Schedule of Accreditation

issued by

United Kingdom Accreditation Service

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

10308

Accredited to ISO/IEC 17025:2017

Key Forensic Services Ltd

Issue No: 024 **Issue date:** 2021

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Testing performed by the Organisation at the locations specified below

Locations covered by the organisation and their relevant activities

Laboratory locations:

Location details		Activity	Location code
Address University of Warwick Science Park Sir William Lyons Road Coventry West Midlands CV4 7EZ	**Local contact** Ali Clark Tel: +44 (0)2477 712246 Fax: +44 (0)2476 323398 E-Mail: qms.team@keyforensic.co.uk Website: www.keyforensic.co.uk	Forensic Analysis Quality Management	A
Address 207B and C Cavendish Place Birchwood Park Warrington WA3 6WU	**Local contact** Ali Clark Tel: +44 (0)2477 712246 Fax: +44 (0)2476 323398 E-Mail: info@keyforensic.co.uk Website: www.keyforensic.co.uk	Forensic Analysis	B
Address 4 Penfold Drive Wymondham Norfolk NR18 OWZ	**Local contact** Ali Clark Tel: +44 (0)2477 712246 Fax: +44 (0)2476 323398 E-Mail: qms.team@keyforensic.co.uk Website: www.keyforensic.co.uk	Forensic Analysis DNA Profiling	C

DETAIL OF ACCREDITATION

Materials/Products tested	Type of test/Properties measured/Range of measurement	Standard specifications/ Equipment/Techniques used	Location Code
	Forensic Testing	The organisation has demonstrated adherence to the relevant requirements of the Forensic Science Regulators Code of Practice and Conduct in relation to their Forensic Activities	A, B, C
ALCOHOL BEVERAGES	Forensic Analysis		
	Detection and quantitation of alcohol content in submitted beverages	Documented in house method using GC-FID	A
BODY FLUIDS and TISSUES	Forensic Analysis		
Blood - Whole - Stains Semen - Whole - Azoospermic Saliva - Whole - Stains - Swabs (buccal cells) Hair Cellular Material Body Tissue - Nail - Bone - Teeth	Short Tandem Repeat (STR)/Y Chromosome DNA profiling for forensic analysis of: - Elimination Database samples (VED, SED, PED) - Crime Scene Samples meeting the requirements of the Custodian for the Purpose of Supply to the National DNA Database - Subject Samples (PACE and Volunteer) meeting the requirements of the Custodian for the Purpose of Supply to the National DNA Database - Environmental Monitoring Samples	Documented In-House Methods using manual extraction (KFSP124 & 154) - Qiagen - SwabSolution™ SwabSolution™ (reference buccal swabs only) Documented In-House Methods using Manual quantification (KFSP132 & 187) - Plexor HY - ABI 7500 Documented In-House Methods using Manual amplification (PCR) and the following chemistry: - ESI 17 - NGM Select - Powerplex Y23 (Y chromosome only) - SwabSolution™ (reference buccal swabs only) Documented In-House Methods using Electrophoresis (KFSP219 & 186) Applied Biosystems 3500XL and 3130XL Genetic Analyser©	C C

Materials/Products tested	Type of test/Properties measured/Range of measurement	Standard specifications/ Equipment/Techniques used	Location Code
BODY FLUIDS and TISSUES (cont'd)	<u>Forensic Analysis</u> (cont'd)		
- Muscle	Short Tandem Repeat (STR) DNA profiling for forensic analysis of: Crime Scene Samples Subject Samples	Documented In-House Methods using manual extraction - Qiagen	C
	Crime Scene Samples Subject Samples ctd	Documented In-House Methods using Manual quantification (KFSP187)	
		- Plexor HY - ABI 7500	C
		Documented In-House Methods using Manual amplification (PCR) and the following chemistry:	
		- ESI 17 - NGM Select - Powerplex Y23 (Y chromosome only)	C
		Documented In-House Methods using Electrophoresis (KFSP219 & 186) - Applied Biosystems 3500XL Genetic Analyser© - Applied Biosystems 3130XL Genetic Analyser©	C
	<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 Statistical analysis and comparison of DNA profiles generated from crime stains with compatible reference DNA profiles (internally generated or from other accredited laboratories)	Documented In-House methods (KFSP217 & 218 – GMIDX KFSP268, 271, 272 – STR Mix, KFSP228 - YHRD) - Genetic Characterisation o GMIDX (B and C only) o STRMix V2.6 & V2.7 o Y HRD (C only)	A, B, C

