



NMS Labs

CONFIDENTIAL

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

Demo Report

Report Issued 11/13/2018 12:49
Last Report Issued 10/12/2018 12:12

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

Patient Name 8054B-POS
Patient ID 8054B-POS
Chain 18001479
Age Not Given DOB Not Given
Gender Not Given
Workorder 18001479
Received 09/25/2018 12:47

Sample ID 18001479-001
Matrix Blood
Patient Name 8054B-POS
Patient ID 8054B-POS
Container Type Clear vial

Collect Dt/Tm Not Given
Source Not Given

Approx Vol/Weight Not Given

Receipt Notes None Entered

Table with 5 columns: Analysis and Comments, Result, Units, Reporting Limit, Notes

5960B Synthetic Cannabinoids Confirmation, Blood

Analysis by High Performance Liquid Chromatography/ Tandem Mass Spectrometry (LC-MS/MS)

AM-2201 50 ng/mL 0.10

Synonym(s): 5F-JWH-018; [1-(5-fluoropentyl)-1H-indol-3-yl]-1-naphthalenyl-methanone

AM-2201, a synthetic cannabinoid, has been identified in products sold as 'herbal incense'. These products may be used as an alternative to cannabis.

Whole blood concentrations of 0.31 - 4.6 ng/mL have been reported (N=6).

XLR-11 50 ng/mL 0.20

Synonym(s): (1-(5-fluoropentyl)-1H-indol-3-yl)(2,2,3,3-tetramethylcyclopropyl)methanone; 5F-UR-144

Results for sample 18001479-001 are continued on next page



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

**Sample ID** 18001479-001  
**Matrix** Blood  
**Patient Name** 8054B-POS  
**Patient ID** 8054B-POS

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

Analysis and Comments	Result	Units	Reporting Limit	Notes
<p>XLR-11 a synthetic cannabinoid, has been identified in products sold as 'herbal incense'. These products may be used as an alternative to cannabis.</p> <p>A serum concentration of 35 ng/mL was reported in a patient admitted to the hospital with nausea, vomiting and abdominal pain. XLR-11 has been associated with acute kidney injury.</p> <p>The whole blood to serum ratio of this analyte is not known.</p>				
<p><b>JWH-018</b></p> <p>Synonym(s): (1-pentyl-1H-indol-3-yl)-1-naphthalenyl-methanone; AM-678</p> <p>JWH-018, a synthetic cannabinoid, has been identified in products sold as 'herbal incense'. These products may be used as an alternative to cannabis.</p> <p>Two volunteers smoked cigarettes containing 100 mg or 150 mg of an herbal incense containing an unknown amount of JWH-018. Peak serum concentrations were 8.1 and 10.2 ng/mL, respectively, 5 minutes post-dose. Serum concentrations in both volunteers were &lt;0.5 ng/mL 3 hours post dose.</p> <p>The whole blood to serum ratio of this analyte is not known.</p>	50	ng/mL	0.10	
<p><b>JWH-122</b></p> <p>Synonym(s): (4-methyl-1-naphthalenyl)(1-pentyl-1H-indol-3-yl)-methanone</p> <p>JWH-122, a synthetic cannabinoid, has been identified in products sold as 'herbal incense'. These products may be used as an alternative to cannabis.</p> <p>Eleven patients admitted to emergency departments had JWH-122 serum concentrations of 0.17 - 40 ng/mL; the concentration was less than 1 ng/mL in 6 cases.</p> <p>The whole blood to serum ratio of this analyte is not known.</p>	50	ng/mL	0.10	
<p><b>UR-144</b></p> <p>Synonym(s): 1-pentyl-3-[1-(2,2,3,3-tetramethylcyclopropyl)]indole; KM-X1</p>	50	ng/mL	0.20	

Results for sample 18001479-001 are continued on next page



**Sample ID** 18001479-001  
**Matrix** Blood  
**Patient Name** 8054B-POS  
**Patient ID** 8054B-POS

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

Analysis and Comments	Result	Units	Reporting Limit	Notes
<p>UR-144 a synthetic cannabinoid, has been identified in products sold as 'herbal incense'. These products may be used as an alternative to cannabis.</p> <p>JWH-081 a synthetic cannabinoid, has been identified in products sold as 'herbal incense'. These products may be used as an alternative to cannabis.</p> <p>A serum concentration of 6 ng/mL was reported in a patient admitted to the hospital with nausea, vomiting and abdominal pain.</p> <p>The whole blood to serum ratio of this analyte is not known.</p>				
<b>8054B Postmortem, Expanded with NPS, Blood (Forensic)</b>				
Analysis by Enzyme-Linked Immunosorbent Assay (ELISA)				
Salicylates	See Comment	mcg/mL	120	
Comment:	Based on this screening result, confirmation testing was performed. Refer to the confirmation test result(s).			
Cannabinoids	See Comment	ng/mL	10	
Comment:	Based on this screening result, confirmation testing was performed. Refer to the confirmation test result(s).			
Barbiturates	See Comment	mcg/mL	0.040	
Comment:	Based on this screening result, confirmation testing was performed. Refer to the confirmation test result(s).			
Analysis by Headspace Gas Chromatography (GC)				
Ethanol	85	mg/dL	10	
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.				
Blood Alcohol Concentration (BAC)	0.085	g/100 mL	0.010	
Methanol	85	mg/dL	5.0	

Results for sample 18001479-001 are continued on next page



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Sample ID 18001479-001
Matrix Blood
Patient Name 8054B-POS
Patient ID 8054B-POS

Collect Dt/Tm Not Given
Source Not Given

Table with 5 columns: Analysis and Comments, Result, Units, Reporting Limit, Notes. Contains rows for Methyl Alcohol, Isopropanol, Acetone, and PX1 with detailed clinical and analytical notes.

