Forensic Capability Network

# Supplementary Technical Notes for Road Traffic Toxicology SFR

| | | | |
|---|---|---|---|
| Document Title: | Supplementary Technical Notes for RT Toxicology SFR | | |
| Reference | FCN-SP-MGT-GUI-0011 | FCN Pillar | Science Pillar |
| Version: | 2.0 | Document Owner: | Director of Science |
| Issue Date: | 03/02/2022 | Reviewed by: | James Kendall-Milnes |

## Document Control

| | |
|---|---|
| **Document status** | ACTIVE |
| **Author** | Deborah Sharp – Lead Scientist - FCN |
| **Approved By** | Christopher Davies |

## Update History

| Version | Issue date | Reason for issue | Updated by |
|---|---|---|---|
| 1 | 13/08/2021 | To supplement the SFR process for Road Traffic Toxicology | FCN Science Pillar |
| 2 | 03/02/2022 | Revision to coincide with new SFR Guidance | FCN Science Pillar |
| | | | |
| | | | |

**This Guidance has undergone significant changes therefore highlighting all of the changes would not be appropriate. We recommend reviewing the document in its entirety.**

# Contents

# 1 Introduction

These guidance notes are intended to be used to supplement the production of an MG22B (SFR1) form when reporting the results of sample analysis for the purposes of Section 5A of the Road Traffic Act 1988. This is to ensure that the SFR1 remains as clear and succinct as possible, whilst providing additional information to enable all parties to fully understand the significance of the findings and assist with efficient case management. The contents of this document have been created and agreed by the following providers of forensic toxicology services to policing in England and Wales:

Key Forensic Services

Cellmark Forensic Services

Eurofins Forensic Services

Hampshire Scientific Services

Analytical Services International

## 1.1 Definitions and Abbreviations

| Abbr. | Meaning |
|---|---|
| CoPC | Codes of Practice and Conduct |
| CPS | Crown Prosecution Service |
| CRM | Certified Reference Materials |
| CrimPR | Criminal Procedure Rules |
| CRM | Certified Reference Material |
| FCN | Forensic Capability Network |
| FSR | Forensic Science Regulator |
| (HM)IC | (Her Majesty's) Inspectorate of Constabulary |
| ISO | International Standards Organisation |
| MG | Manual of Guidance |
| RTA | Road Traffic Act |
| SFR | Streamlined Forensic Report(ing) |
| UKAS | United Kingdom Accreditation Service |
| **Definition** | **Meaning** |
| Can | indicates a possibility or a capability |
| May | indicates a permission |
| Shall | indicates a requirement |
| Should | indicates a recommendation |

## 2 Hunt v CPS (2018)

The SFR1 is not in a format which can be used in evidence unless it is agreed by both parties under s.10 Criminal Justice Act 1967. The SFR process introduces a formal mechanism by which the defence can either agree the scientific findings or outline the reasons why they are unable to agree them, compliant with Criminal Procedure Rule (CrimPR) 3 and 19. This then allows the prosecution expert to provide a further, tailored response (SFR2) to address the specific issues in dispute.

## 3 Provision of SFR2 and analytical data-packs

In cases where the defence are unable to agree the findings contained in an SFR1, then the laboratory conducting the analysis will need to provide more detailed information in the form of an SFR2. If requested by the defence this may also involve the production of a 'data pack' in some cases (such data packs are "records of tests" under CrimPR 19.3(3)(d)). The technical information provided within this pack is complex and requires an understanding of the scientific methodology used in order to interpret the findings accurately. Hence, the defence should instruct their own expert, who understands the scientific methodology, before requesting a data pack. It may be appropriate for the prosecution and defence experts to consider the analytical results together. If necessary, the appointed defence scientist can attend the prosecution laboratory to facilitate this; it is recommended that any such meeting should occur well in advance of the trial date.

Those individuals who are representing themselves are unlikely to be able to interpret the content of a data-pack unless the defendant understands the scientific methodology used in the case.

## 4 Reliability of Results - Quality Standards

The analysis of samples is carried out using validated analytical methods which are accredited by the United Kingdom Accreditation Service (UKAS) to the international standard ISO/IEC 17025. The method(s) used for the analysis of samples has/have been specifically developed and validated for the purpose of producing results pertinent to Section 5A of the Road Traffic Act (RTA) 1988. The requirements for the analysis and reporting of whole blood specimens in relation to S5A of the RTA 1988 are as defined by the FSR within the CoPC document FSR-C-133.

https://www.gov.uk/government/publications/analysis-and-reporting-of-whole-blood-specimens-in-relation-to-s5a-road-traffic-act-1988

Scientific analysis is conducted by trained and competent staff using specialist, calibrated equipment and set procedures. All analytical results and reports are peer reviewed and agreed by another competent forensic toxicologist.

## 5 Report Author

The forensic toxicologist has been deemed competent by their organisation to provide the SFR1. The analytical work has been carried out by competent practitioner(s) including the production of contemporaneous notes. The results of this analytical work, together with the

SFR1 have been peer reviewed by a separate competent forensic toxicologist as part of the quality assurance processes in place.

There is no requirement to name the individual completing the SFR1, nor does the report have to be signed. This is merely to prevent the author of this MG22B (SFR1) being warned to attend court, which would be a procedural error. Whilst identifying the person authorising the report is a requirement of ISO/IEC 17025, in accordance with clause 7.8.1.3, results can be reported in a simplified way when agreed with the customer. All information that is not reported shall still be readily available.