Materials/Products tested	Type of test/Properties measured/Range of measurement	Standard specifications/ Equipment/Techniques used	Location Code
BODY FLUIDS and TISSUES (cont'd) Saliva - Swabs (buccal cells) - Whole - FTA (Fast Technology for Analysis of nucleic acids) paper for saliva Blood - FTA (Fast Technology for Analysis of nucleic acids) paper for blood - Whole - Swabs Semen - Whole - Azospermic Cellular Material - Surrogate reference samples (e.g. toothbrushes and razors) Hair Body Tissue - Nail - Bone - Teeth Muscle	<u>Relationship Analysis</u> Short Tandem Repeat (STR) /Y Chromosome DNA profiling for relationship testing for: - Paternity - Maternity - Sibling - Extended relationships (Aunt/Uncle, Niece/Nephew, Grandparent, Grandchild and cousins)	Documented In-House Methods (KFSP124, 139, 133, 199, 210) using Manual extraction - QiaAMp - SwabSolution (Saliva Swabs, buccal cells only) Documented In-House Method (KFSP133) using Manual amplification and the following chemistry: - Fusion - SwabSolution (Saliva Swabs, buccal cells only) - Powerplex Y23 - ESI 17 Documented In-House Method (KFSP186) using Electrophoresis Applied Biosystems 3500XL and 3130XL Genetic Analyser©	C
	<u>Related Opinions and Interpretation</u> Comparison, interpretation and statistical analysis of DNA profiles against compatible DNA Profile information from within submitted cases	Documented In-House method (KFSP210, 214 and 228) Genetic Characterisation using - GMID-X - GenoProof v3 - Y HRD	A, B, C

Materials/Products tested	Type of test/Properties measured/Range of measurement	Standard specifications/ Equipment/Techniques used	Location Code
BODY FLUIDS and TISSUES (cont'd)	<u>Forensic Analysis</u> (cont'd)		
Any material	Searching for - Semen - Saliva - Blood - hairs	Documented in house methods KFSP140, 142 and 145 using - visual examination - low power microscopy - high power microscopy - chemical tesing (see below)	A, B, C
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: - semen - Saliva - Blood - cellular material - hairs	Documented in house methods KFSP 255, 115, 140, 142, 143, 144 and 145 142 and 159 using - cutting, - swabbing of stains - extraction of stained materials - extraction of swabs, - minitaping as appropriate	A, B, C
Blood	Presumptive testing for Blood via detection of: - Peroxidase - Human Haemoglobin	Documented in house method KFSP 142 using - Visual Examination - LMG (Leucomalachite green) - KM (Kastle Meyer) - Bluestar - luminol - leuco-crystal violet (LCV)	A, B, C B B B
	<u>Related Opinions and Interpretations</u>		
Blood	Identification, interpretation and recording of blood patterns (BPA) on clothing and other items examined at the laboratory	Documented In-House Method KFSP 142 & 172 using: - visual examination - low power microscopy	A, B, C

Materials/Products tested	Type of test/Properties measured/Range of measurement	Standard specifications/ Equipment/Techniques used	Location Code
BODY FLUIDS and TISSUES (cont'd)	Forensic Analysis (cont'd)		
Semen	Presumptive testing for seminal fluid, via detection of: - Acid Phosphatase - Choline - Prostate Specific Antigen (PSA)	Documented In-House Methods KFSP 255 and 144 using: - Visual Examination - Alternative light sources - Acid phosphatase detection (colour reaction) - Choline detection by Florence Iodine test - PSA detection by immunoassay (C only)	
Semen	Confirmatory testing for seminal fluid via identification of: - Spermatozoa	Documented In-House Methods KFSP 255 and 144 using: - High power microscopy - Haematoxylin and Eosin staining	A, B, C
Saliva	Presumptive testing for saliva via detection of: - Amylase	Documented In-House Method KFSP 143 using: - Visual examination - Phadebas paper	A, B, C
DAMAGE	Forensic Analysis		
Damage (Clothing and Fabric material)	Related Opinions and Interpretations		
	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 KFSP098 using: - visual examination - microscopy	A, B