Results for sample 18001479-001 are continued on next page



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**Sample ID** 18001479-001  
**Matrix** Blood  
**Patient Name** 8054B-POS  
**Patient ID** 8054B-POS

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

Analysis and Comments	Result	Units	Reporting Limit	Notes
<p>This analyte has demonstrated instability under certain storage conditions which may be dependent upon matrix, pH, collection tube, and storage temperature. Negative results should be interpreted with caution.</p>				
PX2	See Comment	ng/mL	0.20	
<p>Synonym(s): (R)-N-(1-amino-1-oxo-3-phenylpropan-2-yl)-1-(5-fluoropentyl)-1H-indazole-3-carboxamide; 5F-APP-PINACA; FU-PX</p> <p>Comment: Based on this screening result, confirmation testing was performed. Refer to the confirmation test result(s).</p> <p>This analyte has demonstrated instability under certain storage conditions which may be dependent upon matrix, pH, collection tube, and storage temperature. Negative results should be interpreted with caution.</p>				
AB-FUBINACA	See Comment	ng/mL	1.0	
<p>Synonym(s): N-(1-amino-3-methyl-1-oxobutan-2-yl)-1-(4-fluorobenzyl)-1H-indazole-3-carboxamide</p> <p>Comment: Based on this screening result, confirmation testing was performed. Refer to the confirmation test result(s).</p>				
5F-ADBICA	See Comment	ng/mL	1.0	
<p>Synonym(s): N-(1-amino-3,3-dimethyl-1-oxobutan-2-yl)-1-(5-fluoropentyl)-1H-indole-3-carboxamide</p> <p>Comment: Based on this screening result, confirmation testing was performed. Refer to the confirmation test result(s).</p>				
5F-ADB-PINACA	See Comment	ng/mL	1.0	
<p>Synonym(s): N-(1-amino-3,3-dimethyl-1-oxobutan-2-yl)-1-(5-Fluoropentyl)-1H-indazole-3-carboxamide</p> <p>Comment: Based on this screening result, confirmation testing was performed. Refer to the confirmation test result(s).</p> <p>This analyte has demonstrated instability under certain storage conditions which may be dependent upon matrix, pH, collection tube, and storage temperature. Negative results should be interpreted with caution.</p>				
ADB-FUBINACA	See Comment	ng/mL	1.0	
<p>Synonym(s): N-(1-Amino-3,3-dimethyl-1-oxobutan-2-yl)-1-(4-fluorobenzyl)-1H-indazole-3-carboxamide</p> <p>Comment: Based on this screening result, confirmation testing was performed. Refer to the confirmation test result(s).</p>				

Results for sample 18001479-001 are continued on next page



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**Sample ID** 18001479-001  
**Matrix** Blood  
**Patient Name** 8054B-POS  
**Patient ID** 8054B-POS

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

Analysis and Comments	Result	Units	Reporting Limit	Notes
<b>AB-PINACA</b> Synonym(s): N-(1-amino-3-methyl-1-oxobutan-2-yl)-1-pentyl-1H-indazole-3-carboxamide Comment: Based on this screening result, confirmation testing was performed. Refer to the confirmation test result(s).	See Comment	ng/mL	0.20	
<b>5F-PB-22</b> Synonym(s): 1-(5-fluoropentyl)-8-quinolinyl ester-1H-indole-3-carboxylic acid; 5F-QUPIC Comment: Based on this screening result, confirmation testing was performed. Refer to the confirmation test result(s).	See Comment	ng/mL	0.10	
<b>5F-AMB</b> Synonym(s): 5F-AMP; N-[[1-(5-fluoropentyl)-1H-indazol-3-yl]carbonyl]-L-valine, methyl ester Comment: Based on this screening result, confirmation testing was performed. Refer to the confirmation test result(s).  This analyte has demonstrated instability under certain storage conditions which may be dependent upon matrix, pH, collection tube, and storage temperature. Negative results should be interpreted with caution.	See Comment	ng/mL	0.10	
<b>FUB-AMB</b> Synonym(s): AMB-FUBINACA; methyl (1-(4-fluorobenzyl)-1H-indazole-3-carbonyl)-L-valinate Comment: Based on this screening result, confirmation testing was performed. Refer to the confirmation test result(s).  This analyte has demonstrated instability under certain storage conditions which may be dependent upon matrix, pH, collection tube, and storage temperature. Negative results should be interpreted with caution.	See Comment	ng/mL	0.10	
<b>CUMYL-THPINACA</b> Synonym(s): methyl (1-(cyclohexylmethyl)-1H-indole-3-carbonyl)-L-valinate Comment: Based on this screening result, confirmation testing was performed. Refer to the confirmation test result(s).	See Comment	ng/mL	0.10	
<b>FUB-PB-22</b> Synonym(s): quinolin-8-yl-1-(4-fluorobenzyl)-1H-indole-3-carboxylate Comment: Based on this screening result, confirmation testing was performed. Refer to the confirmation test result(s).	See Comment	ng/mL	0.10	

