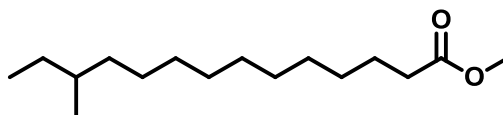
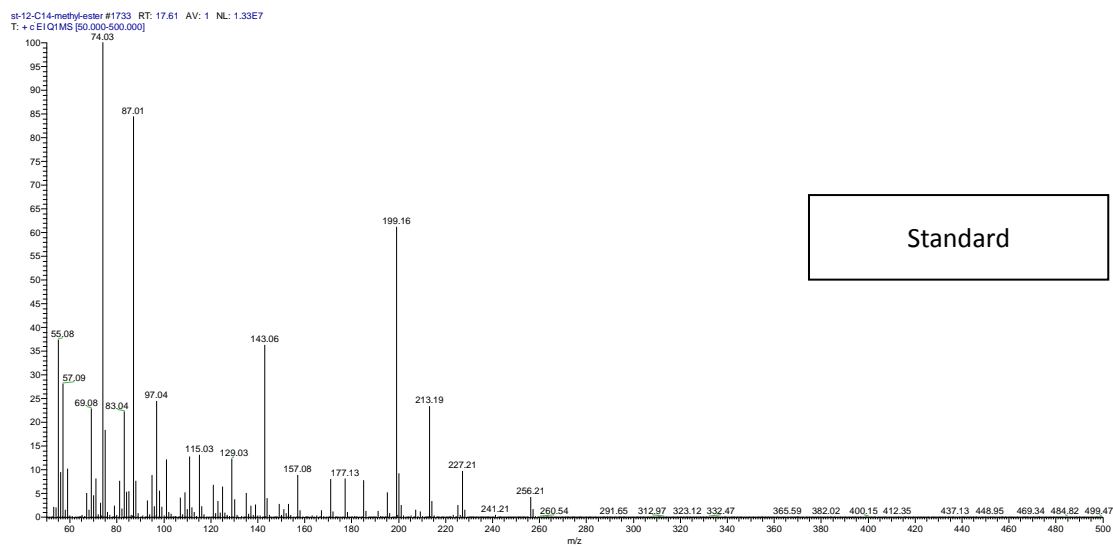
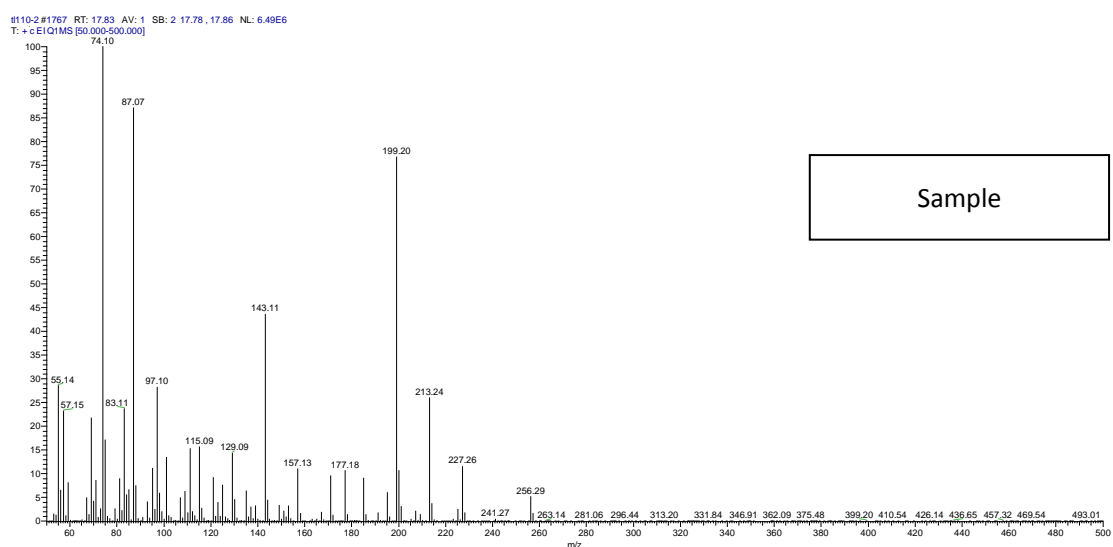


