



Effective Date:

Monday, November 14, 2011

## New Tests and Test Updates

### Immediate Action

Modified Date: 10/26/2011

In our continuing effort to provide you with the highest quality toxicology laboratory services available, we have compiled important changes regarding a number of tests we perform. Listed below are the types of changes that may be included in this notification, effective Monday, November 14, 2011

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**New Tests** - Tests recently added to the NMS Labs test menu. *New Tests are effective immediately.*

**Test Changes** - Tests that have had changes to the method/ CPT code, units of measurement, scope of analysis, reference comments, or specimen requirements.

**Discontinued Tests** - Tests being discontinued with alternate testing suggestions.

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Please use this information to update your computer systems/records. These changes are important to ensure standardization of our mutual laboratory databases.

If you have any questions about the information contained in this notification, please call our Client Support Department at (866) 522-2206. Thank you for your continued support of NMS Labs and your assistance in implementing these changes.

The CPT Codes provided in this document are based on AMA guidelines and are for informational purposes only. NMS Labs does not assume responsibility for billing errors due to reliance on the CPT Codes listed in this document.



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Test Code	Test Name	New Test	Test Name	Method / CPT Code	Specimen Req.	Stability	Scope	Units	Reference Comments	Discontinue
5023B	Acetone Confirmation, Blood									•
50033B	Acetone Confirmation, Blood (Forensic)									•
5023FL	Acetone Confirmation, Fluid									•
50033FL	Acetone Confirmation, Fluid (Forensic)									•
5023SP	Acetone Confirmation, Serum/Plasma									•
50033SP	Acetone Confirmation, Serum/Plasma (Forensic)									•
5023TI	Acetone Confirmation, Tissue									•
50033TI	Acetone Confirmation, Tissue (Forensic)									•
5023U	Acetone Confirmation, Urine									•
50033U	Acetone Confirmation, Urine (Forensic)									•
0080B	Acetone, Blood				•	•			•	
0080FL	Acetone, Fluid				•				•	
0080SP	Acetone, Serum/Plasma				•	•			•	
0080U	Acetone, Urine				•	•			•	
0088B	Acetonitrile Exposure Profile, Blood			•	•				•	
0148B	Acrylonitrile Exposure Profile, Blood			•					•	
0175B	Alcohol (Police), Blood (Forensic)			•	•	•	•	•	•	
0175SP	Alcohol (Police), Serum/Plasma (Forensic)			•	•	•	•		•	
0175U	Alcohol (Police), Urine (Forensic)			•	•	•	•		•	
5627B	Alcohol Confirmation, Blood									•
5627FL	Alcohol Confirmation, Fluid									•
5627SP	Alcohol Confirmation, Serum/Plasma									•
5627TI	Alcohol Confirmation, Tissue									•
5627U	Alcohol Confirmation, Urine									•
0177LI	Alcohol In Suspected Alcoholic Beverages				•			•	•	
0170B	Alcohol Panel, Blood				•	•			•	
0170FL	Alcohol Panel, Fluid				•				•	
0170SP	Alcohol Panel, Serum/Plasma				•	•			•	
0170TI	Alcohol Panel, Tissue				•				•	
0170U	Alcohol Panel, Urine				•				•	



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Test Code	Test Name	New Test	Test Name	Method / CPT Code	Specimen Req.	Stability	Scope	Units	Reference Comments	Discontinue
0171B	Alcohol Screen, Blood			•	•	•			•	
9096B	Alcohol Screen, Blood (Forensic)				•	•		•	•	
0169B	Alcohol Screen, Blood (Forensic) (CSA)		•	•	•	•	•	•	•	
0171FL	Alcohol Screen, Fluid			•	•				•	
0171SP	Alcohol Screen, Serum/Plasma			•	•	•			•	
0171TI	Alcohol Screen, Tissue			•	•		•		•	
0171U	Alcohol Screen, Urine			•	•	•			•	
0176B	Alcohol, Blood (Forensic)			•	•	•	•	•	•	
0176SP	Alcohol, Serum/Plasma (Forensic)			•	•	•	•		•	
0176U	Alcohol, Urine (Forensic)			•	•	•	•		•	
54033B	Drug Impaired Driving/DRE Toxicology Acetone Confirmation, Blood (Forensic)									•
54033U	Drug Impaired Driving/DRE Toxicology Acetone Confirmation, Urine (Forensic)									•
8077B	Drug Impaired Driving/DRE Toxicology Inhalants Add-On, Blood (Forensic)			•						
8077U	Drug Impaired Driving/DRE Toxicology Inhalants Add-On, Urine (Forensic)			•						
54032B	Drug Impaired Driving/DRE Toxicology Isopropanol Confirmation, Blood (Forensic)									•
54032U	Drug Impaired Driving/DRE Toxicology Isopropanol Confirmation, Urine (Forensic)									•
54031B	Drug Impaired Driving/DRE Toxicology Methanol Confirmation, Blood (Forensic)									•
54031U	Drug Impaired Driving/DRE Toxicology Methanol Confirmation, Urine (Forensic)									•
8070B	Drug Impaired Driving/DRE Toxicology Panel (with Alcohol), Blood (Forensic)			•	•		•	•	•	
8067B	Drug Impaired Driving/DRE Toxicology Panel (with Alcohol), Blood (Forensic) (CSA)			•			•	•	•	
8069B	Drug Impaired Driving/DRE Toxicology Panel (with Alcohol), Blood (Forensic) (CSA)			•			•	•	•	



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8070U	Drug Impaired Driving/DRE Toxicology Panel (with Alcohol), Urine (Forensic)				•		•		•	
8069U	Drug Impaired Driving/DRE Toxicology Panel (with Alcohol), Urine (Forensic) (CSA)				•		•		•	
1450SP	Drug-Facilitated Sexual Assault Screen, Serum/Plasma (Forensic)								•	
1452B	Drug-Facilitated Sexual Assault Survey 2, Blood (Forensic)				•			•	•	
1452U	Drug-Facilitated Sexual Assault Survey 2, Urine (Forensic)				•				•	
8091U	Drugs of Abuse (10 Panel) and Alcohol Screen, Urine (Forensic)					•			•	
8101U	Drugs of Abuse (10 Panel) and Alcohol Screen, Urine (Forensic)				•	•			•	
1858B	Drugs of Abuse (9 Panel) and Alcohol Screen, Blood			•					•	
8091B	Drugs of Abuse (9 Panel) and Alcohol Screen, Blood (Forensic)							•	•	
8101B	Drugs of Abuse (9 Panel) and Alcohol Screen, Blood (Forensic)				•			•	•	
1858FL	Drugs of Abuse (9 Panel) and Alcohol Screen, Fluid			•	•				•	
8091FL	Drugs of Abuse (9 Panel) and Alcohol Screen, Fluid (Forensic)				•				•	
8101FL	Drugs of Abuse (9 Panel) and Alcohol Screen, Fluid (Forensic)				•				•	
1858SP	Drugs of Abuse (9 Panel) and Alcohol Screen, Serum/Plasma			•	•				•	
8091SP	Drugs of Abuse (9 Panel) and Alcohol Screen, Serum/Plasma (Forensic)				•				•	
8101SP	Drugs of Abuse (9 Panel) and Alcohol Screen, Serum/Plasma (Forensic)				•				•	
1858TI	Drugs of Abuse (9 Panel) and Alcohol Screen, Tissue			•	•		•		•	
8091TI	Drugs of Abuse (9 Panel) and Alcohol Screen, Tissue (Forensic)				•				•	
8101TI	Drugs of Abuse (9 Panel) and Alcohol Screen, Tissue (Forensic)			•	•				•	
1858U	Drugs of Abuse (9 Panel) and Alcohol Screen, Urine			•	•				•	
8103B	Environmental Exposure Screen, Blood (Forensic)			•				•	•	
5020B	Ethanol Confirmation, Blood									•
50030B	Ethanol Confirmation, Blood (Forensic)									•
5020FL	Ethanol Confirmation, Fluid									•



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50030FL	Ethanol Confirmation, Fluid (Forensic)									•
5020SP	Ethanol Confirmation, Serum/Plasma									•
50030SP	Ethanol Confirmation, Serum/Plasma (Forensic)									•
5020TI	Ethanol Confirmation, Tissue									•
50030TI	Ethanol Confirmation, Tissue (Forensic)									•
5020U	Ethanol Confirmation, Urine									•
50030U	Ethanol Confirmation, Urine (Forensic)									•
6303B	Firefighter Core Baseline Profile, Blood			•	•				•	
2321B	Hydrocarbon and Oxygenated Volatiles Panel, Blood			•					•	
2321FL	Hydrocarbon and Oxygenated Volatiles Panel, Fluid				•				•	
2321SP	Hydrocarbon and Oxygenated Volatiles Panel, Serum/Plasma			•					•	
2321TI	Hydrocarbon and Oxygenated Volatiles Panel, Tissue								•	
2321U	Hydrocarbon and Oxygenated Volatiles Panel, Urine			•					•	
9332U	Hydrocodone Screen, Urine			•						
2417B	Inhalant Intoxicants Profile, Blood			•					•	
2415B	Inhalants Panel, Blood			•					•	
2408B	Inhalants Panel, Blood (CSA)			•					•	
2415SP	Inhalants Panel, Serum/Plasma			•					•	
2413B	Inhalants Panel, Solvents and Gases, Blood			•					•	
2411B	Inhalants Panel, Solvents, Blood			•					•	
2411SP	Inhalants Panel, Solvents, Serum/Plasma			•					•	
2411TI	Inhalants Panel, Solvents, Tissue				•				•	
2411U	Inhalants Panel, Solvents, Urine			•					•	
2409U	Inhalants Panel, Urine (CSA)			•					•	
2426U	Inhalants and Metabolites Panel, Urine			•					•	
5022B	Isopropanol Confirmation, Blood									•
50032B	Isopropanol Confirmation, Blood (Forensic)									•
5022FL	Isopropanol Confirmation, Fluid									•
50032FL	Isopropanol Confirmation, Fluid (Forensic)									•



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5022SP	Isopropanol Confirmation, Serum/Plasma									•
50032SP	Isopropanol Confirmation, Serum/Plasma (Forensic)									•
5022TI	Isopropanol Confirmation, Tissue									•
50032TI	Isopropanol Confirmation, Tissue (Forensic)									•
5022U	Isopropanol Confirmation, Urine									•
50032U	Isopropanol Confirmation, Urine (Forensic)									•
2445B	Isopropanol and Acetone, Blood		•		•	•			•	
2445SP	Isopropanol and Acetone, Serum/Plasma		•		•	•			•	
2445U	Isopropanol and Acetone, Urine		•		•	•			•	
2480SP	Ketone Bodies Panel, Serum/Plasma				•				•	
2481B	Ketone Panel, Blood			•	•	•			•	
2481FL	Ketone Panel, Fluid				•				•	
2481SP	Ketone Panel, Serum/Plasma			•	•	•			•	
2481U	Ketone Panel, Urine			•					•	
5021B	Methanol Confirmation, Blood									•
50031B	Methanol Confirmation, Blood (Forensic)									•
5021FL	Methanol Confirmation, Fluid									•
50031FL	Methanol Confirmation, Fluid (Forensic)									•
5021SP	Methanol Confirmation, Serum/Plasma									•
50031SP	Methanol Confirmation, Serum/Plasma (Forensic)									•
5021TI	Methanol Confirmation, Tissue									•
50031TI	Methanol Confirmation, Tissue (Forensic)									•
5021U	Methanol Confirmation, Urine									•
50031U	Methanol Confirmation, Urine (Forensic)									•
2836U	Methanol Exposure Profile, Urine				•	•			•	
2837SP	Methanol Poisoning Profile, Serum/Plasma			•					•	
2834B	Methanol, Blood				•	•			•	
2835B	Methanol, Blood				•	•			•	
2835FL	Methanol, Fluid				•				•	



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Test Code	Test Name	New Test	Test Name	Method / CPT Code	Specimen Req.	Stability	Scope	Units	Reference Comments	Discontinue
2834SP	Methanol, Serum/Plasma				•	•			•	
2835SP	Methanol, Serum/Plasma				•	•			•	
2834U	Methanol, Urine				•	•			•	
2835U	Methanol, Urine			•	•				•	
9132U	Oxycodone Screen, Urine			•						
8055B	Postmortem Toxicology - Basic Plus, Blood (Forensic) (CSA)				•			•	•	
8055FL	Postmortem Toxicology - Basic Plus, Fluid (Forensic) (CSA)				•				•	
8055SP	Postmortem Toxicology - Basic Plus, Serum/Plasma (Forensic) (CSA)				•				•	
8055TI	Postmortem Toxicology - Basic Plus, Tissue (Forensic) (CSA)				•				•	
8055U	Postmortem Toxicology - Basic Plus, Urine (Forensic) (CSA)				•				•	
8051B	Postmortem Toxicology - Basic, Blood (Forensic)				•			•	•	
8051FL	Postmortem Toxicology - Basic, Fluid (Forensic)				•				•	
8051SP	Postmortem Toxicology - Basic, Serum/Plasma (Forensic)				•				•	
8051TI	Postmortem Toxicology - Basic, Tissue (Forensic)				•				•	
8051U	Postmortem Toxicology - Basic, Urine (Forensic)				•				•	
8052B	Postmortem Toxicology - Expanded, Blood (Forensic)				•			•	•	
8052FL	Postmortem Toxicology - Expanded, Fluid (Forensic)				•				•	
8052SP	Postmortem Toxicology - Expanded, Serum/Plasma (Forensic)				•				•	
8052TI	Postmortem Toxicology - Expanded, Tissue (Forensic)				•				•	
8052U	Postmortem Toxicology - Expanded, Urine (Forensic)				•				•	
8092B	Postmortem Toxicology - Expert, Blood (Forensic)				•			•	•	
8092FL	Postmortem Toxicology - Expert, Fluid (Forensic)				•				•	
8092SP	Postmortem Toxicology - Expert, Serum/Plasma (Forensic)				•				•	
8092TI	Postmortem Toxicology - Expert, Tissue (Forensic)				•				•	
8092U	Postmortem Toxicology - Expert, Urine (Forensic)				•				•	
4177B	Postmortem Toxicology - SIDS Screen, Blood (Forensic)				•			•	•	



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Test Code	Test Name	New Test	Test Name	Method / CPT Code	Specimen Req.	Stability	Scope	Units	Reference Comments	Discontinue
4187B	Postmortem Toxicology - SIDS Screen, Blood (Forensic)				•			•	•	
4187FL	Postmortem Toxicology - SIDS Screen, Fluid (Forensic)				•				•	
4177TI	Postmortem Toxicology - SIDS Screen, Tissue (Forensic)				•				•	
4187TI	Postmortem Toxicology - SIDS Screen, Tissue (Forensic)			•	•				•	
4177U	Postmortem Toxicology - SIDS Screen, Urine (Forensic)				•				•	
4187U	Postmortem Toxicology - SIDS Screen, Urine (Forensic)				•				•	
8102B	Therapeutic and Abused Drugs with Alcohol Screen, Blood (Forensic)				•			•	•	
8102FL	Therapeutic and Abused Drugs with Alcohol Screen, Fluid (Forensic)				•				•	
8102SP	Therapeutic and Abused Drugs with Alcohol Screen, Serum/Plasma (Forensic)								•	
8102TI	Therapeutic and Abused Drugs with Alcohol Screen, Tissue (Forensic)			•	•				•	
8102U	Therapeutic and Abused Drugs with Alcohol Screen, Urine (Forensic)				•				•	
8106B	Therapeutic and Abused Drugs with CO Screen, Blood (Forensic)				•			•	•	





# New Tests and Test Updates

## Test Changes

### 0080B Acetone, Blood

Summary of Changes: Specimen Requirements (Transport Temperature) were changed.  
Specimen Requirements (Specimen Container) were changed.  
Specimen Requirements (Special Handling) were changed.  
Stability was changed.  
Reference Comment was changed.

Specimen Requirements: 1 mL Blood  
Transport Temperature: Refrigerated  
Specimen Container: Gray top tube (Sodium Fluoride / Potassium Oxalate)  
Light Protection: Not Required  
Special Handling: Collect sample using alcohol free skin preparation.  
Rejection Criteria: None  
Stability: Room Temperature: 3 month(s)  
Refrigerated: 3 month(s)  
Frozen (-20 °C): 12 month(s)  
Scope of Analysis: Headspace GC (82010): Acetone  
Method (CPT Code)

Compound Name	Units	Reference Comment
Acetone	mg/dL	Normal: Up to 3 mg/dL. Blood Acetone concentrations are markedly elevated during diabetic or fasting ketoacidosis and may range from 10 - 70 mg/dL.

### 0080FL Acetone, Fluid

Summary of Changes: Specimen Requirements (Specimen Container) were changed.  
Reference Comment was changed.

Specimen Requirements: 1 mL Fluid  
Transport Temperature: Refrigerated  
Specimen Container: Plastic container (preservative-free)  
Light Protection: Not Required  
Special Handling: None  
Rejection Criteria: None  
Scope of Analysis: Headspace GC (82010): Acetone  
Method (CPT Code)



# New Tests and Test Updates

## Test Changes

Compound Name	Units	Reference Comment
Acetone	mg/dL	Acetone is a solvent used for chemicals, paints, etc. It is also a product of diabetic- and fasting-induced ketoacidosis as well as a metabolite following isopropanol ingestion. In high concentrations, acetone can have CNS-depressing effects. Symptoms include lethargy, ataxia, headache, nausea and lightheadedness. Stupor and coma appear in severe cases. Acetone produced in the body as a result of uncontrolled diabetes can also be converted to isopropanol.

### 0080SP Acetone, Serum/Plasma

Summary of Changes: Specimen Requirements (Transport Temperature) were changed.  
 Specimen Requirements (Specimen Container) were changed.  
 Specimen Requirements (Special Handling) were changed.  
 Stability was changed.  
 Reference Comment was changed.

Specimen Requirements: 1 mL Serum or Plasma  
 Transport Temperature: Refrigerated  
 Specimen Container: Plastic container (preservative-free)  
 Light Protection: Not Required  
 Special Handling: Collect sample using alcohol free skin preparation. Promptly centrifuge and separate Serum or Plasma into an plastic screw capped vial using approved guidelines.  
 Rejection Criteria: Polymer gel separation tube (SST or PST).  
 Stability: Room Temperature: 3 month(s)  
 Refrigerated: 3 month(s)  
 Frozen (-20 °C): 12 month(s)  
 Scope of Analysis: Headspace GC (82010): Acetone  
 Method (CPT Code)

Compound Name	Units	Reference Comment
Acetone	mg/dL	Normal: Up to 3 mg/dL. Blood Acetone concentrations are markedly elevated during diabetic or fasting ketoacidosis and may range from 10 - 70 mg/dL.

The blood to plasma ratio of acetone is 1.0 - 1.1.

### 0080U Acetone, Urine

Summary of Changes: Specimen Requirements (Specimen Container) were changed.  
 Specimen Requirements (Special Handling) were changed.  
 Stability was changed.  
 Reference Comment was changed.



# New Tests and Test Updates

## Test Changes

Specimen Requirements: 1 mL Urine  
 Transport Temperature: Refrigerated  
 Specimen Container: Plastic container (preservative-free)  
 Light Protection: Not Required  
 Special Handling: Collect sample at end of shift.  
 Rejection Criteria: None  
 Stability: Room Temperature: 30 day(s)  
 Refrigerated: 30 day(s)  
 Frozen (-20 °C): 12 month(s)  
 Scope of Analysis: Headspace GC (82010): Acetone  
 Method (CPT Code)

Compound Name	Units	Reference Comment
Acetone	mg/dL	Biological Exposure Index (ACGIH): Following workplace exposure to Acetone: 5 mg/dL measured in a urine specimen collected at end of shift.

### 0088B Acetonitrile Exposure Profile, Blood

Summary of Changes: Specimen Requirements (Specimen Container) were changed.  
 Specimen Requirements (Special Handling) were changed.  
 Reference Comment was changed.  
 Methods/CPT Codes were changed [Headspace GC (82000)]

Specimen Requirements: 3 mL Blood  
 Transport Temperature: Refrigerated  
 Specimen Container: Gray top tube (Sodium Fluoride / Potassium Oxalate)  
 Light Protection: Not Required  
 Special Handling: Collect sample using alcohol free skin preparation.  
 Rejection Criteria: None  
 Scope of Analysis: SP (82600): Cyanide  
 Method (CPT Code) Headspace GC (82000): Acetaldehyde, Acetone

Compound Name	Units	Reference Comment
Acetaldehyde	mg/dL	Normal: Up to 0.02 mg/dL.  Acetaldehyde is an unstable compound post-collection. It will both form and degrade under certain conditions. Although extreme precautions have been demonstrated to maintain the integrity of Acetaldehyde, the results will be affected under typical collection and laboratory procedures.



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## Test Changes

Compound Name	Units	Reference Comment
Acetone	mg/dL	Normal: Up to 3 mg/dL. Blood Acetone concentrations are markedly elevated during diabetic or fasting ketoacidosis and may range from 10 - 70 mg/dL.

### 0148B Acrylonitrile Exposure Profile, Blood

Summary of Changes: Reference Comment was changed.  
Methods/CPT Codes were changed [Headspace GC (84600)]

Scope of Analysis: SP (82600): Cyanide  
Method (CPT Code) Headspace GC (84600): Acetaldehyde, Acrylonitrile, Acetone

Compound Name	Units	Reference Comment
Acetaldehyde	mg/dL	Normal: Up to 0.02 mg/dL.  Acetaldehyde is an unstable compound post-collection. It will both form and degrade under certain conditions. Although extreme precautions have been demonstrated to maintain the integrity of Acetaldehyde, the results will be affected under typical collection and laboratory procedures.
Acetone	mg/dL	Normal: Up to 3 mg/dL. Blood Acetone concentrations are markedly elevated during diabetic or fasting ketoacidosis and may range from 10 - 70 mg/dL.

### 0175B Alcohol (Police), Blood (Forensic)

Summary of Changes: Specimen Requirements were changed.  
Stability was changed.  
Scope of Analysis was changed.  
Methanol, Isopropanol and Acetone were added.  
Reference Comment was changed.  
Units were changed.  
Methods/CPT Codes were changed [Headspace GC (82055)]  
Compounds Added: Methanol, Isopropanol and Acetone  
Alcohol Reflex Testing added.

Specimen Requirements: 1 mL Blood  
Transport Temperature: Refrigerated  
Specimen Container: Gray top tube (Sodium Fluoride / Potassium Oxalate)  
Light Protection: Not Required  
Special Handling: Collect sample using alcohol free skin preparation.  
Rejection Criteria: None



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## Test Changes

Stability: Room Temperature: 7 day(s)  
 Refrigerated: 1 month(s)  
 Frozen (-20 °C): 8 month(s)

Scope of Analysis: Headspace GC (82055): Ethanol, Blood Alcohol Concentration (BAC), Approximate #  
 Method (CPT Code) of Drinks:, Methanol, Isopropanol, Acetone

Compound Name	Units	Reference Comment
Ethanol	mg/dL	<p>Ethanol (beverage alcohol) is a central nervous system depressant. It causes impairment of cognitive, perceptual and psychomotor capabilities manifested as decrements in alertness, judgment, perception, coordination, response time and sense of care and caution. Potential effects on driving include, but are not limited to, weaving, crossing center or fog lines, failure to obey traffic signals, wide turns, inappropriate speed for conditions, and involvement in collisions. Generally, a person's level of intoxication will increase with rising blood alcohol concentration. Effects are more pronounced in individuals with limited tolerance, especially minors, however at blood alcohol concentrations of 80 mg/dL (0.08 g/100 mL or 0.08% w/v), virtually all individuals exhibit impairment on some critical driving measures.</p> <p>Analysis performed in duplicate by, internally standardized, headspace Gas Chromatography (GC). The average of the two headspace GC results is reported.</p> <p>NMS Labs is an approved Laboratory for Alcohol analysis in the Commonwealth of Pennsylvania.</p>
Blood Alcohol Concentration (BAC)	g/100 mL	<p>I certify that I am the analyst of record for this report. In that capacity I am authorized by NMS Labs to provide the final analytical review of the results in this case. This report cannot be released without my review, and I am responsible for the accuracy of results contained herein. This laboratory is nationally accredited by the American Board of Forensic Toxicologists Inc., and complies with accreditation standards for internal chain of custody, standard operating procedures, analysis of appropriate blanks, calibrators and controls, and other quality control and quality assurance measures, all of which I am familiar with, and which help ensure test result accuracy. I have considered all the information available to me at this time, and it is my opinion and belief that the analysis was properly performed in</p>



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### Test Changes

Compound Name	Units	Reference Comment
		compliance with laboratory standards and policies, that the results are supported by the analytical data, and that the results accurately reflect the toxicological findings for this subject to a reasonable degree of scientific certainty. If lawfully subpoenaed, I will testify to the above facts in a court of law.
Methanol	mg/dL	Methanol is contained in paints, cleaners, windshield washer fluid, 'canned heat', and other household products. It may be consumed for its intoxicating properties which are similar to ethanol; however it is much more toxic. In addition to central nervous system depression with its associated slowing of reaction time, lethargy and confusion, methanol can cause blindness due to its toxic metabolites.
Isopropanol	mg/dL	Isopropanol is a common industrial and laboratory chemical that is available as a 70% aqueous solution in 'Rubbing Alcohol'. Isopropanol may be consumed for its intoxicating effects. Isopropanol produces effects in man similar to those produced by ethanol, including impairment of cognitive, perceptual and psychomotor capabilities presenting as decrements in alertness, judgment, perception, coordination, response time and sense of care and caution. As a central nervous system depressant, isopropanol has about two times the potency of ethanol; therefore, while the effects produced are similar, impairment caused by isopropyl alcohol will occur at blood concentrations substantially lower than those of ethanol. Isopropyl alcohol is metabolized to acetone, however acetone produced in the body as a result of uncontrolled diabetes can also be converted to isopropanol.
Acetone	mg/dL	Reported normal endogenous acetone levels in blood are up to 3 mg/dL. Levels associated with diabetic or fasting ketoacidosis range from 10 - 70 mg/dL. After exposure to 100 and 500 ppm acetone for 2 hr, reported blood acetone concentrations peaked at 2 and 10 mg/dL, respectively. A blood level of 250 mg/dL was reported in an individual who became lethargic following ingestion of acetone.

0175SP Alcohol (Police), Serum/Plasma (Forensic)



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## Test Changes

Summary of Changes: Specimen Requirements were changed.  
 Specimen Requirements (Specimen Container) were changed.  
 Stability was changed.  
 Scope of Analysis was changed.  
 Methanol, Isopropanol and Acetone were added.  
 Reference Comment was changed.  
 Methods/CPT Codes were changed [Headspace GC (82055)]  
 Compounds Added: Methanol, Isopropanol and Acetone  
 Alcohol Reflex Testing added.

Specimen Requirements: 1 mL Serum or Plasma  
 Transport Temperature: Refrigerated  
 Specimen Container: Plastic container (preservative-free)  
 Light Protection: Not Required  
 Special Handling: Collect sample using alcohol free skin preparation. Promptly centrifuge and separate Serum or Plasma into an plastic screw capped vial using approved guidelines.  
 Rejection Criteria: Polymer gel separation tube (SST or PST).  
 Stability: Room Temperature: 3 month(s)  
 Refrigerated: 3 month(s)  
 Frozen (-20 °C): 8 month(s)  
 Scope of Analysis: Headspace GC (82055): Ethanol, Methanol, Isopropanol, Acetone  
 Method (CPT Code)

Compound Name	Units	Reference Comment
Ethanol	mg/dL	<p>Ethanol (beverage alcohol) is a central nervous system depressant. It causes impairment of cognitive, perceptual and psychomotor capabilities manifested as decrements in alertness, judgment, perception, coordination, response time and sense of care and caution. Potential effects on driving include, but are not limited to, weaving, crossing center or fog lines, failure to obey traffic signals, wide turns, inappropriate speed for conditions, and involvement in collisions. Generally, a person's level of intoxication will increase with rising blood alcohol concentration. Effects are more pronounced in individuals with limited tolerance, especially minors, however at blood alcohol concentrations of 80 mg/dL (0.08 g/100 mL or 0.08% w/v), virtually all individuals exhibit impairment on some critical driving measures.</p> <p>Analysis performed in duplicate by, internally standardized, headspace Gas Chromatography (GC). The average of the two headspace GC results is reported.</p>

NMS Labs is an approved Laboratory for Alcohol analysis in the Commonwealth of Pennsylvania.



Effective Date:

Monday, November 14, 2011

## New Tests and Test Updates

### Test Changes

Compound Name	Units	Reference Comment
		<p>I certify that:            I directly participated in the determination of the results by reviewing and certifying that the analytical data including internal standards and calculations utilized in reporting the results of this case are accurate and correct.</p>
Methanol	mg/dL	<p>Methanol is contained in paints, cleaners, windshield washer fluid, 'canned heat', and other household products. It may be consumed for its intoxicating properties which are similar to ethanol; however it is much more toxic. In addition to central nervous system depression with its associated slowing of reaction time, lethargy and confusion, methanol can cause blindness due to its toxic metabolites.</p>
Isopropanol	mg/dL	<p>Isopropanol is a common industrial and laboratory chemical that is available as a 70% aqueous solution in 'Rubbing Alcohol'. Isopropanol may be consumed for its intoxicating effects. Isopropanol produces effects in man similar to those produced by ethanol, including impairment of cognitive, perceptual and psychomotor capabilities presenting as decrements in alertness, judgment, perception, coordination, response time and sense of care and caution. As a central nervous system depressant, isopropanol has about two times the potency of ethanol; therefore, while the effects produced are similar, impairment caused by isopropyl alcohol will occur at blood concentrations substantially lower than those of ethanol. Isopropyl alcohol is metabolized to acetone, however acetone produced in the body as a result of uncontrolled diabetes can also be converted to isopropanol.</p>
Acetone	mg/dL	<p>Reported normal endogenous acetone levels in blood are up to 3 mg/dL. Levels associated with diabetic or fasting ketoacidosis range from 10 - 70 mg/dL. After exposure to 100 and 500 ppm acetone for 2 hr, reported blood acetone concentrations peaked at 2 and 10 mg/dL, respectively. A blood level of 250 mg/dL was reported in an individual who became lethargic following ingestion of acetone.</p> <p>The blood to plasma ratio of acetone is 1.0 - 1.1.</p>

0175U Alcohol (Police), Urine (Forensic)





Effective Date:

Monday, November 14, 2011

# New Tests and Test Updates

## Test Changes

Summary of Changes: Specimen Requirements were changed.  
 Specimen Requirements (Specimen Container) were changed.  
 Stability was changed.  
 Scope of Analysis was changed.  
 Isopropanol, Acetone and Methanol were added.  
 Reference Comment was changed.  
 Methods/CPT Codes were changed [Headspace GC (82055)]  
 Ethanol (by EZA) was removed.  
 Alcohol Reflex Testing added.

Specimen Requirements: 1 mL Urine  
 Transport Temperature: Refrigerated  
 Specimen Container: Plastic container (preservative-free)  
 Light Protection: Not Required  
 Special Handling: None  
 Rejection Criteria: None  
 Stability: Room Temperature: 7 day(s)  
 Refrigerated: 7 day(s)  
 Frozen (-20 °C): 8 month(s)  
 Scope of Analysis: Headspace GC (82055): Ethanol, Methanol, Isopropanol, Acetone  
 Method (CPT Code)

Compound Name	Units	Reference Comment
Ethanol	mg/dL	<p>Ethanol (beverage alcohol) is a central nervous system depressant. It causes impairment of cognitive, perceptual and psychomotor capabilities manifested as decrements in alertness, judgment, perception, coordination, response time and sense of care and caution. Potential effects on driving include, but are not limited to, weaving, crossing center or fog lines, failure to obey traffic signals, wide turns, inappropriate speed for conditions, and involvement in collisions.</p> <p>Analysis performed in duplicate by, internally standardized, headspace Gas Chromatography (GC). The average of the two headspace GC results is reported.</p> <p>NMS Labs is an approved Laboratory for Alcohol analysis in the Commonwealth of Pennsylvania.</p>



Effective Date:

Monday, November 14, 2011

## New Tests and Test Updates

### Test Changes

Compound Name	Units	Reference Comment
		I certify that: I directly participated in the determination of the results by reviewing and certifying that the analytical data including internal standards and calculations utilized in reporting the results of this case are accurate and correct.
Methanol	mg/dL	Methanol is contained in paints, cleaners, windshield washer fluid, 'canned heat', and other household products. It may be consumed for its intoxicating properties which are similar to ethanol; however it is much more toxic. In addition to central nervous system depression with its associated slowing of reaction time, lethargy and confusion, methanol can cause blindness due to its toxic metabolites.
Isopropanol	mg/dL	Isopropanol is a common industrial and laboratory chemical that is available as a 70% aqueous solution in 'Rubbing Alcohol'. Isopropanol may be consumed for its intoxicating effects. Isopropanol produces effects in man similar to those produced by ethanol, including impairment of cognitive, perceptual and psychomotor capabilities presenting as decrements in alertness, judgment, perception, coordination, response time and sense of care and caution. As a central nervous system depressant, isopropanol has about two times the potency of ethanol; therefore, while the effects produced are similar, impairment caused by isopropyl alcohol will occur at blood concentrations substantially lower than those of ethanol. Isopropyl alcohol is metabolized to acetone, however acetone produced in the body as a result of uncontrolled diabetes can also be converted to isopropanol.
Acetone	mg/dL	Acetone is a solvent used for chemicals, paints, etc. It is also a product of diabetic- and fasting-induced ketoacidosis as well as a metabolite following isopropanol ingestion. In high concentrations, acetone can have CNS-depressing effects. Symptoms include lethargy, ataxia, headache, nausea and lightheadedness. Stupor and coma appear in severe cases. Acetone produced in the body as a result of uncontrolled diabetes can also be converted to isopropanol.

0177LI Alcohol In Suspected Alcoholic Beverages



Effective Date:

Monday, November 14, 2011

# New Tests and Test Updates

## Test Changes

Summary of Changes: Specimen Requirements (Specimen Container) were changed.  
Reference Comment was changed.  
Units were changed.

Specimen Requirements: 1 mL Liquid  
 Transport Temperature: Refrigerated  
 Specimen Container: Plastic container (preservative-free)  
 Light Protection: Not Required  
 Special Handling: None  
 Rejection Criteria: None  
 Scope of Analysis: Headspace GC (None): Ethanol  
 Method (CPT Code)

Compound Name	Units	Reference Comment
Ethanol	% v/v	<p>Ethyl alcohol (ethanol, drinking alcohol) is a central nervous system depressant and has effects so-related, e.g., impaired judgment, reduced alertness and impaired muscular coordination.</p> <p>Ethyl alcohol content of beverages by volume is:            Beer (generally): 4 - 5 % v/v            Table wines (generally): 8 - 14 % v/v            Distilled spirits (generally): 40 - 50 % v/v</p> <p>The result reported is the average of duplicate determinations. This test meets the requirements for testing described in the Pennsylvania court ruling of Commonwealth vs. Tau Kappa Epsilon.            NMS Labs is an approved laboratory for alcohol analysis in the Commonwealth of Pennsylvania.</p>

**0170B Alcohol Panel, Blood**

Summary of Changes: Specimen Requirements (Transport Temperature) were changed.  
Stability was changed.  
Reference Comment was changed.

