

Ligand Exchange HPLC Column

Ligand exchange columns are used for the analysis of carbohydrates, alcohols and organic acids. However, most columns in the market are produced from low crosslinked resin and limited the speed of separations because of back pressure. BioChrom developed ligand exchange HPLC column, **Hydrocell SCX 100** by sulfonating the high crosslinked polystyrene-divinylbenzene beads with average particle size 5 μm and pore size 100 \AA .

The resin can be changed its selectivity by ligand exchange interaction with metal ion such as sodium, calcium and lead. The selection of molecular weight range of analysis can also be controlled by changing crosslinked percentage of resin. Pharmacopeia methods specify the type of HPLC column which should be used. Hydrocell SCX 100 column comply with USP definitions of Media Type L17.

The ligand exchange interaction with calcium and lead of H-form resin can change its application to comply with definitions of media type L19 and L34.

The typical operating conditions of the column is eluted under isocratic condition with water which has been adjusted to pH 2.5 by sulfuric acid solution at flow rate 1.5 mL/minute in 7.8 x 100 mm dimension of column at room temperature. The recommendation of maximum flow rate of this column is 6 mL / minutes. It is recommended to clean this column with 0.5 M sulfuric acid, 0.5 M sodium hydroxide or 80% Methanol.

The separation conditions of this column to monitor the purity of small drug, Ribavirin are as follows.

Scroll Down for Chromatogram

Hydrocell SCX 100

Column: 7.8 x 100 mm

Mobile Phase:
Water , pH 2.5
(sulfuric
Acid)

Elution: Isocratic

Detection: UV
207 nm

Flow Rate: 1.5
mL/minute
(back pressure
600psi)

Sample: 6
ppm
Ribavirin

Injection: 10 μ L

Catalog #:
43- 21SCX

