



**The National Drug and Alcohol
Screening Association Hereby Adopts
and Endorses Industry Developed Hair
Testing For Drugs of Abuse
Required Changes to**

**The Mandatory Guidelines for Federal
Workplace Drug Testing Programs 2018**

Federal Approval of Hair Testing for Drugs of Abuse Table of Contents

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Executive Summary
The Addition of Hair Testing for Drugs of Abuse to the Mandatory Guidelines for Federal Workplace Drug Testing Programs

Federally regulated industries want and need choices in the type of drug testing they can perform to fulfill the U.S. Department of Health and Human Services' (HHS) Mandatory Guidelines for Federal Workplace Drug Testing Programs. For regulated industries to have access to advanced drug testing methods, HHS must add hair specimens to the Mandatory Guidelines for Federal Workplace Drug Testing Programs.

This synopsis, endorsed by leading hair test laboratories, presents clear examples and data to prove the necessity for HHS acceptance of hair testing. It addresses key questions and facts, clarifies misinformation, and highlights factors motivating the barriers to the approval process. Also included is data demonstrating the hair test's ability to detect a significantly higher number of drug users than a urine test, collected by companies that currently perform urine testing and hair testing in conjunction.

Hair testing is recognized in the U.S. and worldwide as a deterrent to the abuse of drugs. Within the U.S. hair testing is used in many court systems and drug free workplace programs that fall outside of HHS's Mandatory Guidelines. A growing number of organizations that fall within HHS's Mandatory Guidelines are performing a company hair testing policy in conjunction with the mandated urine test in order to detect more drug users that would have been missed by performing a urine test alone.

Due to continued delays by HHS, U.S. Senator John Boozman (R-Arkansas) and U.S. Congressman Rick Crawford (R-Arkansas) introduced companion bills (H.R. 1467 and S. 806) that would provide motor carriers with the option to use hair testing in place of urine drug testing. These bills were co-sponsored by U.S. Senators Joe Manchin (D-West Virginia), Heidi Heitkamp (D-North Dakota), Deb Fisher (R-Nebraska), and Tammy Baldwin (D-Wisconsin), and Congressmen Sean Duffy (R-Wisconsin), Reid Ribble (R-Wisconsin), J. French Hill (R-Arizona), Steve Womack (R-Arkansas), Bruce Westerman (R-Arkansas), Eleanor Holmes Norton (D- District of Colombia), Daniel Lipinski (D-Illinois), Jeff Denham (R-California), Mark Meadows (R-North Carolina), and Lou Barletta (R-Pennsylvania). The proposed legislation was intended to direct the U.S. Department of Health and Human Services (HHS) to permit hair testing as an alternative to urine for Department of Transportation (DOT) compliance. In December of 2015, S.806 was included in the FAST Act and signed into law. The legislation mandated that HHS provide final published guidelines within one year. The deadline was ignored, and no guidelines were published.

Concerned organizations want Congress to know that hair testing will improve the success of drug testing programs because it increases the time period over which drug use can be detected as compared to urine; a hair specimen is easily collected, transported and stored; it is less likely to transmit bio-organisms than urine; and it is more difficult to adulterate.

While oral fluid and urine testing have many benefits for post-accident and probable cause testing, hair testing has the complementary advantage of the longest detection period, adding the ability to detect chronic drug usage among candidates applying for safety-sensitive positions.

Federally regulated industries need to be given the option to use the best available technology to fight illegal drug use in the workplace. Urine, hair and oral fluid all have their place in the overall scope of drug testing and should be held to an equivalent scientific standard when being considered for the Federal Drug Testing Program. It is our opinion, that Congress mandate that HHS add hair testing to the Mandatory Guidelines for Workplace Drug Testing Programs.

What is Hair Testing?

Hair testing is a process in which hair specimens are analyzed for the use of illegal drugs. When a drug is ingested, it enters the blood stream and is broken down into specific metabolites. When a hair sample is screened, both the parent drug and the metabolite are isolated. Any samples that screen as potentially positive are confirmed using state-of-the-art technology.

In order for a hair sample to test positive, the metabolite of the drug will be detected if the donor has physically ingested the drug. Laboratories use detection levels that follow government recommendations.

Why use Hair Testing?

When compared to other forms of testing (urine, blood, oral fluids), hair samples can detect a longer period of drug use. For example, urinalysis can only detect most drugs within 2-3 days of use. After this period, a donor will be free of the drug, test negative and slip through the screening process. This is important in pre-employment testing where most candidates are aware that a drug test might be required and can abstain accordingly. With hair samples, the only time limitation for detecting drug usage is imposed by the length of the donor's hair. The industry standard is to test 1.5 inches of head hair for a 90-day history.

Why is hair testing the best method of detecting substance abusers?

- Hair testing offers the longest window of detection (90 days standard test).
- Hair specimens cannot be adulterated or substituted.
- Collection is safe and simple (no handling of hazardous bodily fluids).
- Hair testing is valid and admissible in court.

Benefits of Hair Testing for International Programs

Since hair specimens do not deteriorate during transit, hair testing is quickly becoming the methodology of choice for multinational corporations, and safety sensitive, regulated industries. Most Human Resources and Safety Administrators suspect that some substance abusers are slipping through their company's pre-employment drug screening process. The increased acceptance and success of hair testing has given these organizations a powerful tool for their workplace drug testing programs.

For Questions or Additional Information Please Contact:

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Clarification of Misinformation

A Legislative Director to a member of the U.S. House of Representatives conducted independent research to gain insight into HHS's continued delay of evaluating hair testing for acceptance into the Mandatory Guidelines for Federal Workplace Drug Testing Programs.

When questioned, HHS stated the following "myths" as their justifications for the lack of acceptance of hair testing. These statements sum up the misinformation that concerned organizations are fighting to dispel.

MYTH #1

Hair testing has not been proven to be scientifically or legally sound.

FACT

Over the past twenty-five years, there has been dramatic growth in the development, validation, and application of hair analysis to detect drugs in human hair. Over 300 studies and syntheses on hair drug testing have been published since its infancy in the mid-1950s up to present day. These studies have examined how hair drug testing is best utilized, the physiological intricacies of this matrix, and the ability of laboratories to perform forensically sound and legally defensible hair drug tests.

The support of hair testing includes studies from FBI laboratories and the U.S. Department of Defense. Additionally, the United Nations International Drug Control Programme published *Guidelines for Testing Drugs under International Control in Hair, Sweat and Saliva* as far back as 2001. Thousands of hair tests are performed worldwide each day for companies that have successfully implemented hair testing programs. These employers recognize that it is an accurate and reliable test that deters drug use among workers. For hair testing, the nearly three decades of real-world usage has led to studies and publications by researchers performed on large populations in diverse settings of workplace, court, and school drug testing programs.

Hair testing has been proven as acceptable evidence in Court systems throughout the U.S. and worldwide. Hair testing is currently used as evidence in criminal, civil and military courts and has passed the admissibility of expert testimony known as the Frye Rule, the Federal Rules of Evidence, and the Daubert Rule.

The Frye Rule: "that the opinions of experts or skilled witnesses are admissible in evidence in those cases in which the matter of inquiry is such that inexperienced persons are unlikely to prove capable of forming a correct judgment upon it, for the reason that the subject matter so far partakes of science, art, or trade as to require a previous habit or experience or study in it, in order to acquire a knowledge of it... Just when a scientific principle or discovery crosses the line between the experimental and demonstrable stages is difficult to define. Somewhere in this twilight zone the evidential force of the principle must be recognized, and while courts will go a long way in admitting expert testimony deduced from a well-recognized scientific principle or discovery, the thing from which the deduction is made must be sufficiently established to have gained general acceptance in the particular field in which it belongs." (Frye v. U.S. (1923). 293 F. 1013.)

Rule 702. Testimony of Experts: *“If scientific, technical, or other specialized knowledge will assist the trier of fact to understand the evidence or to determine a fact in issue, a witness qualified as an expert by knowledge, skill, experience, training, or education, may testify thereto in the form of an opinion or otherwise.* Rule 703. Bases of Opinion Testimony by Experts: *The facts or data in a particular cause upon which an expert bases an opinion or inference may be those perceived by or made known to the expert at or before the hearing. If of a type reasonably relied upon by experts in the particular field in forming opinions or inferences upon the subject, the facts or data need not be admissible in evidence.* Rule 705. Disclosure of Facts or Data Underlying Expert Opinion: *The expert may testify in terms of opinion or inference and give reasons therefore without first testifying to the underlying facts or data, unless the court requires otherwise. The expert may in any event be required to disclose the underlying facts or data cross examination.”* (Moore, J.W. (1994a). Moore’s Federal Practice, Federal Rules of Evidence. Matthew Bender. 315-341.)

In Daubert, *the U.S. Supreme Court handed down a new standard for determining the admissibility of scientific evidence in the Federal Courts. The Daubert rule states that: “The reasoning or methodology underlying testimony must be scientifically valid. Examination of the scientific validity include: widespread acceptance; peer review; publication; testing; rates of error; the existence of standards.”* (Daubert (1993) v. Merrell Pharmaceuticals, Inc., 509 U.S. 579.)

MYTH #2

Hair testing has been plagued with two problems – ethnic bias and external contamination.

