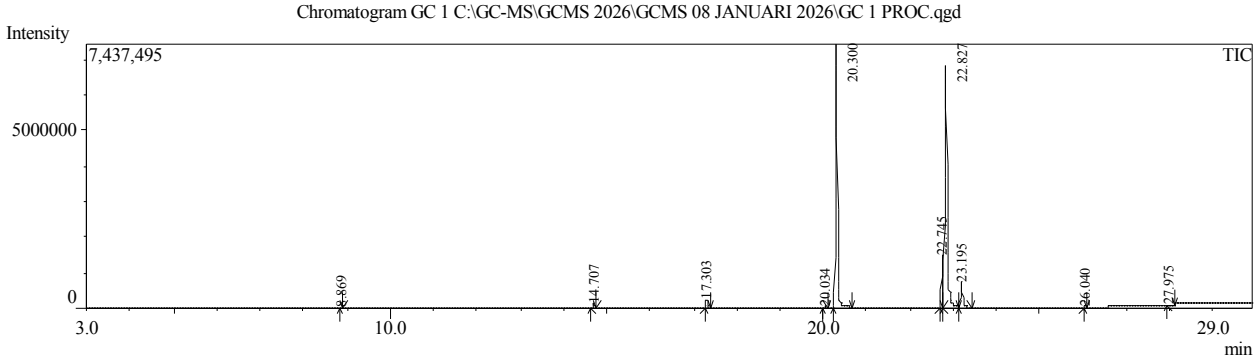
LABORATORIUM MINERAL DAN MATERIAL MAJU
FAKULTAS MATEMATIKA DAN ILMU PENGETAHUAN ALAM
UNIVERSITAS NEGERI MALANG

Chromatogram GC 1 C:\GC-MS\GCMS 2026\GCMS 08 JANUARI 2026\GC 1 PROC.qgd




Peak Report TIC

| Peak# | R.Time | Area | Area% | Height | Height% | A/H |
|---|---|---|---|---|---|---|
| 1 | 8.869 | 41105 | 0.07 | 23770 | 0.14 | 1.73 |
| 2 | 14.707 | 228405 | 0.41 | 123584 | 0.73 | 1.85 |
| 3 | 17.303 | 585889 | 1.05 | 250166 | 1.48 | 2.34 |
| 4 | 20.034 | 64424 | 0.12 | 33582 | 0.20 | 1.92 |
| 5 | 20.300 | 21875274 | 39.18 | 7433675 | 44.04 | 2.94 |
| 6 | 22.745 | 4535021 | 8.12 | 1475099 | 8.74 | 3.07 |
| 7 | 22.827 | 25947833 | 46.47 | 6808349 | 40.33 | 3.81 |
| 8 | 23.195 | 2504462 | 4.49 | 716220 | 4.24 | 3.50 |
| 9 | 26.040 | 33846 | 0.06 | 12411 | 0.07 | 2.73 |
| 10 | 27.975 | 17448 | 0.03 | 3194 | 0.02 | 5.46 |
| | | 55833707 | 100.00 | 16880050 | 100.00 | |

Method

[Comment]

====== Analytical Line 1 ======

[AOC-20i+s]
# of Rinses with Presolvent :2
# of Rinses with Solvent(post) :3
# of Rinses with Sample :2
Plunger Speed(Suction) :High
Viscosity Comp. Time :0.2 sec
Plunger Speed(Injection) :Middle
Syringe Insertion Speed :High
Injection Mode :Normal
Pumping Times :5
Inj. Port Dwell Time :0.3 sec
Terminal Air Gap :No
Plunger Washing Speed :High
Washing Volume :8uL
Syringe Suction Position :0.0 mm
Syringe Injection Position :0.0 mm
Solvent Selection :All A,B,C

[GC-2010]
Column Oven Temp. :50.0 °C
Injection Temp. :250.00 °C
Injection Mode :Split
Flow Control Mode :Pressure
Pressure :100.0 kPa
Total Flow :681.2 mL/min
Column Flow :1.69 mL/min
Linear Velocity :47.2 cm/sec
Purge Flow :3.0 mL/min
Split Ratio :400.0
High Pressure Injection :OFF
Carrier Gas Saver :OFF
Splitter Hold :OFF
Oven Temp. Program

| Rate | Temperature(°C) | Hold Time(min) |
|---|---|---|
| - | 50.0 | 1.00 |
| 10.00 | 200.0 | 2.00 |
| 10.00 | 230.0 | 2.00 |
| 10.00 | 280.0 | 2.00 |

< Ready Check Heat Unit >
Column Oven : Yes
SPL1 : Yes
MS : Yes
< Ready Check Detector(FTD/BID) >

< Ready Check Baseline Drift >
< Ready Check Injection Flow >
SPL1 Carrier : Yes
SPL1 Purge : Yes
< Ready Check APC Flow >
< Ready Check Detector APC Flow >
External Wait :No
Equilibrium Time :3.0 min

[GC Program]

[GCMS-QP2010 Plus]
IonSourceTemp :200.00 °C
Interface Temp. :200.00 °C
Solvent Cut Time :2.00 min
Detector Gain Mode :Relative to the Tuning Result
Detector Gain :+0.00 kV
Threshold :1000

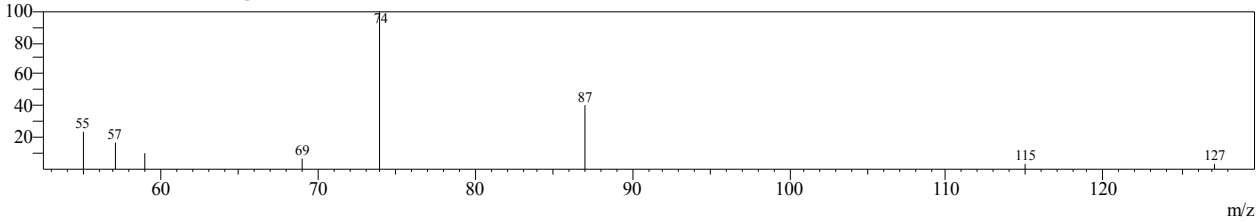
[MS Table]
--Group 1 - Event 1--
Start Time :3.00min
End Time :29.90min
ACQ Mode :Scan
Event Time :0.50sec
Scan Speed : 625
Start m/z :50.00
End m/z :350.00

