

What is “Rare sugars”?

“Rare sugars” are monosaccharides and their derivatives that seldom occur in nature. D-Psicose, D-Tagatose and D-Allose are representative of rare sugars.

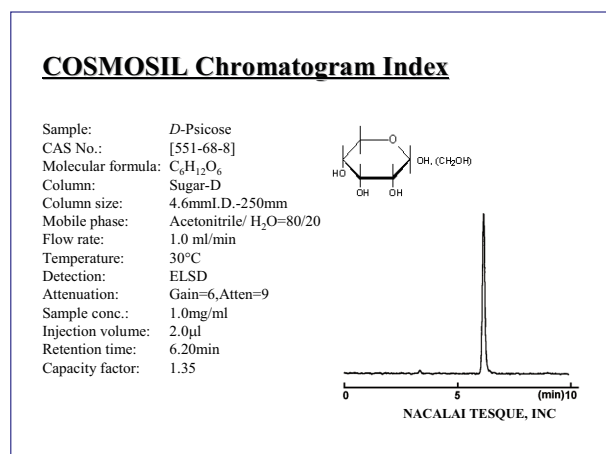
For example, D-Psicose has 70% sweetness of table sugar and almost zero calorie. It inhibits blood sugar level elevation and prevents arteriosclerosis. Due to these beneficial attributes, D-Psicose is expected to be widely applied in medicine, functional food and cosmetics.

Sugar-D HPLC column is designed specifically for sugar analysis. It can resolve rare sugars including D-Psicose.

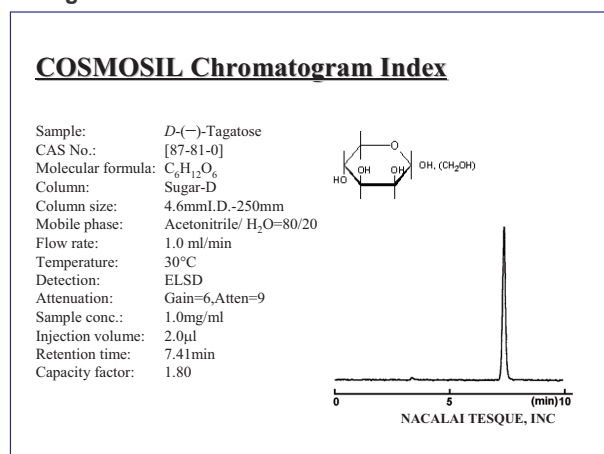


ref: 1) Kei Takeshita, Akihiro Suga, Goro Takada, Ken Izumori “Mass production of D-psicose from D-fructose by a continuous bioreactor system using immobilized-tagatose 3-epimerase” Journal of Bioscience and Bioengineering 90, (2000), 453-455

