



CHROMABOND® SA benzenesulfonic acid cation exchanger based on silica (SCX)

★ Key features

- Adsorbent with hydrophobic and π - π interactions (benzene ring)
- Ion exchange of organic compounds from aqueous matrix
- Elution of interesting compounds with solvent systems, which compensate the ionic and nonpolar interactions, e.g., methanolic HCl

🔧 Technical characteristics

- Base material silica, pore size 60 Å, particle size 45 μ m, specific surface 500 m²/g, pH stability 2–8, benzenesulfonic acid modified silica, strongly acidic cation exchanger (capacity ~ 0.5 meq/g)

✓ Recommended application

- Amino acids, amines, chlorophyll, PCBs

Sulfonamides in meat and kidney

MN Appl. No. 302710

B. Pacciarelli et al., Mitt. Gebiete Lebensm. Hyg. 82 (1991) 45–55

Compounds investigated:

sulfaguanidine, sulfanilamide, sulfadiazine, sulfathiazole, sulfapyridine, sulfamerazine, sulfamethizole, sulfadimidine, sulfamethoxy-pyridazine, sulfachlorpyridazine, sulfadoxine, sulfadimethoxine

Column type:

CHROMABOND® SA (= SCX), 3 mL, 500 mg
REF 730077

Sample pretreatment: homogenize 10 g sample and 60 mL dichloromethane – acetone (1:1, v/v) for 30 s with a Polytron. Centrifuge the homogenate for 10 min at 2500 rpm. Filter the organic phase and wash the filter residue with a little dichloromethane – acetone. Add 5 mL glacial acetic acid to the filtered extract.

Column conditioning: apply 6 mL hexane and suck air until the column is dry (10 min). Then apply 6 mL dichloromethane – acetone – glacial acetic acid (10:10:1, v/v/v). Now the column must not run dry.

Sample application:

1/10 of the extract volume, flow rate about 2 mL/min; the column must not run dry

Column washing: 5 mL water, then 5 mL methanol; dry for 10 min under vacuum. Now suck NH₃ gas through the column until the acid is neutralized. To control the neutralization process, press air through the column: a wet pH paper should indicate a neutral or basic pH value.

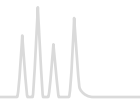
Elution: 3 mL methanol (1–2 mL/min); carefully concentrate the eluate on a rotation evaporator (40 °C/100 mbar), dissolve the residue in 0.5 mL of 5.5% acetonitrile in buffer (1.641 g sodium acetate in 1 L water, adjusted to pH 5 with glacial acetic acid) and centrifuge.

Further analysis: HPLC

Ordering information

	Volume	Adsorbent weight →			Pack of
		100 mg	200 mg	500 mg	
	CHROMABOND® SA polypropylene columns				
	1 mL	730076			100
	3 mL		730275	730077	50
	6 mL			730425	730212
	CHROMABOND® SA polypropylene columns · BIGpack				
	3 mL			730077.250	250
	CHROMABOND® LV-SA				
	15 mL			732083	30
	Size →		S	M	L
	Minimum adsorbent weight →		80 mg	200 mg	580 mg
	CHROMAFIX® SA cartridges				
			731831	731832	731833
					96 x 100 mg
	CHROMABOND® MULTI 96 SA				
					738141.100M
	CHROMABOND® SA adsorbent				
					730609

Glass columns on request.



CHROMABOND[®] SB quaternary ammonium anion exchanger based on silica (SAX)

★ Key features

- Not suited for very strong anions such as sulfonic acids because these are difficult to elute

🔧 Technical characteristics

- Base material silica, pore size 60 Å, particle size 45 µm, specific surface 500 m²/g, pH stability 2–8, silica modified with quaternary amine, strongly basic anion exchanger (capacity ~ 0.3 meq/g)

✓ Recommended application

- Organic acids, caffeine, saccharin

Vitamins: folic acid from food (e.g., wheat germs)

MN Appl. No. 300650

Column type:

CHROMABOND[®] SB (= SAX), 3 mL, 500 mg

REF 730079

Sample pretreatment: homogenize 10 g food sample in 100 mL 0.01 mol/L phosphate buffer pH 7.4 and filter





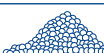
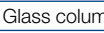
Column conditioning: 2 column volumes *n*-hexane, then 2 column volumes methanol, finally 2 column volumes dist. water

Sample application: force or aspirate 10 mL of the filtrate through the column

Column washing: 2 column volumes dist. water

Elution: 5 mL 10% sodium chloride in 0.1 mol/L sodium acetate buffer

Ordering information

	Volume	Adsorbent weight →			Pack of
		100 mg	200 mg	500 mg	
	CHROMABOND[®] SB polypropylene columns				
	1 mL	730078			100
	3 mL		730322	730079	50
	6 mL			730426	730323
	CHROMABOND[®] SB polypropylene columns · BIGpack				
	3 mL			730079.250	250
	CHROMABOND[®] LV-SB				
	15 mL			732088	30
		Size →	S	M	L
		Minimum adsorbent weight →	80 mg	180 mg	500 mg
	CHROMAFIX[®] SB cartridges				
			731834	731835	731836
	CHROMABOND[®] MULTI 96 SB				
				96 x 100 mg	Pack of
	CHROMABOND[®] SB adsorbent				
				738101.100M	1
				730610	100 g

Glass columns on request.



CHROMABOND® PCA propylcarboxylic acid cation exchanger based on silica (WCX)

★ Key features

- Weakly acidic cation exchanger (WCX)




🔧 Technical characteristics

- Base material silica, pore size 60 Å, particle size 45 µm, specific surface 500 m²/g, pH stability 2–8
- Propylcarboxylic acid modified silica

✓ Recommended application

- Strong cations

Ordering information

	Volume	Adsorbent weight →			Pack of
		500 mg	1 g		
	CHROMABOND® PCA polypropylene columns				
	3 mL	730482			50
	6 mL	730483	730484		30
	CHROMABOND® LV-PCA				
	15 mL	732482			30
	CHROMABOND® PCA adsorbent				
			730629		100 g

Glass columns, LV columns, CHROMAFIX® cartridges and MULTI 96 on request.

CHROMABOND® PSA propylsulfonic acid cation exchanger based on silica

★ Key features

- In contrast to the SA phase no π-π interactions



🔧 Technical characteristics

- Base material silica, pore size 60 Å, particle size 45 µm, specific surface 500 m²/g, pH stability 2–8
- Propylsulfonic acid modified silica, very strong cation exchanger (capacity ~ 0.7 meq/g)

✓ Recommended application

- Weak cations

Ordering information

	Volume	Adsorbent weight →			Pack of
		100 mg	500 mg	1 g	
	CHROMABOND® PSA polypropylene columns				
	1 mL	730460			100
	3 mL		730462		50
	6 mL			730464	30
	CHROMABOND® PSA adsorbent				
			730630		100 g

Glass columns, LV columns, CHROMAFIX® cartridges and MULTI 96 on request.

For further applications on CHROMABOND® phases visit our online application database at www.mn-net.com/apps