Sample Inlet Unit :GC

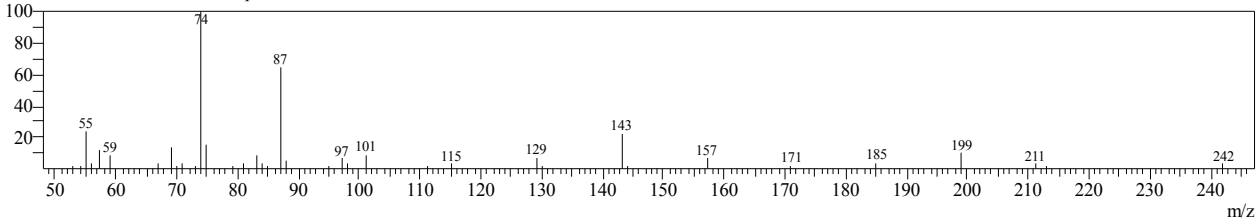
[MS Program]
Use MS Program :OFF

Spectr

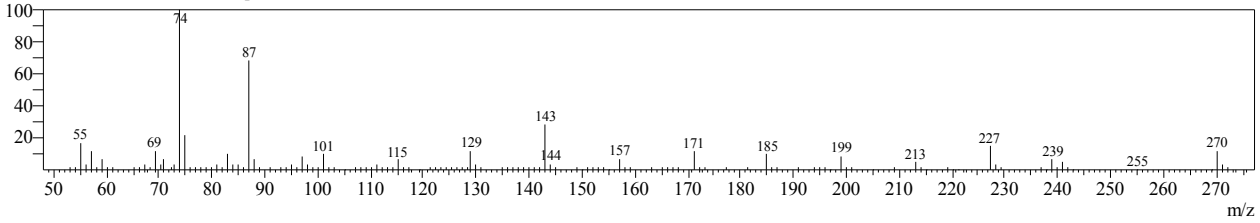
Line#:1 R.Time:8.867(Scan#:705)
MassPeaks:8
RawMode:Averaged 8.858-8.875(704-706) BasePeak:74.00(9472)
BG Mode:Calc. from Peak Group 1 - Event 1



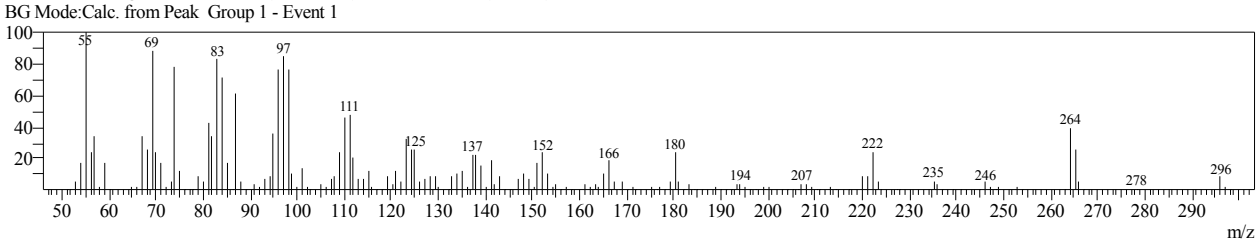

Line#:3 R.Time:17.300(Scan#:1717)
MassPeaks:37
RawMode:Averaged 17.292-17.308(1716-1718) BasePeak:74.00(59661)
BG Mode:Calc. from Peak Group 1 - Event 1



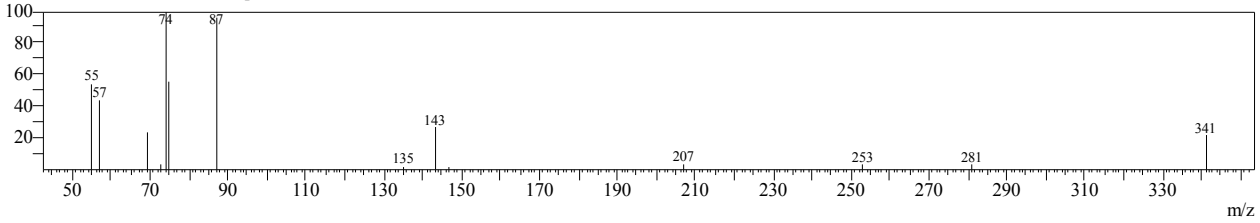

Line#:5 R.Time:20.300(Scan#:2077)
MassPeaks:135
RawMode:Averaged 20.292-20.308(2076-2078) BasePeak:74.00(1448807)
BG Mode:Calc. from Peak Group 1 - Event 1



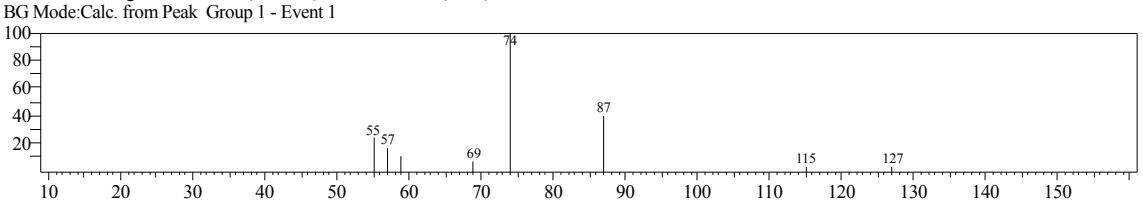
Line#:7 R.Time:22.825(Scan#:2380)
MassPeaks:175
RawMode:Averaged 22.817-22.833(2379-2381) BasePeak:55.00(281650)
BG Mode:Calc. from Peak Group 1 - Event 1



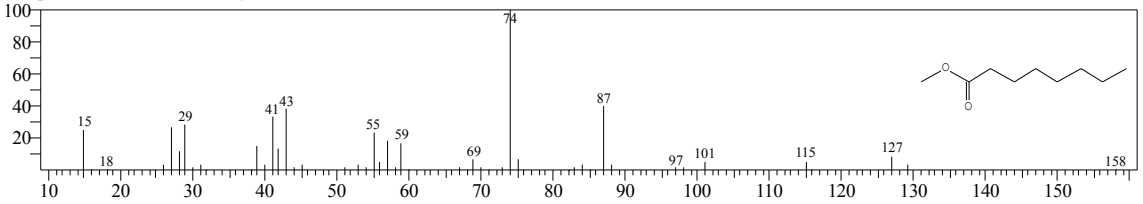

Line#:9 R.Time:26.042(Scan#:2766)
MassPeaks:14
RawMode:Averaged 26.033-26.050(2765-2767) BasePeak:74.00(2638)
BG Mode:Calc. from Peak Group 1 - Event 1



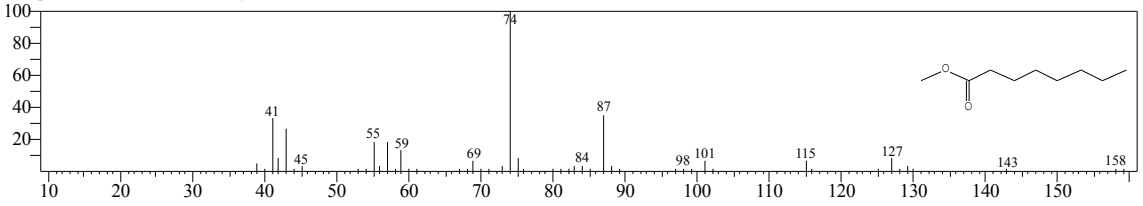

Library
<< Target >>
Line#:1 R.Time:8.867(Scan#:705) MassPeaks:8
RawMode:Averaged 8.858-8.875(704-706) BasePeak:74.00(9472)
BG Mode:Calc. from Peak Group 1 - Event 1



