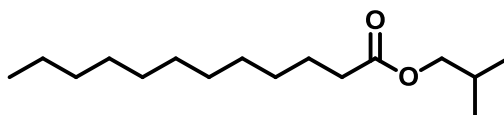
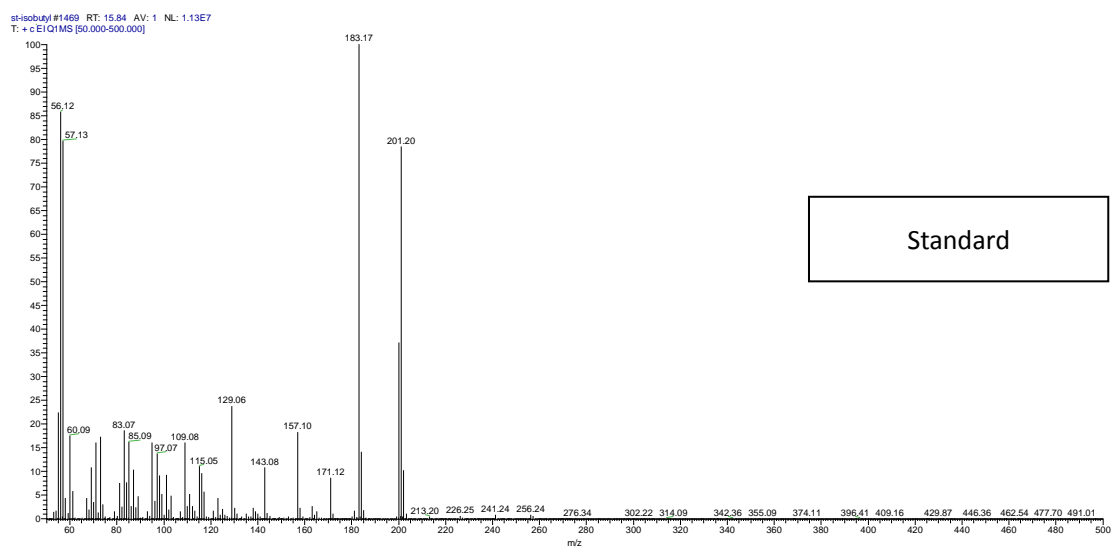
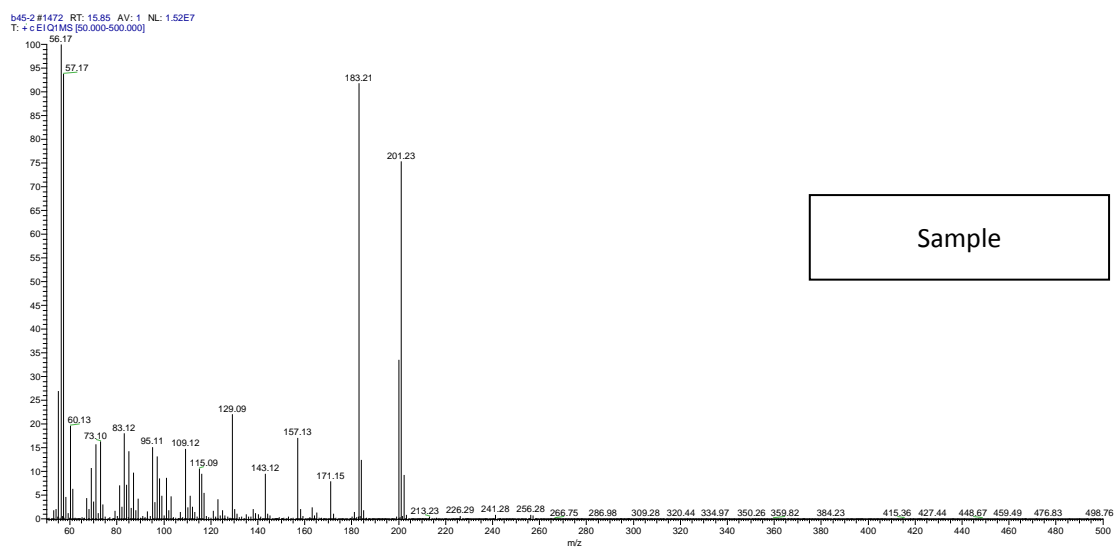


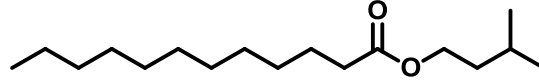
**Additional file 1: Synthetic fatty acid branched-chain ester (FABCE) standards.** The FABCE standards were synthesized by esterification of authentic fatty acid standards and corresponding branched-chain alcohols using approaches in reference 48.



**Isobutyl Dodecanoate**

1.

