



## HAIR TESTING

Hair testing, as a forensic tool, has been conducted for decades. Using hair as the designated specimen in drug-free workplace testing programs is appealing to many employers as the scientific knowledge base has expanded, the costs are decreasing and the collection procedures are the least invasive for workplace drug testing. Strict chain-of-custody documentation procedures are followed, thereby providing the same safeguards and protections for the employee and the employer as in urine specimen collections. Note: hair as an illicit drug-testing specimen is not currently an option for U.S. Department of Transportation regulated companies.

### Some facts about hair analysis and workplace testing:

- A swath of hair, from the back crown area, is taken to provide a testable sample measuring 1.5" long and about 0.5" wide (70-120 strands of hair) - only the 1.5" closest to the scalp is tested.<sup>1</sup>
- 1.5" of hair will provide information covering about 90 days.<sup>2</sup>
- The hair sample is tracked through chain-of-custody procedures and will be packaged and sent to a laboratory that specializes in hair testing. Hair not used for the 90-day period testing is stored.
- Hair specimens are thoroughly washed to remove contaminants (hair products, dust, sweat, smoke etc.), the melanin is removed to eliminate any bias, then liquified for testing.<sup>3</sup>
- The minimum time period that may be analyzed is about one month.
- Brief periods of abstinence from drugs will not alter the test results.<sup>4</sup>
- Trying to thwart hair drug testing is much more difficult than with urine testing. Employees may cut off the head hair - in which case body hair or fingernails may be used. Testing procedures for fingernails are identical to those used in hair analysis.
- Once a drug metabolite is embedded in the hair shaft during formation of a hair in the follicle, that metabolite is very nearly permanent in the hair shaft.<sup>5</sup>
- Drug metabolites will become detectable in the hair about one week after ingestion.<sup>6</sup>
- Hair analysis is a better indicator of chronic cocaine use, whereas urine analysis is a better measure of short-term cocaine use.<sup>7</sup>
- Hair testing is comparable to urine testing for presence of marijuana.<sup>8</sup>
- Hair testing is better at detecting morphine-based compounds than it is in detecting opiates, particularly codeine.<sup>9</sup>

1. *Specimen Collection: Hair Testing for drugs of abuse. Procedures & Information.* Associated Pathologists Laboratories.

2. *Hair Testing Questions & Answers.* Omega Labs website @ [www.omegalabs.net](http://www.omegalabs.net)

3. *Drug Testing Technology: Assessment of Field Applications.* Baumgartner, Werner A., Ph.D.; Hill, Virginia A., B.S.; and Kippenberger, Donald Ph.D. Edited by Tom Mieczkowski. CRC Press LLC. 1999.

4. *Hair Assays for Drugs of Abuse in a Probation Population: Implementation of a Pilot Study in a Correctional Field Setting.* National Institute of Justice Research Brief. Mieczkowski, Tom, Ph.D.; Newel, Richard A.; Allison, Gail; and Coletti, Shirley. October 1995.

5. Ibid.

6. Ibid.

7. Ibid.

8. Ibid.

9. Ibid.