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**

<table>
<thead>
<tr>
<th>Specimen Type</th>
<th>Temperature</th>
<th>Time</th>
<th>Special Container</th>
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<tr>
<td>Urine</td>
<td>Refrigerated (preferred)</td>
<td>28 days</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Frozen</td>
<td>28 days</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
Test Definition: ETGS
Ethyl Glucuronide Screen, U

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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<table>
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