Results for sample 18001479-001 are continued on next page



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**Sample ID** 18001479-001  
**Matrix** Blood  
**Patient Name** 8054B-POS  
**Patient ID** 8054B-POS

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

Analysis and Comments	Result	Units	Reporting Limit	Notes
5F-ADB Synonym(s): 5F-MDMB-PINACA; methyl (R)-2-(1-(5-fluoropentyl)-1H-indazole-3-carboxamido)-3,3-dimethylbutanoate Comment: Based on this screening result, confirmation testing was performed. Refer to the confirmation test result(s).	See Comment	ng/mL	0.20	
ADBICA Synonym(s): N-(1-amino-3,3-dimethyl-1-oxobutan-2-yl)-1-pentyl-1H-indole-3-carboxamide Comment: Based on this screening result, confirmation testing was performed. Refer to the confirmation test result(s).	See Comment	ng/mL	1.0	
ADB-PINACA Synonym(s): N-(1-amino-3,3-dimethyl-1-oxobutan-2-yl)-1-pentyl-1H-indazole-3-carboxamide Comment: Based on this screening result, confirmation testing was performed. Refer to the confirmation test result(s).	See Comment	ng/mL	0.20	
AM-2201 Synonym(s): 5F-JWH-018; [1-(5-fluoropentyl)-1H-indol-3-yl]-1-naphthalenyl-methanone Comment: Based on this screening result, confirmation testing was performed. Refer to the confirmation test result(s).	See Comment	ng/mL	0.10	
AB-CHMINACA Synonym(s): N-[(1S)-1-(Aminocarbonyl)-2-methylpropyl]-1-(cyclohexylmethyl)-1H-indazole-3-carboxamide Comment: Based on this screening result, confirmation testing was performed. Refer to the confirmation test result(s).	See Comment	ng/mL	1.0	
MDMB-FUBINACA Synonym(s): 1-methoxy-3,3-dimethyl-1-oxobutan-2-yl 1-(cyclohexylmethyl)-1H-indazole-3-carboxylate; MO-AMB Comment: Based on this screening result, confirmation testing was performed. Refer to the confirmation test result(s).	See Comment	ng/mL	0.10	
FUB-JWH-018 Synonym(s): (1-(4-fluorobenzyl)-1H-indol-3-yl)(naphthalen-1-yl)methanone Comment: Based on this screening result, confirmation testing was performed. Refer to the confirmation test result(s).	See Comment	ng/mL	0.20	
APP-CHMINACA (PX3)	See Comment	ng/mL	0.20	

Results for sample 18001479-001 are continued on next page



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**Sample ID** 18001479-001  
**Matrix** Blood  
**Patient Name** 8054B-POS  
**Patient ID** 8054B-POS

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

Analysis and Comments	Result	Units	Reporting Limit	Notes
Synonym(s): N-[(1S)-2-amino-2-oxo-1-(phenylmethyl)ethyl]-1-(cyclohexylmethyl)-1H-Indazole-3-carboxamide; PX3 Comment: Based on this screening result, confirmation testing was performed. Refer to the confirmation test result(s).				
5F-MN-18	See Comment	ng/mL	0.10	
Synonym(s): 1-(5-fluoropentyl)-N-1-naphthalenyl-1H-indazole-3-carboxamide Comment: Based on this screening result, confirmation testing was performed. Refer to the confirmation test result(s).				
ADB-CHMINACA	See Comment	ng/mL	0.10	
Synonym(s): MAB-CHMINACA; N-(1-amino-3,3-dimethyl-1-oxobutan-2-yl)-1-(cyclohexylmethyl)-1H-indazole-3-carboxamide Comment: Based on this screening result, confirmation testing was performed. Refer to the confirmation test result(s).				
THJ-2201	See Comment	ng/mL	0.10	
Synonym(s): (1-(5-fluoropentyl)-1H-indazol-3-yl)(naphthalen-1-yl)methanone; 5-fluoro THJ-018; AM2201 indazole analog; Fluoropentyl-JWH-018 indazole Comment: Based on this screening result, confirmation testing was performed. Refer to the confirmation test result(s).				
AMB	See Comment	ng/mL	0.10	
Synonym(s): AMP; methyl (1-pentyl-1H-indazole-3-carbonyl)-L-valinate Comment: Based on this screening result, confirmation testing was performed. Refer to the confirmation test result(s).				
MMB-CHMICA	See Comment	ng/mL	0.10	
Synonym(s): MDMB-Bz-F; methyl (S)-2-(1-(4-fluorobenzyl)-1H-indazole-3-carboxamido)-3,3-dimethylbutanoate; FUB-MDMB Comment: Based on this screening result, confirmation testing was performed. Refer to the confirmation test result(s).				
XLR-11	See Comment	ng/mL	0.20	
Synonym(s): (1-(5-fluoropentyl)-1H-indol-3-yl)(2,2,3,3-tetramethylcyclopropyl)methanone; 5F-UR-144 Comment: Based on this screening result, confirmation testing was performed. Refer to the confirmation test result(s).				
FUB-144	See Comment	ng/mL	0.10	

