Porphyrins in Oral Bacteria by LC-MS/MS

ACE® Ultra-inert UHPLC & HPLC Columns

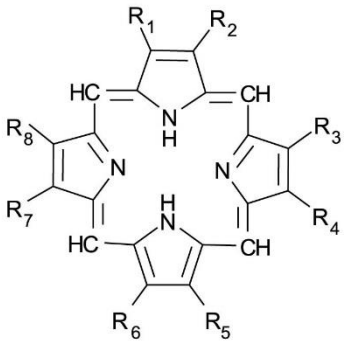
Application #AN3080

Conditions

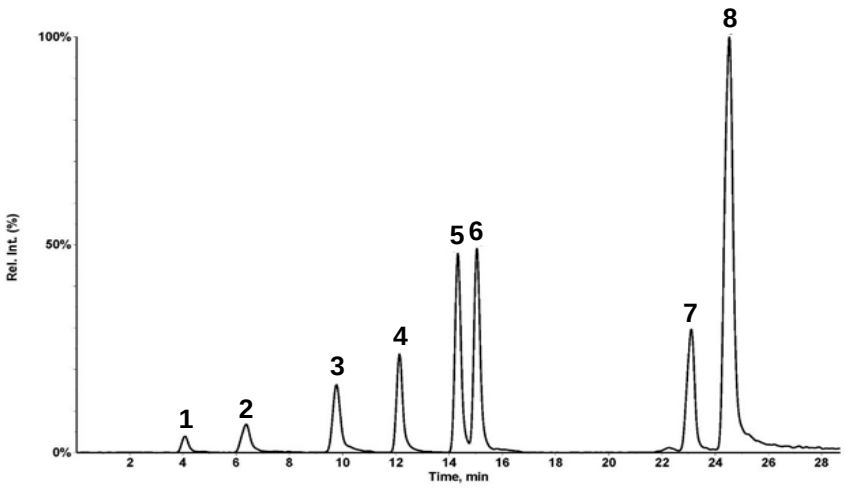
Column:	ACE 3 C18-PFP
Dimensions:	75 x 2.1 mm
Part Number:	ACE-1110-7502
Mobile Phase:	A: 0.1% formic acid in H_2O/MeCN (95:5 v/v)
	B: 0.1% formic acid in H_2O/MeCN (5:95 v/v)

Time (mins)	%B
0.0	30
10.0	50
10.2	100
35.0	100

Flow Rate:	0.1 mL/min
Injection:	5 µL
Temperature:	25 °C
Detection:	SCIEX API 2000 triple quad MS
	TurbolonSpray interface
	Positive ESI
	Ion source temperature: 200 °C
	Capillary voltage: 5 kV



Where:
A: -CH_2COOH
E: -CH_2CH_3
M: -CH_3
P: -CH_2CH_2COOH
V: -$CH{=}CH_2$



1. Uroporphyrin I
(R_1:A, R_2:P, R_3:A, R_4:P, R_5:A, R_6:P, R_7:A, R_8:P)
(*m/z* 831 → 727, 623, 655)

2. 7-Carboxyporphyrin I
(R_1:A, R_2:P, R_3:A, R_4:P, R_5:A, R_6:P, R_7:M, R_8:P)
(*m/z* 787 → 683, 670, 623)

3. 6-Carboxyporphyrin I
(R_1:M, R_2:P, R_3:A, R_4:P, R_5:A, R_6:P, R_7:M, R_8:P)
(*m/z* 743 → 639, 507, 521)

4. 5-Carboxyporphyrin I
(R_1:M, R_2:P, R_3:M, R_4:P, R_5:A, R_6:P, R_7:M, R_8:P)
(*m/z* 699 → 463, 595, 640)

5. Coproporphyrin I
(R_1:M, R_2:P, R_3:M, R_4:P, R_5:M, R_6:P, R_7:M, R_8:P)
(*m/z* 655 → 537, 596, 523)

6. Coproporphyrin III
(R_1:M, R_2:P, R_3:M, R_4:P, R_5:M, R_6:P, R_7:P, R_8:M)
(*m/z* 655 → 537, 596, 523)

7. Mesoporphyrin IX
(R_1:M, R_2:E, R_3:M, R_4:E, R_5:M, R_6:P, R_7:M, R_8:P)
(*m/z* 567 → 449, 479, 508)

8. Protoporphyrin IX
(R_1:M, R_2:V, R_3:M, R_4:V, R_5:M, R_6:P, R_7:P, R_8:M)
(*m/z* 563 → 445, 504, 489)

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