Specimen Requirements: 1 mL Blood  
 Transport Temperature: Refrigerated  
 Specimen Container: Gray top tube (Sodium Fluoride / Potassium Oxalate)  
 Light Protection: Not Required  
 Special Handling: Collect sample using alcohol free skin preparation.  
 Rejection Criteria: None



Effective Date:

Monday, November 14, 2011

# New Tests and Test Updates

## Test Changes

Stability: Room Temperature: 7 day(s)  
 Refrigerated: 1 month(s)  
 Frozen (-20 °C): 8 month(s)

Scope of Analysis: Headspace GC (82055): Ethanol, Methanol, Isopropanol, Acetone  
 Method (CPT Code)

Compound Name	Units	Reference Comment
Ethanol	mg/dL	Ethyl alcohol (ethanol, drinking alcohol) is a central nervous system depressant and can cause effects such as impaired judgment, reduced alertness and impaired muscular coordination. Ethanol can also be a product of decomposition or degradation of biological samples.
Methanol	mg/dL	Endogenous blood levels of methanol from metabolic and dietary sources are approximately 0.15 mg/dL.  Exposure to 800 ppm methanol for 8 hours produced a maximum average blood methanol concentration of 3.1 mg/dL.
Isopropanol	mg/dL	Three workers exposed to 191 - 200 ppm isopropanol in air had blood isopropanol concentrations <1 mg/dL; acetone levels were 4 - 16 mg/dL during the exposure. After a sponge bath with isopropanol, one adult had a blood isopropanol concentration of 10 mg/dL.
Acetone	mg/dL	Normal: Up to 3 mg/dL. Blood Acetone concentrations are markedly elevated during diabetic or fasting ketoacidosis and may range from 10 - 70 mg/dL.

### 0170FL Alcohol Panel, Fluid

Summary of Changes: Specimen Requirements (Specimen Container) were changed.  
 Reference Comment was changed.

Specimen Requirements: 1 mL Fluid  
 Transport Temperature: Refrigerated  
 Specimen Container: Plastic container (preservative-free)  
 Light Protection: Not Required  
 Special Handling: None  
 Rejection Criteria: None  
 Scope of Analysis: Headspace GC (82055): Ethanol, Methanol, Isopropanol, Acetone  
 Method (CPT Code)



Effective Date:

Monday, November 14, 2011

## New Tests and Test Updates

### Test Changes

Compound Name	Units	Reference Comment
Ethanol	mg/dL	Ethyl alcohol (ethanol, drinking alcohol) is a central nervous system depressant and can cause effects such as impaired judgment, reduced alertness and impaired muscular coordination. Ethanol can also be a product of decomposition or degradation of biological samples.
Methanol	mg/dL	Methanol is contained in paints, cleaners, windshield washer fluid, 'canned heat', and other household products. It may be consumed for its intoxicating properties which are similar to ethanol; however it is much more toxic. In addition to central nervous system depression with its associated slowing of reaction time, lethargy and confusion, methanol can cause blindness due to its toxic metabolites.
Isopropanol	mg/dL	Isopropanol is a common industrial and laboratory chemical that is available as a 70% aqueous solution in 'Rubbing Alcohol'. Isopropanol may be consumed for its intoxicating effects. Isopropanol produces effects in man similar to those produced by ethanol, including impairment of cognitive, perceptual and psychomotor capabilities presenting as decrements in alertness, judgment, perception, coordination, response time and sense of care and caution. As a central nervous system depressant, isopropanol has about two times the potency of ethanol; therefore, while the effects produced are similar, impairment caused by isopropyl alcohol will occur at blood concentrations substantially lower than those of ethanol. Isopropyl alcohol is metabolized to acetone, however acetone produced in the body as a result of uncontrolled diabetes can also be converted to isopropanol.
Acetone	mg/dL	Acetone is a solvent used for chemicals, paints, etc. It is also a product of diabetic- and fasting-induced ketoacidosis as well as a metabolite following isopropanol ingestion. In high concentrations, acetone can have CNS-depressing effects. Symptoms include lethargy, ataxia, headache, nausea and lightheadedness. Stupor and coma appear in severe cases. Acetone produced in the body as a result of uncontrolled diabetes can also be converted to isopropanol.

0170SP Alcohol Panel, Serum/Plasma



Effective Date:

Monday, November 14, 2011

# New Tests and Test Updates

## Test Changes

Summary of Changes: Specimen Requirements (Transport Temperature) were changed.  
 Specimen Requirements (Specimen Container) were changed.  
 Specimen Requirements (Special Handling) were changed.  
 Stability was changed.  
 Reference Comment was changed.

Specimen Requirements: 1 mL Serum or Plasma  
 Transport Temperature: Refrigerated  
 Specimen Container: Plastic container (preservative-free)  
 Light Protection: Not Required  
 Special Handling: Collect sample using alcohol free skin preparation. Promptly centrifuge and separate Serum or Plasma into an plastic screw capped vial using approved guidelines.  
 Rejection Criteria: Polymer gel separation tube (SST or PST).  
 Stability: Room Temperature: 3 month(s)  
 Refrigerated: 3 month(s)  
 Frozen (-20 °C): 8 month(s)  
 Scope of Analysis: Headspace GC (82055): Ethanol, Methanol, Isopropanol, Acetone  
 Method (CPT Code)

Compound Name	Units	Reference Comment
Ethanol	mg/dL	Ethyl alcohol (ethanol, drinking alcohol) is a central nervous system depressant and can cause effects such as impaired judgment, reduced alertness and impaired muscular coordination. Ethanol can also be a product of decomposition or degradation of biological samples.
Methanol	mg/dL	Endogenous blood levels of methanol from metabolic and dietary sources are approximately 0.15 mg/dL.  Exposure to 800 ppm methanol for 8 hours produced a maximum average blood methanol concentration of 3.1 mg/dL.  The blood to plasma ratio of methanol is 0.9.
Isopropanol	mg/dL	Three workers exposed to 191 - 200 ppm isopropanol in air had blood isopropanol concentrations <1 mg/dL; acetone levels were 4 - 16 mg/dL during the exposure. After a sponge bath with isopropanol, one adult had a blood isopropanol concentration of 10 mg/dL.  The blood to plasma ratio of isopropanol is 0.9 - 1.1.



Effective Date:

Monday, November 14, 2011

## New Tests and Test Updates

### Test Changes

Compound Name	Units	Reference Comment
Acetone	mg/dL	Normal: Up to 3 mg/dL. Blood Acetone concentrations are markedly elevated during diabetic or fasting ketoacidosis and may range from 10 - 70 mg/dL.

The blood to plasma ratio of acetone is 1.0 - 1.1.

#### 0170TI Alcohol Panel, Tissue

Summary of Changes: Specimen Requirements (Specimen Container) were changed.  
Reference Comment was changed.

Specimen Requirements: 10 g Tissue  
 Transport Temperature: Refrigerated  
 Specimen Container: Plastic container (preservative-free)  
 Light Protection: Not Required  
 Special Handling: None  
 Rejection Criteria: None  
 Scope of Analysis: Headspace GC (80103, 82055): Ethanol, Methanol, Isopropanol, Acetone  
 Method (CPT Code)

Compound Name	Units	Reference Comment
Ethanol	mg/100 g	Ethyl alcohol (ethanol, drinking alcohol) is a central nervous system depressant and can cause effects such as impaired judgment, reduced alertness and impaired muscular coordination. Ethanol can also be a product of decomposition or degradation of biological samples.
Methanol	mg/100 g	Methanol is contained in paints, cleaners, windshield washer fluid, 'canned heat', and other household products. It may be consumed for its intoxicating properties which are similar to ethanol; however it is much more toxic. In addition to central nervous system depression with its associated slowing of reaction time, lethargy and confusion, methanol can cause blindness due to its toxic metabolites.
Isopropanol	mg/100 g	Isopropanol is a common industrial and laboratory chemical that is available as a 70% aqueous solution in 'Rubbing Alcohol'. Isopropanol may be consumed for its intoxicating effects. Isopropanol produces effects in man similar to those produced by ethanol, including impairment of cognitive, perceptual and psychomotor capabilities presenting as decrements in alertness, judgment, perception, coordination, response time and sense of care and caution. As a central nervous system



Effective Date:

Monday, November 14, 2011

# New Tests and Test Updates

## Test Changes

Compound Name	Units	Reference Comment
Acetone	mg/100 g	depressant, isopropanol has about two times the potency of ethanol; therefore, while the effects produced are similar, impairment caused by isopropyl alcohol will occur at blood concentrations substantially lower than those of ethanol. Isopropyl alcohol is metabolized to acetone, however acetone produced in the body as a result of uncontrolled diabetes can also be converted to isopropanol.  Acetone is a solvent used for chemicals, paints, etc. It is also a product of diabetic- and fasting-induced ketoacidosis as well as a metabolite following isopropanol ingestion. In high concentrations, acetone can have CNS-depressing effects. Symptoms include lethargy, ataxia, headache, nausea and lightheadedness. Stupor and coma appear in severe cases. Acetone produced in the body as a result of uncontrolled diabetes can also be converted to isopropanol.

### 0170U Alcohol Panel, Urine

Summary of Changes: Specimen Requirements (Specimen Container) were changed.  
Reference Comment was changed.

Specimen Requirements: 1 mL Urine  
 Transport Temperature: Refrigerated  
 Specimen Container: Plastic container (preservative-free)  
 Light Protection: Not Required  
 Special Handling: None  
 Rejection Criteria: None  
 Scope of Analysis: Headspace GC (82055): Ethanol, Methanol, Isopropanol, Acetone  
 Method (CPT Code)

Compound Name	Units	Reference Comment
Ethanol	mg/dL	Ethyl alcohol (ethanol, drinking alcohol) is a central nervous system depressant and can cause effects such as impaired judgment, reduced alertness and impaired muscular coordination. Ethanol can also be a product of decomposition or degradation of biological samples.





Effective Date:

Monday, November 14, 2011

## New Tests and Test Updates

### Test Changes

Compound Name	Units	Reference Comment
Methanol	mg/dL	Methanol is contained in paints, cleaners, windshield washer fluid, 'canned heat', and other household products. It may be consumed for its intoxicating properties which are similar to ethanol; however it is much more toxic. In addition to central nervous system depression with its associated slowing of reaction time, lethargy and confusion, methanol can cause blindness due to its toxic metabolites.
Isopropanol	mg/dL	Isopropanol is a common industrial and laboratory chemical that is available as a 70% aqueous solution in 'Rubbing Alcohol'. Isopropanol may be consumed for its intoxicating effects. Isopropanol produces effects in man similar to those produced by ethanol, including impairment of cognitive, perceptual and psychomotor capabilities presenting as decrements in alertness, judgment, perception, coordination, response time and sense of care and caution. As a central nervous system depressant, isopropanol has about two times the potency of ethanol; therefore, while the effects produced are similar, impairment caused by isopropyl alcohol will occur at blood concentrations substantially lower than those of ethanol. Isopropyl alcohol is metabolized to acetone, however acetone produced in the body as a result of uncontrolled diabetes can also be converted to isopropanol.
Acetone	mg/dL	Acetone is a solvent used for chemicals, paints, etc. It is also a product of diabetic- and fasting-induced ketoacidosis as well as a metabolite following isopropanol ingestion. In high concentrations, acetone can have CNS-depressing effects. Symptoms include lethargy, ataxia, headache, nausea and lightheadedness. Stupor and coma appear in severe cases. Acetone produced in the body as a result of uncontrolled diabetes can also be converted to isopropanol.

0169B Alcohol Screen, Blood (Forensic) (CSA)



Effective Date:

Monday, November 14, 2011

## New Tests and Test Updates

### Test Changes

Summary of Changes: Test Name was changed.  
 Specimen Requirements were changed.  
 Stability was changed.  
 Scope of Analysis was changed.  
 Methanol, Isopropanol and Acetone were added.  
 Reference Comment was changed.  
 Units were changed.  
 Methods/CPT Codes were changed [Headspace GC (82055)]  
 Ethanol (by EZA) was removed.  
 Alcohol Reflex Testing added.

Specimen Requirements: 1 mL Blood  
 Transport Temperature: Refrigerated  
 Specimen Container: Gray top tube (Sodium Fluoride / Potassium Oxalate)  
 Light Protection: Not Required  
 Special Handling: Collect sample using alcohol free skin preparation.  
 Rejection Criteria: None  
 Stability: Room Temperature: 7 day(s)  
 Refrigerated: 1 month(s)  
 Frozen (-20 °C): 8 month(s)  
 Scope of Analysis: Headspace GC (82055): Ethanol, Blood Alcohol Concentration (BAC), Methanol,  
 Method (CPT Code) Isopropanol, Acetone

Compound Name	Units	Reference Comment
Ethanol	mg/dL	Ethanol (beverage alcohol) is a central nervous system depressant. It causes impairment of cognitive, perceptual and psychomotor capabilities manifested as decrements in alertness, judgment, perception, coordination, response time and sense of care and caution. Potential effects on driving include, but are not limited to, weaving, crossing center or fog lines, failure to obey traffic signals, wide turns, inappropriate speed for conditions, and involvement in collisions. Generally, a person's level of intoxication will increase with rising blood alcohol concentration. Effects are more pronounced in individuals with limited tolerance, especially minors, however at blood alcohol concentrations of 80 mg/dL (0.08 g/100 mL or 0.08% w/v), virtually all individuals exhibit impairment on some critical driving measures.

Analysis performed in duplicate by, internally



Effective Date:

Monday, November 14, 2011

## New Tests and Test Updates

### Test Changes

Compound Name	Units	Reference Comment
		standardized, headspace Gas Chromatography (GC). The average of the two headspace GC results is reported.
		NMS Labs is an approved Laboratory for Alcohol analysis in the Commonwealth of Pennsylvania.
Blood Alcohol Concentration (BAC)	g/100 mL	I certify that I am the analyst of record for this report. In that capacity I am authorized by NMS Labs to provide the final analytical review of the results in this case. This report cannot be released without my review, and I am responsible for the accuracy of results contained herein. This laboratory is nationally accredited by the American Board of Forensic Toxicologists Inc., and complies with accreditation standards for internal chain of custody, standard operating procedures, analysis of appropriate blanks, calibrators and controls, and other quality control and quality assurance measures, all of which I am familiar with, and which help ensure test result accuracy. I have considered all the information available to me at this time, and it is my opinion and belief that the analysis was properly performed in compliance with laboratory standards and policies, that the results are supported by the analytical data, and that the results accurately reflect the toxicological findings for this subject to a reasonable degree of scientific certainty. If lawfully subpoenaed, I will testify to the above facts in a court of law.
Methanol	mg/dL	Methanol is contained in paints, cleaners, windshield washer fluid, 'canned heat', and other household products. It may be consumed for its intoxicating properties which are similar to ethanol; however it is much more toxic. In addition to central nervous system depression with its associated slowing of reaction time, lethargy and confusion, methanol can cause blindness due to its toxic metabolites.
Isopropanol	mg/dL	Isopropanol is a common industrial and laboratory chemical that is available as a 70% aqueous solution in 'Rubbing Alcohol'. Isopropanol may be consumed for its intoxicating effects. Isopropanol produces effects in man similar to those produced by ethanol, including impairment of cognitive, perceptual and psychomotor capabilities presenting as decrements in alertness, judgment, perception, coordination, response time and sense of care and caution. As a central nervous system depressant, isopropanol has about two times the potency



# New Tests and Test Updates

## Test Changes

Compound Name	Units	Reference Comment
Acetone	mg/dL	<p>of ethanol; therefore, while the effects produced are similar, impairment caused by isopropyl alcohol will occur at blood concentrations substantially lower than those of ethanol. Isopropyl alcohol is metabolized to acetone, however acetone produced in the body as a result of uncontrolled diabetes can also be converted to isopropanol.</p> <p>Reported normal endogenous acetone levels in blood are up to 3 mg/dL. Levels associated with diabetic or fasting ketoacidosis range from 10 - 70 mg/dL. After exposure to 100 and 500 ppm acetone for 2 hr, reported blood acetone concentrations peaked at 2 and 10 mg/dL, respectively. A blood level of 250 mg/dL was reported in an individual who became lethargic following ingestion of acetone.</p>

### 9096B Alcohol Screen, Blood (Forensic)

Summary of Changes: Specimen Requirements were changed.  
 Specimen Requirements (Transport Temperature) were changed.  
 Stability was changed.  
 Reference Comment was changed.  
 Units were changed.

Specimen Requirements: 1 mL Blood  
 Transport Temperature: Refrigerated  
 Specimen Container: Gray top tube (Sodium Fluoride / Potassium Oxalate)  
 Light Protection: Not Required  
 Special Handling: Collect sample using alcohol free skin preparation.  
 Rejection Criteria: None  
 Stability: Room Temperature: 7 day(s)  
 Refrigerated: 1 month(s)  
 Frozen (-20 °C): 8 month(s)  
 Scope of Analysis: Headspace GC (82055): Ethanol, Blood Alcohol Concentration (BAC), Methanol,  
 Method (CPT Code) Isopropanol, Acetone

Compound Name	Units	Reference Comment
Ethanol	mg/dL	Ethyl alcohol (ethanol, drinking alcohol) is a central nervous system depressant and can cause effects such as impaired judgment, reduced alertness and impaired muscular coordination. Ethanol can also be a product of decomposition or degradation of biological samples.



Effective Date:

Monday, November 14, 2011

# New Tests and Test Updates

## Test Changes

Compound Name	Units	Reference Comment
Blood Alcohol Concentration (BAC)	g/100 mL	I certify that: I directly participated in the determination of the results by reviewing and certifying that the analytical data including internal standards and calculations utilized in reporting the results of this case are accurate and correct.
Methanol	mg/dL	Endogenous blood levels of methanol from metabolic and dietary sources are approximately 0.15 mg/dL.  Exposure to 800 ppm methanol for 8 hours produced a maximum average blood methanol concentration of 3.1 mg/dL.
Isopropanol	mg/dL	Three workers exposed to 191 - 200 ppm isopropanol in air had blood isopropanol concentrations <1 mg/dL; acetone levels were 4 - 16 mg/dL during the exposure. After a sponge bath with isopropanol, one adult had a blood isopropanol concentration of 10 mg/dL.  In a study of 31 isopropanol deaths, postmortem blood concentrations ranged from 10 to 250 mg/dL (mean, 140 mg/dL) and acetone blood concentrations ranged from 40 - 300 mg/dL (mean, 170 mg/dL).
Acetone	mg/dL	Reported normal endogenous acetone levels in blood are up to 3 mg/dL. Levels associated with diabetic or fasting ketoacidosis range from 10 - 70 mg/dL. After exposure to 100 and 500 ppm acetone for 2 hr, reported blood acetone concentrations peaked at 2 and 10 mg/dL, respectively. A blood level of 250 mg/dL was reported in an individual who became lethargic following ingestion of acetone.

### 0171B Alcohol Screen, Blood

Summary of Changes: Specimen Requirements were changed.  
Stability was changed.  
Reference Comment was changed.  
Methods/CPT Codes were changed [Headspace GC (82055)]



# New Tests and Test Updates

## Test Changes

Specimen Requirements: 1 mL Blood  
 Transport Temperature: Refrigerated  
 Specimen Container: Gray top tube (Sodium Fluoride / Potassium Oxalate)  
 Light Protection: Not Required  
 Special Handling: Collect sample using alcohol free skin preparation.  
 Rejection Criteria: None  
 Stability: Room Temperature: 7 day(s)  
 Refrigerated: 1 month(s)  
 Frozen (-20 °C): 12 month(s)  
 Scope of Analysis: Headspace GC (82055): Ethanol  
 Method (CPT Code)

Compound Name	Units	Reference Comment
Ethanol	mg/dL	Ethyl alcohol (ethanol, drinking alcohol) is a central nervous system depressant and can cause effects such as impaired judgment, reduced alertness and impaired muscular coordination. Ethanol can also be a product of decomposition or degradation of biological samples.

### 0171FL Alcohol Screen, Fluid

Summary of Changes: Specimen Requirements were changed.  
 Specimen Requirements (Specimen Container) were changed.  
 Reference Comment was changed.  
 Methods/CPT Codes were changed [Headspace GC (82055)]

Specimen Requirements: 1 mL Fluid  
 Transport Temperature: Refrigerated  
 Specimen Container: Plastic container (preservative-free)  
 Light Protection: Not Required  
 Special Handling: None  
 Rejection Criteria: None  
 Scope of Analysis: Headspace GC (82055): Ethanol  
 Method (CPT Code)

Compound Name	Units	Reference Comment
Ethanol	mg/dL	Ethyl alcohol (ethanol, drinking alcohol) is a central nervous system depressant and can cause effects such as impaired judgment, reduced alertness and impaired muscular coordination. Ethanol can also be a product of decomposition or degradation of biological samples.

### 0171SP Alcohol Screen, Serum/Plasma



# New Tests and Test Updates

## Test Changes

Summary of Changes: Specimen Requirements were changed.  
 Specimen Requirements (Specimen Container) were changed.  
 Specimen Requirements (Special Handling) were changed.  
 Stability was changed.  
 Reference Comment was changed.  
 Methods/CPT Codes were changed [Headspace GC (82055)]

Specimen Requirements: 1 mL Serum or Plasma  
 Transport Temperature: Refrigerated  
 Specimen Container: Plastic container (preservative-free)  
 Light Protection: Not Required  
 Special Handling: Collect sample using alcohol free skin preparation. Promptly centrifuge and separate Serum or Plasma into an plastic screw capped vial using approved guidelines.  
 Rejection Criteria: Polymer gel separation tube (SST or PST).  
 Stability: Room Temperature: 3 month(s)  
 Refrigerated: 3 month(s)  
 Frozen (-20 °C): 12 month(s)  
 Scope of Analysis: Headspace GC (82055): Ethanol  
 Method (CPT Code)

Compound Name	Units	Reference Comment
Ethanol	mg/dL	Ethyl alcohol (ethanol, drinking alcohol) is a central nervous system depressant and can cause effects such as impaired judgment, reduced alertness and impaired muscular coordination. Ethanol can also be a product of decomposition or degradation of biological samples.

**0171TI Alcohol Screen, Tissue**

Summary of Changes: Specimen Requirements (Specimen Container) were changed.  
 Scope of Analysis was changed.  
 Reference Comment was changed.  
 Methods/CPT Codes were changed [Headspace GC (80103, 80101)]  
 Compounds Deleted: Methanol, Isopropanol, Acetone

Specimen Requirements: 10 g Tissue  
 Transport Temperature: Refrigerated  
 Specimen Container: Plastic container (preservative-free)  
 Light Protection: Not Required  
 Special Handling: None  
 Rejection Criteria: None  
 Scope of Analysis: Headspace GC (80103, 80101): Ethanol  
 Method (CPT Code)



# New Tests and Test Updates

## Test Changes

Compound Name	Units	Reference Comment
Ethanol	mg/100 g	Ethyl alcohol (ethanol, drinking alcohol) is a central nervous system depressant and can cause effects such as impaired judgment, reduced alertness and impaired muscular coordination. Ethanol can also be a product of decomposition or degradation of biological samples.

### 0171U Alcohol Screen, Urine

Summary of Changes: Specimen Requirements were changed.  
 Specimen Requirements (Specimen Container) were changed.  
 Stability was changed.  
 Reference Comment was changed.  
 Methods/CPT Codes were changed [Headspace GC (82055)]

Specimen Requirements: 1 mL Urine  
 Transport Temperature: Refrigerated  
 Specimen Container: Plastic container (preservative-free)  
 Light Protection: Not Required  
 Special Handling: None  
 Rejection Criteria: None  
 Stability: Room Temperature: 7 day(s)  
 Refrigerated: 14 day(s)  
 Frozen (-20 °C): 12 month(s)  
 Scope of Analysis: Headspace GC (82055): Ethanol  
 Method (CPT Code)

Compound Name	Units	Reference Comment
Ethanol	mg/dL	Ethyl alcohol (ethanol, drinking alcohol) is a central nervous system depressant and can cause effects such as impaired judgment, reduced alertness and impaired muscular coordination. Ethanol can also be a product of decomposition or degradation of biological samples.

### 0176B Alcohol, Blood (Forensic)

Summary of Changes: Specimen Requirements were changed.  
 Stability was changed.  
 Scope of Analysis was changed.  
 Methanol, Isopropanol and Acetone were added.  
 Reference Comment was changed.  
 Units were changed.  
 Methods/CPT Codes were changed [Headspace GC (82055)]  
 Ethanol (by EZA) was removed.  
 Alcohol Reflex Testing added.





Effective Date:

Monday, November 14, 2011

# New Tests and Test Updates

## Test Changes

Specimen Requirements: 1 mL Blood  
 Transport Temperature: Refrigerated  
 Specimen Container: Gray top tube (Sodium Fluoride / Potassium Oxalate)  
 Light Protection: Not Required  
 Special Handling: Collect sample using alcohol free skin preparation.  
 Rejection Criteria: None  
 Stability: Room Temperature: 7 day(s)  
 Refrigerated: 1 month(s)  
 Frozen (-20 °C): 8 month(s)  
 Scope of Analysis: Headspace GC (82055): Ethanol, Blood Alcohol Concentration (BAC), Approximate #  
 Method (CPT Code) of Drinks:, Methanol, Isopropanol, Acetone

Compound Name	Units	Reference Comment
Ethanol	mg/dL	<p>Ethanol (beverage alcohol) is a central nervous system depressant. It causes impairment of cognitive, perceptual and psychomotor capabilities manifested as decrements in alertness, judgment, perception, coordination, response time and sense of care and caution. Potential effects on driving include, but are not limited to, weaving, crossing center or fog lines, failure to obey traffic signals, wide turns, inappropriate speed for conditions, and involvement in collisions. Generally, a person's level of intoxication will increase with rising blood alcohol concentration. Effects are more pronounced in individuals with limited tolerance, especially minors, however at blood alcohol concentrations of 80 mg/dL (0.08 g/100 mL or 0.08% w/v), virtually all individuals exhibit impairment on some critical driving measures.</p> <p>Analysis performed in duplicate by, internally standardized, headspace Gas Chromatography (GC). The average of the two headspace GC results is reported.</p> <p>NMS Labs is an approved Laboratory for Alcohol analysis in the Commonwealth of Pennsylvania.</p>
Blood Alcohol Concentration (BAC)	g/100 mL	<p>I certify that I am the analyst of record for this report. In that capacity I am authorized by NMS Labs to provide the final analytical review of the results in this case. This report cannot be released without my review, and I am responsible for the accuracy of results contained herein. This laboratory is nationally accredited by the American Board of Forensic Toxicologists Inc., and complies with accreditation standards for internal chain of custody, standard operating procedures, analysis of</p>



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# New Tests and Test Updates

## Test Changes

Compound Name	Units	Reference Comment
		appropriate blanks, calibrators and controls, and other quality control and quality assurance measures, all of which I am familiar with, and which help ensure test result accuracy. I have considered all the information available to me at this time, and it is my opinion and belief that the analysis was properly performed in compliance with laboratory standards and policies, that the results are supported by the analytical data, and that the results accurately reflect the toxicological findings for this subject to a reasonable degree of scientific certainty. If lawfully subpoenaed, I will testify to the above facts in a court of law.
Methanol	mg/dL	Methanol is contained in paints, cleaners, windshield washer fluid, 'canned heat', and other household products. It may be consumed for its intoxicating properties which are similar to ethanol; however it is much more toxic. In addition to central nervous system depression with its associated slowing of reaction time, lethargy and confusion, methanol can cause blindness due to its toxic metabolites.
Isopropanol	mg/dL	Isopropanol is a common industrial and laboratory chemical that is available as a 70% aqueous solution in 'Rubbing Alcohol'. Isopropanol may be consumed for its intoxicating effects. Isopropanol produces effects in man similar to those produced by ethanol, including impairment of cognitive, perceptual and psychomotor capabilities presenting as decrements in alertness, judgment, perception, coordination, response time and sense of care and caution. As a central nervous system depressant, isopropanol has about two times the potency of ethanol; therefore, while the effects produced are similar, impairment caused by isopropyl alcohol will occur at blood concentrations substantially lower than those of ethanol. Isopropyl alcohol is metabolized to acetone, however acetone produced in the body as a result of uncontrolled diabetes can also be converted to isopropanol.



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## New Tests and Test Updates

### Test Changes

Compound Name	Units	Reference Comment
Acetone	mg/dL	Reported normal endogenous acetone levels in blood are up to 3 mg/dL. Levels associated with diabetic or fasting ketoacidosis range from 10 - 70 mg/dL. After exposure to 100 and 500 ppm acetone for 2 hr, reported blood acetone concentrations peaked at 2 and 10 mg/dL, respectively. A blood level of 250 mg/dL was reported in an individual who became lethargic following ingestion of acetone.

#### 0176SP Alcohol, Serum/Plasma (Forensic)

Summary of Changes: Specimen Requirements were changed.  
 Specimen Requirements (Specimen Container) were changed.  
 Stability was changed.  
 Scope of Analysis was changed.  
 Methanol, Isopropanol and Acetone were added.  
 Reference Comment was changed.  
 Methods/CPT Codes were changed [Headspace GC (82055)]  
 Compounds Added: Methanol, Isopropanol and Acetone  
 Alcohol Reflex Testing added.

Specimen Requirements: 1 mL Serum or Plasma  
 Transport Temperature: Refrigerated  
 Specimen Container: Plastic container (preservative-free)  
 Light Protection: Not Required  
 Special Handling: Collect sample using alcohol free skin preparation. Promptly centrifuge and separate Serum or Plasma into an plastic screw capped vial using approved guidelines.  
 Rejection Criteria: Polymer gel separation tube (SST or PST).  
 Stability: Room Temperature: 3 month(s)  
 Refrigerated: 3 month(s)  
 Frozen (-20 °C): 8 month(s)  
 Scope of Analysis: Headspace GC (82055): Ethanol, Methanol, Isopropanol, Acetone  
 Method (CPT Code)

Compound Name	Units	Reference Comment
Ethanol	mg/dL	Ethanol (beverage alcohol) is a central nervous system depressant. It causes impairment of cognitive, perceptual and psychomotor capabilities manifested as decrements in alertness, judgment, perception, coordination, response time and sense of care and caution. Potential effects on driving include, but are not limited to, weaving, crossing center or fog lines, failure to obey traffic signals, wide turns, inappropriate speed for conditions, and involvement in collisions. Generally, a person's level of intoxication will increase with rising blood alcohol concentration.



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## New Tests and Test Updates

### Test Changes

Compound Name	Units	Reference Comment
		<p>Effects are more pronounced in individuals with limited tolerance, especially minors, however at blood alcohol concentrations of 80 mg/dL (0.08 g/100 mL or 0.08% w/v), virtually all individuals exhibit impairment on some critical driving measures.</p> <p>Analysis performed in duplicate by, internally standardized, headspace Gas Chromatography (GC). The average of the two headspace GC results is reported.</p> <p>NMS Labs is an approved Laboratory for Alcohol analysis in the Commonwealth of Pennsylvania.</p> <p>I certify that: I directly participated in the determination of the results by reviewing and certifying that the analytical data including internal standards and calculations utilized in reporting the results of this case are accurate and correct.</p>
Methanol	mg/dL	<p>Methanol is contained in paints, cleaners, windshield washer fluid, 'canned heat', and other household products. It may be consumed for its intoxicating properties which are similar to ethanol; however it is much more toxic. In addition to central nervous system depression with its associated slowing of reaction time, lethargy and confusion, methanol can cause blindness due to its toxic metabolites.</p>
Isopropanol	mg/dL	<p>Isopropanol is a common industrial and laboratory chemical that is available as a 70% aqueous solution in 'Rubbing Alcohol'. Isopropanol may be consumed for its intoxicating effects. Isopropanol produces effects in man similar to those produced by ethanol, including impairment of cognitive, perceptual and psychomotor capabilities presenting as decrements in alertness, judgment, perception, coordination, response time and sense of care and caution. As a central nervous system depressant, isopropanol has about two times the potency of ethanol; therefore, while the effects produced are similar, impairment caused by isopropyl alcohol will occur at blood concentrations substantially lower than those of ethanol. Isopropyl alcohol is metabolized to acetone, however acetone produced in the body as a result of uncontrolled diabetes can also be converted to isopropanol.</p>



# New Tests and Test Updates

## Test Changes

Compound Name	Units	Reference Comment
Acetone	mg/dL	<p>Reported normal endogenous acetone levels in blood are up to 3 mg/dL. Levels associated with diabetic or fasting ketoacidosis range from 10 - 70 mg/dL. After exposure to 100 and 500 ppm acetone for 2 hr, reported blood acetone concentrations peaked at 2 and 10 mg/dL, respectively. A blood level of 250 mg/dL was reported in an individual who became lethargic following ingestion of acetone.</p> <p>The blood to plasma ratio of acetone is 1.0 - 1.1.</p>

### 0176U Alcohol, Urine (Forensic)

Summary of Changes: Specimen Requirements were changed.  
 Specimen Requirements (Specimen Container) were changed.  
 Stability was changed.  
 Scope of Analysis was changed.  
 Methanol, Isopropanol and Acetone were added.  
 Reference Comment was changed.  
 Methods/CPT Codes were changed [Headspace GC (82055)]  
 Ethanol (by EZA) was removed.  
 Alcohol Reflex Testing added.

Specimen Requirements: 1 mL Urine  
 Transport Temperature: Refrigerated  
 Specimen Container: Plastic container (preservative-free)  
 Light Protection: Not Required  
 Special Handling: None  
 Rejection Criteria: None  
 Stability: Room Temperature: 7 day(s)  
 Refrigerated: 7 day(s)  
 Frozen (-20 °C): 8 month(s)  
 Scope of Analysis: Headspace GC (82055): Ethanol, Methanol, Isopropanol, Acetone  
 Method (CPT Code)

Compound Name	Units	Reference Comment
Ethanol	mg/dL	<p>Ethanol (beverage alcohol) is a central nervous system depressant. It causes impairment of cognitive, perceptual and psychomotor capabilities manifested as decrements in alertness, judgment, perception, coordination, response time and sense of care and caution. Potential effects on driving include, but are not limited to, weaving, crossing center or fog lines, failure to obey traffic signals, wide turns, inappropriate speed for conditions, and involvement in</p>



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# New Tests and Test Updates

## Test Changes

Compound Name	Units	Reference Comment
		collisions.  Analysis performed in duplicate by, internally standardized, headspace Gas Chromatography (GC). The average of the two headspace GC results is reported.  NMS Labs is an approved Laboratory for Alcohol analysis in the Commonwealth of Pennsylvania.  I certify that: I directly participated in the determination of the results by reviewing and certifying that the analytical data including internal standards and calculations utilized in reporting the results of this case are accurate and correct.
Methanol	mg/dL	Methanol is contained in paints, cleaners, windshield washer fluid, 'canned heat', and other household products. It may be consumed for its intoxicating properties which are similar to ethanol; however it is much more toxic. In addition to central nervous system depression with its associated slowing of reaction time, lethargy and confusion, methanol can cause blindness due to its toxic metabolites.
Isopropanol	mg/dL	Isopropanol is a common industrial and laboratory chemical that is available as a 70% aqueous solution in 'Rubbing Alcohol'. Isopropanol may be consumed for its intoxicating effects. Isopropanol produces effects in man similar to those produced by ethanol, including impairment of cognitive, perceptual and psychomotor capabilities presenting as decrements in alertness, judgment, perception, coordination, response time and sense of care and caution. As a central nervous system depressant, isopropanol has about two times the potency of ethanol; therefore, while the effects produced are similar, impairment caused by isopropyl alcohol will occur at blood concentrations substantially lower than those of ethanol. Isopropyl alcohol is metabolized to acetone, however acetone produced in the body as a result of uncontrolled diabetes can also be converted to isopropanol.



# New Tests and Test Updates

## Test Changes

Compound Name	Units	Reference Comment
Acetone	mg/dL	Acetone is a solvent used for chemicals, paints, etc. It is also a product of diabetic- and fasting-induced ketoacidosis as well as a metabolite following isopropanol ingestion. In high concentrations, acetone can have CNS-depressing effects. Symptoms include lethargy, ataxia, headache, nausea and lightheadedness. Stupor and coma appear in severe cases. Acetone produced in the body as a result of uncontrolled diabetes can also be converted to isopropanol.

