CHROMABOND® polymer phases · others

CHROMABOND® PS-RP / PS-OH⁻ / PS-H⁺ / PS-Mix / PS-Ag⁺ / PS-Ba²⁺

phases for RP and ion chromatography

Key features

- Very low degree of swelling, thus very well suited for chromatography, reliable function over the whole pH range from 0 – 14

Technical characteristics

- Base material high purity polystyrene-divinylbenzene copolymers (PS/DVB), pore size 100 Å, particle size 100 µm
- Different modifications for different applications from the elimination of nonpolar compounds up to the removal of specific polar components

Recommended application

- Removal of interfering compounds
- Improves chromatographic separation, if the interfering components overlap with the analyte in the chromatogram
- Improves lifetime of the chromatographic column, since interfering components can irreversibly block the column packing
- Enrichment of the analytes

Properties of the individual modifications

▪ PS-RP	hydrophobic PS/DVB copolymer	removal of organic interfering components from water
▪ PS-OH⁻	strong PS/DVB anion exchanger, OH⁻ form capacity 0.6 meq/g	removal or concentration of anions from water increasing the pH value in acidic samples
▪ PS-H⁺	strong PS/DVB cation exchanger, H⁺ form capacity 2.9 meq/g	removal or concentration of cations from water decreasing the pH value of basic samples
▪ PS-Mix	mixture of PS-OH⁻ and PS-H⁺	desalting of water
▪ PS-Ag⁺	strong PS/DVB cation exchanger, Ag⁺ form	removal of halide ions from water
▪ PS-Ba²⁺	strong PS/DVB cation exchanger, Ba²⁺ form	removal of sulfate ions from water

Removal of halides from aqueous samples shown for the trace analysis of nitrate besides an excess of chloride or bromide

MN Appl. No. 301930 / 302750

Compounds investigated:
20 ppm nitrate besides 2500 ppm chloride or 500 ppm bromide

Column type:
CHROMAFIX® PS-Ag⁺ (M) 0.8 mL, min. 250 mg
REF 731865

Column conditioning: 1 mL dist. water

Sample application and Elution:
apply 4 x 1 mL sample fractions to the cartridge, discard 1st mL, collect 2nd, 3rd and 4th mL separately

Further analysis: HPLC with column 250 x 4 mm NUCLEOSIL® Anion II; eluent 2 mmol/L potassium hydrogen phthalate pH 6, 2 mL/min; detection: indirect UV, 280 nm (see applications 110440 and 110450 at *www.mn-net.com/apps*)

Phases	Adsorbent weight → 3 mL / 200 mg	3 mL / 500 mg	6 mL / 500 mg	6 mL / 900 mg			Pack of
CHROMABOND® PS polypropylene columns							
PS-OH⁻			730378				30
PS-H⁺	730690	730376	730377				30
PS-Mix		730394		730310			30

Phases	Size S	Minimum adsorbent weight →	Size M	Minimum adsorbent weight →	Size L	Minimum adsorbent weight →	Pack of
CHROMAFIX® PS cartridges							
PS-RP	731877	60 mg	731875	160 mg			50
PS-OH⁻	731868	70 mg	731860	180 mg	731862	510 mg	50
PS-H⁺	731867	90 mg	731861	220 mg	731863	620 mg	50
PS-Mix	731909	70 mg					50
PS-Ag⁺	731866	100 mg	731865	250 mg			50
PS-Ba²⁺	731871	100 mg	731870	250 mg			50