

# PSYCHEMEDICS

C O R P O R A T I O N

## HAIR ALCOHOL TESTING

*EtG*



# HAIR ALCOHOL TESTING (EtG)

A test that measures average alcohol consumption over a period of approximately three months, indicates the level of alcohol use during that time period, and can provide a behavioral indication of excessive use.



## WHO CAN BENEFIT FROM THIS TEST?

- ✓ Safety Sensitive Industries
- ✓ Return to Work Programs
- ✓ Wellness Programs
- ✓ Rehab Facilities & Healthcare Facilities
- ✓ Family Courts
- ✓ Law Enforcement Agencies
- ✓ Schools & Parents
- ✓ Last Chance Agreements
- ✓ Adoptions
- ✓ Probation and DWI Offenders
- ✓ Medical Monitoring

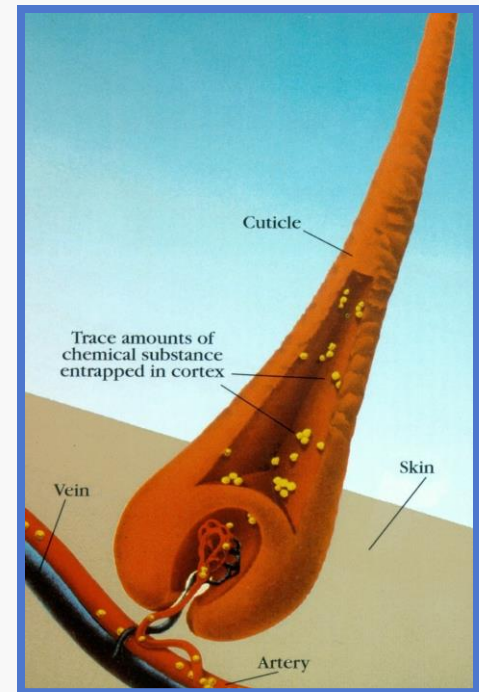
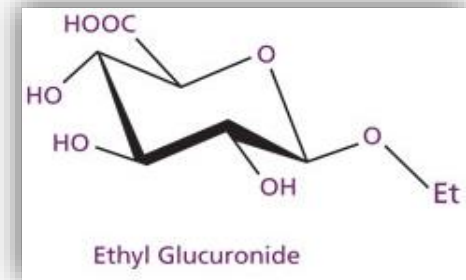
**This test is an indicator of a behavioral issue –  
It does not determine current impairment or abstinence.**

# WHY TEST FOR ALCOHOL?

- **Alcohol is the most abused substance in the world.**
- **This test gives answers about alcohol abuse and a behavioral indicator of excessive use.**
- **Workplace: A reduction in costs related to healthcare, absenteeism, accidents & impaired work performance.**
- **Adolescents: 1)Binge drinking can cause serious damage to a developing brain. 2)Alcohol kills more teens than all other drugs combined.**
- **Alcohol Monitoring: Helps ensures compliance with alcohol related restrictions.**

# WHAT IS BEING TESTED

- EtG (ethyl glucuronide) – a trace metabolite of ethanol and a direct alcohol biomarker.
- Alcohol is not deposited directly into the hair – it first breaks down into ethanol byproducts.
- EtG is water soluble and can be detected in various body fluids and in hair.
- Psychomedics tests what has been entrapped in the cortex of the hair.



# HOW IS IT MEASURED

- EtG is measured in pg/mg
- We follow the guidelines determined by the World Health Organization in association with the Society of Hair Testing
- The test identifies those consuming as low as 8-16 drinks on average per week (Mild to Moderate Consumption)
- Excessive consumption (30 pg/mg +) is an average of 4-6 drinks per day – consumed over 3 months

LEVEL	RESULT
<b>0 - 4.9 pg/mg</b>	Negative ( <i>Below Reliable Quantifiable Measure</i> )
<b>5 – 29.9 pg/mg</b>	Mild to Moderate Consumption
<b>30 + pg/mg</b>	Excessive Alcohol Consumption

*\*A 12 ounce beer, a 4 ounce glass of wine, and one - ounce of 80 proof distilled spirits is the equivalent amount of one alcoholic drink.*

# SPECIFICATIONS OF THE TEST

- **Detection Period:** 1.5 inches of hair measures consumption approximately 3 months back.
- **Amount of Hair Needed:** 50 mg of head or body hair
- **Turnaround Time:** Results within 5 business days.
- **GC/MS/MS:** The testing method that Psychemedics uses.
- **External Contamination:** Our wash process removes what has been deposited on the outside of the hair (including sweat) from gross contaminants.



# THE PSYCHEMEDICS PROCESS



1. **Accessioning** – A portion of the hair sample is removed for the first mass spec test
2. **Wash Process** – 15 min isopropyl wash, 3 separate ½ hour washes
3. **Extraction** – the sample goes through the extraction process to release the EtG
4. **Mass Spec** – goes through 1<sup>st</sup> mass spec, if positive – goes through 2<sup>nd</sup> mass spec
5. **Result Value Reported**





# CERTIFICATIONS & PROFICIENCY TESTING

- College of American Pathologists (CAP) for hair testing
- ISO/IEC 17025:2005 and Forensic Requirements for Accreditation (FRA-1:2008/1)
- Arvecon GmbH (based in Germany) EtG Hair Proficiency Testing
- Society of Hair Testing (SOHT) (based in France) EtG Hair Proficiency Testing



*\*Psychemedics has successfully participated and obtained the correct results in the two proficiency testing programs listed above. We use the tests to monitor our quality assurance in all hair testing and it is an integral part of our Quality management and process improvement program.*



# WHY PSYCHEMEDICS FOR ALCOHOL TESTING?

- ❖ Hair Testing Specialists & Leaders
- ❖ Over 25 Years of Industry Experience
- ❖ Unmatched Service & Support



- **Non-invasive**
- **Easy to collect & ship samples**
- **Measures alcohol use over approximately 3 months**
- **Provides behavioral indication of excessive use**
- **Test performed by our accredited laboratory**
- **Samples can be collected in-house or at a collection facility**
- **Samples can be shipped from anywhere in the world and will not deteriorate**