### 8077B Drug Impaired Driving/DRE Toxicology Inhalants Add-On, Blood (Forensic)

Summary of Changes: Methods/CPT Codes were changed [Headspace GC (84600)]

Scope of Analysis: Headspace GC (84600): n-Butyl Alcohol, Amyl Alcohol, Iso-Butyl Alcohol, Iso-Amyl Alcohol, Benzene, Ethyl Acetate, Ethyl Ether, Heptane, Hexane, Methyl Ethyl Ketone, Pentane, Styrene, Toluene, o-Xylene, m-Xylene, p-Xylene  
 Method (CPT Code) GC (84600): Methane, Ethane, Propane, Isobutane, n-Butane

### 8077U Drug Impaired Driving/DRE Toxicology Inhalants Add-On, Urine (Forensic)

Summary of Changes: Methods/CPT Codes were changed [Headspace GC (84600)]

Scope of Analysis: Headspace GC (84600): n-Butyl Alcohol, Iso-Butyl Alcohol, Iso-Amyl Alcohol, Benzene, Ethyl Acetate, Heptane, Hexane, Methyl Ethyl Ketone, Pentane, Styrene, Toluene, m-Xylene  
 Method (CPT Code)

### 8067B Drug Impaired Driving/DRE Toxicology Panel (with Alcohol), Blood (Forensic) (CSA)

Summary of Changes: Scope of Analysis was changed.  
 Reference Comment was changed.  
 Units were changed.  
 Methods/CPT Codes were changed [Headspace GC (82055)]  
 Ethanol (by EZA) was removed.  
 Alcohol Reflex Testing added.

Scope of Analysis: ELISA (80101x9): Opiates, Cocaine / Metabolites, Benzodiazepines, Cannabinoids, Amphetamines, Barbiturates, Methadone, Phencyclidine, Propoxyphene  
 Method (CPT Code) Headspace GC (82055): Ethanol, Blood Alcohol Concentration (BAC), Methanol, Isopropanol, Acetone

Compound Name	Units	Reference Comment
Ethanol	mg/dL	Ethanol (beverage alcohol) is a central nervous system depressant. It causes impairment of cognitive, perceptual and psychomotor capabilities manifested as decrements in alertness, judgment, perception, coordination, response time and sense of care and caution. Potential effects on driving include, but are not limited to, weaving, crossing center or fog lines, failure to obey traffic signals, wide turns,





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## New Tests and Test Updates

### Test Changes

Compound Name	Units	Reference Comment
Blood Alcohol Concentration (BAC)	g/100 mL	<p>inappropriate speed for conditions, and involvement in collisions. Generally, a person's level of intoxication will increase with rising blood alcohol concentration. Effects are more pronounced in individuals with limited tolerance, especially minors, however at blood alcohol concentrations of 80 mg/dL (0.08 g/100 mL or 0.08% w/v), virtually all individuals exhibit impairment on some critical driving measures.</p> <p>Analysis performed in duplicate by, internally standardized, headspace Gas Chromatography (GC). The average of the two headspace GC results is reported.</p> <p>NMS Labs is an approved Laboratory for Alcohol analysis in the Commonwealth of Pennsylvania.</p> <p>I certify that I am the analyst of record for this report. In that capacity I am authorized by NMS Labs to provide the final analytical review of the results in this case. This report cannot be released without my review, and I am responsible for the accuracy of results contained herein. This laboratory is nationally accredited by the American Board of Forensic Toxicologists Inc., and complies with accreditation standards for internal chain of custody, standard operating procedures, analysis of appropriate blanks, calibrators and controls, and other quality control and quality assurance measures, all of which I am familiar with, and which help ensure test result accuracy. I have considered all the information available to me at this time, and it is my opinion and belief that the analysis was properly performed in compliance with laboratory standards and policies, that the results are supported by the analytical data, and that the results accurately reflect the toxicological findings for this subject to a reasonable degree of scientific certainty. If lawfully subpoenaed, I will testify to the above facts in a court of law.</p>
Methanol	mg/dL	<p>Methanol is contained in paints, cleaners, windshield washer fluid, 'canned heat', and other household products. It may be consumed for its intoxicating properties which are similar to ethanol; however it is much more toxic. In addition to central nervous system depression with its associated slowing of reaction time, lethargy and confusion, methanol can cause blindness due to its toxic metabolites.</p>





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## New Tests and Test Updates

### Test Changes

Compound Name	Units	Reference Comment
Isopropanol	mg/dL	Isopropanol is a common industrial and laboratory chemical that is available as a 70% aqueous solution in 'Rubbing Alcohol'. Isopropanol may be consumed for its intoxicating effects. Isopropanol produces effects in man similar to those produced by ethanol, including impairment of cognitive, perceptual and psychomotor capabilities presenting as decrements in alertness, judgment, perception, coordination, response time and sense of care and caution. As a central nervous system depressant, isopropanol has about two times the potency of ethanol; therefore, while the effects produced are similar, impairment caused by isopropyl alcohol will occur at blood concentrations substantially lower than those of ethanol. Isopropyl alcohol is metabolized to acetone, however acetone produced in the body as a result of uncontrolled diabetes can also be converted to isopropanol.
Acetone	mg/dL	Reported normal endogenous acetone levels in blood are up to 3 mg/dL. Levels associated with diabetic or fasting ketoacidosis range from 10 - 70 mg/dL. After exposure to 100 and 500 ppm acetone for 2 hr, reported blood acetone concentrations peaked at 2 and 10 mg/dL, respectively. A blood level of 250 mg/dL was reported in an individual who became lethargic following ingestion of acetone.

#### 8069B Drug Impaired Driving/DRE Toxicology Panel (with Alcohol), Blood (Forensic) (CSA)

Summary of Changes: Scope of Analysis was changed.  
Reference Comment was changed.  
Units were changed.  
Methods/CPT Codes were changed [Headspace GC (82055)]  
Ethanol (by EZA) was removed.  
Alcohol Reflex Testing added.

Scope of Analysis: ELISA (80101x9): Opiates, Cocaine / Metabolites, Benzodiazepines, Cannabinoids,  
Method (CPT Code) Amphetamines, Barbiturates, Methadone, Phencyclidine, Propoxyphene  
Headspace GC (82055): Ethanol, Blood Alcohol Concentration (BAC), Approximate # of Drinks:, Methanol, Isopropanol, Acetone



Effective Date:

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## New Tests and Test Updates

### Test Changes

Compound Name	Units	Reference Comment
Ethanol	mg/dL	<p>Ethanol (beverage alcohol) is a central nervous system depressant. It causes impairment of cognitive, perceptual and psychomotor capabilities manifested as decrements in alertness, judgment, perception, coordination, response time and sense of care and caution. Potential effects on driving include, but are not limited to, weaving, crossing center or fog lines, failure to obey traffic signals, wide turns, inappropriate speed for conditions, and involvement in collisions. Generally, a person's level of intoxication will increase with rising blood alcohol concentration. Effects are more pronounced in individuals with limited tolerance, especially minors, however at blood alcohol concentrations of 80 mg/dL (0.08 g/100 mL or 0.08% w/v), virtually all individuals exhibit impairment on some critical driving measures.</p> <p>Analysis performed in duplicate by, internally standardized, headspace Gas Chromatography (GC). The average of the two headspace GC results is reported.</p> <p>NMS Labs is an approved Laboratory for Alcohol analysis in the Commonwealth of Pennsylvania.</p>
Blood Alcohol Concentration (BAC)	g/100 mL	<p>I certify that I am the analyst of record for this report. In that capacity I am authorized by NMS Labs to provide the final analytical review of the results in this case. This report cannot be released without my review, and I am responsible for the accuracy of results contained herein. This laboratory is nationally accredited by the American Board of Forensic Toxicologists Inc., and complies with accreditation standards for internal chain of custody, standard operating procedures, analysis of appropriate blanks, calibrators and controls, and other quality control and quality assurance measures, all of which I am familiar with, and which help ensure test result accuracy. I have considered all the information available to me at this time, and it is my opinion and belief that the analysis was properly performed in compliance with laboratory standards and policies, that the results are supported by the analytical data, and that the results accurately reflect the toxicological findings for this subject to a reasonable degree of scientific certainty. If lawfully subpoenaed, I will testify to the above facts in a court of law.</p>



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## New Tests and Test Updates

### Test Changes

Compound Name	Units	Reference Comment
Methanol	mg/dL	Methanol is contained in paints, cleaners, windshield washer fluid, 'canned heat', and other household products. It may be consumed for its intoxicating properties which are similar to ethanol; however it is much more toxic. In addition to central nervous system depression with its associated slowing of reaction time, lethargy and confusion, methanol can cause blindness due to its toxic metabolites.
Isopropanol	mg/dL	Isopropanol is a common industrial and laboratory chemical that is available as a 70% aqueous solution in 'Rubbing Alcohol'. Isopropanol may be consumed for its intoxicating effects. Isopropanol produces effects in man similar to those produced by ethanol, including impairment of cognitive, perceptual and psychomotor capabilities presenting as decrements in alertness, judgment, perception, coordination, response time and sense of care and caution. As a central nervous system depressant, isopropanol has about two times the potency of ethanol; therefore, while the effects produced are similar, impairment caused by isopropyl alcohol will occur at blood concentrations substantially lower than those of ethanol. Isopropyl alcohol is metabolized to acetone, however acetone produced in the body as a result of uncontrolled diabetes can also be converted to isopropanol.
Acetone	mg/dL	Reported normal endogenous acetone levels in blood are up to 3 mg/dL. Levels associated with diabetic or fasting ketoacidosis range from 10 - 70 mg/dL. After exposure to 100 and 500 ppm acetone for 2 hr, reported blood acetone concentrations peaked at 2 and 10 mg/dL, respectively. A blood level of 250 mg/dL was reported in an individual who became lethargic following ingestion of acetone.

#### 8070B Drug Impaired Driving/DRE Toxicology Panel (with Alcohol), Blood (Forensic)

Summary of Changes: Specimen Requirements were changed.  
Scope of Analysis was changed.  
Reference Comment was changed.  
Units were changed.  
Methods/CPT Codes were changed [Headspace GC (82055)]  
Ethanol (by EZA) was removed.  
Alcohol Reflex Testing added.



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# New Tests and Test Updates

## Test Changes

Specimen Requirements: 7 mL Blood  
 Transport Temperature: Refrigerated  
 Specimen Container: Gray top tube (Sodium Fluoride / Potassium Oxalate)  
 Light Protection: Not Required  
 Special Handling: Collect sample using alcohol free skin preparation.  
 Rejection Criteria: Received Room Temperature.  
 Scope of Analysis: ELISA (80101x9): Opiates, Cocaine / Metabolites, Benzodiazepines, Cannabinoids,  
 Method (CPT Code) Amphetamines, Barbiturates, Methadone, Phencyclidine, Propoxyphene  
 Headspace GC (82055): Ethanol, Blood Alcohol Concentration (BAC), Approximate # of Drinks:, Methanol, Isopropanol, Acetone

Compound Name	Units	Reference Comment
Ethanol	mg/dL	<p>Ethanol (beverage alcohol) is a central nervous system depressant. It causes impairment of cognitive, perceptual and psychomotor capabilities manifested as decrements in alertness, judgment, perception, coordination, response time and sense of care and caution. Potential effects on driving include, but are not limited to, weaving, crossing center or fog lines, failure to obey traffic signals, wide turns, inappropriate speed for conditions, and involvement in collisions. Generally, a person's level of intoxication will increase with rising blood alcohol concentration. Effects are more pronounced in individuals with limited tolerance, especially minors, however at blood alcohol concentrations of 80 mg/dL (0.08 g/100 mL or 0.08% w/v), virtually all individuals exhibit impairment on some critical driving measures.</p> <p>Analysis performed in duplicate by, internally standardized, headspace Gas Chromatography (GC). The average of the two headspace GC results is reported.</p> <p>NMS Labs is an approved Laboratory for Alcohol analysis in the Commonwealth of Pennsylvania.</p>
Blood Alcohol Concentration (BAC)	g/100 mL	<p>I certify that I am the analyst of record for this report. In that capacity I am authorized by NMS Labs to provide the final analytical review of the results in this case. This report cannot be released without my review, and I am responsible for the accuracy of results contained herein. This laboratory is nationally accredited by the American Board of Forensic Toxicologists Inc., and complies with accreditation standards for internal chain of custody, standard operating procedures, analysis of appropriate blanks, calibrators and controls, and other</p>



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## New Tests and Test Updates

### Test Changes

Compound Name	Units	Reference Comment
		quality control and quality assurance measures, all of which I am familiar with, and which help ensure test result accuracy. I have considered all the information available to me at this time, and it is my opinion and belief that the analysis was properly performed in compliance with laboratory standards and policies, that the results are supported by the analytical data, and that the results accurately reflect the toxicological findings for this subject to a reasonable degree of scientific certainty. If lawfully subpoenaed, I will testify to the above facts in a court of law.
Methanol	mg/dL	Methanol is contained in paints, cleaners, windshield washer fluid, 'canned heat', and other household products. It may be consumed for its intoxicating properties which are similar to ethanol; however it is much more toxic. In addition to central nervous system depression with its associated slowing of reaction time, lethargy and confusion, methanol can cause blindness due to its toxic metabolites.
Isopropanol	mg/dL	Isopropanol is a common industrial and laboratory chemical that is available as a 70% aqueous solution in 'Rubbing Alcohol'. Isopropanol may be consumed for its intoxicating effects. Isopropanol produces effects in man similar to those produced by ethanol, including impairment of cognitive, perceptual and psychomotor capabilities presenting as decrements in alertness, judgment, perception, coordination, response time and sense of care and caution. As a central nervous system depressant, isopropanol has about two times the potency of ethanol; therefore, while the effects produced are similar, impairment caused by isopropyl alcohol will occur at blood concentrations substantially lower than those of ethanol. Isopropyl alcohol is metabolized to acetone, however acetone produced in the body as a result of uncontrolled diabetes can also be converted to isopropanol.
Acetone	mg/dL	Reported normal endogenous acetone levels in blood are up to 3 mg/dL. Levels associated with diabetic or fasting ketoacidosis range from 10 - 70 mg/dL. After exposure to 100 and 500 ppm acetone for 2 hr, reported blood acetone concentrations peaked at 2 and 10 mg/dL, respectively. A blood level of 250 mg/dL was reported in an individual who became lethargic following ingestion of acetone.



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## New Tests and Test Updates

### Test Changes

#### 8069U Drug Impaired Driving/DRE Toxicology Panel (with Alcohol), Urine (Forensic) (CSA)

Summary of Changes: Specimen Requirements (Specimen Container) were changed.  
Scope of Analysis was changed.  
Reference Comment was changed.  
Ethanol (by EZA) was removed.  
Alcohol Reflex Testing added.

Specimen Requirements: 6 mL Urine  
Transport Temperature: Refrigerated  
Specimen Container: Plastic container (preservative-free)  
Light Protection: Not Required  
Special Handling: None  
Rejection Criteria: None  
Scope of Analysis: EIA (80101x10): Opiates, Cocaine / Metabolites, Benzodiazepines, Cannabinoids,  
Method (CPT Code) Amphetamines, Barbiturates, Methadone, Phencyclidine, Propoxyphene  
Headspace GC (82055): Ethanol, Methanol, Isopropanol, Acetone

Compound Name	Units	Reference Comment
Ethanol	mg/dL	<p>Ethanol (beverage alcohol) is a central nervous system depressant. It causes impairment of cognitive, perceptual and psychomotor capabilities manifested as decrements in alertness, judgment, perception, coordination, response time and sense of care and caution. Potential effects on driving include, but are not limited to, weaving, crossing center or fog lines, failure to obey traffic signals, wide turns, inappropriate speed for conditions, and involvement in collisions.</p> <p>Analysis performed in duplicate by, internally standardized, headspace Gas Chromatography (GC). The average of the two headspace GC results is reported.</p> <p>NMS Labs is an approved Laboratory for Alcohol analysis in the Commonwealth of Pennsylvania.</p> <p>I certify that: I directly participated in the determination of the results by reviewing and certifying that the analytical data including internal standards and calculations utilized in reporting the results of this case are accurate and correct.</p>



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## New Tests and Test Updates

### Test Changes

Compound Name	Units	Reference Comment
Methanol	mg/dL	Methanol is contained in paints, cleaners, windshield washer fluid, 'canned heat', and other household products. It may be consumed for its intoxicating properties which are similar to ethanol; however it is much more toxic. In addition to central nervous system depression with its associated slowing of reaction time, lethargy and confusion, methanol can cause blindness due to its toxic metabolites.
Isopropanol	mg/dL	Isopropanol is a common industrial and laboratory chemical that is available as a 70% aqueous solution in 'Rubbing Alcohol'. Isopropanol may be consumed for its intoxicating effects. Isopropanol produces effects in man similar to those produced by ethanol, including impairment of cognitive, perceptual and psychomotor capabilities presenting as decrements in alertness, judgment, perception, coordination, response time and sense of care and caution. As a central nervous system depressant, isopropanol has about two times the potency of ethanol; therefore, while the effects produced are similar, impairment caused by isopropyl alcohol will occur at blood concentrations substantially lower than those of ethanol. Isopropyl alcohol is metabolized to acetone, however acetone produced in the body as a result of uncontrolled diabetes can also be converted to isopropanol.
Acetone	mg/dL	Acetone is a solvent used for chemicals, paints, etc. It is also a product of diabetic- and fasting-induced ketoacidosis as well as a metabolite following isopropanol ingestion. In high concentrations, acetone can have CNS-depressing effects. Symptoms include lethargy, ataxia, headache, nausea and lightheadedness. Stupor and coma appear in severe cases. Acetone produced in the body as a result of uncontrolled diabetes can also be converted to isopropanol.

#### 8070U Drug Impaired Driving/DRE Toxicology Panel (with Alcohol), Urine (Forensic)

Summary of Changes: Specimen Requirements (Specimen Container) were changed.  
Scope of Analysis was changed.  
Reference Comment was changed.  
Ethanol (by EZA) was removed.  
Alcohol Reflex Testing added.





Effective Date:

Monday, November 14, 2011

# New Tests and Test Updates

## Test Changes

Specimen Requirements: 6 mL Urine  
 Transport Temperature: Refrigerated  
 Specimen Container: Plastic container (preservative-free)  
 Light Protection: Not Required  
 Special Handling: None  
 Rejection Criteria: None  
 Scope of Analysis: EIA (80101x10): Opiates, Cocaine / Metabolites, Benzodiazepines, Cannabinoids,  
 Method (CPT Code) Amphetamines, Barbiturates, Methadone, Phencyclidine, Propoxyphene  
 Headspace GC (82055): Ethanol, Methanol, Isopropanol, Acetone

Compound Name	Units	Reference Comment
Ethanol	mg/dL	<p>Ethanol (beverage alcohol) is a central nervous system depressant. It causes impairment of cognitive, perceptual and psychomotor capabilities manifested as decrements in alertness, judgment, perception, coordination, response time and sense of care and caution. Potential effects on driving include, but are not limited to, weaving, crossing center or fog lines, failure to obey traffic signals, wide turns, inappropriate speed for conditions, and involvement in collisions.</p> <p>Analysis performed in duplicate by, internally standardized, headspace Gas Chromatography (GC). The average of the two headspace GC results is reported.</p> <p>NMS Labs is an approved Laboratory for Alcohol analysis in the Commonwealth of Pennsylvania.</p> <p>I certify that:            I directly participated in the determination of the results by reviewing and certifying that the analytical data including internal standards and calculations utilized in reporting the results of this case are accurate and correct.</p>
Methanol	mg/dL	<p>Methanol is contained in paints, cleaners, windshield washer fluid, 'canned heat', and other household products. It may be consumed for its intoxicating properties which are similar to ethanol; however it is much more toxic. In addition to central nervous system depression with its associated slowing of reaction time, lethargy and confusion, methanol can cause blindness due to its toxic metabolites.</p>





Effective Date:

Monday, November 14, 2011

## New Tests and Test Updates

### Test Changes

Compound Name	Units	Reference Comment
Isopropanol	mg/dL	Isopropanol is a common industrial and laboratory chemical that is available as a 70% aqueous solution in 'Rubbing Alcohol'. Isopropanol may be consumed for its intoxicating effects. Isopropanol produces effects in man similar to those produced by ethanol, including impairment of cognitive, perceptual and psychomotor capabilities presenting as decrements in alertness, judgment, perception, coordination, response time and sense of care and caution. As a central nervous system depressant, isopropanol has about two times the potency of ethanol; therefore, while the effects produced are similar, impairment caused by isopropyl alcohol will occur at blood concentrations substantially lower than those of ethanol. Isopropyl alcohol is metabolized to acetone, however acetone produced in the body as a result of uncontrolled diabetes can also be converted to isopropanol.
Acetone	mg/dL	Acetone is a solvent used for chemicals, paints, etc. It is also a product of diabetic- and fasting-induced ketoacidosis as well as a metabolite following isopropanol ingestion. In high concentrations, acetone can have CNS-depressing effects. Symptoms include lethargy, ataxia, headache, nausea and lightheadedness. Stupor and coma appear in severe cases. Acetone produced in the body as a result of uncontrolled diabetes can also be converted to isopropanol.

#### 1450SP Drug-Facilitated Sexual Assault Screen, Serum/Plasma (Forensic)

Summary of Changes: Reference Comment was changed.

Scope of Analysis:  
Method (CPT Code)

Compound Name	Units	Reference Comment
Ethanol	mg/dL	Ethyl alcohol (ethanol, drinking alcohol) is a central nervous system depressant and can cause effects such as impaired judgment, reduced alertness and impaired muscular coordination. Ethanol can also be a product of decomposition or degradation of biological samples.



Effective Date:

Monday, November 14, 2011

# New Tests and Test Updates

## Test Changes

Compound Name	Units	Reference Comment
Methanol	mg/dL	<p>Endogenous blood levels of methanol from metabolic and dietary sources are approximately 0.15 mg/dL.</p> <p>Exposure to 800 ppm methanol for 8 hours produced a maximum average blood methanol concentration of 3.1 mg/dL.</p> <p>The blood to plasma ratio of methanol is 0.9.</p>
Isopropanol	mg/dL	<p>Three workers exposed to 191 - 200 ppm isopropanol in air had blood isopropanol concentrations &lt;1 mg/dL; acetone levels were 4 - 16 mg/dL during the exposure. After a sponge bath with isopropanol, one adult had a blood isopropanol concentration of 10 mg/dL.</p> <p>In a study of 31 isopropanol deaths, postmortem blood concentrations ranged from 10 to 250 mg/dL (mean, 140 mg/dL) and acetone blood concentrations ranged from 40 - 300 mg/dL (mean, 170 mg/dL).</p> <p>The blood to plasma ratio of isopropanol is 0.9 - 1.1.</p>
Acetone	mg/dL	<p>Reported normal endogenous acetone levels in blood are up to 3 mg/dL. Levels associated with diabetic or fasting ketoacidosis range from 10 - 70 mg/dL. After exposure to 100 and 500 ppm acetone for 2 hr, reported blood acetone concentrations peaked at 2 and 10 mg/dL, respectively. A blood level of 250 mg/dL was reported in an individual who became lethargic following ingestion of acetone.</p> <p>The blood to plasma ratio of acetone is 1.0 - 1.1.</p>

### 1452B Drug-Facilitated Sexual Assault Survey 2, Blood (Forensic)

Summary of Changes: Specimen Requirements (Specimen Container) were changed.  
 Reference Comment was changed.  
 Units were changed.



Effective Date:

Monday, November 14, 2011

# New Tests and Test Updates

## Test Changes

Specimen Requirements: 10 mL Blood  
 Transport Temperature: Refrigerated  
 Specimen Container: Gray top tube (Sodium Fluoride / Potassium Oxalate), Lavender top tube (EDTA)  
 Light Protection: Yes  
 Special Handling: Submit with Chain of Custody.  
 Peak serum levels are recommended when monitoring patients because the level in the blood drops so rapidly that many negative results are found at the trough. The peak occurs at 40 to 90 minutes post dose. Promptly centrifuge and separate Serum or Plasma into a plastic screw capped vial using approved guidelines. Sample should be collected 1 to 6 hours post dose. Glass containers are not acceptable.  
 Rejection Criteria: Not received Light Protected.  
 Scope of Analysis:  
 Method (CPT Code)

Compound Name	Units	Reference Comment
Ethanol	mg/dL	Ethyl alcohol (ethanol, drinking alcohol) is a central nervous system depressant and can cause effects such as impaired judgment, reduced alertness and impaired muscular coordination. Ethanol can also be a product of decomposition or degradation of biological samples.
Blood Alcohol Concentration (BAC)	g/100 mL	I certify that: I directly participated in the determination of the results by reviewing and certifying that the analytical data including internal standards and calculations utilized in reporting the results of this case are accurate and correct.
Methanol	mg/dL	Endogenous blood levels of methanol from metabolic and dietary sources are approximately 0.15 mg/dL.  Exposure to 800 ppm methanol for 8 hours produced a maximum average blood methanol concentration of 3.1 mg/dL.
Isopropanol	mg/dL	Three workers exposed to 191 - 200 ppm isopropanol in air had blood isopropanol concentrations <1 mg/dL; acetone levels were 4 - 16 mg/dL during the exposure. After a sponge bath with isopropanol, one adult had a blood isopropanol concentration of 10 mg/dL.  In a study of 31 isopropanol deaths, postmortem blood concentrations ranged from 10 to 250 mg/dL (mean, 140 mg/dL) and acetone blood concentrations ranged from 40 - 300 mg/dL (mean, 170 mg/dL).



Effective Date:

Monday, November 14, 2011

## New Tests and Test Updates

### Test Changes

Compound Name	Units	Reference Comment
Acetone	mg/dL	Reported normal endogenous acetone levels in blood are up to 3 mg/dL. Levels associated with diabetic or fasting ketoacidosis range from 10 - 70 mg/dL. After exposure to 100 and 500 ppm acetone for 2 hr, reported blood acetone concentrations peaked at 2 and 10 mg/dL, respectively. A blood level of 250 mg/dL was reported in an individual who became lethargic following ingestion of acetone.

#### 1452U Drug-Facilitated Sexual Assault Survey 2, Urine (Forensic)

Summary of Changes: Specimen Requirements (Specimen Container) were changed.  
Reference Comment was changed.

Specimen Requirements: 10 mL Urine  
 Transport Temperature: Refrigerated  
 Specimen Container: Plastic container (preservative-free)  
 Light Protection: Yes  
 Special Handling: Submit with Chain of Custody.  
 Rejection Criteria: Not received Light Protected.  
 Scope of Analysis:  
 Method (CPT Code)

Compound Name	Units	Reference Comment
Ethanol	mg/dL	Ethyl alcohol (ethanol, drinking alcohol) is a central nervous system depressant and can cause effects such as impaired judgment, reduced alertness and impaired muscular coordination. Ethanol can also be a product of decomposition or degradation of biological samples.
Methanol	mg/dL	Methanol is contained in paints, cleaners, windshield washer fluid, 'canned heat', and other household products. It may be consumed for its intoxicating properties which are similar to ethanol; however it is much more toxic. In addition to central nervous system depression with its associated slowing of reaction time, lethargy and confusion, methanol can cause blindness due to its toxic metabolites.



# New Tests and Test Updates

## Test Changes

Compound Name	Units	Reference Comment
Isopropanol	mg/dL	Isopropanol is a common industrial and laboratory chemical that is available as a 70% aqueous solution in 'Rubbing Alcohol'. Isopropanol may be consumed for its intoxicating effects. Isopropanol produces effects in man similar to those produced by ethanol, including impairment of cognitive, perceptual and psychomotor capabilities presenting as decrements in alertness, judgment, perception, coordination, response time and sense of care and caution. As a central nervous system depressant, isopropanol has about two times the potency of ethanol; therefore, while the effects produced are similar, impairment caused by isopropyl alcohol will occur at blood concentrations substantially lower than those of ethanol. Isopropyl alcohol is metabolized to acetone, however acetone produced in the body as a result of uncontrolled diabetes can also be converted to isopropanol.
Acetone	mg/dL	Acetone is a solvent used for chemicals, paints, etc. It is also a product of diabetic- and fasting-induced ketoacidosis as well as a metabolite following isopropanol ingestion. In high concentrations, acetone can have CNS-depressing effects. Symptoms include lethargy, ataxia, headache, nausea and lightheadedness. Stupor and coma appear in severe cases. Acetone produced in the body as a result of uncontrolled diabetes can also be converted to isopropanol.

### 8091U Drugs of Abuse (10 Panel) and Alcohol Screen, Urine (Forensic)

Summary of Changes: Stability was changed.  
Reference Comment was changed.

Stability: Room Temperature: Undetermined  
Refrigerated: 7 day(s)  
Frozen (-20 °C): Undetermined

Scope of Analysis: Headspace GC (82055): Ethanol, Methanol, Isopropanol, Acetone  
Method (CPT Code) EIA (80101x9): Opiates, Cocaine/Metabolites, Benzodiazepines, Cannabinoids, Amphetamines, Barbiturates, Methadone, Phencyclidine, Propoxyphene  
IA (80101): Buprenorphine / Metabolite

Compound Name	Units	Reference Comment
Ethanol	mg/dL	Ethyl alcohol (ethanol, drinking alcohol) is a central nervous system depressant and can cause effects such as impaired judgment, reduced alertness and impaired muscular coordination. Ethanol can also be a product of decomposition or degradation of biological samples.



# New Tests and Test Updates

## Test Changes

Compound Name	Units	Reference Comment
Methanol	mg/dL	Methanol is contained in paints, cleaners, windshield washer fluid, 'canned heat', and other household products. It may be consumed for its intoxicating properties which are similar to ethanol; however it is much more toxic. In addition to central nervous system depression with its associated slowing of reaction time, lethargy and confusion, methanol can cause blindness due to its toxic metabolites.
Isopropanol	mg/dL	Isopropanol is a common industrial and laboratory chemical that is available as a 70% aqueous solution in 'Rubbing Alcohol'. Isopropanol may be consumed for its intoxicating effects. Isopropanol produces effects in man similar to those produced by ethanol, including impairment of cognitive, perceptual and psychomotor capabilities presenting as decrements in alertness, judgment, perception, coordination, response time and sense of care and caution. As a central nervous system depressant, isopropanol has about two times the potency of ethanol; therefore, while the effects produced are similar, impairment caused by isopropyl alcohol will occur at blood concentrations substantially lower than those of ethanol. Isopropyl alcohol is metabolized to acetone, however acetone produced in the body as a result of uncontrolled diabetes can also be converted to isopropanol.
Acetone	mg/dL	Acetone is a solvent used for chemicals, paints, etc. It is also a product of diabetic- and fasting-induced ketoacidosis as well as a metabolite following isopropanol ingestion. In high concentrations, acetone can have CNS-depressing effects. Symptoms include lethargy, ataxia, headache, nausea and lightheadedness. Stupor and coma appear in severe cases. Acetone produced in the body as a result of uncontrolled diabetes can also be converted to isopropanol.

### 8101U Drugs of Abuse (10 Panel) and Alcohol Screen, Urine (Forensic)

Summary of Changes: Specimen Requirements (Specimen Container) were changed.  
 Stability was changed.  
 Reference Comment was changed.



Effective Date:

Monday, November 14, 2011

# New Tests and Test Updates

## Test Changes

Specimen Requirements: 9 mL Urine  
 Transport Temperature: Refrigerated  
 Specimen Container: Plastic container (preservative-free)  
 Light Protection: Not Required  
 Special Handling: Submit with Chain of Custody.  
 Rejection Criteria: None  
 Stability: Room Temperature: Undetermined  
 Refrigerated: 7 day(s)  
 Frozen (-20 °C): Undetermined  
 Scope of Analysis: EIA (80101x9): Opiates, Cocaine/Metabolites, Benzodiazepines, Cannabinoids,  
 Method (CPT Code) Amphetamines, Barbiturates, Methadone, Phencyclidine, Propoxyphene  
 IA (80101): Buprenorphine / Metabolite  
 Headspace GC (82055): Ethanol, Methanol, Isopropanol, Acetone

Compound Name	Units	Reference Comment
Ethanol	mg/dL	Ethyl alcohol (ethanol, drinking alcohol) is a central nervous system depressant and can cause effects such as impaired judgment, reduced alertness and impaired muscular coordination. Ethanol can also be a product of decomposition or degradation of biological samples.
Methanol	mg/dL	Methanol is contained in paints, cleaners, windshield washer fluid, 'canned heat', and other household products. It may be consumed for its intoxicating properties which are similar to ethanol; however it is much more toxic. In addition to central nervous system depression with its associated slowing of reaction time, lethargy and confusion, methanol can cause blindness due to its toxic metabolites.
Isopropanol	mg/dL	Isopropanol is a common industrial and laboratory chemical that is available as a 70% aqueous solution in 'Rubbing Alcohol'. Isopropanol may be consumed for its intoxicating effects. Isopropanol produces effects in man similar to those produced by ethanol, including impairment of cognitive, perceptual and psychomotor capabilities presenting as decrements in alertness, judgment, perception, coordination, response time and sense of care and caution. As a central nervous system depressant, isopropanol has about two times the potency of ethanol; therefore, while the effects produced are similar, impairment caused by isopropyl alcohol will occur at blood concentrations substantially lower than those of ethanol. Isopropyl alcohol is metabolized to acetone, however acetone produced in the body as a result of uncontrolled diabetes can also be converted to isopropanol.



Effective Date:

Monday, November 14, 2011

# New Tests and Test Updates

## Test Changes

Compound Name	Units	Reference Comment
Acetone	mg/dL	Acetone is a solvent used for chemicals, paints, etc. It is also a product of diabetic- and fasting-induced ketoacidosis as well as a metabolite following isopropanol ingestion. In high concentrations, acetone can have CNS-depressing effects. Symptoms include lethargy, ataxia, headache, nausea and lightheadedness. Stupor and coma appear in severe cases. Acetone produced in the body as a result of uncontrolled diabetes can also be converted to isopropanol.

### 8091B Drugs of Abuse (9 Panel) and Alcohol Screen, Blood (Forensic)

Summary of Changes: Reference Comment was changed.  
Units were changed.

Scope of Analysis: Headspace GC (82055): Ethanol, Blood Alcohol Concentration (BAC), Methanol, Isopropanol, Acetone  
Method (CPT Code) ELISA (80101x9): Opiates, Cocaine / Metabolites, Benzodiazepines, Cannabinoids, Amphetamines, Barbiturates, Methadone, Phencyclidine, Propoxyphene

Compound Name	Units	Reference Comment
Ethanol	mg/dL	Ethyl alcohol (ethanol, drinking alcohol) is a central nervous system depressant and can cause effects such as impaired judgment, reduced alertness and impaired muscular coordination. Ethanol can also be a product of decomposition or degradation of biological samples.
Blood Alcohol Concentration (BAC)	g/100 mL	I certify that: I directly participated in the determination of the results by reviewing and certifying that the analytical data including internal standards and calculations utilized in reporting the results of this case are accurate and correct.
Methanol	mg/dL	Endogenous blood levels of methanol from metabolic and dietary sources are approximately 0.15 mg/dL.  Exposure to 800 ppm methanol for 8 hours produced a maximum average blood methanol concentration of 3.1 mg/dL.





Effective Date:

Monday, November 14, 2011

## New Tests and Test Updates

### Test Changes

Compound Name	Units	Reference Comment
Isopropanol	mg/dL	<p>Three workers exposed to 191 - 200 ppm isopropanol in air had blood isopropanol concentrations &lt;1 mg/dL; acetone levels were 4 - 16 mg/dL during the exposure. After a sponge bath with isopropanol, one adult had a blood isopropanol concentration of 10 mg/dL.</p> <p>In a study of 31 isopropanol deaths, postmortem blood concentrations ranged from 10 to 250 mg/dL (mean, 140 mg/dL) and acetone blood concentrations ranged from 40 - 300 mg/dL (mean, 170 mg/dL).</p>
Acetone	mg/dL	<p>Reported normal endogenous acetone levels in blood are up to 3 mg/dL. Levels associated with diabetic or fasting ketoacidosis range from 10 - 70 mg/dL. After exposure to 100 and 500 ppm acetone for 2 hr, reported blood acetone concentrations peaked at 2 and 10 mg/dL, respectively. A blood level of 250 mg/dL was reported in an individual who became lethargic following ingestion of acetone.</p>

#### 8101B Drugs of Abuse (9 Panel) and Alcohol Screen, Blood (Forensic)

Summary of Changes: Specimen Requirements (Special Handling) were changed.  
Reference Comment was changed.  
Units were changed.