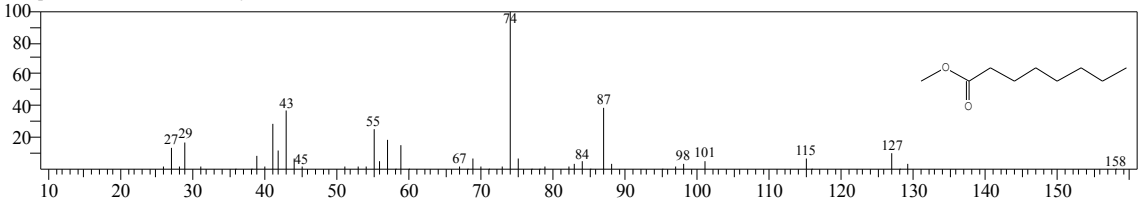

Hit#:1 Entry:33799 Library:NIST17.lib
SI:89 Formula:C9H18O2 CAS:111-11-5 MolWeight:158 RetIndex:1083
CompName:Octanoic acid, methyl ester



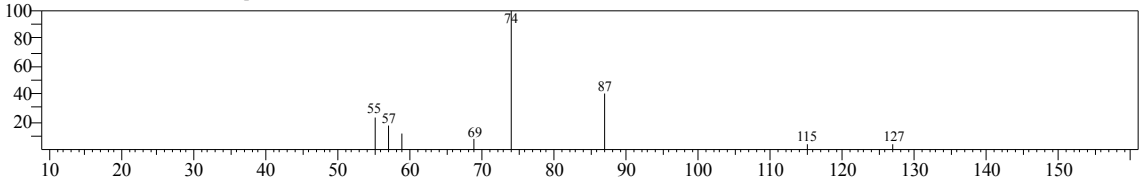

Hit#:2 Entry:33798 Library:NIST17.lib
SI:88 Formula:C9H18O2 CAS:111-11-5 MolWeight:158 RetIndex:1083
CompName:Octanoic acid, methyl ester



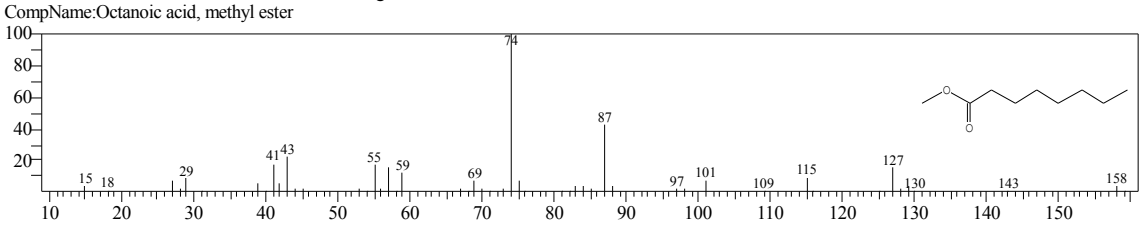

Hit#:3 Entry:33800 Library:NIST17.lib
SI:85 Formula:C9H18O2 CAS:111-11-5 MolWeight:158 RetIndex:1083
CompName:Octanoic acid, methyl ester



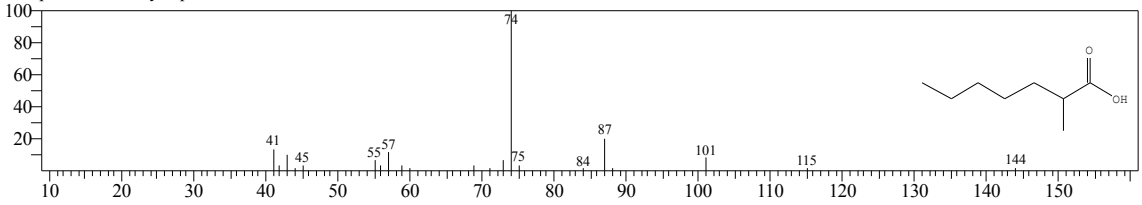
<< Target >>
Line#:1 R.Time:8.867(Scan#:705) MassPeaks:8
RawMode:Averaged 8.858-8.875(704-706) BasePeak:74.00(9472)
BG Mode:Calc. from Peak Group 1 - Event 1



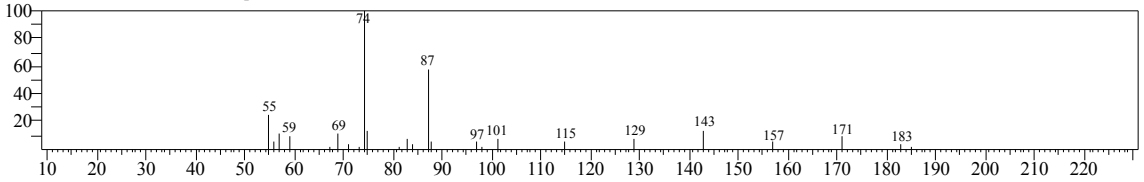

Hit#:4 Entry:33700 Library:NIST17.lib
SI:84 Formula:C9H18O2 CAS:111-11-5 MolWeight:158 RetIndex:1083
CompName:Octanoic acid, methyl ester



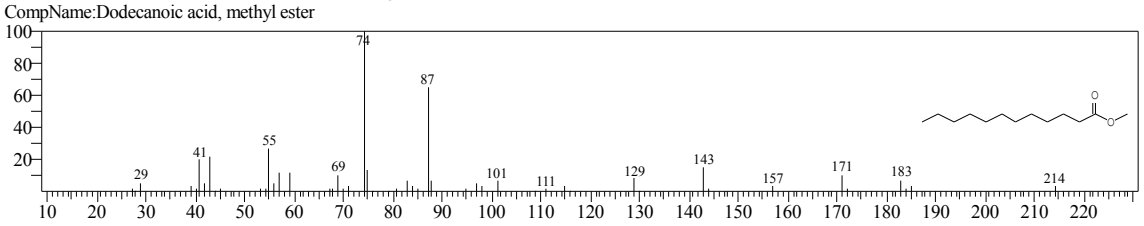

Hit#:5 Entry:23287 Library:NIST17.lib
SI:84 Formula:C8H16O2 CAS:1188-02-9 MolWeight:144 RetIndex:1109
CompName:2-Methylheptanoic acid



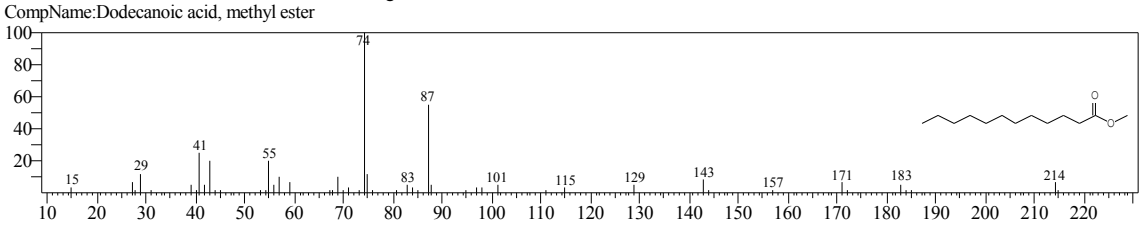
<< Target >>
Line#:2 R.Time:14.708(Scan#:1406) MassPeaks:25
RawMode:Averaged 14.700-14.717(1405-1407) BasePeak:74.00(33661)
BG Mode:Calc. from Peak Group 1 - Event 1



