



Faculty of Forensic and Legal Medicine

Recommendations

# Recommendations for the collection of forensic specimens from complainants and suspects

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The medico-legal guidelines and recommendations published by the Faculty are for general information only. Appropriate specific advice should be sought from your medical defence organisation or professional association. The Faculty has one or more senior persons from each of the three medical defence organisations on its Board, but for the avoidance of doubt, endorsement of the medico-legal guidelines or recommendations published by the Faculty has not been sought from any of the medical defence organisations.

**INSTRUCTIONS FOR USE**

- The persistence data below refers to maximum (not expected) persistence. The data applies to the majority of cases but exceptions are possible; for example, if the patient has been bed-bound or has not washed since the incident. Information from other sources will inform the decision regarding which samples are relevant.
- **Double** gloves should be worn throughout the sampling process in order to minimise DNA transfer and contamination. Change **outer** gloves when sampling different body areas.
- **Retention of water vials or wet control swabs is not necessary, but in their absence, the module batch number, expiry date and supplier should be recorded.**
- Where the order of sampling is given, it is imperative that it is followed.
- In this document the words, complainant, subject, detainee, suspect, and patient may be used to describe the individual being examined (the examinee).

SAMPLE TYPE	REASON FOR ANALYSIS	METHOD OF SAMPLING	PACKAGING AND STORAGE
<b>Mouth swab(s)</b> (1 or 2) <i>(Note: Some kits may contain only 1 swab; in some kits no control swab is provided).</i>	<b>Recovery</b> of semen if oral penetration within 2 days. <i>First mouth sample</i>	<b>Mouth collection kit</b> Rub one dry swab all around the inside of mouth, including over and under the tongue, all sides of the teeth and gums and inside of cheeks. Dentures and dental fixtures should also be swabbed. Repeat with second dry swab (if available). Label the swabs to indicate the order in which they were obtained, e.g. DJR1/A and DJR1/B.	Plain sterile swab. Place immediately in swab sleeve/tube and then in tamper-evident bag. <b>Swabs from the same site can be packaged in a single tamper-evident bag.</b> <b>Freeze</b>
<b>Mouth rinse</b>	<b>Recovery</b> of semen if oral penetration within 2 days. <i>Second mouth sample</i>	<b>Mouth collection kit</b> Rinse mouth with sterile water and retain washings in polypot. Patient must wear gloves whilst handling polypot.	Polypot placed in tamper-evident bag. <b>Retain and exhibit the gloves worn by the patient during this component of the examination and package in separate tamper-evident bag.</b> <b>Freeze</b>
<b>Skin swabs</b> (min 2 per relevant area)	<b>Recovery</b> of body fluids, cellular material, lubricant and other visible trace evidence, (e.g. soil). Limited data on persistence. Routinely obtain if incident has occurred within the preceding 2 days. However, if the subject has <b>not washed</b> , then sample the relevant area of skin up to 7 days (inclusive) post incident.	<b>Swab collection kit</b> Drip 3-4 drops of sterile water onto a swab and using moderate pressure, roll it over the relevant area of skin; immediately roll second dry swab over the same area. If skin is moist prior to sampling, both swabs should be dry. Sample with more than two swabs if staining remains visible after initial sampling (repeat wet/dry cycle if skin is dry). Label the swabs to indicate the order in which they were obtained, e.g. DJR4/A and DJR4/B.	Plain sterile swab. Place immediately in swab sleeve/tube and then in tamper-evident bag. <b>Freeze</b>
<b>Control skin swab</b>	Recovery of background DNA <b>and/or other material</b> – to aid interpretation when <b>its</b> presence in a specific area is significant. Ensure <b>relevant</b> background area is sampled.	Drip 3-4 drops of sterile water onto a swab and using moderate pressure, roll it over relevant area of skin. Repeat the process with a dry swab for the site being sampled. If multiple areas of skin are sampled, take appropriate multiple controls.	Plain sterile swab. Place immediately in swab sleeve/tube and then in tamper-evident bag. <b>Freeze</b>
<b>Control swab (1)</b> <i>There is no need to obtain a <b>wet</b> control swab.</i>	Control swab for each batch.	Submit one unopened swab per batch of swabs.	Unopened plain sterile swab placed in tamper-evident bag. <b>Freeze</b>

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Fingernails	Recovery of body fluid/DNA/other material or comparison with fingernail(s) broken at scene (if the circumstances suggest this as a possibility).	<b>Fingernail collection kit and Swab collection kit (water and swabs) if not in the fingernail kit</b> Clip the fingernails of one hand at a time, over a paper sheet/drape and package separately. In addition to this, swab under the fingernails, on the surface of the nails and around the cuticles. If the fingernails are too short or clipping is unacceptable, obtain swabs only. The first swab should be moistened, the second dry. If comparison with fragment nail is required, broken nail must be cut, and sent separately and unbroken if possible.	Place in tamper-evident bag. Include any clippers used to sample fingernails in the bag with the clippings. <b>Freeze</b>
Vulval swabs (2)	<b>Recovery</b> of body fluids/DNA/other material if: <ul style="list-style-type: none"> <li>vaginal intercourse (even if condom purported to have been used) within 7 days or;</li> <li>digital penetration within 12 hrs or;</li> <li>anal intercourse (even if condom purported to have been used) within 3 days or;</li> <li>ejaculation onto/contact with vulva/perineum.</li> </ul> <b>First female genital sample</b>	<b>Swab collection kit</b> Rub one dry swab over the vulva and perineum. Repeat with second dry swab. If vulval skin (or visible stain) appears dry prior to sampling, the first swab should be moist. Sample with more than two swabs if staining remains visible after initial sampling (repeat wet/dry cycle if skin dry). Label the swabs to indicate the order in which they were obtained.	Plain sterile swab. Place immediately in swab sleeve/tube and then in tamper-evident bag. <b>Freeze</b>
Low vaginal swabs (2)	<b>Recovery</b> of body fluids/DNA/other material if: <ul style="list-style-type: none"> <li>vaginal intercourse (even if condom purported to have been used) within 7 days (3 days if patient is pre-pubertal and it is possible to pass a swab) or;</li> <li>digital penetration within 12 hrs or;</li> <li>anal intercourse (even if condom purported to have been used) within 3 days.</li> </ul> <b>Second female genital sample</b>	<b>Swab collection kit</b> Insert a dry swab approximately 3-5cm into the vagina (reduce as appropriate if patient is pre-pubertal). Use gentle rotational movements to sample the lower half/third of the vagina. Repeat with second dry swab. If the vaginal mucosa is markedly dry, the first swab can be moistened with sterile water (see skin). Label the swabs to indicate the order in which they were obtained.	As above
High vaginal swabs (2)	<b>Recovery</b> of body fluids/DNA/other material if: <ul style="list-style-type: none"> <li>vaginal intercourse (even if condom purported to have been used) within 7 days (3 days if patient is pre-pubertal and it is possible to pass a swab) or;</li> <li>digital penetration within 12 hrs or;</li> <li>anal intercourse (even if condom purported to have been used) within 3 days.</li> </ul> <b>Third female genital sample</b>	<b>Swab collection kit</b> Pass a lubricated (Gelcat® or KY®) single-use speculum. Rub two dry swabs, one at a time, over the mucosa of the unsampled upper two thirds/half of the vagina, making sure the fornices are sampled. <b>If it is not possible to pass a speculum, attempt to obtain two 'vaginal swabs' instead.</b> Label the swabs to indicate the order in which they were obtained.	As above If fluid has been accumulated within/on the speculum, swab the collection of fluid and label as 'speculum swab(s)'. Retain and exhibit the speculum in an appropriately sized, single, tamper-evident bag. <b>If this is not possible, thoroughly swab the speculum &amp; place the swab(s) in the swab sleeve(s)/tube(s) and then in a tamper-evident bag.</b> Submit opened tube/sachet of lubricant. <b>Freeze</b>
Endocervical swabs (2)	<b>Recovery</b> of body fluids/DNA/ if endocervix is visible, it is possible to pass a swab and; <ul style="list-style-type: none"> <li>vaginal intercourse (even if condom purported to have been used) within 7 days or;</li> <li>anal intercourse (even if condom purported to have been used) within 3 days.</li> </ul> <b>Final female genital sample (post-pubertal only)</b>	<b>Swab collection kit</b> With the speculum in place, use two dry swabs, one at a time, to sample the endocervix. When sampling the endocervix, always keep the proximal end of the swab in view. Label the swabs to indicate the order in which they were obtained.	As above

