

# Instruction sheet

## AFFINIMIP® SPE **Amphetamines** cartridges

### CLEAN-UP PROCEDURE OF AMPHETAMINE AND ITS DERIVATIVES

Users should read all instructions before using this kit.

*For laboratory use only*

**AFFINIMIP® SPE Amphetamines** is:

- **Developed and manufactured by AFFINISEP**

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## Method for Selective Phase Extraction of **Amphetamine and its derivatives** using Molecularly Imprinted Polymers

### 1 INTRODUCTION

**AFFINIMIP® SPE Amphetamines** has been developed to **selectively** and **simultaneously** extract Amphetamine and its derivatives in urine or serum.

**By using AFFINIMIP® SPE, the expected result is a clean-up and a pre-concentration of the sample at trace levels.**

### 2 PRINCIPLE OF AFFINIMIP® SPE

**AFFINIMIP®SPE** is a solid phase obtained by a polymerisation process to create a three-dimensional network that recognizes the shape and functional group positions of a template molecule. The **AFFINIMIP® SPE** selectivity comes from the technology of molecularly imprinted polymer (MIP) used during the synthesis.

### 3 PRODUCT INFORMATION

#### Description of the kit

Each solid phase extraction (SPE) cartridge **AFFINIMIP® SPE Amphetamines** contains 25mg of sorbent in a 3mL cartridge.

#### Information and storage

Storage: Room temperature.

Each cartridge has a single use.

### 4 PRECAUTIONS FOR USE

**SPE methods developed for C18 or other sorbents are not appropriate for **AFFINIMIP®SPE Amphetamines**. *The extraction procedure described below has been optimized for the extraction of Amphetamines and its derivatives from urine or serum samples. For the treatment of another matrices, please contact us to adapt the extraction procedure.***

### 5 GENERAL INSTRUCTIONS FOR SPE

#### 5.1 Materials and equipment required

In addition to standard laboratory equipment, the following material is required for the use of **AFFINIMIP® SPE** cartridges:

- SPE automate or SPE vacuum Manifold

- Nitrogen Mini-vap evaporator or a centrifugal concentrator to dry the collected sample

## **5.2 Flow rate**

It is very important to follow the flow rate given in the protocol.

Most especially for the loading, if the sample flow rate is too high, components may not interact sufficiently with the sorbent and the analyte recovery yield will be lower.

## **5.3 Preparation process**

For the MIP preparation, a template is required. An analogue was used instead of Amphetamines to prevent false positive signal in case of bleeding.

## **6 CLEAN-UP PROCEDURE FROM URINE OR SERUM SAMPLE:**

### **6.1 Preparation of solutions**

- Ammonium Acetate Buffer (13mM - pH8.5)

In a 500mL-volumetric flask, add 500mg of Ammonium Acetate and complete with Deionised Water. The pH is adjusted at 8.5 with  $\text{NH}_3$  (35%) and  $\text{CH}_3\text{COOH}$  (glacial).

- Solution 40 - 60 Water - Acetonitrile

In a 100mL-volumetric flask, add 40mL of Deionised Water and complete with Acetonitrile.

- Solution Methanol – 2% Formic Acid

In a 100mL-volumetric flask, add 2mL of Formic Acid and complete with Methanol.

### **6.2 Preparation of the loading solution from urine or serum samples**

Urine is diluted by 2 and Serum by 5 with the Ammonium Acetate buffer (13mM, pH 8.5). The pH of the diluted urine or serum is adjusted with  $\text{NH}_3$  (35%) or  $\text{CH}_3\text{COOH}$  (glacial) at pH 8.5.

