



# MICRO-PREP™

Microelution 96-Well SPE Plates



Microelution Sorbent Selection

**HLB | MMCX | SCX | SAX**

شرکت مهندسی آدرینا زیست گستر

# Micro-Prep™ 96-Well plate

Introduction

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UCT's Micro-Prep™ is a 96-well micro-elution plate that features SPE disk technology designed for streamlined sample clean-up and analyte enrichment. It is ideally suited for automated, high-throughput sample prep workflows for biological sample types such as urine, serum and plasma.

The disk membrane is enhanced with dense sorbent particle packing that ensures uniform distribution of the sorbent. This minimizes the diffusion distance between sorbent particles and enables the Micro-Prep™ plate to achieve excellent extraction efficiency.

Each well of the plate contains 2mg of polymeric sorbent, allowing elution volumes as low as 30µL, and obtaining up to a 13-fold increase in concentration of analyte(s) from samples. Micro-Prep™ 96-well micro-elution plates require no frits to immobilize the SPE sorbent, ensuring efficient recoveries and overall reproducibility.

## EFFECTIVE

High analyte recoveries and cleaner extracts from a variety of matrices.

## EFFICIENT

Enhanced extraction workflows that reduce solvent usage and save time due to dry down elimination.

## FLEXIBLE

Available in various chemistries and compatible with most automated liquid-handling systems for high-throughput SPE.

## CONVENIENT

All-in-one package includes extraction plate, collection plate, and a sealing film. Separate purchases are not necessary.



## Micro-Prep™ 96-Well plate

Parts and Accessories

### Micro-Prep™ HLB - 96 Well Microelution Plate

Part Number: W96-XTMC-HLB

### Micro-Prep™ MMCX - 96 Well Microelution Plate

Part Number: W96-XTMC-MMCX

### Micro-Prep™ SAX - 96 Well Microelution Plate

Part Number: W96-XTMC-SAX

### Micro-Prep™ SCX - 96 Well Microelution Plate

Part Number: W96-XTMC-SCX

تنها نماینده رسمی محصولات UCT آمریکا در ایران

U.S. Sales  
021 91071122

Distributors of Iran ADRINA ZIST GOSTAR

# Micro-Prep™ 96-Well plate

General Methodology

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## Micro-Prep™ HLB



Embedded with  
N-Vinylpyrrolidone

Retention of neutral and aromatic compounds with enhanced bonding capabilities for polar analytes.

SA: 700-900 m<sup>2</sup>/g  
Particle Size: 15-20 μm  
Pore Diameter: 80-100 Å

### Sample Prep

- 300 μL sample + ISTD
- 300 μL 100 mM pH 10.0 Sodium Carb/Bicarbonate Buffer

### Condition (Optional)

- 100 μL MeOH
- 100 μL 100 mM pH 10.0 Sodium Carb/Bicarbonate Buffer

Load -> 400 μL

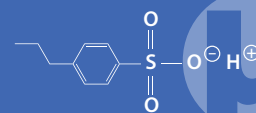
Wash -> 100 μL 5% MeOH in DI H<sub>2</sub>O

Elute -> 50 μL 2% Formic Acid in MeOH

### Post Elution (Optional)

- Evaporate & Reconstitute in Mobile Phase or Add 50 μL DI H<sub>2</sub>O

## Micro-Prep™ MMCX



Low Ion Exchange Capacity  
Retention of weakly basic and hydrophobic compounds.

