Overview

Useful For
Identifying amphetamines (and methamphetamines), opiates, as well as metabolites of cocaine and marijuana in meconium specimens

Reflex Tests

<table>
<thead>
<tr>
<th>Test ID</th>
<th>Reporting Name</th>
<th>Available Separately</th>
<th>Always Performed</th>
</tr>
</thead>
<tbody>
<tr>
<td>AMPHM</td>
<td>Amphetamines, Confirmation, M</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>COKEM</td>
<td>Cocaine and Metabolites, Confirm, M</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>OPATM</td>
<td>Opiate Confirmation, M</td>
<td>Yes</td>
<td>No</td>
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<tr>
<td>THCM</td>
<td>Carboxy-THC Confirmation, M</td>
<td>Yes</td>
<td>No</td>
</tr>
</tbody>
</table>

Testing Algorithm
Testing begins with immunoassay screen. Positives are confirmed and quantitated by liquid-chromatography/tandem-mass spectrometry (LC-MS/MS) at an additional charge.

Method Name
Enzyme-LinkedImmunosorbent Assay (ELISA)

NY State Available
Yes

Specimen

Specimen Type
Meconium

Advisory Information
For chain-of-custody testing, order DSM4X / Drugs of Abuse Screen 4, Chain of Custody, Meconium.

Specimen Required

Supplies: Stool container, Small (Random), 4 oz (T288)

Container/Tube: Stool container (T288)

Specimen Volume: 1 g (approximately 1 teaspoon)

Collection Instructions: Collect entire random meconium specimen.

Forms
If not ordering electronically, complete, print, and send a Therapeutics Test Request (T831) with the specimen.
**Specimen Minimum Volume**
0.45 g (approximately 0.5 teaspoon)

**Reject Due To**

| Other                          | Grossly bloody reject, Pink OK Stool Diapers |

**Specimen Stability Information**

<table>
<thead>
<tr>
<th>Specimen Type</th>
<th>Temperature</th>
<th>Time</th>
<th>Special Container</th>
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</thead>
<tbody>
<tr>
<td>Meconium</td>
<td>Frozen (preferred)</td>
<td>14 days</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Refrigerated</td>
<td>24 hours</td>
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</tbody>
</table>

**Clinical and Interpretive**

**Clinical Information**

Illicit drug use during pregnancy is a major social and medical issue. Drug abuse during pregnancy is associated with significant perinatal complications, which include a high incidence of stillbirths, meconium-stained fluid, premature rupture of the membranes, maternal hemorrhage (abruption placenta or placenta praevia), and fetal distress.(1) In the neonate, the mortality rate, as well as morbidity (eg, asphyxia, prematurity, low birthweight, hyaline membrane distress, infections, aspiration pneumonia, cerebral infarction, abnormal heart rate and breathing problems, drug withdrawal) are increased.(1)

The disposition of drug in meconium is not well understood. The proposed mechanism is that the fetus excretes drug into bile and amniotic fluid. Drug accumulates in meconium either by direct deposit from bile or through swallowing of amniotic fluid.(2) The first evidence of meconium in the fetal intestine appears at approximately the tenth to twelfth week of gestation, and slowly moves into the colon by the sixteenth week of gestation.(3) Therefore, the presence of drugs in meconium has been proposed to be indicative of in utero drug exposure during the final 4 to 5 months of pregnancy, a longer historical measure than is possible by urinalysis.(2)

**Reference Values**

Negative

Positives are reported with a quantitative LC-MS/MS result.

Cutoff concentrations

Amphetamines by ELISA: 100 ng/g

Methamphetamine by ELISA: 100 ng/g

Benzoylcegonine (cocaine metabolite) by ELISA: 100 ng/g

Opiates by ELISA: 100 ng/g

Tetrahydrocannabinol carboxylic acid (marijuana metabolite) by ELISA: 20 ng/g
**Interpretation**

A positive result indicates that the baby was exposed to the drugs indicated.

**Cautions**

No significant cautionary statements

**Clinical Reference**


**Performance**

**Method Description**

Meconium specimen is homogenized in a buffer. The homogenate is analyzed by enzyme-linked immunosorbent assay (ELISA) to detect the presence of drug. If drug presence is indicated by a positive result of ELISA, liquid chromatography-tandem mass spectrometry analysis is performed to verify the presence of the drug. (Unpublished Mayo method)

**PDF Report**

No

**Day(s) and Time(s) Test Performed**

Monday through Sunday

**Analytic Time**

2 days

**Maximum Laboratory Time**

3 days

**Specimen Retention Time**

2 weeks

**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
See individual reflex tests for appropriate CPT codes

LOINC® Information

<table>
<thead>
<tr>
<th>Test ID</th>
<th>Test Order Name</th>
<th>Order LOINC Value</th>
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<tbody>
<tr>
<td>DASM4</td>
<td>Drugs of Abuse Screen, Meconium 4</td>
<td>In Process</td>
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<table>
<thead>
<tr>
<th>Result ID</th>
<th>Test Result Name</th>
<th>Result LOINC Value</th>
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<tbody>
<tr>
<td>32078</td>
<td>Amphetamine</td>
<td>26895-3</td>
</tr>
<tr>
<td>32080</td>
<td>Methamphetamine</td>
<td>27289-8</td>
</tr>
<tr>
<td>32082</td>
<td>Cocaine</td>
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</tr>
<tr>
<td>32084</td>
<td>Opiate</td>
<td>29158-3</td>
</tr>
<tr>
<td>32086</td>
<td>Tetrahydrocannabinol</td>
<td>26893-8</td>
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<tr>
<td>32087</td>
<td>Chain of Custody</td>
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