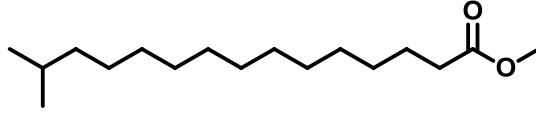
**Additional file 2: Synthetic branched fatty acid ester standards.** The branched fatty acid ester standards were synthesized by esterification of authentic branched fatty acid standards and corresponding alcohols using approaches in reference 48.



**Methyl 12-Methyltetradecanoate**

1.

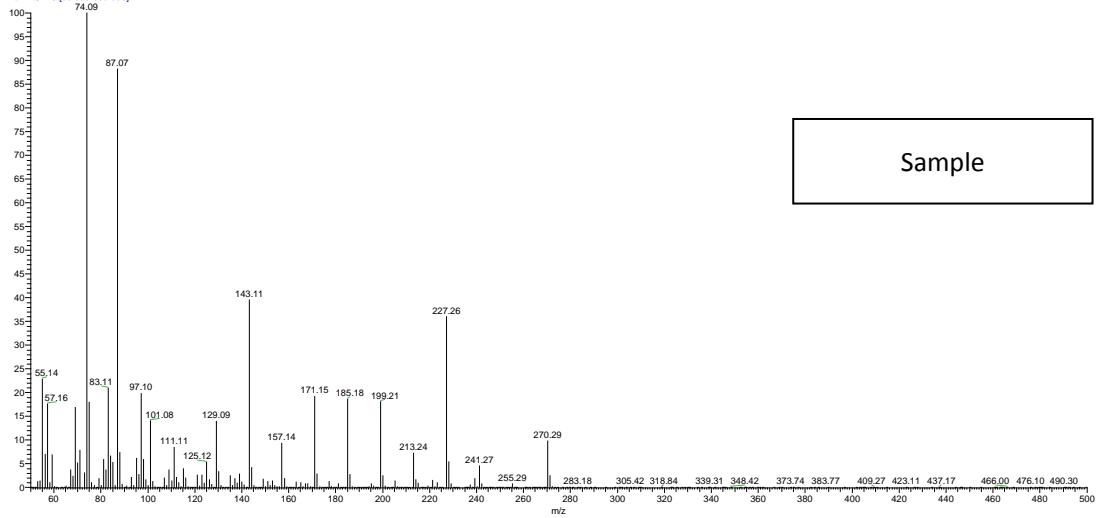




methyl 14-Methylpentadecanoate

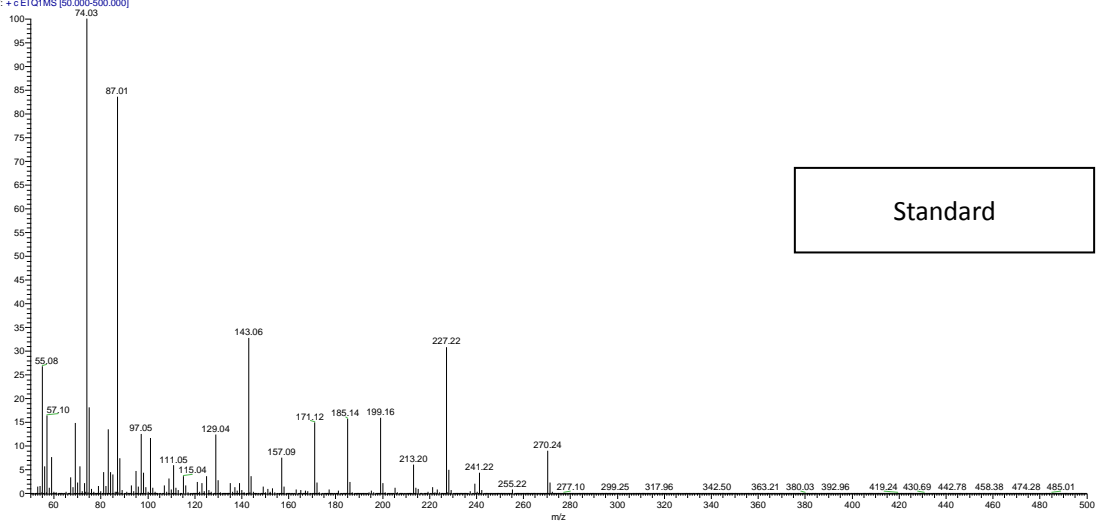
2.