SA: 650-850 m<sup>2</sup>/g  
Particle Size: 15-20 μm  
Pore Diameter: 80-100 Å

### Sample Prep

- 300 μL sample + ISTD
- 300 μL 100 mM pH 6.0 Phosphate Buffer

### Condition (Optional)

- 100 μL MeOH
- 100 μL 100 mM pH 6.0 Phosphate Buffer

Load -> 400 μL

### Wash

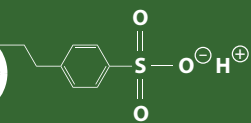
- 100 μL 100 mM Glacial Acetic Acid in DI H<sub>2</sub>O
- 100 μL 40% MeOH

Elute -> 50 μL 2% NH<sub>4</sub>OH in MeOH

### Post Elution (Optional)

- Evaporate & Reconstitute in Mobile Phase or Add 50 μL 2% Formic Acid in DI H<sub>2</sub>O

## Micro-Prep™ SCX



High Ion Exchange Capacity  
Retention of weakly basic compounds

SA: 650-850 m<sup>2</sup>/g  
Particle Size: 15-20 μm  
Pore Diameter: 80-100 Å

### Sample Prep

- 100 μL sample + ISTD
- 100 μL 100 mM pH 6.0 Phosphate Buffer

### Condition (Optional)

- 100 μL MeOH
- 100 μL 100 mM pH 6.0 Phosphate Buffer

Load -> 100 μL

### Wash

- 100 μL 100 mM Glacial Acetic Acid in DI H<sub>2</sub>O
- 100 μL MeOH

Elute -> 50 μL 2% NH<sub>4</sub>OH in MeOH

### Post Elution (Optional)

- Evaporate & Reconstitute in Mobile Phase or Add 50 μL 2% Formic Acid in DI H<sub>2</sub>O

