


Schedule of Accreditation

issued by

United Kingdom Accreditation Service

21 - 47 High Street, Feltham, Middlesex, TW13 4UN, UK

| | | |
|---|--|--|
|  <p>Accredited to ISO/IEC 17025:2005</p> | Orchid Cellmark Ltd (trading as Cellmark) | |
| | Issue No: 030 | Issue date: 08 May 2012 |
| | Unit 16 Blacklands Way Abingdon Business Park Abingdon Oxfordshire OX14 1DY | Contact: Mr Peter Harper Tel: +44 (0)1235 552317 Fax: +44 (0)1235 554428 E-Mail: pharper@orchid.co.uk Website: www.orchid.com |
| 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 |
|--|--|---------------|
| <p>Address Unit 16 Blacklands Way Abingdon Business Park Abingdon Oxfordshire OX14 1DY</p> <p>Local contact Mr Peter Harper Tel: +44 (0)1235 552317 Fax: +44 (0)1235 554428 E-Mail: pharper@orchid.co.uk Website: www.orchid.com</p> | Forensic Testing; Paternity and Relationship testing; Forensic and Veterinary, Forensic Analysis | A |
| <p>Address Unit 1 Buckshaw Link Ordnance Road Buckshaw Village Chorley Lancashire PR7 7EL</p> <p>Local contact Mr Peter Harper Tel: +44(0)1235 552317 Fax: +44(0)1235 554428 E-Mail: pharper@orchid.co.uk Website: www.orchid.com</p> | Forensic Analysis | B |



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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 |
|---|---|---|---------------|
| BODY FLUIDS/TISSUES Blood (whole and stains) Body Tissue Buccal Swabs Cellular Material Hair Police Elimination Database Samples (PEDS) Saliva Saliva on FTA cards Semen | <u>Forensic Testing</u> | | |
| | DNA profiling: | Documented In-House Methods meeting the requirements for supply of profiles to the Custodian of the National DNA Database for subject (PACE) and Crime Scene Samples including: | A |
| | Analysis of Short Tandem Repeat (STR) loci using SGM Plus | Manual extraction, quantitation, amplification, electrophoresis and profile designation | A |
| | | Automated extraction of subject samples. Automated set up of PCR reactions for Quantitation. | A |
| | | Use of expert system for profile designation of subject samples | A |
| | Analysis of Short Tandem Repeat (STR) loci | Documented In-House Methods for profiling trace quantities of DNA including use of elevated PCR cycle number and Post PCR enhancement techniques (Low Template DNA) | A |
| BODY FLUIDS/TISSUES | <u>Forensic Testing</u> | | |
| | DNA profiling: | | |
| | Analysis of Human Short Tandem Repeat (STR) loci on the Y chromosome | Documented In-House Methods defining extraction, amplification, electrophoresis and profile designation of Human samples using AB Y-Filer kit | A |
| Analysis of Human Short Tandem Repeat (STR) loci in degraded/inhibited forensic samples | Documented In-House Methods defining extraction, amplification, electrophoresis and profile designation of Human samples using AB Minifiler kit | A | |



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| BODY FLUIDS/ISSUES (cont'd) | <u>Forensic Testing</u> (cont'd) DNA profiling: Human mitochondrial DNA analysis and comparison of results with reference samples | In house method for extraction, amplification, quantification, sequencing, electrophoresis, and analysis of results | A |
| BODY FLUIDS/ISSUES | <u>Paternity and Relationship Testing</u> DNA profiling: Analysis of Short Tandem Repeat (STR) loci using SGM Plus, Powerplex 16, Y-Filer and Identifiler Kits | Documented In-House Methods including: Manual extraction, quantitation, amplification, electrophoresis and profile designation of samples Automated extraction of samples Use of expert system for profile designation of Paternity samples | A A A A |
| BODY FLUIDS | <u>Forensic examination and analysis</u> | | |
| ANY MATERIAL | Search for blood, saliva semen and cellular debris Recovery of blood, saliva, semen and cellular material from: Searched material/objects Swabs for subsequent DNA analysis Presumptive testing for Seminal fluid via detection of: Enzyme activity Choline | In house methods using visual examination, low power microscopy and high power microscopy In house method using cutting, swabbing of stains, extraction from stained materials, extraction from swabs, minitaping as appropriate In house methods: Using acid phosphatase detection (colour reaction) Using Florence Iodine test to indicate presence of Choline | A, B A, B A, B A, B |



