**COMPANY OVERVIEW**

Psychemedics was established in 1987 to provide testing for drugs of abuse using hair analysis and has been successfully operating for over 20 years. Thousands of corporations currently rely on Psychemedics’ patented hair analysis technology for their pre-employment and employee drug screening. Psychemedics is headquartered in Boston and has offices in Dallas, Chicago, Los Angeles and Las Vegas. Our Laboratory is located in Culver City, CA. Psychemedics is a publicly-held corporation listed on NASDAQ under the ticker symbol PMD.

**THE LEADER IN HAIR TESTING**

Psychemedics developed the first commercially-feasible hair test for drugs of abuse and has been dedicated to hair testing for over 20 years since the company was formed. As a result of our patents, other labs use inferior methods for getting the drug out of the inside of the hair. Psychemedics uses its patented technology to liquefy the hair, releasing essentially 100% of the drugs present and increasing detection capabilities.

Psychemedics performs more hair tests than all other labs combined. With millions of workplace tests performed since 1987, we continue to be the leader in hair testing technology.

**A HISTORY OF INNOVATION**

In 1987, Psychemedics became the world’s first laboratory to offer a cost-effective method for testing hair rather than body fluids for the detection of drugs of abuse. Psychemedics was also the first hair testing company to receive clearance from the Food and Drug Administration and the College of American Pathologists.

Psychemedics holds the first U.S. and foreign patents ever issued to detect the presence of drugs in hair. This patented technology is a proven drug testing process that not only can detect if drugs of abuse have been used, but can also provide information on the quantity and historic pattern of individual drug use in most instances. This information is not available from any body fluid screening procedure.

**RELIABLE RESULTS**

Psychemedics has a legal track record which reflects our superior technology and our dedication to supporting our results. Psychemedics’ test results have been continuously upheld by state and federal courts and in administrative agency hearings and arbitrations. In fact, some court systems even rely on Psychemedics’ technology in their probationary and diversionary programs.

Psychemedics has continued to advance the state of the art with our superior technology, along with our reputation for accuracy, customer service and meticulous quality control.
When you hire a drug user, you may also be hiring increased healthcare costs, absenteeism and accidents, and many times an in-house drug dealer.

Drug users cost businesses from thousands to millions of dollars each year and put the safety of your workers and company at risk.

How confident are you that your current drug screening process is effective?
Our patented technology allows us to offer the most technologically advanced, accurate, and defensible hair test available.

Psychemedics’ RIA technology was pioneered in 1977. Ten years of research on thousands of subjects proved that drugs deposited in hair can be measured by radioimmunoassay and ultrasensitive mass spectrometry procedures.

A key part of this technology is the ability to access the drug deposited in the hair so it can be analyzed. Psychemedics developed and patented a process of liquefying the hair to release virtually all of the drug and metabolite it contains. If you cannot get the drugs out of the hair, they cannot be measured. That is what our patents are all about!

The presence of drugs in hair is based on a simple scientific fact. Ingested drugs circulate in a person’s bloodstream and nourish the developing hair follicle. Trace amounts of the drugs become entrapped in the core of the hair shaft in amounts roughly proportional to those ingested.

Drug use can be detected for months and even years past, depending on the length of the hair sample. Psychemedics’ standard test uses a one and a half inch sample of head hair, which provides an approximate 3 month history of drug use.
As a result of our patents, other hair testing labs use inferior methods to try to get the drug out of the hair. These alternative methods may destroy or fail to recover significant amounts of the drug. This is perhaps the most critical area in the testing process. If you cannot release the drug from the hair, you will not be able to screen for it, which leads to drug users not being identified.

Ineffective release of drugs from the intact hair leads to inadequate testing and false negatives. Psychemedics’ patented liquefying method releases essentially 100% of the drugs present, resulting in superior detection capabilities.

*It is important to note that any Psychemedics positive result has had two completely separate tests performed - an immunoassay screen and a mass spectrometry confirmation test.*

**STATE OF THE ART LABORATORY**

Psychemedics operates a laboratory dedicated to hair analysis in Culver City, California (Los Angeles metropolitan area). Psychemedics has the largest collection of tandem mass spectrometers in the world dedicated to hair analysis to ensure fast turnaround times even in peak periods.

In addition to having all of our screening assays FDA cleared, our state of the art laboratory is certified by CLIA (Clinical Laboratory Improvement Amendments), has CAP (College of American Pathologists) certification for forensic hair testing and holds all required state licenses, including New York and California.
Psychemedics offers significant advantages over urinalysis and creates a powerful deterrent for drug users.

Wider Window of Detection
While urine tests generally detect drug use for only the previous 2-3 days for most drugs, Psychemedics’ hair analysis can typically detect drug use over the previous several months.

Greater Detection and Accuracy
When hair and urine results were compared in “side-by-side” evaluations, 5-10 times as many drug users were accurately identified with Psychemedics’ testing technology.

