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Robert A. Middleberg, PhD, F-ABFT, DABCC-TC, Laboratory Director

**Demo Report**

**Report Issued** 09/29/2017 13:14  
**Last Report Issued** 09/22/2017 10:21

**88888**  
Clinical Example Report  
Attn: IT Department  
200 Welsh Road  
Horsham, PA 19044-2208

**Patient Name** 8101SP-POS  
**Patient ID** 8101SP-POS  
**Chain** 17001864  
**Age** Not Given **DOB** Not Given  
**Gender** Not Given  
**Workorder** 17001864  
**Received** 09/21/2017 11:55

**Sample ID** 17001864-001  
**Matrix** Serum or Plasma  
**Patient Name** 8101SP-POS  
**Patient ID** 8101SP-POS  
**Container Type** Clear vial

**Collect Dt/Tm** Not Given  
**Source** Not Given

**Approx Vol/Weight** Not Given

**Receipt Notes** None Entered

Analysis and Comments	Result	Units	Reporting Limit	Notes
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**8101SP Drugs of Abuse (10 Panel) and Alcohol Screen, Serum/Plasma (Forensic)**

Analysis by Headspace Gas Chromatography (GC)

Ethanol	85	mg/dL	10	
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Synonym(s): Ethyl Alcohol

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	85	mg/dL	5.0	
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Synonym(s): Methyl Alcohol

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	85	mg/dL	5.0	
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Results for sample 17001864-001 are continued on next page



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Sample ID 17001864-001
Matrix Serum or Plasma
Patient Name 8101SP-POS
Patient ID 8101SP-POS

Collect Dt/Tm Not Given
Source Not Given

Table with 5 columns: Analysis and Comments, Result, Units, Reporting Limit, Notes. Contains data for Isopropyl Alcohol and Acetone, and screening results for Opiates, Cocaine, Benzodiazepines, and Cannabinoids.

Results for sample 17001864-001 are continued on next page



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**Matrix** Serum or Plasma  
**Patient Name** 8101SP-POS  
**Patient ID** 8101SP-POS

**Collect Dt/Tm** Not Given  
**Source** Not Given

Analysis and Comments	Result	Units	Reporting Limit	Notes
Amphetamines Comment: Based on this screening result, confirmation testing was performed. Refer to the confirmation test result(s).	See Comment	ng/mL	20	
Barbiturates Comment: Based on this screening result, confirmation testing was performed. Refer to the confirmation test result(s).	See Comment	mcg/mL	0.040	
Methadone / Metabolite Comment: Based on this screening result, confirmation testing was performed. Refer to the confirmation test result(s).	See Comment	ng/mL	25	
Phencyclidine Synonym(s): Angel Dust; PCP; Sherm Comment: Based on this screening result, confirmation testing was performed. Refer to the confirmation test result(s).	See Comment	ng/mL	10	
Methamphetamine / MDMA Comment: Based on this screening result, confirmation testing was performed. Refer to the confirmation test result(s).	See Comment	ng/mL	20	
Oxycodone / Oxymorphone Comment: Based on this screening result, confirmation testing was performed. Refer to the confirmation test result(s).	See Comment	ng/mL	10	

**53250SP Alcohols and Acetone Confirmation, Serum/Plasma (Forensic)**

Analysis by Headspace Gas Chromatography (GC)

Ethanol Synonym(s): Ethyl Alcohol	Confirmed	mg/dL	10	
Methanol Synonym(s): Methyl Alcohol	Confirmed	mg/dL	5.0	
Isopropanol Synonym(s): Isopropyl Alcohol	Confirmed	mg/dL	5.0	
Acetone	Confirmed	mg/dL	5.0	

**5637SP Cocaine and Metabolites Confirmation, Serum/Plasma**

Results for sample 17001864-001 are continued on next page



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Sample ID 17001864-001
Matrix Serum or Plasma
Patient Name 8101SP-POS
Patient ID 8101SP-POS

Collect Dt/Tm Not Given
Source Not Given

Table with 5 columns: Analysis and Comments, Result, Units, Reporting Limit, Notes. Contains data for Cocaine, Cocaethylene, Benzoylecgonine, Diazepam, Nordiazepam, Oxazepam, and Temazepam.

