



COSMOSIL

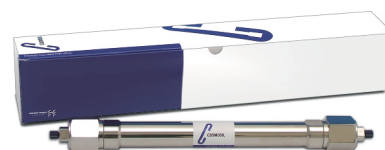
HPLC Column for Saccharide Analysis COSMOSIL Sugar-D

- **Novel stationary phase for saccharides**
- **Superior durability to conventional amino columns**
- **Minimized undesirable adsorption**

Silica Gel	High Purity Porous Spherical Silica
Average Particle Size	5 μm
Average Pore Size	approx. 120 \AA
Stationary Phase	Secondary and Tertiary Amine

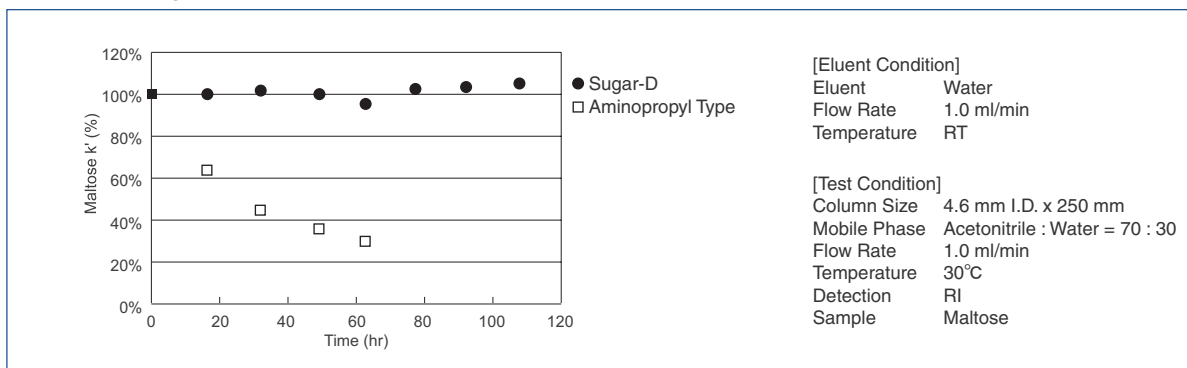
Conventionally aminopropyl bonded stationary phases are used for liquid chromatographic analysis of mono and oligosaccharides. General shortcomings of the conventional aminopropyl bonded phases are tailing and adsorption of certain saccharides and general low durability (short active life) of these columns. These problems are addressed and solved by the novel COSMOSIL Sugar-D, resulting in better (sharper) separation and much improved durability.

In addition COSMOSIL Sugar-D is useful at the separation of highly hydrophilic compounds which are not retained in conventional octadecyl (ODS) bonded stationary phases.



