

Papers on **PolyCAT A™** - for Cation Exchange [WCX] and HILIC

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- CEC of basic compounds: SCX-HILIC was better than RPC.
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Cleavable ICAT tag to improve peptide i.d.'s
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HPLC assay of attack of aminopeptidase P on bradykinin and its metabolites.
Microfluidic device: **2-D LC provides 2-3x more sequence coverage than 1-D LC, even with only 8 SCX fractions collected.**
Online multidimensional system: **2-D LC yielded 2x more protein i.d.'s than did 1-D LC.**
Proteomics: Tagging peptides in SCX fractions with Alexa Fluor 350 (at N-term.) or guanidine (at Lys) increases protein i.d.'s 30%.
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PAPERS on **PolyHYDROXYETHYL Aspartamide™**, **PolyGLYCOPLEX™**, **HILIC** and **SEC**

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SUBJECT

Retention of Ionizable Compounds on HPLC. pH Scale in Methanol-Water and the pK and pH Values of Buffers.

Retention of Ionizable Compounds on HPLC. 4. Mobile-Phase pH Measurement in Methanol/Water.

SUBJECT

Introduction of HILIC for HPLC of polar compounds.

Peptide HILIC on PolyHYDROXYETHYL A and PolySULFOETHYL A (same ref. as S16).

Size-Exclusion HPLC of a **conotoxin peptide**.

Size-Exclusion HPLC of small solutes.

Lactic acid stimulates B-cell growth.

HILIC, SEC, and SCX of recombinant antistasin with a preproleader sequence same ref. as S18).

Isoln. of carcinoembryonic antigen glycopeptides by HILIC, with mass spec. sequencing.

HILIC of phosphorylated peptides and tyrosine kinase reaction mixtures.

SEC of gymnosperm Ser-Hyp4 motif protein (same ref. as S26).

HILIC of **methylphosphonate oligonucleotides**.

Purif. of biotinylated VIP analog.

HILIC of mitochondria proteins from SDS-PAGE gel bands.

Removal of SDS from proteins via capillary HILIC.

HILIC of glucuronides of diosmetin.

Assay of ATPase activity by HILIC.

Removal of SDS and salts **from electroeluted proteins**.

Purif. of saponins by HILIC.

PolyGLYCOPLEX for HILIC of **complex carbohydrates**.

HILIC for **removal of SDS, Triton X-100, and Nonidet P40** from peptides on-line for LC-MS.

HILIC of intact proteins.

Purif. by HILIC of **defensins**.

HILIC of phosphorylated peptides from tyrosine kinase reactions.

Isoln. of dihydroxyproline from mussel adhesive protein.

Fractionation of casein hydrolyzates by SEC.

Characterization by SEC of casein hydrolyzates.

SEC desalting of proteins for ES-mass spec.

Isoln. by RPC/HILIC of a diuretic hormone polypeptide from mealworm (*T. molitor*).

HILIC of hydroxyproline-rich glycopeptides from Douglas Fir, with MS to determine sites of arabinoside attachment.

HILIC of histones (using PolyCAT A).

HILIC of diastereomers of atosiban.

HILIC of nitrobenzyl- derivs. of oligo-saccharides on PolyGLYCOPLEX.

Isoln. of yeast mitochondrial membrane proteins from 2-D gels by HILIC.

