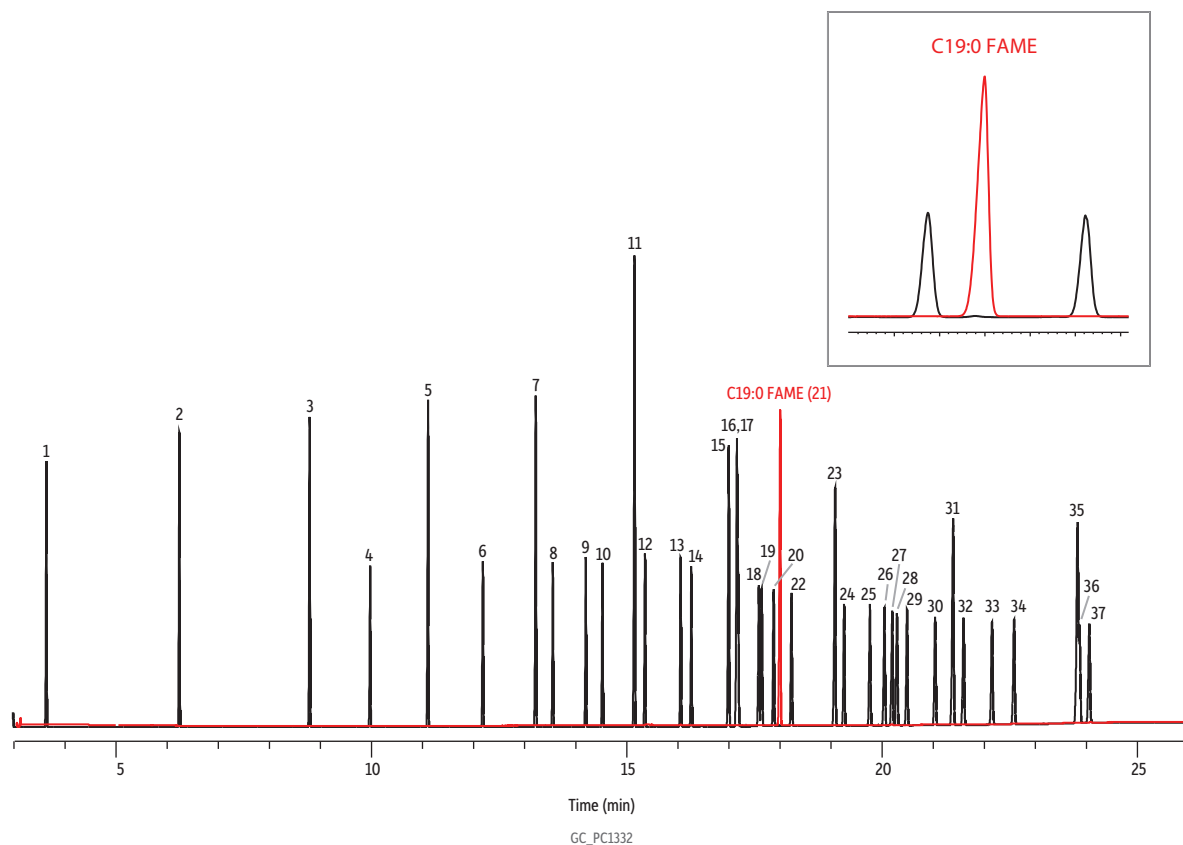


Food Industry FAME on FAMEWAX by EN14103 (2011)



Peaks	tr (min)	Conc. (mg/mL)	Structural Nomenclature
1. Methyl capronate	3.629	1.2	C6:0
2. Methyl caprylate	6.237	1.2	C8:0
3. Methyl caprate	8.787	1.2	C10:0
4. Methyl undecanoate	9.971	0.6	C11:0
5. Methyl laurate	11.105	1.2	C12:0
6. Methyl tridecanoate	12.179	0.6	C13:0
7. Methyl myristate	13.215	1.2	C14:0
8. Methyl myristoleate	13.549	0.6	C14:1 (cis-9)
9. Methyl pentadecanoate	14.196	0.6	C15:0
10. Methyl pentadecenoate	14.524	0.6	C15:1 (cis-10)
11. Methyl palmitate	15.152	1.8	C16:0
12. Methyl palmitoleate	15.355	0.6	C16:1 (cis-9)
13. Methyl margarate	16.052	0.6	C17:0
14. Methyl heptadecenoate	16.261	0.6	C17:1 (cis-10)
15. Methyl stearate	16.995	1.2	C18:0
16. Methyl oleate	17.156	1.2	C18:1 (cis-9)
17. Methyl elaidate	17.168	1.2	C18:1 (trans-9)
18. Methyl linoleate	17.583	0.6	C18:2 (all-cis-9,12)
19. Methyl linolelaidate	17.641	0.6	C18:2 (all-trans-9,12)
20. Methyl γ-linolenate	17.874	0.6	C18:3 (all-cis-6,9,12)
21. Methyl nonadecanoate	18.052	2.0	C19:0
22. Methyl α-linolenate	18.223	0.6	C18:3 (all-cis-9,12,15)
23. Methyl arachidate	19.075	1.2	C20:0
24. Methyl (Z)-11-eicosenoate	19.255	0.6	C20:1 (cis-11)
25. Methyl 11,14-eicosadienoate	19.761	0.6	C20:2 (all-cis-11,14)
26. Methyl eicosa-8,11,14-trienoate	20.046	0.6	C20:3 (all-cis-8,11,14)
27. Methyl heneicosanoate	20.197	0.6	C21:0
28. Methyl arachidonate	20.290	0.6	C20:4 (all-cis-5,8,11,14)
29. Methyl 11,14,17-eicosatrienoate	20.488	0.6	C20:3 (all-cis-11,14,17)
30. Methyl 5,8,11,14,17-eicosapentanoate	21.036	0.6	C20:5 (all-cis-5,8,11,14,17)
31. Methyl behenate	21.39	1.2	C22:0
32. Methyl erucate	21.595	0.6	C22:1 (cis-13)
33. Methyl docosadienoate	22.150	0.6	C22:2 (all-cis-13,16)
34. Methyl tricosanoate	22.584	0.6	C23:0
35. Methyl lignocerate	23.826	1.2	C24:0
36. Methyl docosahexaenoate	23.863	0.6	C22:6 (all-cis-4,7,10,13,16,19)
37. Methyl nervonate	24.055	0.6	C24:1 (cis-15)

Column
FAMEWAX, 30 m, 0.25 mm ID, 0.25 μm (cat.# 12497)

Sample
Food industry FAME mix (cat.# 35077)
Methyl nonadecanoate (cat.# 35055)
Standard cat.# 35055 was dissolved in toluene.

Diluent:
Inj. Vol.: 1 μL split (split ratio 100:1)
Liner: Topaz 4.0 mm ID Precision inlet liner w/wool (cat.# 23305)
Inj. Temp.: 240 °C

Oven
Oven Temp.: 60 °C (hold 2 min) to 200 °C at 10 °C/min to 240 °C at 5 °C/min (hold 7 min)

Carrier Gas
Flow Rate: H₂, constant flow
1.7 mL/min

Detector
FID @ 250 °C

Instrument Notes
Agilent 7890B GC
This chromatogram is an overlay of two injections: food industry FAME standard (black) and C19:0 methyl ester in toluene (red). An excellent separation of C19:0 (used in EN 14103 as an internal standard) and the most prevalent FAMES found in biodiesel blends was achieved. Note that C4:0 from the food industry FAME standard elutes in the solvent front.