## Micro-Prep™ SAX



Retention of weakly acidic compounds

SA: 650-850 m<sup>2</sup>/g  
Particle Size: 15-20 μm  
Pore Diameter: 80-100 Å

### Sample Prep

- 100 μL sample + ISTD
- 100 μL 100 mM pH 7.0 Phosphate Buffer

### Condition (Optional)

- 100 μL MeOH
- 100 μL 100 mM pH 7.0 Phosphate Buffer

Load -> 100 μL

### Wash

- 100 μL 100 mM pH 7.0 Phosphate Buffer
- 100 μL MeOH

Elute -> 50 μL 2% Formic acid in MeOH

### Post Elution (Optional)

- Evaporate & Reconstitute in Mobile Phase or Add 50 μL DI H<sub>2</sub>O

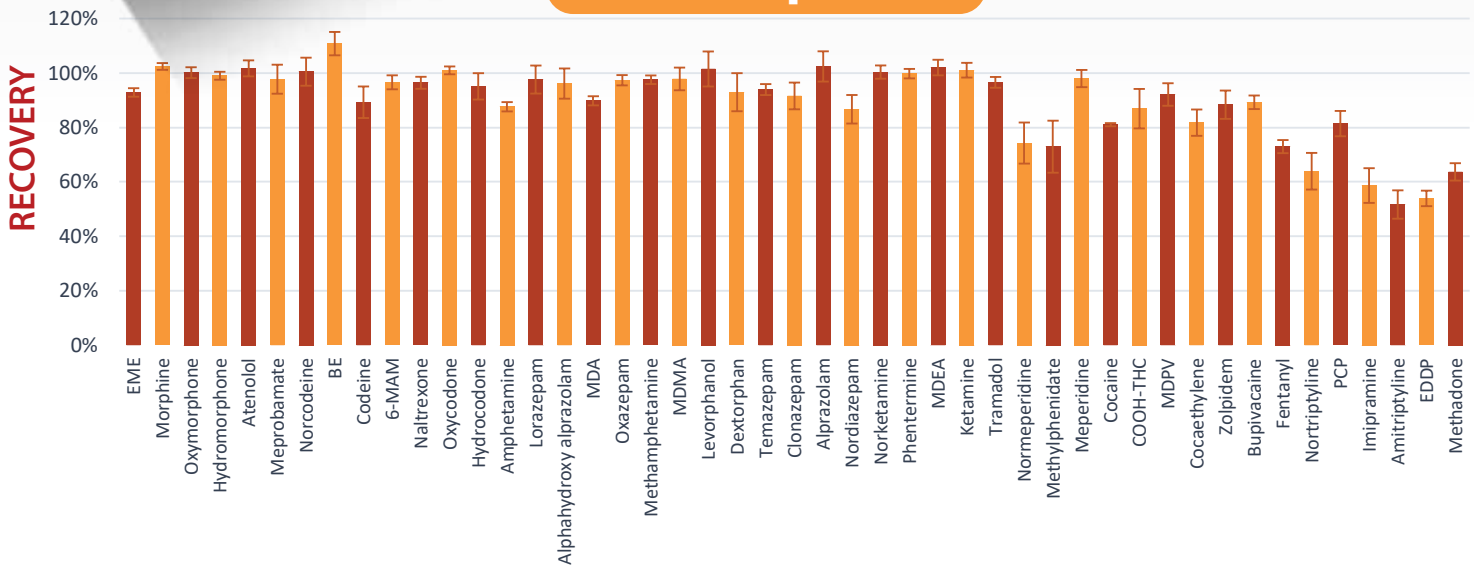


Micro-Prep™ HLB microelution plate consists of a highly retentive uncharged hydrophilic and lipophilic sorbent. This cross-linked polymeric sorbent can effectively retain a range of acids, neutrals, and bases via reverse-phase interactions.

Micro-Prep™ HLB was used to extract a large panel of drugs of abuse from urine and plasma where data is presented below.