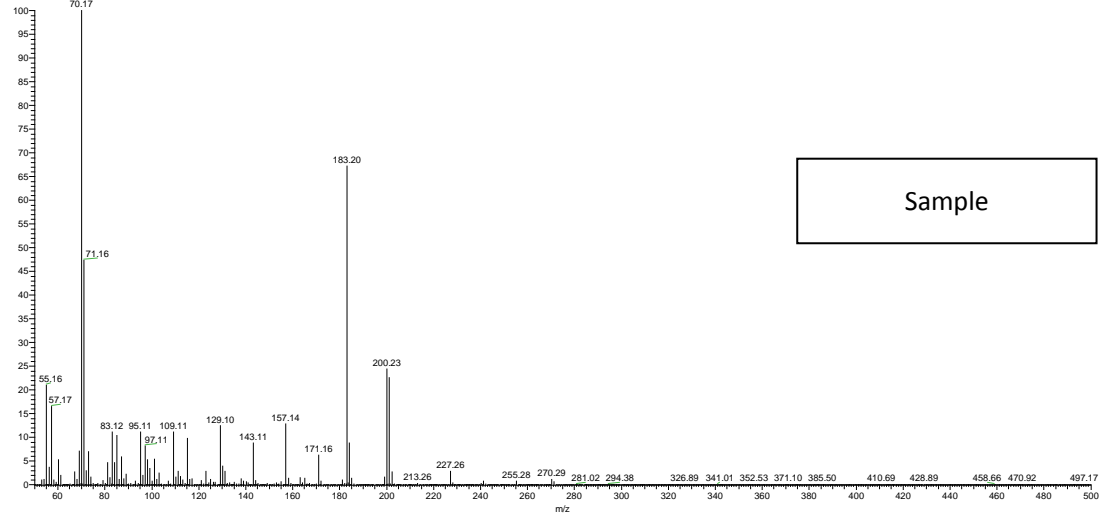




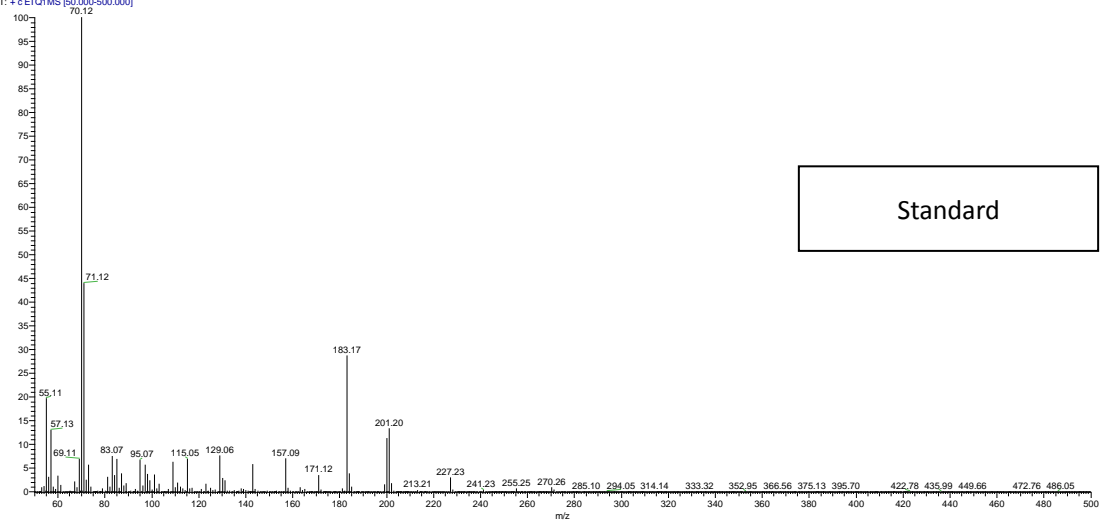
Isoamyl Dodecanoate

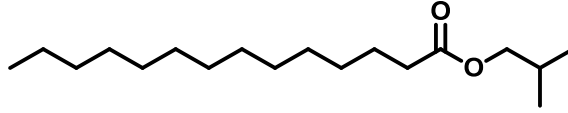
2.

b45-2#1744 RT: 17.67 AV: 1 NL: 1.73E7  
T: +c EI QIMS [50.000-500.000]



st-isoamyl #1744 RT: 17.67 AV: 1 NL: 1.93E7  
T: +c EI QIMS [50.000-500.000]

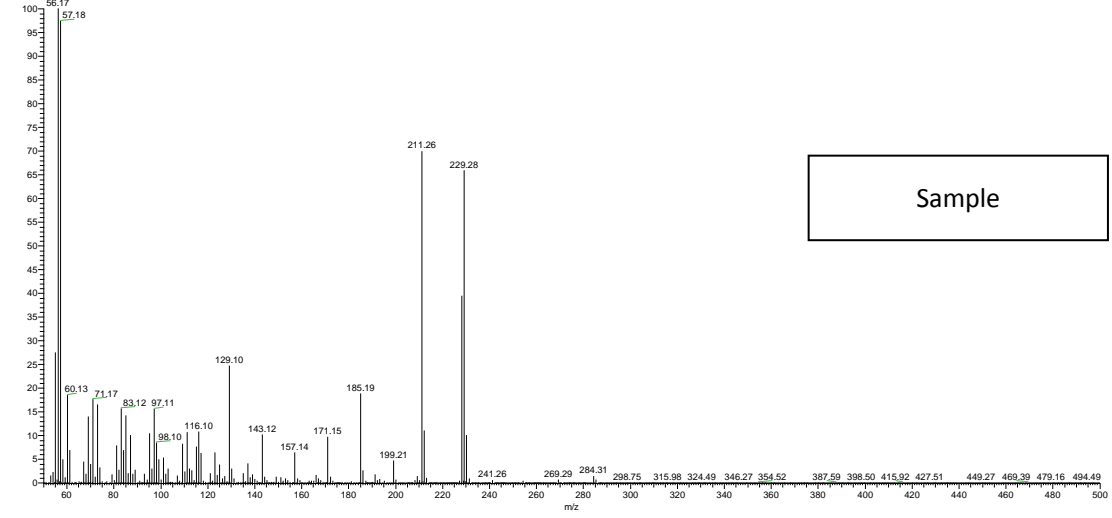




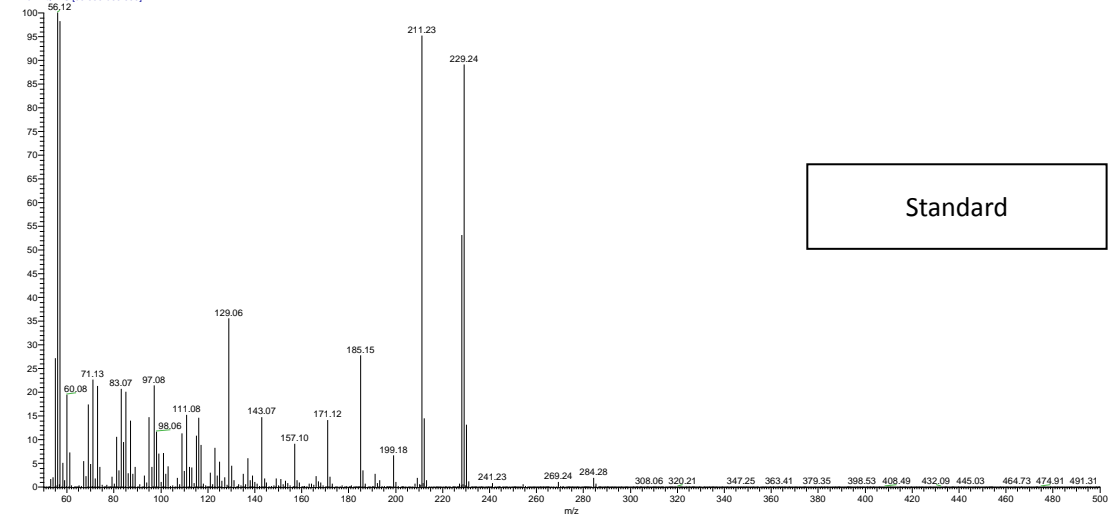
### Isobutyl Myristate

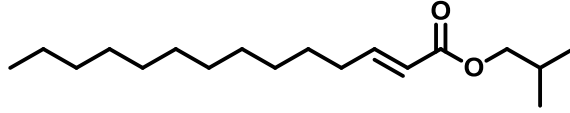
3.