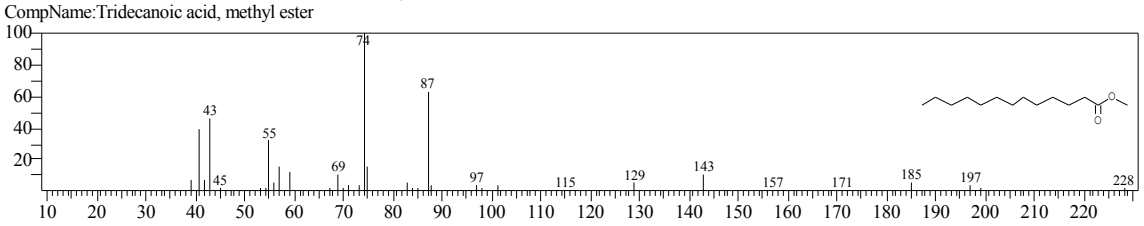

Hit#:1 Entry:85600 Library:NIST17.lib
SI:94 Formula:C13H26O2 CAS:111-82-0 MolWeight:214 RetIndex:1481
CompName:Dodecanoic acid, methyl ester



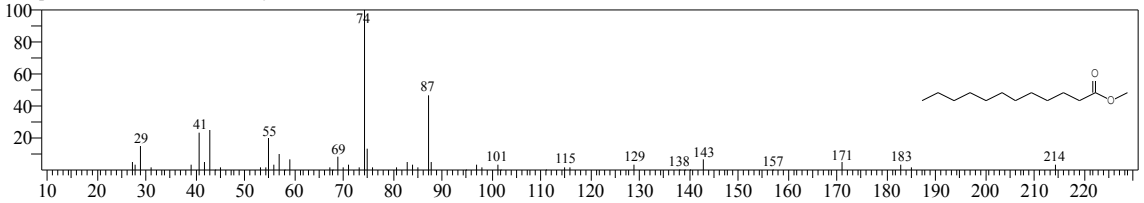

Hit#:2 Entry:85529 Library:NIST17.lib
SI:94 Formula:C13H26O2 CAS:111-82-0 MolWeight:214 RetIndex:1481
CompName:Dodecanoic acid, methyl ester



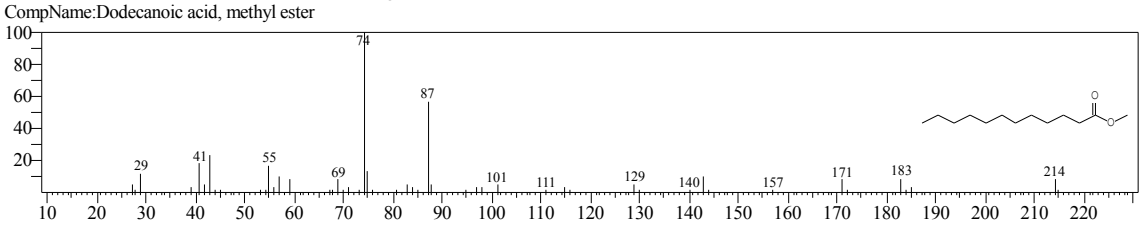

Hit#:3 Entry:100443 Library:NIST17.lib
SI:93 Formula:C14H28O2 CAS:1731-88-0 MolWeight:228 RetIndex:1580
CompName:Tridecanoic acid, methyl ester



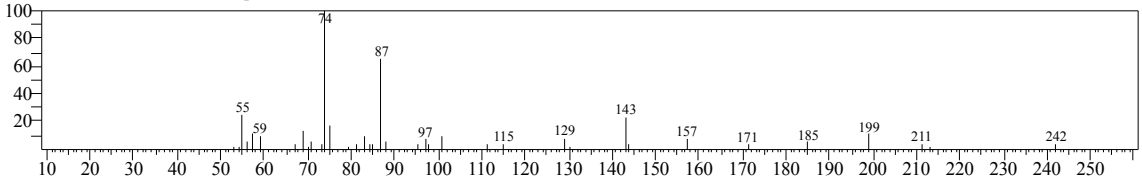

Hit#:4 Entry:85598 Library:NIST17.lib
SI:93 Formula:C13H26O2 CAS:111-82-0 MolWeight:214 RetIndex:1481
CompName:Dodecanoic acid, methyl ester



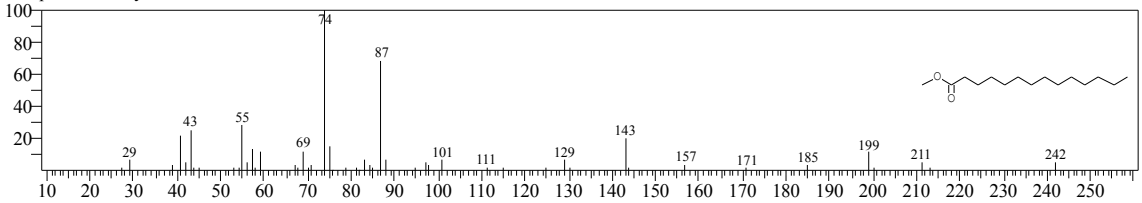

Hit#:5 Entry:85597 Library:NIST17.lib
SI:92 Formula:C13H26O2 CAS:111-82-0 MolWeight:214 RetIndex:1481
CompName:Dodecanoic acid, methyl ester



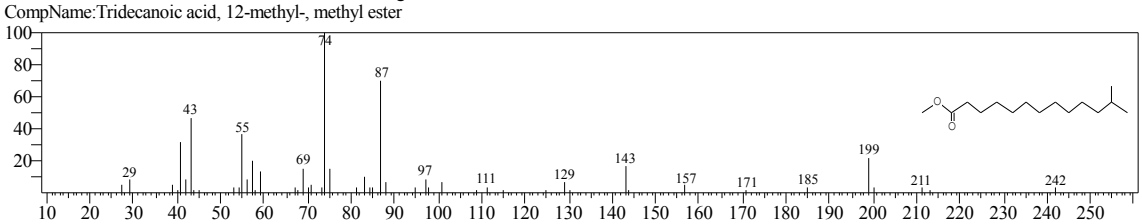
<< Target >>
Line#:3 R.Time:17.300(Scan#:1717) MassPeaks:37
RawMode:Averaged 17.292-17.308(1716-1718) BasePeak:74.00(59661)
BG Mode:Calc. from Peak Group 1 - Event 1



