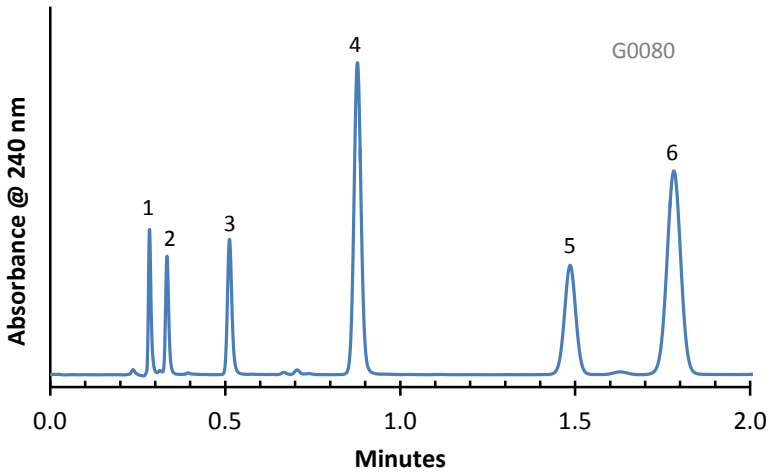
HALO® | Fused-Core® Particle Technology

Application Note: 096-FL

Separation of Six Flavonoids on HALO C18, 2.7µm



PEAK IDENTITIES:

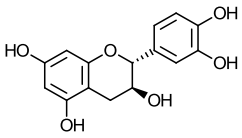
1. Catechin
2. Naringin
3. Myricetin
4. Quercetin
5. Naringenin
6. Hesperetin

TEST CONDITIONS:

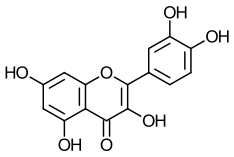
Column: 4.6 x 50 mm, HALO C18, 2.7µm
Part Number: 92814-402
Mobile Phase: 70/30: A/B
A= 0.02 M Phosphate buffer, pH=2.9, (adj.)
B= Acetonitrile
Flow Rate: 2.0 mL/min.
Pressure: 224 Bar
Temperature: 30°C
Detection: UV 240 nm, VWD
Injection Volume: 1.0 µL
Sample Solvent: methanol
Response Time: 0.02 sec.
Flow Cell: 2.5 µL semi-micro
LC System: Shimadzu Prominence UFLC XR
ECV: ~14µL
Data rate: 25 Hz

Flavonoids are naturally occurring polyphenols that are found in plant leaves, flowers and seeds. They have beneficial health effects and are often taken as dietary supplements. Analysis of this flavonoids mixture can be carried out in less than 2 minutes using a short HALO Fused Core C18 column.

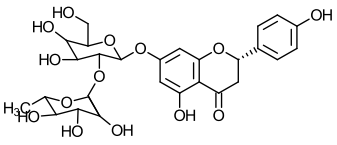
STRUCTURES:



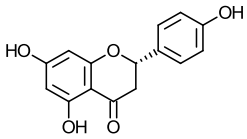
Catechin



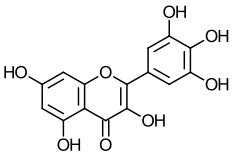
Quercetin



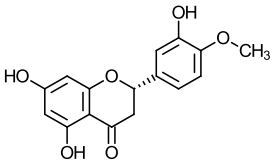
Naringin



Naringenin



Myricetin



Hesperetin

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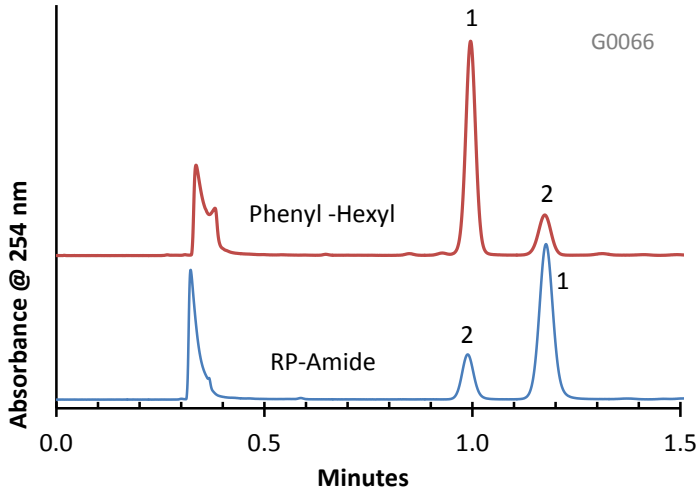
Application Note: 083-FL

