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

CONFIDENTIAL

Demo Report

Report Issued 02/03/2015 09:56
Last Report Issued 09/10/2014 08:24

88888
Clinical Example Report
Attn: IT Department
3701 Welsh Road
Willow Grove, PA 19090

Patient Name 2626B-POS
Patient ID 2626B-POS
Chain 14002612
Age Not Given **DOB** Not Given
Gender Not Given
Workorder 14002612

Received 09/09/2014 10:32

Sample ID 14002612-001
Matrix Blood
Patient Name 2626B-POS
Patient ID 2626B-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
2626B Bath Salts Panel, Blood				
Analysis by High Performance Liquid Chromatography/Tandem Mass Spectrometry (LC-MS/MS)				
Methylone	50	ng/mL	5.0	

Synonym(s): 3,4-methylenedioxy-N-methylcathinone; bk-MDMA

Methylone is a methylenedioxy beta keto amphetamine, or cathinone stimulant drug. It is the beta-keto analog of MDMA. Its use has been linked to the popular 'Designer Drug' movement, and may be present in products sold as 'Legal High' or 'Bath Salts' for recreational purposes. Methylone acts as an inhibitor of dopamine, norepinephrine, and serotonin reuptake and may have stimulating effects on the central nervous system. The drug is usually taken orally, but can also be insufflated or vaporized.

Euphoria, agitation, sweating, nausea, vomiting, dilated pupils, seizures, hyponatremia and confusion were reported in two cases after the use of bath salt products found to contain methylone. Other substances may have been present.

Four fatalities attributed to this drug had methylone heart blood concentrations of 60 - 1100 ng/mL;

Results for sample 14002612-001 are continued on next page

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Collect Dt/Tm Not Given
Source Not Given

Analysis and Comments	Result	Units	Reporting Limit	Notes
concentrations in femoral blood in three fatalities were 560, 840, and 3300 ng/mL. Methylone is known to have limited stability in blood which may be dependent upon pH, collection tube, and storage temperature; results should be interpreted with caution.				
Mephedrone	50	ng/mL	10	
Synonym(s): 1,3-dimethylamylamine; Methylhexaneamine Mephedrone is a psychoactive phenethylamine derivative that is structurally related to methcathinone and amphetamine. It is abused for its perceived 'ecstasy like' effects of euphoria, excitement, and alertness. Reported adverse effects include peripheral vasoconstriction resulting in a bruised appearance on the arms and legs, loss of appetite, poor concentration, increased heart rate, sweating with an odor, and dilation of the pupils. In two fatalities where mephedrone intoxication was determined to be the cause of death blood concentrations were 22000 ng/mL and 3300 ng/mL.				
alpha-PVP	50	ng/mL	2.0	
Synonym(s): (RS)-1-phenyl-2-(1-pyrrolidinyl)-1-pentanone; alpha-Pyrrolidinovalerophenone Alpha-Pyrrolidinovalerophenone (alpha-PVP) is a psychoactive stimulant that is structurally related to pyrovalerone and MDPV. The compound has been sold on the internet as a designer drug for the intention of recreational drug use in the form of tablets or powders to be taken orally or insufflated, respectively. It is abused for its perceived 'ecstasy like 'effects of euphoria, excitement and alertness. It is claimed that alpha-PVP improves productivity, wakefulness, motivation, locomotion and endurance. In general, psychoactive stimulants have temporary effects on the psychoneurotic				

Results for sample 14002612-001 are continued on next page

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Collect Dt/Tm Not Given
Source Not Given

Analysis and Comments	Result	Units	Reporting Limit	Notes
system. In addition, they seem to have a much higher tendency to cause side effects such as paranoia, hallucinations, and schizophrenic or psychosis like symptoms. No reference blood concentration data for this compound have been reported.				
Pentedrone	50	ng/mL	2.0	
Synonym(s): (RS)-1-phenyl-2-(methylamino)pentan-1-one Pentedrone is a beta keto amphetamine or cathinone that is chemically related to mephedron. It is a stimulant drug that was first reported in 2010. Its use has been linked to the popular 'Designer Drug' movement and may be present in products sold as 'Legal Highs' or 'Bath Salts' for recreational purposes. The drug is usually taken orally, but can also be insufflated or vaporized. No reference blood concentration data for this compound have been reported. Pentedrone is known to have limited stability in blood which may be dependent upon pH, collection tube, and storage temperature. Results should be interpreted with caution.				
MDPV	50	ng/mL	10	
Synonym(s): 1-(1,3-benzodioxol-5-yl)-2-pyrrolidin-1-ylpentan-1-one; MDPK; Methylenedioxypyrovalerone MDPV is a synthetic stimulant drug reported to have effects similar to methylphenidate at low doses and cocaine at high doses. Desired outcomes following use include increased energy and sociability, increased concentration, psychedelic effects and sexual stimulation. Reported adverse effects include insomnia, severe agitation/anxiety, panic attacks, kidney pain, stomach cramps, tachycardia, hypertension, dilated pupils, headache, tinnitus and peripheral neuropathies and dizziness. Use of MDPV has been linked to the popular 'Designer Drug' movement and may be present in products sold as 'Legal High' or 'Bath Salts' for recreational purposes. The drug is usually taken				

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Matrix Blood
Patient Name 2626B-POS
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Collect Dt/Tm Not Given
Source Not Given

Analysis and Comments	Result	Units	Reporting Limit	Notes
orally, but can also be insufflated or vaporized. Blood concentrations in 17 fatalities were 10 - 5000 ng/mL. Blood concentrations in 9 cases of drivers exhibiting signs of impairment were 6 - 360 ng/ml; other impairing drugs were often found in conjunction with MDPV.				
Methoxetamine	50	ng/mL	2.0	
Synonym(s): 2-MeO-Oxo-PC; MXE Methoxetamine is a psychoactive compound that is structurally related to ketamine and reported to have similar effects. Ketamine is a DEA Schedule III rapidly acting general anesthetic that is chemically related to phencyclidine (PCP). The effects of ketamine include profound analgesia, normal or enhanced skeletal muscle tone and cardiovascular and respiratory stimulation. Reactions manifested by hallucinations, delirium, irrational behavior and/or dream-like states may be seen with use of ketamine and, presumably, methoxetamine. The use of methoxetamine has been linked to the popular 'Designer Drug' movement and this substance may be present in products sold as 'Legal Highs' or 'Bath Salts' for recreational purposes. Blood concentrations of 130 – 490 ng/g (approximately 130 – 510 ng/mL) have been reported following acute ingestion of methoxetamine. In one fatality a concentration of 8600 ng/g (approximately 9000 ng/mL) was reported.				