Results for sample 17001864-001 are continued on next page



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**Sample ID** 17001864-001  
**Matrix** Serum or Plasma  
**Patient Name** 8101SP-POS  
**Patient ID** 8101SP-POS

**Collect Dt/Tm** Not Given  
**Source** Not Given

Analysis and Comments	Result	Units	Reporting Limit	Notes
<p>When used as a drug, peak plasma concentrations range from 200 - 1100 ng/mL within 1.5 hours post-dose.</p> <p>As a metabolite of Diazepam, low concentrations may be observed. In one study, following chronic daily doses of about 70 mg of Diazepam, the steady-state serum concentrations were 100 - 600 ng Temazepam/mL.</p>				
<p>Clobazam</p> <p>Synonym(s): Frisium®; Urbanyl®</p> <p>Following a single 20 mg oral dose, the mean peak plasma concentration: 465 ng/mL (range, 220 - 710 ng/mL) after 1.7 hours.</p> <p>Following a single 40 mg oral dose, the mean peak plasma concentration: 730 ng/mL at 2.5 hours. The plasma concentration decreased to 360 ng/mL at 12 hours, 180 ng/mL at 48 hours and 17 ng/mL at 96 hours.</p>	50	ng/mL	20	
<p>Chlordiazepoxide</p> <p>Synonym(s): Librium®</p> <p>Therapeutic range: 400 - 2000 ng/mL.</p>	50	ng/mL	20	
<p>Lorazepam</p> <p>Synonym(s): Ativan®</p> <p>Therapeutic range: 50 - 240 ng/mL.</p>	50	ng/mL	5.0	
<p>Clonazepam</p> <p>Synonym(s): Klonopin®</p> <p>Therapeutic range: 10 - 75 ng/mL.          Toxic: Greater than 100 ng/mL.</p>	50	ng/mL	2.0	
<p>7-Amino Clonazepam</p> <p>Synonym(s): Clonazepam Metabolite</p> <p>Plasma concentrations following chronic therapy with 6 mg/day of Clonazepam: 20 - 140 ng/mL.</p>	50	ng/mL	5.0	
<p>Alprazolam</p> <p>Synonym(s): Xanax®</p> <p>Therapeutic range: 10 - 100 ng/mL.          Potentially toxic at greater than 100 ng/mL.</p>	50	ng/mL	5.0	
<p>Alpha-Hydroxyalprazolam</p>	50	ng/mL	5.0	

Results for sample 17001864-001 are continued on next page



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**Matrix** Serum or Plasma  
**Patient Name** 8101SP-POS  
**Patient ID** 8101SP-POS

**Collect Dt/Tm** Not Given  
**Source** Not Given

Analysis and Comments	Result	Units	Reporting Limit	Notes
Synonym(s): Alprazolam Metabolite Alpha-Hydroxyalprazolam has approximately 66% of the pharmacological activity of Alprazolam.				
Midazolam	50	ng/mL	5.0	
Synonym(s): Versed® Peak plasma levels following a single 12.5 mg IM dose: approximately 200 ng/mL within 45 minutes of dose. Following a single 75 mcg/kg IV dose over 1 minute: 320 ng/mL at 0.25 hours 250 ng/mL at 0.5 hours 210 ng/mL at 1 hour 140 ng/mL at 2 hours 80 ng/mL at 4 hours 40 ng/mL at 6 hours 20 ng/mL at 8 hours.				
Triazolam	50	ng/mL	2.0	
Synonym(s): Halcion® Following a single 0.25 mg oral dose, the mean plasma concentration: 3.0 ng/mL (range, 2.3 - 3.7 ng/mL) within 1.5 hours. Following a single 0.5 mg oral dose, the mean plasma concentration: 4.4 ng/mL (range, 1.7 - 9.4 ng/mL) within 4 hours.				
Hydroxytriazolam	50	ng/mL	5.0	
Synonym(s): Triazolam Metabolite Hydroxytriazolam has 50 to 100% of the pharmacological activity of triazolam.				
Hydroxyethylflurazepam	50	ng/mL	5.0	
Synonym(s): Flurazepam Metabolite The mean peak plasma concentration following a 30 mg oral dose of Flurazepam was 18 ng Hydroxyethylflurazepam/mL at 1 hour post dose.				
Desalkylflurazepam	50	ng/mL	5.0	
Synonym(s): Flurazepam Metabolite The mean peak plasma concentration following a 30 mg oral dose of Flurazepam was 23 ng Desalkylflurazepam/mL at 12 hours post dose.				
Flurazepam	50	ng/mL	2.0	