## 6 HMIC Guidelines

There is a misconception by some solicitors that this report should be produced within one week of the sample being taken.

Within the relevant guidance ***('HM Inspectorate of Prisons and HM Inspectorate of Constabulary – Expectations for police custody – Criteria for assessing the treatment of and conditions for detainees in police custody'***), there is a requirement for forensic samples to be processed onwards from the custody suite within one week of being taken, but there is no reference to the timeframe within which the analysis should be conducted and a forensic report prepared.

There are established processes in place for the handling, storage and transportation of forensic samples that maintain integrity and continuity of evidence. Whilst there may be a delay of several weeks or months between taking of a sample and its analysis, this generally favours the motorist, as the levels of any analyte(s) in the sample are likely to decrease over time.

## 7 Quality Controls / Certified Reference Material

Calibration and quality control samples are used routinely during the analysis of blood samples. These are made from different sources of known amounts of pure drug, otherwise known as 'Certified Reference Materials' (CRM). CRM is provided by approved suppliers. The quality control samples are analysed and treated in the same way as case samples and are used to ensure that the system is calibrated correctly, and the analytical procedure is working accurately. More specifically, it is known how much drug is present in the CRM and therefore, if the amount of drug measured in the quality control sample meets specific acceptance criteria, the results of case samples can be relied on.

The analytical results reported in the SFR1 are produced from batches where the quality control samples have met specific acceptance criteria (further information is detailed within FSR-C-133).

## 8 Averaging of Results

The amount of drug that is reported in an SFR1 is based on the average of at least two test results. At least two measured portions of blood are taken from the blood sample and analysed. The average measurement of the portions is taken and then **a standard deduction** (specific to each drug) is made to the average result to allow for normal analytical variation. The same deduction (for each drug) is made by every accredited forensic toxicology laboratory undertaking testing pertinent to Section 5A of the RTA 1988 (also as per FSR-C-133).

## 9 Carry Over / Contamination

A wash sample is analysed before each set of case samples. A wash sample only contains solvent and no analytes should be present in this sample above a significant level as determined by the laboratory. This wash sample ensures detection of any remaining analyte in the instrument ('carry over') from the sample that was analysed before it. If any carry over is detected in the wash (at the significant level as determined by the laboratory) and that analyte is present in the case sample following the wash, that result cannot be relied upon and the analysis of that case is repeated in all instances.

Likewise, a blank whole blood sample is included within the batch and is extracted in the same way as case samples. Any discernible, batch-wide contamination of any analytes present within the batch can be assessed from the results obtained from this blank whole blood sample.

## 10 Detection of Drugs just above the prescribed limit

After averaging (section 8), there is a subtraction to allow for normal analytical variation to provide a 'not less than result'. In quoting a 'not less than result', any analyte concentration is reported with a high degree of confidence, including those which are just above the specified limit.

## 11 Analysis of 'B' portions

Once a blood sample is taken, it is split into two portions (commonly referred to as 'A' and 'B' portions). At the point of sampling, the defendant is given the option of accepting a portion for independent analysis, whereas the other is submitted to the testing laboratory for prosecution analysis. The 'B' portion can be analysed independently when instructed by the defence/defendant but it should be noted that any delay in analysis and unrefrigerated storage may result in degradation and the level of the analytes detected may be lower than those reported in the SFR1 produced by the testing laboratory conducting analysis on behalf of the police/prosecution.

## 12 "Preservative Checks"

Whole blood specimens which are taken under the provisions of the RTA 1988 are generally housed within a standard Road Traffic Act glass vial, which are included within the RTA blood sampling kits. Such vials contain an integral preservative (sodium fluoride) and an anti-coagulant (potassium oxalate) at concentrations which ensure that, even when the vial is full, there is adequate preservative and anti-coagulant present within the blood specimen. The preservative acts to prevent any microbial action occurring which may exacerbate any drug degradation over time. The anti-coagulant acts to prevent any coagulation (clotting) of the blood specimen.

During sample examination and prior to any analysis, the forensic toxicology laboratory will check the blood sample to ensure it is free flowing (i.e. non-clotted) and thereby suitable for S5A RTA 1988 analysis. If clotting is absent, it is a reasonable assumption that, following the provision of the blood specimen, the glass vial was adequately shaken by the medical examiner/health care professional, thereby ensuring sufficient dissolution of the

preservative/anticoagulant within the blood specimen. It is for this reason that preservative checks are not routinely undertaken on whole blood specimens in S5A RTA 1988 cases.

## 13 Supporting Documentation

List of all supporting documentation referred to within this document:

| Document name | Document reference |
|---|---|
| MG22A | SFR MG22A |
| MG22B | SFR MG22B |
| MG22C | SFR MG22C |
| MG22D | SFR MG22D |
| SFR Annex A | SFR2 Expert Witness Declaration |
| SFR Annex B | SFR2 Mitigation Table |
| SFR Annex C | SFR2 Expert Witness Self-Certification |
| SFR Annex D | SFR2 Disclosure Schedule |
| Case Management Risk Form | SFR Case Management Risk Form |
| National Guidance for Streamlined Forensic Reporting | FCN-SP-MGT-GUI-0003 |
| FSR-C-133 | Forensic Science Regulator Codes of Practice and Conduct - The analysis and reporting of whole blood specimens in relation to S5A of the RTA 1988 |