Materials/Products tested	Type of test/Properties measured/Range of measurement	Standard specifications/ Equipment/Techniques used	Location Code
TOXICOLOGY BODY FLUIDS	<u>Forensic Analysis</u>		
Blood/Urine (Preserved, Unpreserved)	Detection and quantification of alcohol in relation to the Road Traffic Act (>20-400mg/100ml)	Documented in house method KFSP090 using - GC-FID	A
Blood (preserved)	Detection and quantification of drugs in relation to S5A of the Road Traffic Act 1988 (as amended) and the Drug Driving (Specified Limits) (England and Wales) Regulations 2014: <u>(Limit) and (Calibration Range):</u> Amphetamine (250µg/l) (25-1250 µg/l) Benzoylecgonine (50µg/l) (25-1000 µg/l) Clonazepam (50µg/l) (20-400 µg/l) Cocaine (10µg/l) (5-500 µg/l) Diazepam (550µg/l) (100-2000 µg/l) Flunitrazepam (300µg/l) (100-2000 µg/l) Ketamine (20µg/l) (10-1000 µg/l) Lorazepam (100µg/l) (20-400 µg/l) Lysergic Acid Diethylamide (LSD) (1µg/L) (0.5-10 µg/l) Methadone (500µg/L) (10-2500 µg/l) Methylamphetamine (10µg/l) (5-1000 µg/l) Methylenedioxymethamphetamine (MDMA) (10µg/l) (5-1000 µg/l) 6-Monoacetylmorphine (5µg/l); (2.5-75 µg/l) Morphine (80µg/l) (25-1000 µg/l) Oxazepam (300µg/l) (100-2000 µg/l) Temazepam (1000µg/l) (100-2000 µg/l)	Documented in house method KFSP 238 using: Protein pPrecipitation and LC-MS-MS	B

Materials/Products tested	Type of test/Properties measured/Range of measurement	Standard specifications/ Equipment/Techniques used	Location Code
TOXICOLOGY BODY FLUIDS (cont'd)	Forensic Analysis (cont'd)		
Blood (preserved)	Detection and quantification of drugs in relation to S5A of the Road Traffic Act 1988 (as amended) and the Drug Driving (Specified Limits) (England and Wales) Regulations 2014: (Limit) and (Calibration Range): Delta-9-Tetrahydrocannabinol (THC) (2 µg/L); (0.5-15 µg/l)	Documented in house methods (ref KFSP236) using liquid-liquid extraction and: - Liquid chromatography tandem mass-spectrometry (LC-MS/MS)	B
Blood (Preserved/Unpreserved)	Presumptive screening for the presence of the following drug or drug group (cut-off limit) Buprenorphine (0.5 µg/l)	Documented in house method (ref KFSP232) using: - Liquid enzyme immunoassay (EIA) / Enzyme-linked immunosorbent (ELISA)	B
Blood and Urine (Preserved/Unpreserved)	Detection and quantitation of fluoride	Documented in house (ref KFSW 267) using Ion selective electrode	B

Materials/Products tested	Type of test/Properties measured/Range of measurement	Standard specifications/ Equipment/Techniques used	Location Code
TOXICOLOGY BODY FLUIDS (cont'd)	Forensic Analysis (cont'd)		
Blood (Preserved/Unpreserved)	Quantitative analysis of the following drugs (concentration range):	Documented in house method (ref KFSP238) using protein precipitation and Liquid chromatography tandem mass-spectrometry (LC-MS/MS)	B
	Amphetamines Group: Amphetamine (25-1250 µg/l Methylamphetamine (5-1000 µg/l) Methylenedioxymethamphetamine (MDMA) (5-1000 µg/l) Methyldioxyamphetamine (MDA) (5-1000 µg/l l) Methylenedioxyethylamphetamine (MDEA) (5-1000 µg/l)		B
	Benzodiazepines Group: Alprazolam (100-2000 µg/l) Clonazepam (20-400 µg/l) Diazepam (100-2000 µg/l)Flunitrazepam (100-2000 µg/l)Lorazepam (20-400 µg/l) Midazolam (100-2000 µg/l) Nitrazepam (100-2000 µg/l) Nordiazepam (100-2000 µg/l) Oxazepam (100-2000 µg/l) Phenazepam (100-2000 µg/l) Temazepam (100-2000 µg/l)		B
	Cocaine group: Cocaine (Preserved only) (5-500 µg/L) Benzoylecgonine (25-1000 µg/L) Cocaethylene (Preserved only) (5-500 µg/L)		B
	Opioids Group: Codeine (25-1000 µg/l) Dihydrocodeine (25-1000 µg/l l) Morphine (25-1000 µg/l) 6-monoacetylmorphine (6-MAM) (2.5-75 µg/l) Methadone (100-2500 µg/l)		B

