Overview

Useful For
Screening for drug abuse involving alcohol

Method Name
Immunoassay

NY State Available
Yes

Specimen

Specimen Type
Urine

Specimen Required
Collection Container/Tube: Plastic urine container
Submission Container/Tube: Plastic, 60-mL urine bottle

Specimen Volume: 20 mL

Collection Instructions:
1. Collect a random urine specimen.
2. Submit 20 mL in 1 plastic bottle.
3. No preservative.

Additional Information:
1. For situations where chain of custody is required, a Chain-of-Custody Kit (T282) is available. For chain-of-custody testing, order ETGX / Ethyl Glucuronide Confirmation, Chain of Custody, Urine.

2. If urine creatinine is required or adulteration of the sample is suspected, the following test should be requested, ADULU / Adulterants Survey, Urine or ADULT / Adulterants Survey, Urine.

3. For additional information, refer to ADULU / Adulterants Survey, Urine or ADULT / Adulterants Survey, Urine.

Forms
If not ordering electronically, complete, print, and send a Therapeutics Test Request (T831) with the specimen.

Specimen Minimum Volume
2.5 mL

Reject Due To
All specimens will be evaluated at Mayo Clinic Laboratories for test suitability.
Specimen Stability Information

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<th>Specimen Type</th>
<th>Temperature</th>
<th>Time</th>
<th>Special Container</th>
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<tr>
<td>Urine</td>
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<td></td>
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<tr>
<td></td>
<td>Frozen</td>
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</tr>
<tr>
<td></td>
<td>Ambient</td>
<td>72 hours</td>
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Clinical and Interpretive

Clinical Information

This procedure uses immunoassay reagents that are designed to produce a negative result when no drugs are present in a natural (ie, unadulterated) specimen of urine; the assay is designed to have a high true-negative rate. Like all immunoassays, it can have a false-positive rate due to cross-reactivity with natural chemicals and drugs other than those they were designed to detect. The immunoassay also has a false-negative rate to the antibody's ability to cross-react with different drugs in the class being screened for.

Ethyl glucuronide is a direct metabolite of ethanol that is formed by enzymatic conjugation of ethanol with glucuronic acid. Alcohol in urine is normally detected for only a few hours, whereas ethyl glucuronide can be detected in the urine for 1 to 3 days.

Reference Values

Negative

Screening cutoff concentration:

Ethyl Glucuronide: 500 ng/mL

Interpretation

This assay only provides a preliminary analytical test result. A more specific alternative method (ie, liquid chromatography-tandem mass spectrometry: LC-MS/MS) must be used to obtain a confirmed analytical result. A positive result using the ethyl glucuronide screen indicates only the potential presence of ethyl glucuronide and does not necessarily correlate with the extent of physiological and psychological effects.

Cautions

Care should be taken when interpreting results since there are many factors (eg, fluid intake and other biologic factors) that may influence a urine test result. It is possible that substances other than those investigated in the specificity study may interfere with the test and cause false-positive or negative results.

Clinical Reference


3. Wurst FM, Skipper GE, Weinmann W: Ethyl glucuronide--the direct ethanol metabolite on the threshold from
science to routine use. Addiction 2003;98 (S2):51-61


Performance

Method Description
This assay is a homogeneous EIA technique. The assay will be performed semiquantitatively. The assay is based on competition between free drug in the urine sample, and a drug labeled with the enzyme glucose-6-phosphate dehydrogenase (G6PDH) for a fixed amount of specific antibody binding sites. Active enzyme converts NAD to NADH, which results in an absorbance change that can be measured spectrophotometrically at 340 nm.(Package insert: DRI Ethyl Glucuronide Assay. Microgenics Corporation. Fremont, CA)

PDF Report
No

Day(s) and Time(s) Test Performed
Monday through Saturday

Analytic Time
Same day/1 day

Maximum Laboratory Time
2 days

Specimen Retention Time
14 days

Performing Laboratory Location
Rochester

Fees and Codes

Fees
- Authorized users can sign in to Test Prices for detailed fee information.
- Clients without access to Test Prices can contact Customer Service 24 hours a day, seven days a week.
- Prospective clients should contact their Regional Manager. For assistance, contact Customer Service.

Test Classification
This test was developed and its performance characteristics determined by Mayo Clinic in a manner consistent with CLIA requirements. This test has not been cleared or approved by the U.S. Food and Drug Administration.

CPT Code Information
80307
### LOINC® Information

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<td>Ethyl Glucuronide Screen, U</td>
<td>58375-7</td>
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