#110-2 #1862 RT: 19.26 AV: 1 SB: 2 19.22, 19.30 NL: 5.28E6  
T: + c E I Q I M S [50.000-500.000]

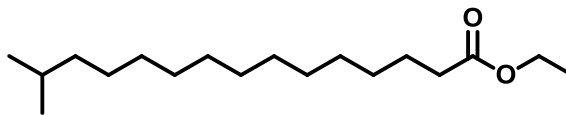


Sample

st-14-C15-methyl-ester #1948 RT: 19.04 AV: 1 NL: 1.51E7  
T: + c E I Q I M S [50.000-500.000]



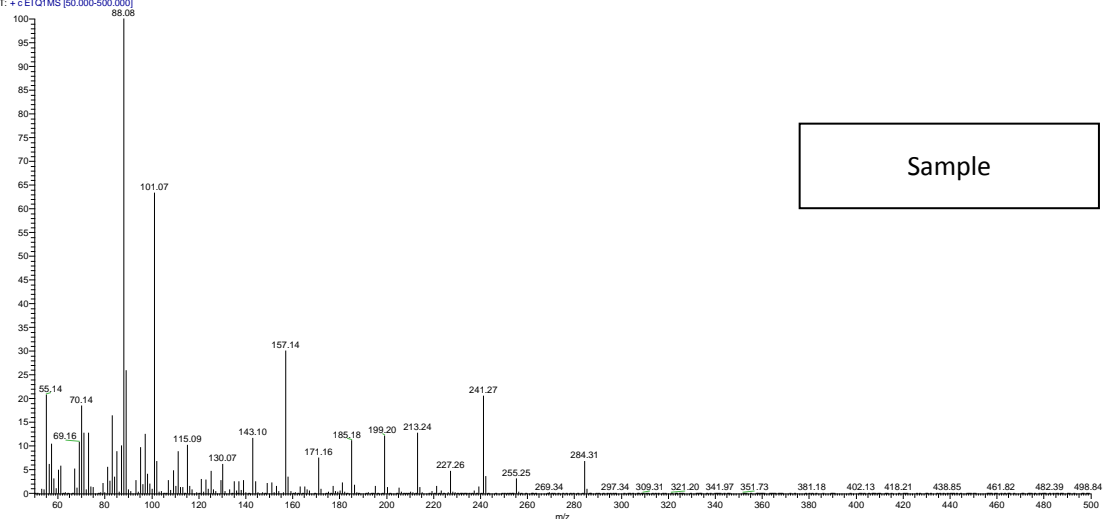
Standard