Specimen Requirements: 7 mL Blood  
 Transport Temperature: Refrigerated  
 Specimen Container: Gray top tube (Sodium Fluoride / Potassium Oxalate)  
 Light Protection: Not Required  
 Special Handling: Submit with Chain of Custody.  
 Collect sample using alcohol free skin preparation.  
 Rejection Criteria: Received Room Temperature.  
 Scope of Analysis: Headspace GC (82055): Ethanol, Blood Alcohol Concentration (BAC), Methanol, Isopropanol, Acetone  
 Method (CPT Code) ELISA (80101x9): Opiates, Cocaine / Metabolites, Benzodiazepines, Cannabinoids, Amphetamines, Barbiturates, Methadone, Phencyclidine, Propoxyphene

Compound Name	Units	Reference Comment
Ethanol	mg/dL	Ethyl alcohol (ethanol, drinking alcohol) is a central nervous system depressant and can cause effects such as impaired judgment, reduced alertness and impaired muscular coordination. Ethanol can also be a product of decomposition or degradation of biological samples.



# New Tests and Test Updates

## Test Changes

Compound Name	Units	Reference Comment
Blood Alcohol Concentration (BAC)	g/100 mL	I certify that: I directly participated in the determination of the results by reviewing and certifying that the analytical data including internal standards and calculations utilized in reporting the results of this case are accurate and correct.
Methanol	mg/dL	Endogenous blood levels of methanol from metabolic and dietary sources are approximately 0.15 mg/dL.  Exposure to 800 ppm methanol for 8 hours produced a maximum average blood methanol concentration of 3.1 mg/dL.
Isopropanol	mg/dL	Three workers exposed to 191 - 200 ppm isopropanol in air had blood isopropanol concentrations <1 mg/dL; acetone levels were 4 - 16 mg/dL during the exposure. After a sponge bath with isopropanol, one adult had a blood isopropanol concentration of 10 mg/dL.  In a study of 31 isopropanol deaths, postmortem blood concentrations ranged from 10 to 250 mg/dL (mean, 140 mg/dL) and acetone blood concentrations ranged from 40 - 300 mg/dL (mean, 170 mg/dL).
Acetone	mg/dL	Reported normal endogenous acetone levels in blood are up to 3 mg/dL. Levels associated with diabetic or fasting ketoacidosis range from 10 - 70 mg/dL. After exposure to 100 and 500 ppm acetone for 2 hr, reported blood acetone concentrations peaked at 2 and 10 mg/dL, respectively. A blood level of 250 mg/dL was reported in an individual who became lethargic following ingestion of acetone.

### 1858B Drugs of Abuse (9 Panel) and Alcohol Screen, Blood

Summary of Changes: Reference Comment was changed.  
Methods/CPT Codes were changed [Headspace GC (82055)]

Scope of Analysis: Headspace GC (82055): Ethanol  
Method (CPT Code) ELISA (80101x9): Opiates, Cocaine / Metabolites, Benzodiazepines, Cannabinoids, Amphetamines, Barbiturates, Methadone, Phencyclidine, Propoxyphene



Effective Date:

Monday, November 14, 2011

## New Tests and Test Updates

### Test Changes

Compound Name	Units	Reference Comment
Ethanol	mg/dL	Ethyl alcohol (ethanol, drinking alcohol) is a central nervous system depressant and can cause effects such as impaired judgment, reduced alertness and impaired muscular coordination. Ethanol can also be a product of decomposition or degradation of biological samples.

#### 8091FL Drugs of Abuse (9 Panel) and Alcohol Screen, Fluid (Forensic)

Summary of Changes: Specimen Requirements (Specimen Container) were changed.  
Reference Comment was changed.

Specimen Requirements: 7 mL Fluid  
 Transport Temperature: Refrigerated  
 Specimen Container: Plastic container (preservative-free)  
 Light Protection: Not Required  
 Special Handling: None  
 Rejection Criteria: None  
 Scope of Analysis: Headspace GC (82055): Ethanol, Methanol, Isopropanol, Acetone  
 Method (CPT Code) ELISA (80101x9): Opiates, Cocaine / Metabolites, Benzodiazepines, Cannabinoids, Amphetamines, Barbiturates, Methadone, Phencyclidine, Propoxyphene

Compound Name	Units	Reference Comment
Ethanol	mg/dL	Ethyl alcohol (ethanol, drinking alcohol) is a central nervous system depressant and can cause effects such as impaired judgment, reduced alertness and impaired muscular coordination. Ethanol can also be a product of decomposition or degradation of biological samples.
Methanol	mg/dL	Methanol is contained in paints, cleaners, windshield washer fluid, 'canned heat', and other household products. It may be consumed for its intoxicating properties which are similar to ethanol; however it is much more toxic. In addition to central nervous system depression with its associated slowing of reaction time, lethargy and confusion, methanol can cause blindness due to its toxic metabolites.
Isopropanol	mg/dL	Isopropanol is a common industrial and laboratory chemical that is available as a 70% aqueous solution in 'Rubbing Alcohol'. Isopropanol may be consumed for its intoxicating effects. Isopropanol produces effects in man similar to those produced by ethanol, including impairment of cognitive, perceptual and psychomotor capabilities presenting as decrements in alertness, judgment, perception, coordination, response time and sense of care and caution. As a central nervous system depressant, isopropanol has about two times the potency



# New Tests and Test Updates

## Test Changes

Compound Name	Units	Reference Comment
Acetone	mg/dL	<p>of ethanol; therefore, while the effects produced are similar, impairment caused by isopropyl alcohol will occur at blood concentrations substantially lower than those of ethanol. Isopropyl alcohol is metabolized to acetone, however acetone produced in the body as a result of uncontrolled diabetes can also be converted to isopropanol.</p> <p>Acetone is a solvent used for chemicals, paints, etc. It is also a product of diabetic- and fasting-induced ketoacidosis as well as a metabolite following isopropanol ingestion. In high concentrations, acetone can have CNS-depressing effects. Symptoms include lethargy, ataxia, headache, nausea and lightheadedness. Stupor and coma appear in severe cases. Acetone produced in the body as a result of uncontrolled diabetes can also be converted to isopropanol.</p>

### 8101FL Drugs of Abuse (9 Panel) and Alcohol Screen, Fluid (Forensic)

Summary of Changes: Specimen Requirements (Specimen Container) were changed.  
 Specimen Requirements (Special Handling) were changed.  
 Reference Comment was changed.

Specimen Requirements: 7 mL Fluid  
 Transport Temperature: Refrigerated  
 Specimen Container: Plastic container (preservative-free)  
 Light Protection: Not Required  
 Special Handling: Submit with Chain of Custody.  
 Rejection Criteria: None  
 Scope of Analysis: Headspace GC (82055): Ethanol, Methanol, Isopropanol, Acetone  
 Method (CPT Code) ELISA (80101x9): Opiates, Cocaine / Metabolites, Benzodiazepines, Cannabinoids, Amphetamines, Barbiturates, Methadone, Phencyclidine, Propoxyphene

Compound Name	Units	Reference Comment
Ethanol	mg/dL	Ethyl alcohol (ethanol, drinking alcohol) is a central nervous system depressant and can cause effects such as impaired judgment, reduced alertness and impaired muscular coordination. Ethanol can also be a product of decomposition or degradation of biological samples.



Effective Date:

Monday, November 14, 2011

## New Tests and Test Updates

### Test Changes

Compound Name	Units	Reference Comment
Methanol	mg/dL	Methanol is contained in paints, cleaners, windshield washer fluid, 'canned heat', and other household products. It may be consumed for its intoxicating properties which are similar to ethanol; however it is much more toxic. In addition to central nervous system depression with its associated slowing of reaction time, lethargy and confusion, methanol can cause blindness due to its toxic metabolites.
Isopropanol	mg/dL	Isopropanol is a common industrial and laboratory chemical that is available as a 70% aqueous solution in 'Rubbing Alcohol'. Isopropanol may be consumed for its intoxicating effects. Isopropanol produces effects in man similar to those produced by ethanol, including impairment of cognitive, perceptual and psychomotor capabilities presenting as decrements in alertness, judgment, perception, coordination, response time and sense of care and caution. As a central nervous system depressant, isopropanol has about two times the potency of ethanol; therefore, while the effects produced are similar, impairment caused by isopropyl alcohol will occur at blood concentrations substantially lower than those of ethanol. Isopropyl alcohol is metabolized to acetone, however acetone produced in the body as a result of uncontrolled diabetes can also be converted to isopropanol.
Acetone	mg/dL	Acetone is a solvent used for chemicals, paints, etc. It is also a product of diabetic- and fasting-induced ketoacidosis as well as a metabolite following isopropanol ingestion. In high concentrations, acetone can have CNS-depressing effects. Symptoms include lethargy, ataxia, headache, nausea and lightheadedness. Stupor and coma appear in severe cases. Acetone produced in the body as a result of uncontrolled diabetes can also be converted to isopropanol.

#### 1858FL Drugs of Abuse (9 Panel) and Alcohol Screen, Fluid

Summary of Changes: Specimen Requirements (Specimen Container) were changed.  
Reference Comment was changed.  
Methods/CPT Codes were changed [Headspace GC (82055)]



Effective Date:

Monday, November 14, 2011

# New Tests and Test Updates

## Test Changes

Specimen Requirements: 7 mL Fluid  
 Transport Temperature: Refrigerated  
 Specimen Container: Plastic container (preservative-free)  
 Light Protection: Not Required  
 Special Handling: None  
 Rejection Criteria: None  
 Scope of Analysis: Headspace GC (82055): Ethanol  
 Method (CPT Code) ELISA (80101x9): Opiates, Cocaine / Metabolites, Benzodiazepines, Cannabinoids, Amphetamines, Barbiturates, Methadone, Phencyclidine, Propoxyphene

Compound Name	Units	Reference Comment
Ethanol	mg/dL	Ethyl alcohol (ethanol, drinking alcohol) is a central nervous system depressant and can cause effects such as impaired judgment, reduced alertness and impaired muscular coordination. Ethanol can also be a product of decomposition or degradation of biological samples.

**8091SP Drugs of Abuse (9 Panel) and Alcohol Screen, Serum/Plasma (Forensic)**

Summary of Changes: Specimen Requirements (Specimen Container) were changed.  
 Reference Comment was changed.

Specimen Requirements: 7 mL Serum or Plasma  
 Transport Temperature: Refrigerated  
 Specimen Container: Plastic container (preservative-free)  
 Light Protection: Not Required  
 Special Handling: Collect sample using alcohol free skin preparation. Collect sample in Gray top tube (Sodium Fluoride / Potassium Oxalate). Promptly centrifuge and separate Serum or Plasma into a plastic screw capped vial using approved guidelines.  
 Rejection Criteria: Received Room Temperature. Polymer gel separation tube (SST or PST).  
 Scope of Analysis: Headspace GC (82055): Ethanol, Methanol, Isopropanol, Acetone  
 Method (CPT Code) ELISA (80101x9): Opiates, Cocaine / Metabolites, Benzodiazepines, Cannabinoids, Amphetamines, Barbiturates, Methadone, Phencyclidine, Propoxyphene

Compound Name	Units	Reference Comment
Ethanol	mg/dL	Ethyl alcohol (ethanol, drinking alcohol) is a central nervous system depressant and can cause effects such as impaired judgment, reduced alertness and impaired muscular coordination. Ethanol can also be a product of decomposition or degradation of biological samples.



Effective Date:

Monday, November 14, 2011

## New Tests and Test Updates

### Test Changes

Compound Name	Units	Reference Comment
Methanol	mg/dL	<p>Endogenous blood levels of methanol from metabolic and dietary sources are approximately 0.15 mg/dL.</p> <p>Exposure to 800 ppm methanol for 8 hours produced a maximum average blood methanol concentration of 3.1 mg/dL.</p> <p>The blood to plasma ratio of methanol is 0.9.</p>
Isopropanol	mg/dL	<p>Three workers exposed to 191 - 200 ppm isopropanol in air had blood isopropanol concentrations &lt;1 mg/dL; acetone levels were 4 - 16 mg/dL during the exposure. After a sponge bath with isopropanol, one adult had a blood isopropanol concentration of 10 mg/dL.</p> <p>In a study of 31 isopropanol deaths, postmortem blood concentrations ranged from 10 to 250 mg/dL (mean, 140 mg/dL) and acetone blood concentrations ranged from 40 - 300 mg/dL (mean, 170 mg/dL).</p> <p>The blood to plasma ratio of isopropanol is 0.9 - 1.1.</p>
Acetone	mg/dL	<p>Reported normal endogenous acetone levels in blood are up to 3 mg/dL. Levels associated with diabetic or fasting ketoacidosis range from 10 - 70 mg/dL. After exposure to 100 and 500 ppm acetone for 2 hr, reported blood acetone concentrations peaked at 2 and 10 mg/dL, respectively. A blood level of 250 mg/dL was reported in an individual who became lethargic following ingestion of acetone.</p> <p>The blood to plasma ratio of acetone is 1.0 - 1.1.</p>

#### 8101SP Drugs of Abuse (9 Panel) and Alcohol Screen, Serum/Plasma (Forensic)

Summary of Changes: Specimen Requirements (Specimen Container) were changed.  
 Specimen Requirements (Special Handling) were changed.  
 Reference Comment was changed.



Effective Date:

Monday, November 14, 2011

# New Tests and Test Updates

## Test Changes

Specimen Requirements: 7 mL Serum or Plasma

Transport Temperature: Refrigerated

Specimen Container: Plastic container (preservative-free)

Light Protection: Not Required

Special Handling: Submit with Chain of Custody.

Collect sample using alcohol free skin preparation. Collect sample in Gray top tube (Sodium Fluoride / Potassium Oxalate). Promptly centrifuge and separate Serum or Plasma into a plastic screw capped vial using approved guidelines.

Rejection Criteria: Received Room Temperature. Polymer gel separation tube (SST or PST).

Scope of Analysis: Headspace GC (82055): Ethanol, Methanol, Isopropanol, Acetone

Method (CPT Code) ELISA (80101x9): Opiates, Cocaine / Metabolites, Benzodiazepines, Cannabinoids, Amphetamines, Barbiturates, Methadone, Phencyclidine, Propoxyphene

Compound Name	Units	Reference Comment
Ethanol	mg/dL	Ethyl alcohol (ethanol, drinking alcohol) is a central nervous system depressant and can cause effects such as impaired judgment, reduced alertness and impaired muscular coordination. Ethanol can also be a product of decomposition or degradation of biological samples.
Methanol	mg/dL	<p>Endogenous blood levels of methanol from metabolic and dietary sources are approximately 0.15 mg/dL.</p> <p>Exposure to 800 ppm methanol for 8 hours produced a maximum average blood methanol concentration of 3.1 mg/dL.</p> <p>The blood to plasma ratio of methanol is 0.9.</p>
Isopropanol	mg/dL	<p>Three workers exposed to 191 - 200 ppm isopropanol in air had blood isopropanol concentrations &lt;1 mg/dL; acetone levels were 4 - 16 mg/dL during the exposure. After a sponge bath with isopropanol, one adult had a blood isopropanol concentration of 10 mg/dL.</p> <p>In a study of 31 isopropanol deaths, postmortem blood concentrations ranged from 10 to 250 mg/dL (mean, 140 mg/dL) and acetone blood concentrations ranged from 40 - 300 mg/dL (mean, 170 mg/dL).</p> <p>The blood to plasma ratio of isopropanol is 0.9 - 1.1.</p>





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# New Tests and Test Updates

## Test Changes

Compound Name	Units	Reference Comment
Acetone	mg/dL	<p>Reported normal endogenous acetone levels in blood are up to 3 mg/dL. Levels associated with diabetic or fasting ketoacidosis range from 10 - 70 mg/dL. After exposure to 100 and 500 ppm acetone for 2 hr, reported blood acetone concentrations peaked at 2 and 10 mg/dL, respectively. A blood level of 250 mg/dL was reported in an individual who became lethargic following ingestion of acetone.</p> <p>The blood to plasma ratio of acetone is 1.0 - 1.1.</p>

### 1858SP Drugs of Abuse (9 Panel) and Alcohol Screen, Serum/Plasma

Summary of Changes: Specimen Requirements (Specimen Container) were changed.  
Reference Comment was changed.  
Methods/CPT Codes were changed [Headspace GC (82055)]

Specimen Requirements: 7 mL Serum or Plasma

Transport Temperature: Refrigerated

Specimen Container: Plastic container (preservative-free)

Light Protection: Not Required

Special Handling: Collect sample using alcohol free skin preparation. Collect sample in Gray top tube (Sodium Fluoride / Potassium Oxalate). Promptly centrifuge and separate Serum or Plasma into a plastic screw capped vial using approved guidelines.

Rejection Criteria: Received Room Temperature. Polymer gel separation tube (SST or PST).

Scope of Analysis: Headspace GC (82055): Ethanol

Method (CPT Code) ELISA (80101x9): Opiates, Cocaine / Metabolites, Benzodiazepines, Cannabinoids, Amphetamines, Barbiturates, Methadone, Phencyclidine, Propoxyphene

Compound Name	Units	Reference Comment
Ethanol	mg/dL	Ethyl alcohol (ethanol, drinking alcohol) is a central nervous system depressant and can cause effects such as impaired judgment, reduced alertness and impaired muscular coordination. Ethanol can also be a product of decomposition or degradation of biological samples.

### 8091TI Drugs of Abuse (9 Panel) and Alcohol Screen, Tissue (Forensic)

Summary of Changes: Specimen Requirements (Specimen Container) were changed.  
Reference Comment was changed.



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## New Tests and Test Updates

### Test Changes

Specimen Requirements: 10 g Tissue  
Transport Temperature: Refrigerated  
Specimen Container: Plastic container (preservative-free)  
Light Protection: Not Required  
Special Handling: None  
Rejection Criteria: None  
Scope of Analysis: Headspace GC (80103, 82055): Ethanol, Methanol, Isopropanol, Acetone  
Method (CPT Code) ELISA (80103, 80101x9): Opiates, Cocaine / Metabolites, Benzodiazepines, Cannabinoids, Amphetamines, Barbiturates, Methadone, Phencyclidine, Propoxyphene

Compound Name	Units	Reference Comment
Ethanol	mg/100 g	Ethyl alcohol (ethanol, drinking alcohol) is a central nervous system depressant and can cause effects such as impaired judgment, reduced alertness and impaired muscular coordination. Ethanol can also be a product of decomposition or degradation of biological samples.
Methanol	mg/100 g	Methanol is contained in paints, cleaners, windshield washer fluid, 'canned heat', and other household products. It may be consumed for its intoxicating properties which are similar to ethanol; however it is much more toxic. In addition to central nervous system depression with its associated slowing of reaction time, lethargy and confusion, methanol can cause blindness due to its toxic metabolites.
Isopropanol	mg/100 g	Isopropanol is a common industrial and laboratory chemical that is available as a 70% aqueous solution in 'Rubbing Alcohol'. Isopropanol may be consumed for its intoxicating effects. Isopropanol produces effects in man similar to those produced by ethanol, including impairment of cognitive, perceptual and psychomotor capabilities presenting as decrements in alertness, judgment, perception, coordination, response time and sense of care and caution. As a central nervous system depressant, isopropanol has about two times the potency of ethanol; therefore, while the effects produced are similar, impairment caused by isopropyl alcohol will occur at blood concentrations substantially lower than those of ethanol. Isopropyl alcohol is metabolized to acetone, however acetone produced in the body as a result of uncontrolled diabetes can also be converted to isopropanol.



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# New Tests and Test Updates

## Test Changes

Compound Name	Units	Reference Comment
Acetone	mg/100 g	Acetone is a solvent used for chemicals, paints, etc. It is also a product of diabetic- and fasting-induced ketoacidosis as well as a metabolite following isopropanol ingestion. In high concentrations, acetone can have CNS-depressing effects. Symptoms include lethargy, ataxia, headache, nausea and lightheadedness. Stupor and coma appear in severe cases. Acetone produced in the body as a result of uncontrolled diabetes can also be converted to isopropanol.

### 8101TI Drugs of Abuse (9 Panel) and Alcohol Screen, Tissue (Forensic)

Summary of Changes: Specimen Requirements (Specimen Container) were changed.  
 Specimen Requirements (Special Handling) were changed.  
 Reference Comment was changed.  
 Methods/CPT Codes were changed [Headspace GC (80103, 82055)]

Specimen Requirements: 10 g Tissue  
 Transport Temperature: Refrigerated  
 Specimen Container: Plastic container (preservative-free)  
 Light Protection: Not Required  
 Special Handling: Submit with Chain of Custody.  
 Rejection Criteria: None  
 Scope of Analysis: ELISA (80103, 80101x9): Opiates, Cocaine / Metabolites, Benzodiazepines,  
 Method (CPT Code) Cannabinoids, Amphetamines, Barbiturates, Methadone, Phencyclidine,  
 Propoxyphene  
 Headspace GC (80103, 82055): Ethanol, Methanol, Isopropanol, Acetone

Compound Name	Units	Reference Comment
Ethanol	mg/100 g	Ethyl alcohol (ethanol, drinking alcohol) is a central nervous system depressant and can cause effects such as impaired judgment, reduced alertness and impaired muscular coordination. Ethanol can also be a product of decomposition or degradation of biological samples.
Methanol	mg/100 g	Methanol is contained in paints, cleaners, windshield washer fluid, 'canned heat', and other household products. It may be consumed for its intoxicating properties which are similar to ethanol; however it is much more toxic. In addition to central nervous system depression with its associated slowing of reaction time, lethargy and confusion, methanol can cause blindness due to its toxic metabolites.



Effective Date:

Monday, November 14, 2011

## New Tests and Test Updates

### Test Changes

Compound Name	Units	Reference Comment
Isopropanol	mg/100 g	Isopropanol is a common industrial and laboratory chemical that is available as a 70% aqueous solution in 'Rubbing Alcohol'. Isopropanol may be consumed for its intoxicating effects. Isopropanol produces effects in man similar to those produced by ethanol, including impairment of cognitive, perceptual and psychomotor capabilities presenting as decrements in alertness, judgment, perception, coordination, response time and sense of care and caution. As a central nervous system depressant, isopropanol has about two times the potency of ethanol; therefore, while the effects produced are similar, impairment caused by isopropyl alcohol will occur at blood concentrations substantially lower than those of ethanol. Isopropyl alcohol is metabolized to acetone, however acetone produced in the body as a result of uncontrolled diabetes can also be converted to isopropanol.
Acetone	mg/100 g	Acetone is a solvent used for chemicals, paints, etc. It is also a product of diabetic- and fasting-induced ketoacidosis as well as a metabolite following isopropanol ingestion. In high concentrations, acetone can have CNS-depressing effects. Symptoms include lethargy, ataxia, headache, nausea and lightheadedness. Stupor and coma appear in severe cases. Acetone produced in the body as a result of uncontrolled diabetes can also be converted to isopropanol.

#### 1858TI Drugs of Abuse (9 Panel) and Alcohol Screen, Tissue

Summary of Changes: Specimen Requirements (Specimen Container) were changed.  
 Scope of Analysis was changed.  
 Reference Comment was changed.  
 Methods/CPT Codes were changed [Headspace GC (80103, 82055)]  
 Compounds Deleted: Methanol, Isopropanol, Acetone

Specimen Requirements: 10 g Tissue  
 Transport Temperature: Refrigerated  
 Specimen Container: Plastic container (preservative-free)  
 Light Protection: Not Required  
 Special Handling: None  
 Rejection Criteria: None  
 Scope of Analysis: Headspace GC (80103, 82055): Ethanol  
 Method (CPT Code) ELISA (80103, 80101x9): Opiates, Cocaine / Metabolites, Benzodiazepines, Cannabinoids, Amphetamines, Barbiturates, Methadone, Phencyclidine, Propoxyphene



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# New Tests and Test Updates

## Test Changes

Compound Name	Units	Reference Comment
Ethanol	mg/100 g	Ethyl alcohol (ethanol, drinking alcohol) is a central nervous system depressant and can cause effects such as impaired judgment, reduced alertness and impaired muscular coordination. Ethanol can also be a product of decomposition or degradation of biological samples.

### 1858U Drugs of Abuse (9 Panel) and Alcohol Screen, Urine

Summary of Changes: Specimen Requirements (Specimen Container) were changed.  
Reference Comment was changed.  
Methods/CPT Codes were changed [Headspace GC (82055)]

Specimen Requirements: 6 mL Urine  
 Transport Temperature: Refrigerated  
 Specimen Container: Plastic container (preservative-free)  
 Light Protection: Not Required  
 Special Handling: None  
 Rejection Criteria: None  
 Scope of Analysis: EIA (80101x10): Opiates, Cocaine / Metabolites, Benzodiazepines, Cannabinoids,  
 Method (CPT Code) Amphetamines, Barbiturates, Methadone, Phencyclidine, Propoxyphene  
 Headspace GC (82055): Ethanol

Compound Name	Units	Reference Comment
Ethanol	mg/dL	Ethyl alcohol (ethanol, drinking alcohol) is a central nervous system depressant and can cause effects such as impaired judgment, reduced alertness and impaired muscular coordination. Ethanol can also be a product of decomposition or degradation of biological samples.

### 8103B Environmental Exposure Screen, Blood (Forensic)

Summary of Changes: Reference Comment was changed.  
Units were changed.  
Methods/CPT Codes were changed [Headspace GC (84600)]  
Method for Volatiles was changed.

Scope of Analysis: SP (80101): Cyanide  
 Method (CPT Code) Colorimetry (80101): Bromides  
 Headspace GC (82055): Ethanol, Blood Alcohol Concentration (BAC), Methanol, Isopropanol, Acetone  
 ICP/MS (83655): Lead  
 ICP/MS (82175): Arsenic  
 ICP/MS (84255): Selenium  
 ICP/MS (83018): Thallium  
 ICP/MS (83825): Mercury  
 GC (83921): Trichloroacetic Acid



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# New Tests and Test Updates

## Test Changes

Headspace GC (84600): Volatiles  
 GC (84600): Hydrocarbon Gases  
 GC (84600): Halocarbons  
 ICP/MS (83018): Bismuth  
 ICP/MS (83018): Barium  
 ICP/MS (83018): Antimony  
 EZA (82480): Cholinesterase  
 SP (80101): Carboxyhemoglobin  
 SP (83050): Methemoglobin, Sulfhemoglobin

Compound Name	Units	Reference Comment
Ethanol	mg/dL	Ethyl alcohol (ethanol, drinking alcohol) is a central nervous system depressant and can cause effects such as impaired judgment, reduced alertness and impaired muscular coordination. Ethanol can also be a product of decomposition or degradation of biological samples.
Blood Alcohol Concentration (BAC)	g/100 mL	I certify that: I directly participated in the determination of the results by reviewing and certifying that the analytical data including internal standards and calculations utilized in reporting the results of this case are accurate and correct.
Methanol	mg/dL	Endogenous blood levels of methanol from metabolic and dietary sources are approximately 0.15 mg/dL.  Exposure to 800 ppm methanol for 8 hours produced a maximum average blood methanol concentration of 3.1 mg/dL.
Isopropanol	mg/dL	Three workers exposed to 191 - 200 ppm isopropanol in air had blood isopropanol concentrations <1 mg/dL; acetone levels were 4 - 16 mg/dL during the exposure. After a sponge bath with isopropanol, one adult had a blood isopropanol concentration of 10 mg/dL.  In a study of 31 isopropanol deaths, postmortem blood concentrations ranged from 10 to 250 mg/dL (mean, 140 mg/dL) and acetone blood concentrations ranged from 40 - 300 mg/dL (mean, 170 mg/dL).



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## New Tests and Test Updates

### Test Changes

Compound Name	Units	Reference Comment
Acetone	mg/dL	Reported normal endogenous acetone levels in blood are up to 3 mg/dL. Levels associated with diabetic or fasting ketoacidosis range from 10 - 70 mg/dL. After exposure to 100 and 500 ppm acetone for 2 hr, reported blood acetone concentrations peaked at 2 and 10 mg/dL, respectively. A blood level of 250 mg/dL was reported in an individual who became lethargic following ingestion of acetone.

#### 6303B Firefighter Core Baseline Profile, Blood

Summary of Changes: Specimen Requirements (Specimen Container) were changed.  
 Specimen Requirements (Special Handling) were changed.  
 Reference Comment was changed.  
 Methods/CPT Codes were changed [Headspace GC (84600)]

Specimen Requirements: 4 mL Blood

Transport Temperature: Refrigerated

Specimen Container: Gray top tube (Sodium Fluoride / Potassium Oxalate), Lavender top tube (EDTA), Royal Blue top tube (Trace metal-free; EDTA)

Light Protection: Yes

Special Handling: Clotted Blood specimens are not acceptable.  
 Collect sample using alcohol free skin preparation. Submit in container with a non-Heparin based anticoagulant. Tubes containing Heparin based anticoagulants are not acceptable.

Rejection Criteria: Not received Light Protected. Light Green top tube (Lithium Heparin). Tan top tube - glass (Sodium Heparin). Royal Blue top tube (Trace metal-free; Sodium Heparin). Green top tube (Sodium Heparin).

Scope of Analysis: ICP/MS (83655): Lead

Method (CPT Code) H (84202): ZPP

Headspace GC (84600): Benzene, Ethyl Benzene, Styrene, Toluene, Xylenes (o,m,p), n-Heptane, n-Hexane, Methylpentanes (2- and 3- Isomers), Pentane, n-Butanol, Ethanol, Isopropanol, n-Propanol, Methanol, Acetaldehyde, Acetone, Methyl Ethyl Ketone, Methyl Isobutyl Ketone, Methyl n-Butyl Ketone, Ethyl Acetate, Diethyl Ether, Methyl Acrylate, Methyl Tertiary Butyl Ether

Compound Name	Units	Reference Comment
Ethanol	mg/dL	Ethyl alcohol (ethanol, drinking alcohol) is a central nervous system depressant and can cause effects such as impaired judgment, reduced alertness and impaired muscular coordination. Ethanol can also be a product of decomposition or degradation of biological samples.





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## New Tests and Test Updates

### Test Changes

Compound Name	Units	Reference Comment
Isopropanol	mg/dL	Three workers exposed to 191 - 200 ppm isopropanol in air had blood isopropanol concentrations <1 mg/dL; acetone levels were 4 - 16 mg/dL during the exposure. After a sponge bath with isopropanol, one adult had a blood isopropanol concentration of 10 mg/dL.
Methanol	mg/dL	Endogenous blood levels of methanol from metabolic and dietary sources are approximately 0.15 mg/dL.  Exposure to 800 ppm methanol for 8 hours produced a maximum average blood methanol concentration of 3.1 mg/dL.
Acetaldehyde	mg/dL	Normal: Up to 0.02 mg/dL.  Acetaldehyde is an unstable compound post-collection. It will both form and degrade under certain conditions. Although extreme precautions have been demonstrated to maintain the integrity of Acetaldehyde, the results will be affected under typical collection and laboratory procedures.
Acetone	mg/dL	Normal: Up to 3 mg/dL. Blood Acetone concentrations are markedly elevated during diabetic or fasting ketoacidosis and may range from 10 - 70 mg/dL.

#### 2321B Hydrocarbon and Oxygenated Volatiles Panel, Blood

Summary of Changes: Reference Comment was changed.  
Methods/CPT Codes were changed [Headspace GC (84600)]

Scope of Analysis: Headspace GC (84600): Benzene, Ethyl Benzene, Styrene, Toluene, Xylenes (o,m,p), n-Heptane, n-Hexane, Methylpentanes (2- and 3- Isomers), Pentane, n-Butanol, Ethanol, Isopropanol, n-Propanol, Methanol, Acetaldehyde, Acetone, Methyl Ethyl Ketone, Methyl Isobutyl Ketone, Methyl n-Butyl Ketone, Ethyl Acetate, Diethyl Ether, Methyl Acrylate, Methyl Tertiary Butyl Ether

Compound Name	Units	Reference Comment
Ethanol	mg/dL	Ethyl alcohol (ethanol, drinking alcohol) is a central nervous system depressant and can cause effects such as impaired judgment, reduced alertness and impaired muscular coordination. Ethanol can also be a product of decomposition or degradation of biological samples.





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# New Tests and Test Updates

## Test Changes

Compound Name	Units	Reference Comment
Isopropanol	mg/dL	Three workers exposed to 191 - 200 ppm isopropanol in air had blood isopropanol concentrations <1 mg/dL; acetone levels were 4 - 16 mg/dL during the exposure. After a sponge bath with isopropanol, one adult had a blood isopropanol concentration of 10 mg/dL.
Methanol	mg/dL	Endogenous blood levels of methanol from metabolic and dietary sources are approximately 0.15 mg/dL.  Exposure to 800 ppm methanol for 8 hours produced a maximum average blood methanol concentration of 3.1 mg/dL.
Acetaldehyde	mg/dL	Normal: Up to 0.02 mg/dL.  Acetaldehyde is an unstable compound post-collection. It will both form and degrade under certain conditions. Although extreme precautions have been demonstrated to maintain the integrity of Acetaldehyde, the results will be affected under typical collection and laboratory procedures.
Acetone	mg/dL	Normal: Up to 3 mg/dL. Blood Acetone concentrations are markedly elevated during diabetic or fasting ketoacidosis and may range from 10 - 70 mg/dL.

### 2321FL Hydrocarbon and Oxygenated Volatiles Panel, Fluid

Summary of Changes: Specimen Requirements (Specimen Container) were changed.  
Reference Comment was changed.

Specimen Requirements: 2 mL Fluid  
 Transport Temperature: Refrigerated  
 Specimen Container: Plastic container (preservative-free)  
 Light Protection: Not Required  
 Special Handling: Ensure that container remains tightly sealed.  
 Rejection Criteria: None  
 Scope of Analysis: Headspace GC (84600): Benzene, Ethyl Benzene, Styrene, Toluene, Xylenes  
 Method (CPT Code) (o,m,p), n-Heptane, n-Hexane, Methylpentanes (2- and 3- Isomers), Pentane, n-Butanol, Ethanol, Isopropanol, n-Propanol, Methanol, Acetaldehyde, Acetone, Methyl Ethyl Ketone, Methyl Isobutyl Ketone, Methyl n-Butyl Ketone, Ethyl Acetate, Diethyl Ether, Methyl Acrylate, Methyl Tertiary Butyl Ether



Effective Date:

Monday, November 14, 2011

## New Tests and Test Updates

### Test Changes

Compound Name	Units	Reference Comment
Ethanol	mg/dL	Ethyl alcohol (ethanol, drinking alcohol) is a central nervous system depressant and can cause effects such as impaired judgment, reduced alertness and impaired muscular coordination. Ethanol can also be a product of decomposition or degradation of biological samples.
Isopropanol	mg/dL	Isopropanol is a common industrial and laboratory chemical that is available as a 70% aqueous solution in 'Rubbing Alcohol'. Isopropanol may be consumed for its intoxicating effects. Isopropanol produces effects in man similar to those produced by ethanol, including impairment of cognitive, perceptual and psychomotor capabilities presenting as decrements in alertness, judgment, perception, coordination, response time and sense of care and caution. As a central nervous system depressant, isopropanol has about two times the potency of ethanol; therefore, while the effects produced are similar, impairment caused by isopropyl alcohol will occur at blood concentrations substantially lower than those of ethanol. Isopropyl alcohol is metabolized to acetone, however acetone produced in the body as a result of uncontrolled diabetes can also be converted to isopropanol.
Methanol	mg/dL	Methanol is contained in paints, cleaners, windshield washer fluid, 'canned heat', and other household products. It may be consumed for its intoxicating properties which are similar to ethanol; however it is much more toxic. In addition to central nervous system depression with its associated slowing of reaction time, lethargy and confusion, methanol can cause blindness due to its toxic metabolites.
Acetone	mg/dL	Acetone is a solvent used for chemicals, paints, etc. It is also a product of diabetic- and fasting-induced ketoacidosis as well as a metabolite following isopropanol ingestion. In high concentrations, acetone can have CNS-depressing effects. Symptoms include lethargy, ataxia, headache, nausea and lightheadedness. Stupor and coma appear in severe cases. Acetone produced in the body as a result of uncontrolled diabetes can also be converted to isopropanol.

