

Instruction sheet

AFFINIMIP® SPE Catecholamines cartridges

Format : 1mL

CLEAN-UP PROCEDURE OF CATECHOLAMINES IN PLASMA OR SERUM

Users should read all instructions before using this kit.

For research use only (RUO)

AFFINIMIP® SPE Catecholamines is:

- developed and manufactured by AFFINISEP

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Method for Selective Phase Extraction of Catecholamines using Molecularly Imprinted Polymers

1 INTRODUCTION

AFFINIMIP® SPE Catecholamines has been developed to selectively extract Catecholamines from serum or plasma.

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 Catecholamines** contains 30mg of sorbent in a 1mL 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 appropriated for **AFFINIMIP® SPE Catecholamines**.

The extraction procedure described below has been optimized for serum. For the treatment of another initial solution, please contact us to help you to adapt the extraction procedure.

5 GENERAL INSTRUCTIONS FOR SPE

5.1 Materials and equipment required

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

- SPE vacuum manifold or a SPE automate
- Nitrogen Mini-vap evaporator or Speed vac to dry the collected samples
- Distilled or deionized water
- Methanol (MeOH)
- Acetic acid (AA)
- Phosphate buffer solution pH 7 (I = 10mM) or (Phosphoric acid 1mol/L (H₃PO₄) and Sodium hydroxide 1mol/L (NaOH))

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 Drying step

If the drying step is not correctly applied, a decreasing of recoveries is observed.

5.4 Template use

For the preparation of the MIP, a template is required. It has a molecular weight of 225 g/mol.

6 CLEAN-UP PROCEDURE OF CATECHOLAMINES FROM PLASMA OR SERUM

6.1 Preparation of solutions

- Solution (85/15) Water/Methanol (v/v)

In a 10mL-volumetric flask, add 1.5mL of Methanol and complete with water.

- Phosphate Buffer pH=7 (I=10mM)

In a 100mL-volumetric flask, mix 510µL of H₃PO₄ (1mol/L), 760µL NaOH (1mol/L) in Water. Adjust to pH 7.

- Methanol with 5% Acetic acid

In a 100mL-volumetric flask, add 5mL of acetic acid and complete with Methanol.

6.2 Preparation of the loading solution from plasma or serum (dilution by 5)

In a 5mL volumetric flask, add 1mL of plasma or serum and complete with water.
This solution is used as the loading solution.

6.3 Protocol for clean-up of Catecholamines

Step (Flow rate)	AFFINIMIP® SPE Catecholamines (30mg/1mL)
Equilibration with (2 drops/s)	<ul style="list-style-type: none"> ▪ 1 mL phosphate buffer pH 7 ▪ 2 mL deionized water ▪ Do not allow the cartridge to dry during conditioning
Loading (L) (1 drop every 2 seconds)	500µL to 1500µL of loading solution
Washing of interferents (W1) (1 drop/s)	1mL Water 500µL (85/15) Water/Methanol
Drying	Apply vacuum through cartridge during 30 seconds
Washing of interferents (W2) (1 drop/s)	500µL Methanol
Elution (E) (1 drop/s)	1mL Methanol / Acetic acid (5%)

The extracts (E) are evaporated until dryness under nitrogen with a mini-vap evaporator at room temperature (or a centrifugal evaporator). These residues are dissolved in 0.5mL of mobile phase for further analysis. Alternatively, the elution may be diluted to a known volume by addition of water 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 other formats, please contact us.

For more information:

For more information on our products & services, please visit www.polyintell.com