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Perianal swabs (2)	<p><b>Recovery</b> of body fluids/DNA/other material if:</p> <ul style="list-style-type: none"> <li>anal intercourse* (even if condom purported to have been used) within 3 days or;</li> <li>digital anal penetration within 12 hrs.</li> </ul> <p><b>First anal sample</b></p> <p>*In a female alleging anal intercourse alone, please seek consent to take vaginal samples in addition to ano-rectal swabs</p>	<p><b>Swab collection kit</b></p> <p>Drip 3-4 drops of sterile water onto a swab and using moderate pressure, roll it over the perianal skin in an area of 3cm radius from the anus; immediately roll second dry swab over the same area.</p> <p>If skin is moist, both swabs should be dry.</p> <p>Recover on more than two swabs if staining remains visible after initial sampling (repeat wet/dry cycle if skin dry).</p> <p>Label the swabs to indicate the order in which they were obtained.</p>	<p>Plain sterile swab.</p> <p>Place immediately in swab sleeve/tube and then in tamper-evident bag.</p> <p><b>Freeze</b></p>
Anal canal swabs (2)	<p><b>Recovery</b> of body fluids/DNA/other material if:</p> <ul style="list-style-type: none"> <li>anal intercourse* (even if condom purported to have been used) within 3 days or;</li> <li>digital anal penetration within 12 hrs.</li> </ul> <p><b>Second anal sample</b></p> <p>*In a female alleging anal intercourse alone, please seek consent to take vaginal samples in addition to ano-rectal swabs</p>	<p><b>Swab collection kit</b></p> <p>Drip 3-4 drops of sterile water onto a swab and insert it 2-3cm through the anal orifice. Use gentle rotational movements to sample the anal canal. Thereafter, the process is repeated with a <b>second dry swab</b>.</p> <p>Label the swabs to indicate the order in which they were obtained.</p>	<p>As above.</p> <p><b>Freeze</b></p>
Rectal swabs (2)	<p><b>Recovery</b> of body fluids/DNA/other material if:</p> <ul style="list-style-type: none"> <li>anal intercourse* (even if condom purported to have been used) within 3 days or;</li> <li>digital anal penetration within 12 hrs.</li> </ul> <p><b>Third anal sample</b></p> <p>*In a female alleging anal intercourse alone, please seek consent to take vaginal samples in addition to ano-rectal swabs</p>	<p><b>Swab collection kit</b></p> <p>Pass a lubricated (Gelcat® or KY®) proctoscope at least 3-4cm into the anus, remove the obturator and sample the mucosa of lower rectum using two dry swabs. The average anal canal is about 3cm long in the adult (range 1.4 – 3.8cm, in males and 1.0 – 3.2cm in females). The mucosa of the upper anal canal is a deep purple colour, which readily distinguishes it from the red/pink mucosa of the lower rectum.</p> <p><b>If it is not possible to pass a proctoscope, try to obtain two ‘anal canal/rectum’ swabs.</b></p>	<p>As above</p> <p>If fluid has been accumulated within/on the proctoscope, swab the collection of fluid and label as ‘proctoscope swab(s)’. Retain and exhibit the proctoscope in an appropriately sized, single, tamper-evident bag. <b>If this is not possible, thoroughly swab the proctoscope &amp; place the swab(s) in the swab sleeve(s)/tube(s) and then in a tamper-evident bag.</b></p> <p>Submit opened tube/sachet of lubricant.</p> <p><b>Freeze</b></p>
<p><b>Penile swabs</b></p> <p><b>Shaft and external foreskin (if present) (2)</b></p> <p><b>Coronal sulcus and internal foreskin (2)</b></p> <p><b>Glans (2)</b></p>	<p><b>Recovery</b> of body fluids/DNA/other material (even if condom purported to have been used) if intercourse within 3 days.</p>	<p>Don one new pair of <b>outer</b> gloves.</p> <p><b>Swab collection kit</b></p> <p><b>Shaft</b> – Drip 3-4 drops of sterile water onto a swab and using moderate pressure, roll it over the skin of the shaft and, if present (i.e. uncircumcised), the external foreskin covering the glans. Immediately roll second dry swab over the same area.</p> <p><b>Coronal sulcus and internal foreskin (if present)</b> – Drip 3-4 drops of sterile water onto a swab, retract the foreskin (if present) and using moderate pressure, roll the swab around the coronal sulcus and the internal foreskin now lying over the shaft; immediately roll second dry swab over the same area.</p> <p><b>Glans</b> – Drip 3-4 drops of sterile water onto a swab and using moderate pressure, roll it over the skin of the glans; immediately roll second dry swab over the same area.</p> <p>Sample with more than two swabs if staining remains visible after initial sampling (repeat wet/dry cycle).</p> <p>Label the swabs to indicate the order in which they were obtained.</p>	<p>As above</p> <p><b>Retain the outer gloves used during this component of the examination and package in separate tamper-evident bag.</b></p>