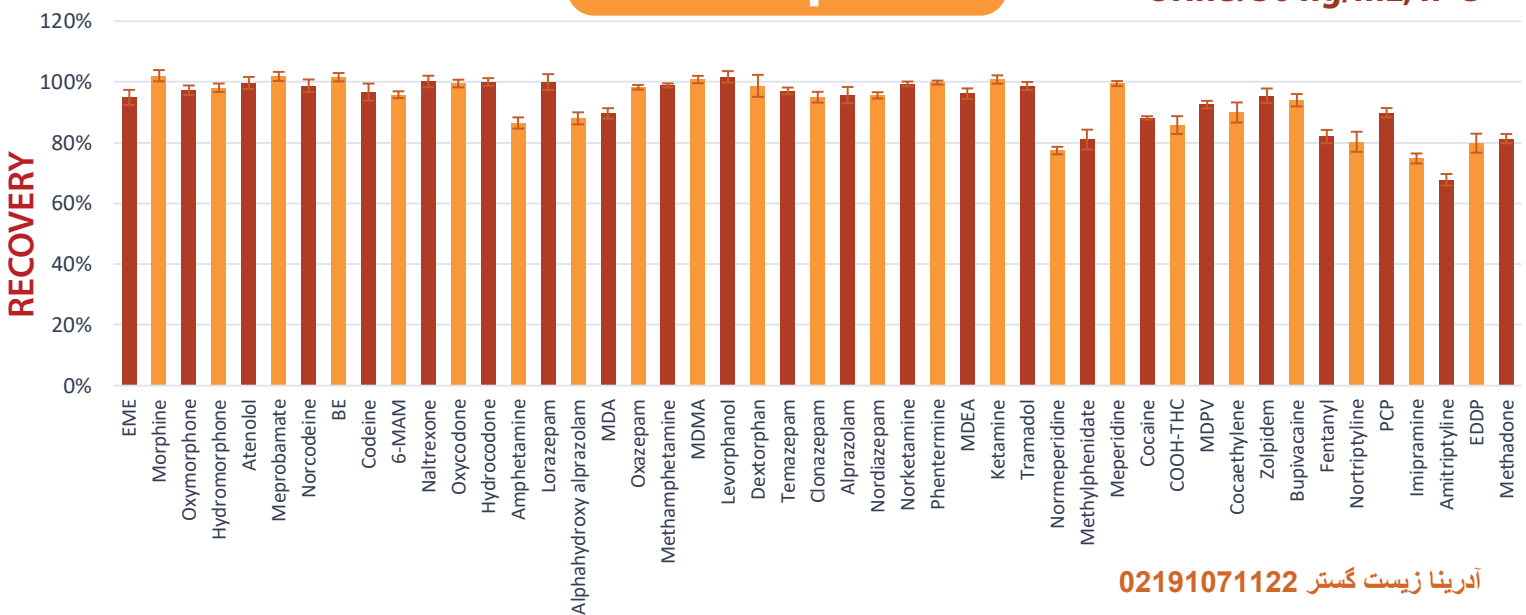
## Micro-Prep™ HLB

Urine: 5 ng/mL, n=5



## Micro-Prep™ HLB

Urine: 50 ng/mL, n=5



UCT's Micro-Prep™ enhances extraction performance and reduces traditional sample prep complexities and processing time. Excellent peak shape and good linear calibration curves were achieved for most analytes. Featuring automation potential with the option to load the plate directly on to the autosampler. Micro-Prep™ is highly recommended for high throughput forensic and clinical testing.

**>80**  
PERCENT

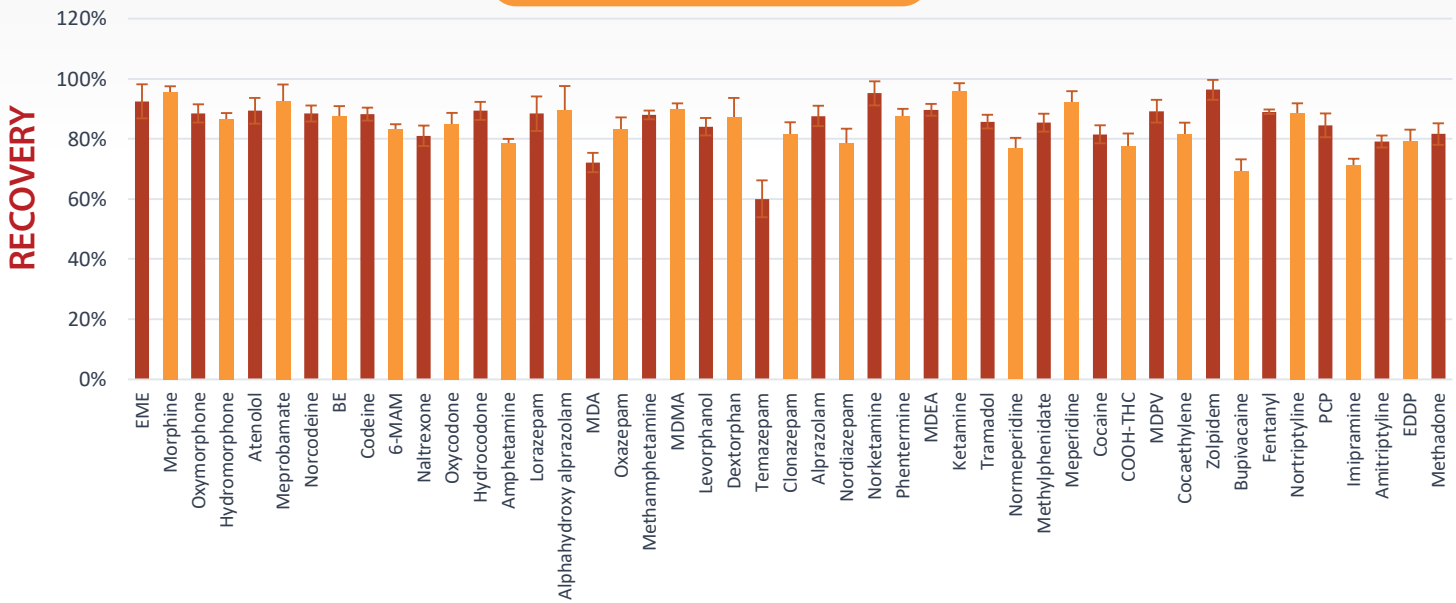
Excellent recoveries (>80%) and RSD values were obtained for most analytes in a 47 drugs panel.



