


# Schedule of Accreditation

issued by

## United Kingdom Accreditation Service

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

 <p>Accredited to ISO/IEC 17025:2005</p>	<b>Orchid Cellmark Ltd (trading as Cellmark)</b>	
	<b>Issue No: 066    Issue date: 25 April 2017</b>	
	<b>Unit 16 Blacklands Way</b> <b>Abingdon Business Park</b> <b>Abingdon</b> <b>Oxfordshire</b> <b>OX14 1DY</b>	<b>Contact: Mr Peter Harper</b> <b>Tel: +44 (0)1235 528609</b> <b>Fax: +44 (0)1235 554428</b> <b>E-Mail: pharper@cellmark.co.uk</b> <b>Website: www.cellmarkforensics.co.uk</b> <b>Website: www.cellmark.co.uk</b>
<b>Testing performed by the Organisation at the locations specified below</b>		

### Locations covered by the organisation and their relevant activities

#### Laboratory locations:

Location details	Activity	Location code
<b>Address</b> Unit 16 Blacklands Way Abingdon Business Park Abingdon Oxfordshire OX14 1DY	<b>Local contact</b> Mr Peter Harper  Tel: +44 (0)1235 528609 Fax: +44 (0)1235 554428 E-Mail: pharper@cellmark.co.uk Website: www.cellmark.co.uk	Forensic Testing; Paternity and Relationship testing; Forensic and Veterinary, Forensic Analysis  A
<b>Address</b> Unit 1 Buckshaw Link Ordnance Road Buckshaw Village Chorley Lancashire PR7 7EL	<b>Local contact</b> Mr Peter Harper  Tel: +44(0)1235 528609 Fax: +44(0)1235 554428 E-Mail: pharper@cellmark.co.uk Website: www.cellmark.co.uk	Forensic Analysis  B



2045  
Accredited to  
ISO/IEC 17025:2005

**Schedule of Accreditation**  
issued by  
**United Kingdom Accreditation Service**  
2 Pine Trees, Chertsey Lane, Staines-upon-Thames, TW18 3HR, UK

**Orchid Cellmark Ltd (trading as Cellmark)**  
Issue No: 066 Issue date: 25 April 2017

Testing performed by the Organisation at the locations specified

DETAIL OF ACCREDITATION

Materials/Products tested	Type of test/Properties measured/Range of measurement	Standard specifications/ Equipment/Techniques used	Location Code
BODY FLUIDS and TISSUES	<u>Forensic Testing</u>	The organisation has demonstrated adherence to the relevant requirements of the Forensic Science Regulators Code of Practice and Conduct (Version 3.0, February 2016) in relation to their Forensic Activities	A, B
	<u>Forensic Analysis</u>		
Blood	DNA Profiling: Short Tandem Repeat (STR) DNA profiling for forensic analysis of:	Documented In-House Methods using manual/automated extraction	A
- Whole	- Low Template DNA (elevated cycle number (SGM Plus) and post PCR enhancement SGM Plus and NGM SElect))	- Automate Express (FSP0124)	
- Stains	- Crime Scene Samples meeting the requirements of the Custodian for the Purpose of Supply to the National DNA Database	- Qiagen (EZ1) (FSP0050)	
- FTA cards	- Subject Samples (PACE and Volunteer) meeting the requirements of the Custodian for the Purpose of Supply to the National DNA Database	- Chelex (FSP0038)	
Semen	- Elimination Database samples (VED/SED and PED)	- FTA purification (STR0187/FSP0156)	
- Whole	- Environmental Monitoring Samples	- DNA IQ (STR0119)	
- Azoospermic		Documented In-House Methods using manual quantification	
Saliva		- Pico Green (QC0005/STR0161)	
- Whole		- Oli Green (QC0005/STR0161)	
- Stains		Real Time Quantification using Quantiplex HYres Dual RT-PCR (FSP0054)	
- FTA Cards		Documented In-House Methods (FSP0156/STR0159) using manual amplification (PCR) and the following chemistry:	
- Swabs (buccal cells)		- SGM Plus	
Hair		- NGM SElect	
Cellular Material		Documented In-House Methods (FSP0028/STR0162/STR0183) using Electrophoresis	
		- Applied Biosystems 3100/3130/3130xl Genetic Analyser©	



2045  
Accredited to  
ISO/IEC 17025:2005

**Schedule of Accreditation**  
issued by  
**United Kingdom Accreditation Service**  
2 Pine Trees, Chertsey Lane, Staines-upon-Thames, TW18 3HR, UK