Quantitative and Historical Information
Because hair records drug use chronologically, Psychemedics’ test can also provide an approximation of the pattern and quantity of drug use in most instances.

Resistance to Evasion
Unlike urine, hair samples cannot be easily substituted, adulterated or diluted when properly performed. Ways to beat urine tests are widely publicized and drug free urine and adulterants can easily be purchased. Most drugs users know that the simplest way to beat the test is to just abstain from drug use for 3 days.

Non-Intrusive Sample Collection
A cosmetically undetectable snip of hair is easily collected under close supervision without causing the embarrassment of providing a urine sample. No refrigeration is required and the sample is easily handled and shipped – it is not considered hazardous material.

Follow-Up Test (Safety Net Testing)
If the results of the first test are challenged, Psychemedics can analyze a second sample, collected close in time to the original sample that can repeat the original results. This is not possible with urine, since the original window will have passed, and the subject can merely abstain from drug use in the few days prior to submitting a new sample.

Cost-Effectiveness
Government studies have revealed that each drug user can conservatively cost a company between $7,000-$10,000 annually. By routinely detecting as many as 5-10 times more drug users than urinalysis, Psychemedics’ superior technology offers the most cost effective and efficient method for drug testing.
ALL HAIR TESTING IS NOT THE SAME

*Psychemedics’ patented technology and the experience gathered from performing millions of hair tests has unique advantages for our clients. In addition to being the only lab to have FDA approval for both head and body hair, Psychemedics offers:*

**Accuracy and Identification of Users**
Because of our patents, other labs use inferior methods for getting the drug out of the inside of the hair, which can result in false negatives. While other hair testing labs may leach drugs from the hair, leaving behind or destroying some of the drug in that process, Psychemedics uses its patented digestion methods to liquefy the hair, thereby releasing essentially 100% of the drugs present and increasing detection capabilities.

**Significantly Smaller Sample of Hair Required**
Other labs require 2-3 times as much hair for their methods. A smaller sample means fewer cancelled tests due to insufficient hair quantity. This also means that even donors with sparse head hair or body hair can be tested.

**Environmental Contamination**
Psychemedics developed and utilizes the most extensive wash procedure in the industry to remove and/or account for any external contamination (a 3 hour and 45 minute multi-step wash procedure that also includes testing of the last wash with application of wash criteria). Other labs use a less effective wash or do not analyze the wash at all, putting clients at risk for making employment decisions based on a false positive result. Numerous studies demonstrate the effectiveness of the Psychemedics wash procedure and the ineffectiveness of others.

**Our Test Cannot Be Beat**
Psychemedics’ test cannot be beat with cleansers, bleachers, dyes, etc. While common adulterants will dramatically effect some other lab’s results, Psychemedics has published data demonstrating that common adulterants do not work on its tests.

**Legal Track Record**
Psychemedics’ hair test has been upheld in more state and federal courts than any other testing lab. In addition to state and federal courts, Psychemedics’ technology has been deemed accurate and reliable in arbitrations, unemployment hearings and other legal actions.
Most of the commonly abused drugs are rapidly excreted from the fluids of the body (blood, saliva and urine). This leads to a very short drug detection window using any of these specimens. The weakness of body fluids testing has more to do with human biology than the technology. Hair stores drugs and their metabolites permanently in the hair as it develops and grows. This provides a much longer detection period of approximately 3 months.

The most common method by which drug users defeat body fluid tests is by abstaining from drug use for several days before the test. Psychemedics’ longer detection window effectively eliminates this tactic and leads to a much higher detection rate.

Psychemedics’ patented liquefying technology can extract essentially 100% of the drug and metabolite from the hair. Bottom line, if you cannot get the drug out, you cannot test it.
Cost-Effectiveness

Government studies reveal that each drug user (conservatively) costs a company between $7,000- $10,000 annually. In side by side comparisons, Psychemedics routinely detected 5-10 times more drug users than urinalysis. Our superior technology offers the most cost effective and efficient method for drug testing.

Drug users cost their employers in the following areas:

- Accidents
- Productivity
- Absenteeism
- Turnover
- Discipline
- Product Quality
- Customer Service
- Employee Morale
- Workers’ Compensation
- Health Insurance Costs
- Life Insurance Costs
- Disability Insurance
- Rehabilitation Program
- Employee Theft
- Workplace Violence

*The actual cost of the test itself is minimal compared to the cost of employing a drug user.*
Thousands of corporations worldwide rely upon Psychemedics’ patented technology for their pre-employment and employee drug testing needs. Our superior technology, along with our reputation for accuracy, customer service and meticulous quality control has made Psychemedics the leader in drug testing using hair analysis. Psychemedics performs more hair tests than all other labs combined.