**Micro-Prep™ HLB**  
96 Well Microelution Plate  
W96-XTMC-HLB

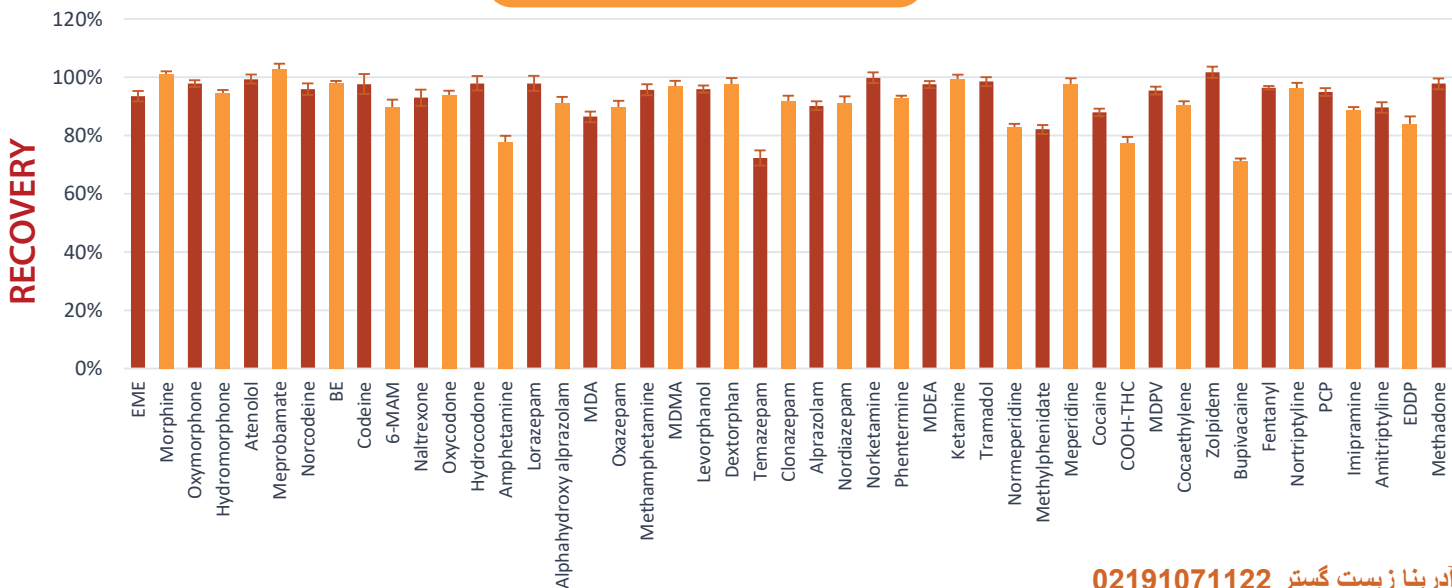
## Micro-Prep™ HLB

Plasma: 5 ng/mL, n=5



