

VertiSep™ SUGAR HPLC Columns

- Polymer based column
- Wide pH stability
- Excellent efficiency and resolution
- Reproducibility lot-to-lot and column-to-column
- Use only water as mobile phase



VertiSep™ SUGAR CMP columns contain 8% cross-linked spherical Polystyrene Divinylbenzen (PS-DVB) polymer with calcium ionic form. Available in 9 µm particle size. VertiSep™ SUGAR CMP columns are useful for analysis of mono-, disaccharides and sugar alcohols by only water as the mobile phase. The dimension of 4.0x250 mm is recommended for **USP L-19** for separation of sugar alcohols such as sorbitol and manitol. Typical applications include fruit juices, soft drinks, dairy products, vegetables and medical source.

VertiSep™ SUGAR SOP columns contain 8% cross-linked spherical Polystyrene Divinylbenzen (PS-DVB) polymer with silver ionic form. Available in 10 and 20 µm particle size. They provide rapid oligosaccharides separation. Particle size of 10 µm can resolve saccharides as large as DP-7 and the 20 µm can resolve saccharides as large as DP-12. VertiSep™ SUGAR SOP columns are also useful in the carbohydrate industry to determine hydrolyzates in the conversion of corn syrup to fermentable carbohydrates.

VertiSep™ SUGAR LMP columns contain 8% cross-linked spherical Polystyrene Divinylbenzene (PS-DVB) polymer with lead ionic form. Available in 8 µm particle size. They provide highest resolution and selectivity for monosaccharides and disaccharides. VertiSep™ SUGAR LMP columns also can resolve pentoses and hexoses found in cellulose products especially glucose, xylose, galactose, cellobiose, arabinose and mannose which are not completely resolved on the calcium form. In addition, VertiSep™ SUGAR LMP columns can resolve sucrose and lactose well if these two sugars are present in excess in some samples. Typical applications include dairy and meat industries, cereals and plant fibers.

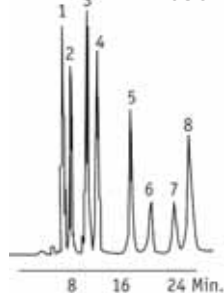
VertiSep™ SUGAR HMP columns contain 8% cross-linked spherical Polystyrene Divinylbenzene (PS-DVB) polymer with hydrogen ionic form. Available in 8 µm particle size. They are useful for analysis of samples containing monosaccharides in combination with organic acids, fatty acids and alcohols by using only a dilute sulfuric acid as mobile phase at ambient temperatures. Typical applications include wine industries, dairy industries, bio-reactions and medical science.

VertiSep™ SUGAR Specifications

Packing	Form	Cross Linking (%)	Particle Size (µm)	Typical Mobile Phase	Max Temp (°C)
VertiSep™ SUGAR CMP	calcium	8	9	water	85
VertiSep™ SUGAR SOP	silver	8	10,20	water	85
VertiSep™ SUGAR LMP	lead	8	8	water	85
VertiSep™ SUGAR HMP	hydrogen	8	8	0.005 N Sulfuric acid	85

VertiSep™ SUGAR

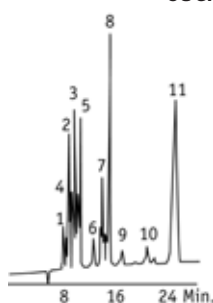
SUGAR HMP Column



1. Maltotriose
2. Maltose
3. Glucose
4. Fructose
5. Glycerol
6. Acetic Acid
7. Methanol
8. Ethanol

Column: VertiSep™ SUGAR HMP 8µm 7.8x300mm
 Mobile Phase: 2.5mM H₂SO₄
 Flow Rate: 0.4mL/min
 Detection: RI
 Temp: Ambient

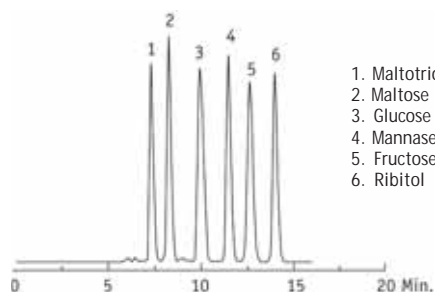
SUGAR HMP Column



1. Citric Acid
2. Tartaric Acid
3. Glucose
4. Malic Acid
5. Fructose
6. Succinic Acid
7. Lactic Acid
8. Glycerin
9. Acetic Acid
10. 2,3 Butanediol
11. Ethanol

Column: VertiSep™ SUGAR HMP 8µm 7.8x300mm
 Mobile Phase: 2.5mM H₂SO₄
 Flow Rate: 0.4mL/min
 Detection: RI
 Temp: 60°C

