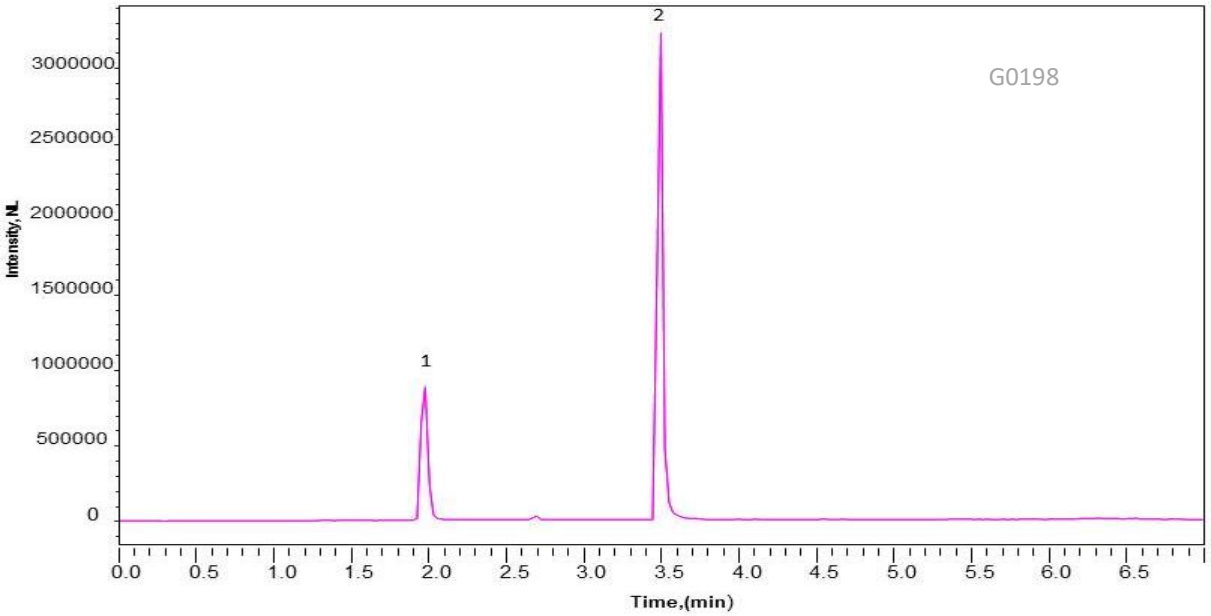
HALO® | Fused-Core® Particle Technology

Application Note: 204-TOX

LC-MS Separation of Kratom and its Metabolite on HALO® C18, 2 µm



TEST CONDITIONS:

Column: HALO 90 Å C18, 2 µm, 2.1 x 50mm
Part Number: 91812-402
Mobile Phase A: Water/0.1% Formic acid
Mobile Phase B: ACN/0.1% Formic acid
Gradient:

Time	%B
0.0	10
4.00	95
5.00	95
5.01	10
7.00	END

Flow Rate: 0.4 mL/min
Initial Pressure: 315 bar
Temperature: ambient
Injection Volume: 2 µL
Sample Solvent: 95/5 ACN/Water

PEAK IDENTITIES:

1. 7-OH Mitragynine (MH^+=415.502 g/mol)
2. Mitragynine (MH^+=399.453 g/mol)

MS CONDITIONS:

LCMS system: Shimadzu LCMS-2020
Detection: +ESI MS
Spray voltage: 4.50 kV
Drying line temp: 300 °C
Heat Block: 450 °C

The 2 µm HALO C18 is an ideal choice for analysis of kratom and its metabolite. Kratom is an herbal extract that comes from the leaves of an evergreen tree (Mitragyna speciosa) grown in Southeast Asia. Believed to act on opioid receptors, kratom has been used by people to mitigate the symptoms of opioid withdraw. However, studies on the effects of kratom have identified many safety concerns and no clear benefits, and kratom is not currently regulated by the United States.

