

ALPHABIOLABS
SETTING THE STANDARD

"Excellent service, we would definitely use Alphabiolabs again"

Kathleen Goddard – Goddard Smith Solicitors

TESTS TO DETECT ILLICIT DRUG ABUSE

ANALYSIS OF HAIR FOR THE PRESENCE OF DRUGS

It is generally accepted that, for an average person, each hair grows approximately 1cm per month. For example, if an individual consumes a drug, then during its circulation in the bloodstream, a proportion of the drug and its metabolites will enter the hair follicle via the dermal papilla and become incorporated into the growth of the hair shaft, meaning the concentration of drug will be greater in the section of hair shaft closest to the scalp. The hair sample will be measured and cut into segments according to your requirements. Each segment will be analysed separately for the presence of drugs and their metabolites. Combined with an estimate of the growth rate of the hair, this assists in the determination of any long-term drug use for an individual. Such an opinion would only be offered if the hair sample analysed is greater than 6cm (i.e. 2 segments) from the scalp to the hair tip.

BENEFITS OF SEGMENTATION

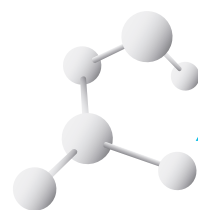
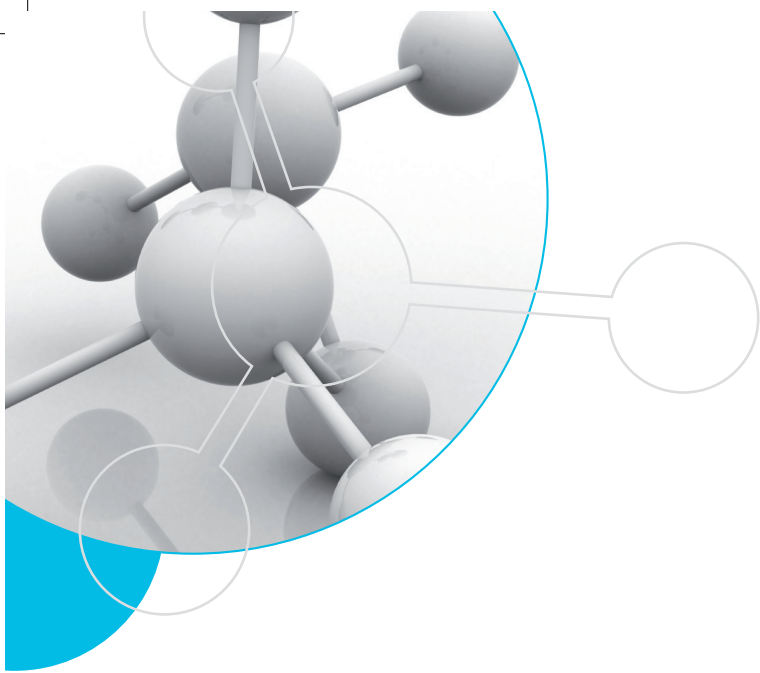
Did you know that if you request a standard length drugs of abuse test to cover a period of 3 months, even if your client abused drugs once, the test may show positive for the whole 3 month period. This can give the impression that the sample donor had been abusing drugs for the whole period analysed.

To overcome this we would recommend a three month segmented test be obtained. In the above referenced example the sample donor could show positive for one month and negative for the other two months. Therefore a more accurate reflection of the sample donors drug abuse/abstinence can be presented to the court.

For example, a six month analysis requesting 2 segments would equate to an analysis of two 3 month segments.

See table for example of hair analysis regularly performed at our laboratory:

Analysis Type Required (months)	Number of segments (cm)	Reported Time Period
3	1	3 Month
3	3	3 Individual Months
6	2	Two x 3 Months Periods
6	6	6 Individual Months



CASE STUDY

The sample donor admitted occasional drug use prior to the instruction. The solicitor therefore requested a six month, 6 segment test for drugs of abuse. The results clearly showed drugs had been abused in months two and five, the remaining segments showed negative results, thus proving the sample donor's initial statement.

Had the solicitor not requested a segmented test, the report could have shown a positive result, therefore leading the solicitor and the courts into thinking the sample donor had abused drugs throughout the entire period tested.

DETECTION OF VARIOUS DRUG TYPES

Hair gives a detailed history of drug use from one week previous, up to approximately a 12 month period. Drugs can be detected in urine from 24 hours after and for several days thereafter. Drugs can be detected in oral fluid shortly after being consumed and up to 48 hours.

Drug	Period of Detection	
	Urine Test	Hair Test
Amphetamine	2-4 days	7 days +
Benzodiazepine	Up to 2 Weeks	7 days +
Cannabinoids (THC) <i>Occasional User:</i>	1 to 9 days	90 days +
Cannabinoids (THC) <i>Chronic User:</i>	30 days or longer	7 days +
Cocaine	2-3 days	7 days +
Methadone	2-4 days	7 days +
Methamphetamine	2-4 days	7 days +
Opiates	2-3 days	7 days +
Zolpidem	2-4 days	7 days +

	Hair drug testing vs. Urinalysis	
	Hair Drug Testing	Urinalysis
Window of detection	Up to 12 months	< 72 Hours
History	Established historical patterns of abuse (monthly quantities)	No historical patterns possible
Regularity	One-off testing	Regular testing
Results	False positives are eliminated	Risk of false positives
Collection	Non-invasive	Invasive
Re-Testing	Possible	Not possible due to short window of detection
Samples and storage	Tamper proof	Risk of tampering