Results for sample 17001864-001 are continued on next page



**Sample ID** 17001864-001  
**Matrix** Serum or Plasma  
**Patient Name** 8101SP-POS  
**Patient ID** 8101SP-POS

**Collect Dt/Tm** Not Given  
**Source** Not Given

Analysis and Comments	Result	Units	Reporting Limit	Notes
Synonym(s): Dalmane® The mean peak plasma concentration following a 30 mg oral dose was 2.1 ng/mL at 1 hour post dose, but was undetectable at subsequent times.				
Estazolam	50	ng/mL	5.0	
Synonym(s): ProSom® The mean peak plasma concentration following a 1 mg oral dose was 55 ng/mL (range, 40 - 70 ng/mL). The mean peak plasma concentration following a 2 mg oral dose was 98 ng/mL (range, 75 - 140 ng/mL).				
<b>5645SP Opiates - Free (Unconjugated) Confirmation, Serum/Plasma</b>				
Analysis by High Performance Liquid Chromatography/Tandem Mass Spectrometry (LC-MS/MS)				
Dihydrocodeine / Hydrocodol - Free	50	ng/mL	5.0	
Adult therapeutic range: 72-150 ng/mL.				
Codeine - Free	50	ng/mL	5.0	
Adult therapeutic range: 20-210 ng/mL.				
Morphine - Free	50	ng/mL	5.0	
Adult therapeutic range: <73 ng/mL.				
Hydrocodone - Free	50	ng/mL	5.0	
Synonym(s): Vicodin®; Zohydro®				
Adult therapeutic range: 6-29 ng/mL.				
6-MAM - Free	50	ng/mL	1.0	
Synonym(s): 6-Monoacetylmorphine; Heroin Metabolite				
6-Monoacetylmorphine is a metabolite of heroin.				
Hydromorphone - Free	50	ng/mL	1.0	
Synonym(s): Dilaudid®; Hydrocodone Metabolite				
Adult therapeutic range: 5-20 ng/mL.				
Oxycodone - Free	50	ng/mL	5.0	
Synonym(s): OxyContin®; Roxicodone®				

Results for sample 17001864-001 are continued on next page



**Sample ID** 17001864-001  
**Matrix** Serum or Plasma  
**Patient Name** 8101SP-POS  
**Patient ID** 8101SP-POS

**Collect Dt/Tm** Not Given  
**Source** Not Given

Analysis and Comments	Result	Units	Reporting Limit	Notes
Adult therapeutic range: 13-120 ng/mL.				
Oxymorphone - Free	50	ng/mL	1.0	
Synonym(s): Numorphan®; Opana®; Oxycodone Metabolite				
Adult therapeutic range: 3-8 ng/mL.				
<b>5646SP Cannabinoids Confirmation, Serum/Plasma</b>				
Analysis by High Performance Liquid Chromatography/Tandem Mass Spectrometry (LC-MS/MS)				
11-Hydroxy Delta-9 THC	50	ng/mL	1.0	
Synonym(s): Active Metabolite				
11-Hydroxy Delta-9 THC is an active intermediate metabolite of tetrahydrocannabinol (THC) the active component of marijuana. Usual peak levels: Less than 10% of THC levels after smoking.				
Delta-9 Carboxy THC	50	ng/mL	5.0	
Synonym(s): Inactive Metabolite				
Usual peak levels in serum for 1.75% or 3.55% THC marijuana cigarettes: 10 - 101 ng/mL about 32 to 240 minutes after beginning smoking, with a slow decline. Usually not detectable after passive inhalation.				
Delta-9 THC	50	ng/mL	0.50	
Synonym(s): Active Ingredient of Marijuana				
Usual peak levels in serum for 1.75% or 3.55% THC marijuana cigarettes: 50 - 270 ng/mL at 6 to 9 minutes after beginning smoking, decreasing to less than 5 ng/mL by 2 hrs.				
<b>5651SP Barbiturates Confirmation, Serum/Plasma</b>				
Analysis by Gas Chromatography/Mass Spectrometry (GC/MS)				
Butabarbital	50	mcg/mL	0.20	
Synonym(s): Butisol Sodium				

