

Client: Example Client ABC123  
123 Test Drive  
Salt Lake City, UT 84108  
UNITED STATES

Physician: Doctor, Example

**Patient: Patient, Example**

**DOB:** 5/11/1989  
**Gender:** Female  
**Patient Identifiers:** 01234567890ABCD, 012345  
**Visit Number (FIN):** 01234567890ABCD  
**Collection Date:** 01/01/2017 12:34

**Bath Salts Panel, Urine**

ARUP test code 2008650

Bath Salts Panel, Urine

See Note

Analysis and Comments	Result	Units
Methylone Urine Reporting Limit: 5.0 ng/mL 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. Methylone is known to have limited stability in urine which may be dependent upon pH, collection tube, and storage temperature; results should be interpreted with caution. Analysis by High Performance Liquid Chromatography/Tandem Mass Spectrometry (LC-MS/MS)	10	ng/mL
Mephedrone Urine Reporting Limit: 10 ng/mL 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. Analysis by High Performance Liquid Chromatography/Tandem Mass Spectrometry (LC-MS/MS)	20	ng/mL
alpha-PVP Urine Reporting Limit: 2.0 ng/mL Synonym(s): (RS)-1-phenyl-2-(1-pyrrolidinyl)-1-pentanone;	30	ng/mL

**H=High, L=Low, \*=Abnormal, C=Critical**

Unless otherwise indicated, testing performed at:

**ARUP LABORATORIES | 800-522-2787 | aruplab.com**  
500 Chipeta Way, Salt Lake City, UT 84108-1221  
Tracy I. George, MD, Laboratory Director

Patient: Patient, Example  
ARUP Accession: 18-289-107794  
Patient Identifiers: 01234567890ABCD, 012345  
Visit Number (FIN): 01234567890ABCD  
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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 system. In addition, they seem to have a much higher tendency to cause side effects such as paranoia, hallucinations, and schizophrenic or psychotic like symptoms.

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

Pentedrone 40 ng/mL

Urine

Reporting Limit: 2.0 ng/mL

Synonym(s): (RS)-1-phenyl-2-(methylamino)pentan-1-one  
Pentedrone is a beta keto amphetamine or cathinone that is chemically related to mephedrone. 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.

Pentedrone is known to have limited stability in urine which may be dependent upon pH, collection tube, and storage temperature. Results should be interpreted with caution.

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

MDPV 50 ng/mL

Urine

Reporting Limit: 10 ng/mL

Synonym(s):

1-(1,3-benzodioxol-5-yl)-2-pyrrolidin-1-ylpentan-1-one;  
MDPK; Methylenedioxypropylvalerone

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 orally, but can also be insufflated or vaporized.

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

Methoxetamine 60 ng/mL

Urine

Reporting Limit: 2.0 ng/mL

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.

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500 Chipeta Way, Salt Lake City, UT 84108-1221  
Tracy I. George, MD, Laboratory Director

Patient: Patient, Example  
ARUP Accession: 18-289-107794  
Patient Identifiers: 01234567890ABCD, 012345  
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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.  
Methoxetamine is known to have limited stability in urine which may be dependent upon pH, collection tube, and storage temperature; results should be interpreted with caution.  
Analysis by High Performance Liquid Chromatography/Tandem Mass Spectrometry (LC-MS/MS)  
Testing performed at NMS Labs, Inc.  
3701 Welsh Road  
Willow Grove, PA 19090-2910  
CLIA 39D0197898

VERIFIED/REPORTED DATES

Procedure	Accession	Collected	Received	Verified/Reported
Bath Salts Panel, Urine	18-289-107794	10/16/2018 12:03:00 PM	10/16/2018 12:05:06 PM	10/16/2018 12:49:00 PM

END OF CHART

**H=High, L=Low, \*=Abnormal, C=Critical**

Unless otherwise indicated, testing performed at: