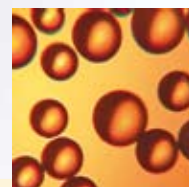


# CHROMABOND® HR-XC

strong mixed-mode polymer-based  
cation exchanger for basic analytes



HR-XC

## ... the innovative cation exchanger offers:

- mixed-mode SPE phase with distinct cation exchange and RP properties  
**your benefit** ⇒ excellent enrichment of basic analytes
- modern, spherical support polymer with optimised pore structure and large surface  
**your benefit** ⇒ good reproducibility, reliable and cost-efficient analyses
- more aggressive washing procedures for matrix removal possible  
**your benefit** ⇒ cleaner samples and protection of your HPLC and GC instrumentation
- quantification of analytes from heavily contaminated samples  
**your benefit** ⇒ lower limits of detection also for critical matrices

... the perfect fit for basic analytes in combination with CHROMABOND® HR-X

similar phases: Oasis® MCX, Strata™ X-C, StyreScreen® DBX  
(trademarks of Waters, Phenomenex® and UCT)

**MACHEREY-NAGEL**  
[www.mn-net.com](http://www.mn-net.com)





## HR-XC

- strong benzenesulphonic acid cation exchanger exchange capacity 1.0 meq/g
- base material polystyrene-divinylbenzene copolymer pH stability 1-14; RP capacity 300 mg/g (caffeine in water)
- high-purity material, highest reproducibility and lowest blank values due to an optimised production process
- spherical particles, particle size 85 µm; pore size 65-75 Å very large specific surface 800 m<sup>2</sup>/g; pore volume 1.4 cm<sup>3</sup>/g
- outstanding recovery rates especially for the enrichment of basic analytes

## strong cation exchanger

- recommended application:
  - basic active ingredients from strongly matrix-contaminated samples like e.g. urine, plasma, serum
  - fungicides from food
  - basic analytes like e.g. amines

Solid phase extraction

### Standard protocol to start your method development with CHROMABOND® HR-XC

MN Appl. No. 304790

Column type: CHROMABOND® HR-XC  
3 ml/200 mg, Cat. No. 730952

- Sample pretreatment: if necessary adjust pH value
- Column conditioning: 5 ml MeOH
- Equilibration: 5 ml water
- Sample application: slowly apply sample
- Washing: a) 2 ml 0.1 N HCl in water  
b) 2 ml MeOH (if necessary, further washing steps)
- Elution: after drying 5 ml MeOH / 5% NH<sub>3</sub>
- Further analysis: if necessary, evaporate and redissolve in a suitable solvent; HPLC or GC

#### Recovery rate [%]:

Fraction A: acidic and neutral analytes      Fraction B: basic analytes

Compound	HR-XC	Compound	HR-XC	Oasis® MCX	Strata™ X-C
Suprofen	108	Doxepin	101	68	82
Naproxen	85	Imipramine	95	71	85
Tolmetin	73	Amitriptyline	94	72	78
Phenobarbital	108	Trimipramine	92	70	81
Indomethacin	33	further analysis: HPLC on NUCLEODUR® C18			
Hexobarbital	80	or C8 Gravity, see MN Appl. No. 122230 + 118520			

### Fractionation of acidic, neutral and basic analytes from serum

MN Appl. No. 304780

Column type: CHROMABOND® HR-XC  
3 ml/200 mg, Cat. No. 730952

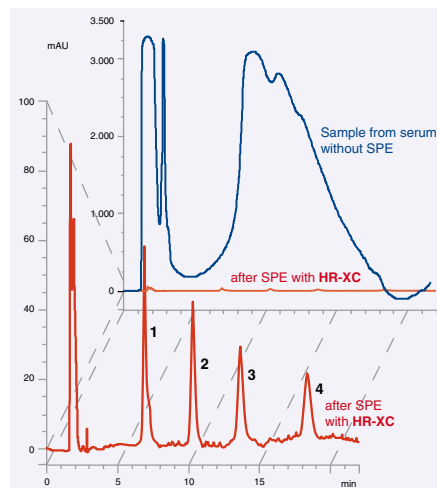
Sample: 1 ml spiked matrix, acidified with 200 µl 2% H<sub>3</sub>PO<sub>4</sub>

Column conditioning: 5 ml MeOH, 5 ml water

Sample application: 1.2 ml spiked serum

Washing: 2 ml 0.1 N HCl in water

Elution: a) 2.5 ml MeOH (fraction A: neutral and acidic analytes)  
b) 5 ml MeOH / 10% NH<sub>3</sub> (fraction B: basic analytes)



#### Peaks:

- Doxepin
- Imipramine
- Amitriptyline
- Trimipramine

### Ordering information

	Volume	Adsorbent weight	Pack of
	<b>CHROMABOND® HR-XC polypropylene columns</b>		
		200 mg	500 mg
	3 ml	<b>730952</b>	<b>730953</b>
	6 ml	<b>730955</b>	30
	<b>CHROMAFIX® HR-XC cartridges</b>		
	Size/Weight Ø	S/155 mg	M/240 mg
		<b>731755</b>	<b>731756</b>
		L/500 mg	<b>731757</b>
	<b>CHROMABOND® HR-XC adsorbent</b>		
		<b>730664</b>	100 g

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