b45-2#1986 RT: 19.29 AV: 1 NL: 1.78E7  
T: +cEI QMS [50.000-500.000]



st-isobutyl#1983 RT: 19.27 AV: 1 NL: 8.70E6  
T: +cEI QMS [50.000-500.000]

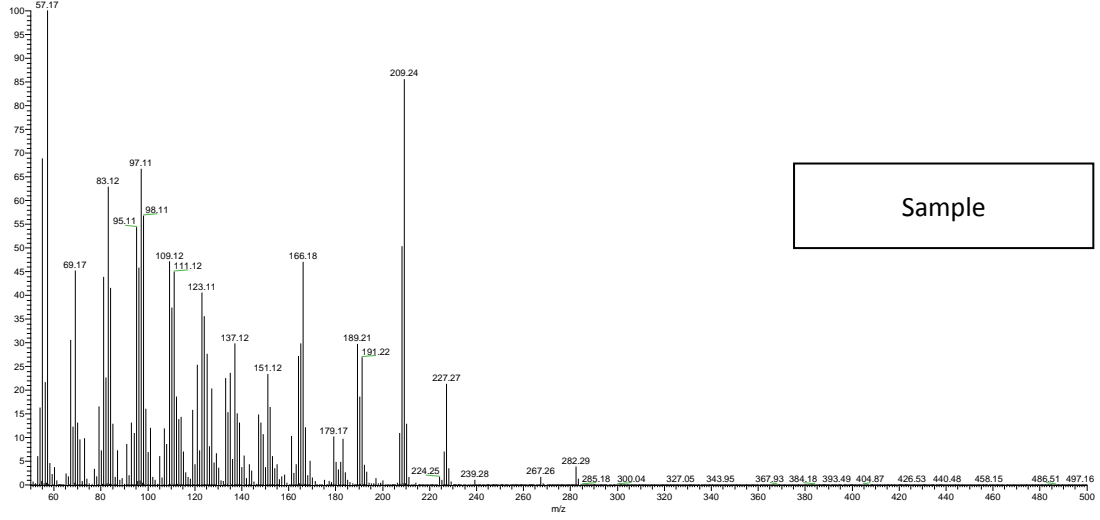




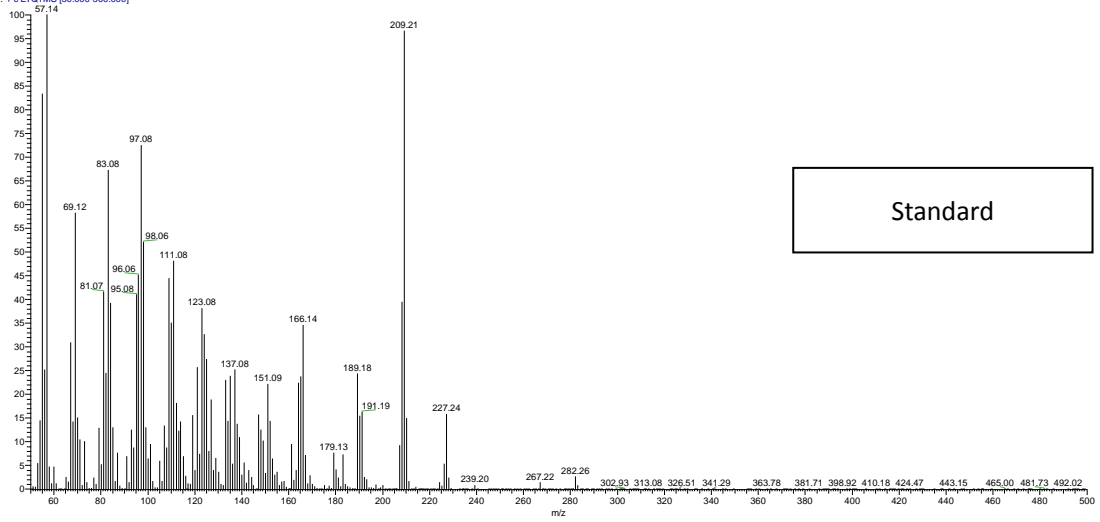
### Isobutyl Tetradecenoate

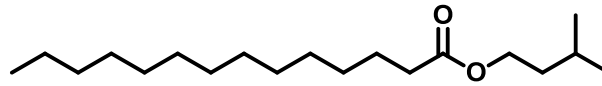
4.

b45-2 #2033 RT: 19.60 AV: 1 NL: 5.46E6  
T: + c E I Q I M S [50.000-500.000]



st-isobutyl#2066 RT: 19.82 AV: 1 SB: 31 19.71-19.77, 19.88-20.01 NL: 3.90E6  
T: + c E I Q I M S [50.000-500.000]