#### 2321SP Hydrocarbon and Oxygenated Volatiles Panel, Serum/Plasma

Summary of Changes: Reference Comment was changed.  
Methods/CPT Codes were changed [Headspace GC (84600)]



Effective Date:

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## New Tests and Test Updates

### Test Changes

Scope of Analysis: Headspace GC (84600): Ethyl Benzene, Styrene, Toluene, Xylenes (o,m,p), n-Heptane, n-Hexane, Methylpentanes (2- and 3- Isomers), Pentane, n-Butanol, Ethanol, Isopropanol, n-Propanol, Methanol, Acetaldehyde, Acetone, Methyl Ethyl Ketone, Methyl Isobutyl Ketone, Methyl n-Butyl Ketone, Ethyl Acetate, Diethyl Ether, Methyl Acrylate, Methyl Tertiary Butyl Ether

Compound Name	Units	Reference Comment
Ethanol	mg/dL	Ethyl alcohol (ethanol, drinking alcohol) is a central nervous system depressant and can cause effects such as impaired judgment, reduced alertness and impaired muscular coordination. Ethanol can also be a product of decomposition or degradation of biological samples.
Isopropanol	mg/dL	Three workers exposed to 191 - 200 ppm isopropanol in air had blood isopropanol concentrations <1 mg/dL; acetone levels were 4 - 16 mg/dL during the exposure. After a sponge bath with isopropanol, one adult had a blood isopropanol concentration of 10 mg/dL.  The blood to plasma ratio of isopropanol is 0.9 - 1.1.
Methanol	mg/dL	Endogenous blood levels of methanol from metabolic and dietary sources are approximately 0.15 mg/dL.  Exposure to 800 ppm methanol for 8 hours produced a maximum average blood methanol concentration of 3.1 mg/dL.  The blood to plasma ratio of methanol is 0.9.
Acetone	mg/dL	Normal: Up to 3 mg/dL. Blood Acetone concentrations are markedly elevated during diabetic or fasting ketoacidosis and may range from 10 - 70 mg/dL.  The blood to plasma ratio of acetone is 1.0 - 1.1.

### 2321TI Hydrocarbon and Oxygenated Volatiles Panel, Tissue

Summary of Changes: Reference Comment was changed.

Scope of Analysis: Headspace GC (80103, 84600): Benzene, Ethyl Benzene, Styrene, Toluene, Xylenes (o,m,p), n-Heptane, n-Hexane, Methylpentanes (2- and 3- Isomers), Pentane, n-Butanol, Ethanol, Isopropanol, n-Propanol, Methanol, Acetaldehyde, Acetone, Methyl Ethyl Ketone, Methyl Isobutyl Ketone, Methyl n-Butyl Ketone, Ethyl Acetate, Diethyl Ether, Methyl Acrylate, Methyl Tertiary Butyl Ether



Effective Date:

Monday, November 14, 2011

## New Tests and Test Updates

### Test Changes

Compound Name	Units	Reference Comment
Ethanol	mg/100 g	Ethyl alcohol (ethanol, drinking alcohol) is a central nervous system depressant and can cause effects such as impaired judgment, reduced alertness and impaired muscular coordination. Ethanol can also be a product of decomposition or degradation of biological samples.
Isopropanol	mg/100 g	Isopropanol is a common industrial and laboratory chemical that is available as a 70% aqueous solution in 'Rubbing Alcohol'. Isopropanol may be consumed for its intoxicating effects. Isopropanol produces effects in man similar to those produced by ethanol, including impairment of cognitive, perceptual and psychomotor capabilities presenting as decrements in alertness, judgment, perception, coordination, response time and sense of care and caution. As a central nervous system depressant, isopropanol has about two times the potency of ethanol; therefore, while the effects produced are similar, impairment caused by isopropyl alcohol will occur at blood concentrations substantially lower than those of ethanol. Isopropyl alcohol is metabolized to acetone, however acetone produced in the body as a result of uncontrolled diabetes can also be converted to isopropanol.
Methanol	mg/100 g	Methanol is contained in paints, cleaners, windshield washer fluid, 'canned heat', and other household products. It may be consumed for its intoxicating properties which are similar to ethanol; however it is much more toxic. In addition to central nervous system depression with its associated slowing of reaction time, lethargy and confusion, methanol can cause blindness due to its toxic metabolites.
Acetone	mg/100 g	Acetone is a solvent used for chemicals, paints, etc. It is also a product of diabetic- and fasting-induced ketoacidosis as well as a metabolite following isopropanol ingestion. In high concentrations, acetone can have CNS-depressing effects. Symptoms include lethargy, ataxia, headache, nausea and lightheadedness. Stupor and coma appear in severe cases. Acetone produced in the body as a result of uncontrolled diabetes can also be converted to isopropanol.

#### 2321U Hydrocarbon and Oxygenated Volatiles Panel, Urine

Summary of Changes: Reference Comment was changed.  
Methods/CPT Codes were changed [Headspace GC (84600)]



# New Tests and Test Updates

## Test Changes

Scope of Analysis: Headspace GC (84600): Benzene, Ethyl Benzene, Styrene, Toluene, Xylenes (o,m,p), n-Heptane, n-Hexane, Methylpentanes (2- and 3- Isomers), Pentane, n-Butanol, Ethanol, Isopropanol, n-Propanol, Methanol, Acetaldehyde, Acetone, Methyl Ethyl Ketone, Methyl Isobutyl Ketone, Methyl n-Butyl Ketone, Ethyl Acetate, Diethyl Ether, Methyl Acrylate, Methyl Tertiary Butyl Ether

Compound Name	Units	Reference Comment
Ethanol	mg/dL	Ethyl alcohol (ethanol, drinking alcohol) is a central nervous system depressant and can cause effects such as impaired judgment, reduced alertness and impaired muscular coordination. Ethanol can also be a product of decomposition or degradation of biological samples.
Isopropanol	mg/dL	Biological Exposure Index (ACGIH): Following workplace exposure to 2-Propanol: 4 mg/dL measured in a urine specimen collected at end of shift at end of work week.
Methanol	mg/dL	Biological Exposure Index (ACGIH): Following workplace exposure to Methanol: 1.5 mg/dL measured in a urine specimen collected at end of shift.
Acetone	mg/dL	Biological Exposure Index (ACGIH): Following workplace exposure to Acetone: 5 mg/dL measured in a urine specimen collected at end of shift.

### 9332U Hydrocodone Screen, Urine

Summary of Changes: Methods/CPT Codes were changed [EIA (80101)]

Scope of Analysis: EIA (80101): Hydrocodone  
Method (CPT Code)

### 2417B Inhalant Intoxicants Profile, Blood

Summary of Changes: Reference Comment was changed.  
Methods/CPT Codes were changed [Headspace GC (84600)]

Scope of Analysis: SP (82375): Carboxyhemoglobin  
Method (CPT Code) Headspace GC (84600): Benzene, Toluene, Xylene, Acetone, Ethyl Acetate, Methyl Ethyl Ketone, Iso-Amyl Alcohol, n-Amyl Alcohol, Iso-Butyl Alcohol, n-Butyl Alcohol, Cyclopropane, Ethyl Ether, Chloromethane, Dichloromethane, Chloroform, Carbon Tetrachloride, Chloroethane, Dichloroethane, Trichloroethane, Tetrachloroethane, Trichlorofluoromethane, Dichlorodifluoromethane, Trichlorotrifluoroethane, Methanol, Ethanol, Isopropanol



# New Tests and Test Updates

## Test Changes

Compound Name	Units	Reference Comment
Acetone	mg/dL	Normal: Up to 3 mg/dL. Blood Acetone concentrations are markedly elevated during diabetic or fasting ketoacidosis and may range from 10 - 70 mg/dL.
Methanol	mg/dL	Endogenous blood levels of methanol from metabolic and dietary sources are approximately 0.15 mg/dL.  Exposure to 800 ppm methanol for 8 hours produced a maximum average blood methanol concentration of 3.1 mg/dL.
Ethanol	mg/dL	Ethyl alcohol (ethanol, drinking alcohol) is a central nervous system depressant and can cause effects such as impaired judgment, reduced alertness and impaired muscular coordination. Ethanol can also be a product of decomposition or degradation of biological samples.
Isopropanol	mg/dL	Three workers exposed to 191 - 200 ppm isopropanol in air had blood isopropanol concentrations <1 mg/dL; acetone levels were 4 - 16 mg/dL during the exposure. After a sponge bath with isopropanol, one adult had a blood isopropanol concentration of 10 mg/dL.

### 2408B Inhalants Panel, Blood (CSA)

Summary of Changes: Reference Comment was changed.  
Methods/CPT Codes were changed [Headspace GC (84600)]

Scope of Analysis: Headspace GC (84600): n-Butanol, Isobutanol, Sec-Butanol, Tert-Butanol, n-Amyl Alcohol, Iso-Amyl Alcohol, Benzene, Ethyl Benzene, Styrene, Toluene, Xylenes (o,m,p), n-Heptane, n-Hexane, Methylpentanes (2- and 3- Isomers), Pentane, n-Butanol, Ethanol, Isopropanol, n-Propanol, Methanol, Acetaldehyde, Acetone, Methyl Ethyl Ketone, Methyl Isobutyl Ketone, Methyl n-Butyl Ketone, Ethyl Acetate, Diethyl Ether, Methyl Acrylate, Methyl Tertiary Butyl Ether  
GC (84600): Cyclopropane

Compound Name	Units	Reference Comment
Ethanol	mg/dL	Ethyl alcohol (ethanol, drinking alcohol) is a central nervous system depressant and can cause effects such as impaired judgment, reduced alertness and impaired muscular coordination. Ethanol can also be a product of decomposition or degradation of biological samples.



Effective Date:

Monday, November 14, 2011

## New Tests and Test Updates

### Test Changes

Compound Name	Units	Reference Comment
Isopropanol	mg/dL	Three workers exposed to 191 - 200 ppm isopropanol in air had blood isopropanol concentrations <1 mg/dL; acetone levels were 4 - 16 mg/dL during the exposure. After a sponge bath with isopropanol, one adult had a blood isopropanol concentration of 10 mg/dL.
Methanol	mg/dL	Endogenous blood levels of methanol from metabolic and dietary sources are approximately 0.15 mg/dL.  Exposure to 800 ppm methanol for 8 hours produced a maximum average blood methanol concentration of 3.1 mg/dL.
Acetaldehyde	mg/dL	Normal: Up to 0.02 mg/dL.  Acetaldehyde is an unstable compound post-collection. It will both form and degrade under certain conditions. Although extreme precautions have been demonstrated to maintain the integrity of Acetaldehyde, the results will be affected under typical collection and laboratory procedures.
Acetone	mg/dL	Normal: Up to 3 mg/dL. Blood Acetone concentrations are markedly elevated during diabetic or fasting ketoacidosis and may range from 10 - 70 mg/dL.

#### 2415B Inhalants Panel, Blood

Summary of Changes: Reference Comment was changed.  
Methods/CPT Codes were changed [Headspace GC (84600)]

Scope of Analysis: Headspace GC (84600): Benzene, Toluene, Xylene, Acetone, Ethyl Acetate, Methyl Method (CPT Code) Ethyl Ketone, Iso-Amyl Alcohol, n-Amyl Alcohol, Iso-Butyl Alcohol, n-Butyl Alcohol, Cyclopropane, Ethyl Ether, Chloromethane, Dichloromethane, Chloroform, Carbon Tetrachloride, Chloroethane, Dichloroethane, Trichloroethane, Tetrachloroethane, Trichlorofluoromethane, Dichlorodifluoromethane, Trichlorotrifluoroethane, Methanol, Ethanol, Isopropanol

Compound Name	Units	Reference Comment
Acetone	mg/dL	Normal: Up to 3 mg/dL. Blood Acetone concentrations are markedly elevated during diabetic or fasting ketoacidosis and may range from 10 - 70 mg/dL.





Effective Date:

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# New Tests and Test Updates

## Test Changes

Compound Name	Units	Reference Comment
Methanol	mg/dL	Endogenous blood levels of methanol from metabolic and dietary sources are approximately 0.15 mg/dL.  Exposure to 800 ppm methanol for 8 hours produced a maximum average blood methanol concentration of 3.1 mg/dL.
Ethanol	mg/dL	Ethyl alcohol (ethanol, drinking alcohol) is a central nervous system depressant and can cause effects such as impaired judgment, reduced alertness and impaired muscular coordination. Ethanol can also be a product of decomposition or degradation of biological samples.
Isopropanol	mg/dL	Three workers exposed to 191 - 200 ppm isopropanol in air had blood isopropanol concentrations <1 mg/dL; acetone levels were 4 - 16 mg/dL during the exposure. After a sponge bath with isopropanol, one adult had a blood isopropanol concentration of 10 mg/dL.

### 2415SP Inhalants Panel, Serum/Plasma

Summary of Changes: Reference Comment was changed.  
Methods/CPT Codes were changed [Headspace GC (84600)]

Scope of Analysis: Headspace GC (84600): Toluene, Xylene, Acetone, Ethyl Acetate, Methyl Ethyl Ketone, Iso-Amyl Alcohol, n-Amyl Alcohol, Iso-Butyl Alcohol, n-Butyl Alcohol, Cyclopropane, Ethyl Ether, Chloromethane, Dichloromethane, Chloroform, Carbon Tetrachloride, Chloroethane, Dichloroethane, Trichloroethane, Tetrachloroethane, Trichlorofluoromethane, Dichlorodifluoromethane, Trichlorotrifluoroethane, Methanol, Ethanol, Isopropanol

Compound Name	Units	Reference Comment
Acetone	mg/dL	Normal: Up to 3 mg/dL. Blood Acetone concentrations are markedly elevated during diabetic or fasting ketoacidosis and may range from 10 - 70 mg/dL.  The blood to plasma ratio of acetone is 1.0 - 1.1.
Methanol	mg/dL	Endogenous blood levels of methanol from metabolic and dietary sources are approximately 0.15 mg/dL.  Exposure to 800 ppm methanol for 8 hours produced a maximum average blood methanol concentration of 3.1 mg/dL.  The blood to plasma ratio of methanol is 0.9.





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## New Tests and Test Updates

### Test Changes

Compound Name	Units	Reference Comment
Ethanol	mg/dL	Ethyl alcohol (ethanol, drinking alcohol) is a central nervous system depressant and can cause effects such as impaired judgment, reduced alertness and impaired muscular coordination. Ethanol can also be a product of decomposition or degradation of biological samples.
Isopropanol	mg/dL	Three workers exposed to 191 - 200 ppm isopropanol in air had blood isopropanol concentrations <1 mg/dL; acetone levels were 4 - 16 mg/dL during the exposure. After a sponge bath with isopropanol, one adult had a blood isopropanol concentration of 10 mg/dL.  The blood to plasma ratio of isopropanol is 0.9 - 1.1.

#### 2413B Inhalants Panel, Solvents and Gases, Blood

Summary of Changes: Reference Comment was changed.  
Methods/CPT Codes were changed [Headspace GC (84600)]

Scope of Analysis: Headspace GC (84600): Acetone, n-Butyl Alcohol, Amyl Alcohol, Iso-Butyl Alcohol, Iso-Amyl Alcohol, Benzene, Ethanol, Ethyl Acetate, Ethyl Ether, Heptane, Hexane, Isopropanol, Methanol, Methyl Ethyl Ketone, Pentane, Styrene, Toluene, o-Xylene, m-Xylene, p-Xylene  
GC (84600): Methane, Ethane, Propane, Isobutane, n-Butane

Compound Name	Units	Reference Comment
Acetone	mg/dL	Normal: Up to 3 mg/dL. Blood Acetone concentrations are markedly elevated during diabetic or fasting ketoacidosis and may range from 10 - 70 mg/dL.
Ethanol	mg/dL	Ethyl alcohol (ethanol, drinking alcohol) is a central nervous system depressant and can cause effects such as impaired judgment, reduced alertness and impaired muscular coordination. Ethanol can also be a product of decomposition or degradation of biological samples.
Isopropanol	mg/dL	Three workers exposed to 191 - 200 ppm isopropanol in air had blood isopropanol concentrations <1 mg/dL; acetone levels were 4 - 16 mg/dL during the exposure. After a sponge bath with isopropanol, one adult had a blood isopropanol concentration of 10 mg/dL.



# New Tests and Test Updates

## Test Changes

Compound Name	Units	Reference Comment
Methanol	mg/dL	Endogenous blood levels of methanol from metabolic and dietary sources are approximately 0.15 mg/dL.  Exposure to 800 ppm methanol for 8 hours produced a maximum average blood methanol concentration of 3.1 mg/dL.

### 2411B Inhalants Panel, Solvents, Blood

Summary of Changes: Reference Comment was changed.  
Methods/CPT Codes were changed [Headspace GC (84600)]

Scope of Analysis: Headspace GC (84600): Acetone, n-Butyl Alcohol, Amyl Alcohol, Iso-Butyl Alcohol, Iso-Amyl Alcohol, Benzene, Ethanol, Ethyl Acetate, Ethyl Ether, Heptane, Hexane, Isopropanol, Methanol, Methyl Ethyl Ketone, Pentane, Styrene, Toluene, o-Xylene, m-Xylene, p-Xylene

Compound Name	Units	Reference Comment
Acetone	mg/dL	Normal: Up to 3 mg/dL. Blood Acetone concentrations are markedly elevated during diabetic or fasting ketoacidosis and may range from 10 - 70 mg/dL.
Ethanol	mg/dL	Ethyl alcohol (ethanol, drinking alcohol) is a central nervous system depressant and can cause effects such as impaired judgment, reduced alertness and impaired muscular coordination. Ethanol can also be a product of decomposition or degradation of biological samples.
Isopropanol	mg/dL	Three workers exposed to 191 - 200 ppm isopropanol in air had blood isopropanol concentrations <1 mg/dL; acetone levels were 4 - 16 mg/dL during the exposure. After a sponge bath with isopropanol, one adult had a blood isopropanol concentration of 10 mg/dL.
Methanol	mg/dL	Endogenous blood levels of methanol from metabolic and dietary sources are approximately 0.15 mg/dL.  Exposure to 800 ppm methanol for 8 hours produced a maximum average blood methanol concentration of 3.1 mg/dL.

### 2411SP Inhalants Panel, Solvents, Serum/Plasma

Summary of Changes: Reference Comment was changed.  
Methods/CPT Codes were changed [Headspace GC (84600)]



Effective Date:

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## New Tests and Test Updates

### Test Changes

Scope of Analysis: Headspace GC (84600): Acetone, n-Butyl Alcohol, Amyl Alcohol, Iso-Butyl Alcohol, Iso-Amyl Alcohol, Ethanol, Ethyl Acetate, Ethyl Ether, Heptane, Hexane, Isopropanol, Methanol, Methyl Ethyl Ketone, Pentane, Styrene, Toluene, o-Xylene, m-Xylene, p-Xylene

Compound Name	Units	Reference Comment
Acetone	mg/dL	<p>Normal: Up to 3 mg/dL.</p> <p>Blood Acetone concentrations are markedly elevated during diabetic or fasting ketoacidosis and may range from 10 - 70 mg/dL.</p> <p>The blood to plasma ratio of acetone is 1.0 - 1.1.</p>
Ethanol	mg/dL	<p>Ethyl alcohol (ethanol, drinking alcohol) is a central nervous system depressant and can cause effects such as impaired judgment, reduced alertness and impaired muscular coordination. Ethanol can also be a product of decomposition or degradation of biological samples.</p>
Isopropanol	mg/dL	<p>Three workers exposed to 191 - 200 ppm isopropanol in air had blood isopropanol concentrations &lt;1 mg/dL; acetone levels were 4 - 16 mg/dL during the exposure. After a sponge bath with isopropanol, one adult had a blood isopropanol concentration of 10 mg/dL.</p> <p>The blood to plasma ratio of isopropanol is 0.9 - 1.1.</p>
Methanol	mg/dL	<p>Endogenous blood levels of methanol from metabolic and dietary sources are approximately 0.15 mg/dL.</p> <p>Exposure to 800 ppm methanol for 8 hours produced a maximum average blood methanol concentration of 3.1 mg/dL.</p> <p>The blood to plasma ratio of methanol is 0.9.</p>

#### 2411TI Inhalants Panel, Solvents, Tissue

Summary of Changes: Specimen Requirements (Specimen Container) were changed.  
Reference Comment was changed.

Specimen Requirements: 10 g Tissue  
 Transport Temperature: Refrigerated  
 Specimen Container: Plastic container (preservative-free)  
 Light Protection: Not Required  
 Special Handling: None  
 Rejection Criteria: None



# New Tests and Test Updates

## Test Changes

Scope of Analysis: Headspace GC (80103, 84600): Acetone, n-Butyl Alcohol, Amyl Alcohol, Iso-Butyl Alcohol, Iso-Amyl Alcohol, Benzene, Ethanol, Ethyl Acetate, Ethyl Ether, Heptane, Hexane, Isopropanol, Methanol, Methyl Ethyl Ketone, Pentane, Styrene, Toluene, o-Xylene, m-Xylene, p-Xylene

Compound Name	Units	Reference Comment
Acetone	mg/100 g	Acetone is a solvent used for chemicals, paints, etc. It is also a product of diabetic- and fasting-induced ketoacidosis as well as a metabolite following isopropanol ingestion. In high concentrations, acetone can have CNS-depressing effects. Symptoms include lethargy, ataxia, headache, nausea and lightheadedness. Stupor and coma appear in severe cases. Acetone produced in the body as a result of uncontrolled diabetes can also be converted to isopropanol.
Ethanol	mg/100 g	Ethyl alcohol (ethanol, drinking alcohol) is a central nervous system depressant and can cause effects such as impaired judgment, reduced alertness and impaired muscular coordination. Ethanol can also be a product of decomposition or degradation of biological samples.
Isopropanol	mg/100 g	Isopropanol is a common industrial and laboratory chemical that is available as a 70% aqueous solution in 'Rubbing Alcohol'. Isopropanol may be consumed for its intoxicating effects. Isopropanol produces effects in man similar to those produced by ethanol, including impairment of cognitive, perceptual and psychomotor capabilities presenting as decrements in alertness, judgment, perception, coordination, response time and sense of care and caution. As a central nervous system depressant, isopropanol has about two times the potency of ethanol; therefore, while the effects produced are similar, impairment caused by isopropyl alcohol will occur at blood concentrations substantially lower than those of ethanol. Isopropyl alcohol is metabolized to acetone, however acetone produced in the body as a result of uncontrolled diabetes can also be converted to isopropanol.
Methanol	mg/100 g	Methanol is contained in paints, cleaners, windshield washer fluid, 'canned heat', and other household products. It may be consumed for its intoxicating properties which are similar to ethanol; however it is much more toxic. In addition to central nervous system depression with its associated slowing of reaction time, lethargy and confusion, methanol can cause blindness due to its toxic metabolites.

2411U Inhalants Panel, Solvents, Urine



Effective Date:

Monday, November 14, 2011

# New Tests and Test Updates

## Test Changes

Summary of Changes: Reference Comment was changed.  
Methods/CPT Codes were changed [Headspace GC (84600)]

Scope of Analysis: Headspace GC (84600): Acetone, Ethanol, Isopropanol, Methanol, Methyl Ethyl  
Method (CPT Code) Ketone, Methyl Isobutyl Ketone

Compound Name	Units	Reference Comment
Acetone	mg/dL	Biological Exposure Index (ACGIH): Following workplace exposure to Acetone: 5 mg/dL measured in a urine specimen collected at end of shift.
Ethanol	mg/dL	Ethyl alcohol (ethanol, drinking alcohol) is a central nervous system depressant and can cause effects such as impaired judgment, reduced alertness and impaired muscular coordination. Ethanol can also be a product of decomposition or degradation of biological samples.
Isopropanol	mg/dL	Biological Exposure Index (ACGIH): Following workplace exposure to 2-Propanol: 4 mg/dL measured in a urine specimen collected at end of shift at end of work week.
Methanol	mg/dL	Biological Exposure Index (ACGIH): Following workplace exposure to Methanol: 1.5 mg/dL measured in a urine specimen collected at end of shift.

### 2409U Inhalants Panel, Urine (CSA)

Summary of Changes: Reference Comment was changed.  
Methods/CPT Codes were changed [Headspace GC (84600)]

Scope of Analysis: Headspace GC (84600): n-Butanol, Isobutanol, Sec-Butanol, Tert-Butanol, n-Amyl  
Method (CPT Code) Alcohol, Iso-Amyl Alcohol, Benzene, Ethyl Benzene, Styrene, Toluene, Xylenes  
(o,m,p), n-Heptane, n-Hexane, Methylpentanes (2- and 3- Isomers), Pentane,  
Ethanol, Isopropanol, n-Propanol, Methanol, Acetaldehyde, Acetone, Methyl Ethyl  
Ketone, Methyl Isobutyl Ketone, Methyl n-Butyl Ketone, Ethyl Acetate, Diethyl Ether,  
Methyl Acrylate, Methyl Tertiary Butyl Ether  
IC (82492): Nitrite, Nitrate  
GC (84600): Phenol - Total, o-Cresol  
IC (83921): Hippuric Acid, Methylhippuric Acid, Mandelic Acid



Effective Date:

Monday, November 14, 2011

## New Tests and Test Updates

### Test Changes

Compound Name	Units	Reference Comment
Ethanol	mg/dL	Ethyl alcohol (ethanol, drinking alcohol) is a central nervous system depressant and can cause effects such as impaired judgment, reduced alertness and impaired muscular coordination. Ethanol can also be a product of decomposition or degradation of biological samples.
Isopropanol	mg/dL	Biological Exposure Index (ACGIH): Following workplace exposure to 2-Propanol: 4 mg/dL measured in a urine specimen collected at end of shift at end of work week.
Methanol	mg/dL	Biological Exposure Index (ACGIH): Following workplace exposure to Methanol: 1.5 mg/dL measured in a urine specimen collected at end of shift.
Acetone	mg/dL	Biological Exposure Index (ACGIH): Following workplace exposure to Acetone: 5 mg/dL measured in a urine specimen collected at end of shift.

#### 2426U Inhalants and Metabolites Panel, Urine

Summary of Changes: Reference Comment was changed.  
Methods/CPT Codes were changed [Headspace GC (84600)]

Scope of Analysis: GC (84600): Phenol - Total, o-Cresol  
Method (CPT Code) Headspace GC (84600): Acetone, Ethanol, Isopropanol, Methanol, Methyl Ethyl Ketone, Methyl Isobutyl Ketone  
IC (83921): Hippuric Acid, Methylhippuric Acid, Mandelic Acid, Phenylglyoxylic Acid  
SP (83921): Trichloro-organic Metabolites

Compound Name	Units	Reference Comment
Acetone	mg/dL	Biological Exposure Index (ACGIH): Following workplace exposure to Acetone: 5 mg/dL measured in a urine specimen collected at end of shift.
Ethanol	mg/dL	Ethyl alcohol (ethanol, drinking alcohol) is a central nervous system depressant and can cause effects such as impaired judgment, reduced alertness and impaired muscular coordination. Ethanol can also be a product of decomposition or degradation of biological samples.



# New Tests and Test Updates

## Test Changes

Compound Name	Units	Reference Comment
Isopropanol	mg/dL	Biological Exposure Index (ACGIH): Following workplace exposure to 2-Propanol: 4 mg/dL measured in a urine specimen collected at end of shift at end of work week.
Methanol	mg/dL	Biological Exposure Index (ACGIH): Following workplace exposure to Methanol: 1.5 mg/dL measured in a urine specimen collected at end of shift.

### 2445B Isopropanol and Acetone, Blood

Summary of Changes: Test Name was changed.  
Specimen Requirements (Specimen Container) were changed.  
Specimen Requirements (Special Handling) were changed.  
Stability was changed.  
Reference Comment was changed.

Specimen Requirements: 1 mL Blood  
Transport Temperature: Refrigerated  
Specimen Container: Gray top tube (Sodium Fluoride / Potassium Oxalate)  
Light Protection: Not Required  
Special Handling: Collect sample using alcohol free skin preparation.  
Rejection Criteria: None  
Stability: Room Temperature: 3 month(s)  
Refrigerated: 3 month(s)  
Frozen (-20 °C): 8 month(s)  
Scope of Analysis: Headspace GC (82055): Isopropanol, Acetone  
Method (CPT Code)

Compound Name	Units	Reference Comment
Isopropanol	mg/dL	Three workers exposed to 191 - 200 ppm isopropanol in air had blood isopropanol concentrations <1 mg/dL; acetone levels were 4 - 16 mg/dL during the exposure. After a sponge bath with isopropanol, one adult had a blood isopropanol concentration of 10 mg/dL.
Acetone	mg/dL	Normal: Up to 3 mg/dL. Blood Acetone concentrations are markedly elevated during diabetic or fasting ketoacidosis and may range from 10 - 70 mg/dL.

### 2445SP Isopropanol and Acetone, Serum/Plasma



Effective Date:

Monday, November 14, 2011

# New Tests and Test Updates

## Test Changes

Summary of Changes: Test Name was changed.  
 Specimen Requirements (Specimen Container) were changed.  
 Specimen Requirements (Special Handling) were changed.  
 Stability was changed.  
 Reference Comment was changed.

Specimen Requirements: 1 mL Serum or Plasma  
 Transport Temperature: Refrigerated  
 Specimen Container: Plastic container (preservative-free)  
 Light Protection: Not Required  
 Special Handling: Collect sample using alcohol free skin preparation. Promptly centrifuge and separate Serum or Plasma into an plastic screw capped vial using approved guidelines.  
 Rejection Criteria: Polymer gel separation tube (SST or PST).  
 Stability: Room Temperature: 3 month(s)  
 Refrigerated: 3 month(s)  
 Frozen (-20 °C): 8 month(s)  
 Scope of Analysis: Headspace GC (82055): Isopropanol, Acetone  
 Method (CPT Code)

Compound Name	Units	Reference Comment
Isopropanol	mg/dL	Three workers exposed to 191 - 200 ppm isopropanol in air had blood isopropanol concentrations <1 mg/dL; acetone levels were 4 - 16 mg/dL during the exposure. After a sponge bath with isopropanol, one adult had a blood isopropanol concentration of 10 mg/dL.  The blood to plasma ratio of isopropanol is 0.9 - 1.1.
Acetone	mg/dL	Normal: Up to 3 mg/dL. Blood Acetone concentrations are markedly elevated during diabetic or fasting ketoacidosis and may range from 10 - 70 mg/dL.  The blood to plasma ratio of acetone is 1.0 - 1.1.

### 2445U Isopropanol and Acetone, Urine

Summary of Changes: Test Name was changed.  
 Specimen Requirements (Specimen Container) were changed.  
 Specimen Requirements (Special Handling) were changed.  
 Stability was changed.  
 Reference Comment was changed.





Effective Date:

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# New Tests and Test Updates

## Test Changes

Specimen Requirements: 1 mL Urine  
 Transport Temperature: Refrigerated  
 Specimen Container: Plastic container (preservative-free)  
 Light Protection: Not Required  
 Special Handling: Collect sample at end of shift.  
 Rejection Criteria: None  
 Stability: Room Temperature: 7 day(s)  
 Refrigerated: 7 day(s)  
 Frozen (-20 °C): 8 month(s)  
 Scope of Analysis: Headspace GC (82055): Isopropanol, Acetone  
 Method (CPT Code)

Compound Name	Units	Reference Comment
Isopropanol	mg/dL	Biological Exposure Index (ACGIH): Following workplace exposure to 2-Propanol: 4 mg/dL measured in a urine specimen collected at end of shift at end of work week.
Acetone	mg/dL	Biological Exposure Index (ACGIH): Following workplace exposure to Acetone: 5 mg/dL measured in a urine specimen collected at end of shift.

### 2480SP Ketone Bodies Panel, Serum/Plasma

Summary of Changes: Specimen Requirements (Specimen Container) were changed.  
 Reference Comment was changed.

Specimen Requirements: 4 mL Serum or Plasma  
 Transport Temperature: Frozen  
 Specimen Container: Plastic container (preservative-free)  
 Light Protection: Not Required  
 Special Handling: Promptly centrifuge and separate Serum or Plasma into a plastic screw capped vial  
 using approved guidelines AND freeze (preferably at -70 C). Ship overnight for  
 arrival at NMS Labs on Monday through Thursday.  
 Rejection Criteria: Received Room Temperature. Received Refrigerated. Polymer gel separation tube  
 (SST or PST).  
 Scope of Analysis: GC (82010): Acetoacetate  
 Method (CPT Code) Headspace GC (82010): Acetone  
 EZA (82010): Betahydroxybutyric Acid



# New Tests and Test Updates

## Test Changes

Compound Name	Units	Reference Comment
Acetone	mg/dL	Normal: Up to 3 mg/dL. Blood Acetone concentrations are markedly elevated during diabetic or fasting ketoacidosis and may range from 10 - 70 mg/dL.

The blood to plasma ratio of acetone is 1.0 - 1.1.

### 2481B Ketone Panel, Blood

Summary of Changes: Specimen Requirements (Transport Temperature) were changed.  
 Specimen Requirements (Specimen Container) were changed.  
 Specimen Requirements (Special Handling) were changed.  
 Stability was changed.  
 Reference Comment was changed.  
 Methods/CPT Codes were changed [Headspace GC (82492)]

Specimen Requirements: 2 mL Blood  
 Transport Temperature: Frozen  
 Specimen Container: Gray top tube (Sodium Fluoride / Potassium Oxalate)  
 Light Protection: Not Required  
 Special Handling: Collect sample using alcohol free skin preparation.  
 Rejection Criteria: Received Room Temperature. Received Refrigerated.  
 Stability: Room Temperature: 4 day(s)  
 Refrigerated: 5 day(s)  
 Frozen (-20 °C): 14 day(s)  
 Scope of Analysis: Headspace GC (82492): Acetone, Methyl Ethyl Ketone, Methyl n-Propyl Ketone,  
 Method (CPT Code) Methyl n-Butyl Ketone, Methyl n-Amyl Ketone, Methyl Isobutyl Ketone, Methyl Isoamyl Ketone, Diisobutyl Ketone, Cyclohexanone, Mesityl Oxide

Compound Name	Units	Reference Comment
Acetone	mg/dL	Normal: Up to 3 mg/dL. Blood Acetone concentrations are markedly elevated during diabetic or fasting ketoacidosis and may range from 10 - 70 mg/dL.

### 2481FL Ketone Panel, Fluid

Summary of Changes: Specimen Requirements (Specimen Container) were changed.  
 Reference Comment was changed.



Effective Date:

Monday, November 14, 2011

# New Tests and Test Updates

## Test Changes

Specimen Requirements: 2 mL Fluid  
 Transport Temperature: Refrigerated  
 Specimen Container: Plastic container (preservative-free)  
 Light Protection: Not Required  
 Special Handling: None  
 Rejection Criteria: None  
 Scope of Analysis: Headspace GC (82492): Acetone, Methyl Ethyl Ketone, Methyl n-Propyl Ketone,  
 Method (CPT Code) Methyl n-Butyl Ketone, Methyl n-Amyl Ketone, Methyl Isobutyl Ketone, Methyl Isoamyl Ketone, Diisobutyl Ketone, Cyclohexanone, Mesityl Oxide

Compound Name	Units	Reference Comment
Acetone	mg/dL	Acetone is a solvent used for chemicals, paints, etc. It is also a product of diabetic- and fasting-induced ketoacidosis as well as a metabolite following isopropanol ingestion. In high concentrations, acetone can have CNS-depressing effects. Symptoms include lethargy, ataxia, headache, nausea and lightheadedness. Stupor and coma appear in severe cases. Acetone produced in the body as a result of uncontrolled diabetes can also be converted to isopropanol.