Materials/Products tested	Type of test/Properties measured/Range of measurement	Standard specifications/ Equipment/Techniques used	Location Code
TOXICOLOGY BODY FLUIDS (cont'd)	Forensic Analysis (cont'd)		
Blood (Preserved/Unpreserved)	Quantitative analysis of the following drugs (concentration range):	Documented in house method (ref KFSP238) using Protein Precipitation and Liquid chromatography tandem mass-spectrometry (LC-MS/MS)	
	Z Drugs group: Zopiclone (5-500 µg/l) Zaleplon (5-500 µg/l) Zolpidem (5-500 µg/l l)		B
	Ketamine (10-1000 µg/l) Norketamine (10-1000 µg/l)		B
	Lysergic Acid Diethylamide (LSD) (0.5-10 µg/l)		B
Blood (Preserved/Unpreserved)	Quantitative analysis of the following drugs (concentration range):	Documented in house methods KFSP236 using liquid-liquid extraction and LC-MS/MS	B
	Cannabinoids group: Delta-9-tetrahydrocannabinol (THC) (0.5-15 µg/l) 11-hydroxy-Delta-9-tetrahydrocannabinol (11-OH-THC) (0.5-15 µg/l) 11-nor-Delta-9-tetrahydrocannabinol-9-carboxylic acid (11-COOH-THC)(5-150 µg/l)		B

Materials/Products tested	Type of test/Properties measured/Range of measurement	Standard specifications/ Equipment/Techniques used	Location Code
TOXICOLOGY BODY FLUIDS (cont'd) Blood (Preserved/Unpreserved)	Forensic Analysis (cont'd) Quantitative analysis of the following drugs (concentration range): (cont'd) **Cathinones group:** Mephedrone (4-methylmethcathinone) (50-1000µg/l) 4-MEC (4-methylethcathinone) Methylone (50-1000 µg/l) Naphyrone (50-1000 µg/l) Butylone (50-1000 µg/l) MDPV (3,4-methylenedioxypyrovalerone) (50-1000 µg/l) Cathinone (50-1000 µg/l) Methcathinone (50-1000 µg/l) Methedrone (50-1000 µg/l) Pentylone (50-1000 µg/l) **Piperazines group:** BZP (1-benzylpiperazine) (50-1000 µg/l) TFMPP (1-[3-Trifluoromethyl)phenyl]piperazine) (50-1000 µg/l) m-CPP (meta-chlorophenylpiperazine) (50-1000µg/l)	Documented in house method KFSP 239 using: Protein precipitation and LC-MS-MS	B B
Urine (Preserved/Unpreserved)	Presumptive screening for the presence of the following drug (s) or drug group(s) (cut-off limit) Amphetamines (150 µg/l) Methamphetamines (150 µg/l) Cocaine metabolite (50 µg/l) Cannabinoids (10 µg/l) Methadone (40 µg/l) Opiates (100 µg/l l) Benzodiazepines (50 µg/l) Ketamine (10 µg/l)	Documented in house method (ref KFSP232) using: - Liquid enzyme immunoassay (EIA) / Enzyme-linked immunosorbent (ELISA)	B B