Results for sample 18001479-001 are continued on next page



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**Sample ID** 18001479-001  
**Matrix** Blood  
**Patient Name** 8054B-POS  
**Patient ID** 8054B-POS

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

Analysis and Comments	Result	Units	Reporting Limit	Notes
Synonym(s): (1-(4-fluorobenzyl)-1H-indol-3-yl)(2,2,3,3-tetramethylcyclopropyl)methanone; FUB-UR-144				
Comment: Based on this screening result, confirmation testing was performed. Refer to the confirmation test result(s).				
NM-2201	See Comment	ng/mL	0.10	
Synonym(s): CBL-2201; naphthalen-1-yl 1-(5-fluoropentyl)-1H-indole-3-carboxylate				
Comment: Based on this screening result, confirmation testing was performed. Refer to the confirmation test result(s).				
5F-APICA	See Comment	ng/mL	1.0	
Synonym(s): 5F-JWH-018 Adamantyl Carboxamide; N-(1-adamantyl)-1-(5-fluoropentyl)-1H-indole-3-carboxamide; STS-135				
Comment: Based on this screening result, confirmation testing was performed. Refer to the confirmation test result(s).				
JWH-018	See Comment	ng/mL	0.10	
Synonym(s): (1-pentyl-1H-indol-3-yl)-1-naphthalenyl-methanone; AM-678				
Comment: Based on this screening result, confirmation testing was performed. Refer to the confirmation test result(s).				
MMB-CHMINACA (MDMB-CHMICA)	See Comment	ng/mL	0.10	
Synonym(s): methyl (S)-2-(1-(cyclohexylmethyl)-1H-indole-3-carboxamido)-3,3-dimethylbutanoate				
Comment: Based on this screening result, confirmation testing was performed. Refer to the confirmation test result(s).				
MA-CHMINACA	See Comment	ng/mL	0.20	
Synonym(s): AMB-CHMINACA; AMB-N-methylcyclohexyl analog; MAB-AB-CHMINACA; methyl (1-(cyclohexylmethyl)-1H-indazole-3-carbonyl)-L-valinate				
Comment: Based on this screening result, confirmation testing was performed. Refer to the confirmation test result(s).				
5F-AB-001	See Comment	ng/mL	1.0	
Synonym(s): 1-(5-Fluoropentyl)-3-(1-adamantoyl)indole; 5F-JWH-018 Adamantyl Analog; AM2201 adamantyl analog				
Comment: Based on this screening result, confirmation testing was performed. Refer to the confirmation test result(s).				

Results for sample 18001479-001 are continued on next page



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**Sample ID** 18001479-001  
**Matrix** Blood  
**Patient Name** 8054B-POS  
**Patient ID** 8054B-POS

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

Analysis and Comments	Result	Units	Reporting Limit	Notes
<p>This analyte has demonstrated instability under certain storage conditions which may be dependent upon matrix, pH, collection tube, and storage temperature.            Negative results should be interpreted with caution.</p>				
JWH-122	See Comment	ng/mL	0.10	
Synonym(s):	(4-methyl-1-naphthalenyl)(1-pentyl-1H-indol-3-yl)-methanone			
Comment:	Based on this screening result, confirmation testing was performed. Refer to the confirmation test result(s).			
MDMB-CHMINACA	See Comment	ng/mL	0.10	
Synonym(s):	N-[[1-(cyclohexylmethyl)-1H-indazol-3-yl]carbonyl]-3-methyl-L-valine, methyl ester			
Comment:	Based on this screening result, confirmation testing was performed. Refer to the confirmation test result(s).			
MO-CHMINACA	See Comment	ng/mL	0.10	
Synonym(s):	N-(1-methyl-1-phenylethyl)-1-[(tetrahydro-2H-pyran-4-yl)methyl]-1H-indazole-3-carboxamide			
Comment:	Based on this screening result, confirmation testing was performed. Refer to the confirmation test result(s).			
5F-APINACA (5F-AKB-48)	See Comment	ng/mL	2.0	
Synonym(s):	N-(1-adamantyl)-1-(5-Fluoropentyl)-1H-indazole-3-carboxamide			
Comment:	Based on this screening result, confirmation testing was performed. Refer to the confirmation test result(s).			
THJ-018	See Comment	ng/mL	0.10	
Synonym(s):	1-naphthalenyl(1-pentyl-1H-indazol-3-yl)-methanone; JWH-018 indazole analog			
Comment:	Based on this screening result, confirmation testing was performed. Refer to the confirmation test result(s).			
UR-144	See Comment	ng/mL	0.20	
Synonym(s):	1-pentyl-3-[1-(2,2,3,3-tetramethylcyclopropyl)]indole; KM-X1			
Comment:	Based on this screening result, confirmation testing was performed. Refer to the confirmation test result(s).			
EG-2201	See Comment	ng/mL	0.20	
Synonym(s):	(9-(5-fluoropentyl)-9H-carbazol-3-yl)(naphthalen-1-yl)methanone			