Our clients represent a wide variety and cross-section of businesses and industries including:

<table>
<thead>
<tr>
<th>Manufacturing</th>
<th>Oil and Natural Resources</th>
</tr>
</thead>
<tbody>
<tr>
<td>Service Industries</td>
<td>Lodging and Hospitality</td>
</tr>
<tr>
<td>Retail</td>
<td>Property Management</td>
</tr>
<tr>
<td>Gaming</td>
<td>Law Enforcement</td>
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<tr>
<td>Banking</td>
<td>Criminal Justice</td>
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<tr>
<td>Education</td>
<td>Health Care</td>
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<tr>
<td>Entertainment</td>
<td>Transportation</td>
</tr>
</tbody>
</table>

Our clients range in size from regional employers to Fortune 500 companies. Psychemedics’ patented technology is utilized by over 10% of the Fortune 500 companies, major police forces, Federal Reserve Banks, schools and a variety of government and medical research programs.

Psychemedics also became the first company to offer a patented hair drug testing service (the PDT-90) for parents concerned about their children and possible drug use.
CASE STUDY

*Psychemedics detected 6 times the number of drug users*

<table>
<thead>
<tr>
<th>Drugs</th>
<th>Urine</th>
<th>Psychemedics Hair</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cocaine</td>
<td>0.5%</td>
<td>8.4%</td>
</tr>
<tr>
<td>Marijuana</td>
<td>0.5%</td>
<td>3.5%</td>
</tr>
<tr>
<td>Other</td>
<td>1.7%</td>
<td>6.1%</td>
</tr>
<tr>
<td>Overall Positive Rate</td>
<td>2.7%</td>
<td>18.0%</td>
</tr>
</tbody>
</table>

Steelcase administered both urine and Psychemedics’ hair analysis tests to 774 applicants in order to provide an effective side-by-side comparison. Hair and urine samples were collected on the same day from each applicant. For all the drugs tested, Psychemedics was dramatically more effective in identifying drug use, yielding an 18% positive rate in comparison to a rate of 2.7% for urine. This demonstrates that 85% of the drug users identified by Psychemedics would have passed the urine test and entered the workforce.

Drug users are very well informed on the tactics and approaches to use to defeat a urine test. When a company switches to Psychemedics, not only do they start identifying more drug users; drug users stop applying. As soon as the word begins to spread that a company is now using Psychemedics, the message given becomes “Drug users need not apply.”
Psychemedics offers *5 Panel Plus* testing for all of the most commonly abused drugs. We also test for the metabolites associated with these drugs, where applicable.

<table>
<thead>
<tr>
<th>DRUG CLASS</th>
<th>ANALYTE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cocaine</td>
<td>Cocaine</td>
</tr>
<tr>
<td></td>
<td>Benzoylcegonine</td>
</tr>
<tr>
<td></td>
<td>Cocaethylene</td>
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<tr>
<td></td>
<td>Norococaine</td>
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<tr>
<td>Opiates</td>
<td>Codeine</td>
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<tr>
<td></td>
<td>Morphine</td>
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<tr>
<td></td>
<td>6-MAM</td>
</tr>
<tr>
<td></td>
<td>Oxycodone (OxyContin)</td>
</tr>
<tr>
<td></td>
<td>Hydrocodone (Vicodin)</td>
</tr>
<tr>
<td></td>
<td>Hydromorphone (Dilaudid)</td>
</tr>
<tr>
<td>Phencyclidine</td>
<td>Phencyclidine (PCP)</td>
</tr>
<tr>
<td>Amphetamines</td>
<td>Amphetamine</td>
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<tr>
<td></td>
<td>Methamphetamine</td>
</tr>
<tr>
<td></td>
<td>MDMA (Ecstasy)</td>
</tr>
<tr>
<td></td>
<td>MDA</td>
</tr>
<tr>
<td></td>
<td>MDEA (Eve)</td>
</tr>
<tr>
<td>Marijuana</td>
<td>THCA</td>
</tr>
</tbody>
</table>
FREQUENTLY ASKED QUESTIONS

Who is using hair testing?
Thousands of corporations use Psychemedics’ test to screen applicants and perform random drug tests on their employees. Schools have been using the Psychemedics test since 1997 to help their students stay drug-free. Courts have routinely used Psychemedics’ test in their probation, parole, and diversionary programs. The use of hair is well established, and Psychemedics has been doing hair tests since 1987.

What time period does a standard test cover?
A standard test of one-and-one-half inches of head hair cut close to the scalp can provide a several month window to detect drug ingestion.

How soon after use can a drug be detected in hair?
It takes approximately 5-7 days from the time of drug use for the portion of the hair containing that drug to grow above the scalp and be detectable.

What is the shortest time period that can accurately be evaluated?
In most situations the minimum time period is approximately one month. A hair test does not determine drugs used on a particular day or week.