**Orchid Cellmark Ltd (trading as Cellmark)**  
Issue No: 066 Issue date: 25 April 2017

Testing performed by the Organisation at the locations specified

Materials/Products tested	Type of test/Properties measured/Range of measurement	Standard specifications/ Equipment/Techniques used	Location Code
BODY FLUIDS and TISSUES (cont'd)	<p><u>Forensic Analysis</u> (cont'd)</p> <p><u>Related Opinions and Interpretation</u></p> <p>Interpretation of DNA profiles generated internally from crime stains (single source/major-minor mixtures/complex mixtures) and reference samples</p> <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><u>Forensic Testing</u></p>	<p>Documented In-House methods (STR0147/STR0183/STR0184/STR0194/FRP0122/FSP0133/GM0004/GM0005/FSP0021)</p> <ul style="list-style-type: none"> <li>- Genetic Characterisation               <ul style="list-style-type: none"> <li>o GMID 3.2.1</li> <li>o GeneMapper IDX</li> <li>o Expert systems:                   <ul style="list-style-type: none"> <li>▪ Mixtures Analyser</li> <li>▪ Sequencher</li> <li>▪ DNA Resolve</li> <li>▪ ReliCalc</li> <li>▪ STRMix (v2.3)</li> </ul> </li> </ul> </li> </ul>	<p>A</p> <p>A</p> <p>A, B</p> <p>A</p> <p>A, B</p> <p>A, B</p> <p>A, B</p>
<p>Blood</p> <ul style="list-style-type: none"> <li>- FTA cards</li> </ul> <p>Saliva</p> <ul style="list-style-type: none"> <li>- FTA Cards</li> </ul>	<p>DNA Profiling: Short Tandem Repeat (STR) DNA profiling for forensic analysis of:</p> <p>Subject Samples for input into population databases.</p>	<p>Documented In-House Methods (STR0202) &amp; manufacturer specifications using FTA purification (STR0187/FSP015) and amplification (PCR) using the following chemistry:</p> <ul style="list-style-type: none"> <li>- PowerPlex® Fusion 6C</li> </ul> <p>Documented In-House Methods (STR0203) using Electrophoresis:</p> <ul style="list-style-type: none"> <li>- Applied Biosystems 3500 Genetic Analyser©</li> </ul> <p>Genetic characterisation using documented in-house methods (STR0204):</p> <ul style="list-style-type: none"> <li>- GeneMapper IDX v1.4</li> </ul>	<p>A</p>



2045

Accredited to  
ISO/IEC 17025:2005

## Schedule of Accreditation

issued by

### United Kingdom Accreditation Service

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

### Orchid Cellmark Ltd (trading as Cellmark)

Issue No: 066 Issue date: 25 April 2017

Testing performed by the Organisation at the locations specified

Materials/Products tested	Type of test/Properties measured/Range of measurement	Standard specifications/ Equipment/Techniques used	Location Code
<p>BODY FLUIDS and TISSUES (cont'd)</p> <p>Blood</p> <ul style="list-style-type: none"> <li>- Whole</li> <li>- Stains</li> <li>- FTA cards</li> </ul> <p>Semen</p> <ul style="list-style-type: none"> <li>- Whole</li> <li>- Azoospermic</li> </ul> <p>Saliva</p> <ul style="list-style-type: none"> <li>- Whole</li> <li>- Stains</li> <li>- FTA Cards</li> <li>- Swabs (buccal cells)</li> </ul> <p>Faeces</p> <p>Urine</p> <p>Stomach Contents</p> <p>Hair</p> <p>Cellular Material</p> <p>Body Tissue</p> <ul style="list-style-type: none"> <li>- Nail</li> <li>- Muscle</li> <li>- Bone</li> <li>- Teeth</li> <li>- Amniotic Fluid</li> <li>- Products of conception</li> </ul>	<p><u>Forensic Analysis</u> (cont'd)</p> <p>DNA Profiling: Short Tandem Repeat (STR)/Mitochondrial/Y Chromosome DNA profiling for forensic analysis of:</p> <ul style="list-style-type: none"> <li>- Low Template DNA (elevated cycle number and post PCR enhancement)</li> <li>- Crime Scene Samples</li> </ul>	<p>Documented In-House Methods using manual/automated extraction</p> <ul style="list-style-type: none"> <li>- Automate Express (FSP0124)</li> <li>- Chelex (FSP0038)</li> <li>- FTA purification (STR0187/FSP0156)</li> <li>- DNA IQ (STR0119)</li> </ul> <p>Documented In-House Methods using Manual quantification</p> <ul style="list-style-type: none"> <li>- Oli Green (QC0005/STR0161)</li> <li>- Real Time Quantification using Quantiplex HYres Dual RT-PCR (FSP0054) Mini-gel</li> </ul> <p>Documented In-House Methods using Manual amplification (PCR) and the following chemistry:</p> <ul style="list-style-type: none"> <li>- SGM Plus (FSP0156/STR0159)</li> <li>- NGM SElect</li> <li>- Identifiler</li> <li>- Yfiler (FSP0156)</li> <li>- mtDNA (MIT0004)</li> <li>- Minifiler (FSP0070)</li> <li>- Powerplex Y23 (FSP0149)</li> </ul> <p>Documented In-House Methods (FSP0028/STR0162/STR0188) using Electrophoresis</p> <ul style="list-style-type: none"> <li>- Applied Biosystems 3100/3130/3130xl Genetic Analyser©</li> </ul>	<p>A</p>