Results for sample 18001479-001 are continued on next page



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Sample ID 18001479-001
Matrix Blood
Patient Name 8054B-POS
Patient ID 8054B-POS

Collect Dt/Tm Not Given
Source Not Given

Table with 5 columns: Analysis and Comments, Result, Units, Reporting Limit, Notes. Rows include FUB-AKB-48, APICA, MDMB-CHMCZCA, and APINACA (AKB-48) with their respective results and comments.

Analysis by High Performance Liquid
Chromatography/Time of Flight-Mass Spectrometry
(LC/TOF-MS)

Scope Statement See Comment
Comment: The following is a general list of compound classes included in this screen. The detection of any specific analyte is concentration-dependent. Note, not all known analytes in each specified compound class are included. Some specific analytes outside these classes are also included. For a detailed list of all analytes and reporting limits, please contact NMS Labs.

- Amphetamines, Anticonvulsants, Antidepressants, Antihistamines, Antipsychotic Agents, Benzodiazepines, CNS Stimulants, Cocaine and Metabolites, Hallucinogens, Hyposedatives, Hypoglycemics, Muscle Relaxants, Non-Steroidal Anti-Inflammatory Agents, Opiates and Opioids.

Results for sample 18001479-001 are continued on next page



**Sample ID** 18001479-001  
**Matrix** Blood  
**Patient Name** 8054B-POS  
**Patient ID** 8054B-POS

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

Analysis and Comments	Result	Units	Reporting Limit	Notes
<b>50001B Salicylate Confirmation, Blood</b>				
Analysis by High Performance Liquid Chromatography/ Tandem Mass Spectrometry (LC-MS/MS)				
Salicylate	500	mcg/mL	5.0	
Analgesic range: 20 - 100 mcg/mL. Anti-inflammatory range: 150 - 300 mcg/mL. Toxic: Greater than 300 mcg/mL.				
<b>50011B Barbiturates Confirmation, Blood</b>				
Analysis by Gas Chromatography/Mass Spectrometry (GC/MS)				
Butabarbital	25	mcg/mL	0.20	
Synonym(s): Butisol Sodium				
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.				
Butalbital	25	mcg/mL	0.20	
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.				
Amobarbital	25	mcg/mL	0.20	
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.				
Pentobarbital	25	mcg/mL	0.20	

Results for sample 18001479-001 are continued on next page



**Sample ID** 18001479-001  
**Matrix** Blood  
**Patient Name** 8054B-POS  
**Patient ID** 8054B-POS

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

Analysis and Comments	Result	Units	Reporting Limit	Notes
<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>				
<p>Secobarbital</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>	25	mcg/mL	0.20	
<p>Phenobarbital</p> <p>Synonym(s): Luminal®</p> <p>Serum/plasma concentrations of 10 - 30 mcg/mL are generally considered desirable when given as an anticonvulsant. A blood/plasma ratio of 0.81 has been reported.</p>	25	mcg/mL	0.50	
<b>52198B Cannabinoids Confirmation, Blood</b>				
Analysis by High Performance Liquid Chromatography/ Tandem Mass Spectrometry (LC-MS/MS)				
<p>11-Hydroxy Delta-9 THC</p> <p>Synonym(s): Active Metabolite</p> <p>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.</p>	50	ng/mL	1.0	
<p>Delta-9 Carboxy THC</p> <p>Synonym(s): Inactive Metabolite</p> <p>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.</p>	50	ng/mL	5.0	
<p>Delta-9 THC</p> <p>Synonym(s): Active Ingredient of Marijuana</p>	50	ng/mL	0.50	

Results for sample 18001479-001 are continued on next page



Sample ID 18001479-001  
Matrix Blood  
Patient Name 8054B-POS  
Patient ID 8054B-POS