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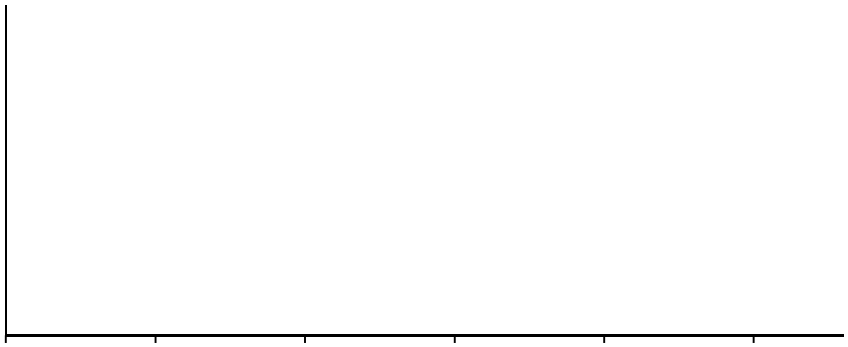
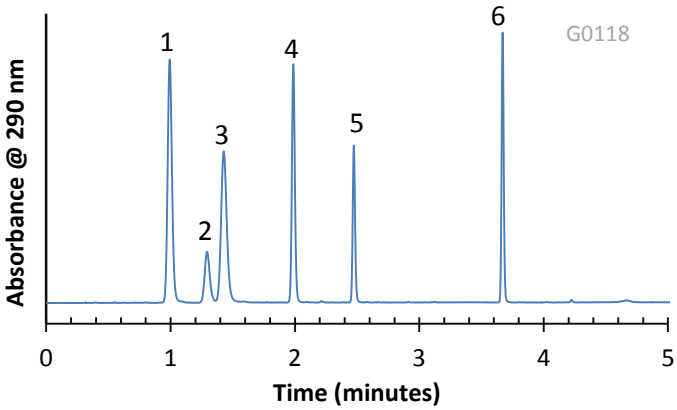
Application Note: 177-P

Chinese Pharmacopeia Separation of Parabens on HALO C18, 2.7µm



Application Note: 133-P

Separation of Resveratrols and Related Compounds on HALO 5 C18



PEAK IDENTITIES:

1. *trans*-Polydatin
2. Piceatannol
3. *trans*-Oxyresveratrol
4. *trans*-Resveratrol
5. *cis*-Resveratrol
6. Pterostilbene

TEST CONDITIONS:

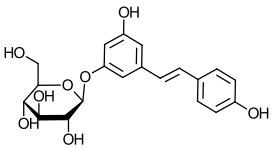
Column: 3.0 x 100 mm, HALO 5 C18, 5 µm
Part Number: 95813-602
Mobile Phase:
A= Water
B= Methanol
Gradient:

Time	%B
0.0	32
1.0	32
4.0	90
5.0	90

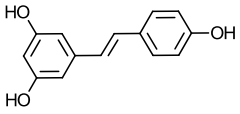
Flow Rate: 1.2 mL/min.
Pressure: 245 Bar
Temperature: 35°C
Detection: UV 290 nm, VWD
Injection Volume: 1.0 µL
Sample Solvent: 50/50: Acetonitrile/water
Response Time: 0.02 sec.
Data rate: 25 Hz.
Flow Cell: 2.5 µL semi-micro
LC System: Shimadzu Prominence UFLC XR
ECV: ~14 µL

These naturally occurring compounds can be found in grapes and grape vines and other plants and are claimed to have health benefits. Resveratrol and these related compounds can be analyzed in less than 5 minutes using a HALO 5 C18 column.

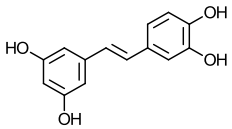
STRUCTURES:



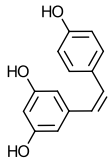
trans-Polydatin



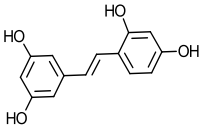
trans-Resveratrol



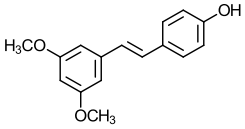
Piceatannol



cis-Resveratrol



trans-Oxyresveratrol



Pterostilbene

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