2045

Accredited to  
ISO/IEC 17025:2005

### Schedule of Accreditation

issued by

### United Kingdom Accreditation Service

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

### Orchid Cellmark Ltd (trading as Cellmark)

Issue No: 066 Issue date: 25 April 2017

Testing performed by the Organisation at the locations specified

Materials/Products tested	Type of test/Properties measured/Range of measurement	Standard specifications/ Equipment/Techniques used	Location Code
BODY FLUIDS and TISSUES (cont'd)	<p><u>Forensic Analysis</u> (cont'd)</p> <p><u>Related Opinions and Interpretation</u></p> <p>Interpretation of DNA profiles generated internally from crime stains (single source/major-minor mixtures) and reference samples</p> <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 (STR0168/STR0183/STR0184/STR0194/FRP0135)</p> <ul style="list-style-type: none"> <li>- Genetic Characterisation <ul style="list-style-type: none"> <li>o GMID 3.2.1</li> <li>o Expert systems: <ul style="list-style-type: none"> <li>▪ Sequencher</li> </ul> </li> </ul> </li> </ul>	A



2045  
Accredited to  
ISO/IEC 17025:2005

**Schedule of Accreditation**  
issued by  
**United Kingdom Accreditation Service**  
2 Pine Trees, Chertsey Lane, Staines-upon-Thames, TW18 3HR, UK

**Orchid Cellmark Ltd (trading as Cellmark)**  
Issue No: 066 Issue date: 25 April 2017

Testing performed by the Organisation at the locations specified

Materials/Products tested	Type of test/Properties measured/Range of measurement	Standard specifications/ Equipment/Techniques used	Location Code
<p><b>BODY FLUIDS and TISSUES (cont'd)</b></p> <p>Blood</p> <ul style="list-style-type: none"> <li>- Whole</li> <li>- Serum</li> <li>- Stains</li> </ul> <p>Semen</p> <ul style="list-style-type: none"> <li>- Whole</li> <li>- Azoospermic</li> </ul> <p>Saliva</p> <ul style="list-style-type: none"> <li>- Whole</li> <li>- Swabs (buccal cells)</li> </ul> <p>Faeces</p> <p>Hair</p> <p>Body Tissue</p> <ul style="list-style-type: none"> <li>- Nail</li> <li>- Muscle</li> <li>- Bone</li> <li>- Teeth</li> <li>- Amniotic Fluid</li> <li>- Products of conception</li> </ul>	<p><u>Relationship Analysis</u></p> <p>Short Tandem Repeat (STR)/Mitochondrial/Y Chromosome DNA profiling for relationship testing for:</p> <ul style="list-style-type: none"> <li>- Paternity</li> <li>- Maternity</li> <li>- Sibling</li> <li>- Familial Searching</li> <li>- Extended relationship (Aunt/Uncle, Niece/Nephew, Grandparent, Grandchild, Cousin)</li> </ul> <p><u>Related Opinions and Interpretation</u></p> <p>Comparison, interpretation and statistical analysis of DNA profiles against compatible DNA Profile information from within submitted cases</p>	<p>Documented In-House Methods using Manual/Automated extraction</p> <ul style="list-style-type: none"> <li>- Automate Express (FSP0124)</li> <li>- Chelex (FSP0038)</li> <li>- FTA Purification (STR0187)</li> </ul> <p>Documented In-House Methods (FSP0054) using Manual quantification</p> <p>Real Time Quantification using Quantiplex HYres Dual RT-PCR (FSP0054)</p> <p>Documented In-House Methods using Manual amplification and the following chemistry:</p> <ul style="list-style-type: none"> <li>- NGM Select (STR0161)</li> <li>- Yfiler (FSP0065)</li> <li>- Identifiler Direct (STR0187)</li> <li>- Powerplex Fusion (STR0183)</li> <li>- Powerplex Y23 (FSP0149)</li> </ul> <p>Documented In-House Methods using Electrophoresis (FSP0028/STR0162/STR0188)</p> <ul style="list-style-type: none"> <li>- Applied Biosystems 3130 Genetic Analyser©</li> </ul> <p>Documented In-House methods (STR0186/STR0183/STR0184/STR0194)</p> <ul style="list-style-type: none"> <li>- Genetic Characterisation <ul style="list-style-type: none"> <li>o GMID 3.2</li> <li>o GeneMapper IDX</li> </ul> </li> </ul>	<p>A</p> <p>A</p>



2045  
Accredited to  
ISO/IEC 17025:2005

**Schedule of Accreditation**  
issued by  
**United Kingdom Accreditation Service**  
2 Pine Trees, Chertsey Lane, Staines-upon-Thames, TW18 3HR, UK