Collect Dt/Tm Not Given  
Source Not Given

Analysis and Comments	Result	Units	Reporting Limit	Notes
<p>THC concentrations in blood are usually about one-half of serum/plasma concentrations. 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.</p>				
<b>52250B Alcohols and Acetone Confirmation, Blood</b>				
Analysis by Headspace Gas Chromatography (GC)				
Ethanol	Confirmed	mg/dL	10	
Synonym(s): Ethyl Alcohol				
Methanol	Confirmed	mg/dL	5.0	
Synonym(s): Methyl Alcohol				
Isopropanol	Confirmed	mg/dL	5.0	
Synonym(s): Isopropyl Alcohol				
Acetone	Confirmed	mg/dL	5.0	
<b>5970B Synthetic Cannabinoids Confirmation Panel 2 (Qualitative), Blood</b>				
Analysis by High Performance Liquid Chromatography/ Tandem Mass Spectrometry (LC-MS/MS)				
5F-AMB	Positive	ng/mL	0.10	
Synonym(s): 5F-AMP; N-[[1-(5-fluoropentyl)-1H-indazol-3-yl]carbonyl]-L-valine, methyl ester				
<p>5F-AMB is one of many synthetic cannabinoid drugs. The drug is typically sprayed on botanical material and smoked, although it can be ingested in liquid or powder form. It binds to and demonstrates functional activity at the same brain receptor as THC, the active component of marijuana.</p> <p>This analyte has demonstrated instability under certain storage conditions which may be dependent upon matrix, pH, collection tube, and storage temperature. Negative results should be interpreted with caution.</p>				
5F-PB-22	Positive	ng/mL	0.10	

Results for sample 18001479-001 are continued on next page



**Sample ID** 18001479-001  
**Matrix** Blood  
**Patient Name** 8054B-POS  
**Patient ID** 8054B-POS

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

Analysis and Comments	Result	Units	Reporting Limit	Notes
<p>Synonym(s): 1-(5-fluoropentyl)-8-quinolinyl ester-1H-indole-3-carboxylic acid; 5F-QUPIC</p> <p>5F-PB-22 is one of many synthetic cannabinoid drugs. The drug is typically sprayed on botanical material and smoked, although it can be ingested in liquid or powder form. It binds to and demonstrates functional activity at the same brain receptor as THC, the active component of marijuana.</p>				
<b>FUB-AMB</b>	<b>Positive</b>	<b>ng/mL</b>	<b>0.10</b>	
<p>Synonym(s): AMB-FUBINACA; methyl (1-(4-fluorobenzyl)-1H-indazole-3-carbonyl)-L-valinate</p> <p>FUB-AMB is one of many synthetic cannabinoid drugs. The drug is typically sprayed on botanical material and smoked, although it can be ingested in liquid or powder form. It binds to and demonstrates functional activity at the same brain receptor as THC, the active component of marijuana.</p> <p>This analyte has demonstrated instability under certain storage conditions which may be dependent upon matrix, pH, collection tube, and storage temperature. Negative results should be interpreted with caution.</p>				
<b>FUB-PB-22</b>	<b>Positive</b>	<b>ng/mL</b>	<b>0.10</b>	
<p>Synonym(s): quinolin-8-yl-1-(4-fluorobenzyl)-1H-indole-3-carboxylate</p> <p>FUB-PB-22 is one of many synthetic cannabinoid drugs. The drug is typically sprayed on botanical material and smoked, although it can be ingested in liquid or powder form. It binds to and demonstrates functional activity at the same brain receptor as THC, the active component of marijuana.</p>				
<b>5F-ADB</b>	<b>Positive</b>	<b>ng/mL</b>	<b>0.20</b>	
<p>Synonym(s): 5F-MDMB-PINACA; methyl (R)-2-(1-(5-fluoropentyl)-1H-indazole-3-carboxamido)-3,3-dimethylbutanoate</p> <p>5F-ADB is one of many synthetic cannabinoid drugs. The drug is typically sprayed on botanical material and smoked, although it can be ingested in liquid or powder form. It binds to and demonstrates functional activity at the same brain receptor as THC, the active component of marijuana.</p>				
<b>FUB-JWH-018</b>	<b>Positive</b>	<b>ng/mL</b>	<b>0.20</b>	
<p>Synonym(s): (1-(4-fluorobenzyl)-1H-indol-3-yl)(naphthalen-1-yl)methanone</p>				

Results for sample 18001479-001 are continued on next page



**Sample ID** 18001479-001  
**Matrix** Blood  
**Patient Name** 8054B-POS  
**Patient ID** 8054B-POS

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

Analysis and Comments	Result	Units	Reporting Limit	Notes
<p>FUB-JWH-018 is one of many synthetic cannabinoid drugs. The drug is typically sprayed on botanical material and smoked, although it can be ingested in liquid or powder form. No studies have been performed to evaluate the pharmacological effects of this compound.</p>				
5F-MN-18	Positive	ng/mL	0.10	
<p>Synonym(s): 1-(5-fluoropentyl)-N-1-naphthalenyl-1H-indazole-3-carboxamide</p> <p>5F-MN-18 is one of many synthetic cannabinoid drugs. The drug is typically sprayed on botanical material and smoked, although it can be ingested in liquid or powder form. No studies have been performed to evaluate the pharmacological effects of this compound.</p>				
AMB	Positive	ng/mL	0.10	
<p>Synonym(s): AMP; methyl (1-pentyl-1H-indazole-3-carbonyl)-L-valinate</p> <p>AMB is one of many synthetic cannabinoid drugs. The drug is typically sprayed on botanical material and smoked, although it can be ingested in liquid or powder form. No studies have been performed to evaluate the pharmacological effects of this compound.</p>				
THJ-2201	Positive	ng/mL	0.10	
<p>Synonym(s): (1-(5-fluoropentyl)-1H-indazol-3-yl)(naphthalen-1-yl)methanone; 5-fluoro THJ-018; AM2201 indazole analog; Fluoropentyl-JWH-018 indazole</p> <p>THJ-2201 is one of many synthetic cannabinoid drugs. The drug is typically sprayed on botanical material and smoked, although it can be ingested in liquid or powder form. It binds to and demonstrates functional activity at the same brain receptor as THC, the active component of marijuana.</p>				
MMB-CHMINACA (MDMB-CHMICA)	Positive	ng/mL	0.10	
<p>Synonym(s): methyl (S)-2-(1-(cyclohexylmethyl)-1H-indole-3-carboxamido)-3,3-dimethylbutanoate</p> <p>MMB-CHMINACA is one of many synthetic cannabinoid drugs. The drug is typically sprayed on botanical material and smoked, although it can be ingested in liquid or powder form. It binds to and demonstrates functional activity at the same brain receptor as THC, the active component of marijuana.</p>				
5F-APICA	Positive	ng/mL	1.0	

