

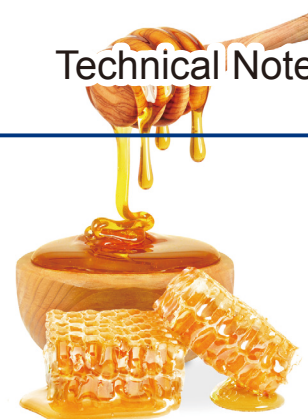


COSMOSIL

Analysis of Sugars in Honey and Syrup

Technical Note

Analysis of honey and syrup is an important part of detecting food adulteration. Sugar-D provides good and consistent separation with high durability.



Standards

COSMOSIL Application Data

Column: COSMOSIL Sugar-D
 Column size: 4.6mm I.D.-250mm
 Mobile phase: Acetonitrile/ H₂O = 75/25
 Flow rate: 1.0 ml/min
 Temperature: 30°C
 Detection: RI

Sample: 1; Fructose (30mg/ml)
 2; Glucose (24mg/ml)
 3; Sucrose (6mg/ml)
 4; Maltose (6mg/ml)

Inj. Vol.: 5.0µl

NACALAI TESQUE, INC

Honey

COSMOSIL Application Data

Column: COSMOSIL Sugar-D
 Column size: 4.6mm I.D.-250mm
 Mobile phase: Acetonitrile/ H₂O = 75/25
 Flow rate: 1.0 ml/min
 Temperature: 30°C
 Detection: RI

Sample: Honey (50mg/ml)
 1; Fructose
 2; Glucose

Inj. Vol.: 5.0µl

NACALAI TESQUE, INC

Gum syrup

COSMOSIL Application Data

Column: COSMOSIL Sugar-D
 Column size: 4.6mm I.D.-250mm
 Mobile phase: Acetonitrile/ H₂O = 75/25
 Flow rate: 1.0 ml/min
 Temperature: 30°C
 Detection: RI

Sample: Gum syrup (50mg/ml)
 1; Fructose
 2; Glucose

Inj. Vol.: 5.0µl

NACALAI TESQUE, INC

Gum syrup (contains honey)

COSMOSIL Application Data

Column: COSMOSIL Sugar-D
 Column size: 4.6mm I.D.-250mm
 Mobile phase: Acetonitrile/ H₂O = 75/25
 Flow rate: 1.0 ml/min
 Temperature: 30°C
 Detection: RI

Sample: Gum syrup (contains honey) (50mg/ml)
 1; Fructose
 2; Glucose

Inj. Vol.: 5.0µl

NACALAI TESQUE, INC

Maple syrup

COSMOSIL Application Data

Column: COSMOSIL Sugar-D
 Column size: 4.6mm I.D.-250mm
 Mobile phase: Acetonitrile/ H₂O = 75/25
 Flow rate: 1.0 ml/min
 Temperature: 30°C
 Detection: RI

Sample: Maple syrup (50mg/ml)
 1; Fructose
 2; Glucose
 3; Sucrose

Inj. Vol.: 5.0µl

NACALAI TESQUE, INC

Sugar syrup (Maple flavor)

COSMOSIL Application Data

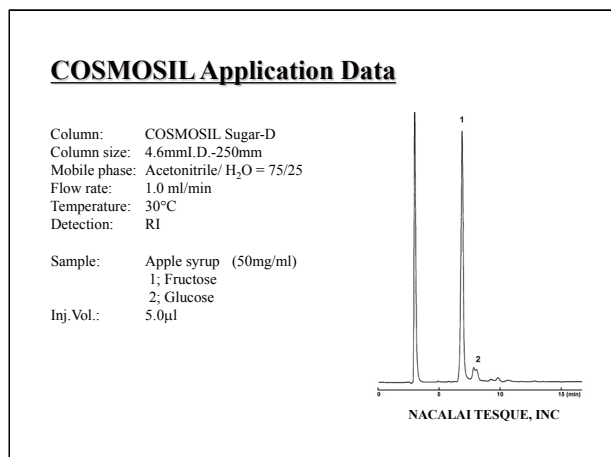
Column: COSMOSIL Sugar-D
 Column size: 4.6mm I.D.-250mm
 Mobile phase: Acetonitrile/ H₂O = 75/25
 Flow rate: 1.0 ml/min
 Temperature: 30°C
 Detection: RI

Sample: Sugar syrup (Maple flavor) (50mg/ml)
 1; Fructose
 2; Glucose
 3; Sucrose