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Isoln. of a hepatic growth stimulator by SEC; it's glycerophosphorylethanolamine.
HILIC of phosphorylated histones using PolyCAT A (same ref. as C64).
Analysis of protein and peptide samples that contain detergents.
Analysis of the peptides GHK and KGHK in digests of SPARC protein.
Separation of glycopeptides from digest of carcinoembryonic antigen by RPC-HILIC.
CEX-HILIC of peptides (using PolySULF. A).
Purif. and analysis of the **scrapie prion protein** (using PolyWAX LP) [same ref. as W5].
HILIC of deamidation and acetylation variants of H1 histone (using PolyCAT A).
HILIC-ES-MS of small polar compounds in drug discovery screens.
HILIC of coeluting glycopeptides from an RPC map of a tryptic digest of recombinant γ -interferon from a CHO cell culture.
RPC-HILIC-CEX isolation of γ -lipotropin and β -endorphin from rat pituitary.
CEX-HILIC detects substitutions on the polar face of amphipathic α -helical peptides; RPC, the nonpolar face (PolySULF. A used).
CEX-HILIC vs. RPC for separation of variants of cyclic peptides (Gramicidin S analogs) (PolySULF. A used).
Explains the principles and gives applications.
HILIC-MS combination for drug discovery.
HILIC-CEX can resolve peptides that vary in position of Ser-acetylation (PolySULF. A used).
HILIC-MS/MS of underivatized amino acids in seeds; run time of 6 minutes.
SEC of designed proteins @ packing interactions.
HILIC with PolyGLYCOPLEX of the carbohydrates from a GPI anchor of *Trypanosoma cruzi*.
HILIC of small, polar peptide products from t-PA and urokinase substrate cleavage.
HILIC of small, polar peptide products from a high-affinity urokinase substrate library.
SEC of peptides generated by degradation of model proteins by archaeal proteasomes.
SEC of peptides generated by degradation of model proteins by mammalian proteasomes.
HILIC of urea, allantoin, and lysine pyroglutamate in cosmetics.
HILIC of small molecules with coupled anion- and cation-exchange columns.
Sepn. of Histone H1 variants by HILIC on PolyCAT A.
SEC analysis of peptide size in chickpea protein hydrolyzates.
SEC of engineered helical proteins: distinguishing dimers from tetramers.
HILIC of hydroxypropyl cyclodextrins.
HILIC of avian Histone H5; degree of N-term. acetylation vs. age.
HILIC of NAD in cell extracts following use of HILIC SPE cartridge to get rid of perchloric acid.
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- Purif. of vascular endothelial growth factor-B.
- SEC of small peptides** in proteasome studies: their **fluorescamine derivs. elute more ideally**.
- HILIC of intact **glucosinolates** from broccoli.
- HILIC and RPC of neutral N-glycans in rat brain tissue.
- HILIC of N-linked glucose-capped oligosaccharides from hemoglobins of a deep-sea tube worm.
- HILIC-CEC of polar compounds (used PolySULF. A).
- Measurement of **folates and methotrexate in human plasma** using HILIC-MS/MS.
- 26S Proteasome studies: SEC of small peptides.
- Analysis by HILIC on PolyGLYCOPLEX of an galactosyl oligosaccharide used as an immune response blocker in xenotransplantation.
- SEC-RPC of a tryptic digest of superoxide dismutase.
- HILIC analysis and SPE extraction of avoparcin from kidney extracts.
- SEC to isolate neural acetylcholinesterase (280 KDa) for online assay.
- Purification of sugar pyrazolone derivs.
- SCX/HILIC purification of peptides to eliminate acetylated serine impurities.
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- HILIC-SCX-RPC capillaries for 3-D proteomics analysis of lens tissue proteins.
- HILIC-MS/MS of **nicotine and its metabolites in serum or urine**.
- RPC vs. HILIC-SCX for separation of subst. helical peptides.
- Prep-scale purif. of **glucosinolates** from seeds.
- HILIC-SCX-RPC capillaries for 3-D proteomics analysis of membrane proteins.
- SEC of recombinant carbohydrate-binding protein 35.
- Analysis via RPC-SEC-ESI-MS of bacilysin, chlorotetraine, and iturin A produced by bacteria in fermented maize dough
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- SEC of a single chain Fv antibody + streptavidin fusion protein.
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- SEC to follow degradation of **post-proteasomal peptides**.
- SEC sepn. of tyrosine, isodityrosine, and di-isodityrosine in extensin analog crosslink study.
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- Triphasic MuDPIT capillary (HILIC on top) for proteomics of Golgi proteins.
- Detection of the prion protein in blood** using HILIC extraction in a fluorescence immunoassay.
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 - for Hydrophobic Interaction Chromatography (HIC)

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