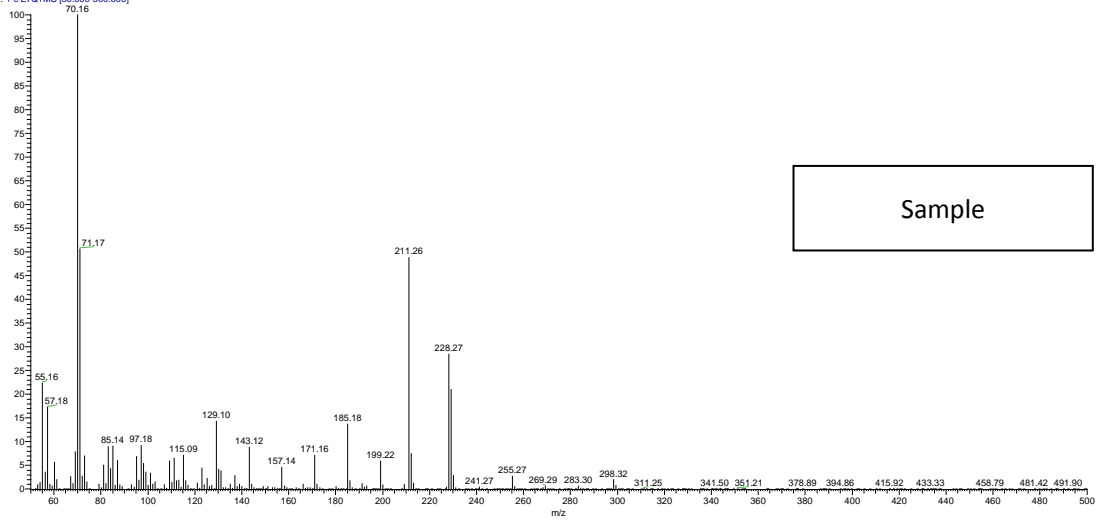




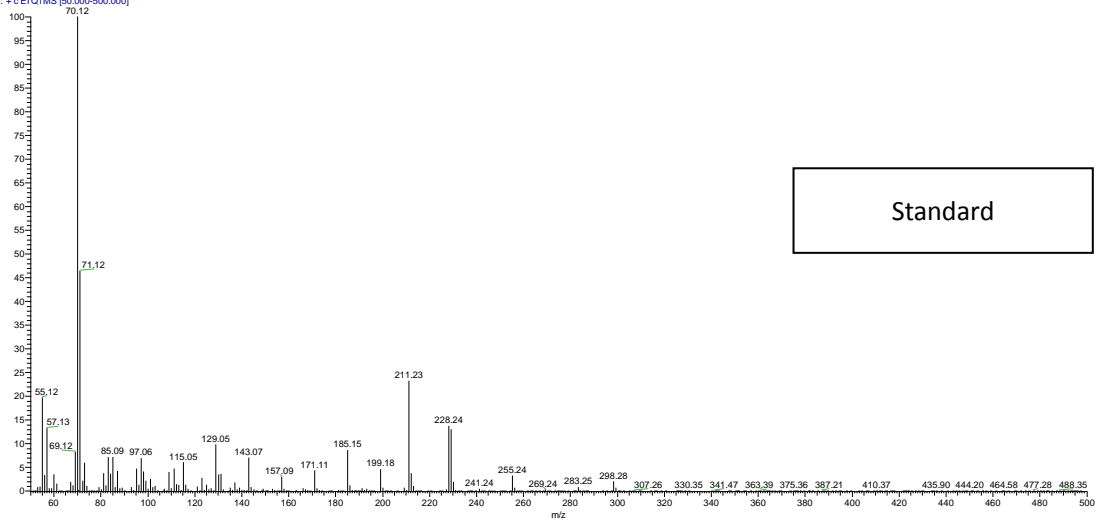
5.

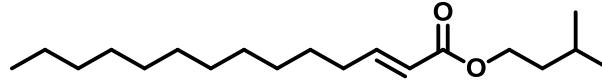
### Isoamyl Myristate

b45-2 #2233 RT: 20.93 AV: 1 SB: 2 20.87, 20.97 NL: 1.89E7  
T: +c EIC/MS [50.000-500.000]



st-isoamyl #2233 RT: 20.94 AV: 1 SB: 2 21.44, 21.53 NL: 2.29E7  
T: +c EIC/MS [50.000-500.000]

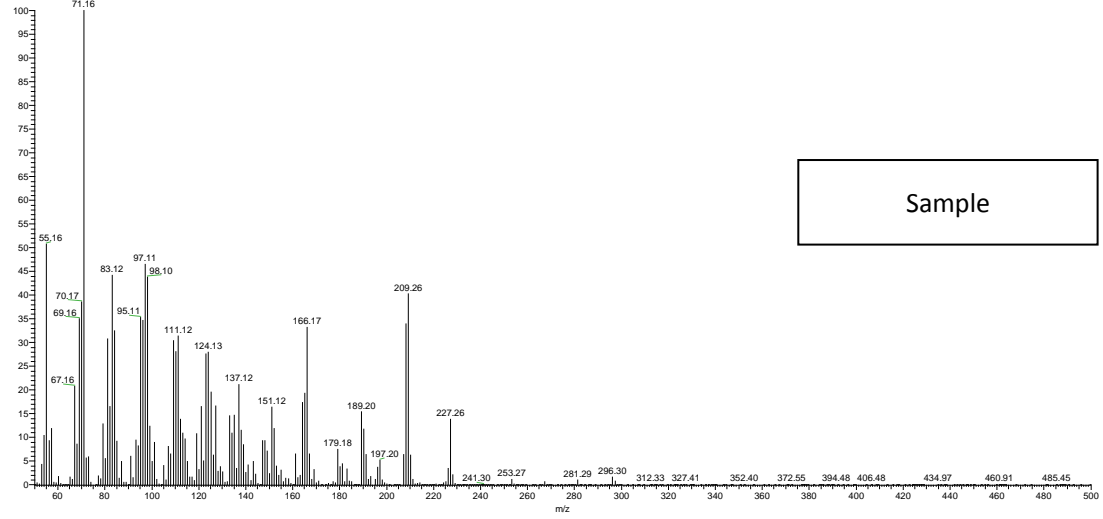




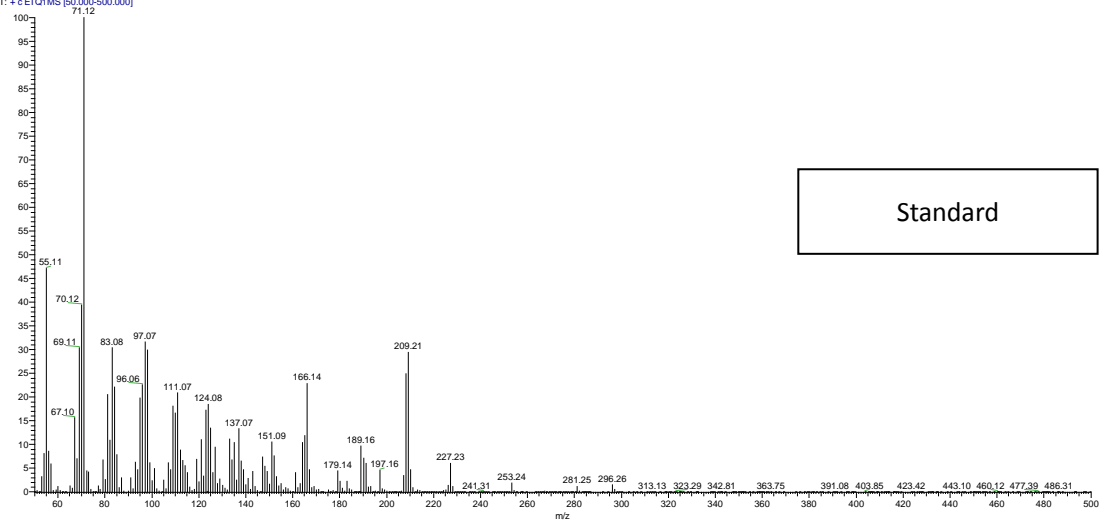
Isoamyl Tetradecenoate

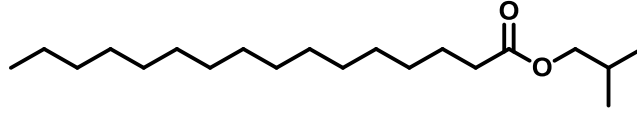
6.