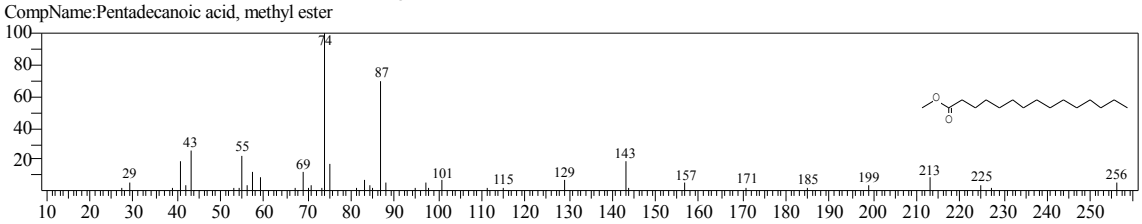

Hit#:1 Entry:114635 Library:NIST17.lib
SI:96 Formula:C15H30O2 CAS:124-10-7 MolWeight:242 RetIndex:1680
CompName:Methyl tetradecanoate



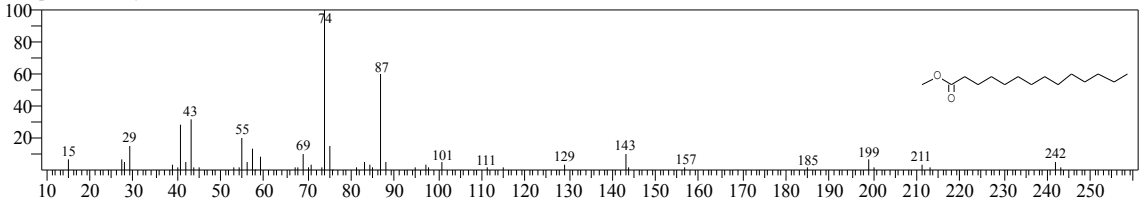

Hit#:2 Entry:114634 Library:NIST17.lib
SI:94 Formula:C15H30O2 CAS:5129-58-8 MolWeight:242 RetIndex:1615
CompName:Tridecanoic acid, 12-methyl-, methyl ester



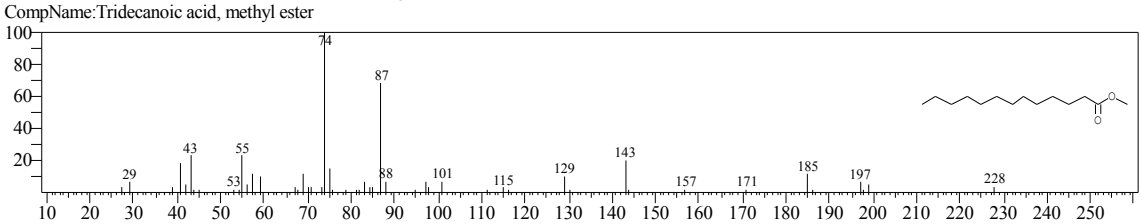

Hit#:3 Entry:129308 Library:NIST17.lib
SI:94 Formula:C16H32O2 CAS:7132-64-1 MolWeight:256 RetIndex:1779
CompName:Pentadecanoic acid, methyl ester



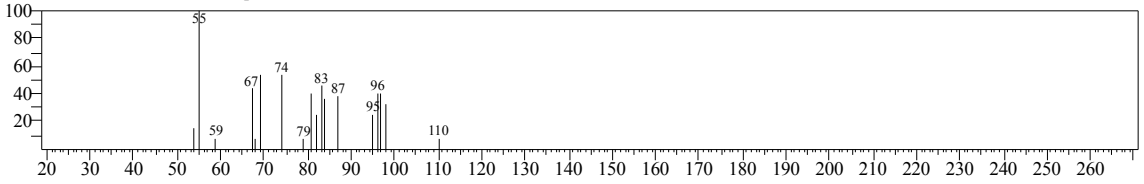

Hit#:4 Entry:114686 Library:NIST17.lib
SI:94 Formula:C15H30O2 CAS:124-10-7 MolWeight:242 RetIndex:1680
CompName:Methyl tetradecanoate



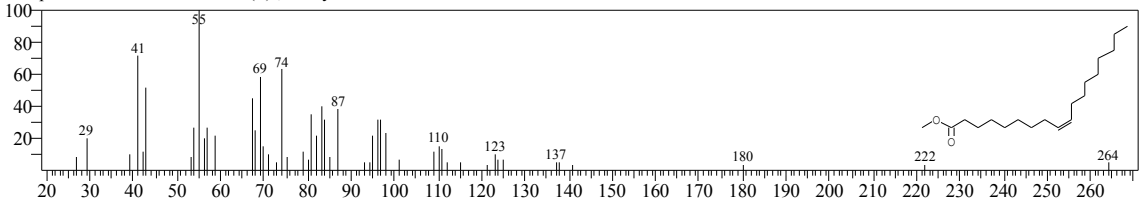

Hit#:5 Entry:100382 Library:NIST17.lib
SI:94 Formula:C14H28O2 CAS:1731-88-0 MolWeight:228 RetIndex:1580
CompName:Tridecanoic acid, methyl ester



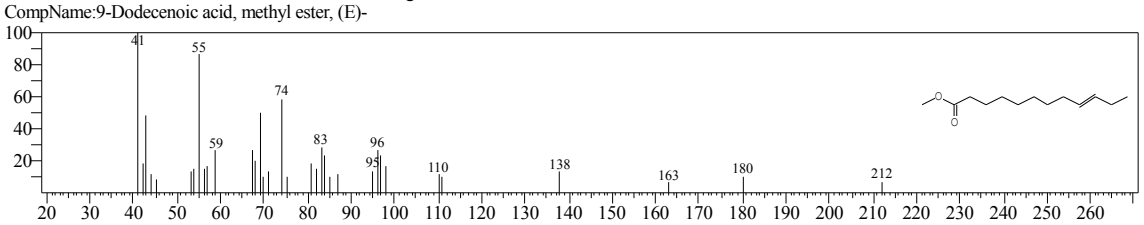
<< Target >>
Line#:4 R.Time:20.033(Scan#:2045) MassPeaks:18
RawMode:Averaged 20.025-20.042(2044-2046) BasePeak:55.05(4605)
BG Mode:Calc. from Peak Group 1 - Event 1



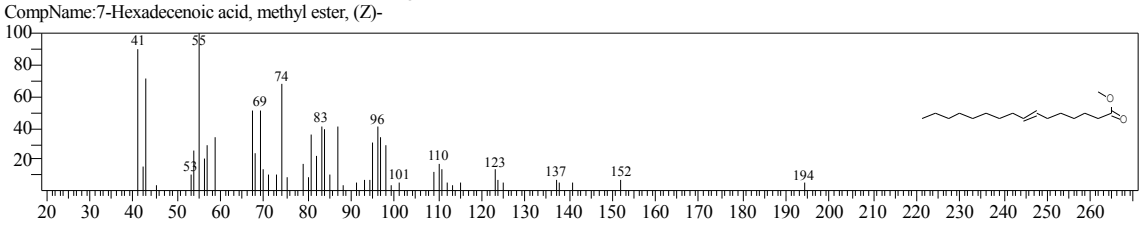

Hit#:1 Entry:172447 Library:NIST17.lib
SI:82 Formula:C19H36O2 CAS:112-62-9 MolWeight:296 RetIndex:2085
CompName:9-Octadecenoic acid (Z)-, methyl ester