SUGAR and Sugar Alcohols



1. Maltotriose
2. Maltose
3. Glucose
4. Mannose
5. Fructose
6. Ribitol

Column: VertiSep™ SUGAR CMP 9µm 7.8x300mm
 Mobile Phase: DDI H₂O
 Flow Rate: 0.6mL/min
 Detection: RI
 Temp: 85°C

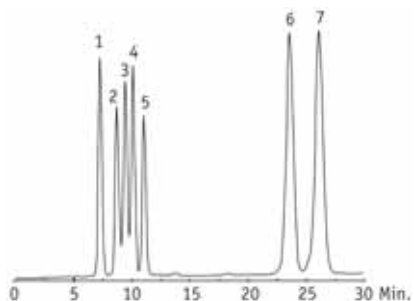
Mannitol and Sorbitol for USP L-19



1. Mannitol
2. Sorbitol

Column: VertiSep™ SUGAR CMP 9µm 4.0x250mm
 Mobile Phase: Water
 Flow Rate: 0.2mL/min
 Detection: RI
 Temp: 30°C

SUGAR and Sugar Alcohols



1. Cellobiose
2. Glucose
3. Xylose
4. Galactose
5. Arabinose
6. Xylitol
7. Sorbitol

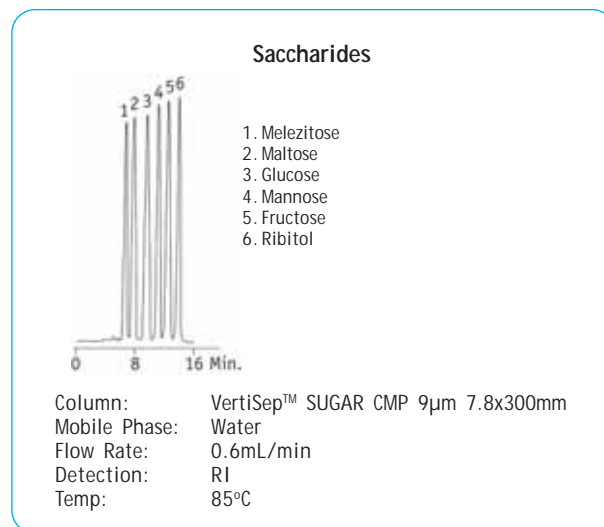
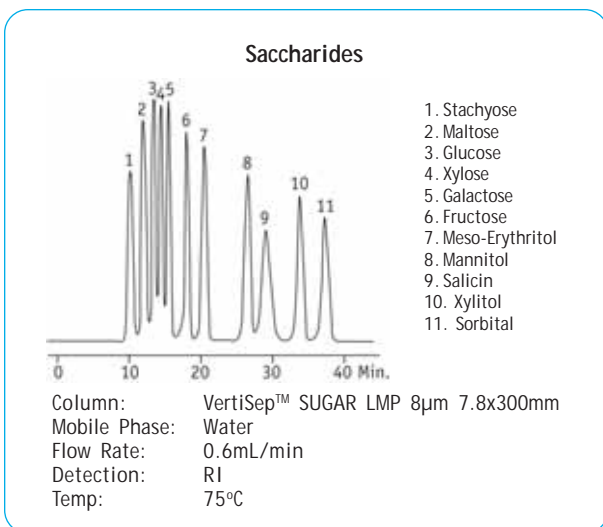
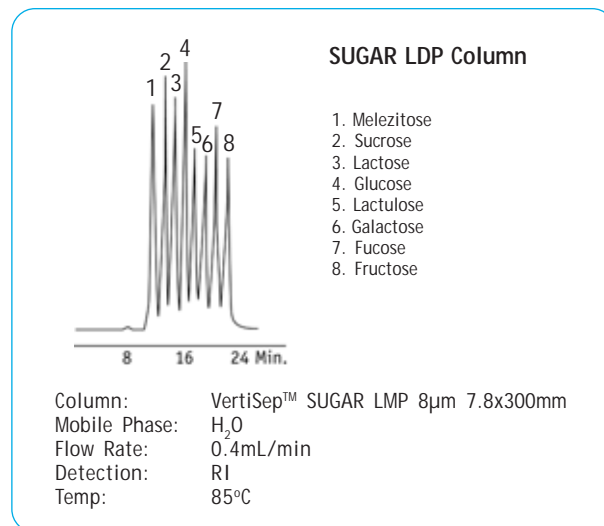
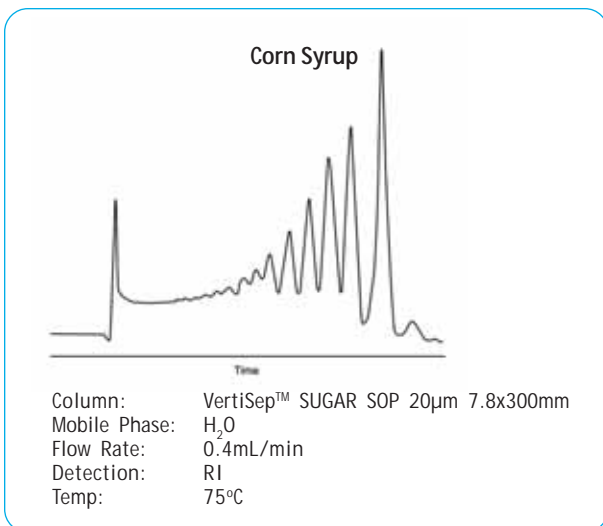
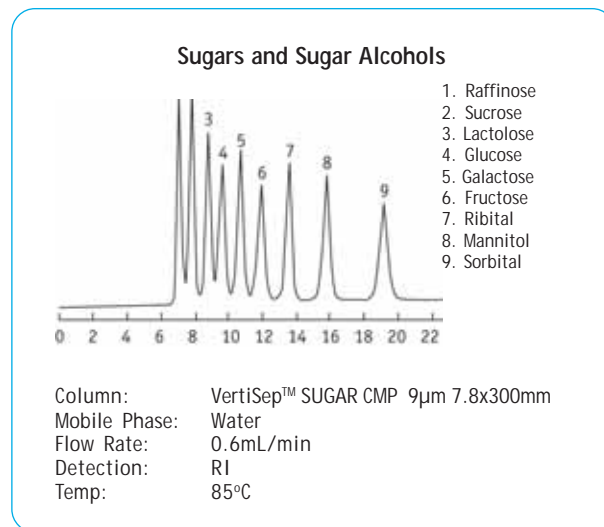
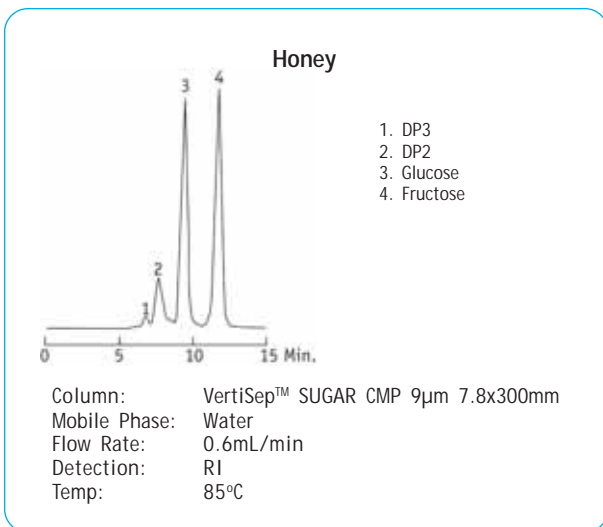
Column: VertiSep™ SUGAR LMP 8µm 7.8x300mm
 Mobile Phase: DDI H₂O
 Flow Rate: 1.0mL/min
 Detection: RI
 Temp: 85°C