Results for sample 18001479-001 are continued on next page



**Sample ID** 18001479-001  
**Matrix** Blood  
**Patient Name** 8054B-POS  
**Patient ID** 8054B-POS

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

Analysis and Comments	Result	Units	Reporting Limit	Notes
Synonym(s): 5F-JWH-018 Adamantyl Carboxamide; N-(1-adamantyl)-1-(5-fluoropentyl)-1H-indole-3-carboxamide; STS-135  5F-APICA is one of many synthetic cannabinoid drugs. The drug is typically sprayed on botanical material and smoked, although it can be ingested in liquid or powder form. It binds to and demonstrates functional activity at the same brain receptor as THC, the active component of marijuana.				
<b>NM-2201</b>  Synonym(s): CBL-2201; naphthalen-1-yl 1-(5-fluoropentyl)-1H-indole-3-carboxylate  NM-2201 is one of many synthetic cannabinoid drugs. The drug is typically sprayed on botanical material and smoked, although it can be ingested in liquid or powder form. It binds to and demonstrates functional activity at the same brain receptor as THC, the active component of marijuana.	Positive	ng/mL	0.10	
<b>FUB-144</b>  Synonym(s): (1-(4-fluorobenzyl)-1H-indol-3-yl)(2,2,3,3-tetramethylcyclopropyl)methanone; FUB-UR-144  FUB-144 is one of many synthetic cannabinoid drugs. The drug is typically sprayed on botanical material and smoked, although it can be ingested in liquid or powder form. It binds to and demonstrates functional activity at the same brain receptor as THC, the active component of marijuana.	Positive	ng/mL	0.10	
<b>MA-CHMINACA</b>  Synonym(s): AMB-CHMINACA; AMB-N-methylcyclohexyl analog; MAB-AB-CHMINACA; methyl (1-(cyclohexylmethyl)-1H-indazole-3-carbonyl)-L-valinate  MA-CHMINACA is one of many synthetic cannabinoid drugs. The drug is typically sprayed on botanical material and smoked, although it can be ingested in liquid or powder form. It binds to and demonstrates functional activity at the same brain receptor as THC, the active component of marijuana.	Positive	ng/mL	0.20	
<b>5F-AB-001</b>  Synonym(s): 1-(5-Fluoropentyl)-3-(1-adamantoyl)indole; 5F-JWH-018 Adamantyl Analog; AM2201 adamantyl analog	Positive	ng/mL	1.0	

Results for sample 18001479-001 are continued on next page



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Sample ID 18001479-001
Matrix Blood
Patient Name 8054B-POS
Patient ID 8054B-POS

Collect Dt/Tm Not Given
Source Not Given

Table with 5 columns: Analysis and Comments, Result, Units, Reporting Limit, Notes. Rows include 5F-AB-001, 5F-APINACA (5F-AKB-48), MDMB-CHMINACA, EG-2201, and THJ-018.

Results for sample 18001479-001 are continued on next page



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Sample ID 18001479-001
Matrix Blood
Patient Name 8054B-POS
Patient ID 8054B-POS

Collect Dt/Tm Not Given
Source Not Given

Table with 5 columns: Analysis and Comments, Result, Units, Reporting Limit, Notes. Rows include APICA, FUB-AKB-48, APINACA (AKB-48), and MO-CHMINACA with detailed descriptions and results.