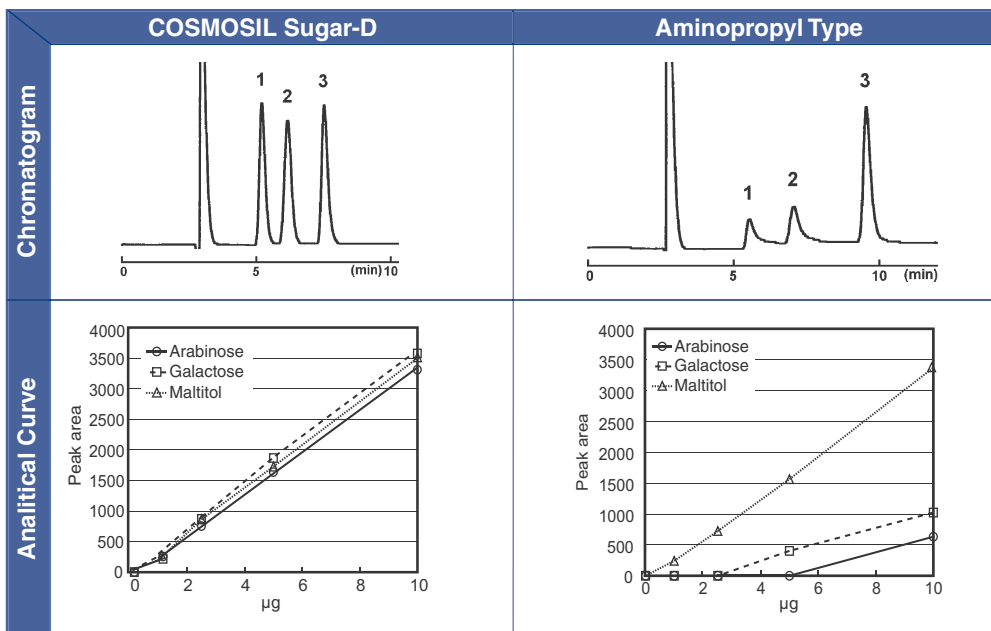
Durability

The decrease of retention time was compared between COSMOSIL Sugar-D and conventional aminopropyl bonded stationary phase under severe condition of 100% water as eluent between tests. The capacity factor did not decrease in case to COSMOSIL Sugar-D.



Adsorption Characteristic

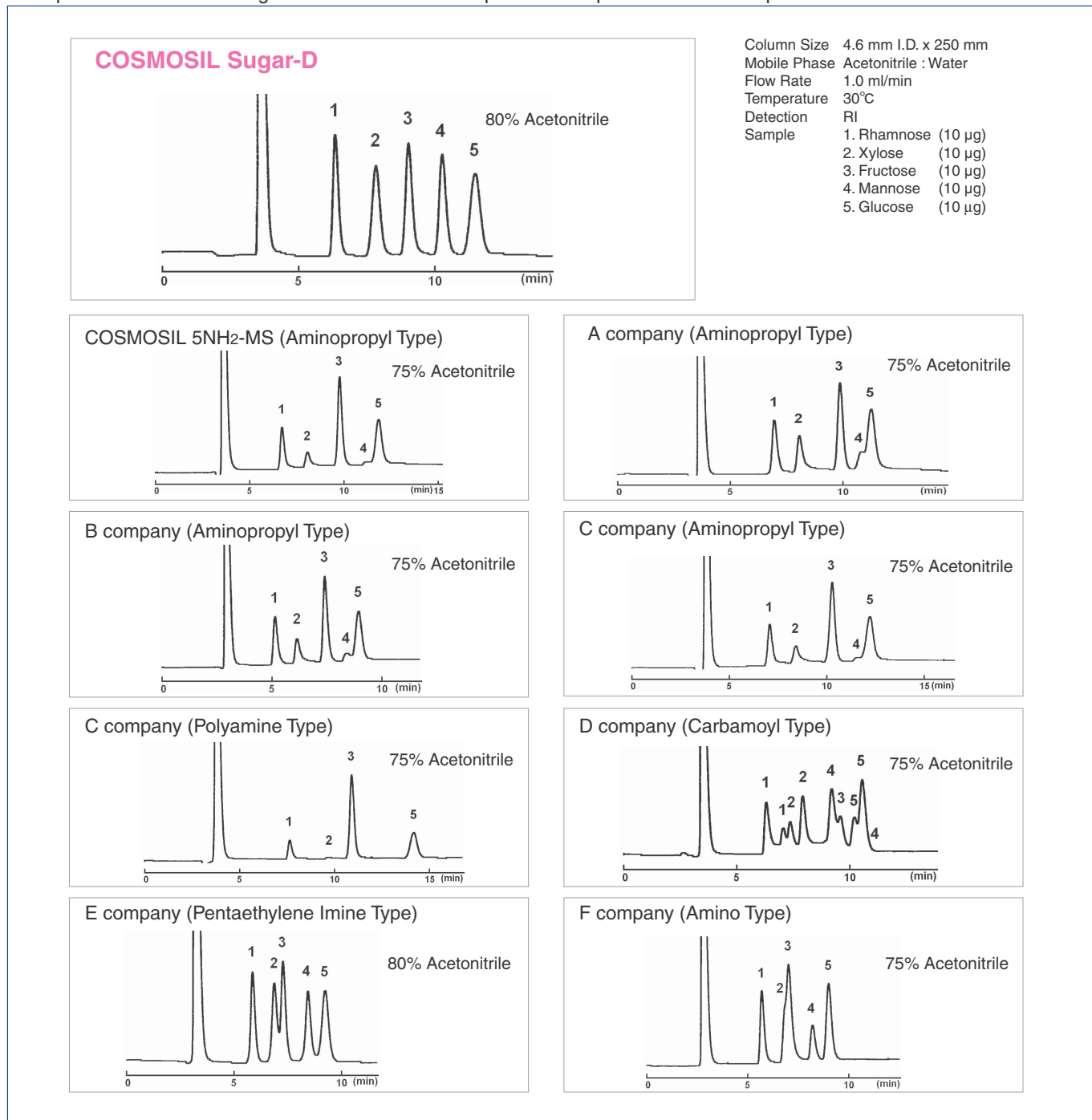
Certain types of saccharides such as arabinose or galactose are partially or temporarily adsorbed in conventional aminopropyl stationary phases causing disappearance of sample or tailing. These problematic saccharides elute sharply and in proportion to the injection volume from the superior COSMOSIL Sugar-D.