b45-2 #2280 RT: 21.25 AV: 1 SB: 15 21.15-21.19, 21.29-21.34 NL: 4.59E6  
T: + c EI QIMS [50,000-500,000]



st-Isoamyl #2314 RT: 21.48 AV: 1 SB: 2 21.44, 21.53 NL: 6.31E6  
T: + c EI QIMS [50,000-500,000]

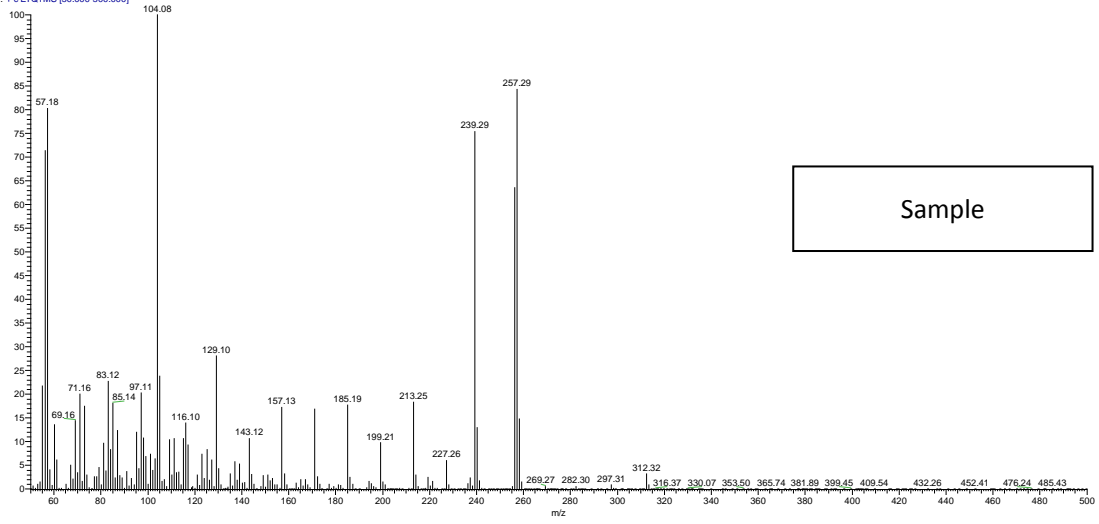




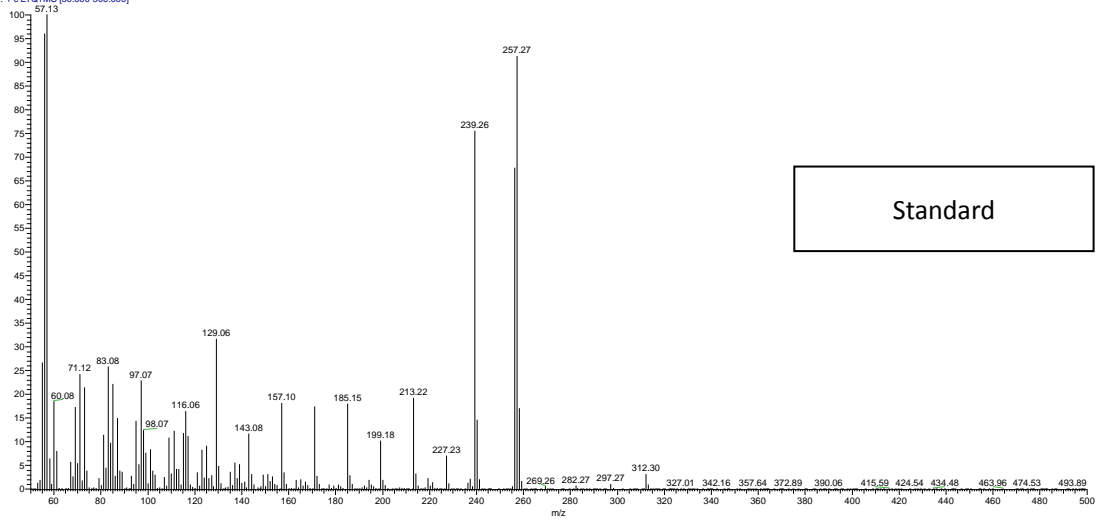
### Isobutyl Palmitate

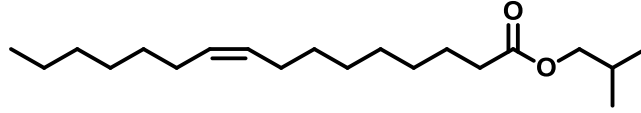
7.

b45-2#2448 RT: 22.37 AV: 1 SB: 15 21.15-21.19, 21.29-21.34 NL: 7.56E6  
T: +c EIC/MS [50.000-500.000]



st-isobutyl#2447 RT: 22.26 AV: 1 SB: 2 21.44, 21.53 NL: 7.94E6  
T: +c EIC/MS [50.000-500.000]

