

STERLING NEWS & NOTES

A Technical Update from Sterling Reference Laboratories
Your Complete Drug Testing Resource!

Second Quarter 2009

A Discussion Highlighting Some of the Specialty Testing Options Available for Your Use

OXYCODONE vs. OPIATES SCREEN

What is Oxycodone?

Oxycodone is a semi synthetic opiate agonist derived from the opioid alkaloid thebaine. It is a Schedule II prescription drug for the control of moderate to severe pain that is related to morphine and hydrocodone. It may be prescribed in combination with other pain medications such as aspirin (Percodan) or acetaminophen (Percocet), or may be prescribed in time-release form (OxyContin). Abuse of prescription opiates such as oxycodone has sky-rocketed since the introduction of OxyContin in 1996.

If oxycodone is an opiate, why use a separate test?

Traditional opiate screening tests (immunoassays) are designed to detect heroin use. Therefore, the detection potential of the tests is optimized for morphine, the primary heroin metabolite. Other related substances such as codeine and hydrocodone have adequate antibody cross-reactivity to be readily detected in a urine specimen. However, opiate immunoassays generally have a very low cross-reactivity for oxycodone and are therefore not well suited for monitoring oxycodone use.

What are my testing options if I suspect Oxycodone abuse?

Standard opiate immunoassays will detect heavy oxycodone use, but lack the sensitivity needed to serve as an effective monitor of abuse. Maximum sensitivity can be achieved by using techniques such as gas chromatography /mass spectrometry (GC/MS), but this technology is labor intensive and may be too expensive for routine use. A commercial immunoassay is now available which has good sensitivity (100 ng/mL cutoff) and great specificity (minimal cross-reactivity with other opiates).

How can I order the Oxycodone screening test?

The oxycodone test can be ordered just like any other test. You can have it included as a component of a basic test panel or as an optional add-on to a standard panel. All of your testing options such as confirmation method, etc., can be applied to this test. For optimal monitoring for opiate use, STERLING recommends using both the opiate screening and oxycodone screening tests.

ECSTASY vs. AMPHETAMINE SCREEN

What Is Ecstasy?

Ecstasy is a designer methamphetamine frequently associated with Raves or the club scene. Chemically it is methylenedioxymethamphetamine (MDMA). This drug can produce both stimulant and psychedelic effects. MDMA is a popular "club" drug because it can reduce inhibitions, eliminate anxiety, and produce feelings of empathy.

If Ecstasy is an amphetamine, why use a separate test?

Traditional amphetamine screening tests (immunoassays) are designed to detect amphetamine or methamphetamine use. Therefore, the detection potential of these tests is optimized for methamphetamine and its metabolite amphetamine. MDMA and its metabolite methylenedioxyamphetamine (MDA) have adequate antibody cross-reactivity to be detected in a urine specimen. However, because of the lower cross-reactivity for these substances the window of detection is shortened to as little as 24 hours after use.

What are my testing options if I suspect Ecstasy abuse?

Standard amphetamine immunoassays will detect recent ecstasy use, but lack the sensitivity needed to serve as an effective monitor of abuse. Maximum sensitivity can be achieved by using techniques such as gas chromatography /mass spectrometry (GC/MS), but this technology is labor intensive and may be too expensive for routine use. A commercial immunoassay is now available which has good sensitivity (500 ng/mL cutoff) and great specificity (minimal cross-reactivity with other substances).

How can I order the Ecstasy screening test?

The ecstasy test can be ordered just like any other test. You can have it included as a component of a basic test panel or as an optional add-on to a standard panel. All of your testing options such as confirmation method, etc. can be applied to this test. For optimal monitoring for illegal stimulant use, STERLING recommends using both the amphetamine and ecstasy screening tests. This approach may be best suited for, but not necessarily limited to juvenile or young adult populations that frequent clubs or raves.

ETHYLGLUCURONIDE vs. ETHANOL SCREEN

What is EtG?

EtG (ethylglucuronide) is a direct metabolite of ethyl alcohol (ethanol) and is a marker for recent alcohol exposure; it is non-volatile, water soluble, and stable. EtG is a test for ethanol that has entered the body and been processed by the liver; it is not a test for current impairment.

EtG testing utilizes liquid chromatography coupled with tandem mass spectrometry (LC/MS/MS) to detect the presence of EtG in urine. EtG may be detectable at the usual reporting cutoffs as soon as two hours after exposure and may be detectable for up to 96 hours after heavy ethanol consumption. This increased window of detection is superior to traditional ethanol testing.

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If EtG is an indicator of ethanol exposure, why not just test for ethanol directly?

Traditional ethanol screening tests will detect current use. Ethanol is rapidly metabolized and cleared at a rate roughly equivalent to one drink per hour. This results in a very narrow window of detection; as little as one or two hours after use, up to about 14 hours after use dependent on the actual amount of ethanol consumed.

What are my testing options if I suspect ethanol abuse?

Standard ethanol tests will detect recent use, but lack the ability to serve as an effective monitor of chronic ethanol use. Maximum sensitivity can be achieved by using EtG to monitor compliance. A commercial immunoassay is now available which has good sensitivity (500 ng/mL cutoff) and great specificity (minimal cross-reactivity with other substances).

How can I order the EtG screening test?

The EtG screening test can be ordered just like any other test. You can have it included as a component of a basic test panel or as an optional add-on to a standard panel. All of your testing options such as confirmation method, etc. can be applied to this test. For optimal monitoring for ethanol use, STERLING recommends using both the EtG and ethanol screening tests, or EtG only if more than 10 or 12 hours has elapsed since the last suspected ethanol consumption.

As always, if you have any questions on interpretation, a consulting scientist is available at (800) 442-0438, (253) 552-1551, or via e-mail at certifying@regtox.com.

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If you know of anyone who would compliment our team, please refer them to us. Thank you!

STERLING Reference Laboratories is an industry-leading toxicology laboratory, testing for drugs of abuse, and delivering superior quality, service and value since 1987.

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2617 East L Street
Tacoma, WA 98421
Phone: 1-800-442-0438
Fax: 1-253-552-1549
www.sterlingreflabs.com