**Orchid Cellmark Ltd (trading as Cellmark)**  
Issue No: 066 Issue date: 25 April 2017

Testing performed by the Organisation at the locations specified

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>		
ANY MATERIAL	<p>Searching for:</p> <ul style="list-style-type: none"> <li>- Blood</li> <li>- Semen</li> <li>- Saliva</li> <li>- Urine</li> <li>- Hairs</li> </ul> <p>Recovery and preparation for subsequent DNA analysis or for contingency purposes of the following from searched materials and swabs:</p> <ul style="list-style-type: none"> <li>- Blood</li> <li>- Semen</li> <li>- Saliva</li> <li>- Hairs</li> <li>- Cellular Material</li> </ul>	<p>Documented In-House Methods (FSP0027/FSP0069) using:</p> <ul style="list-style-type: none"> <li>- visual examination</li> <li>- White light and filter source</li> <li>- High Energy light Sources</li> <li>- low power microscopy</li> <li>- high power microscopy</li> <li>- chemical testing (see below)</li> </ul> <p>Documented In-House Methods (FSL0002) using:</p> <ul style="list-style-type: none"> <li>- cutting</li> <li>- swabs and swabbing</li> <li>- extraction of stained materials</li> <li>- extraction of swabs</li> <li>- taping</li> <li>- mini-taping</li> </ul>	A, B
Blood	<p>Presumptive testing for blood via detection of:</p> <ul style="list-style-type: none"> <li>- Peroxidase</li> <li>- Human Haemoglobin</li> </ul> <p><u>Related Opinions and Interpretations</u></p> <p>Identification, interpretation and recording of blood patterns (BPA) on clothing and other items examined at the laboratory</p>	<p>Documented In-House Methods (FSL0070, FSL0013, FSL0031, FSL0058, FSL0082) using:</p> <ul style="list-style-type: none"> <li>- Visual Examination</li> <li>- Alternative light sources</li> <li>- KM (Kastle Meyer)</li> <li>- Hemastix (A only (CS DNA))</li> <li>- Luminol</li> <li>- Hydrogen Peroxide</li> <li>- OBTI</li> </ul> <p>Documented In-House Methods (FSL0044/TG0010) using:</p> <ul style="list-style-type: none"> <li>- visual examination</li> <li>- low power microscopy</li> <li>- dimensional measurement</li> </ul>	A, B



2045  
Accredited to  
ISO/IEC 17025:2005

**Schedule of Accreditation**  
issued by  
**United Kingdom Accreditation Service**  
2 Pine Trees, Chertsey Lane, Staines-upon-Thames, TW18 3HR, UK

**Orchid Cellmark Ltd (trading as Cellmark)**  
Issue No: 066 Issue date: 25 April 2017

Testing performed by the Organisation at the locations specified

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)		
Semen	Presumptive testing for seminal fluid, via detection of: <ul style="list-style-type: none"> <li>- Acid Phosphatase</li> <li>- Choline</li> </ul>	Documented In-House Methods (FSL0005, FSL0007) using: <ul style="list-style-type: none"> <li>- Visual Examination</li> <li>- Alternative light sources</li> <li>- Acid phosphatase detection (colour reaction)</li> <li>- Choline detection by Florence Iodine test</li> </ul>	A, B
	Confirmatory testing for seminal fluid via identification of spermatozoa	Documented In-House Methods (FSL0009/FSL0017/FSL0008) using: <ul style="list-style-type: none"> <li>- High power microscopy</li> <li>- Christmas Tree staining</li> <li>- Haematoxylin and Eosin staining</li> </ul>	A, B
Saliva	Presumptive testing for saliva via detection of: <ul style="list-style-type: none"> <li>- Amylase</li> </ul>	Documented In-House Methods (FSL0004) using: <ul style="list-style-type: none"> <li>- Visual examination</li> <li>- Alternative light sources</li> <li>- Phadebas paper</li> <li>- Phadebas tube test</li> </ul>	A, B
Urine	Presumptive testing for urine via detection of: <ul style="list-style-type: none"> <li>- Urea</li> </ul>	Documented In-House Methods (FSL0060) using: <ul style="list-style-type: none"> <li>- Visual examination</li> <li>- Alternative light sources</li> <li>- DMAC</li> <li>- Azostix</li> </ul>	A, B
Hairs	Differentiation of human and animal hairs	Documented In-House Methods (FSL0010/FSL0068) using: <ul style="list-style-type: none"> <li>- visual examination</li> <li>- low power microscopy</li> <li>- high power microscopy</li> </ul>	A, B





2045  
Accredited to  
ISO/IEC 17025:2005

**Schedule of Accreditation**  
issued by  
**United Kingdom Accreditation Service**  
2 Pine Trees, Chertsey Lane, Staines-upon-Thames, TW18 3HR, UK