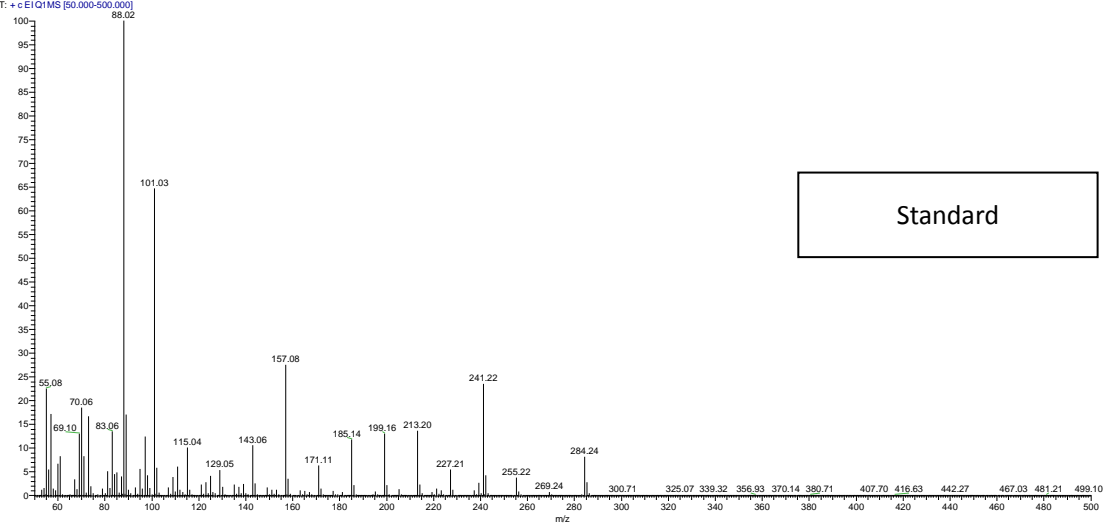
Ethyl 14-Methylpentadecanoate

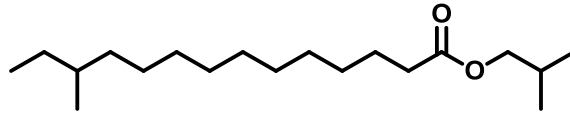
3.

1126-M516-3 #2076 RT: 19.86 AV: 1 SB: 2 19.85, 19.92 NL: 1.14E6  
T: + c EI QIMS [50.000-500.000]



st-14-C15-ethyl-ester #2046 RT: 19.70 AV: 1 NL: 2.87E7  
T: + c EI QIMS [50.000-500.000]