Materials/Products tested	Type of test/Properties measured/Range of measurement	Standard specifications/ Equipment/Techniques used	Location Code
TOXICOLOGY BODY FLUIDS (cont'd) Urine (Preserved/Unpreserved)	<u>Forensic Analysis</u> (cont'd) Confirmation (above specified cut-off limit) of the following drugs (cut-off limit):		
	Cannabinoids group: 11-nor-Delta-9-tetrahydrocannabinol-9-carboxylic acid (11-COOH-THC) – (0.1µg/l)	Documented in house method KFSP 236 using: - Protein precipitation and LC-MS-MS	B
	Cocaine group: Cocaine (1.05 µg/l) Benzoylecgonine (1.36 µg/l) Cocaethylene (0.73 µg/l)	Documented in house method KFSP 237 using: - Protein precipitation and LC-MS-MS	B
	Opiates/Opioids Group: 6-monoacetylmorphine (6-MAM) (1.5 µg/l) Morphine (0.74 µg/l) Dihydrocodeine (1.04 µg/l) Methadone (0.99 µg/l) Codeine (2.66 µg/l)		B
	Benzodiazepines: Diazepam (0.97 µg/l) Nordiazepam (1.34 µg/l) Oxazepam (4.86 µg/l) Temazepam (0.91 µg/l) Alprazolam (2.06 µg/l) Phenazepam (2.77 µg/l)		B
	Ketamine (1.47 µg/l)		B
	Amphetamine and related compounds: Amphetamine (1.86 µg/l) Methylamphetamine (2.72 µg/l) Methylenedioxymethylamphetamine (MDMA) (1.66 µg/l) Methyldioxyamphetamine (MDA) (3.71 µg/l) Methylenedioxyethylamphetamine (MDEA) (2.44 µg/l l)		B

Materials/Products tested	Type of test/Properties measured/Range of measurement	Standard specifications/ Equipment/Techniques used	Location Code
TOXICOLOGY BODY FLUIDS (cont'd) Urine (Preserved/Unpreserved)	<u>Forensic Analysis</u> (cont'd) Confirmation (above specified cut-off limit) of the following drugs (cut-off limit): **Cathinones group:** Mephedrone (4-methylmethcathinone) (1.32 µg/l) 4-MEC (4-methylethcathinone) (2.04 µg/l) Methylone (0.63 µg/l) Naphyrone (0.41 µg/l) Butylone (1.40 µg/l) MDPV (3,4-methylenedioxypyrovalerone) (0.76 µg/l) Cathinone (1.27 µg/l) Methcathinone (0.76 µg/l l) Methedrone (0.49 µg/l) Pentylone (0.92 µg/l) **Piperazines group:** BZP (1-benzylpiperazine) (0.52µg/l) TFMPP (1-[3-Trifluoromethyl)phenyl]piperazine) (0.79 µg/l) m-CPP (meta-chlorophenylpiperazine) (1.09µg/l)	Documented in house method KFSP 239 using: - Protein precipitation and LC-MS-MS	B B

Materials/Products tested	Type of test/Properties measured/Range of measurement	Standard specifications/ Equipment/Techniques used	Location Code
DRUGS (and materials suspected of containing drugs)	<u>Legal classification of controlled drugs (Misuse of Drugs Act 1971)</u>		
	Identification of cannabis, cannabis resin and cannabis products	Documented in house method KFSP 203 using : - Microscopy - TLC - GC-MS	A
	Identification of cannabis plants	Documented in house method KFSP 203 using - Microscopy	A
	Identification of: - Opiates - Cocaine - Amphetamine - Ecstasy - LSD (by TLC only) - Psilocybin/Psilocin (by TLC only)	Documented in house method KFSP 203 using - spot tests(Marquis Reagent and Cobalt Thiocyanete Reagent) (KFSP194) - microscopy - TLC (KFSP202) - FTIR (KFSP193) - GC-MS (KFSP190)	A
	Identification of : - Mephedrone - Methylethcathinone - TFMPP - Methylamphetamine Temazep	Documented In house method KFSP 190 using - GC-MS	A
	Identification of : - Buprenorphine - Ketamine - Tramadol - Zolpidem	Documented In house method KFSP 190 using GC-MS	A
	The identification of additives and diluents commonly associated with drugs: - Caffeine - Lignocaine - Phenacetin - Levamisole - Benzocaine - Paracetamol	Documented in house method KFSP 190 using - GC-MS	A

Materials/Products tested	Type of test/Properties measured/Range of measurement	Standard specifications/ Equipment/Techniques used	Location Code
DRUGS (and materials suspected of containing drugs)	Legal classification of controlled drugs (Misuse of Drugs Act 1971)		
	Quantification of : - Amphetamine - Cocaine - Diamorphine - MDMA	Documented in house methods KFSP 204 using - HPLC	A
FIBRES	Forensic Analysis (cont'd)		
	Recovery of fibres for contingency purposes from clothing and objects	Documented in house method KFSP037 using - visual examination - low power microscopy - taping - Mounting	A, B
Natural and man made fibres	Search and recovery of fibres from clothing and objects for analysis	Documented in house method KFSP037 using - Visual Examination - Low power microscopy - taping	A
Natural and man-made fibres	Identification of fibre type	Documented in house method KFSP037 using - FTIR - polarised light microscopy	A
Natural and man made fibres	Comparison of fibres	Documented in house method KFSP037 using - comparison microscopy - TLC	A
Natural and man made fibres	Spectroscopic analysis of fibres in the visible range for the purpose of comparison of fibres	Documented in house method KFSP037 using - microspectrophotometry (visible light)	A,
	Opinion and Interpretation 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 method	A