Results for sample 18001479-001 are continued on next page



**Sample ID** 18001479-001  
**Matrix** Blood  
**Patient Name** 8054B-POS  
**Patient ID** 8054B-POS

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

Analysis and Comments	Result	Units	Reporting Limit	Notes
MO-CHMINACA is one of many synthetic cannabinoid drugs. The drug is typically sprayed on botanical material and smoked, although it can be ingested in liquid or powder form. No studies have been published which evaluate the pharmacological effects of this compound.				
<b>MDMB-CHMCZCA</b> Synonym(s): methyl (S)-2-(9-(cyclohexylmethyl)-9H-carbazole-3-carboxamido)-3,3-dimethylbutanoate; EGMB-CHMINACA MDMB-CHMCZCA is one of many synthetic cannabinoid drugs. The drug is typically sprayed on botanical material and smoked, although it can be ingested in liquid or powder form. No studies have been published which evaluate the pharmacological effects of this compound.	Positive	ng/mL	0.10	
<b>MMB-CHMICA</b> Synonym(s): methyl (1-(cyclohexylmethyl)-1H-indole-3-carbonyl)-L-valinate MMB-CHMICA is one of many synthetic cannabinoid drugs. The drug is typically sprayed on botanical material and smoked, although it can be ingested in liquid or powder form. It binds to and demonstrates functional activity at the same brain receptor as THC, the active component of marijuana.	Positive	ng/mL	0.10	
<b>CUMYL-THPINACA</b> Synonym(s): N-(1-methyl-1-phenylethyl)-1-[(tetrahydro-2H-pyran-4-yl)methyl]-1H-indazole-3-carboxamide CUMYL-THPINACA is one of many synthetic cannabinoid drugs. The drug is typically sprayed on botanical material and smoked, although it can be ingested in liquid or powder form. No studies have been published which evaluate the pharmacological effects of this compound.	Positive	ng/mL	0.10	
<b>MDMB-FUBINACA</b> Synonym(s): methyl (S)-2-(1-(4-fluorobenzyl)-1H-indazole-3-carboxamido)-3,3-dimethylbutanoate; FUB-MDMB; MDMB-Bz-F	Positive	ng/mL	0.10	

Results for sample 18001479-001 are continued on next page



**Sample ID** 18001479-001  
**Matrix** Blood  
**Patient Name** 8054B-POS  
**Patient ID** 8054B-POS

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

Analysis and Comments	Result	Units	Reporting Limit	Notes
<p>MDMB-FUBINACA is one of many synthetic cannabinoid drugs. The drug is typically sprayed on botanical material and smoked, although it can be ingested in liquid or powder form. It binds to and demonstrates functional activity at the same brain receptor as THC, the active component of marijuana.</p>				
<p><b>5971B Synthetic Cannabinoids Confirmation Panel 1 (Qualitative), Blood</b></p> <p>Analysis by High Performance Liquid Chromatography/Tandem Mass Spectrometry (LC-MS/MS)</p>				
PX1	Positive	ng/mL	0.10	
<p>Synonym(s): 5F- APP-PICA; SRF-30; (S)-N-(1-amino-1-oxo-3-phenylpropan-2-yl)-1-(5-fluoropentyl)-1H-indole-3-carboxamide</p> <p>PX1 is one of many synthetic cannabinoid drugs. The drug is typically sprayed on botanical material and smoked, although it can be ingested in liquid or powder form. No studies have been performed to evaluate the pharmacological effects of this compound.</p> <p>This analyte has demonstrated instability under certain storage conditions which may be dependent upon matrix, pH, collection tube, and storage temperature. Negative results should be interpreted with caution.</p>				
5F-ADBICA	Positive	ng/mL	1.0	
<p>Synonym(s): N-(1-amino-3,3-dimethyl-1-oxobutan-2-yl)-1-(5-fluoropentyl)-1H-indole-3-carboxamide</p> <p>5F-ADBICA is one of many synthetic cannabinoid drugs. The drug is typically sprayed on botanical material and smoked, although it can be ingested in liquid or powder form. It binds to and demonstrates functional activity at the same brain receptor as THC, the active component of marijuana.</p>				
AB-FUBINACA	Positive	ng/mL	1.0	
<p>Synonym(s): N-(1-amino-3-methyl-1-oxobutan-2-yl)-1-(4-fluorobenzyl)-1H-indazole-3-carboxamide</p>				

Results for sample 18001479-001 are continued on next page



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Sample ID 18001479-001
Matrix Blood
Patient Name 8054B-POS
Patient ID 8054B-POS

Collect Dt/Tm Not Given
Source Not Given

Table with 5 columns: Analysis and Comments, Result, Units, Reporting Limit, Notes. Contains entries for AB-FUBINACA, PX2, 5F-ADB-PINACA, and ADB-FUBINACA.

Results for sample 18001479-001 are continued on next page



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Sample ID 18001479-001
Matrix Blood
Patient Name 8054B-POS
Patient ID 8054B-POS

Collect Dt/Tm Not Given
Source Not Given

Table with 5 columns: Analysis and Comments, Result, Units, Reporting Limit, Notes. Rows include ADB-FUBINACA, AB-PINACA, ADBICA, ADB-PINACA, and AB-CHMINACA with their respective results and reporting limits.

Results for sample 18001479-001 are continued on next page



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Sample ID 18001479-001
Matrix Blood
Patient Name 8054B-POS
Patient ID 8054B-POS

Collect Dt/Tm Not Given
Source Not Given

Table with 5 columns: Analysis and Comments, Result, Units, Reporting Limit, Notes. Contains three rows of data for AB-CHMINACA, APP-CHMINACA (PX3), and ADB-CHMINACA.