**2481SP Ketone Panel, Serum/Plasma**

Summary of Changes: Specimen Requirements (Transport Temperature) were changed.  
 Specimen Requirements (Specimen Container) were changed.  
 Specimen Requirements (Special Handling) were changed.  
 Stability was changed.  
 Reference Comment was changed.  
 Methods/CPT Codes were changed [Headspace GC (82010)]

Specimen Requirements: 2 mL Serum or Plasma  
 Transport Temperature: Frozen  
 Specimen Container: Plastic container (preservative-free)  
 Light Protection: Not Required  
 Special Handling: Collect sample using alcohol free skin preparation. Promptly centrifuge and separate Serum or Plasma into an plastic screw capped vial using approved guidelines.  
 Rejection Criteria: Received Room Temperature. Received Refrigerated. Polymer gel separation tube (SST or PST).  
 Stability: Room Temperature: 4 day(s)  
 Refrigerated: 5 day(s)  
 Frozen (-20 °C): 14 day(s)  
 Scope of Analysis: Headspace GC (82010): Acetone, Methyl Ethyl Ketone, Methyl n-Propyl Ketone,  
 Method (CPT Code) Methyl n-Butyl Ketone, Methyl n-Amyl Ketone, Methyl Isobutyl Ketone, Methyl Isoamyl Ketone, Diisobutyl Ketone, Cyclohexanone, Mesityl Oxide



# New Tests and Test Updates

## Test Changes

Compound Name	Units	Reference Comment
Acetone	mg/dL	Normal: Up to 3 mg/dL. Blood Acetone concentrations are markedly elevated during diabetic or fasting ketoacidosis and may range from 10 - 70 mg/dL.

The blood to plasma ratio of acetone is 1.0 - 1.1.

### 2481U Ketone Panel, Urine

Summary of Changes: Reference Comment was changed.  
Methods/CPT Codes were changed [Headspace GC (82492)]

Scope of Analysis: Headspace GC (82492): Acetone, Methyl Ethyl Ketone, Methyl n-Propyl Ketone,  
Method (CPT Code) Methyl n-Butyl Ketone, Methyl n-Amyl Ketone, Methyl Isobutyl Ketone, Methyl Isoamyl Ketone, Diisobutyl Ketone, Cyclohexanone, Mesityl Oxide

Compound Name	Units	Reference Comment
Acetone	mg/dL	Biological Exposure Index (ACGIH): Following workplace exposure to Acetone: 5 mg/dL measured in a urine specimen collected at end of shift.

### 2836U Methanol Exposure Profile, Urine

Summary of Changes: Specimen Requirements (Specimen Container) were changed.  
Stability was changed.  
Reference Comment was changed.

Specimen Requirements: 5 mL Urine  
 Transport Temperature: Refrigerated  
 Specimen Container: Plastic container (preservative-free)  
 Light Protection: Not Required  
 Special Handling: None  
 Rejection Criteria: None  
 Stability: Room Temperature: 7 day(s)  
 Refrigerated: 7 day(s)  
 Frozen (-20 °C): 10 month(s)  
 Scope of Analysis: Colorimetry (82570): Creatinine  
 Method (CPT Code) GC (83921): Formic Acid, Formic Acid (Creatinine corrected)  
 Headspace GC (84600): Methanol



Effective Date:

Monday, November 14, 2011

# New Tests and Test Updates

## Test Changes

Compound Name	Units	Reference Comment
Methanol	mg/dL	Biological Exposure Index (ACGIH): Following workplace exposure to Methanol: 1.5 mg/dL measured in a urine specimen collected at end of shift.

### 2837SP Methanol Poisoning Profile, Serum/Plasma

Summary of Changes: Reference Comment was changed.  
Methods/CPT Codes were changed [Headspace GC (82000)]

Scope of Analysis: Headspace GC (82000): Acetaldehyde, Ethanol, Methanol, Isopropanol, Acetone  
Method (CPT Code) IC (83921): Formic Acid

Compound Name	Units	Reference Comment
Acetaldehyde	mg/dL	Normal: Up to 0.02 mg/dL in blood.

Acetaldehyde is an unstable compound post-collection and will both form and degrade under certain sample handling conditions. Even when extreme precautions are taken to maintain the integrity of Acetaldehyde during sample collection, transport and analysis, the results will be affected under typical collection and laboratory procedures.

The blood to serum ratio for acetaldehyde is unknown.

Ethanol	mg/dL	Ethyl alcohol (ethanol, drinking alcohol) is a central nervous system depressant and can cause effects such as impaired judgment, reduced alertness and impaired muscular coordination. Ethanol can also be a product of decomposition or degradation of biological samples.
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Methanol	mg/dL	Endogenous blood levels of methanol from metabolic and dietary sources are approximately 0.15 mg/dL.
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Exposure to 800 ppm methanol for 8 hours produced a maximum average blood methanol concentration of 3.1 mg/dL.

The blood to plasma ratio of methanol is 0.9.



# New Tests and Test Updates

## Test Changes

Compound Name	Units	Reference Comment
Isopropanol	mg/dL	<p>Three workers exposed to 191 - 200 ppm isopropanol in air had blood isopropanol concentrations &lt;1 mg/dL; acetone levels were 4 - 16 mg/dL during the exposure. After a sponge bath with isopropanol, one adult had a blood isopropanol concentration of 10 mg/dL.</p> <p>The blood to plasma ratio of isopropanol is 0.9 - 1.1.</p>
Acetone	mg/dL	<p>Normal: Up to 3 mg/dL. Blood Acetone concentrations are markedly elevated during diabetic or fasting ketoacidosis and may range from 10 - 70 mg/dL.</p> <p>The blood to plasma ratio of acetone is 1.0 - 1.1.</p>

### 2834B Methanol, Blood

Summary of Changes: Specimen Requirements (Transport Temperature) were changed.  
 Specimen Requirements (Specimen Container) were changed.  
 Specimen Requirements (Special Handling) were changed.  
 Stability was changed.  
 Reference Comment was changed.

Specimen Requirements: 2 mL Blood  
 Transport Temperature: Refrigerated  
 Specimen Container: Gray top tube (Sodium Fluoride / Potassium Oxalate)  
 Light Protection: Not Required  
 Special Handling: Collect sample using alcohol free skin preparation.  
 Rejection Criteria: None  
 Stability: Room Temperature: 1 month(s)  
 Refrigerated: 3 month(s)  
 Frozen (-20 °C): 12 month(s)  
 Scope of Analysis: GC/MS (84600): Methanol  
 Method (CPT Code)

Compound Name	Units	Reference Comment
Methanol	mg/dL	<p>Endogenous blood levels of methanol from metabolic and dietary sources are approximately 0.15 mg/dL.</p> <p>Exposure to 800 ppm methanol for 8 hours produced a maximum average blood methanol concentration of 3.1 mg/dL.</p>

### 2835B Methanol, Blood



# New Tests and Test Updates

## Test Changes

Summary of Changes: Specimen Requirements (Transport Temperature) were changed.  
 Specimen Requirements (Specimen Container) were changed.  
 Stability was changed.  
 Reference Comment was changed.

Specimen Requirements: 1 mL Blood  
 Transport Temperature: Refrigerated  
 Specimen Container: Gray top tube (Sodium Fluoride / Potassium Oxalate)  
 Light Protection: Not Required  
 Special Handling: Collect sample using alcohol free skin preparation.  
 Rejection Criteria: None  
 Stability: Room Temperature: 1 month(s)  
 Refrigerated: 3 month(s)  
 Frozen (-20 °C): 12 month(s)  
 Scope of Analysis: Headspace GC (84600): Methanol  
 Method (CPT Code)

Compound Name	Units	Reference Comment
Methanol	mg/dL	Endogenous blood levels of methanol from metabolic and dietary sources are approximately 0.15 mg/dL.  Exposure to 800 ppm methanol for 8 hours produced a maximum average blood methanol concentration of 3.1 mg/dL.

### 2835FL Methanol, Fluid

Summary of Changes: Specimen Requirements (Specimen Container) were changed.  
 Reference Comment was changed.

Specimen Requirements: 1 mL Fluid  
 Transport Temperature: Refrigerated  
 Specimen Container: Plastic container (preservative-free)  
 Light Protection: Not Required  
 Special Handling: None  
 Rejection Criteria: None  
 Scope of Analysis: Headspace GC (84600): Methanol  
 Method (CPT Code)



# New Tests and Test Updates

## Test Changes

Compound Name	Units	Reference Comment
Methanol	mg/dL	Methanol is contained in paints, cleaners, windshield washer fluid, 'canned heat', and other household products. It may be consumed for its intoxicating properties which are similar to ethanol; however it is much more toxic. In addition to central nervous system depression with its associated slowing of reaction time, lethargy and confusion, methanol can cause blindness due to its toxic metabolites.

### 2834SP Methanol, Serum/Plasma

Summary of Changes: Specimen Requirements (Transport Temperature) were changed.  
 Specimen Requirements (Specimen Container) were changed.  
 Specimen Requirements (Special Handling) were changed.  
 Stability was changed.  
 Reference Comment was changed.

Specimen Requirements: 2 mL Serum or Plasma  
 Transport Temperature: Refrigerated  
 Specimen Container: Plastic container (preservative-free)  
 Light Protection: Not Required  
 Special Handling: Collect sample using alcohol free skin preparation. Promptly centrifuge and separate Serum or Plasma into an plastic screw capped vial using approved guidelines.  
 Rejection Criteria: Polymer gel separation tube (SST or PST).  
 Stability: Room Temperature: 3 month(s)  
 Refrigerated: 3 month(s)  
 Frozen (-20 °C): 12 month(s)  
 Scope of Analysis: GC/MS (84600): Methanol  
 Method (CPT Code)

Compound Name	Units	Reference Comment
Methanol	mg/dL	Endogenous blood levels of methanol from metabolic and dietary sources are approximately 0.15 mg/dL.  Exposure to 800 ppm methanol for 8 hours produced a maximum average blood methanol concentration of 3.1 mg/dL.  The blood to plasma ratio of methanol is 0.9.

### 2835SP Methanol, Serum/Plasma





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# New Tests and Test Updates

## Test Changes

Summary of Changes: Specimen Requirements (Transport Temperature) were changed.  
 Specimen Requirements (Specimen Container) were changed.  
 Specimen Requirements (Special Handling) were changed.  
 Stability was changed.  
 Reference Comment was changed.

Specimen Requirements: 1 mL Serum or Plasma  
 Transport Temperature: Refrigerated  
 Specimen Container: Plastic container (preservative-free)  
 Light Protection: Not Required  
 Special Handling: Collect sample using alcohol free skin preparation. Promptly centrifuge and separate Serum or Plasma into an plastic screw capped vial using approved guidelines.  
 Rejection Criteria: Polymer gel separation tube (SST or PST).  
 Stability: Room Temperature: 3 month(s)  
 Refrigerated: 3 month(s)  
 Frozen (-20 °C): 12 month(s)  
 Scope of Analysis: Headspace GC (84600): Methanol  
 Method (CPT Code)

Compound Name	Units	Reference Comment
Methanol	mg/dL	Endogenous blood levels of methanol from metabolic and dietary sources are approximately 0.15 mg/dL.  Exposure to 800 ppm methanol for 8 hours produced a maximum average blood methanol concentration of 3.1 mg/dL.  The blood to plasma ratio of methanol is 0.9.

**2834U Methanol, Urine**

Summary of Changes: Specimen Requirements (Specimen Container) were changed.  
 Specimen Requirements (Special Handling) were changed.  
 Stability was changed.  
 Reference Comment was changed.

Specimen Requirements: 2 mL Urine  
 Transport Temperature: Refrigerated  
 Specimen Container: Plastic container (preservative-free)  
 Light Protection: Not Required  
 Special Handling: Collect sample at end of shift.  
 Rejection Criteria: None  
 Stability: Room Temperature: 3 month(s)  
 Refrigerated: 3 month(s)  
 Frozen (-20 °C): 12 month(s)



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## New Tests and Test Updates

### Test Changes

Scope of Analysis: GC/MS (84600): Methanol  
Method (CPT Code)

Compound Name	Units	Reference Comment
Methanol	mg/dL	Biological Exposure Index (ACGIH): Following workplace exposure to Methanol: 1.5 mg/dL measured in a urine specimen collected at end of shift.

#### 2835U Methanol, Urine

Summary of Changes: Specimen Requirements (Specimen Container) were changed.  
Reference Comment was changed.  
Methods/CPT Codes were changed [Headspace GC (84600)]

Specimen Requirements: 2 mL Urine  
Transport Temperature: Refrigerated  
Specimen Container: Plastic container (preservative-free)  
Light Protection: Not Required  
Special Handling: Collect sample at end of shift.  
Rejection Criteria: None  
Scope of Analysis: Headspace GC (84600): Methanol  
Method (CPT Code)

Compound Name	Units	Reference Comment
Methanol	mg/dL	Biological Exposure Index (ACGIH): Following workplace exposure to Methanol: 1.5 mg/dL measured in a urine specimen collected at end of shift.

#### 9132U Oxycodone Screen, Urine

Summary of Changes: Methods/CPT Codes were changed [EIA (80101)]

Scope of Analysis: EIA (80101): Oxycodone  
Method (CPT Code)

#### 8055B Postmortem Toxicology - Basic Plus, Blood (Forensic) (CSA)

Summary of Changes: Specimen Requirements (Special Handling) were changed.  
Reference Comment was changed.  
Units were changed.



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## New Tests and Test Updates

### Test Changes

Specimen Requirements: 10 mL Blood  
 Transport Temperature: Refrigerated  
 Specimen Container: Gray top tube (Sodium Fluoride / Potassium Oxalate), Lavender top tube (EDTA)  
 Light Protection: Not Required  
 Special Handling: Submit with Chain of Custody.  
 Collect sample using alcohol free skin preparation.  
 Rejection Criteria: None  
 Scope of Analysis: ELISA (80101x9): Opiates, Cocaine / Metabolites, Benzodiazepines, Cannabinoids,  
 Method (CPT Code) Amphetamines, Barbiturates, Methadone, Phencyclidine, Propoxyphene  
 Headspace GC (82055): Ethanol, Blood Alcohol Concentration (BAC), Methanol,  
 Isopropanol, Acetone  
 LC-MS/MS (80100): Fentanyl, Norfentanyl  
 HPLC (82491): Ibuprofen  
 ELISA (80101): Salicylates  
 ELISA (80101): Buprenorphine / Metabolite

Compound Name	Units	Reference Comment
Ethanol	mg/dL	Ethyl alcohol (ethanol, drinking alcohol) is a central nervous system depressant and can cause effects such as impaired judgment, reduced alertness and impaired muscular coordination. Ethanol can also be a product of decomposition or degradation of biological samples.
Blood Alcohol Concentration (BAC)	g/100 mL	I certify that: I directly participated in the determination of the results by reviewing and certifying that the analytical data including internal standards and calculations utilized in reporting the results of this case are accurate and correct.
Methanol	mg/dL	Endogenous blood levels of methanol from metabolic and dietary sources are approximately 0.15 mg/dL.  Exposure to 800 ppm methanol for 8 hours produced a maximum average blood methanol concentration of 3.1 mg/dL.
Isopropanol	mg/dL	Three workers exposed to 191 - 200 ppm isopropanol in air had blood isopropanol concentrations <1 mg/dL; acetone levels were 4 - 16 mg/dL during the exposure. After a sponge bath with isopropanol, one adult had a blood isopropanol concentration of 10 mg/dL.  In a study of 31 isopropanol deaths, postmortem blood concentrations ranged from 10 to 250 mg/dL (mean, 140 mg/dL) and acetone blood concentrations ranged from 40 - 300 mg/dL (mean, 170 mg/dL).



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# New Tests and Test Updates

## Test Changes

Compound Name	Units	Reference Comment
Acetone	mg/dL	Reported normal endogenous acetone levels in blood are up to 3 mg/dL. Levels associated with diabetic or fasting ketoacidosis range from 10 - 70 mg/dL. After exposure to 100 and 500 ppm acetone for 2 hr, reported blood acetone concentrations peaked at 2 and 10 mg/dL, respectively. A blood level of 250 mg/dL was reported in an individual who became lethargic following ingestion of acetone.

### 8055FL Postmortem Toxicology - Basic Plus, Fluid (Forensic) (CSA)

Summary of Changes: Specimen Requirements (Special Handling) were changed.  
Reference Comment was changed.

Specimen Requirements: 10 mL Fluid  
 Transport Temperature: Refrigerated  
 Specimen Container: Plastic container (preservative-free)  
 Light Protection: Not Required  
 Special Handling: Submit with Chain of Custody.  
 Rejection Criteria: None  
 Scope of Analysis: ELISA (80101x9): Opiates, Cocaine / Metabolites, Benzodiazepines, Cannabinoids,  
 Method (CPT Code) Amphetamines, Barbiturates, Methadone, Phencyclidine, Propoxyphene  
 Headspace GC (82055): Ethanol, Methanol, Isopropanol, Acetone  
 LC-MS/MS (80100): Fentanyl, Norfentanyl  
 HPLC (82491): Ibuprofen  
 Colorimetry (80101): Salicylates  
 ELISA (80101): Buprenorphine / Metabolite

Compound Name	Units	Reference Comment
Ethanol	mg/dL	Ethyl alcohol (ethanol, drinking alcohol) is a central nervous system depressant and can cause effects such as impaired judgment, reduced alertness and impaired muscular coordination. Ethanol can also be a product of decomposition or degradation of biological samples.
Methanol	mg/dL	Methanol is contained in paints, cleaners, windshield washer fluid, 'canned heat', and other household products. It may be consumed for its intoxicating properties which are similar to ethanol; however it is much more toxic. In addition to central nervous system depression with its associated slowing of reaction time, lethargy and confusion, methanol can cause blindness due to its toxic metabolites.



# New Tests and Test Updates

## Test Changes

Compound Name	Units	Reference Comment
Isopropanol	mg/dL	Isopropanol is a common industrial and laboratory chemical that is available as a 70% aqueous solution in 'Rubbing Alcohol'. Isopropanol may be consumed for its intoxicating effects. Isopropanol produces effects in man similar to those produced by ethanol, including impairment of cognitive, perceptual and psychomotor capabilities presenting as decrements in alertness, judgment, perception, coordination, response time and sense of care and caution. As a central nervous system depressant, isopropanol has about two times the potency of ethanol; therefore, while the effects produced are similar, impairment caused by isopropyl alcohol will occur at blood concentrations substantially lower than those of ethanol. Isopropyl alcohol is metabolized to acetone, however acetone produced in the body as a result of uncontrolled diabetes can also be converted to isopropanol.
Acetone	mg/dL	Acetone is a solvent used for chemicals, paints, etc. It is also a product of diabetic- and fasting-induced ketoacidosis as well as a metabolite following isopropanol ingestion. In high concentrations, acetone can have CNS-depressing effects. Symptoms include lethargy, ataxia, headache, nausea and lightheadedness. Stupor and coma appear in severe cases. Acetone produced in the body as a result of uncontrolled diabetes can also be converted to isopropanol.

**8055SP Postmortem Toxicology - Basic Plus, Serum/Plasma (Forensic) (CSA)**

Summary of Changes: Specimen Requirements (Special Handling) were changed.  
Reference Comment was changed.

- Specimen Requirements: 10 mL Serum or Plasma
- Transport Temperature: Refrigerated
- Specimen Container: Plastic container (preservative-free)
- Light Protection: Not Required
- Special Handling: Submit with Chain of Custody.  
Collect sample in Gray top tube (Sodium Fluoride / Potassium Oxalate). Promptly centrifuge and separate Serum or Plasma into a plastic screw capped vial using approved guidelines.
- Rejection Criteria: Polymer gel separation tube (SST or PST).



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# New Tests and Test Updates

## Test Changes

Scope of Analysis: ELISA (80101x9): Opiates, Cocaine / Metabolites, Benzodiazepines, Cannabinoids,  
 Method (CPT Code) Amphetamines, Barbiturates, Methadone, Phencyclidine, Propoxyphene  
 Headspace GC (82055): Ethanol, Methanol, Isopropanol, Acetone  
 LC-MS/MS (80100): Fentanyl, Norfentanyl  
 HPLC (82491): Ibuprofen  
 ELISA (80101): Salicylates  
 ELISA (80101): Buprenorphine / Metabolite

Compound Name	Units	Reference Comment
Ethanol	mg/dL	Ethyl alcohol (ethanol, drinking alcohol) is a central nervous system depressant and can cause effects such as impaired judgment, reduced alertness and impaired muscular coordination. Ethanol can also be a product of decomposition or degradation of biological samples.
Methanol	mg/dL	<p>Endogenous blood levels of methanol from metabolic and dietary sources are approximately 0.15 mg/dL.</p> <p>Exposure to 800 ppm methanol for 8 hours produced a maximum average blood methanol concentration of 3.1 mg/dL.</p> <p>The blood to plasma ratio of methanol is 0.9.</p>
Isopropanol	mg/dL	<p>Three workers exposed to 191 - 200 ppm isopropanol in air had blood isopropanol concentrations &lt;1 mg/dL; acetone levels were 4 - 16 mg/dL during the exposure. After a sponge bath with isopropanol, one adult had a blood isopropanol concentration of 10 mg/dL.</p> <p>In a study of 31 isopropanol deaths, postmortem blood concentrations ranged from 10 to 250 mg/dL (mean, 140 mg/dL) and acetone blood concentrations ranged from 40 - 300 mg/dL (mean, 170 mg/dL).</p> <p>The blood to plasma ratio of isopropanol is 0.9 - 1.1.</p>
Acetone	mg/dL	<p>Reported normal endogenous acetone levels in blood are up to 3 mg/dL. Levels associated with diabetic or fasting ketoacidosis range from 10 - 70 mg/dL. After exposure to 100 and 500 ppm acetone for 2 hr, reported blood acetone concentrations peaked at 2 and 10 mg/dL, respectively. A blood level of 250 mg/dL was reported in an individual who became lethargic following ingestion of acetone.</p> <p>The blood to plasma ratio of acetone is 1.0 - 1.1.</p>

8055TI Postmortem Toxicology - Basic Plus, Tissue (Forensic) (CSA)



Effective Date:

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## New Tests and Test Updates

### Test Changes

Summary of Changes: Specimen Requirements (Special Handling) were changed.  
Reference Comment was changed.

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Specimen Requirements: 10 g Tissue  
Transport Temperature: Refrigerated  
Specimen Container: Plastic container (preservative-free)  
Light Protection: Not Required  
Special Handling: Submit with Chain of Custody.  
Rejection Criteria: None  
Scope of Analysis: ELISA (80103, 80101x9): Opiates, Cocaine / Metabolites, Benzodiazepines,  
Method (CPT Code) Cannabinoids, Amphetamines, Barbiturates, Methadone, Phencyclidine,  
Propoxyphene  
Headspace GC (80103, 82055): Ethanol, Methanol, Isopropanol, Acetone  
LC-MS/MS (80103, 80100): Fentanyl, Norfentanyl  
HPLC (80103, 82491): Ibuprofen  
Colorimetry (80103, 80101): Salicylates  
ELISA (80103, 80101): Buprenorphine / Metabolite

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Compound Name	Units	Reference Comment
Ethanol	mg/100 g	Ethyl alcohol (ethanol, drinking alcohol) is a central nervous system depressant and can cause effects such as impaired judgment, reduced alertness and impaired muscular coordination. Ethanol can also be a product of decomposition or degradation of biological samples.
Methanol	mg/100 g	Methanol is contained in paints, cleaners, windshield washer fluid, 'canned heat', and other household products. It may be consumed for its intoxicating properties which are similar to ethanol; however it is much more toxic. In addition to central nervous system depression with its associated slowing of reaction time, lethargy and confusion, methanol can cause blindness due to its toxic metabolites.
Isopropanol	mg/100 g	Isopropanol is a common industrial and laboratory chemical that is available as a 70% aqueous solution in 'Rubbing Alcohol'. Isopropanol may be consumed for its intoxicating effects. Isopropanol produces effects in man similar to those produced by ethanol, including impairment of cognitive, perceptual and psychomotor capabilities presenting as decrements in alertness, judgment, perception, coordination, response time and sense of care and caution. As a central nervous system depressant, isopropanol has about two times the potency of ethanol; therefore, while the effects produced are



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## New Tests and Test Updates

### Test Changes

Compound Name	Units	Reference Comment
Acetone	mg/100 g	<p>similar, impairment caused by isopropyl alcohol will occur at blood concentrations substantially lower than those of ethanol. Isopropyl alcohol is metabolized to acetone, however acetone produced in the body as a result of uncontrolled diabetes can also be converted to isopropanol.</p> <p>Acetone is a solvent used for chemicals, paints, etc. It is also a product of diabetic- and fasting-induced ketoacidosis as well as a metabolite following isopropanol ingestion. In high concentrations, acetone can have CNS-depressing effects. Symptoms include lethargy, ataxia, headache, nausea and lightheadedness. Stupor and coma appear in severe cases. Acetone produced in the body as a result of uncontrolled diabetes can also be converted to isopropanol.</p>

#### 8055U Postmortem Toxicology - Basic Plus, Urine (Forensic) (CSA)

Summary of Changes: Specimen Requirements (Special Handling) were changed.  
Reference Comment was changed.

Specimen Requirements: 10 mL Urine  
 Transport Temperature: Refrigerated  
 Specimen Container: Plastic container (preservative-free)  
 Light Protection: Not Required  
 Special Handling: Submit with Chain of Custody.  
 Rejection Criteria: None  
 Scope of Analysis: EIA (80101x9): Opiates, Cocaine/Metabolites, Benzodiazepines, Cannabinoids,  
 Method (CPT Code) Amphetamines, Barbiturates, Methadone, Phencyclidine, Propoxyphene  
 Headspace GC (82055): Ethanol, Methanol, Isopropanol, Acetone  
 ELISA (80101): Fentanyl  
 HPLC (82491): Ibuprofen  
 ELISA (80101): Salicylates  
 IA (80101): Buprenorphine / Metabolite

Compound Name	Units	Reference Comment
Ethanol	mg/dL	Ethyl alcohol (ethanol, drinking alcohol) is a central nervous system depressant and can cause effects such as impaired judgment, reduced alertness and impaired muscular coordination. Ethanol can also be a product of decomposition or degradation of biological samples.





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## New Tests and Test Updates

### Test Changes

Compound Name	Units	Reference Comment
Methanol	mg/dL	Methanol is contained in paints, cleaners, windshield washer fluid, 'canned heat', and other household products. It may be consumed for its intoxicating properties which are similar to ethanol; however it is much more toxic. In addition to central nervous system depression with its associated slowing of reaction time, lethargy and confusion, methanol can cause blindness due to its toxic metabolites.
Isopropanol	mg/dL	Isopropanol is a common industrial and laboratory chemical that is available as a 70% aqueous solution in 'Rubbing Alcohol'. Isopropanol may be consumed for its intoxicating effects. Isopropanol produces effects in man similar to those produced by ethanol, including impairment of cognitive, perceptual and psychomotor capabilities presenting as decrements in alertness, judgment, perception, coordination, response time and sense of care and caution. As a central nervous system depressant, isopropanol has about two times the potency of ethanol; therefore, while the effects produced are similar, impairment caused by isopropyl alcohol will occur at blood concentrations substantially lower than those of ethanol. Isopropyl alcohol is metabolized to acetone, however acetone produced in the body as a result of uncontrolled diabetes can also be converted to isopropanol.
Acetone	mg/dL	Acetone is a solvent used for chemicals, paints, etc. It is also a product of diabetic- and fasting-induced ketoacidosis as well as a metabolite following isopropanol ingestion. In high concentrations, acetone can have CNS-depressing effects. Symptoms include lethargy, ataxia, headache, nausea and lightheadedness. Stupor and coma appear in severe cases. Acetone produced in the body as a result of uncontrolled diabetes can also be converted to isopropanol.

#### 8051B Postmortem Toxicology - Basic, Blood (Forensic)

Summary of Changes: Specimen Requirements were changed.  
Specimen Requirements (Special Handling) were changed.  
Reference Comment was changed.  
Units were changed.



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# New Tests and Test Updates

## Test Changes

Specimen Requirements: 7 mL Blood  
 Transport Temperature: Refrigerated  
 Specimen Container: Gray top tube (Sodium Fluoride / Potassium Oxalate)  
 Light Protection: Not Required  
 Special Handling: Submit with Chain of Custody.  
 Collect sample using alcohol free skin preparation.  
 Rejection Criteria: None  
 Scope of Analysis: ELISA (80101x9): Opiates, Cocaine / Metabolites, Benzodiazepines, Cannabinoids,  
 Method (CPT Code) Amphetamines, Barbiturates, Methadone, Phencyclidine, Propoxyphene  
 Headspace GC (82055): Ethanol, Blood Alcohol Concentration (BAC), Methanol,  
 Isopropanol, Acetone  
 ELISA (80101): Buprenorphine / Metabolite

Compound Name	Units	Reference Comment
Ethanol	mg/dL	Ethyl alcohol (ethanol, drinking alcohol) is a central nervous system depressant and can cause effects such as impaired judgment, reduced alertness and impaired muscular coordination. Ethanol can also be a product of decomposition or degradation of biological samples.
Blood Alcohol Concentration (BAC)	g/100 mL	I certify that: I directly participated in the determination of the results by reviewing and certifying that the analytical data including internal standards and calculations utilized in reporting the results of this case are accurate and correct.
Methanol	mg/dL	Endogenous blood levels of methanol from metabolic and dietary sources are approximately 0.15 mg/dL.  Exposure to 800 ppm methanol for 8 hours produced a maximum average blood methanol concentration of 3.1 mg/dL.
Isopropanol	mg/dL	Three workers exposed to 191 - 200 ppm isopropanol in air had blood isopropanol concentrations <1 mg/dL; acetone levels were 4 - 16 mg/dL during the exposure. After a sponge bath with isopropanol, one adult had a blood isopropanol concentration of 10 mg/dL.  In a study of 31 isopropanol deaths, postmortem blood concentrations ranged from 10 to 250 mg/dL (mean, 140 mg/dL) and acetone blood concentrations ranged from 40 - 300 mg/dL (mean, 170 mg/dL).



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## New Tests and Test Updates

### Test Changes

Compound Name	Units	Reference Comment
Acetone	mg/dL	Reported normal endogenous acetone levels in blood are up to 3 mg/dL. Levels associated with diabetic or fasting ketoacidosis range from 10 - 70 mg/dL. After exposure to 100 and 500 ppm acetone for 2 hr, reported blood acetone concentrations peaked at 2 and 10 mg/dL, respectively. A blood level of 250 mg/dL was reported in an individual who became lethargic following ingestion of acetone.

#### 8051FL Postmortem Toxicology - Basic, Fluid (Forensic)

Summary of Changes: Specimen Requirements were changed.  
 Specimen Requirements (Specimen Container) were changed.  
 Reference Comment was changed.

Specimen Requirements: 10 mL Fluid  
 Transport Temperature: Refrigerated  
 Specimen Container: Plastic container (preservative-free)  
 Light Protection: Not Required  
 Special Handling: Submit with Chain of Custody.  
 Rejection Criteria: None  
 Scope of Analysis: ELISA (80101x9): Opiates, Cocaine / Metabolites, Benzodiazepines, Cannabinoids,  
 Method (CPT Code) Amphetamines, Barbiturates, Methadone, Phencyclidine, Propoxyphene  
 Headspace GC (82055): Ethanol, Methanol, Isopropanol, Acetone  
 ELISA (80101): Buprenorphine / Metabolite

Compound Name	Units	Reference Comment
Ethanol	mg/dL	Ethyl alcohol (ethanol, drinking alcohol) is a central nervous system depressant and can cause effects such as impaired judgment, reduced alertness and impaired muscular coordination. Ethanol can also be a product of decomposition or degradation of biological samples.
Methanol	mg/dL	Methanol is contained in paints, cleaners, windshield washer fluid, 'canned heat', and other household products. It may be consumed for its intoxicating properties which are similar to ethanol; however it is much more toxic. In addition to central nervous system depression with its associated slowing of reaction time, lethargy and confusion, methanol can cause blindness due to its toxic metabolites.



# New Tests and Test Updates

## Test Changes

Compound Name	Units	Reference Comment
Isopropanol	mg/dL	Isopropanol is a common industrial and laboratory chemical that is available as a 70% aqueous solution in 'Rubbing Alcohol'. Isopropanol may be consumed for its intoxicating effects. Isopropanol produces effects in man similar to those produced by ethanol, including impairment of cognitive, perceptual and psychomotor capabilities presenting as decrements in alertness, judgment, perception, coordination, response time and sense of care and caution. As a central nervous system depressant, isopropanol has about two times the potency of ethanol; therefore, while the effects produced are similar, impairment caused by isopropyl alcohol will occur at blood concentrations substantially lower than those of ethanol. Isopropyl alcohol is metabolized to acetone, however acetone produced in the body as a result of uncontrolled diabetes can also be converted to isopropanol.
Acetone	mg/dL	Acetone is a solvent used for chemicals, paints, etc. It is also a product of diabetic- and fasting-induced ketoacidosis as well as a metabolite following isopropanol ingestion. In high concentrations, acetone can have CNS-depressing effects. Symptoms include lethargy, ataxia, headache, nausea and lightheadedness. Stupor and coma appear in severe cases. Acetone produced in the body as a result of uncontrolled diabetes can also be converted to isopropanol.

**8051SP Postmortem Toxicology - Basic, Serum/Plasma (Forensic)**

Summary of Changes: Specimen Requirements (Specimen Container) were changed.  
Reference Comment was changed.

- Specimen Requirements: 7 mL Serum or Plasma
- Transport Temperature: Refrigerated
- Specimen Container: Plastic container (preservative-free)
- Light Protection: Not Required
- Special Handling: Submit with Chain of Custody.  
Collect sample in Gray top tube (Sodium Fluoride / Potassium Oxalate). Promptly centrifuge and separate Serum or Plasma into a plastic screw capped vial using approved guidelines.
- Rejection Criteria: Polymer gel separation tube (SST or PST).
- Scope of Analysis: ELISA (80101x9): Opiates, Cocaine / Metabolites, Benzodiazepines, Cannabinoids,
- Method (CPT Code) Amphetamines, Barbiturates, Methadone, Phencyclidine, Propoxyphene  
Headspace GC (82055): Ethanol, Methanol, Isopropanol, Acetone  
ELISA (80101): Buprenorphine / Metabolite



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# New Tests and Test Updates

## Test Changes

Compound Name	Units	Reference Comment
Ethanol	mg/dL	Ethyl alcohol (ethanol, drinking alcohol) is a central nervous system depressant and can cause effects such as impaired judgment, reduced alertness and impaired muscular coordination. Ethanol can also be a product of decomposition or degradation of biological samples.
Methanol	mg/dL	<p>Endogenous blood levels of methanol from metabolic and dietary sources are approximately 0.15 mg/dL.</p> <p>Exposure to 800 ppm methanol for 8 hours produced a maximum average blood methanol concentration of 3.1 mg/dL.</p> <p>The blood to plasma ratio of methanol is 0.9.</p>
Isopropanol	mg/dL	<p>Three workers exposed to 191 - 200 ppm isopropanol in air had blood isopropanol concentrations &lt;1 mg/dL; acetone levels were 4 - 16 mg/dL during the exposure. After a sponge bath with isopropanol, one adult had a blood isopropanol concentration of 10 mg/dL.</p> <p>In a study of 31 isopropanol deaths, postmortem blood concentrations ranged from 10 to 250 mg/dL (mean, 140 mg/dL) and acetone blood concentrations ranged from 40 - 300 mg/dL (mean, 170 mg/dL).</p> <p>The blood to plasma ratio of isopropanol is 0.9 - 1.1.</p>
Acetone	mg/dL	<p>Reported normal endogenous acetone levels in blood are up to 3 mg/dL. Levels associated with diabetic or fasting ketoacidosis range from 10 - 70 mg/dL. After exposure to 100 and 500 ppm acetone for 2 hr, reported blood acetone concentrations peaked at 2 and 10 mg/dL, respectively. A blood level of 250 mg/dL was reported in an individual who became lethargic following ingestion of acetone.</p> <p>The blood to plasma ratio of acetone is 1.0 - 1.1.</p>

### 8051TI Postmortem Toxicology - Basic, Tissue (Forensic)

Summary of Changes: Specimen Requirements (Specimen Container) were changed.  
Reference Comment was changed.