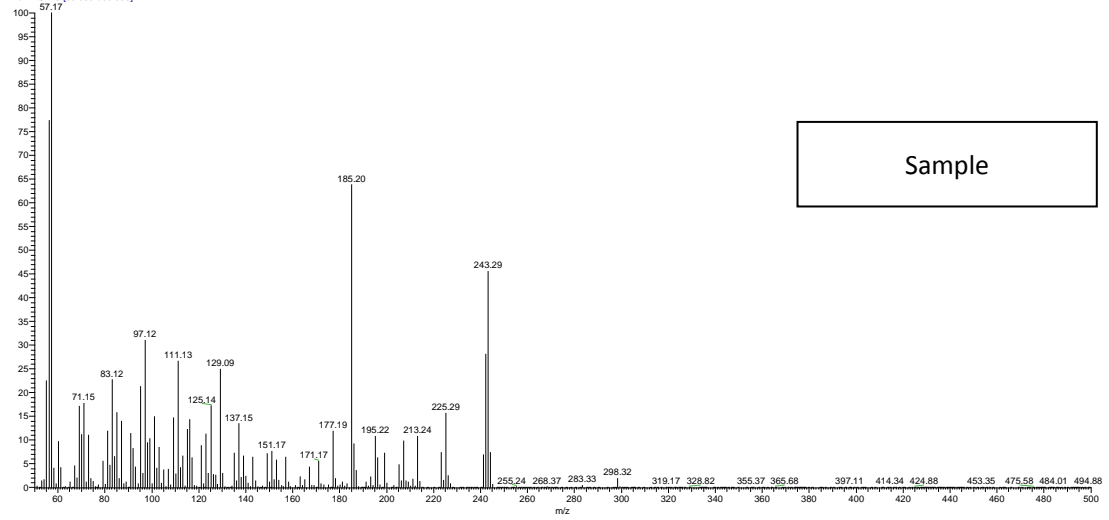




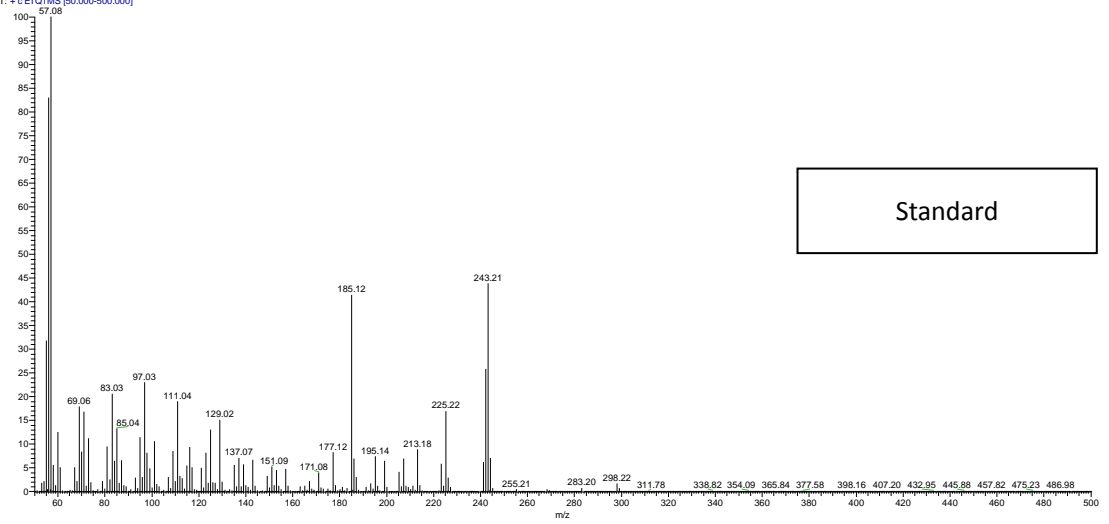
4.

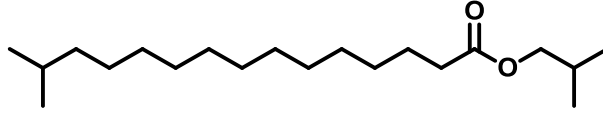
### Isobutyl 12-Methyltetradecanoate

1128-ME16-3-#2142 RT: 20.33 AV: 1 SB: 2 20.30, 20.36 NL: 1.58E6  
T: + c EIC/MS [50.000-500.000]



12-C14-isobuty-wax #2123 RT: 20.20 AV: 1 NL: 1.58E7  
T: + c EIC/MS [50.000-500.000]

