysis, comparison and evaluation of recovered friction marks with finger, thumb and palm from known marks	Documented In-House methods using visual examination, low power magnification and automated fingerprint recognition system IDENT1.	G, D, A, E
Images of fingermark and palm mark friction ridge detail	Manual analysis, comparison and evaluation of recovered friction marks with finger, thumb and palm from known marks	Documented In-House methods using visual examination, low power magnification, comparators dimensional measurements and reference databases.	G, D, A, E
	<u>Opinion and Interpretation</u> The evaluation of the significance of any matching features between the suspect mark and a known mark to determine the likelihood of the suspect mark being made by an individual marks being made by the same unidentified person	Documented In-House methods using: - Personal experience - Databases	G, D, A, E



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PAINTS	<u>Forensic Analysis</u> Search and Recovery of paint and paint fragments from clothing and objects for analysis	Documented in house Methods using - visual examination - Low power microscopy - Brushing - Scalpel recovery of paint deposits	G
	Comparison of control and recovered samples	Documented in house methods using - high power comparison microscopy - FTIR - SEM	G
VEHICLE COMPONENTS Wheel assemblies removed from vehicles (Tyres)	<u>Forensic Analysis</u> Examination of wheel assemblies and constituent parts of wheel assemblies (rims, tyres, inner tubes)	Documented in house method using - visual examination - length measurement - pressure measurement	G
	Identification of damage and defects - Measurement of tread depth - Measurement of valve back pressure	Documented in house method using - visual examination - length measurement - pressure measurement	G



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BODY FLUIDS Blood (Preserved/Unpreserved) Urine (Perserved/Unpreserved) Alcohol Technical Defence (in relation to RTA and sexual offences)	<u>Forensic Analysis</u> Detection and quantification of alcohol in relation to the Road Traffic Act (minimum quantification level 10mg%)	Documented in house Method using headspace GC-FID	E
	<u>Related Opinions and Interpretations</u> Estimation of alcohol consumption and elimination with respect to validity of drinking patterns: 1) Effect of alleged post accident alcohol consumption on measured breath/body fluids alcohol levels 2) Effect of alleged spiked drink 3) Back calculations of breath/body fluid alcohol levels to the time of accident or other incident from 20mg%/ 8.6.µg% and above	Documented in house Method using mathematical calculations - blood - urine	E
FIBRES	<u>Forensic Analysis</u> Recovery of fibres for contingency purposes from clothing and objects	Documented in house Methods using: - Visual examination - taping, - low power microscopy - mounting	A



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FIBRES (cont'd)	<u>Forensic Analysis</u> (cont'd)		
	Search and recovery of fibres from clothing and objects for analysis (including tapings)	Documented in house Methods using: - visual examination - low power microscopy and screening - fibre recovery (taping) - mounting	A
	Identification of fibre type	Documented in house Methods using: - Polarised light microscopy - FTIR	A
	Comparison of fibre	Documented in house Methods using: - Stereo microscopy - Polarised light microscopy - Comparison microscopy	A
	Spectroscopic analysis of fibres in the visible range for the purpose of comparison of fibres	Documented in house Methods using: - UV and visible microspectrophotometry	A
	<u>Opinion and Interpretation</u> The evaluation of the significance of any matching features between the suspect and reference/control fibre to determine the likelihood of the suspect fibre coming from a specific source	Documented in house Methods	A
HAIRS	Differentiation of Human and Animal hairs	Documented in house Methods using: - Visual examination - Low power microscopy - High power microscopy	A

END