**Orchid Cellmark Ltd (trading as Cellmark)**  
Issue No: 066 Issue date: 25 April 2017

Testing performed by the Organisation at the locations specified

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 and Veterinary</u>		
Blood Body Tissue DNA FTA Cards	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 1.2 (BOVSTR0003)	A
Forensic samples and meat products	<u>Related Opinions and Interpretations</u>  Identification of animal species by sequencing of the 12S rRNA mitochondrial gene from DNA extracts	Documented In-House Methods (SID0004) defining extraction, amplification, sequencing and analysis and comparison with reference sequences and analysis (SID0001-05).  In house methods for relationship analysis (BOVSTR0006-7)	A
BODY FLUIDS and TISSUES - TOXICOLOGY	<u>Forensic Analysis</u>		
Hair	Screening for the presence of drugs of abuse:  - Amphetamines - Benzodiazepines - Cocaine - Ketamine - Methadone - Methamphetamine - Mephedrone - Opiates	Documented in house method (TOX0009) using liquid-liquid extraction and LC-MSMS	A
Hair	Confirmation and quantitation of:  Amphetamine Group : - Amphetamine - Methamphetamine - MDA - MDMA - MDEA - MBDB - Mephedrone	Documented in house method (TOX0013) using liquid-liquid extraction and LC-MSMS	A



2045  
Accredited to  
ISO/IEC 17025:2005

**Schedule of Accreditation**  
issued by  
**United Kingdom Accreditation Service**  
2 Pine Trees, Chertsey Lane, Staines-upon-Thames, TW18 3HR, UK

**Orchid Cellmark Ltd (trading as Cellmark)**  
Issue No: 066 Issue date: 25 April 2017

Testing performed by the Organisation at the locations specified

Materials/Products tested	Type of test/Properties measured/Range of measurement	Standard specifications/ Equipment/Techniques used	Location Code
BODY FLUIDS and TISSUES TOXICOLOGY (cont'd)	<u>Forensic Analysis</u> (cont'd)		
Hair	Confirmation and quantitation of (cont'd):  Cocaine Group : - Cocaine - Cocaethylene - Benzoylcegonine - Norcocaine - Anhydroecgonine methyl ester (AEME) - Ecgonine methyl ester (EME)  Opioid Group : - Methadone - EDDP  Benzodiazepines Group - Diazepam - Temazepam - Oxazepam - Chlordiazepoxide - Desmethyldiazepam  Opiate Group : - Morphine - Codeine - 6-Monoacetylmorphine (6-MAM) - Heroin - 6 – Acetylcodeine - Dihydrocodeine	Documented in house method (TOX0013) using liquid-liquid extraction and LC-MSMS	A
Hair	Confirmation and quantitation: - Ketamine	Documented in house method (TOX0014) using liquid-liquid extraction and LC-MSMS	A
Hair	Confirmation and quantitation: - Ethyl Glucuronide (EtG)	Documented in house method (TOX0015) using solid phase extraction and GC-MSMS	A



2045  
Accredited to  
ISO/IEC 17025:2005

**Schedule of Accreditation**  
issued by  
**United Kingdom Accreditation Service**  
2 Pine Trees, Chertsey Lane, Staines-upon-Thames, TW18 3HR, UK

**Orchid Cellmark Ltd (trading as Cellmark)**  
Issue No: 066 Issue date: 25 April 2017

Testing performed by the Organisation at the locations specified

Materials/Products tested	Type of test/Properties measured/Range of measurement	Standard specifications/ Equipment/Techniques used	Location Code
BODY FLUIDS and TISSUES -TOXICOLOGY (cont'd)	<u>Forensic Analysis</u> (cont'd)		
Hair	Confirmation only : Cannabis Group : - Cannabinol - Cannabidiol	Documented in house method (TOX0011) using solid-phase extraction and GC-MSMS	A
Hair	Confirmation and quantitation: Cannabis Group : - THC - THC-OH - THC-COOH	Documented in house method (TOX0011) using solid-phase extraction and GC-MSMS	A
Whole Blood (Preserved)	Detection and quantitation 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:  Amphetamine (250 ug/L) Benzoylcegonine(50 µg/L) Clonazepam (50 µg/L) Cocaine (10 µg/L) Diazepam (550 µg/L) Flunitrazepam (300 µg/L) Ketamine (20 µg/L) Lorazepam (100 µg/L) Lysergic Acid Diethylamide – LSD (1µg/L) Methadone (500 µg/L) Methylamphetamine (10 µg/L) Methylenedioxymethamphetamine – MDMA (10 µg/L) 6-Monoacetylmorphine (5 µg/L) Morphine (80 µg/L) Oxazepam (300 µg/L) Temazepam (1000 µg/L)	Documented in house (TOX0026) using: - Protein Precipitation - LCMS-MS  - -	A



2045  
Accredited to  
ISO/IEC 17025:2005

**Schedule of Accreditation**  
issued by  
**United Kingdom Accreditation Service**  
2 Pine Trees, Chertsey Lane, Staines-upon-Thames, TW18 3HR, UK