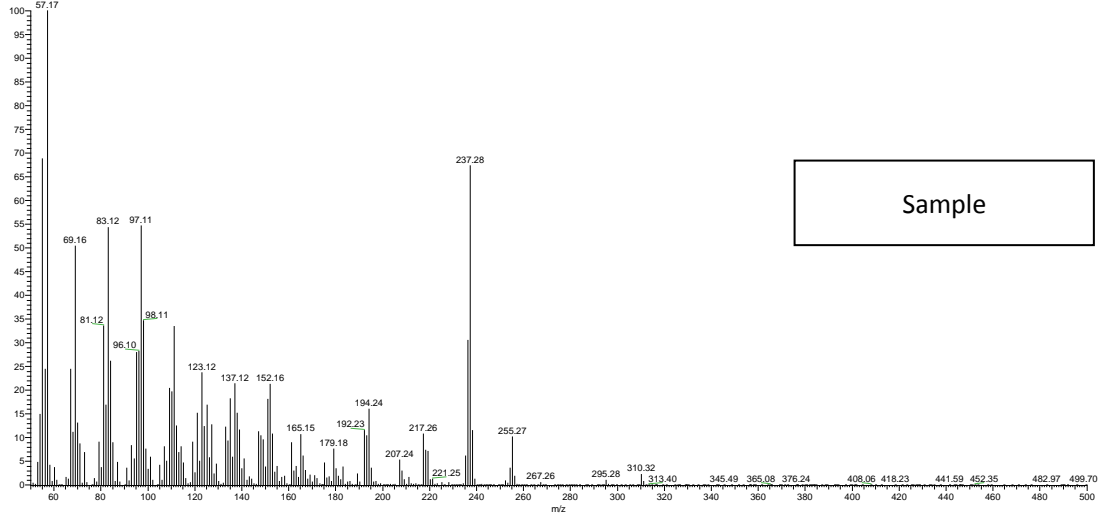




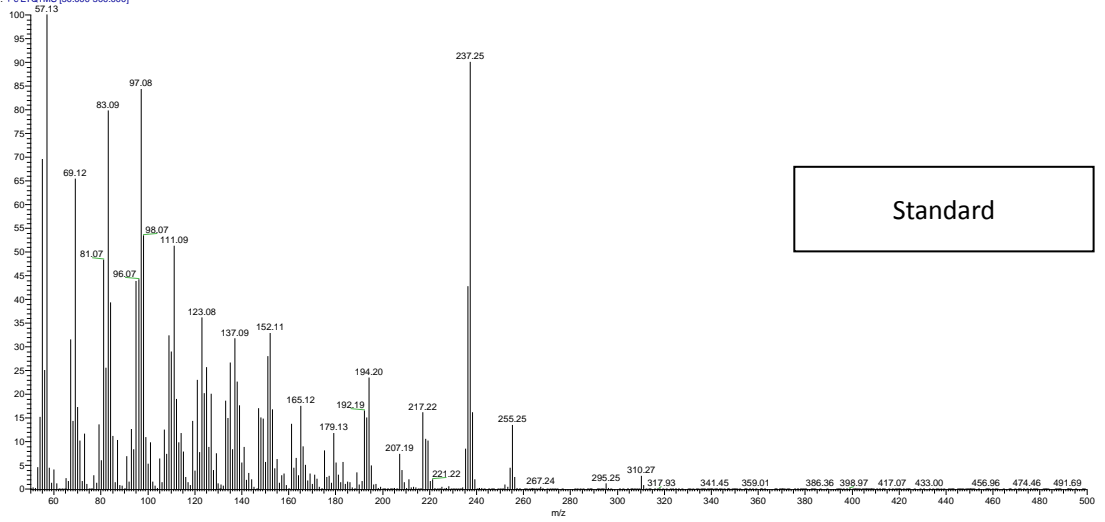
8.

### Isobutyl Palmitoleate

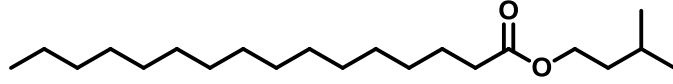
b45-2#2504 RT: 22.74 AV: 1 SB: 15 21.15-21.19, 21.29-21.34 NL: 1.00E7  
T: +c EI QMS [50.000-500.000]



st-isobutyl#2501 RT: 22.72 AV: 1 SB: 2 21.44, 21.53 NL: 2.96E6  
T: +c EI QMS [50.000-500.000]