Apple Juice



1. Sucrose
2. Glucose
3. Fructose

Column: VertiSep™ SUGAR CMP 9µm 7.8x300mm
 Mobile Phase: Water
 Flow Rate: 0.6mL/min
 Detection: RI
 Temp: 75°C





VertiSep™ SUGAR Columns

Packing	Particle Size (µm)	I.D. Length (mm)	Part No.
SUGAR CMP	9	4.0 x 250	03IJ-D561
	9	7.8 x 100	03IJ-G631
	9	7.8 x 300	03IJ-G961
SUGAR SOP	10	7.8 x 300	03IM-G931
	20	7.8 x 300	03IM-G971
SUGAR LMP	8	7.8 x 300	03IK-G951
SUGAR HMP	8	4.6 x 250	03IL-E551
	8	7.8 x 300	03IL-G951

VertiSep™ SUGAR Guard Cartridges*, 2/PK

Packing	Formats	I.D. Length (mm)	Part No.
SUGAR CMP	Guard	4.6 x 10	03IJ-E163
SUGAR SOP	Guard	4.6 x 10	03IM-E133
SUGAR LMP	Guard	4.6 x 10	03IK-E153
SUGAR HMP	Guard	4.6 x 10	03IL-E153

*Guard holder required

Guard Holder with Coupler

Guard Holder with Coupler	QTY	Part NO.
For column I.D. 2.1-7.8 mm	1	0300-0001

