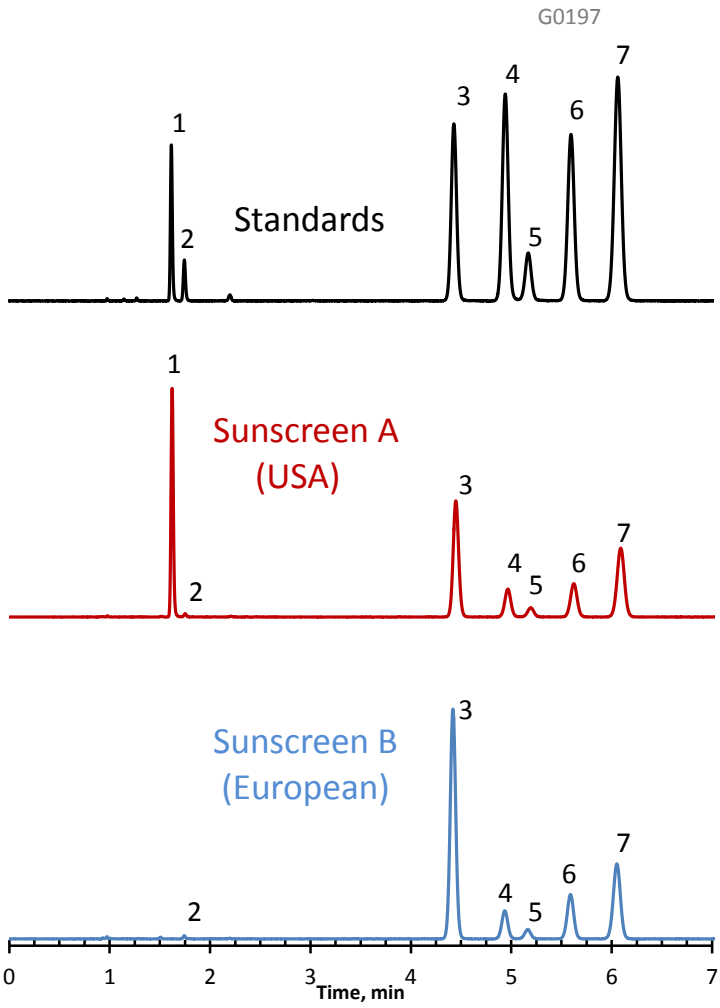
Application Note: 203-SA

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

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.

PEAK IDENTITIES:

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

STRUCTURES on PAGE 2

FOR MORE INFORMATION OR TO PLACE AN ORDER, CONTACT:

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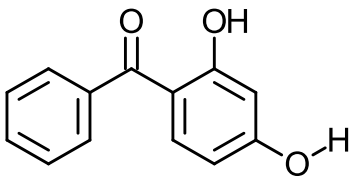
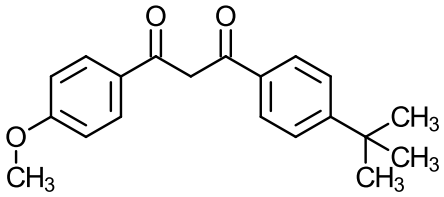
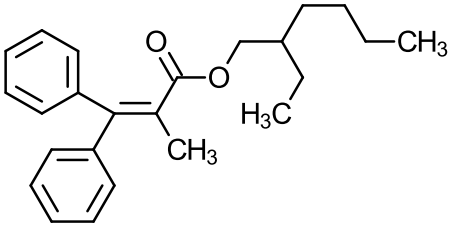
STRUCTURES:



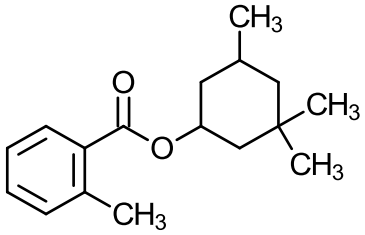
Oxybenzone



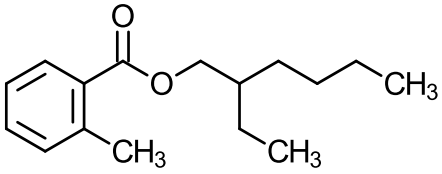
Avobenzone



Octocrylene



Homosalate



Octisalate

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