

Materials/Products tested	Type of test/Properties measured/Range of measurement	Standard specifications/ Equipment/Techniques used
INCIDENT SCENE EXAMINATION		
Volume Crime Major Crime	Assessment, Forensic Strategy Setting, Location, Identification, Recovery, Recording (including general photography), Selecting, Examination and Interpretation of Physical Material and Associated Items from Scenes of Crime for Forensic Purposes	
Body Fluids	Location, recovery, and presumptive testing	<ul style="list-style-type: none"> - Visual examination - Swabbing, taping, cutting etc. - Chemical tests
Blood	Identification, interpretation and recording of blood patterns (BPA) on items examined at the scene	<ul style="list-style-type: none"> - Visual examination
Footwear / Toolmarks	Location, enhancement, and recovery	<ul style="list-style-type: none"> - Chemical and Physical enhancement techniques - Lifting / casting techniques - Visual and lighting enhancement techniques - Digital capture / photography
Particulate Trace Materials	Location and recovery	<ul style="list-style-type: none"> - Visual examination - Taping / Forceps
Friction Ridge Detail	Location and Enhancement of fingermarks and palm marks, plantar marks	<ul style="list-style-type: none"> - Chemical and Physical enhancement techniques - Lifting techniques - Visual and lighting enhancement techniques - Digital capture / photography
FORENSIC EXAMINATION OF SEXUAL OFFENCE COMPLAINANTS		
To be determined		
HUMAN BIOLOGICAL MATERIAL EXAMINATION		
Any Material	Searching for: <ul style="list-style-type: none"> - Blood - Semen - Saliva - Faeces - Urine - Hairs - Products of conception 	<ul style="list-style-type: none"> - Visual examination - Light sources - Low and high-power microscopy - Chemical test
Body Fluids	Recovery and Presumptive Testing	<ul style="list-style-type: none"> - Swabbing, taping, cutting etc. - Chemical tests
Semen	Confirmatory Tests	<ul style="list-style-type: none"> - Microscopy
Hair	Differentiation of Human and Animal	<ul style="list-style-type: none"> - Visual examination - Microscopy
HUMAN BODY FLUID DISTRIBUTION ANALYSIS		
Blood	<u>Opinion and Interpretation</u> Blood Pattern Analysis	<ul style="list-style-type: none"> - Visual examination, microscopy, dimensional measurement, simulated experiment

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HUMAN DNA ANALYSIS		
Human Body Fluids	Extraction, quantification, amplification, and analysis of DNA from crime scene samples, subject samples, elimination database samples, environmental monitoring samples.	- Automated and Manual processes
	Extraction, quantification, amplification, and analysis of DNA samples to meet the requirements of the Custodian for the purpose of Supply to the National DNA Database	- Automated and Manual processes
	<u>Opinion and Interpretation</u> Interpretation of DNA Profiles Statistical analysis and comparison of DNA profiles	- Expert systems
HUMAN KINSHIP ANALYSIS		
Human Body Fluids	Extraction, quantification, amplification, and analysis of DNA.	- Automated and Manual processes
	<u>Opinion and Interpretation</u> Comparison, interpretation, and statistical analysis of DNA Profiles against compatible DNA Profile information from within submitted cases	- Expert systems
NON-HUMAN BIOLOGICAL EXAMINATION - VERTEBRATES		
Non-human Body Fluids and Tissues	Extraction, amplification, and analysis of DNA.	- Automated and Manual processes
TOXICOLOGY: ANALYSIS FOR DRUG(S), ALCOHOL, AND/OR NOXIOUS SUBSTANCES		
Human Body Fluids	Presumptive screening for the presence of drugs of abuse	- Chemical and instrumental analysis
	Screening and confirmation of drugs of abuse	- Instrumental analysis
	Quantitative analysis of drugs of abuse	- Instrumental analysis
	Identification and quantification of alcohol	- Instrumental analysis
TOXICOLOGY: ANALYSIS FOR DRUGS AND ALCOHOL UNDER THE ROAD TRAFFIC ACT 1988, TRANSPORT AND WORKS ACT 1992, AND RAILWAYS AND TRANSPORT SAFETY ACT 2003		
Blood / Urine	Detection and quantification of alcohol	- Instrumental Analysis