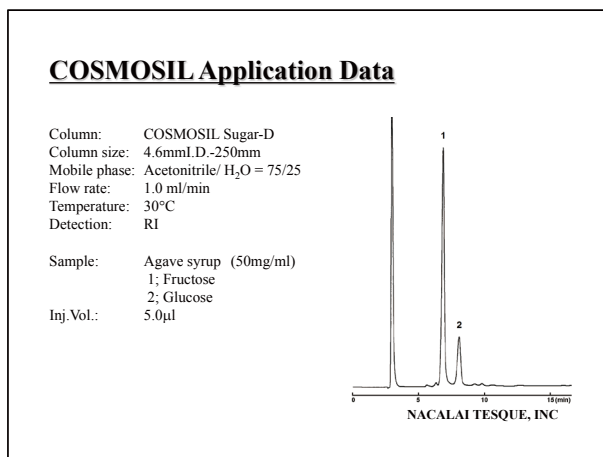
Inj. Vol.: 5.0µl

NACALAI TESQUE, INC

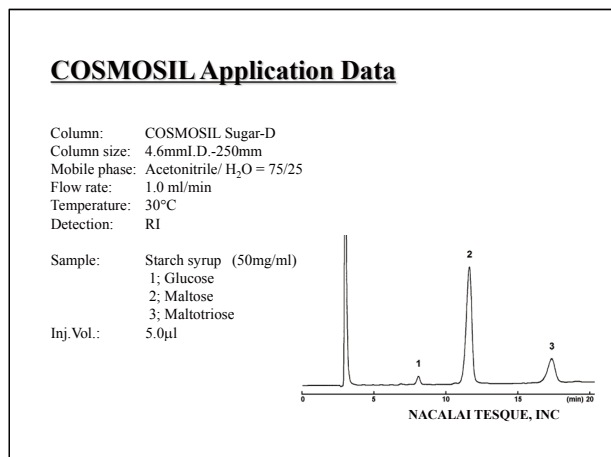
Apple syrup



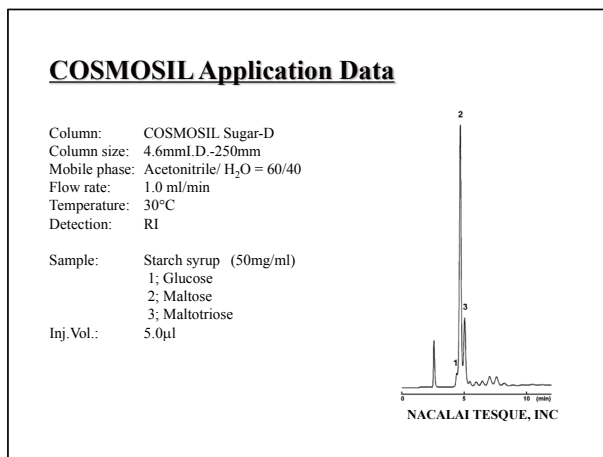
Agave syrup



Starch syrup



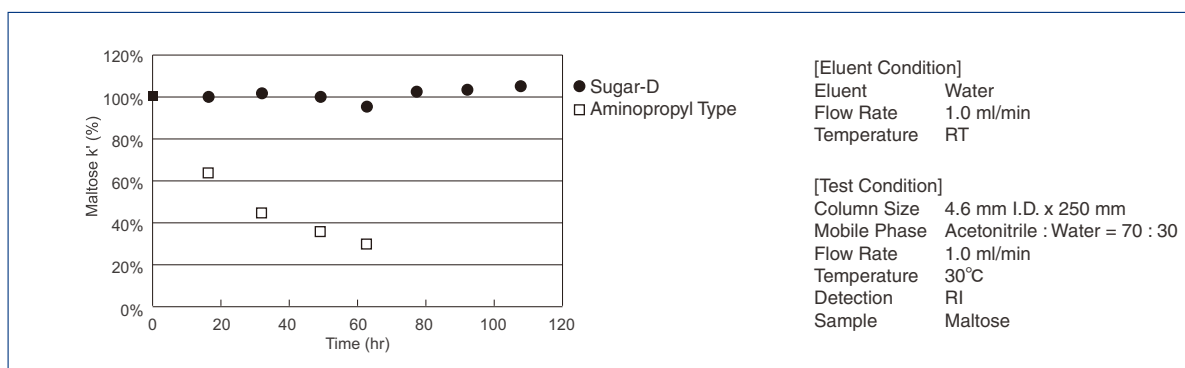
Starch syrup (fast analysis)



More Sugar-D application data are available on our website (<http://www.nacalai.co.jp/cosmosil/data/csmosrcht0p.cfm>). Or you can search "COSMOSIL Application".

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.



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