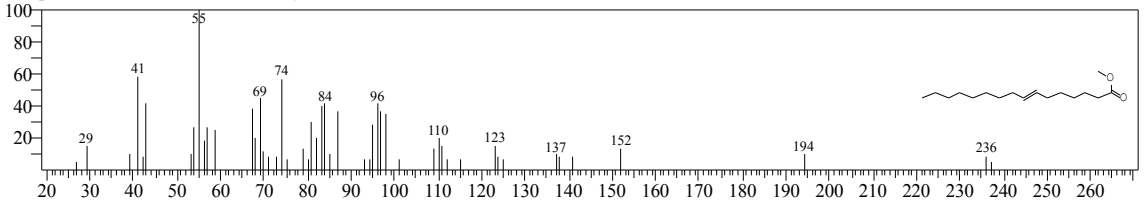

Hit#:2 Entry:83443 Library:NIST17.lib
SI:81 Formula:C13H24O2 CAS:55030-26-7 MolWeight:212 RetIndex:1489
CompName:9-Dodecenoic acid, methyl ester, (E)-



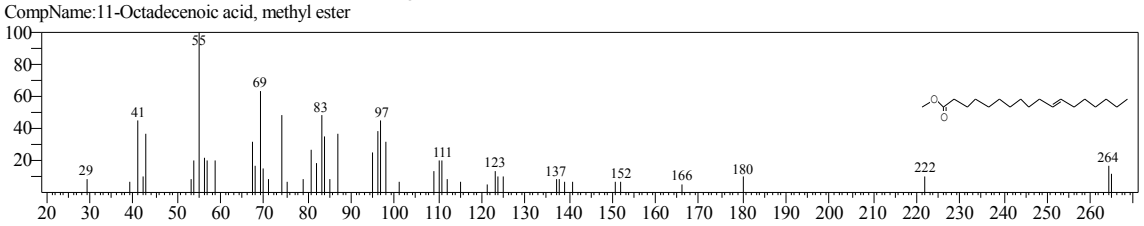

Hit#:3 Entry:141967 Library:NIST17.lib
SI:80 Formula:C17H32O2 CAS:56875-67-3 MolWeight:268 RetIndex:1886
CompName:7-Hexadecenoic acid, methyl ester, (Z)-



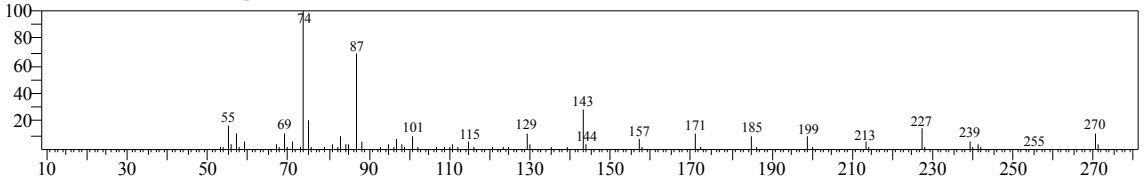

Hit#:4 Entry:141920 Library:NIST17.lib
SI:80 Formula:C17H32O2 CAS:56875-67-3 MolWeight:268 RetIndex:1886
CompName:7-Hexadecenoic acid, methyl ester, (Z)-



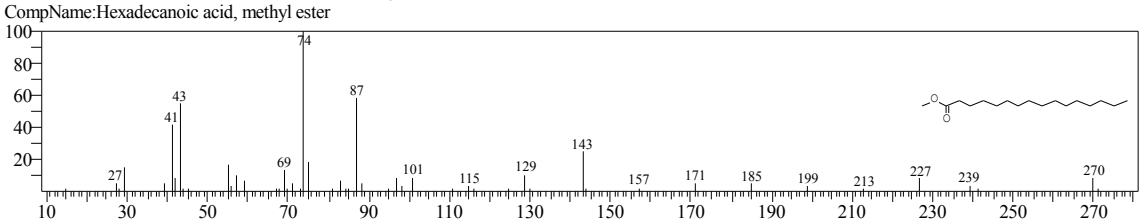

Hit#:5 Entry:172450 Library:NIST17.lib
SI:79 Formula:C19H36O2 CAS:52380-33-3 MolWeight:296 RetIndex:2085
CompName:11-Octadecenoic acid, methyl ester



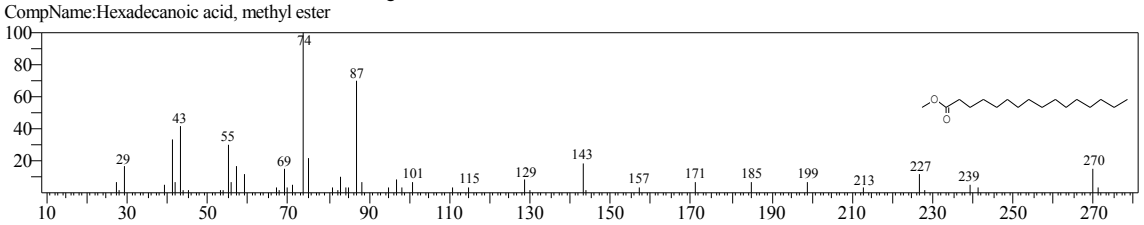
<< Target >>
Line#:5 R.Time:20.300(Scan#:2077) MassPeaks:135
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BG Mode:Calc. from Peak Group 1 - Event 1



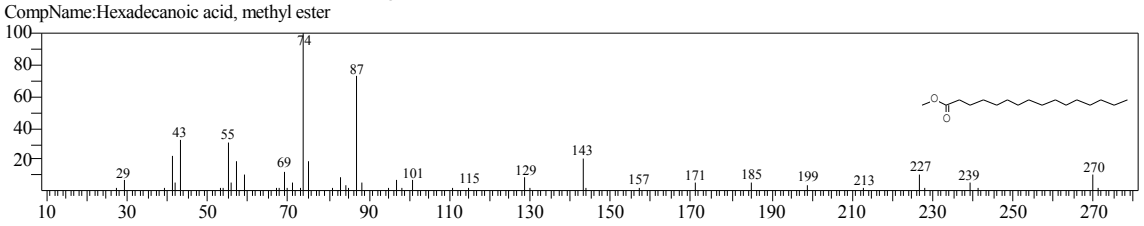

Hit#:1 Entry:144337 Library:NIST17.lib
SI:94 Formula:C17H34O2 CAS:112-39-0 MolWeight:270 RetIndex:1878
CompName:Hexadecanoic acid, methyl ester