## Micro-Prep™ HLB

Plasma: 50 ng/mL, n=5

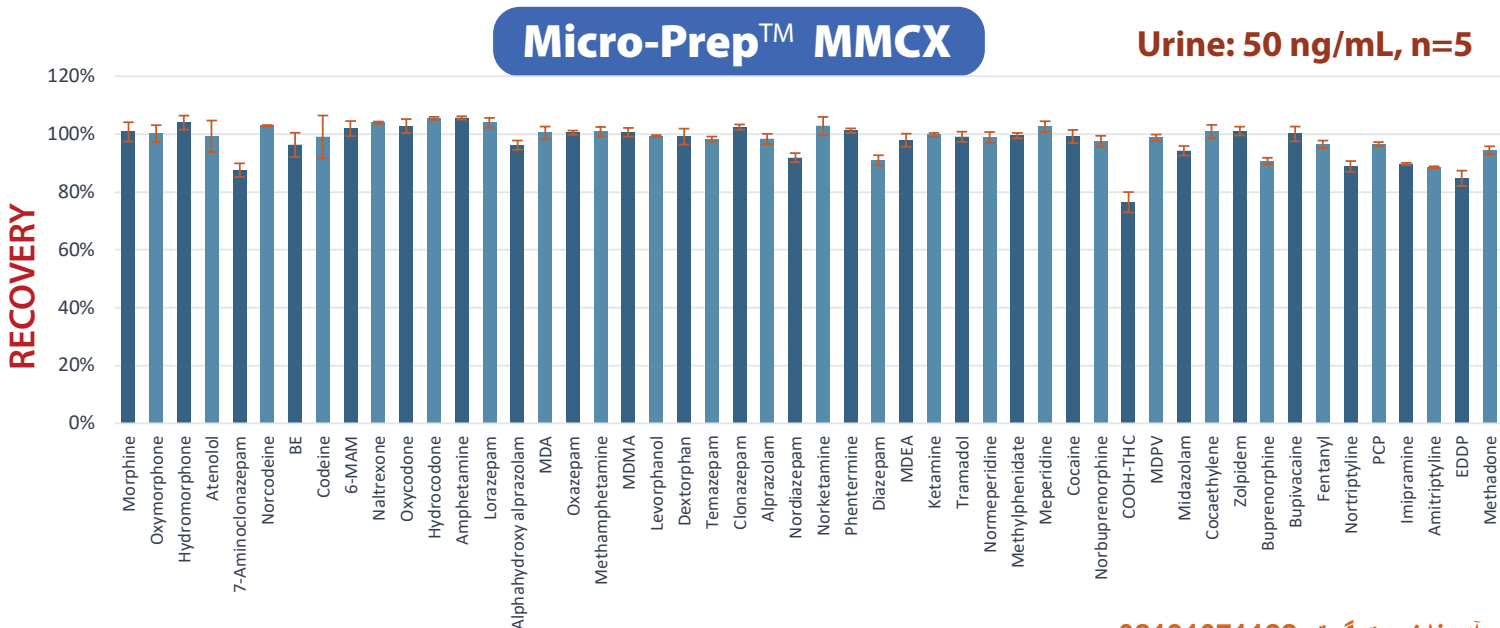
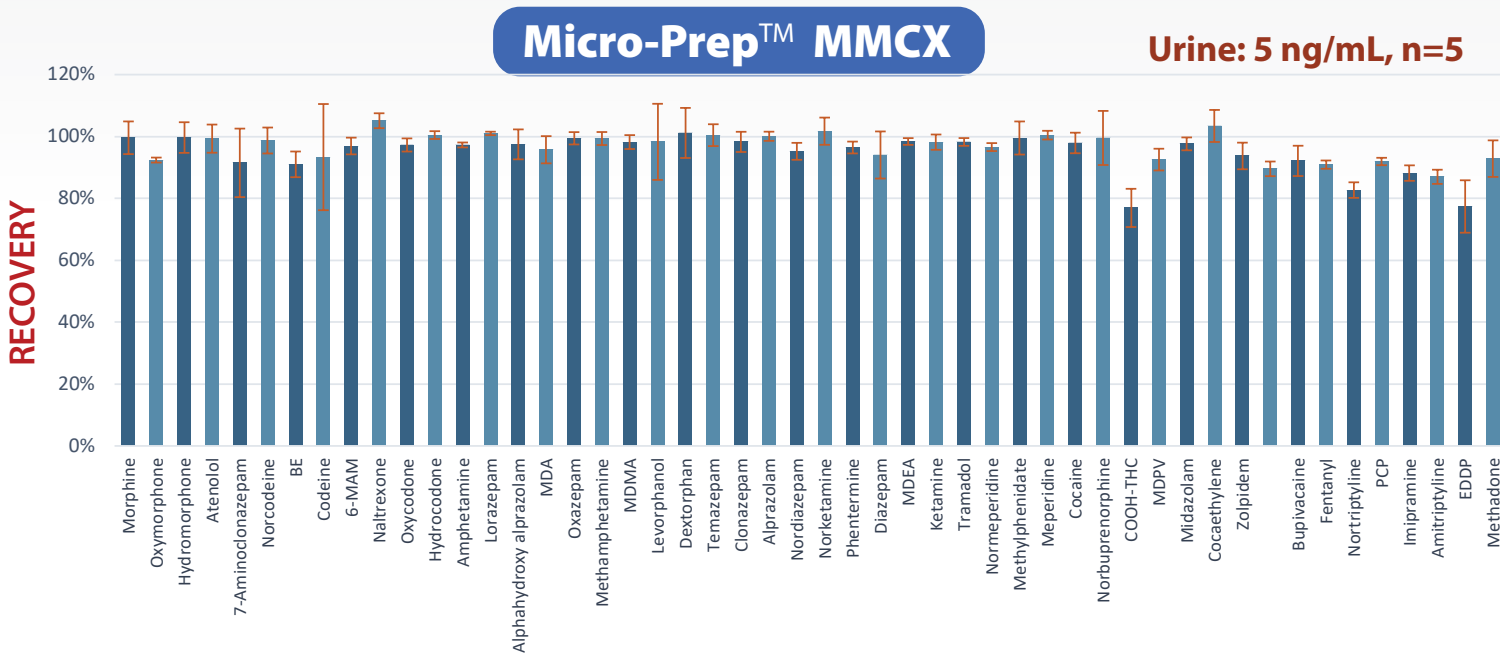