SAMPLE TYPE	REASON FOR ANALYSIS	METHOD OF SAMPLING	PACKAGING AND STORAGE
<p>Hair (head &amp; pubic)</p> <p><i>FOR TOXICOLOGY, SEE PAGE 5</i></p>	<p>A. Recovery of foreign particles, e.g. glass, fibres, hairs.</p> <p>B. Recovery of body fluids/contact DNA (e.g. from pulling)/other material</p> <p>C. Control sample for hair comparison: take from all suspects; obtain from complainants where relevant, e.g. unknown assailant.</p>	<p><b>Hair Collection kit / Head Hair Collection Kit</b></p> <p>A. Recover visible foreign particles with disposable forceps and collect in paper sheet/drape.</p> <p>B. Swab and/or cut relevant area. If hair is dry, use wet swab then dry swab (see skin swabs). <b>This should be done before combing/gloving/plucking.</b> Once the above has been considered, it may be relevant to use low-adhesive tape collected onto acetate sheets (available from Crime Scene Investigator (CSI)) or gentle combing of the head or pubic area (see below).</p> <p>C. Give complainant/suspect the option to have hair combed or to comb own hair using normal hair comb – not a nit-comb. Comb hairs with an aim of collecting 5 with roots (and make up to 25 with cutting as close to the skin as possible). If &lt;5 roots are yielded, put on standard gloves and run fingers through hair. If &lt;5 roots are yielded still, give complainant/suspect the option of plucking.</p>	<p>Fold paper sheets/drapes securely with upper sides inwards to retain debris.</p> <p>Place each type of sample in separate tamper-evident bag (include scissors, forceps and/or comb in the bag if used).</p> <p>Stick low-adhesive tape onto acetate sheet and then place (tape &amp; acetate) into tamper-evident bag (if used).</p> <p><b>Non-biological samples, e.g. glass fragments, must be placed in a DRY STORE at normal room temperature. Other samples should be frozen.</b></p> <p><i>FOR TOXICOLOGY, SEE PAGE 5</i></p>
<p>Buccal scrapes (2)</p>	<p>Reference sampling for DNA profiling.</p>	<p><b>Elimination DNA Sampling kit (for complainants)</b> <b>PACE DNA sampling kit (for detainees)</b></p> <p>Take one buccal scrape from the inside of each cheek at least 20 mins after patient has had a drink, food or a cigarette (in cases involving oral sex within 48 hours, take an additional sample at least two days after incident).</p>	<p>Place in plastic tubes then into a tamper-evident bag. <b>Freeze</b></p>
<p>Condoms</p>	<p>Recovery of body fluids/DNA/other material if in situ or after incident.</p>	<p><b>Condom collection kit</b></p> <p>Secure the open end of condom (do NOT knot). Place in plastic container.</p>	<p>Place in plastic container/pot in tamper-evident bag. <b>Freeze</b></p>
<p>Sanitary towels/ Tampons</p>	<p>Recovery of body fluids/DNA/other material, if in situ or after incident.</p>	<p>Retain intact</p>	<p>Place in plastic container then into tamper-evident bag. <b>Freeze</b></p>
<p>Gunshot residue (GSR)</p>	<p>Recovery of gunshot residues (GSR) if gun thought to have been in contact with, or fired within 3m of skin or hair surfaces. Persistence up to approx. 4 hours - hands, 6 hours - face, 12 hours - hair.</p>	<p>Normally obtained by Crime Scene Investigator (CSI) but if not available (e.g. self-referral case) follow instructions in GSR kit (sometimes referred to as 'Firearms Discharge Residue kit') available from local CSI.</p>	<p>Place samples and completed 'Sampling Report' (in the kit) in labelled tamper-evident bag. <b>Store at normal room temperature.</b></p>
<p>Ground sheet/ Couch cover</p>	<p>Recovery of foreign particles that may fall from clothing or body during examination.</p>	<p><b>Clothing collection kit</b></p> <p>Stand examinee on ground sheet when undressing.</p>	<p>Fold paper sheets/drapes securely with upper sides inwards to retain debris.</p> <p>Place separately in paper bags and seal. <b>STORE DRY</b></p>