How effective is hair testing in detecting drug users?
Comparison studies have proven that Psychemedics’ testing is up to 5-10 times more effective in identifying drug users than urinalysis.

How does Psychemedics establish its cut-off levels?
These levels are based on field studies that establish the presence of the drugs following ingestion. These levels are included in Psychemedics’ FDA submissions, and are similar to the cut-off levels in the SAMSHA 2004 proposed federal mandatory guidelines.

Has Psychemedics’ testing been admitted in court?
Yes. The use of Psychemedics’ hair testing for drugs of abuse has been routinely admitted in both state and federal courts, as well as arbitrations and agency hearings. The test results are routinely upheld. Some court systems use hair analysis as part of their probation, parole, and diversionary programs.
**How much hair is needed?**
Psychemedics’ standard screen, along with GC/MS/MS or LC/MS/MS confirmation, usually requires a cosmetically undetectable lock of hair preferably snipped from the back of the head, just below the crown. In general, the amount needed is the thickness of a shoelace tip. Hair analysis methods used by other laboratories may require significantly more hair.

**Can tests be run on people with little or no hair?**
Yes. Hair can be collected from several locations on the head and combined to obtain the required amount of hair. If head hair is not available, body hair can be used as an alternative.

**Does chemical treatment of the hair affect the test results?**
Commonly used hair procedures (shampoos, conditioners, sprays, mousses and gels) have no significant effect on Psychemedics test results. In fact, normal hair washing helps to remove external contamintes. Normal hair treatments such as bleaching, perming and dyeing generally also will not significantly lower the quantitative results of the Psychemedics hair test. However, this is NOT the case for other labs purporting to do hair testing using inferior technology.

**Is there a risk that the results of a hair test can be affected by environmental contamination?**
Psychemedics utilizes several independent approaches which, in various combinations, rule out the possibility of reporting a positive result from external contamination. Studies have shown that the combination of extensive washing, application of wash criteria, metabolite analysis, and proper cut-off levels are necessary to avoid false positives due to external contamination. Psychemedics developed and utilizes the most extensive wash procedures in the industry.

**Are Psychemedics’ tests regulated by the Food and Drug Administration (FDA)?**
All of Psychemedics’ screening tests have been evaluated and cleared by the FDA under guidelines developed to ensure accuracy and reliability.
**Client Services**
Our clients praise the service they receive, starting with program management for a smooth rollout for companies of all sizes and needs, to in-house trainers that help ensure trouble free sample collection. Each client has a dedicated Client Service Account Manager at the Laboratory to address any questions and issues directly or provide access to the necessary technical expertise.

**Information Technology**
All proprietary laboratory processes (shipping, billing, receiving, accessioning, testing, and quality control) utilize custom database application software, which was designed and developed in-house. All proprietary software is continually updated and enhanced to improve efficiency and ensure the highest standards of quality control.

The IT department utilizes state of the art backup software. All test results data is backed up daily, and all backup media is moved offsite upon conclusion of the backup.

**Legal Support**
Psychemedics has in-house lawyers and forensic toxicologists to ensure that the highest quality support is always available to our clients. Because these professionals are dedicated to defending hair testing, they have the specific experience and expertise to help clients prevail in court. Psychemedics’ hair testing has been upheld in significantly more state and federal courts than any other testing lab. Psychemedics has over 20 years of experience in providing expert witness testimony and administrative and legal support in court cases.
Our result reporting system is highly automated to ensure rapid transmission of negative and positive reports. Psychemedics provides an array of flexible result reporting systems, including:

**Online Results:** Psychemedics’ Online Results website provides secure access to test results released by the laboratory in real-time twenty-fours a day, seven days a week. Clients may search for, view and print digital images of individual result reports and chain of custody forms.

**Fax and Email:** Psychemedics’ Systems provide automated transmission of Results Reports via secure Fax and Email with a wide range of customization options. Choose between Individual Report and Summary Report formats. Transmission may be scheduled at regular intervals, only during selected times or as soon as results become available.

**Integrated Voice Response:** Call our Interactive Voice Response System and enter your secure PIN number to retrieve test results by Donor Subject ID. Optionally, request an immediate fax copy of the complete test results or request transfer to a Client Services Representative to answer any questions you may have. The Integrated Voice Response system is ideal for companies with remote locations that may not have access to the internet.

**EDI (Electronic Data Interchange):** Our systems can generate data files of test result information in a variety of formats. These files can be retrieved by your company’s systems and loaded into your database.

**eResults On Demand:** Our eResults On Demand Web Service can be integrated directly with your company’s website or software service to provide immediate, secure, real-time access to your test results. eResults on Demand is ideal for companies that may already have their own website for background checks into which they would like to add dynamic protected links to our result reporting system.

**Management Reports:** Psychemedics can also provide customized reports to help you analyze the overall testing results for your company.