Flash Chromatography Application Note: **AN1103**
Revised 02/08/2010

Luknova *SuperSep*™ Reversed Phase C18 Columns

Introduction

Luknova SuperSep™ C18 reversed phase columns are packed with endcapped C18-bonded silica gel to purify medium to high polarity compounds, such as carbohydrates, acids, peptides, heterocyclics, natural products, and ionic compounds. High C18 loading with uniform distribution provides the highest degree of hydrophobicity and capacity with sample loading up to 3% of packed mass (recommended loading capacity from 0.1% to 1.0%). C18-bonded silica gel is considered as the least selective packing media since it interacts with a wide range of organic molecules. This column is also used for the separation of biomolecules in ion-pairing chromatography. The columns can be reused up to 20-30 times with proper care.

Experimental Tips

System Preparation C18 columns typically operate under reversed phase conditions (i.e., 100% Water → 100% Acetonitrile). When ready to switch from normal phase to reversed phase purification, make sure (i) air purge solvent A and B lines, (ii) flush solvent A and B lines with high purity acetonitrile, methanol, or ethanol, and (iii) flush solvent A line with aqueous solvent thoroughly.

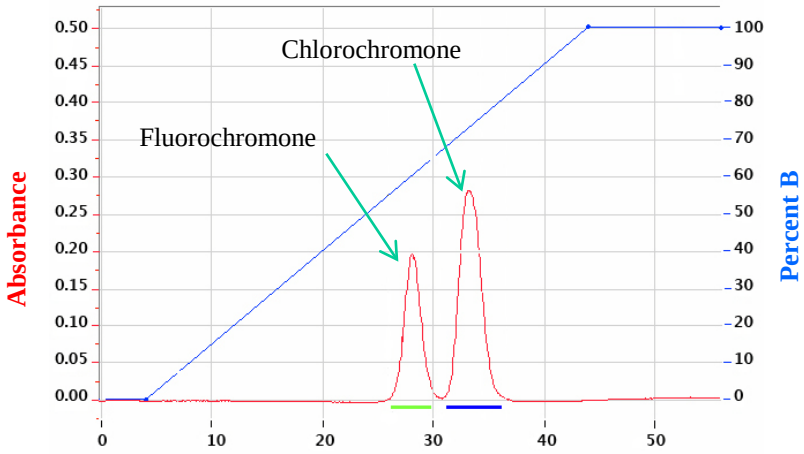
C18 Column Preconditioning Use six to seven column volumes (CV) of 1/1 water/acetonitrile (or water/methanol) mixture to flush the C18 column prior to first and immediate use. In an alternative way, pre-equilibrate with 2 CV of 100% acetonitrile and store for 1hr prior to use.

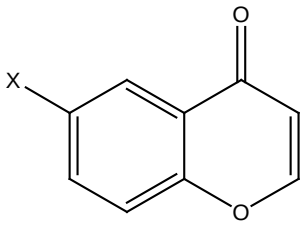
Luknova *SuperSep*™ C18
Flash Column Size and Flow Rate Range

P/N	Column Mass, gram	Column Volume, ml	Flow rate (mL/min)
FR004-1	5.5	5	18±5
FR012-1	16.5	17	30±5
FR025-1	34	34	35±10
FR040-1	50	57	40±10
FR080-1	100	120	60±15
FR120-1	150	190	85±15
FR240-1	300	330	60—170
FR330-1	420	450	80—220

End of the Run Care and Storage At the end of the separation run, wash the column with 4 CV of 100% acetonitrile or organic solvent B. It is recommended that only after the wash with 100% organic solvent, the purification can be returned to the condition of the start of the run and start the next run. At the end of the run, flush the column with 4 CV of 80% organic solvent + 20% water and capped wet to store for future use.

Application Example





X = F, Cl

Fluoro and Chlorochromone

Conditions:
Luknova *SuperSep*™ C18 Column, 5.5g.
Solvents: Water (A) and Methanol (B)