Effective Date:

Monday, November 14, 2011

# New Tests and Test Updates

## Test Changes

Specimen Requirements: 10 g Tissue  
Transport Temperature: Refrigerated  
Specimen Container: Plastic container (preservative-free)  
Light Protection: Not Required  
Special Handling: Submit with Chain of Custody.  
Rejection Criteria: None  
Scope of Analysis: ELISA (80103, 80101x9): Opiates, Cocaine / Metabolites, Benzodiazepines,  
Method (CPT Code) Cannabinoids, Amphetamines, Barbiturates, Methadone, Phencyclidine,  
Propoxyphene  
Headspace GC (80103, 82055): Ethanol, Methanol, Isopropanol, Acetone  
ELISA (80103, 80101): Buprenorphine / Metabolite

Compound Name	Units	Reference Comment
Ethanol	mg/100 g	Ethyl alcohol (ethanol, drinking alcohol) is a central nervous system depressant and can cause effects such as impaired judgment, reduced alertness and impaired muscular coordination. Ethanol can also be a product of decomposition or degradation of biological samples.
Methanol	mg/100 g	Methanol is contained in paints, cleaners, windshield washer fluid, 'canned heat', and other household products. It may be consumed for its intoxicating properties which are similar to ethanol; however it is much more toxic. In addition to central nervous system depression with its associated slowing of reaction time, lethargy and confusion, methanol can cause blindness due to its toxic metabolites.
Isopropanol	mg/100 g	Isopropanol is a common industrial and laboratory chemical that is available as a 70% aqueous solution in 'Rubbing Alcohol'. Isopropanol may be consumed for its intoxicating effects. Isopropanol produces effects in man similar to those produced by ethanol, including impairment of cognitive, perceptual and psychomotor capabilities presenting as decrements in alertness, judgment, perception, coordination, response time and sense of care and caution. As a central nervous system depressant, isopropanol has about two times the potency of ethanol; therefore, while the effects produced are similar, impairment caused by isopropyl alcohol will occur at blood concentrations substantially lower than those of ethanol. Isopropyl alcohol is metabolized to acetone, however acetone produced in the body as a result of uncontrolled diabetes can also be converted to isopropanol.



# New Tests and Test Updates

## Test Changes

Compound Name	Units	Reference Comment
Acetone	mg/100 g	Acetone is a solvent used for chemicals, paints, etc. It is also a product of diabetic- and fasting-induced ketoacidosis as well as a metabolite following isopropanol ingestion. In high concentrations, acetone can have CNS-depressing effects. Symptoms include lethargy, ataxia, headache, nausea and lightheadedness. Stupor and coma appear in severe cases. Acetone produced in the body as a result of uncontrolled diabetes can also be converted to isopropanol.

### 8051U Postmortem Toxicology - Basic, Urine (Forensic)

Summary of Changes: Reference Comment was changed.

Scope of Analysis: EIA (80101x9): Opiates, Cocaine/Metabolites, Benzodiazepines, Cannabinoids,  
 Method (CPT Code) Amphetamines, Barbiturates, Methadone, Phencyclidine, Propoxyphene  
 Headspace GC (82055): Ethanol, Methanol, Isopropanol, Acetone  
 IA (80101): Buprenorphine / Metabolite

Compound Name	Units	Reference Comment
Ethanol	mg/dL	Ethyl alcohol (ethanol, drinking alcohol) is a central nervous system depressant and can cause effects such as impaired judgment, reduced alertness and impaired muscular coordination. Ethanol can also be a product of decomposition or degradation of biological samples.
Methanol	mg/dL	Methanol is contained in paints, cleaners, windshield washer fluid, 'canned heat', and other household products. It may be consumed for its intoxicating properties which are similar to ethanol; however it is much more toxic. In addition to central nervous system depression with its associated slowing of reaction time, lethargy and confusion, methanol can cause blindness due to its toxic metabolites.
Isopropanol	mg/dL	Isopropanol is a common industrial and laboratory chemical that is available as a 70% aqueous solution in 'Rubbing Alcohol'. Isopropanol may be consumed for its intoxicating effects. Isopropanol produces effects in man similar to those produced by ethanol, including impairment of cognitive, perceptual and psychomotor capabilities presenting as decrements in alertness, judgment, perception, coordination, response time and sense of care and caution. As a central nervous system depressant, isopropanol has about two times the potency of ethanol; therefore, while the effects produced are





# New Tests and Test Updates

## Test Changes

Compound Name	Units	Reference Comment
Acetone	mg/dL	<p>similar, impairment caused by isopropyl alcohol will occur at blood concentrations substantially lower than those of ethanol. Isopropyl alcohol is metabolized to acetone, however acetone produced in the body as a result of uncontrolled diabetes can also be converted to isopropanol.</p> <p>Acetone is a solvent used for chemicals, paints, etc. It is also a product of diabetic- and fasting-induced ketoacidosis as well as a metabolite following isopropanol ingestion. In high concentrations, acetone can have CNS-depressing effects. Symptoms include lethargy, ataxia, headache, nausea and lightheadedness. Stupor and coma appear in severe cases. Acetone produced in the body as a result of uncontrolled diabetes can also be converted to isopropanol.</p>

### 8052B Postmortem Toxicology - Expanded, Blood (Forensic)

Summary of Changes: Specimen Requirements (Specimen Container) were changed.  
 Specimen Requirements (Special Handling) were changed.  
 Reference Comment was changed.  
 Units were changed.

Specimen Requirements: 10 mL Blood  
 Transport Temperature: Refrigerated  
 Specimen Container: Gray top tube (Sodium Fluoride / Potassium Oxalate), Lavender top tube (EDTA)  
 Light Protection: Yes  
 Special Handling: Submit with Chain of Custody.  
 Peak serum levels are recommended when monitoring patients because the level in the blood drops so rapidly that many negative results are found at the trough. The peak occurs at 40 to 90 minutes post dose.  
 Rejection Criteria: Not received Light Protected.  
 Scope of Analysis:  
 Method (CPT Code)

Compound Name	Units	Reference Comment
Ethanol	mg/dL	Ethyl alcohol (ethanol, drinking alcohol) is a central nervous system depressant and can cause effects such as impaired judgment, reduced alertness and impaired muscular coordination. Ethanol can also be a product of decomposition or degradation of biological samples.





# New Tests and Test Updates

## Test Changes

Compound Name	Units	Reference Comment
Blood Alcohol Concentration (BAC)	g/100 mL	I certify that: I directly participated in the determination of the results by reviewing and certifying that the analytical data including internal standards and calculations utilized in reporting the results of this case are accurate and correct.
Methanol	mg/dL	Endogenous blood levels of methanol from metabolic and dietary sources are approximately 0.15 mg/dL.  Exposure to 800 ppm methanol for 8 hours produced a maximum average blood methanol concentration of 3.1 mg/dL.
Isopropanol	mg/dL	Three workers exposed to 191 - 200 ppm isopropanol in air had blood isopropanol concentrations <1 mg/dL; acetone levels were 4 - 16 mg/dL during the exposure. After a sponge bath with isopropanol, one adult had a blood isopropanol concentration of 10 mg/dL.  In a study of 31 isopropanol deaths, postmortem blood concentrations ranged from 10 to 250 mg/dL (mean, 140 mg/dL) and acetone blood concentrations ranged from 40 - 300 mg/dL (mean, 170 mg/dL).
Acetone	mg/dL	Reported normal endogenous acetone levels in blood are up to 3 mg/dL. Levels associated with diabetic or fasting ketoacidosis range from 10 - 70 mg/dL. After exposure to 100 and 500 ppm acetone for 2 hr, reported blood acetone concentrations peaked at 2 and 10 mg/dL, respectively. A blood level of 250 mg/dL was reported in an individual who became lethargic following ingestion of acetone.

### 8052FL Postmortem Toxicology - Expanded, Fluid (Forensic)

Summary of Changes: Specimen Requirements (Specimen Container) were changed.  
Reference Comment was changed.

- Specimen Requirements: 10 mL Fluid
- Transport Temperature: Refrigerated
- Specimen Container: Plastic container (preservative-free)
- Light Protection: Not Required
- Special Handling: Submit with Chain of Custody.
- Rejection Criteria: None



Effective Date:

Monday, November 14, 2011

## New Tests and Test Updates

### Test Changes

Scope of Analysis:  
Method (CPT Code)

Compound Name	Units	Reference Comment
Ethanol	mg/dL	Ethyl alcohol (ethanol, drinking alcohol) is a central nervous system depressant and can cause effects such as impaired judgment, reduced alertness and impaired muscular coordination. Ethanol can also be a product of decomposition or degradation of biological samples.
Methanol	mg/dL	Methanol is contained in paints, cleaners, windshield washer fluid, 'canned heat', and other household products. It may be consumed for its intoxicating properties which are similar to ethanol; however it is much more toxic. In addition to central nervous system depression with its associated slowing of reaction time, lethargy and confusion, methanol can cause blindness due to its toxic metabolites.
Isopropanol	mg/dL	Isopropanol is a common industrial and laboratory chemical that is available as a 70% aqueous solution in 'Rubbing Alcohol'. Isopropanol may be consumed for its intoxicating effects. Isopropanol produces effects in man similar to those produced by ethanol, including impairment of cognitive, perceptual and psychomotor capabilities presenting as decrements in alertness, judgment, perception, coordination, response time and sense of care and caution. As a central nervous system depressant, isopropanol has about two times the potency of ethanol; therefore, while the effects produced are similar, impairment caused by isopropyl alcohol will occur at blood concentrations substantially lower than those of ethanol. Isopropyl alcohol is metabolized to acetone, however acetone produced in the body as a result of uncontrolled diabetes can also be converted to isopropanol.
Acetone	mg/dL	Acetone is a solvent used for chemicals, paints, etc. It is also a product of diabetic- and fasting-induced ketoacidosis as well as a metabolite following isopropanol ingestion. In high concentrations, acetone can have CNS-depressing effects. Symptoms include lethargy, ataxia, headache, nausea and lightheadedness. Stupor and coma appear in severe cases. Acetone produced in the body as a result of uncontrolled diabetes can also be converted to isopropanol.

8052SP Postmortem Toxicology - Expanded, Serum/Plasma (Forensic)



Effective Date:

Monday, November 14, 2011

# New Tests and Test Updates

## Test Changes

Summary of Changes: Specimen Requirements (Specimen Container) were changed.  
Reference Comment was changed.

Specimen Requirements: 10 mL Serum or Plasma

Transport Temperature: Refrigerated

Specimen Container: Plastic container (preservative-free)

Light Protection: Yes

Special Handling: Submit with Chain of Custody.

Collect sample in Gray top tube (Sodium Fluoride / Potassium Oxalate). Peak serum levels are recommended when monitoring patients because the level in the blood drops so rapidly that many negative results are found at the trough. The peak occurs at 40 to 90 minutes post dose. Promptly centrifuge and separate Serum or Plasma into a plastic screw capped vial using approved guidelines.

Rejection Criteria: Not received Light Protected. Polymer gel separation tube (SST or PST).

Scope of Analysis:

Method (CPT Code)

Compound Name	Units	Reference Comment
Ethanol	mg/dL	Ethyl alcohol (ethanol, drinking alcohol) is a central nervous system depressant and can cause effects such as impaired judgment, reduced alertness and impaired muscular coordination. Ethanol can also be a product of decomposition or degradation of biological samples.
Methanol	mg/dL	Endogenous blood levels of methanol from metabolic and dietary sources are approximately 0.15 mg/dL.  Exposure to 800 ppm methanol for 8 hours produced a maximum average blood methanol concentration of 3.1 mg/dL.  The blood to plasma ratio of methanol is 0.9.
Isopropanol	mg/dL	Three workers exposed to 191 - 200 ppm isopropanol in air had blood isopropanol concentrations <1 mg/dL; acetone levels were 4 - 16 mg/dL during the exposure. After a sponge bath with isopropanol, one adult had a blood isopropanol concentration of 10 mg/dL.  In a study of 31 isopropanol deaths, postmortem blood concentrations ranged from 10 to 250 mg/dL (mean, 140 mg/dL) and acetone blood concentrations ranged from 40 - 300 mg/dL (mean, 170 mg/dL).  The blood to plasma ratio of isopropanol is 0.9 - 1.1.



Effective Date:

Monday, November 14, 2011

## New Tests and Test Updates

### Test Changes

Compound Name	Units	Reference Comment
Acetone	mg/dL	<p>Reported normal endogenous acetone levels in blood are up to 3 mg/dL. Levels associated with diabetic or fasting ketoacidosis range from 10 - 70 mg/dL. After exposure to 100 and 500 ppm acetone for 2 hr, reported blood acetone concentrations peaked at 2 and 10 mg/dL, respectively. A blood level of 250 mg/dL was reported in an individual who became lethargic following ingestion of acetone.</p> <p>The blood to plasma ratio of acetone is 1.0 - 1.1.</p>

#### 8052TI Postmortem Toxicology - Expanded, Tissue (Forensic)

Summary of Changes: Specimen Requirements (Specimen Container) were changed.  
Reference Comment was changed.

Specimen Requirements: 10 g Tissue  
Transport Temperature: Refrigerated  
Specimen Container: Plastic container (preservative-free)  
Light Protection: Yes  
Special Handling: Submit with Chain of Custody.  
Rejection Criteria: Not received Light Protected.  
Scope of Analysis:  
Method (CPT Code)

Compound Name	Units	Reference Comment
Ethanol	mg/100 g	Ethyl alcohol (ethanol, drinking alcohol) is a central nervous system depressant and can cause effects such as impaired judgment, reduced alertness and impaired muscular coordination. Ethanol can also be a product of decomposition or degradation of biological samples.
Methanol	mg/100 g	Methanol is contained in paints, cleaners, windshield washer fluid, 'canned heat', and other household products. It may be consumed for its intoxicating properties which are similar to ethanol; however it is much more toxic. In addition to central nervous system depression with its associated slowing of reaction time, lethargy and confusion, methanol can cause blindness due to its toxic metabolites.



Effective Date:

Monday, November 14, 2011

# New Tests and Test Updates

## Test Changes

Compound Name	Units	Reference Comment
Isopropanol	mg/100 g	Isopropanol is a common industrial and laboratory chemical that is available as a 70% aqueous solution in 'Rubbing Alcohol'. Isopropanol may be consumed for its intoxicating effects. Isopropanol produces effects in man similar to those produced by ethanol, including impairment of cognitive, perceptual and psychomotor capabilities presenting as decrements in alertness, judgment, perception, coordination, response time and sense of care and caution. As a central nervous system depressant, isopropanol has about two times the potency of ethanol; therefore, while the effects produced are similar, impairment caused by isopropyl alcohol will occur at blood concentrations substantially lower than those of ethanol. Isopropyl alcohol is metabolized to acetone, however acetone produced in the body as a result of uncontrolled diabetes can also be converted to isopropanol.
Acetone	mg/100 g	Acetone is a solvent used for chemicals, paints, etc. It is also a product of diabetic- and fasting-induced ketoacidosis as well as a metabolite following isopropanol ingestion. In high concentrations, acetone can have CNS-depressing effects. Symptoms include lethargy, ataxia, headache, nausea and lightheadedness. Stupor and coma appear in severe cases. Acetone produced in the body as a result of uncontrolled diabetes can also be converted to isopropanol.

**8052U Postmortem Toxicology - Expanded, Urine (Forensic)**

Summary of Changes: Specimen Requirements (Specimen Container) were changed.  
Reference Comment was changed.

- Specimen Requirements: 10 mL Urine
- Transport Temperature: Refrigerated
- Specimen Container: Plastic container (preservative-free)
- Light Protection: Yes
- Special Handling: Submit with Chain of Custody.
- Rejection Criteria: Not received Light Protected.
- Scope of Analysis:
- Method (CPT Code)



Effective Date:

Monday, November 14, 2011

## New Tests and Test Updates

### Test Changes

Compound Name	Units	Reference Comment
Ethanol	mg/dL	Ethyl alcohol (ethanol, drinking alcohol) is a central nervous system depressant and can cause effects such as impaired judgment, reduced alertness and impaired muscular coordination. Ethanol can also be a product of decomposition or degradation of biological samples.
Methanol	mg/dL	Methanol is contained in paints, cleaners, windshield washer fluid, 'canned heat', and other household products. It may be consumed for its intoxicating properties which are similar to ethanol; however it is much more toxic. In addition to central nervous system depression with its associated slowing of reaction time, lethargy and confusion, methanol can cause blindness due to its toxic metabolites.
Isopropanol	mg/dL	Isopropanol is a common industrial and laboratory chemical that is available as a 70% aqueous solution in 'Rubbing Alcohol'. Isopropanol may be consumed for its intoxicating effects. Isopropanol produces effects in man similar to those produced by ethanol, including impairment of cognitive, perceptual and psychomotor capabilities presenting as decrements in alertness, judgment, perception, coordination, response time and sense of care and caution. As a central nervous system depressant, isopropanol has about two times the potency of ethanol; therefore, while the effects produced are similar, impairment caused by isopropyl alcohol will occur at blood concentrations substantially lower than those of ethanol. Isopropyl alcohol is metabolized to acetone, however acetone produced in the body as a result of uncontrolled diabetes can also be converted to isopropanol.
Acetone	mg/dL	Acetone is a solvent used for chemicals, paints, etc. It is also a product of diabetic- and fasting-induced ketoacidosis as well as a metabolite following isopropanol ingestion. In high concentrations, acetone can have CNS-depressing effects. Symptoms include lethargy, ataxia, headache, nausea and lightheadedness. Stupor and coma appear in severe cases. Acetone produced in the body as a result of uncontrolled diabetes can also be converted to isopropanol.

8092B Postmortem Toxicology - Expert, Blood (Forensic)



Effective Date:

Monday, November 14, 2011

# New Tests and Test Updates

## Test Changes

Summary of Changes: Specimen Requirements (Specimen Container) were changed.  
 Specimen Requirements (Special Handling) were changed.  
 Reference Comment was changed.  
 Units were changed.

Specimen Requirements: 10 mL Blood  
 Transport Temperature: Refrigerated  
 Specimen Container: Gray top tube (Sodium Fluoride / Potassium Oxalate), Lavender top tube (EDTA)  
 Light Protection: Yes  
 Special Handling: Submit with Chain of Custody.  
 Peak serum levels are recommended when monitoring patients because the level in the blood drops so rapidly that many negative results are found at the trough. The peak occurs at 40 to 90 minutes post dose. Promptly centrifuge and separate Serum or Plasma into a plastic screw capped vial using approved guidelines. Sample should be collected 1 to 6 hours post dose. Glass containers are not acceptable.  
 Rejection Criteria: Not received Light Protected.  
 Scope of Analysis:  
 Method (CPT Code)

Compound Name	Units	Reference Comment
Ethanol	mg/dL	Ethyl alcohol (ethanol, drinking alcohol) is a central nervous system depressant and can cause effects such as impaired judgment, reduced alertness and impaired muscular coordination. Ethanol can also be a product of decomposition or degradation of biological samples.
Blood Alcohol Concentration (BAC)	g/100 mL	I certify that: I directly participated in the determination of the results by reviewing and certifying that the analytical data including internal standards and calculations utilized in reporting the results of this case are accurate and correct.
Methanol	mg/dL	Endogenous blood levels of methanol from metabolic and dietary sources are approximately 0.15 mg/dL.  Exposure to 800 ppm methanol for 8 hours produced a maximum average blood methanol concentration of 3.1 mg/dL.



Effective Date:

Monday, November 14, 2011

## New Tests and Test Updates

### Test Changes

Compound Name	Units	Reference Comment
Isopropanol	mg/dL	<p>Three workers exposed to 191 - 200 ppm isopropanol in air had blood isopropanol concentrations &lt;1 mg/dL; acetone levels were 4 - 16 mg/dL during the exposure. After a sponge bath with isopropanol, one adult had a blood isopropanol concentration of 10 mg/dL.</p> <p>In a study of 31 isopropanol deaths, postmortem blood concentrations ranged from 10 to 250 mg/dL (mean, 140 mg/dL) and acetone blood concentrations ranged from 40 - 300 mg/dL (mean, 170 mg/dL).</p>
Acetone	mg/dL	<p>Reported normal endogenous acetone levels in blood are up to 3 mg/dL. Levels associated with diabetic or fasting ketoacidosis range from 10 - 70 mg/dL. After exposure to 100 and 500 ppm acetone for 2 hr, reported blood acetone concentrations peaked at 2 and 10 mg/dL, respectively. A blood level of 250 mg/dL was reported in an individual who became lethargic following ingestion of acetone.</p>

#### 8092FL Postmortem Toxicology - Expert, Fluid (Forensic)

Summary of Changes: Specimen Requirements (Specimen Container) were changed.  
 Specimen Requirements (Special Handling) were changed.  
 Reference Comment was changed.

Specimen Requirements: 10 mL Fluid  
 Transport Temperature: Refrigerated  
 Specimen Container: Plastic container (preservative-free)  
 Light Protection: Not Required  
 Special Handling: Submit with Chain of Custody.  
 Rejection Criteria: None  
 Scope of Analysis:  
 Method (CPT Code)

Compound Name	Units	Reference Comment
Ethanol	mg/dL	Ethyl alcohol (ethanol, drinking alcohol) is a central nervous system depressant and can cause effects such as impaired judgment, reduced alertness and impaired muscular coordination. Ethanol can also be a product of decomposition or degradation of biological samples.





Effective Date:

Monday, November 14, 2011

## New Tests and Test Updates

### Test Changes

Compound Name	Units	Reference Comment
Methanol	mg/dL	Methanol is contained in paints, cleaners, windshield washer fluid, 'canned heat', and other household products. It may be consumed for its intoxicating properties which are similar to ethanol; however it is much more toxic. In addition to central nervous system depression with its associated slowing of reaction time, lethargy and confusion, methanol can cause blindness due to its toxic metabolites.
Isopropanol	mg/dL	Isopropanol is a common industrial and laboratory chemical that is available as a 70% aqueous solution in 'Rubbing Alcohol'. Isopropanol may be consumed for its intoxicating effects. Isopropanol produces effects in man similar to those produced by ethanol, including impairment of cognitive, perceptual and psychomotor capabilities presenting as decrements in alertness, judgment, perception, coordination, response time and sense of care and caution. As a central nervous system depressant, isopropanol has about two times the potency of ethanol; therefore, while the effects produced are similar, impairment caused by isopropyl alcohol will occur at blood concentrations substantially lower than those of ethanol. Isopropyl alcohol is metabolized to acetone, however acetone produced in the body as a result of uncontrolled diabetes can also be converted to isopropanol.
Acetone	mg/dL	Acetone is a solvent used for chemicals, paints, etc. It is also a product of diabetic- and fasting-induced ketoacidosis as well as a metabolite following isopropanol ingestion. In high concentrations, acetone can have CNS-depressing effects. Symptoms include lethargy, ataxia, headache, nausea and lightheadedness. Stupor and coma appear in severe cases. Acetone produced in the body as a result of uncontrolled diabetes can also be converted to isopropanol.

#### 8092SP Postmortem Toxicology - Expert, Serum/Plasma (Forensic)

Summary of Changes: Specimen Requirements (Special Handling) were changed.  
Reference Comment was changed.

Specimen Requirements: 10 mL Serum or Plasma

Transport Temperature: Refrigerated

Specimen Container: Gray top tube (Sodium Fluoride / Potassium Oxalate), Lavender top tube (EDTA), Plastic container (preservative-free)

Light Protection: Yes



# New Tests and Test Updates

## Test Changes

Special Handling: Submit with Chain of Custody.

Peak serum levels are recommended when monitoring patients because the level in the blood drops so rapidly that many negative results are found at the trough. The peak occurs at 40 to 90 minutes post dose. Promptly centrifuge and separate Serum or Plasma into a plastic screw capped vial using approved guidelines. Sample should be collected 1 to 6 hours post dose. Glass containers are not acceptable.

Rejection Criteria: Not received Light Protected. Polymer gel separation tube (SST or PST).

Scope of Analysis:

Method (CPT Code)

Compound Name	Units	Reference Comment
Ethanol	mg/dL	Ethyl alcohol (ethanol, drinking alcohol) is a central nervous system depressant and can cause effects such as impaired judgment, reduced alertness and impaired muscular coordination. Ethanol can also be a product of decomposition or degradation of biological samples.
Methanol	mg/dL	<p>Endogenous blood levels of methanol from metabolic and dietary sources are approximately 0.15 mg/dL.</p> <p>Exposure to 800 ppm methanol for 8 hours produced a maximum average blood methanol concentration of 3.1 mg/dL.</p> <p>The blood to plasma ratio of methanol is 0.9.</p>
Isopropanol	mg/dL	<p>Three workers exposed to 191 - 200 ppm isopropanol in air had blood isopropanol concentrations &lt;1 mg/dL; acetone levels were 4 - 16 mg/dL during the exposure. After a sponge bath with isopropanol, one adult had a blood isopropanol concentration of 10 mg/dL.</p> <p>In a study of 31 isopropanol deaths, postmortem blood concentrations ranged from 10 to 250 mg/dL (mean, 140 mg/dL) and acetone blood concentrations ranged from 40 - 300 mg/dL (mean, 170 mg/dL).</p> <p>The blood to plasma ratio of isopropanol is 0.9 - 1.1.</p>



Effective Date:

Monday, November 14, 2011

# New Tests and Test Updates

## Test Changes

Compound Name	Units	Reference Comment
Acetone	mg/dL	<p>Reported normal endogenous acetone levels in blood are up to 3 mg/dL. Levels associated with diabetic or fasting ketoacidosis range from 10 - 70 mg/dL. After exposure to 100 and 500 ppm acetone for 2 hr, reported blood acetone concentrations peaked at 2 and 10 mg/dL, respectively. A blood level of 250 mg/dL was reported in an individual who became lethargic following ingestion of acetone.</p> <p>The blood to plasma ratio of acetone is 1.0 - 1.1.</p>

### 8092TI Postmortem Toxicology - Expert, Tissue (Forensic)

Summary of Changes: Specimen Requirements (Specimen Container) were changed.  
 Specimen Requirements (Special Handling) were changed.  
 Reference Comment was changed.

Specimen Requirements: 10 g Tissue  
 Transport Temperature: Refrigerated  
 Specimen Container: Plastic container (preservative-free)  
 Light Protection: Yes  
 Special Handling: Submit with Chain of Custody.  
 Rejection Criteria: Not received Light Protected.  
 Scope of Analysis:  
 Method (CPT Code)

Compound Name	Units	Reference Comment
Ethanol	mg/100 g	Ethyl alcohol (ethanol, drinking alcohol) is a central nervous system depressant and can cause effects such as impaired judgment, reduced alertness and impaired muscular coordination. Ethanol can also be a product of decomposition or degradation of biological samples.
Methanol	mg/100 g	Methanol is contained in paints, cleaners, windshield washer fluid, 'canned heat', and other household products. It may be consumed for its intoxicating properties which are similar to ethanol; however it is much more toxic. In addition to central nervous system depression with its associated slowing of reaction time, lethargy and confusion, methanol can cause blindness due to its toxic metabolites.



Effective Date:

Monday, November 14, 2011

## New Tests and Test Updates

### Test Changes

Compound Name	Units	Reference Comment
Isopropanol	mg/100 g	Isopropanol is a common industrial and laboratory chemical that is available as a 70% aqueous solution in 'Rubbing Alcohol'. Isopropanol may be consumed for its intoxicating effects. Isopropanol produces effects in man similar to those produced by ethanol, including impairment of cognitive, perceptual and psychomotor capabilities presenting as decrements in alertness, judgment, perception, coordination, response time and sense of care and caution. As a central nervous system depressant, isopropanol has about two times the potency of ethanol; therefore, while the effects produced are similar, impairment caused by isopropyl alcohol will occur at blood concentrations substantially lower than those of ethanol. Isopropyl alcohol is metabolized to acetone, however acetone produced in the body as a result of uncontrolled diabetes can also be converted to isopropanol.
Acetone	mg/100 g	Acetone is a solvent used for chemicals, paints, etc. It is also a product of diabetic- and fasting-induced ketoacidosis as well as a metabolite following isopropanol ingestion. In high concentrations, acetone can have CNS-depressing effects. Symptoms include lethargy, ataxia, headache, nausea and lightheadedness. Stupor and coma appear in severe cases. Acetone produced in the body as a result of uncontrolled diabetes can also be converted to isopropanol.

#### 8092U Postmortem Toxicology - Expert, Urine (Forensic)

Summary of Changes: Specimen Requirements (Specimen Container) were changed.  
Reference Comment was changed.

Specimen Requirements: 10 mL Urine  
Transport Temperature: Refrigerated  
Specimen Container: Plastic container (preservative-free)  
Light Protection: Yes  
Special Handling: Submit with Chain of Custody.  
Rejection Criteria: Not received Light Protected.  
Scope of Analysis:  
Method (CPT Code)



Effective Date:

Monday, November 14, 2011

## New Tests and Test Updates

### Test Changes

Compound Name	Units	Reference Comment
Ethanol	mg/dL	Ethyl alcohol (ethanol, drinking alcohol) is a central nervous system depressant and can cause effects such as impaired judgment, reduced alertness and impaired muscular coordination. Ethanol can also be a product of decomposition or degradation of biological samples.
Methanol	mg/dL	Methanol is contained in paints, cleaners, windshield washer fluid, 'canned heat', and other household products. It may be consumed for its intoxicating properties which are similar to ethanol; however it is much more toxic. In addition to central nervous system depression with its associated slowing of reaction time, lethargy and confusion, methanol can cause blindness due to its toxic metabolites.
Isopropanol	mg/dL	Isopropanol is a common industrial and laboratory chemical that is available as a 70% aqueous solution in 'Rubbing Alcohol'. Isopropanol may be consumed for its intoxicating effects. Isopropanol produces effects in man similar to those produced by ethanol, including impairment of cognitive, perceptual and psychomotor capabilities presenting as decrements in alertness, judgment, perception, coordination, response time and sense of care and caution. As a central nervous system depressant, isopropanol has about two times the potency of ethanol; therefore, while the effects produced are similar, impairment caused by isopropyl alcohol will occur at blood concentrations substantially lower than those of ethanol. Isopropyl alcohol is metabolized to acetone, however acetone produced in the body as a result of uncontrolled diabetes can also be converted to isopropanol.
Acetone	mg/dL	Acetone is a solvent used for chemicals, paints, etc. It is also a product of diabetic- and fasting-induced ketoacidosis as well as a metabolite following isopropanol ingestion. In high concentrations, acetone can have CNS-depressing effects. Symptoms include lethargy, ataxia, headache, nausea and lightheadedness. Stupor and coma appear in severe cases. Acetone produced in the body as a result of uncontrolled diabetes can also be converted to isopropanol.

#### 4177B Postmortem Toxicology - SIDS Screen, Blood (Forensic)

Summary of Changes: Specimen Requirements (Specimen Container) were changed.  
Reference Comment was changed.  
Units were changed.



Effective Date:

Monday, November 14, 2011

# New Tests and Test Updates

## Test Changes

Specimen Requirements: 10 mL Blood  
 Transport Temperature: Refrigerated  
 Specimen Container: Gray top tube (Sodium Fluoride / Potassium Oxalate), Lavender top tube (EDTA)  
 Light Protection: Yes  
 Special Handling: Submit with Chain of Custody.  
 Peak serum levels are recommended when monitoring patients because the level in the blood drops so rapidly that many negative results are found at the trough. The peak occurs at 40 to 90 minutes post dose. Promptly centrifuge and separate Serum or Plasma into a plastic screw capped vial using approved guidelines. Sample should be collected 1 to 6 hours post dose. Glass containers are not acceptable.  
 Rejection Criteria: Not received Light Protected.  
 Scope of Analysis:  
 Method (CPT Code)

Compound Name	Units	Reference Comment
Ethanol	mg/dL	Ethyl alcohol (ethanol, drinking alcohol) is a central nervous system depressant and can cause effects such as impaired judgment, reduced alertness and impaired muscular coordination. Ethanol can also be a product of decomposition or degradation of biological samples.
Blood Alcohol Concentration (BAC)	g/100 mL	I certify that: I directly participated in the determination of the results by reviewing and certifying that the analytical data including internal standards and calculations utilized in reporting the results of this case are accurate and correct.
Methanol	mg/dL	Endogenous blood levels of methanol from metabolic and dietary sources are approximately 0.15 mg/dL.  Exposure to 800 ppm methanol for 8 hours produced a maximum average blood methanol concentration of 3.1 mg/dL.
Isopropanol	mg/dL	Three workers exposed to 191 - 200 ppm isopropanol in air had blood isopropanol concentrations <1 mg/dL; acetone levels were 4 - 16 mg/dL during the exposure. After a sponge bath with isopropanol, one adult had a blood isopropanol concentration of 10 mg/dL.  In a study of 31 isopropanol deaths, postmortem blood concentrations ranged from 10 to 250 mg/dL (mean, 140 mg/dL) and acetone blood concentrations ranged from 40 - 300 mg/dL (mean, 170 mg/dL).



Effective Date:

Monday, November 14, 2011

# New Tests and Test Updates

## Test Changes

Compound Name	Units	Reference Comment
Acetone	mg/dL	Reported normal endogenous acetone levels in blood are up to 3 mg/dL. Levels associated with diabetic or fasting ketoacidosis range from 10 - 70 mg/dL. After exposure to 100 and 500 ppm acetone for 2 hr, reported blood acetone concentrations peaked at 2 and 10 mg/dL, respectively. A blood level of 250 mg/dL was reported in an individual who became lethargic following ingestion of acetone.

### 4187B Postmortem Toxicology - SIDS Screen, Blood (Forensic)

Summary of Changes: Specimen Requirements (Specimen Container) were changed.  
Reference Comment was changed.  
Units were changed.

Specimen Requirements: 10 mL Blood

Transport Temperature: Refrigerated

Specimen Container: Gray top tube (Sodium Fluoride / Potassium Oxalate), Lavender top tube (EDTA)

Light Protection: Not required

Special Handling: Submit with Chain of Custody.

Peak serum levels are recommended when monitoring patients because the level in the blood drops so rapidly that many negative results are found at the trough. The peak occurs at 40 to 90 minutes post dose. Promptly centrifuge and separate Serum or Plasma into a plastic screw capped vial using approved guidelines. Collect sample using alcohol free skin preparation. Sample should be collected 1 to 6 hours post dose. Glass containers are not acceptable.

Rejection Criteria: Glass container.

Scope of Analysis:  
Method (CPT Code)

Compound Name	Units	Reference Comment
Ethanol	mg/dL	Ethyl alcohol (ethanol, drinking alcohol) is a central nervous system depressant and can cause effects such as impaired judgment, reduced alertness and impaired muscular coordination. Ethanol can also be a product of decomposition or degradation of biological samples.
Blood Alcohol Concentration (BAC)	g/100 mL	I certify that: I directly participated in the determination of the results by reviewing and certifying that the analytical data including internal standards and calculations utilized in reporting the results of this case are accurate and correct.