Separation of Diosmin and Hesperidin on HALO Phenyl-Hexyl and HALO RP-Amide



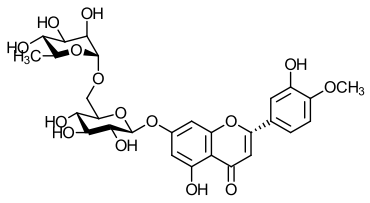
PEAK IDENTITIES:

1. Diosmin
2. Hesperidin

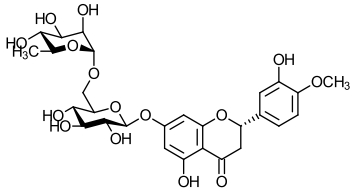
TEST CONDITIONS:

Column 1: 4.6 x 50 mm, HALO Phenyl-Hexyl
Part Number: 92814-406
Column 2: 4.6 x 50 mm, HALO RP Amide
Part Number: 92814-407
Mobile Phase: 78/22: Water/acetonitrile
Flow Rate: 1.5 mL/min.
Pressure: 145 Bar
Temperature: 40°C
Detection: UV 254 nm, VWD
Injection Volume: 0.5 µL
Sample Solvent: Dimethylformamide*
Response Time: 0.02 sec.
Flow Cell: 2.5 µL semi-micro
LC System: Shimadzu Prominence UFLC XR
ECV: ~14 µL

STRUCTURES:



Diosmin



Hesperidin

These two semi-synthetic flavonoids are often taken to enhance vascular health. The two compounds may be easily separated using either HALO RP-Amide or HALO Phenyl-Hexyl phases. Note the difference in elution order on the two phases.

*Needed for solubility reasons.

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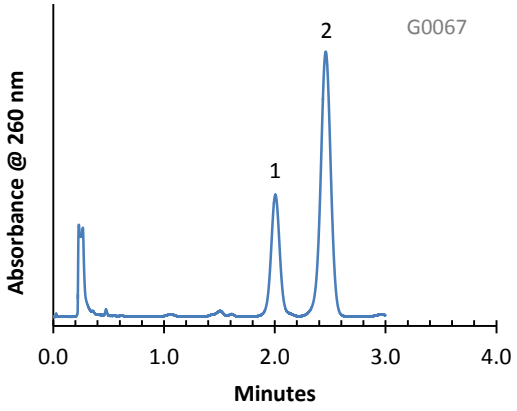
Application Note: 084-FL

HPLC Separation of Hesperidin and Diosmin on HALO-5 PFP Phase



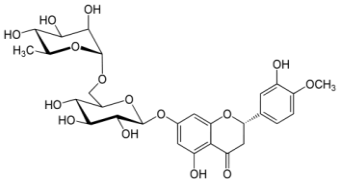
PEAK IDENTITIES:

1. Hesperidin
2. Diosmin

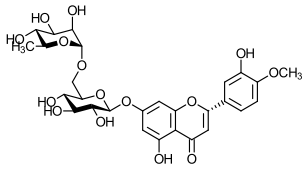
TEST CONDITIONS:

Column: 3.0 x 50 mm, HALO-5 PFP
Part Number: 95813-409
Mobile Phase: 85/15: A/B
A= 0.02 M Potassium phosphate buffer, pH=3
B= Acetonitrile
Flow Rate: 1.0 mL/min.
Pressure: 92 Bar
Temperature: 30°C
Detection: UV 260 nm, VWD
Injection Volume: 0.5 µL
Sample Solvent: Dimethylformamide*
Response Time: 0.02 sec.
Flow Cell: 2.5 µL semi-micro
LC System: Shimadzu Prominence UFLC XR
ECV: ~14 µL

STRUCTURES:



Hesperidin



Diosmin

These two semisynthetic flavonoids can be rapidly separated using HALO-5 PFP (pentafluorophenyl) stationary phase at a low pressure. Note that just the addition of a double bond results in a difference that allows these two very similar compounds to be separated.

*Needed for solubility reasons.

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