Faculty of Forensic & Legal Medicine

Forensic Science Sub-committee

Newsletter JANUARY 2025

Updated versions of the following documents are available:

Recommendations for the collection of forensic specimens from complainants and suspects

- There have been a few changes highlighted in the January version.

Recommendations for the collection of forensic specimens from complainants and suspects – the evidence

- There has been one paper added to the Evidence document.

Forensic Science Subcommittee (FSSC) Newsletter

- Please see responses from questions submitted to the FSSC.

Recommended equipment for obtaining forensic samples from complainants and suspects

Operational procedures and equipment for forensic medical examination rooms in Sexual Assault Referral Centres (SARCs)

Operational procedures and equipment for clinical and forensic examination rooms in police stations

Labelling forensic samples

- **This has been amended to remove the use of the forward/as there have been incidents of confusion with the number one.**

Hair samples for Toxicology

- **This has been amended to advise that hair samples can be stored indefinitely (if kept at room temperature and out of sunlight).**

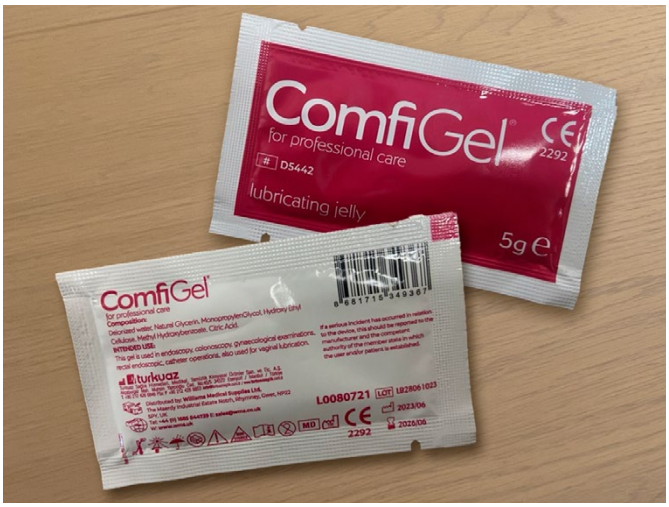
Forensic medical examination form – Complainant

- This has been amended to record how many times a complainant has showered/washed/bathed/douched.

General Updates

FFLM has published a *Position Statement 'Self-Swabbing Kits' for survivors of sexual assault or rape*.

Comfi-Gel has been tested by Scenesafe and is suitable to added to the approved list.



Limited data collection project on Mons Pubis swabs

In January 2023 mons pubis swabs were added as a standalone item on the FFLM's *Recommendations for the taking of forensic specimens* as the scientists advised that they were seeing more mons pubis swabs coming through and, as a result, were anecdotally reporting more positive findings.

To verify this view, forensic scientists from England and NI have collected preliminary data on results obtained from mons pubis swabs in a small set of cases. These cases covered a range of activities and timeframes. In approximately 14% of these cases positive results were obtained from the mons pubis swabs. Furthermore, in some cases, DNA material was detected on the mons pubis when other intimate swabs did not provide useful results. Generally, we would expect a lower background level of donor DNA on the mons pubis sample than the vulval sample as the vulva is usually a richer source of donor DNA. This should make it easier to detect foreign DNA in a mons pubis sample vs the vulval sample in some circumstances.

Consequently, as a result of this limited data collection project, the FFLM Forensic Science Sub-Committee recommend that, following the recommendations, mons pubis swabs should be taken alongside other intimate swabs when there is any potential contact with the external genital area, for example, digital penetration, oral sex and/or vaginal/anal intercourse.

Questions to the FSSC

The publication *Recommendations on the order of ano-genital sampling when obtaining forensic specimens from complainants and suspects of sexual offences* has resulted in many questions to the chair of the FSSC. There was further discussion at the meeting of the FSSC in November 2024 and it was decided that a full review of the recommendations document would be completed as soon as practicable under the leadership of the FFLM SOM lead Dr Marie-Elle Vooijs..

1. **Peri-oral swabs are currently recommended specifically for oral sex allegations. FSNI also utilise the peri-oral swabs when kissing is alleged so perhaps this could be added in under reason for analysis: 'if kissing is alleged' as well as the current oral sex reason? There have been positive foreign DNA results when kissing is involved, particularly if the swabs have been recovered before any washing has taken place.**

The FSSC thought this was a worthwhile addition to the Recommendations document.

2. **I have been involved in discussions with our SARC clinicians over recent weeks regarding appropriateness of intimate examinations in complainants where the history of events may be either convoluted or complicated. Common situations that have arisen are:**

   Case 1 – a young woman reported that she was raped on day X but that the assailant did not ejaculate, and no condom was used. 4 days later the subject had consensual sex with her partner who did ejaculate and in between times she has showered on at least one occasion and obviously has used multiple bathroom tissues etc. The question that has been asked by the clinicians is "what is the realistic chance of recovery of an identifiable DNA profile from the assailant given the passage of time, the shower, etc". These figures should be available in order that the subject can be given the opportunity to consider what the odds are and whether they consider that these odds are, in their evaluation of the situation, worth undergoing an intrusive intimate examination. Without this information in my opinion the Montgomery test is not being met, and I suspect that there are many SARC examinations being conducted where there is a woeful inadequacy of information being given to the complainant in order that they can make the decision.

   Similar discussions have arisen around a case where an individual was digitally penetrated by an assailant but then went on to have consensual sexual activity with their partner 48 hours later and had showered after the initial event. The question asked was again what is the chance of recovery? Logical analysis would suggest virtually zero but again there seems to be no published or even reported outcomes from the forensic labs to aid the informed consent issue of these examinations.

   I could compile several more, but the basic premise is that there is a paucity of information available from the labs to the clinicians and for that matter the police, to provide guidance on realistic recovery.

   Thoughts and evidence would be appreciated.

The FSSC discussed these questions and concluded that many of the issues raised should be covered in the clinicians' initial training including obtaining consent for the forensic medical examination (FME) and the limitations of an FME. Senior clinicians felt that patients need to be advised that the examination would not necessarily answer the question of what happened if they do not know themselves. Furthermore, complainants should routinely be informed that their samples may not be tested and that if they are, they may not yield results which help to answer the question of what happened. The examining clinicians need to be careful in explaining the limitations to DNA testing.

The problem of research relating to the realistic chance of recovery of a DNA profile is very complicated as many samples taken may not be sent to the lab for testing by the police for a variety of reasons. Results from samples tested in the lab may not be completely accurate in the interpretation as the full history is not always known or accurate.

3. We have had our departmental peer review meeting today and one of my colleagues raised that in the most recent update the recommendations for vulval swabs includes that samples should be taken for mouth to vulva there is no timescale recorded for this on the document.

This would be 48 hours as per skin swabs.
The recommendations document has been amended.

4. On the sampling recommendations on page 2 under mouth samples I wonder whether, for each item in the oral samples' section it should say penile-oral penetration.

The recommendations document has been amended.

5. With regard to page 1 of FME complainant form is it important to know how many times the following have occurred: showered/washed/bathed/douched?

Yes, it is and the FME complainant form has been amended.

6. A question about Urine DNA sample on page 6 as with Urine for toxicology on page 7, should we include amount needed? Similarly, Urine DNA sample on page 6 states freeze, where Toxicology Urine on page 7 states refrigerate or freeze (with specific timings), should they both be the same i.e. refrigerate or freeze.

No specific amount is required in the exceptional cases where urine is collected for DNA and the sample should be frozen as it is a biological sample.

7. Please would it be possible to ask SceneSafe to print 'NOT TO SCALE' on the body maps so that examiners do not have to remember to hand write this by hand every time?

This is not required, please see *Recommendations for the documentation of injuries*, published September 2024.

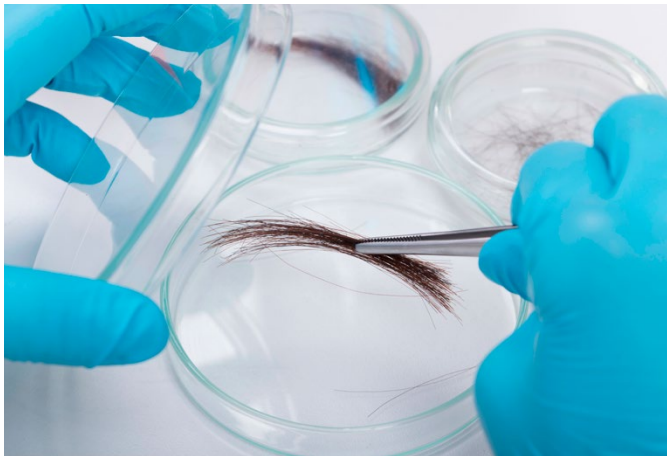
8. Many examiners are not Doctors so please could they change 'Name of Doctor' to 'Name of Sexual Offence Examiner' for accuracy?

The change of name to clinician will be made in documentation as soon as practicable.

9. During the process of culling/destroying samples held at the Havens we contacted the toxicology team at the Met Lab and were informed that hair samples for toxicology are not tested after they have been held for more than 10 months. I wondered if this information would be useful to put on the Faculty's Recommendations for sampling document.

This was discussed at the FSSC and the forensic toxicologist advised that drugs in hair samples do not degrade over time if the hair sample is stored at room temperature and out of sunlight. In a living person drugs in hair degrade, or get washed out, as it grows, due to various processes (normal hygiene and washing procedures, hair treatments, heating, exposure to sunlight, etc). Therefore, there are limitations on the usefulness of taking a hair sample after a certain time (e.g. 3 months, 6 months, 1 year) if there is a particular date of interest and this will also depend on the drug in question and what question needs answering e.g. a search for a 'one off' dose, multiple administration, or an investigation into past/historic drug use.

The FFLM document *Recommendations for collecting hair samples for toxicology* has been amended under the storage section to cover this advice: 'Hair samples can be stored indefinitely (if kept at room temperature and out of sunlight).'



10. Please may I ask if this can be discussed at the FSSC, it is as a result of some feedback from a colleague who was attending a meeting in relation to SARC accreditation. In some of the SARC accreditation preparatory work, it has been suggested it is not sufficient for the kit number and expiry date to be noted on the exhibit list/FME form, but the batch number of the swabs within the kit needs to be recorded too. This is because, it was suggested, the manufacturer/kit provider might 'go out of business' and so not be in a position to provide this information, if it was required. This then led us to ponder, if this was the case, then the 'unused unopened batch control swab' held by the manufacturer/kit provider was also at potential risk, for the same reasons.

As long as the clinicians note the serial number and expiry date on the kit, SceneSafe will be able to tell you what was in the kit.

11. I am a Forensic Scientist in New Zealand working for the Institute of Environmental Science and Research Limited (ESR). I just have a couple of queries in regards to your collection of blood and urine samples for drug/alcohol analysis. I have read the contents of your alcohol/drug blood kit (G91613-Q) and I was wondering if the 5ml fluoride oxalate evacuated bottle is made of glass?

How do you store these bottles for long term storage?

Do you store them within the plastic securitainer or take them out of this container?

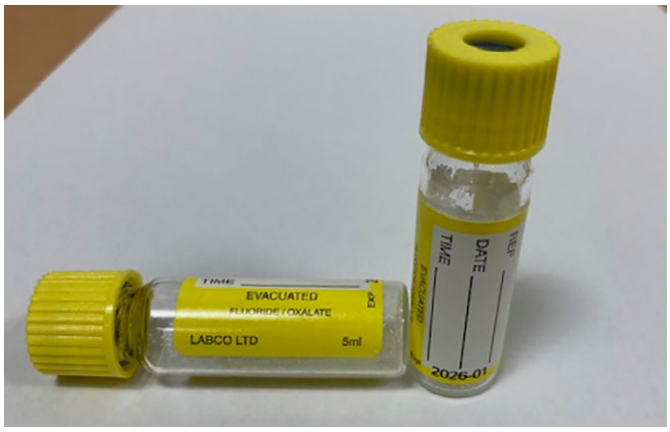
If freezer, what temperature freezer?

How long is your long term storage for?

Have you had any issues with the bottles cracking with freezer storage?

I have also read the contents of your alcohol/blood urine kit (G91613-R).

Do you have many issues with spillage when transferring the urine from the specimen collection pot to the glass bottle?



The 5ml fluoride oxalate evacuated bottles are made of glass.

The forensic toxicologist advised that the general advice is storing the samples refrigerated if they are to be submitted to the laboratory quickly (within a few weeks). The exceptions to this are if a sample is required for volatile analysis (or other highly volatile/unstable substance) in which case it would need to be frozen (and kept frozen) asap. This is standard freezer temperature. If the samples are not going to be submitted to the laboratory within a few weeks, we advise freezing (to prevent potential degradation of susceptible drugs). We advise our customers that the samples will be returned to the customer or destroyed (as stipulated in the initial agreement between the customer and the laboratory) after a specified time frame (usually 6 months) after the case has been reported.

Whether they are stored in the securitainer or without depends on the department. For road traffic cases (which receive a very large number each month), they are stored without to help with storage limitations. However, if so, they need to be protected from light. For other cases, we store them how they are submitted, so that would be in the securitainer.

We have had some breakages with vials – both blood and urine. This has been investigated and believed to often (but not always) have been due to the vials being overfilled (and contents expanding on freezing). However, this doesn't explain all of the instances and it seems to be a combination of a number of other reasons (thin glass of the vial, vibrations on transport, insufficient padding or no padding being added to urine vials in the securitainer etc.).

As regards urine transfer there is a pourer on the specimen collection pot so there isn't usually a problem.

Produced by Prof Margaret Stark
on behalf of the Faculty of Forensic & Legal Medicine

Send any feedback and comments to forensic.medicine@fflm.ac.uk