Column Size	4.6 mm I.D. x 250 mm
Mobile Phase	Acetonitrile : Water = 70 : 30
Flow Rate	1.0 ml/min
Temperature	30°C
Detection	RI
Sample	1. Arabinose 2. Galactose 3. Maltitol

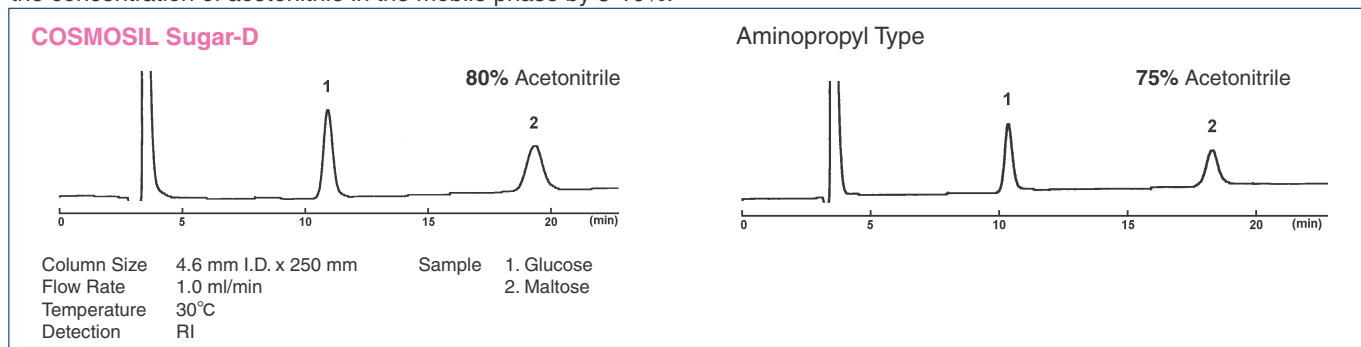
Comparison

The performance of Sugar-D and Competitors' columns was compared in separation and adsorption of monosaccharides. Aldehyde group, present in many monosaccharides, often results in undesirable adsorption when using conventional aminopropyl or other phases. COSMOSIL Sugar-D columns solve such problem and provide excellent separation of these saccharides.



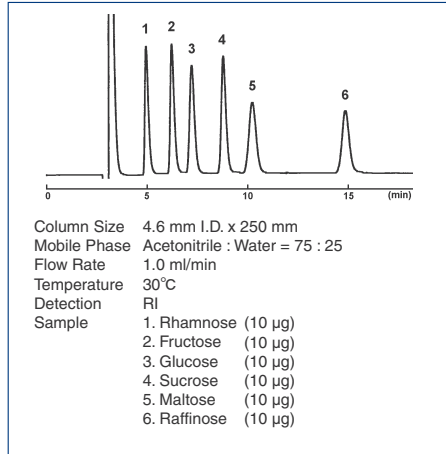
Retention Time

The conventional aminopropyl column is slightly more retentive than Sugar-D. The retention time can be adjusted by increasing the concentration of acetonitrile in the mobile phase by 5-10%.