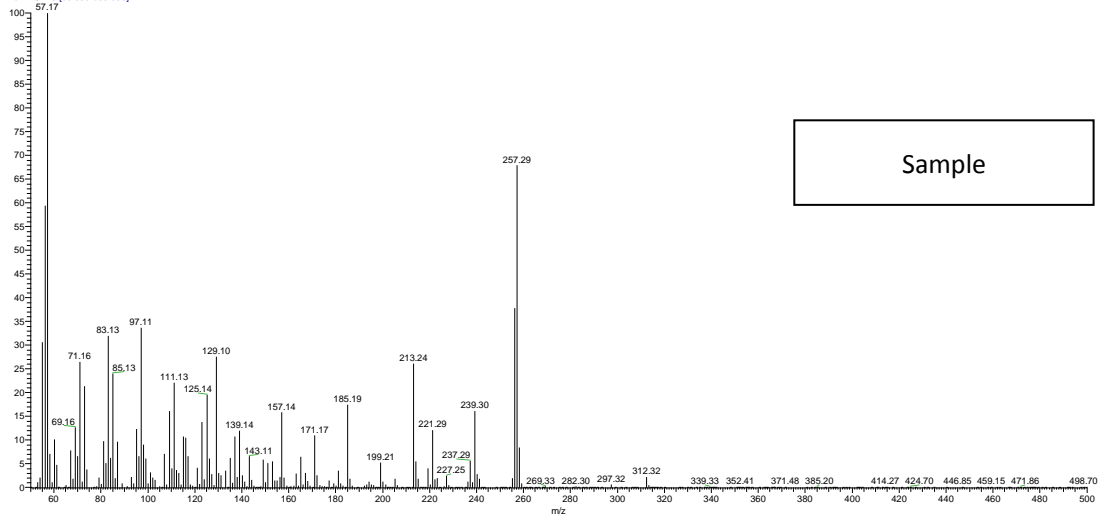




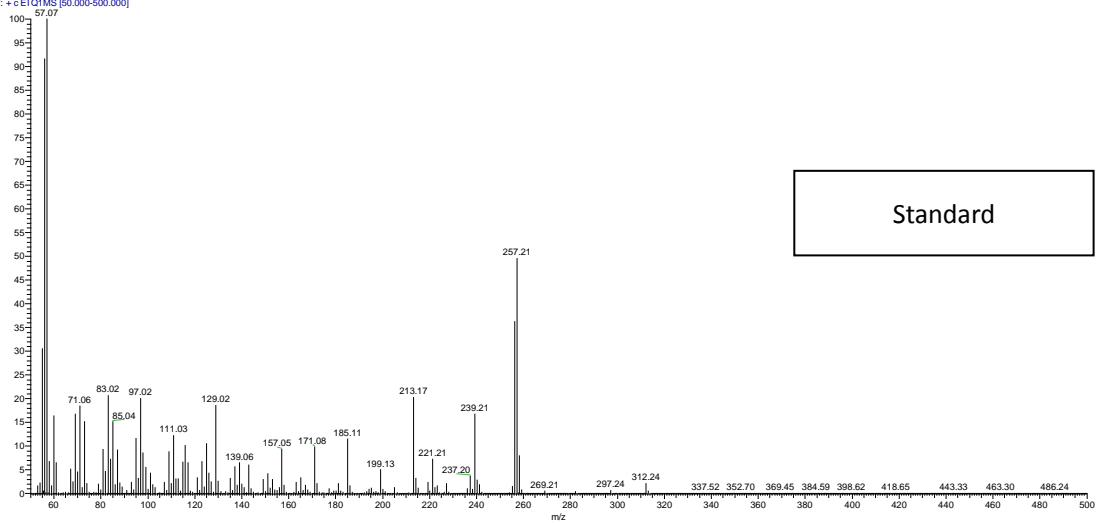
Isobutyl 14-Methylpentadecanoate

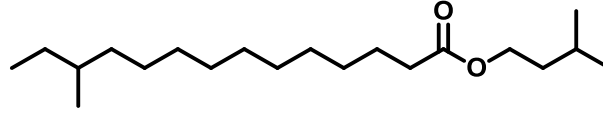
5.

1128-ME16-3 #2540 RT: 21.65 AV: 1 SB: 2 21.62, 21.68 NL: 1.98E6  
T: + c EI QMS [50.000-500.000]



14-C15-isobuty-wax #2319 RT: 21.51 AV: 1 NL: 1.20E7  
T: + c EI QMS [50.000-500.000]