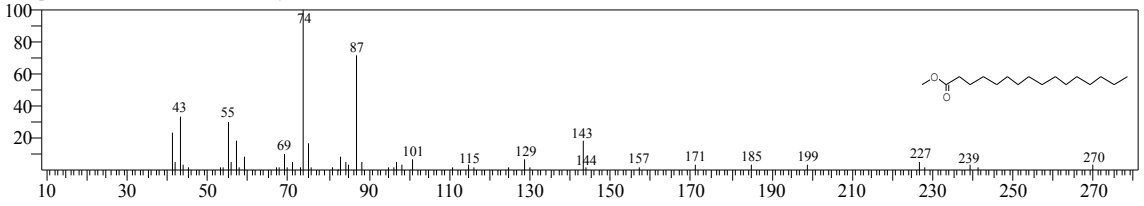

Hit#:2 Entry:144338 Library:NIST17.lib
SI:94 Formula:C17H34O2 CAS:112-39-0 MolWeight:270 RetIndex:1878
CompName:Hexadecanoic acid, methyl ester



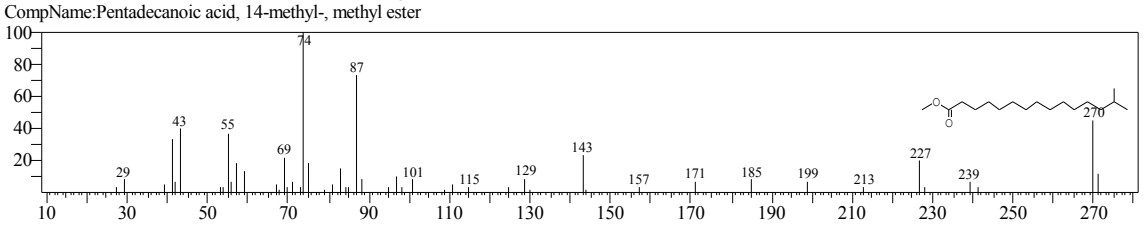

Hit#:3 Entry:144285 Library:NIST17.lib
SI:94 Formula:C17H34O2 CAS:112-39-0 MolWeight:270 RetIndex:1878
CompName:Hexadecanoic acid, methyl ester



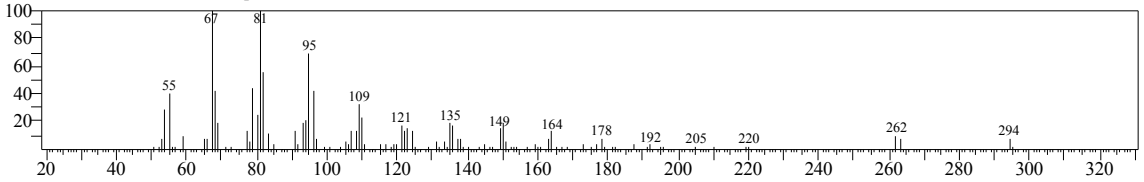

Hit#:4 Entry:144339 Library:NIST17.lib
SI:91 Formula:C17H34O2 CAS:112-39-0 MolWeight:270 RetIndex:1878
CompName:Hexadecanoic acid, methyl ester



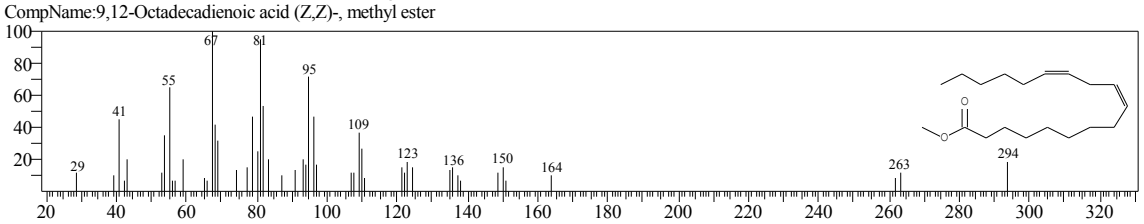

Hit#:5 Entry:144340 Library:NIST17.lib
SI:91 Formula:C17H34O2 CAS:5129-60-2 MolWeight:270 RetIndex:1814
CompName:Pentadecanoic acid, 14-methyl-, methyl ester



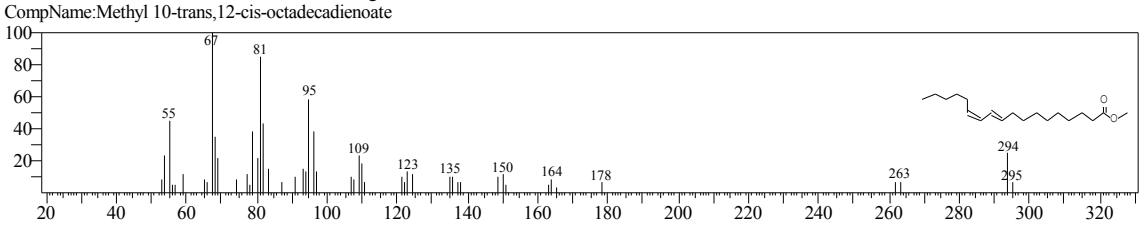
<< Target >>
Line#:6 R.Time:22.742(Scan#:2370) MassPeaks:107
RawMode:Averaged 22.733-22.750(2369-2371) BasePeak:81.05(71197)
BG Mode:Calc. from Peak Group 1 - Event 1



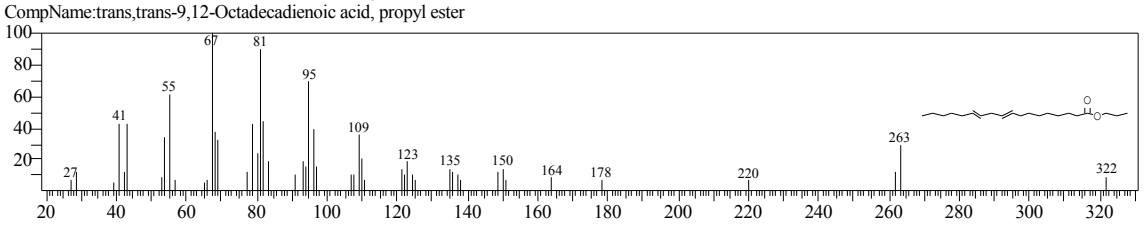

Hit#:1 Entry:170247 Library:NIST17.lib
SI:92 Formula:C19H34O2 CAS:112-63-0 MolWeight:294 RetIndex:2093
CompName:9,12-Octadecadienoic acid (Z,Z)-, methyl ester



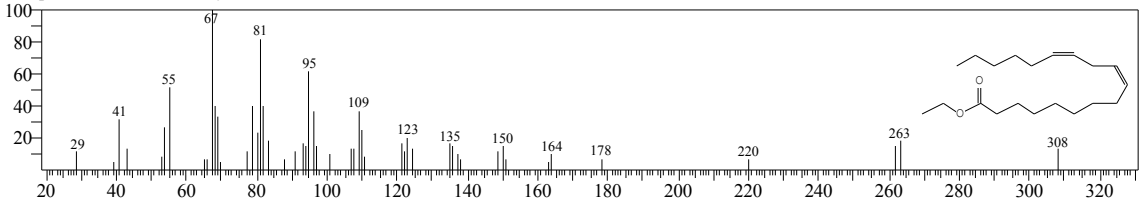

Hit#:2 Entry:170244 Library:NIST17.lib
SI:91 Formula:C19H34O2 CAS:0-00-0 MolWeight:294 RetIndex:2093
CompName:Methyl 10-trans,12-cis-octadecadienoate