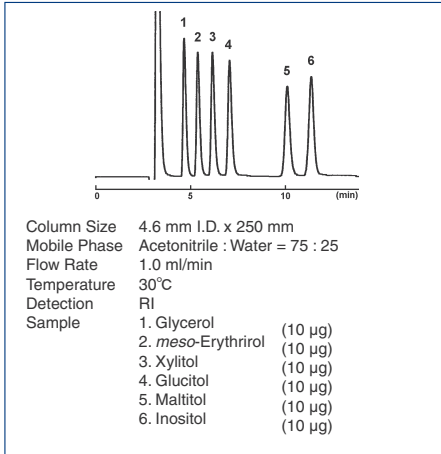


Separation of Saccharides

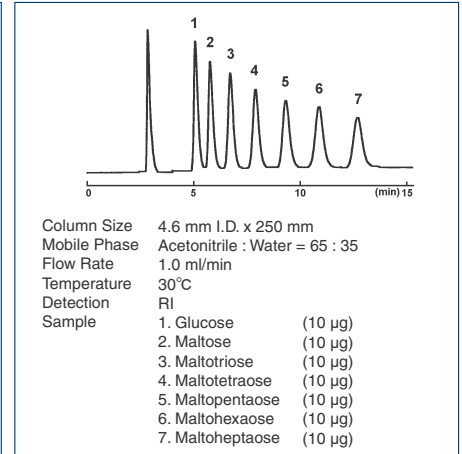
• Mono- and Oligosaccharides



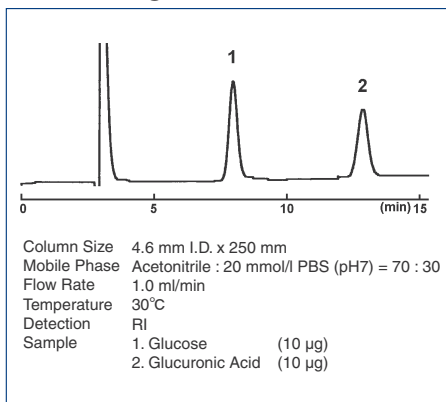
• Sugar Alcohols



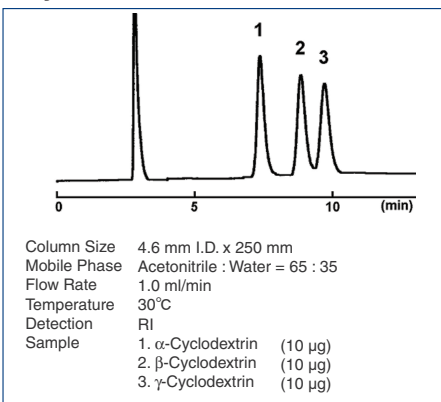
• Oligomaltoses



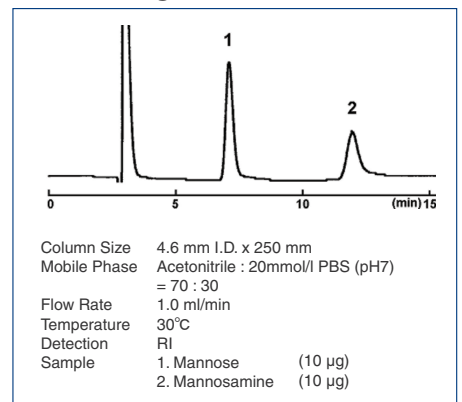
• Acidic Sugars



• Cyclodextrins

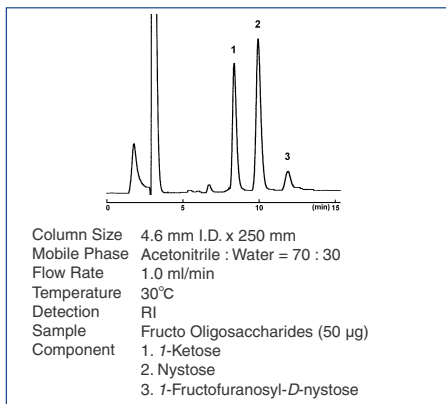


• Amino Sugars

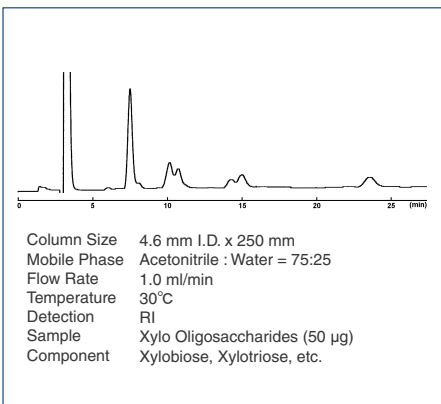


Health Food Compositions

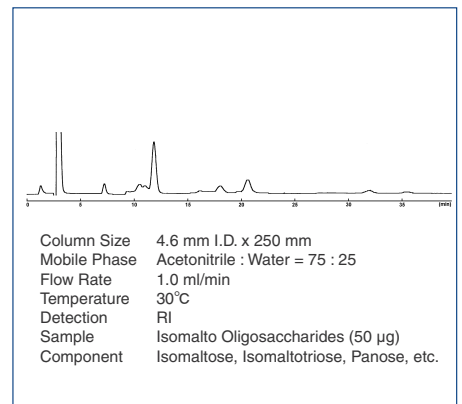
• Fructo Oligosaccharides



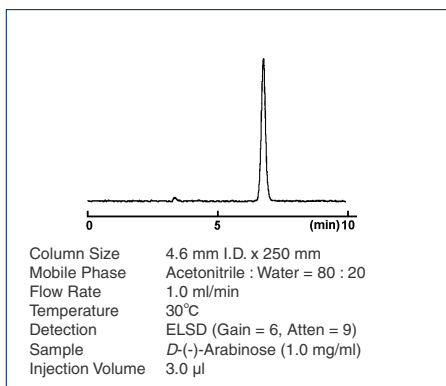
• Xylo Oligosaccharides