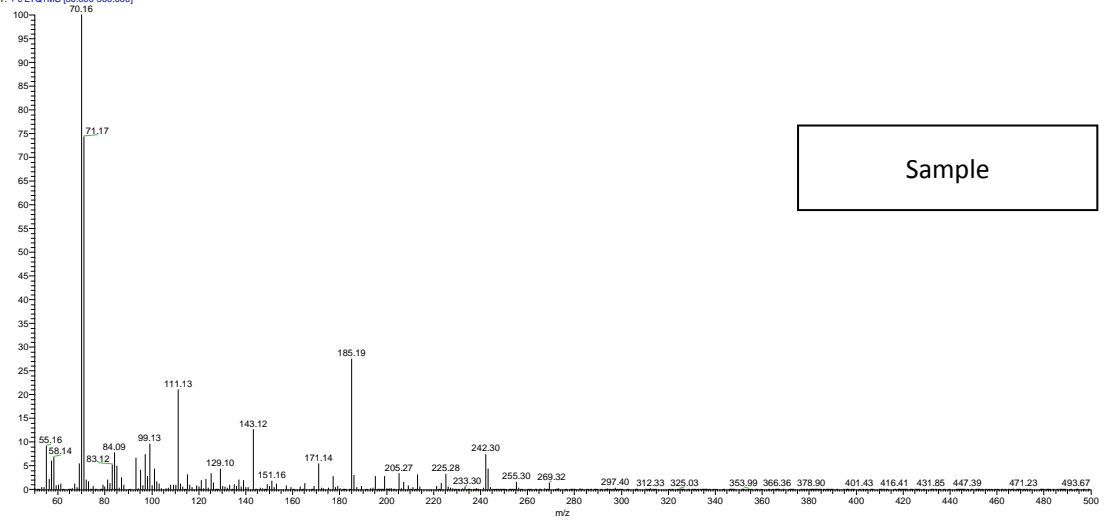




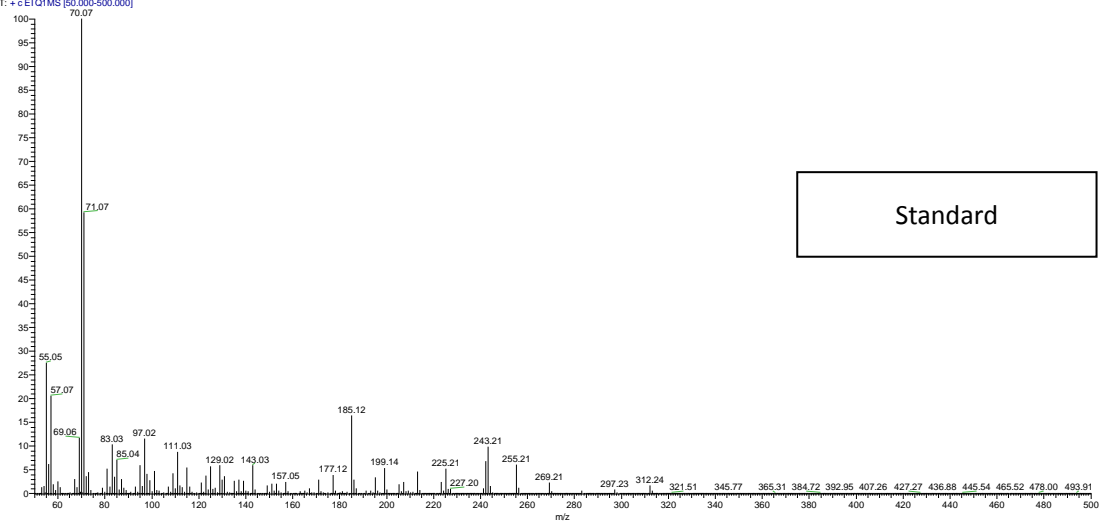
6.

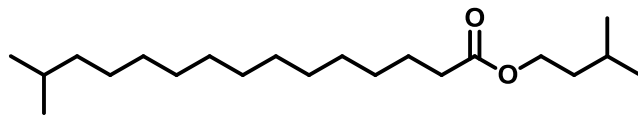
### Isoamyl 12-Methyltetradecanoate

1128-ME16-3 #2385 RT: 21.95 AV: 1 SB: 2 21.92, 21.96 NL: 6.25E5  
T: + c EIC/MS [50.000-500.000]



12-C14-isoamy-wax #2364 RT: 21.81 AV: 1 NL: 1.91E7  
T: + c EIC/MS [50.000-500.000]