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TOXICOLOGY: ANALYSIS FOR DRUGS IN RELATION TO S5A OF THE ROAD TRAFFIC ACT 1988		-
Blood	Detection and quantitation of drugs of abuse	- Instrumental Analysis
ANALYSIS TO IDENTIFY AND QUANTIFY DRUGS AND/OR ASSOCIATED MATERIALS		
Drugs (and materials suspected of containing drugs)	Sample preparation of large seizures of controlled drugs and materials suspected of containing drugs	- Homogenisation and sub-sampling
	Presumptive testing for drugs	- Chemical tests
	Identification and quantification of controlled drugs	- Visual examination - Microscopy - Instrumental analysis
	Identification of additives and diluents commonly associated with drugs	- Instrumental analysis
Swabs / Banknotes	Identification of controlled drugs	- Instrumental analysis
FRICTION RIDGE DETAIL: VISUALISATION AND ENHANCEMENT		
Any material which is capable of retaining Friction Ridge Detail	Visualisation and enhancement of fingermarks, palm marks and plantar marks	- Chemical and Physical enhancement techniques - Lifting techniques - Visual and lighting enhancement techniques
	Imaging of fingermarks, palm marks and plantar marks	- Imaging and digital capture
Developed Friction Ridge Detail	Determination of the presence of friction ridge characteristics for the purpose of subsequent comparison	- Visual examination - Low power microscopy
FRICTION RIDGE DETAIL: COMPARISON		
Friction Ridge Detail - Ten Prints	Comparison with Ten Prints	- Visual manual techniques - Automated techniques for initial screening
Friction Ridge Detail - Ten Prints	Comparison with Marks	- Visual manual techniques - Automated techniques for initial screening
Friction Ridge Detail - Marks	Comparison with Ten Prints	- Visual manual techniques - Automated techniques for initial screening
Friction Ridge Detail - Marks	Comparison with Marks	- Visual manual techniques - Automated techniques for initial screening
Friction Ridge Detail – Reference Plantar	Comparison with Reference Plantar	- Visual manual techniques
Friction Ridge Detail – Plantar Marks	Comparison with Reference Plantar	- Visual manual techniques
	<u>Opinion and Interpretation</u> The evaluation of the significance of any matching and non-matching features between sources of friction ridge detail	

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FOOTWEAR: CODING AND SCENE LINKING		
Footwear	Coding of incident scene marks and prints taken from suspect footwear	- National Footwear Reference Collection
	Coding of Custody prints taken from suspect footwear using gross features	- National Footwear Reference Collection
	Linking of incident scene marks to other incident scene marks or crime scene marks to suspect footwear	- National Footwear Reference Collection or local database
FOOTWEAR: SCREENING		
Footwear	Screening of suspect footwear by pattern type, size, wear, and general patterns	- Visual examination
FOOTWEAR MARK COMPARISONS		
Footwear mark	Visualisation / Enhancement of footwear marks	- Chemical and Physical enhancement techniques - Lifting techniques - Visual and lighting enhancement techniques
Footwear	Production of test marks from suspect footwear	- Chemical and Physical techniques
Footwear mark	Assessment, Comparison, and evaluation of footwear with scene marks	
	<u>Opinion and Interpretation</u> The evaluation of the significance of any matching and non-matching features between the footwear scene impression and reference/control footwear marks	
MARKS VISUALISATION AND ENHANCEMENT		
Toolmarks	Visualisation, enhancement, and recovery of toolmarks	- lighting technique - casting - digital capture/photography
	Production of Test Marks from suspect items	- test mark media / casting - digital capture/photography
MARKS COMPARISON		
Toolmarks	Comparison of submitted marks, photographs of marks or marks made from suspect items with marks left at scene	- visual examination - low power microscopy - comparison microscopy - dimensional measurements - photography
	<u>Opinion and Interpretation</u> The evaluation of the significance of any matching and non-matching features between the tool scene impression and reference/control toolmarks	

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DAMAGE AND PHYSICAL FIT		
Damage Clothing / Fabric	Examination, assessment, and evaluation of a damage item	<ul style="list-style-type: none"> - Visual examination - Lighting techniques - Microscopy
	<u>Opinion and Interpretation</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.	
Physical Fit Drugs, packaging, clothing, documents etc.	Examination of material to determine the presence of a physical fit including the determination of striation and manufacturing marks.	<ul style="list-style-type: none"> - Visual examination - Physical manipulation - Lighting techniques - Microscopy - Photography / Digital Capture - Shadowgraph - Casting
	<u>Opinion and Interpretation</u> The evaluation of the significance of any matching features between the recovered packaging to determine if they are from the same source.	
TAGGANT ANALYSIS		
Taggants Any solid material including swabs	Search, recovery, and preparation for subsequent analysis	<ul style="list-style-type: none"> - Visual examination - Light sources - Low power microscopy - Swabbing, cutting, taping etc.
	Analysis and comparison of recovered material with known source	<ul style="list-style-type: none"> - High power microscopy - Instrumental analysis
ANALYSIS OF CORROSIVES AND/OR NOXIOUS SUBSTANCES		
NOXIOUS SUBSTANCES (Acids, Bases and Bleaches)	Identification of acids, bases, and bleaches	<ul style="list-style-type: none"> - Chemical and instrumental analysis
LACHRYMATORS	Recovery, presumptive testing, and identification.	<ul style="list-style-type: none"> - Direct sampling and swabbing - Chemical test - Instrumental analysis
	Legal classification of devices (Firearms Act 1968) Analysis to determine the nature of the contents of a device, and whether the item fits the description of a Prohibited Weapon	<ul style="list-style-type: none"> - Visual examination - Reference standards and publications
ANALYSIS OF RESIDUES OF LUBRICANTS USED IN SEXUAL OFFENCES, INCLUDING OILS, GREASES, AND LUBRICANTS		
Lubricants Swabs / Fabric / Material	Recovery, extraction, and analysis of lubricants	<ul style="list-style-type: none"> - Extraction - Instrumental analysis

Materials/Products tested	Type of test/Properties measured/Range of measurement	Standard specifications/ Equipment/Techniques used
ANALYSIS OF IGNITABLE LIQUIDS AND THEIR RESIDUES		
Ignitable liquids (Fire accelerants)	Recovery, examination, analysis, identification, and comparison of potential fire accelerants	<ul style="list-style-type: none"> - Direct and headspace sampling - Instrumental analysis
EXAMINATION AND ANALYSIS OF PARTICULATE TRACE MATERIALS		
Fibres (Any material)	Search, recovery, identification, and comparison of fibres	<ul style="list-style-type: none"> - Visual examination - Microscopy - Recovery techniques - Instrumental analysis
	<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	
Glass (Any material)	Search, recovery, characterisation, and comparison of glass fragments	<ul style="list-style-type: none"> - Visual examination - Microscopy - Recovery techniques - Instrumental analysis
	<u>Opinion and Interpretation</u> The evaluation of the significance of matching and non-matching features between the suspect and reference/control samples	
Paint (Any material)	Search, recovery, and comparison of paint	<ul style="list-style-type: none"> - Visual examination - Microscopy - Recovery techniques - Instrumental analysis
	<u>Opinion and Interpretation</u> The evaluation of the significance of any matching and non-matching features between the suspect and reference/control paint samples	
EXAMINATION AND ANALYSIS OF GUNSHOT RESIDUE (GSR)		
Gunshot residue (GSR) (Any material)	Recovery, identification, and comparison of organic and inorganic GSR	<ul style="list-style-type: none"> - Recovery methods - Instrumental analysis
Articles suspected of being damaged by firearms	Presumptive Testing for the presence of Lead and Copper	<ul style="list-style-type: none"> - Chemical tests
	<u>Opinions and Interpretations</u> Identification (type) and comparison of recovered GSR particles, including with a suspected source	
EXAMINATION AND CLASSIFICATION OF FIREARMS, AMMUNITION, AND ASSOCIATED MATERIALS		
Firearms	Firearm and firearm component part identification and legal classification (Firearms Act 1968)	<ul style="list-style-type: none"> - Visual examination - Reference standards and publications

Materials/Products tested	Type of test/Properties measured/Range of measurement	Standard specifications/ Equipment/Techniques used
	Firearm identification from class marks present on ammunition components	<ul style="list-style-type: none"> - Visual examination - Reference standards and publications
	Test firing to assess functionality of weapons and ammunition and to generate test samples for comparison	<ul style="list-style-type: none"> - Test firing
	Trigger pull measurement	<ul style="list-style-type: none"> - Strain Gauge / weights
	Trigger travel measurement	<ul style="list-style-type: none"> - Length measurement
	Determination of Kinetic Energy	<ul style="list-style-type: none"> - Chronograph / balance
	Accidental discharge testing	<ul style="list-style-type: none"> - Impact and drop tests
	Determination of Range of Fire	<ul style="list-style-type: none"> - Test firing
	<u>Opinion and Interpretation</u> The evaluation of features between recovered and reference/control shot patterns to determine range of fire	<ul style="list-style-type: none"> - Simulation
	Test Firing to generate test samples of ammunition for comparison to exhibits and for inclusion in the NABIS database	<ul style="list-style-type: none"> - Test firing
FIREARMS: BALLISTICS		
Ammunition	Ammunition and component identification and legal classification	<ul style="list-style-type: none"> - Weighing - length measurement - use of known samples or standard reference data.
	Examination of cartridges to determine if ammunition has been loaded into a firearm	<ul style="list-style-type: none"> - Microscopy
	<u>Opinion and Interpretation</u> The evaluation of features on recovered unfired ammunition	<ul style="list-style-type: none"> - Use of known samples or standard reference data.
	Examination of discharged ammunition components to determine the number of guns used.	<ul style="list-style-type: none"> - Microscopy
	<u>Opinion and Interpretation</u> The evaluation of features between recovered fired ballistic components	<ul style="list-style-type: none"> - Use of known samples or standard reference data.
	Comparison of spent ammunition to suspect guns	<ul style="list-style-type: none"> - Microscopy
	<u>Opinion and Interpretation</u> The evaluation of features on recovered fired ballistic components	<ul style="list-style-type: none"> - Use of known samples or standard reference data.
	Test Firing to generate test samples of ammunition for comparison to exhibits and for inclusion in the NABIS database	<ul style="list-style-type: none"> - Test firing