**Orchid Cellmark Ltd (trading as Cellmark)**  
Issue No: 066 Issue date: 25 April 2017

Testing performed by the Organisation at the locations specified

Materials/Products tested	Type of test/Properties measured/Range of measurement	Standard specifications/ Equipment/Techniques used	Location Code
BODY FLUIDS and TISSUES - TOXICOLOGY (cont'd)	<u>Forensic Analysis</u> (cont'd)		
Whole Blood (Preserved) (cont'd)	Delta-9-tetrahydrocannabinol (THC) (2 µg/L)	Documented in house (TOX0024) using: - Solid phase extraction - GC-MS-MS	A
Blood (Preserved, Unpreserved)	Detection and quantification of alcohol in relation to the Road Traffic Act. (10mg/mL)	Documented in house (TOX0029) using : - HS-GC-FID,	A
	Qualitative and Quantitative Analysis of Drugs of Abuse		
	Amphetamines: - Amphetamine - Butylone - Methamphetamine - Methylenedioxyamphetamine (MDA) - Methylenedioxymethamphetamine (MDMA) - Methylenedioxypropylamphetamine (MDPV) - Methylone - Naphyrone	Documented in house (TOX0026) using: - Protein Precipitation - LCMS-MS	A
	Benzodiazepines: - Alprazolam - Clonazepam - Diazepam - Desmethyldiazepam - Flunitrazepam - Lorazepam - Oxazepam - Phenazepam - Temazepam		A
	Cathinones: - Mephedrone - (4-Methylmethcathinone)		A





2045  
Accredited to  
ISO/IEC 17025:2005

**Schedule of Accreditation**  
issued by  
**United Kingdom Accreditation Service**  
2 Pine Trees, Chertsey Lane, Staines-upon-Thames, TW18 3HR, UK

**Orchid Cellmark Ltd (trading as Cellmark)**  
Issue No: 066 Issue date: 25 April 2017

Testing performed by the Organisation at the locations specified

Materials/Products tested	Type of test/Properties measured/Range of measurement	Standard specifications/ Equipment/Techniques used	Location Code
BODY FLUIDS and TISSUES - TOXICOLOGY (cont'd)  Blood (Preserved, Unpreserved) (cont'd)	<u>Chemical Analysis</u> (cont'd)  Qualitative and Quantitative Analysis of Drugs of Abuse (cont'd)  Cannabinoids: Cannabidiol Cannabinol Carboxy-THC (THC-COOH) Delta-9-tetrahydrocannabinol (THC) Hydroxy-THC (THC-OH)	Documented in house (TOX0026) using: - Protein Precipitation - LCMS-MS	A
DAMAGE  Damage (Clothing and Fabric material)	<u>Forensic Analysis</u>  <u>Related Opinions and Interpretations</u> Examination, assessment and evaluation of a damage item, comparison of damage with suspected instrument to determine the likelihood the suspected instrument caused the damage.	Documented In-House Methods (FSL0003) using: - visual examination - microscopy - dimensional measurement - Physical fit (FSL0075/FSL0039)	A, B
FIBRES	<u>Forensic Analysis</u>  Recovery of fibres for contingency purposes from clothing and objects  Search and recovery of fibres from clothing and objects for analysis (including tapings)	Documented in house method (FSL0010/FSL0055) using - visual examination - low power microscopy - taping - forceps  Documented in house method (FSL0010/FSL0055) using - visual examination, - low power microscopy and screening - fibre recovery (taping) - mounting	A, B  B



2045  
Accredited to  
ISO/IEC 17025:2005

**Schedule of Accreditation**  
issued by  
**United Kingdom Accreditation Service**  
2 Pine Trees, Chertsey Lane, Staines-upon-Thames, TW18 3HR, UK