FACT

Ingested drugs are metabolized differently depending on a person’s gender, weight, and racial identity, but it has been found that there is no significant difference between these factors and when comparing evidence of drug use through test results based on urine, oral fluid or hair. Rather, it has been found that a difference between individuals and groups is linked to differences in drug “Preference Behavior.” Studies published in peer-reviewed literature do not indicate any significant impact based on hair color or race, and this has been acknowledged by the U.S. Government in the Notice of Proposed Regulatory Modification (NPRM) published in the Federal Register (69 FR 19675) in 2004.

A 2011 study by Roper Miller and Peter Stout of Research Triangle Institute took into account different ethnic features of head hair and suggests that there is no relationship between a donor’s ethnicity and a sample result being positive in situations of environmental cocaine (COC) surface contamination and exposure. This study examined the effects of external contamination and wash procedures on hair of different ethnicities. Their past and recent research has put color/ethnicity concerns to rest, along with the argument of color/ethnic bias as a reason to exclude hair drug testing in the Mandatory Guidelines for Federal Workplace Drug Testing Programs.

Furthermore, these two issues have been found possible in urine, breath, and oral fluid testing.

Contamination:

To minimize potential contamination concerns, various wash procedures have been implemented as requirements to Society of Hair Testing (SoHT), College of American Pathologists (CAP), and New York State Dept. of Health (NYS DoH) accreditations for hair testing labs. Hair analysis differentiates environmental contamination from actual drug use because of the presence and/or quantitative ratios of the drug metabolites stored in the hair shaft. Unlike urine tests, hair test results are not impacted by attempts to adulterate the specimen just prior to collection. The “Mandatory Guidelines for Federal Workplace Drug Testing Programs; Notice of proposed rule-making,” 69 Federal Register 71 (13 April 2004), pp. 19675, states hair analysis differentiates environmental contamination from actual drug use because of the presence of the metabolite.

A few individuals’ justification of this concern must be understood in terms of the situations they foresee contamination occurring. Some studies’ concerns and conclusions on external contamination revolve around various professions that are at greater risk of being environmentally exposed to illegal drugs, such as first responders and narcotics agents. This type of professional exposure is not the norm and the majority of regulated employees tested under the Mandatory Guidelines do not have a legitimate, documentable reason for having their hair externally contaminated by illegal drugs to such a degree that it would cause a positive drug test result. As previously mentioned, to alleviate the possibility of a positive result from environmental contamination, hair testing labs have implemented wash procedures and test for metabolites.

MYTH #3

There is a lack of credible accreditation programs in place for hair testing.

FACT

Currently, hair testing laboratories can receive a variety of accreditations through the Clinical Laboratory Improvement Amendments, New York State Department of Health, ISO/IEC 17025 Laboratory Accreditation programs and College of American Pathologists. Three major hair testing labs have also gone, through the FDA premarket notification (510(k)) clearance process for their screening assays. For those who have participated, this process has included method agreement, assessment of the impact of cosmetic use and applications, environmental contamination, drug cross reactivity, sample storage and shipping stability, method precision, and drug recovery studies.

There is also an internationally recognized proficiency testing program available to hair testing laboratories run by The German Society of Toxicological and Forensic Chemistry (GTFCh). The GTFCh currently has over 50 laboratories worldwide (including 3 in the U.S.) that voluntarily participate and are graded based on their performance in the hair testing proficiency program. In addition, Reference Materials to validate hair testing are available in the U.S. from Research Triangle Institute (RTI) and the National Institute of Standards and Technology (NIST).

MYTH #4

An FBI study on hair testing and cocaine contamination around 2008 has raised questions, and, as a result of this study, the FBI no longer uses hair testing.

FACT

The FBI never performed the alleged study. The FBI merely commented on a study conducted by RTI that was published in the Journal of Analytical Toxicology (JAT). After some concerned responses from JAT contributors, the FBI clarified their stance with a response letter stating “In fact, our laboratory continues to offer this service [hair testing] for numerous other drugs that do not share the same interpretation challenges as cocaine. *And we reiterate that we continue to test for cocaine in hair samples collected from subjects that have no legitimate reason to have cocaine exposure, such as in child endangerment investigations.*”

In 2014, the Chemistry Unit of the Federal Bureau of Investigation (FBI) Laboratory Division published a study titled *Analysis of Extensively Washed Hair from Cocaine Users and Drug Chemists to Establish New Reporting Criteria*. This study highlighted the importance of a wash procedure in removing external contamination, and also identified new metabolite criteria to ensure that contamination does not negatively affect donors.

MYTH #5

There has been an insufficient amount of time to review hair testing.