Effective Date:

Monday, November 14, 2011

# New Tests and Test Updates

## Test Changes

Compound Name	Units	Reference Comment
Methanol	mg/dL	<p>Endogenous blood levels of methanol from metabolic and dietary sources are approximately 0.15 mg/dL.</p> <p>Exposure to 800 ppm methanol for 8 hours produced a maximum average blood methanol concentration of 3.1 mg/dL.</p>
Isopropanol	mg/dL	<p>Three workers exposed to 191 - 200 ppm isopropanol in air had blood isopropanol concentrations &lt;1 mg/dL; acetone levels were 4 - 16 mg/dL during the exposure. After a sponge bath with isopropanol, one adult had a blood isopropanol concentration of 10 mg/dL.</p> <p>In a study of 31 isopropanol deaths, postmortem blood concentrations ranged from 10 to 250 mg/dL (mean, 140 mg/dL) and acetone blood concentrations ranged from 40 - 300 mg/dL (mean, 170 mg/dL).</p>
Acetone	mg/dL	<p>Reported normal endogenous acetone levels in blood are up to 3 mg/dL. Levels associated with diabetic or fasting ketoacidosis range from 10 - 70 mg/dL. After exposure to 100 and 500 ppm acetone for 2 hr, reported blood acetone concentrations peaked at 2 and 10 mg/dL, respectively. A blood level of 250 mg/dL was reported in an individual who became lethargic following ingestion of acetone.</p>

### 4187FL Postmortem Toxicology - SIDS Screen, Fluid (Forensic)

Summary of Changes: Specimen Requirements (Special Handling) were changed.  
Reference Comment was changed.

Specimen Requirements: 10 mL Fluid  
 Transport Temperature: Refrigerated  
 Specimen Container: Plastic container (preservative-free)  
 Light Protection: Not Required  
 Special Handling: Submit with Chain of Custody.  
 Rejection Criteria: None  
 Scope of Analysis:  
 Method (CPT Code)





# New Tests and Test Updates

## Test Changes

Compound Name	Units	Reference Comment
Ethanol	mg/dL	Ethyl alcohol (ethanol, drinking alcohol) is a central nervous system depressant and can cause effects such as impaired judgment, reduced alertness and impaired muscular coordination. Ethanol can also be a product of decomposition or degradation of biological samples.
Methanol	mg/dL	Methanol is contained in paints, cleaners, windshield washer fluid, 'canned heat', and other household products. It may be consumed for its intoxicating properties which are similar to ethanol; however it is much more toxic. In addition to central nervous system depression with its associated slowing of reaction time, lethargy and confusion, methanol can cause blindness due to its toxic metabolites.
Isopropanol	mg/dL	Isopropanol is a common industrial and laboratory chemical that is available as a 70% aqueous solution in 'Rubbing Alcohol'. Isopropanol may be consumed for its intoxicating effects. Isopropanol produces effects in man similar to those produced by ethanol, including impairment of cognitive, perceptual and psychomotor capabilities presenting as decrements in alertness, judgment, perception, coordination, response time and sense of care and caution. As a central nervous system depressant, isopropanol has about two times the potency of ethanol; therefore, while the effects produced are similar, impairment caused by isopropyl alcohol will occur at blood concentrations substantially lower than those of ethanol. Isopropyl alcohol is metabolized to acetone, however acetone produced in the body as a result of uncontrolled diabetes can also be converted to isopropanol.
Acetone	mg/dL	Acetone is a solvent used for chemicals, paints, etc. It is also a product of diabetic- and fasting-induced ketoacidosis as well as a metabolite following isopropanol ingestion. In high concentrations, acetone can have CNS-depressing effects. Symptoms include lethargy, ataxia, headache, nausea and lightheadedness. Stupor and coma appear in severe cases. Acetone produced in the body as a result of uncontrolled diabetes can also be converted to isopropanol.

### 4177TI Postmortem Toxicology - SIDS Screen, Tissue (Forensic)

Summary of Changes: Specimen Requirements (Specimen Container) were changed.  
Reference Comment was changed.



Effective Date:

Monday, November 14, 2011

## New Tests and Test Updates

### Test Changes

Specimen Requirements: 10 g Tissue  
Transport Temperature: Refrigerated  
Specimen Container: Plastic container (preservative-free)  
Light Protection: Yes  
Special Handling: Submit with Chain of Custody.  
Rejection Criteria: Not received Light Protected.  
Scope of Analysis:  
Method (CPT Code)

Compound Name	Units	Reference Comment
Ethanol	mg/100 g	Ethyl alcohol (ethanol, drinking alcohol) is a central nervous system depressant and can cause effects such as impaired judgment, reduced alertness and impaired muscular coordination. Ethanol can also be a product of decomposition or degradation of biological samples.
Methanol	mg/100 g	Methanol is contained in paints, cleaners, windshield washer fluid, 'canned heat', and other household products. It may be consumed for its intoxicating properties which are similar to ethanol; however it is much more toxic. In addition to central nervous system depression with its associated slowing of reaction time, lethargy and confusion, methanol can cause blindness due to its toxic metabolites.
Isopropanol	mg/100 g	Isopropanol is a common industrial and laboratory chemical that is available as a 70% aqueous solution in 'Rubbing Alcohol'. Isopropanol may be consumed for its intoxicating effects. Isopropanol produces effects in man similar to those produced by ethanol, including impairment of cognitive, perceptual and psychomotor capabilities presenting as decrements in alertness, judgment, perception, coordination, response time and sense of care and caution. As a central nervous system depressant, isopropanol has about two times the potency of ethanol; therefore, while the effects produced are similar, impairment caused by isopropyl alcohol will occur at blood concentrations substantially lower than those of ethanol. Isopropyl alcohol is metabolized to acetone, however acetone produced in the body as a result of uncontrolled diabetes can also be converted to isopropanol.



Effective Date:

Monday, November 14, 2011

## New Tests and Test Updates

### Test Changes

Compound Name	Units	Reference Comment
Acetone	mg/100 g	Acetone is a solvent used for chemicals, paints, etc. It is also a product of diabetic- and fasting-induced ketoacidosis as well as a metabolite following isopropanol ingestion. In high concentrations, acetone can have CNS-depressing effects. Symptoms include lethargy, ataxia, headache, nausea and lightheadedness. Stupor and coma appear in severe cases. Acetone produced in the body as a result of uncontrolled diabetes can also be converted to isopropanol.

#### 4187TI Postmortem Toxicology - SIDS Screen, Tissue (Forensic)

Summary of Changes: Specimen Requirements (Specimen Container) were changed.  
 Reference Comment was changed.  
 Methods/CPT Codes were changed [Headspace GC (80103, 82055)]

Specimen Requirements: 10 g Tissue  
 Transport Temperature: Refrigerated  
 Specimen Container: Plastic container (preservative-free)  
 Light Protection: Yes  
 Special Handling: Submit with Chain of Custody.  
 Rejection Criteria: Not received Light Protected.  
 Scope of Analysis:  
 Method (CPT Code)

Compound Name	Units	Reference Comment
Ethanol	mg/100 g	Ethyl alcohol (ethanol, drinking alcohol) is a central nervous system depressant and can cause effects such as impaired judgment, reduced alertness and impaired muscular coordination. Ethanol can also be a product of decomposition or degradation of biological samples.
Methanol	mg/100 g	Methanol is contained in paints, cleaners, windshield washer fluid, 'canned heat', and other household products. It may be consumed for its intoxicating properties which are similar to ethanol; however it is much more toxic. In addition to central nervous system depression with its associated slowing of reaction time, lethargy and confusion, methanol can cause blindness due to its toxic metabolites.



Effective Date:

Monday, November 14, 2011

# New Tests and Test Updates

## Test Changes

Compound Name	Units	Reference Comment
Isopropanol	mg/100 g	Isopropanol is a common industrial and laboratory chemical that is available as a 70% aqueous solution in 'Rubbing Alcohol'. Isopropanol may be consumed for its intoxicating effects. Isopropanol produces effects in man similar to those produced by ethanol, including impairment of cognitive, perceptual and psychomotor capabilities presenting as decrements in alertness, judgment, perception, coordination, response time and sense of care and caution. As a central nervous system depressant, isopropanol has about two times the potency of ethanol; therefore, while the effects produced are similar, impairment caused by isopropyl alcohol will occur at blood concentrations substantially lower than those of ethanol. Isopropyl alcohol is metabolized to acetone, however acetone produced in the body as a result of uncontrolled diabetes can also be converted to isopropanol.
Acetone	mg/100 g	Acetone is a solvent used for chemicals, paints, etc. It is also a product of diabetic- and fasting-induced ketoacidosis as well as a metabolite following isopropanol ingestion. In high concentrations, acetone can have CNS-depressing effects. Symptoms include lethargy, ataxia, headache, nausea and lightheadedness. Stupor and coma appear in severe cases. Acetone produced in the body as a result of uncontrolled diabetes can also be converted to isopropanol.

### 4177U Postmortem Toxicology - SIDS Screen, Urine (Forensic)

Summary of Changes: Specimen Requirements (Specimen Container) were changed.  
 Specimen Requirements (Special Handling) were changed.  
 Reference Comment was changed.

Specimen Requirements: 10 mL Urine  
 Transport Temperature: Refrigerated  
 Specimen Container: Plastic container (preservative-free)  
 Light Protection: Yes  
 Special Handling: Submit with Chain of Custody.  
 Rejection Criteria: Not received Light Protected.  
 Scope of Analysis:  
 Method (CPT Code)



Effective Date:

Monday, November 14, 2011

## New Tests and Test Updates

### Test Changes

Compound Name	Units	Reference Comment
Ethanol	mg/dL	Ethyl alcohol (ethanol, drinking alcohol) is a central nervous system depressant and can cause effects such as impaired judgment, reduced alertness and impaired muscular coordination. Ethanol can also be a product of decomposition or degradation of biological samples.
Methanol	mg/dL	Methanol is contained in paints, cleaners, windshield washer fluid, 'canned heat', and other household products. It may be consumed for its intoxicating properties which are similar to ethanol; however it is much more toxic. In addition to central nervous system depression with its associated slowing of reaction time, lethargy and confusion, methanol can cause blindness due to its toxic metabolites.
Isopropanol	mg/dL	Isopropanol is a common industrial and laboratory chemical that is available as a 70% aqueous solution in 'Rubbing Alcohol'. Isopropanol may be consumed for its intoxicating effects. Isopropanol produces effects in man similar to those produced by ethanol, including impairment of cognitive, perceptual and psychomotor capabilities presenting as decrements in alertness, judgment, perception, coordination, response time and sense of care and caution. As a central nervous system depressant, isopropanol has about two times the potency of ethanol; therefore, while the effects produced are similar, impairment caused by isopropyl alcohol will occur at blood concentrations substantially lower than those of ethanol. Isopropyl alcohol is metabolized to acetone, however acetone produced in the body as a result of uncontrolled diabetes can also be converted to isopropanol.
Acetone	mg/dL	Acetone is a solvent used for chemicals, paints, etc. It is also a product of diabetic- and fasting-induced ketoacidosis as well as a metabolite following isopropanol ingestion. In high concentrations, acetone can have CNS-depressing effects. Symptoms include lethargy, ataxia, headache, nausea and lightheadedness. Stupor and coma appear in severe cases. Acetone produced in the body as a result of uncontrolled diabetes can also be converted to isopropanol.

#### 4187U Postmortem Toxicology - SIDS Screen, Urine (Forensic)

Summary of Changes: Specimen Requirements (Specimen Container) were changed.  
 Specimen Requirements (Special Handling) were changed.  
 Reference Comment was changed.



Effective Date:

Monday, November 14, 2011

# New Tests and Test Updates

## Test Changes

Specimen Requirements: 10 mL Urine  
Transport Temperature: Refrigerated  
Specimen Container: Gray top tube (Sodium Fluoride / Potassium Oxalate), Lavender top tube (EDTA)  
Light Protection: Not required  
Special Handling: Glass containers are not acceptable.  
Rejection Criteria: Glass container  
Scope of Analysis:  
Method (CPT Code)

Compound Name	Units	Reference Comment
Ethanol	mg/dL	Ethyl alcohol (ethanol, drinking alcohol) is a central nervous system depressant and can cause effects such as impaired judgment, reduced alertness and impaired muscular coordination. Ethanol can also be a product of decomposition or degradation of biological samples.
Methanol	mg/dL	Methanol is contained in paints, cleaners, windshield washer fluid, 'canned heat', and other household products. It may be consumed for its intoxicating properties which are similar to ethanol; however it is much more toxic. In addition to central nervous system depression with its associated slowing of reaction time, lethargy and confusion, methanol can cause blindness due to its toxic metabolites.
Isopropanol	mg/dL	Isopropanol is a common industrial and laboratory chemical that is available as a 70% aqueous solution in 'Rubbing Alcohol'. Isopropanol may be consumed for its intoxicating effects. Isopropanol produces effects in man similar to those produced by ethanol, including impairment of cognitive, perceptual and psychomotor capabilities presenting as decrements in alertness, judgment, perception, coordination, response time and sense of care and caution. As a central nervous system depressant, isopropanol has about two times the potency of ethanol; therefore, while the effects produced are similar, impairment caused by isopropyl alcohol will occur at blood concentrations substantially lower than those of ethanol. Isopropyl alcohol is metabolized to acetone, however acetone produced in the body as a result of uncontrolled diabetes can also be converted to isopropanol.



Effective Date:

Monday, November 14, 2011

# New Tests and Test Updates

## Test Changes

Compound Name	Units	Reference Comment
Acetone	mg/dL	Acetone is a solvent used for chemicals, paints, etc. It is also a product of diabetic- and fasting-induced ketoacidosis as well as a metabolite following isopropanol ingestion. In high concentrations, acetone can have CNS-depressing effects. Symptoms include lethargy, ataxia, headache, nausea and lightheadedness. Stupor and coma appear in severe cases. Acetone produced in the body as a result of uncontrolled diabetes can also be converted to isopropanol.

### 8102B Therapeutic and Abused Drugs with Alcohol Screen, Blood (Forensic)

Summary of Changes: Specimen Requirements (Specimen Container) were changed.  
Reference Comment was changed.  
Units were changed.

Specimen Requirements: 10 mL Blood  
 Transport Temperature: Refrigerated  
 Specimen Container: Gray top tube (Sodium Fluoride / Potassium Oxalate), Lavender top tube (EDTA)  
 Light Protection: Yes  
 Special Handling: Submit with Chain of Custody.  
 Peak serum levels are recommended when monitoring patients because the level in the blood drops so rapidly that many negative results are found at the trough. The peak occurs at 40 to 90 minutes post dose. Promptly centrifuge and separate Serum or Plasma into a plastic screw capped vial using approved guidelines. Sample should be collected 1 to 6 hours post dose. Glass containers are not acceptable.  
 Rejection Criteria: Not received Light Protected.  
 Scope of Analysis:  
 Method (CPT Code)

Compound Name	Units	Reference Comment
Ethanol	mg/dL	Ethyl alcohol (ethanol, drinking alcohol) is a central nervous system depressant and can cause effects such as impaired judgment, reduced alertness and impaired muscular coordination. Ethanol can also be a product of decomposition or degradation of biological samples.
Blood Alcohol Concentration (BAC)	g/100 mL	I certify that: I directly participated in the determination of the results by reviewing and certifying that the analytical data including internal standards and calculations utilized in reporting the results of this case are accurate and correct.



# New Tests and Test Updates

## Test Changes

Compound Name	Units	Reference Comment
Methanol	mg/dL	<p>Endogenous blood levels of methanol from metabolic and dietary sources are approximately 0.15 mg/dL.</p> <p>Exposure to 800 ppm methanol for 8 hours produced a maximum average blood methanol concentration of 3.1 mg/dL.</p>
Isopropanol	mg/dL	<p>Three workers exposed to 191 - 200 ppm isopropanol in air had blood isopropanol concentrations &lt;1 mg/dL; acetone levels were 4 - 16 mg/dL during the exposure. After a sponge bath with isopropanol, one adult had a blood isopropanol concentration of 10 mg/dL.</p> <p>In a study of 31 isopropanol deaths, postmortem blood concentrations ranged from 10 to 250 mg/dL (mean, 140 mg/dL) and acetone blood concentrations ranged from 40 - 300 mg/dL (mean, 170 mg/dL).</p>
Acetone	mg/dL	<p>Reported normal endogenous acetone levels in blood are up to 3 mg/dL. Levels associated with diabetic or fasting ketoacidosis range from 10 - 70 mg/dL. After exposure to 100 and 500 ppm acetone for 2 hr, reported blood acetone concentrations peaked at 2 and 10 mg/dL, respectively. A blood level of 250 mg/dL was reported in an individual who became lethargic following ingestion of acetone.</p>

### 8102FL Therapeutic and Abused Drugs with Alcohol Screen, Fluid (Forensic)

Summary of Changes: Specimen Requirements (Specimen Container) were changed.  
 Specimen Requirements (Special Handling) were changed.  
 Reference Comment was changed.

Specimen Requirements: 10 mL Fluid  
 Transport Temperature: Refrigerated  
 Specimen Container: Plastic container (preservative-free)  
 Light Protection: Not Required  
 Special Handling: Submit with Chain of Custody.  
 Rejection Criteria: None  
 Scope of Analysis:  
 Method (CPT Code)





Effective Date:

Monday, November 14, 2011

## New Tests and Test Updates

### Test Changes

Compound Name	Units	Reference Comment
Ethanol	mg/dL	Ethyl alcohol (ethanol, drinking alcohol) is a central nervous system depressant and can cause effects such as impaired judgment, reduced alertness and impaired muscular coordination. Ethanol can also be a product of decomposition or degradation of biological samples.
Methanol	mg/dL	Methanol is contained in paints, cleaners, windshield washer fluid, 'canned heat', and other household products. It may be consumed for its intoxicating properties which are similar to ethanol; however it is much more toxic. In addition to central nervous system depression with its associated slowing of reaction time, lethargy and confusion, methanol can cause blindness due to its toxic metabolites.
Isopropanol	mg/dL	Isopropanol is a common industrial and laboratory chemical that is available as a 70% aqueous solution in 'Rubbing Alcohol'. Isopropanol may be consumed for its intoxicating effects. Isopropanol produces effects in man similar to those produced by ethanol, including impairment of cognitive, perceptual and psychomotor capabilities presenting as decrements in alertness, judgment, perception, coordination, response time and sense of care and caution. As a central nervous system depressant, isopropanol has about two times the potency of ethanol; therefore, while the effects produced are similar, impairment caused by isopropyl alcohol will occur at blood concentrations substantially lower than those of ethanol. Isopropyl alcohol is metabolized to acetone, however acetone produced in the body as a result of uncontrolled diabetes can also be converted to isopropanol.
Acetone	mg/dL	Acetone is a solvent used for chemicals, paints, etc. It is also a product of diabetic- and fasting-induced ketoacidosis as well as a metabolite following isopropanol ingestion. In high concentrations, acetone can have CNS-depressing effects. Symptoms include lethargy, ataxia, headache, nausea and lightheadedness. Stupor and coma appear in severe cases. Acetone produced in the body as a result of uncontrolled diabetes can also be converted to isopropanol.

#### 8102SP Therapeutic and Abused Drugs with Alcohol Screen, Serum/Plasma (Forensic)

Summary of Changes: Reference Comment was changed.



Effective Date:

Monday, November 14, 2011

# New Tests and Test Updates

## Test Changes

Scope of Analysis:  
Method (CPT Code)

Compound Name	Units	Reference Comment
Ethanol	mg/dL	Ethyl alcohol (ethanol, drinking alcohol) is a central nervous system depressant and can cause effects such as impaired judgment, reduced alertness and impaired muscular coordination. Ethanol can also be a product of decomposition or degradation of biological samples.
Methanol	mg/dL	<p>Endogenous blood levels of methanol from metabolic and dietary sources are approximately 0.15 mg/dL.</p> <p>Exposure to 800 ppm methanol for 8 hours produced a maximum average blood methanol concentration of 3.1 mg/dL.</p> <p>The blood to plasma ratio of methanol is 0.9.</p>
Isopropanol	mg/dL	<p>Three workers exposed to 191 - 200 ppm isopropanol in air had blood isopropanol concentrations &lt;1 mg/dL; acetone levels were 4 - 16 mg/dL during the exposure. After a sponge bath with isopropanol, one adult had a blood isopropanol concentration of 10 mg/dL.</p> <p>In a study of 31 isopropanol deaths, postmortem blood concentrations ranged from 10 to 250 mg/dL (mean, 140 mg/dL) and acetone blood concentrations ranged from 40 - 300 mg/dL (mean, 170 mg/dL).</p> <p>The blood to plasma ratio of isopropanol is 0.9 - 1.1.</p>
Acetone	mg/dL	<p>Reported normal endogenous acetone levels in blood are up to 3 mg/dL. Levels associated with diabetic or fasting ketoacidosis range from 10 - 70 mg/dL. After exposure to 100 and 500 ppm acetone for 2 hr, reported blood acetone concentrations peaked at 2 and 10 mg/dL, respectively. A blood level of 250 mg/dL was reported in an individual who became lethargic following ingestion of acetone.</p> <p>The blood to plasma ratio of acetone is 1.0 - 1.1.</p>

**8102TI Therapeutic and Abused Drugs with Alcohol Screen, Tissue (Forensic)**



Effective Date:

Monday, November 14, 2011

## New Tests and Test Updates

### Test Changes

Summary of Changes: Specimen Requirements (Specimen Container) were changed.  
Specimen Requirements (Special Handling) were changed.  
Reference Comment was changed.  
Methods/CPT Codes were changed [Headspace GC (80103, 82055)]

Specimen Requirements: 10 g Tissue  
Transport Temperature: Refrigerated  
Specimen Container: Plastic container (preservative-free)  
Light Protection: Yes  
Special Handling: Submit with Chain of Custody.  
Rejection Criteria: Not received Light Protected.  
Scope of Analysis:  
Method (CPT Code)

Compound Name	Units	Reference Comment
Ethanol	mg/100 g	Ethyl alcohol (ethanol, drinking alcohol) is a central nervous system depressant and can cause effects such as impaired judgment, reduced alertness and impaired muscular coordination. Ethanol can also be a product of decomposition or degradation of biological samples.
Methanol	mg/100 g	Methanol is contained in paints, cleaners, windshield washer fluid, 'canned heat', and other household products. It may be consumed for its intoxicating properties which are similar to ethanol; however it is much more toxic. In addition to central nervous system depression with its associated slowing of reaction time, lethargy and confusion, methanol can cause blindness due to its toxic metabolites.
Isopropanol	mg/100 g	Isopropanol is a common industrial and laboratory chemical that is available as a 70% aqueous solution in 'Rubbing Alcohol'. Isopropanol may be consumed for its intoxicating effects. Isopropanol produces effects in man similar to those produced by ethanol, including impairment of cognitive, perceptual and psychomotor capabilities presenting as decrements in alertness, judgment, perception, coordination, response time and sense of care and caution. As a central nervous system depressant, isopropanol has about two times the potency of ethanol; therefore, while the effects produced are similar, impairment caused by isopropyl alcohol will occur at blood concentrations substantially lower than those of ethanol. Isopropyl alcohol is metabolized to acetone, however acetone produced in the body as a result of uncontrolled diabetes can also be converted to isopropanol.



Effective Date:

Monday, November 14, 2011

# New Tests and Test Updates

## Test Changes

Compound Name	Units	Reference Comment
Acetone	mg/100 g	Acetone is a solvent used for chemicals, paints, etc. It is also a product of diabetic- and fasting-induced ketoacidosis as well as a metabolite following isopropanol ingestion. In high concentrations, acetone can have CNS-depressing effects. Symptoms include lethargy, ataxia, headache, nausea and lightheadedness. Stupor and coma appear in severe cases. Acetone produced in the body as a result of uncontrolled diabetes can also be converted to isopropanol.

### 8102U Therapeutic and Abused Drugs with Alcohol Screen, Urine (Forensic)

Summary of Changes: Specimen Requirements (Specimen Container) were changed.  
Reference Comment was changed.

Specimen Requirements: 10 mL Urine  
 Transport Temperature: Refrigerated  
 Specimen Container: Plastic container (preservative-free)  
 Light Protection: Yes  
 Special Handling: Submit with Chain of Custody.  
 Rejection Criteria: Not received Light Protected.  
 Scope of Analysis:  
 Method (CPT Code)

Compound Name	Units	Reference Comment
Ethanol	mg/dL	Ethyl alcohol (ethanol, drinking alcohol) is a central nervous system depressant and can cause effects such as impaired judgment, reduced alertness and impaired muscular coordination. Ethanol can also be a product of decomposition or degradation of biological samples.
Methanol	mg/dL	Methanol is contained in paints, cleaners, windshield washer fluid, 'canned heat', and other household products. It may be consumed for its intoxicating properties which are similar to ethanol; however it is much more toxic. In addition to central nervous system depression with its associated slowing of reaction time, lethargy and confusion, methanol can cause blindness due to its toxic metabolites.



# New Tests and Test Updates

## Test Changes

Compound Name	Units	Reference Comment
Isopropanol	mg/dL	Isopropanol is a common industrial and laboratory chemical that is available as a 70% aqueous solution in 'Rubbing Alcohol'. Isopropanol may be consumed for its intoxicating effects. Isopropanol produces effects in man similar to those produced by ethanol, including impairment of cognitive, perceptual and psychomotor capabilities presenting as decrements in alertness, judgment, perception, coordination, response time and sense of care and caution. As a central nervous system depressant, isopropanol has about two times the potency of ethanol; therefore, while the effects produced are similar, impairment caused by isopropyl alcohol will occur at blood concentrations substantially lower than those of ethanol. Isopropyl alcohol is metabolized to acetone, however acetone produced in the body as a result of uncontrolled diabetes can also be converted to isopropanol.
Acetone	mg/dL	Acetone is a solvent used for chemicals, paints, etc. It is also a product of diabetic- and fasting-induced ketoacidosis as well as a metabolite following isopropanol ingestion. In high concentrations, acetone can have CNS-depressing effects. Symptoms include lethargy, ataxia, headache, nausea and lightheadedness. Stupor and coma appear in severe cases. Acetone produced in the body as a result of uncontrolled diabetes can also be converted to isopropanol.

**8106B Therapeutic and Abused Drugs with CO Screen, Blood (Forensic)**

Summary of Changes: Specimen Requirements (Specimen Container) were changed.  
 Reference Comment was changed.  
 Units were changed.

- 
- Specimen Requirements: 10 mL Blood
  - Transport Temperature: Refrigerated
  - Specimen Container: Gray top tube (Sodium Fluoride / Potassium Oxalate), Lavender top tube (EDTA)
  - Light Protection: Yes
  - Special Handling: Submit with Chain of Custody.  
 Peak serum levels are recommended when monitoring patients because the level in the blood drops so rapidly that many negative results are found at the trough. The peak occurs at 40 to 90 minutes post dose. Promptly centrifuge and separate Serum or Plasma into a plastic screw capped vial using approved guidelines. Sample should be collected 1 to 6 hours post dose. Glass containers are not acceptable.
  - Rejection Criteria: Not received Light Protected.



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# New Tests and Test Updates

## Test Changes

Scope of Analysis:  
Method (CPT Code)

Compound Name	Units	Reference Comment
Ethanol	mg/dL	Ethyl alcohol (ethanol, drinking alcohol) is a central nervous system depressant and can cause effects such as impaired judgment, reduced alertness and impaired muscular coordination. Ethanol can also be a product of decomposition or degradation of biological samples.
Blood Alcohol Concentration (BAC)	g/100 mL	I certify that: I directly participated in the determination of the results by reviewing and certifying that the analytical data including internal standards and calculations utilized in reporting the results of this case are accurate and correct.
Methanol	mg/dL	Endogenous blood levels of methanol from metabolic and dietary sources are approximately 0.15 mg/dL.  Exposure to 800 ppm methanol for 8 hours produced a maximum average blood methanol concentration of 3.1 mg/dL.
Isopropanol	mg/dL	Three workers exposed to 191 - 200 ppm isopropanol in air had blood isopropanol concentrations <1 mg/dL; acetone levels were 4 - 16 mg/dL during the exposure. After a sponge bath with isopropanol, one adult had a blood isopropanol concentration of 10 mg/dL.  In a study of 31 isopropanol deaths, postmortem blood concentrations ranged from 10 to 250 mg/dL (mean, 140 mg/dL) and acetone blood concentrations ranged from 40 - 300 mg/dL (mean, 170 mg/dL).
Acetone	mg/dL	Reported normal endogenous acetone levels in blood are up to 3 mg/dL. Levels associated with diabetic or fasting ketoacidosis range from 10 - 70 mg/dL. After exposure to 100 and 500 ppm acetone for 2 hr, reported blood acetone concentrations peaked at 2 and 10 mg/dL, respectively. A blood level of 250 mg/dL was reported in an individual who became lethargic following ingestion of acetone.



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## New Tests and Test Updates

### Discontinued Tests

Test Code	Test Name	Alternative Test
5023B	Acetone Confirmation, Blood	53250B - Alcohols and Acetone Confirmation, Blood (Forensic)
50033B	Acetone Confirmation, Blood (Forensic)	52250B - Alcohols and Acetone Confirmation, Blood (Forensic)
5023FL	Acetone Confirmation, Fluid	53250FL - Alcohols and Acetone Confirmation, Fluid (Forensic)
50033FL	Acetone Confirmation, Fluid (Forensic)	52250FL - Alcohols and Acetone Confirmation, Fluid (Forensic)
5023SP	Acetone Confirmation, Serum/Plasma	53250SP - Alcohols and Acetone Confirmation, Serum/Plasma (Forensic)
50033SP	Acetone Confirmation, Serum/Plasma (Forensic)	52250SP - Alcohols and Acetone Confirmation, Serum/Plasma (Forensic)
5023TI	Acetone Confirmation, Tissue	53250TI - Alcohols and Acetone Confirmation, Tissue (Forensic)
50033TI	Acetone Confirmation, Tissue (Forensic)	52250TI - Alcohols and Acetone Confirmation, Tissue (Forensic)
5023U	Acetone Confirmation, Urine	53250U - Alcohols and Acetone Confirmation, Urine (Forensic)
50033U	Acetone Confirmation, Urine (Forensic)	52250U - Alcohols and Acetone Confirmation, Urine (Forensic)
5627B	Alcohol Confirmation, Blood	53251B - Ethanol Confirmation, Blood
5627FL	Alcohol Confirmation, Fluid	53251FL - Ethanol Confirmation, Fluid
5627SP	Alcohol Confirmation, Serum/Plasma	53251SP - Ethanol Confirmation, Serum/Plasma
5627TI	Alcohol Confirmation, Tissue	53251TI - Ethanol Confirmation, Tissue
5627U	Alcohol Confirmation, Urine	53251U - Ethanol Confirmation, Urine
54033B	Drug Impaired Driving/DRE Toxicology Acetone Confirmation, Blood (Forensic)	54251B - Drug Impaired Driving/DRE Toxicology Alcohols and Acetone Confirmation, Blood (Forensic)
54033U	Drug Impaired Driving/DRE Toxicology Acetone Confirmation, Urine (Forensic)	54251U - Drug Impaired Driving/DRE Toxicology Alcohols and Acetone Confirmation, Urine (Forensic)
54032B	Drug Impaired Driving/DRE Toxicology Isopropanol Confirmation, Blood (Forensic)	54251B - Drug Impaired Driving/DRE Toxicology Alcohols and Acetone Confirmation, Blood (Forensic)
54032U	Drug Impaired Driving/DRE Toxicology Isopropanol Confirmation, Urine (Forensic)	54251U - Drug Impaired Driving/DRE Toxicology Alcohols and Acetone Confirmation, Urine (Forensic)
54031B	Drug Impaired Driving/DRE Toxicology Methanol Confirmation, Blood (Forensic)	54251B - Drug Impaired Driving/DRE Toxicology Alcohols and Acetone Confirmation, Blood (Forensic)
54031U	Drug Impaired Driving/DRE Toxicology Methanol Confirmation, Urine (Forensic)	54251U - Drug Impaired Driving/DRE Toxicology Alcohols and Acetone Confirmation, Urine (Forensic)
5020B	Ethanol Confirmation, Blood	53250B - Alcohols and Acetone Confirmation, Blood (Forensic)
50030B	Ethanol Confirmation, Blood (Forensic)	52250B - Alcohols and Acetone Confirmation, Blood (Forensic)
5020FL	Ethanol Confirmation, Fluid	53250FL - Alcohols and Acetone Confirmation, Fluid (Forensic)





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## New Tests and Test Updates

### Discontinued Tests

Test Code	Test Name	Alternative Test
50030FL	Ethanol Confirmation, Fluid (Forensic)	52250FL - Alcohols and Acetone Confirmation, Fluid (Forensic)
5020SP	Ethanol Confirmation, Serum/Plasma	53250SP - Alcohols and Acetone Confirmation, Serum/Plasma (Forensic)
50030SP	Ethanol Confirmation, Serum/Plasma (Forensic)	52250SP - Alcohols and Acetone Confirmation, Serum/Plasma (Forensic)
5020TI	Ethanol Confirmation, Tissue	53250TI - Alcohols and Acetone Confirmation, Tissue (Forensic)
50030TI	Ethanol Confirmation, Tissue (Forensic)	52250TI - Alcohols and Acetone Confirmation, Tissue (Forensic)
5020U	Ethanol Confirmation, Urine	53250U - Alcohols and Acetone Confirmation, Urine (Forensic)
50030U	Ethanol Confirmation, Urine (Forensic)	52250U - Alcohols and Acetone Confirmation, Urine (Forensic)
5022B	Isopropanol Confirmation, Blood	53250B - Alcohols and Acetone Confirmation, Blood (Forensic)
50032B	Isopropanol Confirmation, Blood (Forensic)	52250B - Alcohols and Acetone Confirmation, Blood (Forensic)
5022FL	Isopropanol Confirmation, Fluid	53250FL - Alcohols and Acetone Confirmation, Fluid (Forensic)
50032FL	Isopropanol Confirmation, Fluid (Forensic)	52250FL - Alcohols and Acetone Confirmation, Fluid (Forensic)
5022SP	Isopropanol Confirmation, Serum/Plasma	53250SP - Alcohols and Acetone Confirmation, Serum/Plasma (Forensic)
50032SP	Isopropanol Confirmation, Serum/Plasma (Forensic)	52250SP - Alcohols and Acetone Confirmation, Serum/Plasma (Forensic)
5022TI	Isopropanol Confirmation, Tissue	53250TI - Alcohols and Acetone Confirmation, Tissue (Forensic)
50032TI	Isopropanol Confirmation, Tissue (Forensic)	52250TI - Alcohols and Acetone Confirmation, Tissue (Forensic)
5022U	Isopropanol Confirmation, Urine	53250U - Alcohols and Acetone Confirmation, Urine (Forensic)
50032U	Isopropanol Confirmation, Urine (Forensic)	52250U - Alcohols and Acetone Confirmation, Urine (Forensic)
5021B	Methanol Confirmation, Blood	53250B - Alcohols and Acetone Confirmation, Blood (Forensic)
50031B	Methanol Confirmation, Blood (Forensic)	52250B - Alcohols and Acetone Confirmation, Blood (Forensic)
5021FL	Methanol Confirmation, Fluid	53250FL - Alcohols and Acetone Confirmation, Fluid (Forensic)
50031FL	Methanol Confirmation, Fluid (Forensic)	52250FL - Alcohols and Acetone Confirmation, Fluid (Forensic)
5021SP	Methanol Confirmation, Serum/Plasma	53250SP - Alcohols and Acetone Confirmation, Serum/Plasma (Forensic)
50031SP	Methanol Confirmation, Serum/Plasma (Forensic)	52250SP - Alcohols and Acetone Confirmation, Serum/Plasma (Forensic)
5021TI	Methanol Confirmation, Tissue	53250TI - Alcohols and Acetone Confirmation, Tissue (Forensic)
50031TI	Methanol Confirmation, Tissue (Forensic)	52250TI - Alcohols and Acetone Confirmation, Tissue (Forensic)





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## New Tests and Test Updates

### Discontinued Tests

Test Code	Test Name	Alternative Test
5021U	Methanol Confirmation, Urine	53250U - Alcohols and Acetone Confirmation, Urine (Forensic)
50031U	Methanol Confirmation, Urine (Forensic)	52250U - Alcohols and Acetone Confirmation, Urine (Forensic)