Micro-Prep™ MMCX with mixed-mode cation exchange functionality extracts polar and non-polar analytes from aqueous samples.

The extraction procedure optimized for the MMCX microelution plate allows for enhanced removal of matrix interferences by utilizing ion exchange. This results in exceptional recoveries for target compounds.



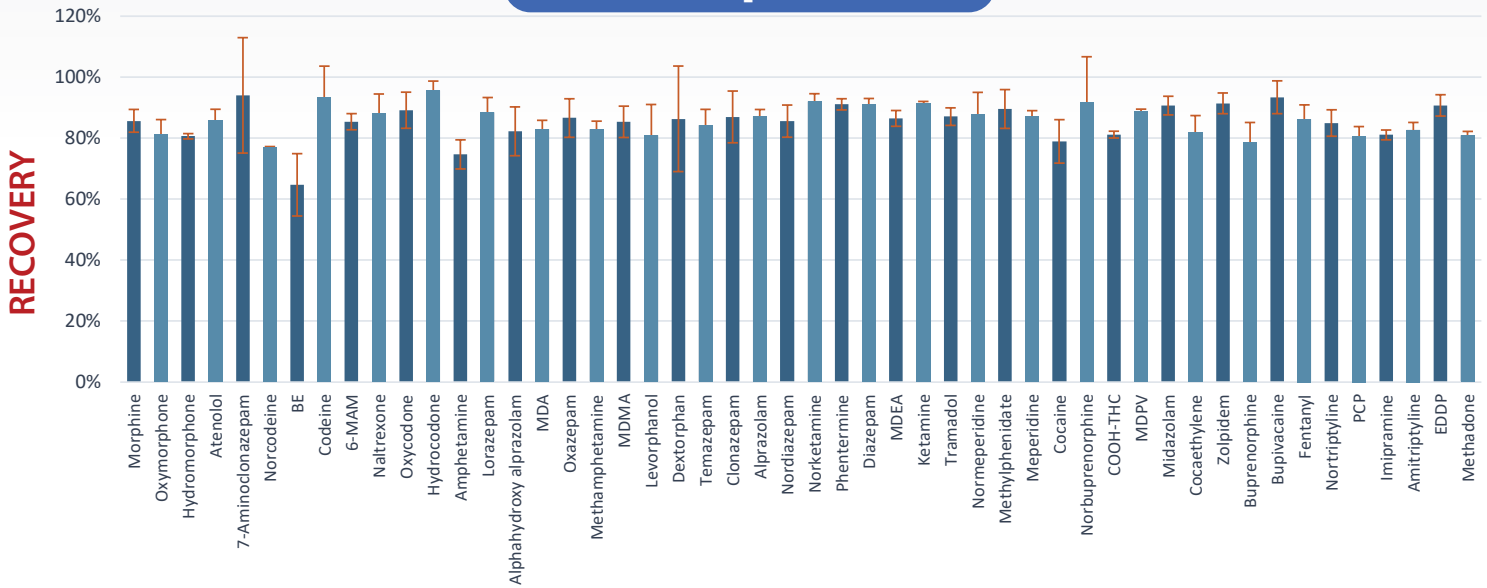
The water wettable sorbent improves recoveries for polar analytes and eliminates the need for conditioning and equilibration steps. By utilizing smaller solvent volumes, overall processing time can be reduced to just under 30 minutes (\*up to 96 samples).