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EXAMINATION AND ANALYSIS OF VEHICLE COMPONENTS		
Light bulbs from motor vehicles and pedal bicycles	Examination and investigation of cause of failure or defect	<ul style="list-style-type: none"> - Visual examination - Microscopy - Electrical continuity - Illumination test
Wheel assemblies removed from vehicles (tyres)	Examination of wheel assemblies and constituent parts of wheel assemblies (rims, tyres, inner tubes) Identification of damage and defects <ul style="list-style-type: none"> - Measurement of tread depth - Measurement of valve back pressure 	<ul style="list-style-type: none"> - Visual examination, - Lighting techniques - Microscopy, - length measurement - pressure measurement
EXAMINATION AND ANALYSIS OF HAZARDOUS CHEMICAL AND BIOLOGICAL AGENTS AND ASSOCIATED MATERIALS		
Organic liquids and water based liquid samples and extracts of samples	Identification and confirmation of CW agents and /or related compounds	<ul style="list-style-type: none"> - Instrumental analysis
EXAMINATION AND ANALYSIS OF EXPLOSIVES, EXPLOSIVES PRECURSORS, AND EXPLOSIVE RESIDUES		
Explosives, Trace, Non-Trace, Pyrotechnics and Associated Material	Recovery, identification, and confirmation of explosives and precursors	<ul style="list-style-type: none"> - Recovery methods - Instrumental analysis
DATA CAPTURE AND PROCESSING FROM DIGITAL STORAGE DEVICES		
Computers, digital storage devices, mobile phones, tablets etc.	Physical and logical capture and preservation of data	<ul style="list-style-type: none"> - Digital forensic tools and software
Data associated with digital devices	Screening of digital media for defined data types e.g. images, videos etc.	<ul style="list-style-type: none"> - Digital forensic tools and software
Data extracted from digital devices	Processing of data	<ul style="list-style-type: none"> - Digital forensic tools and software
DIGITAL DATA ANALYSIS		
Data extracted from digital devices	Processing and analysis of data	<ul style="list-style-type: none"> - Digital forensic tools and software
GEOLOCATION ANALYSIS		
To be determined		
RECOVERY AND PROCESSING OF FOOTAGE FROM CCTV/VSS		
CCTV Systems	Recovery of CCTV footage from digital CCTV systems Physical capture and preservation	<ul style="list-style-type: none"> - Digital forensic tools and software
Analogue and Digital CCTV footage	Video conversion / de-multiplexing Production of digital stills	<ul style="list-style-type: none"> - Digital forensic tools and software
Digital Images / Video	Enhancement of digital images/video	<ul style="list-style-type: none"> - Digital forensic tools and software

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SPECIALIST VIDEO MULTIMEDIA, RECOVERY, PROCESSING AND ANALYSIS		
To be determined		
TECHNICAL AUDIO OPERATIONS		
Audio Digital Media	Physical and logical capture and preservation of data	- Digital forensic tools and software
Audio files	Standardisation /conversion	- Digital forensic tools and software
DOCUMENT HANDWRITING		
Handwriting and signatures	The examination of submitted items to compare known and suspect sources.	- visual examination - low power microscopy - photography
	<u>Opinion and interpretation</u> The evaluation of the significance of any similarities and differences between submitted items and/or suspect/reference sources to determine the likelihood of them being written by the same/different individuals.	
DOCUMENT AUTHENTICITY AND ORIGIN		
Documents	Detection and enhancement of indented marks made by handwriting	- Visual examination - Lighting techniques - Low power microscopy - ESDA
	Detection of alterations and decipherment of altered or obliterated entries	- Visual examination - Lighting techniques - Low power microscopy - VSC
Office printing equipment	Comparison of office printing equipment and outputs with suspect material	- Visual examination, - Low power microscopy
Inks	Recovery and comparison of inks	- Extraction - Visual examination - Lighting techniques - Low power microscopy - TLC
Currency and identity documents	Examination to determine the authenticity	- Visual examination - Low power microscopy - VSC - Database
END		