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| BODY FLUIDS (cont'd) | <u>Forensic examination and analysis</u> (cont'd) | | |
| ANY MATERIAL (cont'd) | Confirmatory identification of Spermatazoa | In house method using microscopy and Haematoxylin and Eosin staining Christmas Tree staining | A, B A |
| | Presumptive testing for blood via detection of: Enzyme activity | In house methods: Using peroxidase detection (colour reaction) | A, B |
| | Presumptive testing for saliva via detection of: Amylase | In house method using Phadebas (paper and tube test) | A, B |
| | Presumptive testing for urine via detection of: Urea | In house method using DMAC and Azostix® | A, B |
| | Recovery of hairs from: Searched materials/objects Swabs for subsequent DNA analysis | In house methods using microscopy, taping, recovery to sealed bags, recovery to sealed tubes as appropriate | A |
| | Recovery of fibres from: Searched materials/objects Swabs for contingency purposes | In house method using taping | A, B |
| | Recovery of hairs from: Searched materials/objects Swabs for contingency purposes | In house methods using microscopy, taping, recovery to sealed bags, recovery to sealed tubes as appropriate | A, B |



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| BODY FLUIDS (cont'd) | <u>Forensic examination and analysis</u> (cont'd) | | |
| ANY MATERIAL (cont'd) | Detection of body fluids on submitted items using white light, filtered and UV light (Crimelite) | In house method using white light, filtered and UV light (Crimelite) | A, B |
| | Detection of blood on dark coloured items (clothing) | In house method using hydrogen peroxide | A, B |
| ANY MATERIAL | Identification, recording and interpretation of blood patterns on clothing and other items examined at the laboratory | In house method using visual examination, low power microscopy and dimensional measurement | A,B |
| FABRIC MATERIAL AND WEAPONS | Damage to fabrics including physical fit of fabrics and comparison with suspect weapons | In house method using visual examination, low power microscopy and dimensional measurement | A, B |
| | <u>Forensic and Veterinary</u> | | |
| Blood Body Tissue DNA | Single Nucleotide Polymorphisms | Documented In-House Methods using Primer Extension Technology | A |
| | Analysis of Bovine Short Tandem Repeat (STR) loci | Documented In-House Methods defining extraction, amplification, electrophoresis and profile designation of Bovine samples using Finnzymes kit 1.1 | A |
| Forensic samples and meat products | Identification of animal species by sequencing of the 12S rRNA mitochondrial gene from DNA extracts | Documented In-House Methods defining extraction, amplification, sequencing and analysis | A |



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| GLASS | <u>Forensic examination and analysis</u> | | |
| | Search and recovery of glass from casework items | Documented In-House Methods using low power microscopy | A, B |
| | Preparation of glass fragments for SEM analysis | Documented In-House Method describing SEM stub preparation | B |
| PAINT | Analysis of recovered glass fragments and control samples | Documented In-House Methods using GRIM 3 refractive index measurement and annealing | A, B |
| | Search and recovery of paint from casework items | Documented In-House Methods using low power microscopy | B |
| | Examination of paint samples | Documented In-House Methods using chemical spot tests and bright field/dark field/florescence microscopy | B |
| TOOLMARKS | <u>Forensic examination and analysis</u> | | |
| | Examination of toolmarks | Documented In-House Methods using low power microscopy and photography | B |
| FIBRES Vegetable, Animal, and Man-made Fibres | Recovery from clothing and objects (including TWOC cases) | In house method using visual examination, low power microscopy, fibre recovery and mounting | B |
| | Identification of fibre type | Documented In-House Method using polarising light, indication of birefringence examination by microscopy - comparison microscopy using white, blue and UV light | B |
| HAIRS | Differentiation of animal and human hair | Documented In-House Method using low and high power microscopy | A, B |



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| MARKS | <u>Forensic examination and analysis</u> Revelation of marks in blood on items recovered from scenes | Documented In-House Methods using Sulphosalicylic acid, methanol and heat fixing, acid black 1 and leuco-crystal violet | B |
| FOOTWEAR MARKS | <u>Forensic examination and analysis</u> Comparison of footwear with scene marks including physical enhancement of submitted scene marks Comparison of footwear marks with footwear and with other marks | Documented In-House Methods using gel lifting, ESLA, photography and lighting Documented In-House Methods using dynamic and static methods incorporating powders (Bristol black/aluminium/light mineral oil/magnetic powder) and casting in dental stone/bio foam | B |
| LACHRYMATORS | <u>Forensic Analysis</u> Analysis to determine the nature of the contents of submitted devices including the identification of Ortho-chlorobenzalmalonitrile (CS) Alpha-chloroacetophenone (CN) Pelargonic acid vanillylamide (PAVA) Capsaicin (Pepper Spray) | Documented in house method using GCMS | A |
| END | | | |