FACT

We believe the amount of time spent retrofitting the urine test guidelines has taken away valuable time for reviewing alternative matrices. The urine test guidelines have been continually changed to account for the urine specimen’s shortcomings, and the continuing emergence of new methods to adulterate urine tests.

Examples:

Time spent implementing direct observation

- Not an issue with hair testing

Addition of temperature and sample validity requirements

- Not an issue with hair testing

Urine, hair, breath, oral fluid, sweat, forehead/tongue wipe testing matrices have their place in the overall scope of truly complementary testing. Hair testing needs to be reviewed and approved as a significant tool in preventing illegal drug use. There are significant potential dangers that can result by bureaucratically limiting the availability and application of a scientifically proven drug testing method.

MYTH #6

Private industry already has the option to use hair testing if they so choose. SAMHSA only establishes rules for the Federal Drug Testing Program.

FACT

Yes, many private industries do choose to hair test, but many federally regulated industries also want this option to fulfill their requirement to the Federal Workplace Drug Testing Program. Currently, several federally-regulated companies have implemented routine hair testing in addition to their mandated urine testing program because of the value and proven effectiveness hair testing provides to screen out drug abusers. Unfortunately, while many other federally-regulated companies are interested in hair

testing, they will not use it until it is accepted into the Federal Guidelines, primarily due to the cost of performing the two tests in conjunction. HHS and SAMHSA’s rules act as an example for all Drug-Free Workplace Programs, and by excluding hair as an option, there is an inferior model in place, which hinders organization’s ability to choose the best technology for each “best use” application provided in the Comparison of Methods Table below.

Comparison of Methods

	<i>Urine</i>	<i>Oral Fluid</i>	<i>Hair</i>
<i>Test Timeframe</i>	Most Drugs 2-3 Days	1-2 Days	3 Months
<i>Adulteration</i>	Commonly available	Difficult to adulterate	Difficult to adulterate
<i>Collection Difficulty</i>	Invasive, special facilities required	Non-invasive	Non-invasive
<i>Best Use</i>	Post Accident, For Cause, Random	Post Accident, For Cause, Random	Pre-Employment, Random

MYTH #7

SAMHSA has identified these issues and continues to study findings from research as it does for all potential biological specimens that have been brought up for DTAB review (urine, hair, oral fluid, breath and sweat).

FACT

Someone continually drives the topics and studies to overlook hair testing and is spreading misinformation like the above examples.

A small group of working researchers, a few from Research Triangle Institute (RTI), maintains that hair testing has not met their standards for use. These outlying research organizations have been intertwined with HHS and the U.S. Department of Transportation (DOT) for the past twenty years and have been battling to keep urine as the only government accepted drug testing matrix. As regulated organizations have questioned HHS and DOT on the use of hair testing, these studies have become more objective toward hair testing.

Real World Statistics: Hair vs. Urine

The following documents provide data gathered from organizations that fall under the HHS Mandatory Guidelines for Federal Workplace Drug Testing Programs. These organizations perform the mandatory urine test while voluntarily performing hair testing under company authority. They incur the additional cost for hair testing because it has been proven to work better than the mandated urine testing program. They continue to use the best technology available because they are concerned with safety. These statistics also show the impact hair testing has had on reducing the amount of random urine positives within the companies that hair test.

In April 2011, motor carrier CR England had identified and kept out 150 drug users, Schneider National had kept out over 1,000 drug users, and JB Hunt had kept out over 2,572 drug users, all of which would have otherwise passed their urine test and gained employment at these companies. This data shows that hair testing is the best option for pre-employment testing, as it screens out far more drug users. The following data of drugs of abuse testing with hair was performed by multiple laboratories.

Carrier	Pre-Emp Urine Pos. %	Pre-Emp Hair Pos. %	Post-Accident Urine Pos. %	Random Urine Pos. %
Schneider National	0.34%	4.12%	83% Decrease	57% Decrease
J. B. Hunt	0.16%	5.59%	-	79% Decrease
C.R. England	2.79%	11.06%	-	-
Roehl Transport	0.40%	3.00%	-	-
USA Truck	1.49%	11.67%	-	-
United Petroleum Transports	1.20%	11.60%	-	73% Decrease
Meadowbrook Meat Company	0.84%	3.19%	-	-

Conclusion

In summary, many organizations within federally regulated industries believe that the current federal drug testing regulations allow drug users to easily pass the HHS/DOT mandated urine drug test and gain employment performing safety-sensitive functions. The National Drug and Alcohol Screening Association and major hair test laboratories will continue to support these organizations by asking members of Congress, the U.S. Department of Health and Human Services, and the U.S. Department of Transportation to support the addition of hair testing to the Mandatory Guidelines for Federal Workplace Drug Testing Programs.

*For Questions or Additional
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