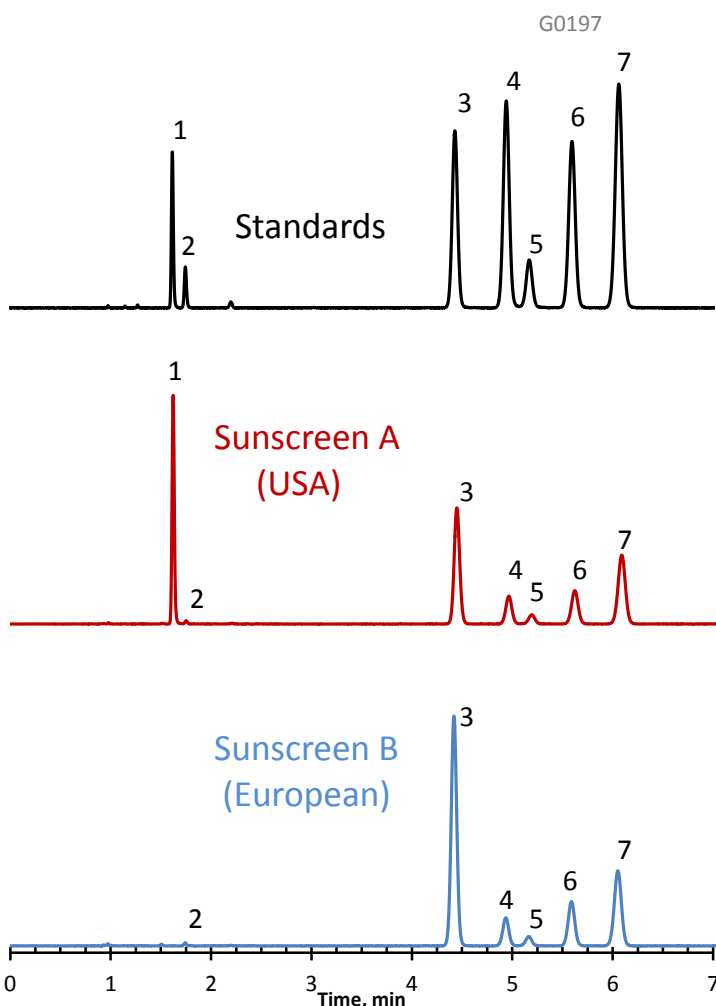


## Analysis of Sunscreens using HALO® RP-Amide, 2.7 µm



### TEST CONDITIONS:

Column: HALO 90 Å RP Amide, 2.7 µm, 4.6 x 150 mm

Part Number: 92814-707

Mobile Phase: A/B

A= Water

B= Acetonitrile

Gradient:

Time	% B
0.0	75
7.0	75
10	100
20	100

Flow Rate: 1.5 mL/min.

Initial pressure: 206 bar

Temperature: 30°C

Injection Volume: 0.5 µL

Sample Solvent: ethanol or 1-propanol

Standards: methanol

Sample A: 1-propanol

Sample B: ethanol

Detection: 300 nm, VWD

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

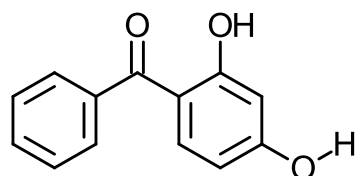
### PEAK IDENTITIES:

1. Oxybenzone
2. Avobenzene isomer 1
3. Octocrylene
4. Avobenzene isomer 2
5. Homosalate isomer 1
6. Octisalate
7. Homosalate isomer 2

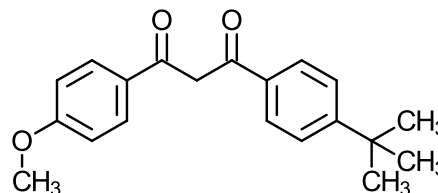
STRUCTURES on PAGE 2

Sunscreens are designed to reduce the risk of burning from exposure to the sun's UV rays. Overexposure to the sun increases the chances of skin cancer so it is important to use sunscreens during outdoor activities. The active contents of sunscreens can be analyzed using HPLC as shown in this application note. Approximately 200 mg of sunscreen lotions were treated with 10 mL of ethanol or 1-propanol to dissolve the active ingredients and suspend insolubles. Aliquots of the slurries were centrifuged and the supernates were filtered through Nylon 0.45 µm porosity syringe filters prior to analysis.

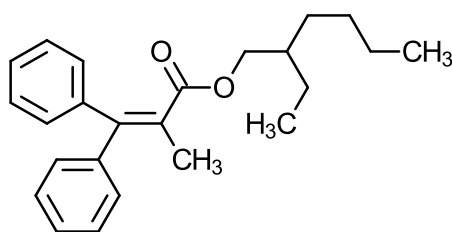
## STRUCTURES:



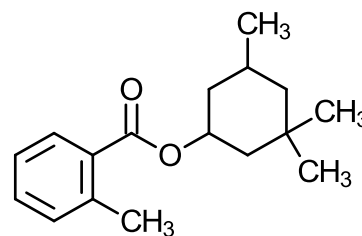
Oxybenzone



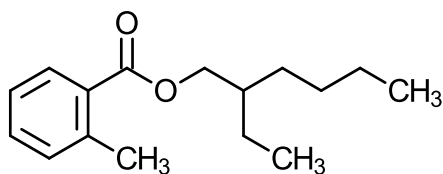
Avobenzene



Octocrylene



Homosalate



Octisalate