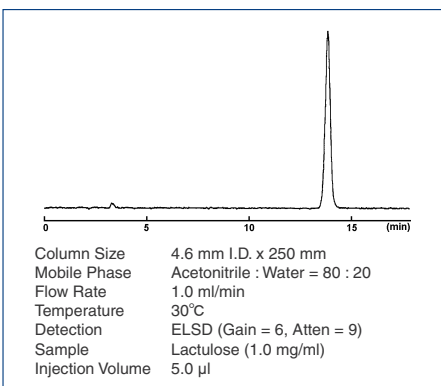
• Isomalto Oligosaccharides



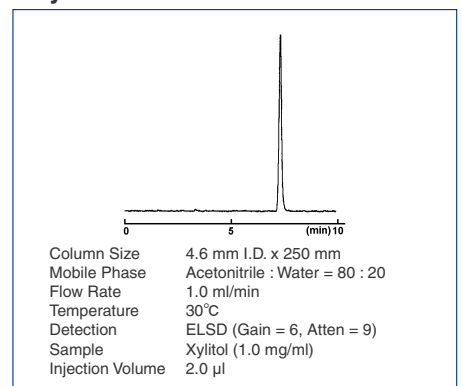
• Arabinose



• Lactulose

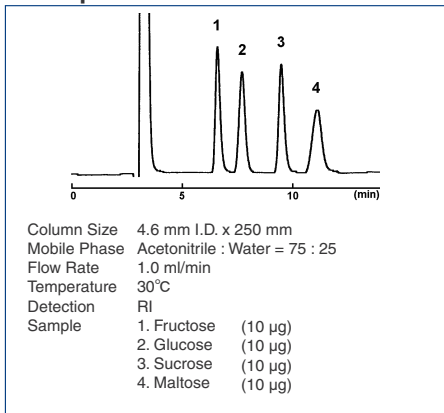


• Xylitol

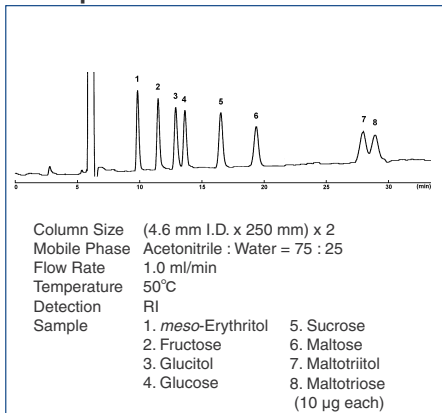


Food Compositions / Anticaries Agents

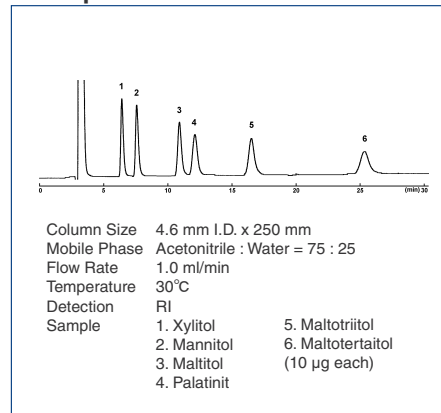
• Components of SOFT DRINK



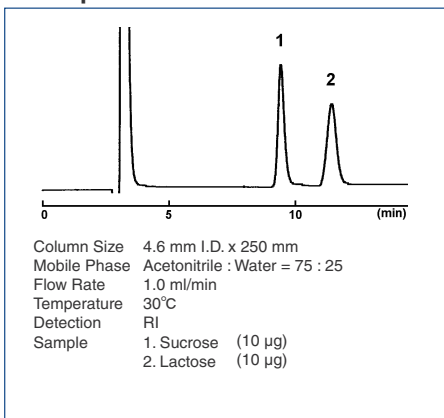
• Components of ISOTONIC DRINK



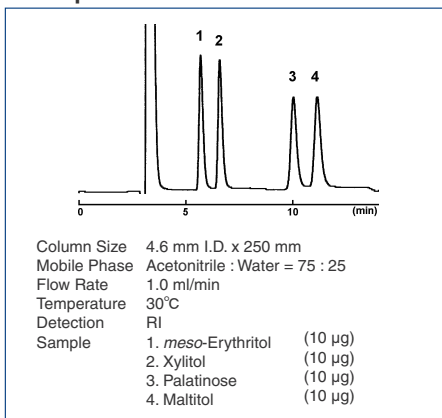
• Components of GUM



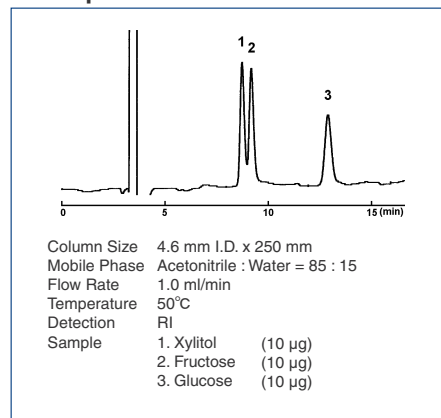
• Components of CHOCOLATE



• Components of ANTICARIES AGENTS



• Components of INFUSION



Ordering Information

Product Name	Column Size	Product Number	Product Name	Column Size	Product Number
COSMOSIL Sugar-D	2.0 mm I.D. x 250 mm	05689-31	COSMOSIL Sugar-D	4.6 mm I.D. x 10 mm	05394-81
Packed Column	3.0 mm I.D. x 150 mm	05690-91	Guard Column	10.0 mm I.D. x 20 mm	05696-31
	3.0 mm I.D. x 250 mm	05691-81		20.0 mm I.D. x 50 mm	05694-51
	4.6 mm I.D. x 150 mm	05395-71			
	4.6 mm I.D. x 250 mm	05397-51			
	10.0 mm I.D. x 250 mm	05692-71			
	20.0 mm I.D. x 250 mm	05693-61			

Other size may be available. Please enquire.

For research use only, not intended for diagnostic or drug use.