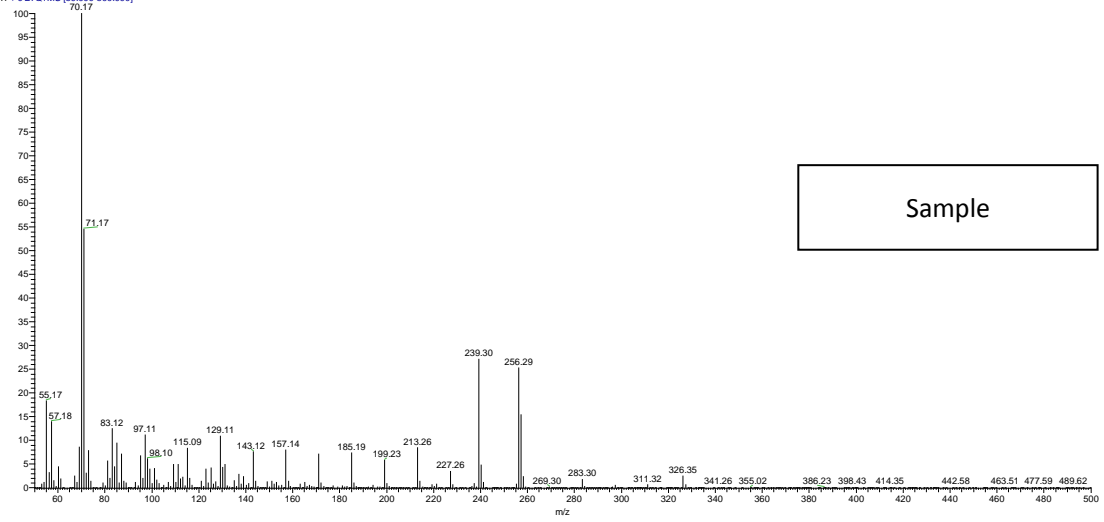




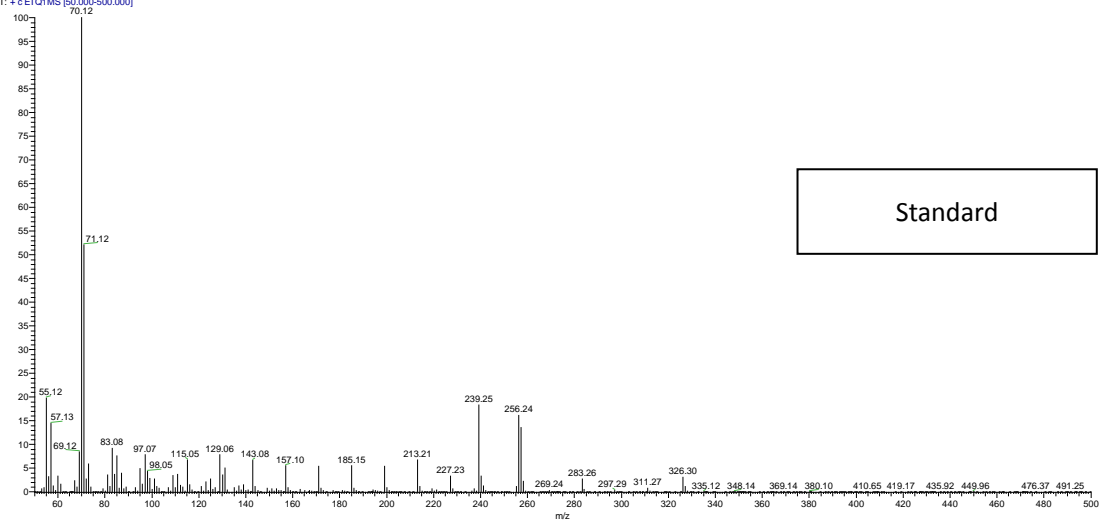
Isoamyl Palmitate

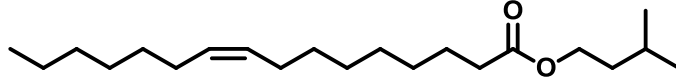
9.

b45-2 #2679 RT: 23.91 AV: 1 SB: 2 23.86, 23.96 NL: 8.45E6  
T: + c E I Q I M S [50.000-500.000]



st-Isoamyl #2681 RT: 23.93 AV: 1 SB: 2 21.44, 21.53 NL: 2.36E7  
T: + c E I Q I M S [50.000-500.000]

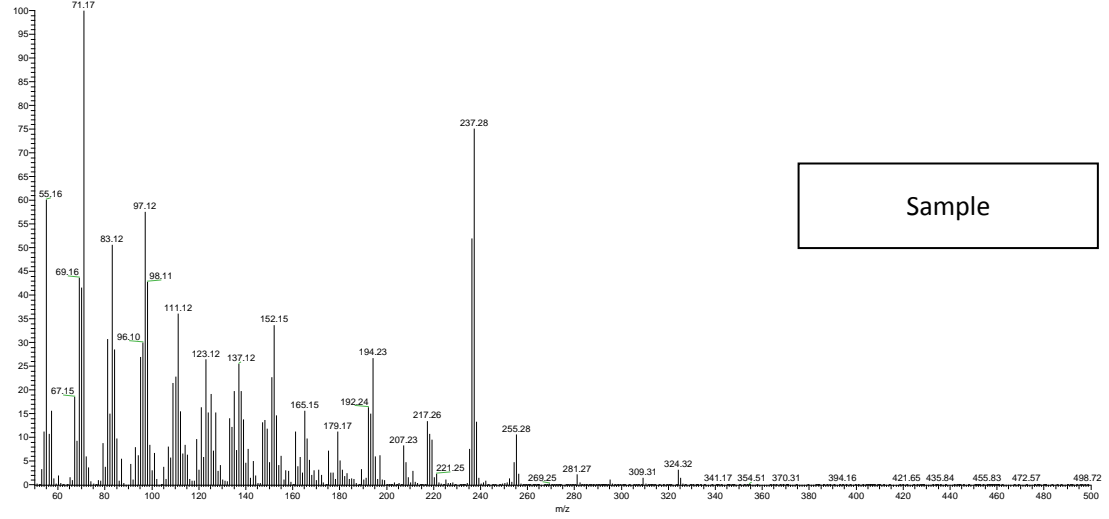




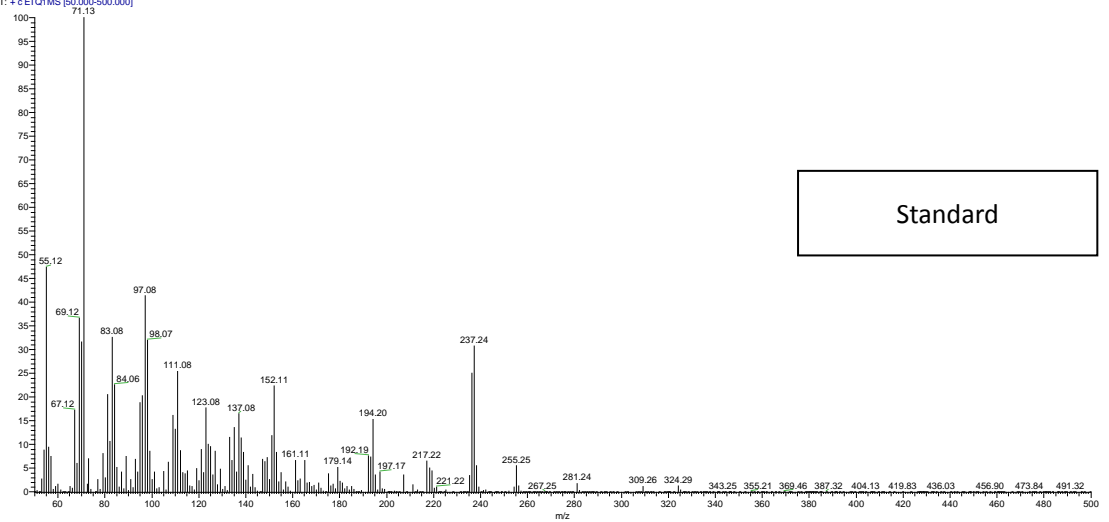
Isoamyl Palmitoleate

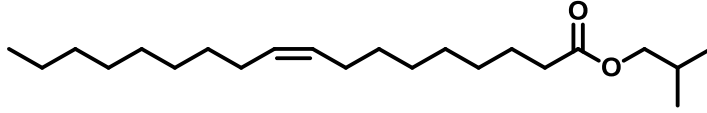
10.

b45-2 #2732 RT: 24.26 AV: 1 SB: 23 24.11-24.17, 24.32-24.40 NL: 6.70E6  
T: + c EI QIMS [50.000-500.000]



st:isoamyl #2731 RT: 24.26 AV: 1 SB: 2 21.44, 21.53 NL: 2.81E6  
T: + c EI QIMS [50.000-500.000]

