Overview

**Useful For**
Monitoring abstinence in clinical and justice system settings

**Method Name**
Liquid Chromatography-Tandem Mass Spectrometry (LC-MS/MS)

**NY State Available**
Yes

Specimen

**Specimen Type**
Urine

**Ordering Guidance**
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, Random, Urine.

Additional drug panels and specific requests are available: call 800-533-1710 or 507-266-5700.

**Additional Testing Requirements**
If urine creatinine is required or adulteration of the sample is suspected, the following test should also be ordered, ADULT / Adulterants Survey, Random, Urine.

**Specimen Required**

**Supplies:** Sarstedt 5 mL Aliquot Tube (T914)

**Collection Container/Tube:** Plastic urine container

**Submission Container/Tube:** Aliquot Tube, 5 mL

**Specimen Volume:** 1 mL

**Collection Instructions:**
1. Collect a random urine specimen.
2. No preservative.

**Additional Information:**
1. No specimen substitutions.
2. STAT requests are **not accepted** for this test.
3. Submitting <1 mL will compromise our ability to perform all necessary testing.

**Forms**
If not ordering electronically, complete, print, and send a [Therapeutics Test Request](#) (T831) with the specimen.
Specimen Minimum Volume
0.5 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>
</tr>
</thead>
<tbody>
<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>
<td></td>
</tr>
<tr>
<td></td>
<td>Ambient</td>
<td>72 hours</td>
<td></td>
</tr>
</tbody>
</table>

Clinical & Interpretive

Clinical Information
Ethyl glucuronide (EtG) and ethyl sulfate (EtS) are minor metabolites of ethanol that are detectable in body fluids following alcohol consumption and, less commonly, following extraneous exposure. EtG and EtS can be detected up to 5 days in urine using a cutoff of 500 ng/mL.(1)

Reference Values
Negative

Interpretation
A positive interpretation will be given if either the ethyl glucuronide (EtG) result is greater than or equal to 250 ng/mL and/or the ethyl sulfate (EtS) is greater than or equal to 100 ng/mL.

A "high" positive (ie, >1000 ng/mL) may indicate:
- Heavy drinking on the same day or previously (ie, previous day or 2).
- Light drinking the same day

A "low" positive (ie, 500-1000 ng/mL) may indicate:
- Previous heavy drinking (ie, previous 1-3 days).
- Recent light drinking (ie, past 24 hours).
- Recent intense "extraneous" exposure (ie, within 24 hours or less).

A "very low" positive (ie, 100-500 ng/mL) may indicate:
- Previous heavy drinking (ie, 1-3 days)
- Previous light drinking (ie, 12-36 hours).
- Recent "extraneous" exposure.(2)

Cautions
Please note that incidental exposure to alcohol in many daily use products (ie, hand sanitizers, mouthwash) may result in detectable levels of ethyl glucuronide (EtG) and/or ethyl sulfate (EtS).

In addition, upper respiratory infections as well as beta-glucuronidase hydrolysis may lower levels of EtG but do not seem to affect EtS.(2)

EtG/EtS results should be interpreted in the context of all available clinical and behavioral information.

Clinical Reference

Performance

Method Description
The urine sample is diluted with internal standard in 0.1% formic acid for detection by a tandem mass spectrometer (MS/MS). (Unpublished Mayo method)

PDF Report
No

Day(s) Performed
Tuesday, Thursday, Sunday

Report Available
3 to 5 days

Specimen Retention Time
14 days

Performing Laboratory Location
Rochester

Fees & Codes

Fees
- Authorized users can sign in to Test Prices for detailed fee information.
Test Definition: ETGC
Ethyl Glucuronide Confirmation, Random, Urine

- Clients without access to Test Prices can contact Customer Service 24 hours a day, seven days a week.
- Prospective clients should contact their account representative. 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 US Food and Drug Administration.

CPT Code Information
80321; G0480 (if appropriate)

LOINC® Information

<table>
<thead>
<tr>
<th>Test ID</th>
<th>Test Order Name</th>
<th>Order LOINC® Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>ETGC</td>
<td>Ethyl Glucuronide Confirmation, U</td>
<td>93705-2</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Result ID</th>
<th>Test Result Name</th>
<th>Result LOINC® Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>63421</td>
<td>Ethyl Glucuronide</td>
<td>58378-1</td>
</tr>
<tr>
<td>36848</td>
<td>Ethyl Sulfate</td>
<td>58425-0</td>
</tr>
<tr>
<td>36849</td>
<td>Ethyl Gluc/Sulfate Interpretation</td>
<td>69050-3</td>
</tr>
</tbody>
</table>