### 6.3 Protocol for clean-up

Step	AFFINIMIP® SPE Amphetamines (25mg/3mL)	Flow (mL/min)
Equilibration with	<ul style="list-style-type: none"> <li>▪ 1 mL Acetonitrile (ACN)</li> <li>▪ 1 mL deionized Water</li> <li>▪ Do not allow the cartridge to dry during conditioning</li> </ul>	1mL/min (1drops/s)
Loading (L)	<p><b>Up to 2mL</b> of the loading solution for urine</p> <p><b>Up to 2.5mL</b> of the loading solution for serum</p>	<b>0.5mL/min</b> <b>(1drop/2s)</b>
Washing of interferents	<ul style="list-style-type: none"> <li>▪ 3mL of deionized Water</li> <li>▪ 3mL of deionized Water /Acetonitrile (40/60, v/v)</li> </ul>	1mL/min (1drop/s)
Drying step	Force the water down into the cartridge and out of the bottom (or apply vacuum 30 seconds)	
Elution (E)	<p>1.5mL of Methanol containing 2% of Formic Acid</p> <p>Force the solvent down into the cartridge and of out the bottom</p>	1mL/min (1drop/s)

The elution (E) is evaporated until dryness under nitrogen with a mini-vap evaporator at room temperature (or a centrifugal concentrator). The residue is dissolved in the mobile phase solution for further analysis.





## PRODUCTS LIST

AFFINIMIP® SPE Products	Designation	Description
Multimycos10	AFFINIMIP® SPE Multimycos10	selective SPE cartridges 3mL for ZON, OTA, HT-2, T-2, Aflatoxins and Fumonisin
Zearalenone	AFFINIMIP® SPE Zearalenone	selective SPE cartridges 3mL for ZON
Ochratoxin A	AFFINIMIP® SPE Ochratoxin A	selective SPE cartridges 3mL for OTA
Patulin	AFFINIMIP® SPE Patulin	selective SPE cartridges for Patulin
	AFFINIMIP® SPE Patulin & Pectinase kit	kit of selective SPE cartridges for Patulin + 50mL pectinase enzyme solution
Deoxynivalenol	AFFINIMIP® SPE Deoxynivalenol	selective SPE cartridges 6mL for DON
Phenolics	AFFINIMIP® SPE Phenolics	selective SPE cartridges for Phenolic compounds
Estrogens	AFFINIMIP® SPE Estrogens	selective SPE cartridges for Estrogens
Zeranol Residues	AFFINIMIP® SPE Zeranol Residues	selective SPE cartridges for Zeranol Residues
Bisphenol A	AFFINIMIP® SPE Bisphenol A	selective (PP or Glass) SPE cartridges for Bisphenol A
FumoZON	AFFINIMIP® SPE FumoZON	selective SPE cartridges for Fumonisin and Zearalenone
Chloramphenicol	AFFINIMIP® SPE Chloramphenicol	selective SPE cartridges for Chloramphenicol
Tamoxifen	AFFINIMIP® SPE Tamoxifen	selective SPE cartridges for Tamoxifen
Catecholamines	AFFINIMIP® SPE Catecholamines	selective SPE cartridges for Catecholamines
	AFFINIMIP® SPE Catecholamines	selective SPE cartridges for Catecholamines
Metanephrines	AFFINIMIP® SPE Metanephrines	selective SPE cartridges for Metanephrines
Amphetamines	AFFINIMIP® SPE Amphetamines	selective SPE cartridges for Amphetamines
PECTINASE	Pectinase solution	50 mL pectinase enzyme solution
AttractSPE™ Products	Designation	Description
W/O	AttractSPE™ W/O	HLB SPE cartridges sorbent
SCX	AttractSPE™ SCX	Strong Cation Exchange SPE cartridges sorbent
WCX	AttractSPE™ WCX	Weak Cation Exchange SPE cartridges sorbent
SAX	AttractSPE™ SAX	Strong Anion Exchange SPE cartridges sorbent
WAX	AttractSPE™ WAX	Weak Anion Exchange SPE cartridges sorbent
DVB	AttractSPE™ DVB	Reversed Phase Copolymer SPE cartridges sorbent
Anionic & Cationic AttractSPE polymeric cartridges	AttractSPE™ KIT	Kit of 10 cartridges of each sorbent (SAX, WAX, WCX, SCX)

### For more information:

For more information on our products & services, please visit [www.polyintell.com](http://www.polyintell.com)