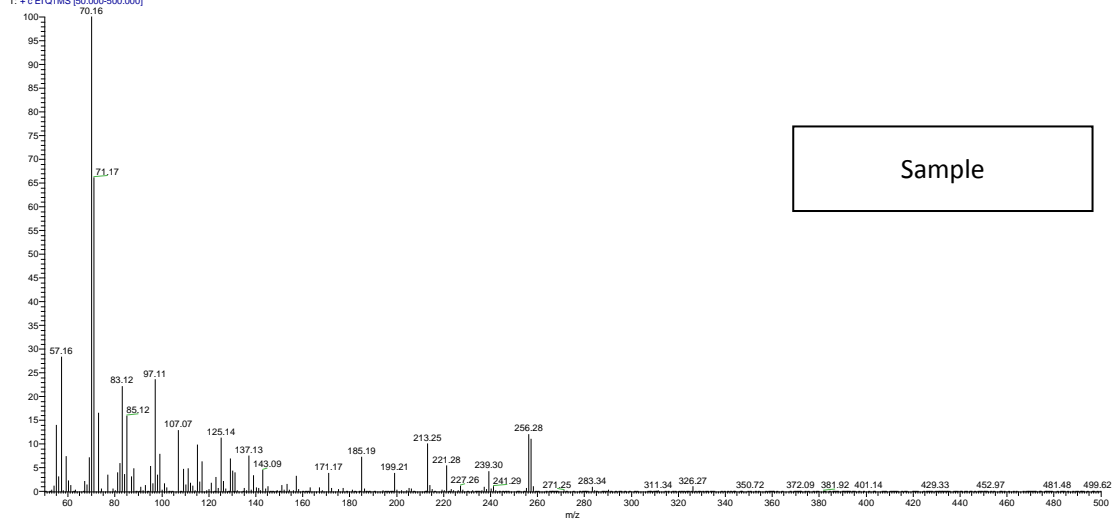




7.

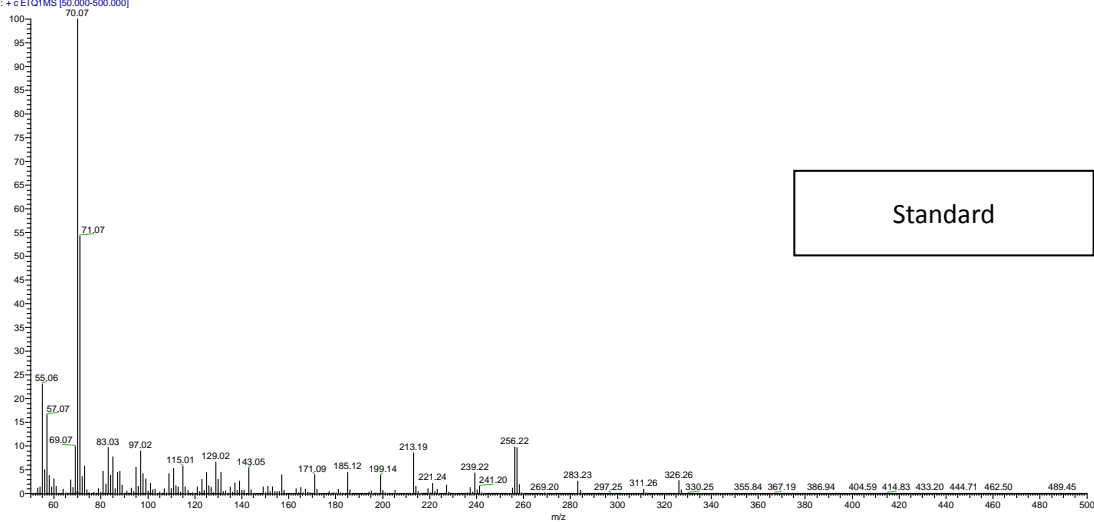
**Isoamyl 14-Methylpentadecanoate**

11264510-3 #2574 RT: 23.21 AV: 1 SB: 2 23.18, 23.24 NL: 8.38E5  
T: + c EICIMS [50.000-500.000]



Sample

14-C15-isoamyl-wax #2546 RT: 23.03 AV: 1 NL: 7.91E6  
T: + c EICIMS [50.000-500.000]



Standard