Micro-Prep™ MMCX was used to extract a large panel of drugs of abuse from urine and plasma where data is presented below.

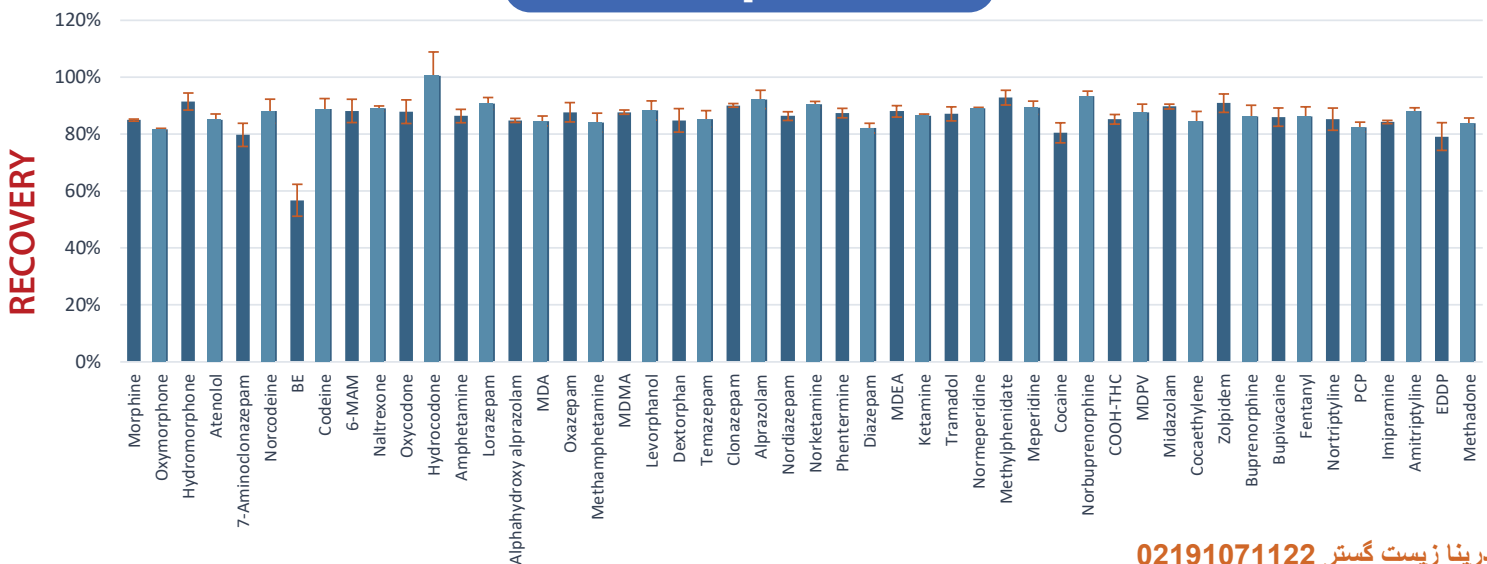
## Micro-Prep™ MMCX

Plasma: 5 ng/mL, n=5



## Micro-Prep™ MMCX

Plasma: 50 ng/mL, n=5





UCT, Inc.  
Distributors of Iran  
ADRINA ZIST

Phone: 021-91071122  
Mob: 0919 777 7712  
Email: masoodjeddi@gmail.com

Visit us online @ [www.azg-co.com](http://www.azg-co.com)



# MICRO-PREP™

Microelution 96-Well SPE Plates

HLB | MMCX | SCX | SAX

آدرینا زیست گستر 02191071122