**Orchid Cellmark Ltd (trading as Cellmark)**  
Issue No: 066 Issue date: 25 April 2017

Testing performed by the Organisation at the locations specified

Materials/Products tested	Type of test/Properties measured/Range of measurement	Standard specifications/ Equipment/Techniques used	Location Code
FIBRES (cont'd)	<u>Forensic Analysis</u> (cont'd)		
	Identification of fibre type	Documented in house method (FRP0085/ FSL0087/FSL0089) using <ul style="list-style-type: none"> <li>- polarised light microscopy</li> <li>- FTIR</li> <li>- MSP</li> </ul>	B
	Spectroscopic analysis of fibres in the visible range for the purpose of comparison of fibres	Documented in house method (method ref) using <ul style="list-style-type: none"> <li>- visible Microspectrophotometry</li> </ul>	
	Comparison of fibres	Documented in house method (FRP0085/ FSL0087/FSL0089) using <ul style="list-style-type: none"> <li>- stereo microscopy</li> <li>- polarised light microscopy</li> <li>- comparison microscopy</li> <li>- FTIR</li> <li>- MSP</li> </ul>	B
<u>FLAMMABLE LIQUIDS (FIRE ACCELERANTS)</u>	<u>Forensic Analysis</u>		
Material Recovered from and associated with Fire Scenes			
Debris and materials recovered from fires and suspected fire scenes	Recovery of potential fire accelerants	Documented in-house method using <ul style="list-style-type: none"> <li>- Direct sampling</li> <li>- Headspace sampling</li> </ul>	A, B
Common fire accelerant liquids	Recovery of potential fire accelerants	Documented in-house method (ACCEL0002) using <ul style="list-style-type: none"> <li>- Direct sampling</li> <li>- Headspace sampling</li> </ul>	A, B
	Examination and analysis of the following flammable liquids <ul style="list-style-type: none"> <li>- Petrol</li> <li>- Paraffin</li> <li>- Turpentine substitute</li> <li>- White spirit</li> <li>- Diesel</li> <li>- Alcohols (methanol/ethanol)</li> </ul>	Documented in house method (ACCEL0003) using <ul style="list-style-type: none"> <li>- TENAX</li> <li>- ATD-GCMS</li> </ul>	B



2045  
Accredited to  
ISO/IEC 17025:2005

**Schedule of Accreditation**  
issued by  
**United Kingdom Accreditation Service**  
2 Pine Trees, Chertsey Lane, Staines-upon-Thames, TW18 3HR, UK

**Orchid Cellmark Ltd (trading as Cellmark)**  
Issue No: 066 Issue date: 25 April 2017

Testing performed by the Organisation at the locations specified

Materials/Products tested	Type of test/Properties measured/Range of measurement	Standard specifications/ Equipment/Techniques used	Location Code
<u>FLAMMABLE LIQUIDS (FIRE ACCELERANTS) (cont'd)</u>  Material Recovered from and associated with Fire Scenes (cont'd)	<u>Forensic Analysis</u> (cont'd)  Analysis and identification of common fire accelerants : <ul style="list-style-type: none"> <li>- Petrol</li> <li>- Paraffin</li> <li>- Turpentine substitute</li> <li>- White spirit</li> <li>- Diesel</li> <li>- Alcohols (methanol/ethanol)</li> <li>- Lighter Fuels</li> </ul>	Documented in house method (ACCEL0003) using <ul style="list-style-type: none"> <li>- TENAX</li> <li>- ATD-GCMS</li> </ul>	B
	Comparison of common fire accelerants	Documented in house method (ACCEL0004) using <ul style="list-style-type: none"> <li>- ATD-GCMS</li> </ul>	A, B
	<u>Forensic Analysis</u>  Search and recovery of glass fragments from clothing and objects	Documented In-House Methods (FSL0029/FSL0033) using visual examination and low power microscopy	A, B
	Preparation of glass fragments for SEM Analysis	Documented In-House Method (FSL0066) involving stub preparation.	A, B
GLASS	Characterisation of glass fragments	Documented In-House methods (FSL0035/FSL0036/FSL0037) using <ul style="list-style-type: none"> <li>- refractive index determination by oil immersion (GRIM 3)</li> <li>- low power and interference microscopy</li> <li>- re-annealing by tube furnace</li> </ul>	A, B A, B A A, B





2045  
Accredited to  
ISO/IEC 17025:2005

**Schedule of Accreditation**  
issued by  
**United Kingdom Accreditation Service**  
2 Pine Trees, Chertsey Lane, Staines-upon-Thames, TW18 3HR, UK

**Orchid Cellmark Ltd (trading as Cellmark)**  
Issue No: 066 Issue date: 25 April 2017

Testing performed by the Organisation at the locations specified

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>		
Any Material	Recovery of in-organic gun shot residues (primer)	Documented in house method (FSL0078) using <ul style="list-style-type: none"> <li>- carbon coated aluminium stubs</li> <li>- Wipes</li> <li>- Swabbing</li> </ul>	A, B
Recovered Material	Identification of in-organic gun shot residues (primer)	Documented in house method (GSR0002/GSR0010) using SEM/EDX	A
LACHRYMATORS	<u>Forensic Analysis</u>		
Submitted devices and material recovered from clothing	Identification of: <ul style="list-style-type: none"> <li>- Ortho-chlorobenzalmalonitrile (CS)</li> <li>- Alpha-chloroacetophenone (CN)</li> <li>- Pelargonic acid vanillylamide (PAVA)</li> <li>- Capsaicin (Pepper Spray) &amp; (Dihydrocapsaicin)</li> </ul>	Documented in house method (TOX0002) using GC-MS	A
	Legal Classification of devices (Firearms Act 1968) and Article 45 of the Firearms (N.I.) Order 2004		A
	Analysis to determine the nature of the contents of a device, and whether the item fits the description of a Prohibited Weapon		



2045  
Accredited to  
ISO/IEC 17025:2005

**Schedule of Accreditation**  
issued by  
**United Kingdom Accreditation Service**  
2 Pine Trees, Chertsey Lane, Staines-upon-Thames, TW18 3HR, UK

**Orchid Cellmark Ltd (trading as Cellmark)**  
**Issue No: 066 Issue date: 25 April 2017**

**Testing performed by the Organisation at the locations specified**

Materials/Products tested	Type of test/Properties measured/Range of measurement	Standard specifications/ Equipment/Techniques used	Location Code
<b>MARKS AND IMPRESSIONS</b>  Footwear    Footwear mark (physically or image)    Toolmarks	<u>Forensic Analysis</u>		
	Enhancement of footwear marks recovered from scenes	Documented in house method (FSL0026/FSL0090) using <ul style="list-style-type: none"> <li>- lighting techniques</li> <li>- ESLA</li> <li>- gel lifting</li> <li>- digital capture photography</li> </ul>	A, B
	Production of test marks from suspect footwear	Documented in house method (FSL0025) using <ul style="list-style-type: none"> <li>- casting (dental stone/bio foam)</li> <li>- powders (Bristol black/aluminium/light mineral oil/magnetic powder)</li> <li>- digital capture photography</li> </ul>	A, B
	Assessment, comparison and evaluation of footwear with scene marks	Documented In-House methods (FSL0025) using visual examination, low power microscopy and dimensional measurements	A, B
	<u>Opinion and Interpretation</u> The evaluation of the significance of any matching features between the suspect and reference/control footwear marks to determine the likelihood of the suspect mark coming from a specific footwear	Documented In-House methods using <ul style="list-style-type: none"> <li>- Personal experience</li> <li>- Database – NFRC system for coding of marks</li> </ul>	A, B
Enhancement of toolmarks	Documented in house method (FSL0057) using <ul style="list-style-type: none"> <li>- lighting technique</li> <li>- casting</li> <li>- digital capture/photography</li> </ul>	B	
Production of test marks from suspect items	Documented in house method (FSL0057) using <ul style="list-style-type: none"> <li>- casting</li> <li>- digital capture/photography</li> </ul>	B	



2045  
Accredited to  
ISO/IEC 17025:2005

**Schedule of Accreditation**  
issued by  
**United Kingdom Accreditation Service**  
2 Pine Trees, Chertsey Lane, Staines-upon-Thames, TW18 3HR, UK

**Orchid Cellmark Ltd (trading as Cellmark)**  
Issue No: 066 Issue date: 25 April 2017

Testing performed by the Organisation at the locations specified

Materials/Products tested	Type of test/Properties measured/Range of measurement	Standard specifications/ Equipment/Techniques used	Location Code
MARKS AND IMPRESSIONS (cont'd)	<u>Forensic Analysis</u> (cont'd)		
Toolmarks	Comparison of submitted marks or marks made from suspect items with marks left at scene	Documented In-House methods (FSL0057) using visual examination, low power microscopy, comparison microscopy, dimensional measurements and photography	B
	<u>Opinion and Interpretation</u> The evaluation of the significance of any matching features between the suspect and reference/control toolmarks to determine the likelihood of the suspect mark coming from a specific tool	Documented In-House methods (FSL0057) using - Personal experience	B
Marks in blood	Location and enhancement of marks in blood from items recovered from crime scenes	Documented in house method (FSL0026/FSL0070) using - Sulphosalicylic acid - Hydrogen Peroxide - methanol and heat fixing acid black 1 and leuco crystal violet	B
PAINT	<u>Forensic Analysis</u>		
	Search and recovery of paint and paint fragments from clothing and objects	Documented in house method (FSL0029) using - visual examination - low power microscopy	A, B
	Comparison of recovered and control samples	Documented in house method (FSL0061/FSL0062/FSL0064) using - spot tests - florescence - high power microscopy	A, B



2045  
Accredited to  
ISO/IEC 17025:2005

**Schedule of Accreditation**  
issued by  
**United Kingdom Accreditation Service**  
2 Pine Trees, Chertsey Lane, Staines-upon-Thames, TW18 3HR, UK

**Orchid Cellmark Ltd (trading as Cellmark)**  
Issue No: 066 Issue date: 25 April 2017

Testing performed by the Organisation at the locations specified

Materials/Products tested	Type of test/Properties measured/Range of measurement	Standard specifications/ Equipment/Techniques used	Location Code
MARKS AND IMPRESSIONS (cont'd)	<u>Forensic Analysis</u> (cont'd)		
PAINT	<u>Opinion and Interpretation</u>  The evaluation of the significance of any matching features between the suspect and reference/control paint samples to determine the likelihood of the suspect paint fragment coming from a specific source.	Documented in house method	A, B
ALCOHOL TECHNICAL DEFENCE			
Alcohol Technical Defence (in relation to RTA) for sample matrix including Blood/urine/breath	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/blood/urine alcohol levels to the time of accident or other incident from 20mg% and above	Documented in house methods using mathematical calculations	A
END			