Materials/Products tested	Type of test/Properties measured/Range of measurement	Standard specifications/ Equipment/Techniques used	Location Code
FIREARMS	<u>Forensic Analysis</u>		
	Examination of discharged ammunition components to determine the number of guns used.	Documented In house methods KFSP263 using: - comparison microscopy	B
	Examination of cartridges to determine if ammunition has been loaded into a firearm	Documented In house methods KFSP263 using : - Microscopy - comparison microscopy	B
	Comparison of spent ammunition to suspect guns	Documented In house methods KFSP263 using: - comparison microscopy	B
	<u>Opinion and Interpretation</u> The evaluation of features between recovered and reference/control ammunition.	Documented In-House methods using - Personal experience - Reference collections	B
Ammunition	Ammunition and component identification and legal classification	Documented In house method KFSP069 using : - Weighing - length measurement - use of known samples or standard reference data.	B
Firearms	Firearm and firearm component part identification and legal classification (Firearms Act 1968)	Documented in house method KFSP069 using - visual examination - physical properties and features - use of reference sources and publications	B
	Trigger pull measurement	Documented in house method KFSP070 using - weights	B

Materials/Products tested	Type of test/Properties measured/Range of measurement	Standard specifications/ Equipment/Techniques used	Location Code
FIREARMS (cont'd)	Range of fire determination	Documented in house method KFSP072 and KFSP087 using - appropriate weapon/ ammunition combination & target material to assess range of fire - Comparison of test patterns to exhibits	B
	<u>Opinion and Interpretation</u> The evaluation of features between recovered and reference/control shot patterns to determine range of fire	Documented In-House methods using - Personal experience - Simulation	B
Firearms	Test Firing to assess the functionality of weapons and/or ammunition.	Documented In house method KFSP068 using suspect or reference guns and ammunition	B
Firearms	Determination of Kinetic Energy of projectiles	Documented In house method (KFSP073) using SKAN chronograph and balance	B
Firearms	Test Firing to generate test samples of ammunition for comparison to exhibits	Documented In house method KFSP068 using suspect or reference guns and ammunition	B
Firearms	Test Firing to generate test samples of ammunition for inclusion in the NABIS database	Documented In house methods KFSP068 meeting the requirements of NABIS	B
Articles suspected of being damaged by firearms	Presumptive Testing for the presence of Lead	Documented In house method (KFSP291 & KFSW050) using spot tests (Sodium Rhodizonate) for lead	B
Articles suspected of being damaged by firearms	Presumptive Testing for the presence of Copper	Documented In house method (KFSP291 & KFSW050) using spot tests for (DTO) Copper	B
Electrical Shock Devices	Identification, classification and function test	Documented In house method (KFSP303 & KFSP609) using visual examination and function testing.	B
Any firearm	Accidental discharge testing	In house method (KFSP070) using impact and drop tests	B

Materials/Products tested	Type of test/Properties measured/Range of measurement	Standard specifications/ Equipment/Techniques used	Location Code
GUN SHOT RESIDUE (GSR / FDR)	<u>Forensic Analysis</u>		
	Recovery of in-organic gun shot residues (primer)	Documented in house method KFSP080 using - carbon coated aluminium stubs	A
Recovered Material	Identification of in-organic gun shot residues (primer)	Documented in house method KFSP034 using - SEM/EDS	A
GLASS	<u>Forensic Analysis</u> (cont'd)		
	Search and Recovery of glass fragments from clothing and objects	Documented in house method KFSP047 using - visual examination microscopy - appropriate recovery: - Shaking - Brushing - Direct removal	A
	Characterisation of glass fragments	Documented in house method KFSP047 & KFSP036 using - refractive index determination by oil immersion (GRIM) - re-annealing by tube furnace - low power microscopy and UV illumination, - elemental analysis by SEM-EDX	A
	Comparison of recovered glass fragments to control samples recovered from crime scenes	Documented in house method KFSP047 and KFSP036	A
	<u>Opinion and Interpretation</u> The evaluation of the significance of matching and non-matching features between the suspect and reference/control samples	Documented in house method KFSP047	A