Results for sample 17001864-001 are continued on next page





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**Sample ID** 17001864-001  
**Matrix** Serum or Plasma  
**Patient Name** 8101SP-POS  
**Patient ID** 8101SP-POS

**Collect Dt/Tm** Not Given  
**Source** Not Given

Analysis and Comments	Result	Units	Reporting Limit	Notes
<p>Plasma concentrations of 2 - 3 mcg/mL produce sedation and plasma concentrations of 25 mcg/mL produce sleep in most patients. Plasma concentrations of greater than 30 mcg/mL may produce coma and plasma concentrations in excess of 50 mcg/mL are potentially lethal.</p>				
<p><b>Butalbital</b></p> <p>A single oral 100 mg dose resulted in a mean peak blood concentration of 2.1 mcg/mL (range, 1.7 - 2.6 mcg/mL) at 2 hours, with a decline to 1.5 mcg/mL (range, 1.3 - 1.7 mcg/mL) by 24 hours. Potentially toxic at plasma concentrations greater than 10 mcg/mL.</p>	50	mcg/mL	0.20	
<p><b>Amobarbital</b></p> <p>Following a single oral administration of 120 mg, serum concentrations peaked at about 1.8 mcg/mL at 2 hours, and declined slowly thereafter with a half-life of approximately 24 hours. Potentially toxic at plasma concentrations greater than 9 mcg/mL.</p>	50	mcg/mL	0.20	
<p><b>Pentobarbital</b></p> <p>Peak serum concentrations of 1.2 - 3.1 mcg/mL were produced 0.5 - 2.0 hours after a 100 mg oral dose and peak serum concentrations of 3 mcg/mL were produced 6 min. following a 100 mg IV dose. Potentially toxic at blood concentrations greater than 10 mcg/mL.</p>	50	mcg/mL	0.20	
<p><b>Secobarbital</b></p> <p>Synonym(s): Seconal®</p> <p>A 3.3 mg/kg oral dose (approx. 230 mg/70 kg) produced a mean peak blood concentration of 2.0 mcg/mL (range, 1.8 - 2.2 mcg/mL) at 3 hours, diminishing to 1.3 mcg/mL by 20 hours and 0.8 mcg/mL by 40 hours. Potentially toxic at blood concentrations greater than 8 mcg/mL.</p>	50	mcg/mL	0.20	
<p><b>Phenobarbital</b></p> <p>Synonym(s): Luminal®</p> <p>Serum/plasma concentrations of 10 - 30 mcg/mL are generally considered desirable when given as an anticonvulsant.</p>	50	mcg/mL	0.20	ELEVATED

Results for sample 17001864-001 are continued on next page



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Sample ID 17001864-001
Matrix Serum or Plasma
Patient Name 8101SP-POS
Patient ID 8101SP-POS

Collect Dt/Tm Not Given
Source Not Given

Table with 5 columns: Analysis and Comments, Result, Units, Reporting Limit, Notes. Contains three sections: 5657SP Phencyclidine Confirmation, 5682SP Methadone and Metabolite Confirmation, and 5684SP Amphetamines Confirmation.

Results for sample 17001864-001 are continued on next page



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Sample ID 17001864-001
Matrix Serum or Plasma
Patient Name 8101SP-POS
Patient ID 8101SP-POS

Collect Dt/Tm Not Given
Source Not Given

Table with 5 columns: Analysis and Comments, Result, Units, Reporting Limit, Notes. Contains data for Phenylpropanolamine, Norpseudoephedrine, Amphetamine, and Phentermine.

Results for sample 17001864-001 are continued on next page



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Matrix Serum or Plasma
Patient Name 8101SP-POS
Patient ID 8101SP-POS

Collect Dt/Tm Not Given
Source Not Given

Table with 5 columns: Analysis and Comments, Result, Units, Reporting Limit, Notes. Contains data for Methamphetamine, MDA, MDMA, and MDEA.