

Child Protection - Forensic Hair & Nail Sampling for Toxicology

Document Type	Guideline
Function	Clinical Service Delivery
Healthcare Service Group (HSG)	Child Health
Department(s) affected	Te Puaruruhau
Patients affected (if applicable)	Children and young people seen by the Te Puaruruhau team
Staff members affected	Te Puaruruhau clinicians
Key words (not part of title)	methamphetamine, Environmental Science & Research (ESR) examination Kit, sexual assault, DNA samples
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1. Purpose of guideline

Recent advances in scientific technology mean that Environmental Science & Research (ESR) can now look for the presence of some drugs in hair and fingernail samples. If the initial window of opportunity is lost to obtain useful blood and urine samples, it may be worthwhile obtaining hair and nails samples from the complainant to be analysed for the presence of drugs.

As well as collecting the samples, it is important to record the time since the alleged drugging. Record any hair or nail treatments that have been carried out (e.g. perming, bleaching, or acrylic nails). As with other toxicological samples, it is important to record any medication the complainant may have been taking in the months prior to and subsequent to the alleged offence.

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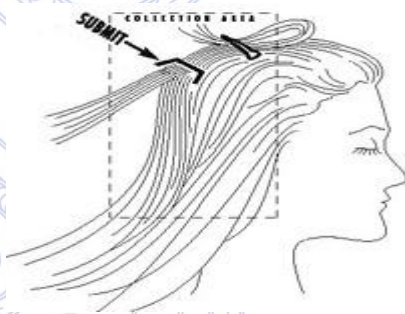
2. Hair sampling

Hair toxicology is available at the ESR for amphetamine type stimulants, opiate type drugs, sedative type drugs and benzylpiperazine (BZP) party pills.

Use fresh gloves and clean equipment for each child.

Hair samples should be taken one to six months after the event. Results have been obtained at 16 months from exposure but it is rare for individuals to have hair of that length to enable delayed testing.

The top rear of the head has the most consistent hair growth; this is the area in which hair samples need to be taken.



Hair tuft needs to be cut as close as possible to the scalp to include the most recent hair growth as this is where the most recent drug intake has been deposited from the follicle.

For cosmetic reasons smaller tufts (fewer strands, full length) may need to be taken at various sites within the sampling area to obtain a sufficient sample, which needs to be at least pencil-width in thickness.

Clamp the hair, (if clamp available), leaving room between the clamp and the scalp to allow the hair to be cut. Once cut leave the sample clamped and tie the hair tuft together at the end by the clamp.

The ends need to be able to be distinguished. Where possible, place the tie closer to the scalp end of the sample, approximately 1 cm from the scalp end of the sample (use dental floss from the dispenser provided, to tie the hair sample). If several tufts are required each should be individually tied.

The hair sample should be wrapped in a fresh square of glad wrap from the box provided. This is to maintain integrity and to avoid contamination. Where it is not obvious, mark the outside of the wrap to indicate the scalp end of the sample.

Place samples into the plastic exhibit bag, and seal the bag. Write on the front of the bag the child's name, date and time the sample(s) were obtained, (or use a patient label), and the name of the person who obtained it., Sign across the seal and hand the sealed envelope to the police officer in charge.

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3. Nail sampling

Nails grow at 1/3 - 1/10 the speed of the hair and that varies between the nails. Levels of drugs in nails are similar to the levels in hairs.

Nail samples can be taken from 2 weeks after ingestion of the drug. The drug enters the nail through the nail root and bed so there is no way of establishing a time frame. Nails are used more as a screening tool, and the hair samples can then be used to narrow down the time frame. The best estimate of time frame will be obtained from hair samples taken as close to one month post event as possible.

It has been advised that the complainant may be asked to clip their nails after the event and then again 1 month post event and those clippings collected.

Clippings can be taken by cutting the overhang of the nail, as a person would do during normal personal grooming.

Bag nail clippings from each hand or foot into a self-sealing plastic exhibit bags (there should be 4 separate bags corresponding to left hand, right hand, left foot, right foot) and seal the bag. Write on the front of the bags the child's name, date and time the sample(s) were obtained, (or use a patient label), and the name of the person who obtained the samples, Sign across the seal and hand the sealed envelope to the police officer in charge.

Wipe scissors/nail clippers with an alcohol wipe between each nail set.

This technique is relatively new to ESR and not part of routine analysis so will run an additional cost. Appropriate cases should be discussed with the NZ police officer in charge of the case and ESR Toxicology in Wellington on (04) 914 0749.

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4. Child protection services

If the child or young person is in CYFS care:

- Obtain consent and document on CR 2597: Examination Consent
- Sight Section 42 and Section 53
- Ensure the CYFS social worker signs the CR 2597: Examination Consent

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5. Associated ADHB documents

- [Child Abuse Neglect, Care & Protection](#)
- [Child Protection Team Documentation & Child Protection Reports](#)
- [Child Protection Forensic Examination Kit](#)
- [Child Protection Forensic Specimens to Lab](#)
- [Forensic DNA Testing](#) (Epsom Day Unit)
- Puawaitahi Interagency Guidelines
- [Sexually Transmitted Infection \(STI\) in Child & Adolescent - Management](#)

Clinical forms

- CR 2597: Examination Consent

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6. Disclaimer

No guideline can cover all variations required for specific circumstances. It is the responsibility of the health care practitioners using this ADHB guideline to adapt it for safe use within their own institution, recognise the need for specialist help, and call for it without delay, when an individual patient falls outside of the boundaries of this guideline.

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7. Corrections and amendments

The next scheduled review of this document is as per the document classification table (page 1). However, if the reader notices any errors or believes that the document should be reviewed **before** the scheduled date, they should contact the owner or the [Clinical Policy Advisor](#) without delay.

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