Materials/Products tested	Type of test/Properties measured/Range of measurement	Standard specifications/ Equipment/Techniques used	Location Code
LACHRYMATORS	Forensic Analysis (cont'd)		
	Recovery of lachrymators material	Documented in house methods KFSP180 using - Activation - Direct sampling	B
	Identification of - Ortho-chlorobenzalmalonitrile (CS) - Alpha-chloroacetophenone (CN) - Pelargonic acid vanillylamide (PAVA) - Capsaicin (Pepper Spray)	Documented in house method KFSP180 using - GCMS	A
	Legal Classification of devices (Firearms Act 1968)		B
	Analysis to determine the nature of the contents, functionality of device and whether the item fits the description of a Prohibited Weapon		B
MARKS AND IMPRESSIONS	Forensic Analysis		
Footwear	Coding of Custody prints taken from suspect footwear using gross features	Documented in house method KFSP067	A
	Enhancement of footwear marks recovered from scenes	Documented in house method KFSP032 & KFSP019 using - lighting techniques - powders - ESLA - gel lifting - gel scanner - digital capture photography	A

Materials/Products tested	Type of test/Properties measured/Range of measurement	Standard specifications/ Equipment/Techniques used	Location Code
MARKS AND IMPRESSIONS (cont'd)	Forensic Analysis (cont'd)		
Footwear (cont'd)	Production of test marks from suspect footwear	Documented in house method KFSP019 using - Dynamic Oil and magna Powder Method - Static Powdering Methods (using Aluminium flake / black granular powder) - 3-D test impressions (using Bio Foam)	A
Footwear mark (physically or image)	Assessment, Comparison and evaluation of footwear with scene marks	Documented In-House methods KFSP019 using visual examination and low power microscopy and dimensional measurements	A
	Opinion and Interpretation The evaluation of the significance of any matching and non-matching features between the footwear scene impression and reference/control footwear marks	Documented In-House methods KFSP019 using - Personal experience - Local test mark reference database	A
Packaging (Plastic bags and clingfilm typcially associated with drugs packaging)	Examination to determine the presence of striation marks and manufacturing features	Documented in house method KFSP205 using - dimensional measurement - visual comparison - polarised light - shadowgraph	A
MARKS AND IMPRESSIONS (cont'd)	Opinions and Interpretation The evaluation of the significance of any matching features between the recovered packaging to determine if they are from the same source	Documented In-House method	A

Materials/Products tested	Type of test/Properties measured/Range of measurement	Standard specifications/ Equipment/Techniques used	Location Code
DRUGS	Legal classification of controlled drugs (Misuse of Drugs Act 1971) and substances		
Paper Banknotes	Detection and identification of: Amphetamines Group: - Amphetamine - Methylenedioxymethylamph-etamine (MDMA) - Methylamphetamine Benzodiazepines Group: - Diazepam - Temazepam Cocaine Group: - Cocaine Cannabis Group: - Delta-9-tetrahydrocannabinol (THC) Methadone Group: - Methadone Opiates Group: - Codeine - Diamorphine - Morphine - Fentanyl Phenacetin Aspirin Paracetamol	Documented in House Method (KFSP333) using thermal desorption MS-MS	A

Materials/Products tested	Type of test/Properties measured/Range of measurement	Standard specifications/ Equipment/Techniques used	Location Code
DRUGS (cont'd) Swabs (taken of miscellaneous items, including but not limited to items such as: mobile phones, items of clothing, weighing scales, polymer banknotes)	Recovery and identification of drug traces from drug paraphernalia and packaging Detection and identification of: Amphetamines Group: - Amphetamine - Methylenedioxymethylamph-etamine (MDMA) - Methylamphetamine Benzodiazepines Group: - Diazepam - Temazepam Cocaine Group: - Cocaine Cannabis Group: - Delta-9-tetrahydrocannabinol (THC) Methadone Group: - Methadone Opiates Group: - Codeine - Diamorphine - Morphine - Fentanyl Phenacetin Aspirin Paracetamol	Documented in House Method (KFSP333) using thermal desorption MS MS	A
END			