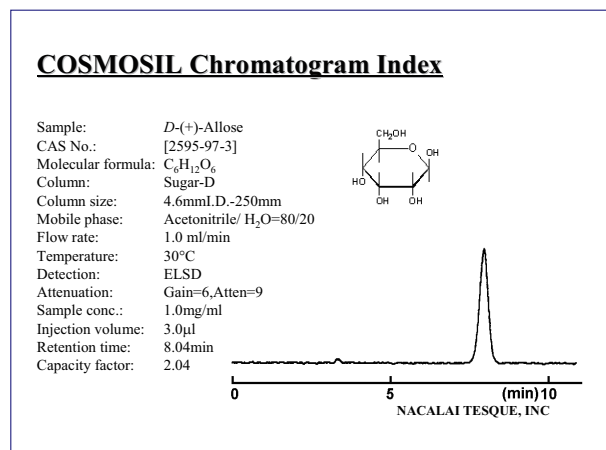
D- Psicose



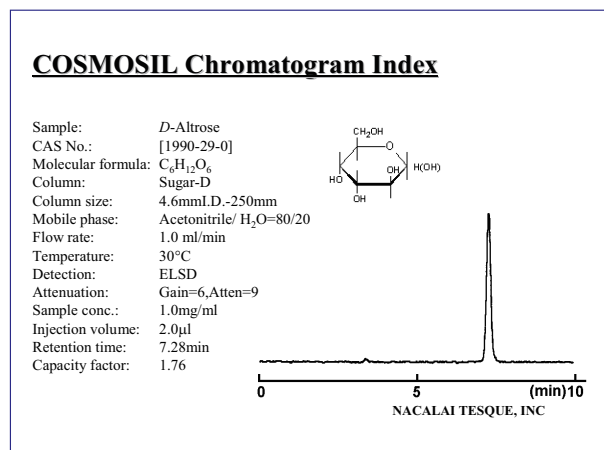
D- Tagatose



D- Allose



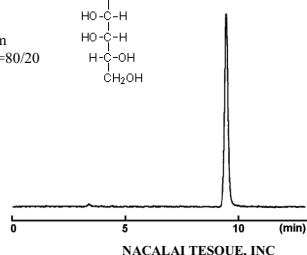
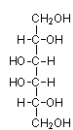
D- Altrose



D- Alditol

COSMOSIL Chromatogram Index

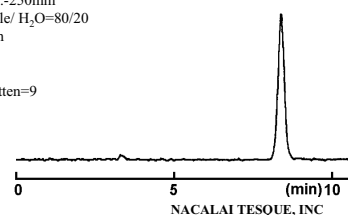
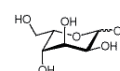
Sample: Dulcitol [Galactitol]
CAS No.: [608-66-2]
Molecular formula: $C_6H_{14}O_6$
Column: Sugar-D
Column size: 4.6mmI.D.-250mm
Mobile phase: Acetonitrile/ $H_2O=80/20$
Flow rate: 1.0 ml/min
Temperature: 30°C
Detection: ELSD
Attenuation: Gain=6,Atten=9
Sample conc.: 1.0mg/ml
Injection volume: 3.0 μ l
Retention time: 9.48min
Capacity factor: 2.59



L- Gulose

COSMOSIL Chromatogram Index

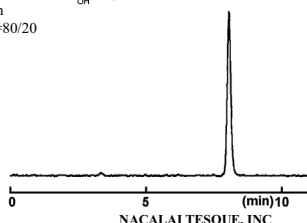
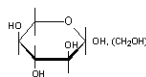
Sample: L-Gulose
CAS No.: [6027-89-0]
Molecular formula: $C_6H_{12}O_6$
Column: Sugar-D
Column size: 4.6mmI.D.-250mm
Mobile phase: Acetonitrile/ $H_2O=80/20$
Flow rate: 1.0 ml/min
Temperature: 30°C
Detection: ELSD
Attenuation: Gain=6,Atten=9
Sample conc.: 1.0mg/ml
Injection volume: 4.0 μ l
Retention time: 8.44min
Capacity factor: 2.19



L- Sorbose

COSMOSIL Chromatogram Index

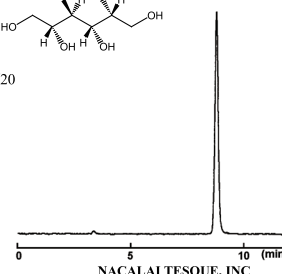
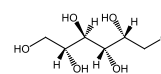
Sample: L(-)-Sorbose
CAS No.: [87-79-6]
Molecular formula: $C_6H_{12}O_6$
Column: Sugar-D
Column size: 4.6mmI.D.-250mm
Mobile phase: Acetonitrile/ $H_2O=80/20$
Flow rate: 1.0 ml/min
Temperature: 30°C
Detection: ELSD
Attenuation: Gain=6,Atten=9
Sample conc.: 1.0mg/ml
Injection volume: 2.0 μ l
Retention time: 8.12min
Capacity factor: 2.07



D- Talitol

COSMOSIL Chromatogram Index

Sample: D-Talitol
CAS No.: [643-03-8]
Molecular formula: $C_6H_{14}O_6$
Column: Sugar-D
Column size: 4.6mmI.D.-250mm
Mobile phase: Acetonitrile/ $H_2O=80/20$
Flow rate: 1.0 ml/min
Temperature: 30°C
Detection: ELSD
Attenuation: Gain=6,Atten=9
Sample conc.: 1.0mg/ml
Injection volume: 3.0 μ l
Retention time: 8.85min
Capacity factor: 2.35



More Sugar-D application data are available on our website (<http://www.nacalai.co.jp/cosmosil/data/csmosrchttop.cfm>). Or you can search "COSMOSIL Application" by search engine.

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