TOXICOLOGY

SAMPLE TYPE	REASON FOR ANALYSIS	METHOD OF SAMPLING	PACKAGING AND STORAGE
<b>Blood preserved (at least 1.5% sodium fluoride + potassium oxalate or EDTA)</b>	Should always be taken if incident occurred <b>within 72 hours</b> .	Approximately 7.5 ml into 10ml / 2x5ml <b>glass</b> tubes (no more than ¾ full). <u>Plastic tubes should not be used.</u> If volatile analysis required a second sample should be taken similar to the first (no more than ¾ full).  <b>Blood samples for volatile analysis must be frozen ideally within the hour and kept frozen in transit.</b>	<b>Blood and Urine</b>  Place glass tubes inside sealed plastic containers and then into tamper-evident bags.  <b>Ideally samples should be refrigerated but if no refrigerator available they can be frozen as long as the sample tubes are no more than ¾ full.</b>
<b>Urine preserved (at least 1.5% sodium fluoride)</b>	Should always be taken if incident occurred <b>within 72 hours</b> .  Should be obtained if suspected drug-facilitated sexual assault in preceding <b>14 days</b> .	Urine samples should be decanted into a <b>glass</b> tube which should be at least 20ml in volume (no more than ¾ full). Two urine samples should be taken if the incident occurred in the preceding 24 hours. The first should be taken as soon as practicable after the incident and the second should be the next urination after the first sample and ideally within an hour of the first if possible. Both specimens can be taken prior to full medical examination. Urine from complainants does not need to be witnessed.	<b>REFRIGERATE OR FREEZE</b>  Samples should be sent for analysis as soon as possible otherwise some drugs will be undetectable due to instability.
<b>Hair (normally only head hair suitable)</b>	If incident occurred <b>up to 6 months</b> prior to the examination and there is a possibility that drugs may have been eliminated from the urine (drugs are eliminated from urine at rates varying from 12 hours to over 3 weeks). If in doubt consult the laboratory for advice.	Follow instructions in specific kit from specialist laboratory. <b>Should only be taken a minimum of 4-6 weeks after incident.</b> Individual should be requested not to cut or chemically treat (dye or perm) their hair in the intervening period.	Hair samples should be packaged as described in the specific hair testing kit. They should then be placed in tamper-evident bags.  <b>Hair samples must not be frozen or refrigerated. THEY MUST BE STORED DRY AT NORMAL ROOM TEMPERATURE.</b>

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