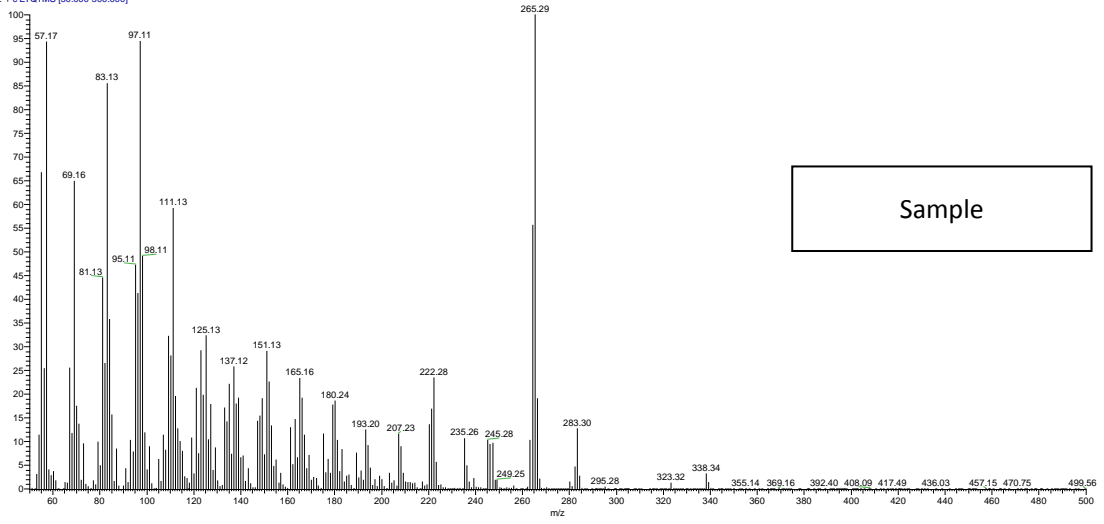




### Isobutyl Oleate

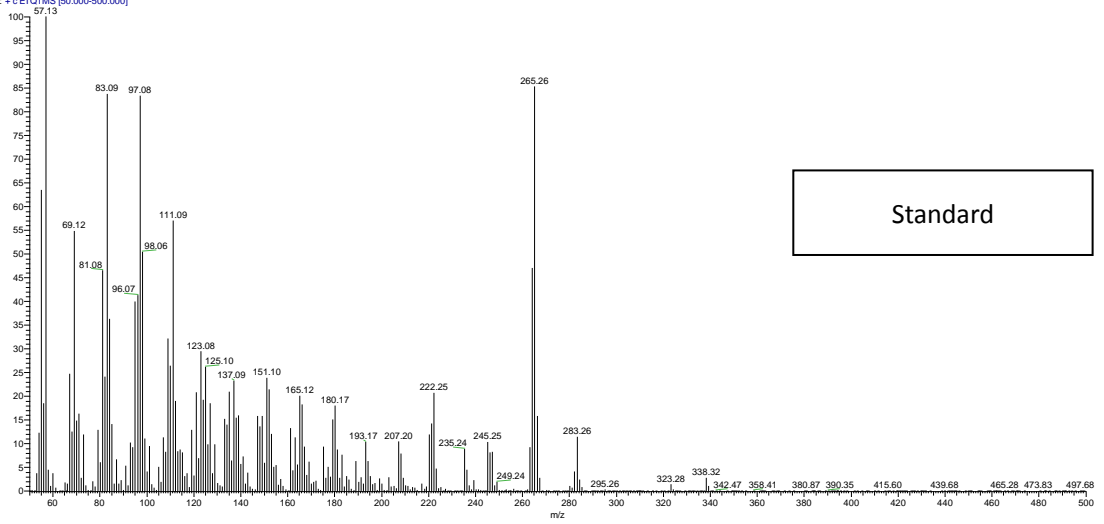
11.

b45-2#2930 RT: 25.58 AV: 1 SB: 2 25.52, 25.65 NL: 4.08E6  
T: +c EIGMS [50.000-500.000]

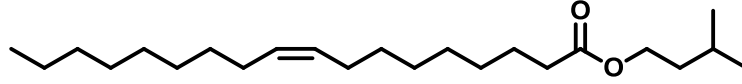


Sample

st-isobutyl#2914 RT: 25.48 AV: 1 SB: 2 25.44, 25.55 NL: 2.61E6  
T: +c EIGMS [50.000-500.000]



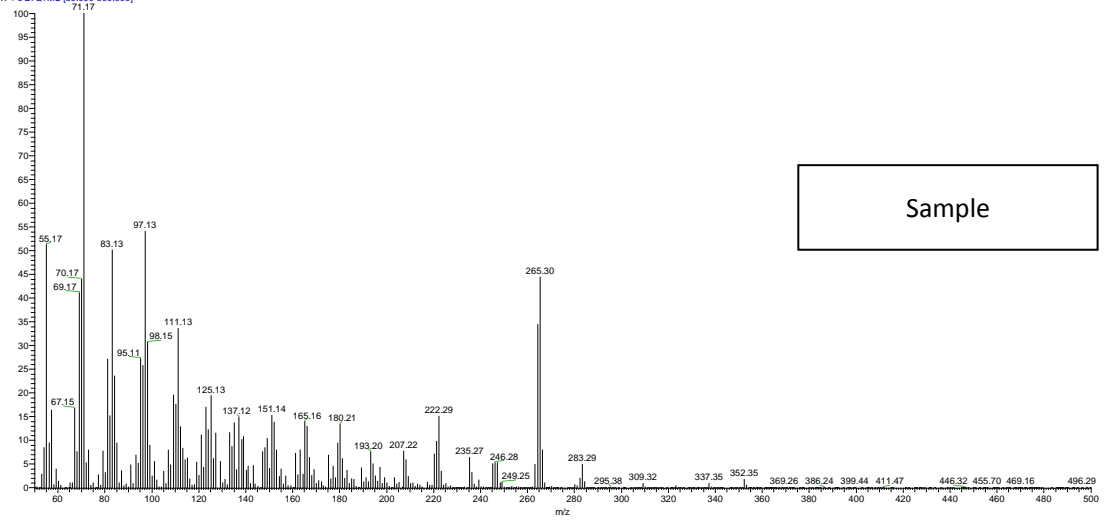
Standard



Isoamyl Oleate

12.

b45-2#3147 RT: 27.03 AV: 1 SB: 2 26.98, 27.09 NL: 3.72E6  
T: +c E I Q I M S [50,000-500,000]



st-isobutyl#2914 RT: 25.48 AV: 1 SB: 2 25.44, 25.55 NL: 2.61E6  
T: +c E I Q I M S [50,000-500,000]