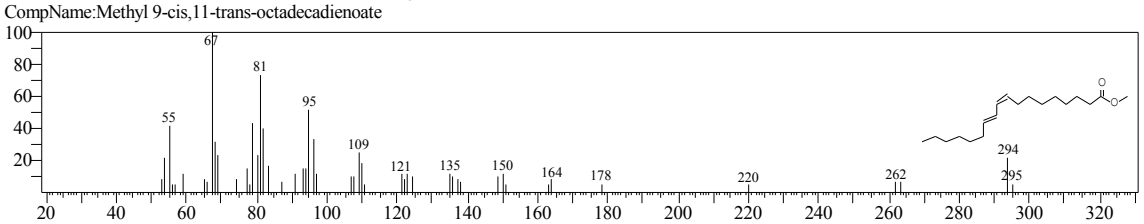

Hit#:3 Entry:200637 Library:NIST17.lib
SI:91 Formula:C21H38O2 CAS:0-00-0 MolWeight:322 RetIndex:2292
CompName:trans,trans-9,12-Octadecadienoic acid, propyl ester



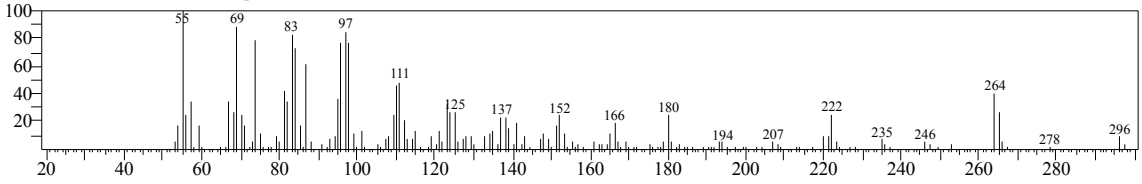

Hit#:4 Entry:185529 Library:NIST17.lib
SI:91 Formula:C20H36O2 CAS:544-35-4 MolWeight:308 RetIndex:2193
CompName:Linoleic acid ethyl ester



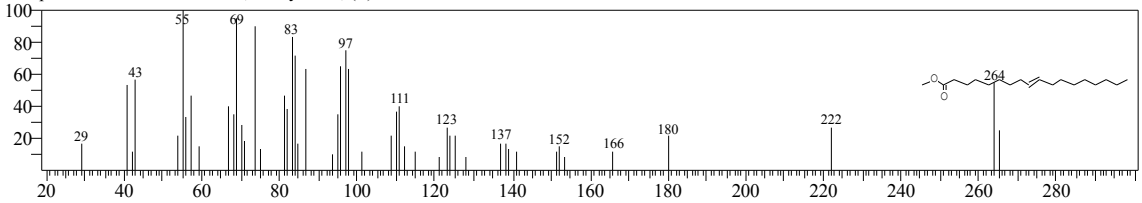

Hit#:5 Entry:170246 Library:NIST17.lib
SI:91 Formula:C19H34O2 CAS:13058-52-1 MolWeight:294 RetIndex:2093
CompName:Methyl 9-cis,11-trans-octadecadienoate



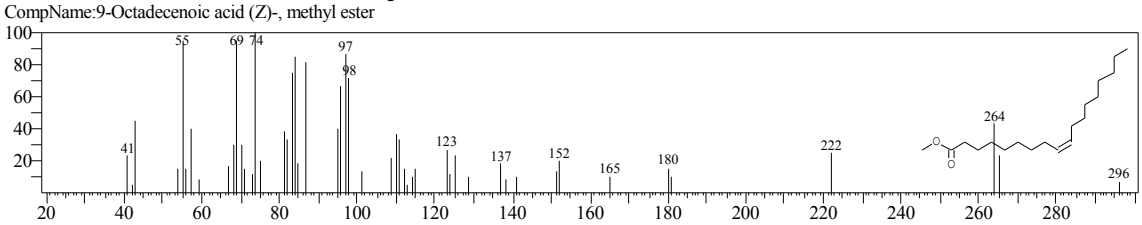
<< Target >>
Line#:7 R.Time:22.825(Scan#:2380) MassPeaks:175
RawMode:Averaged 22.817-22.833(2379-2381) BasePeak:55.00(281650)
BG Mode:Calc. from Peak Group 1 - Event 1



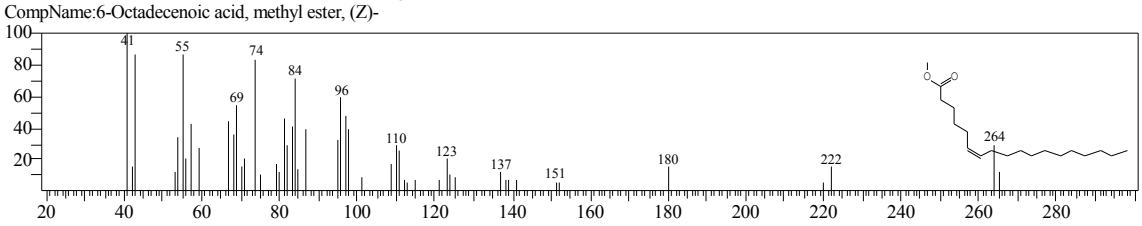

Hit#:1 Entry:172388 Library:NIST17.lib
SI:94 Formula:C19H36O2 CAS:1937-62-8 MolWeight:296 RetIndex:2085
CompName:9-Octadecenoic acid, methyl ester, (E)-



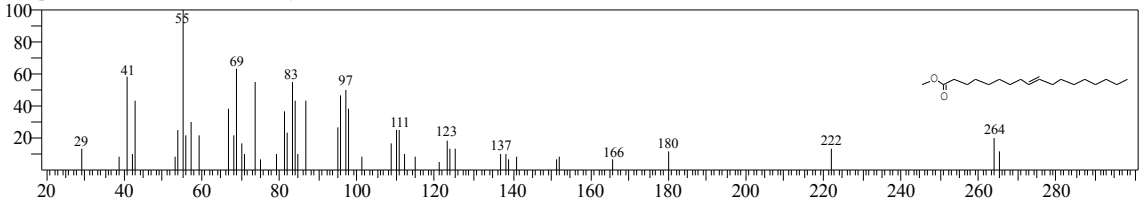

Hit#:2 Entry:172452 Library:NIST17.lib
SI:90 Formula:C19H36O2 CAS:112-62-9 MolWeight:296 RetIndex:2085
CompName:9-Octadecenoic acid (Z)-, methyl ester



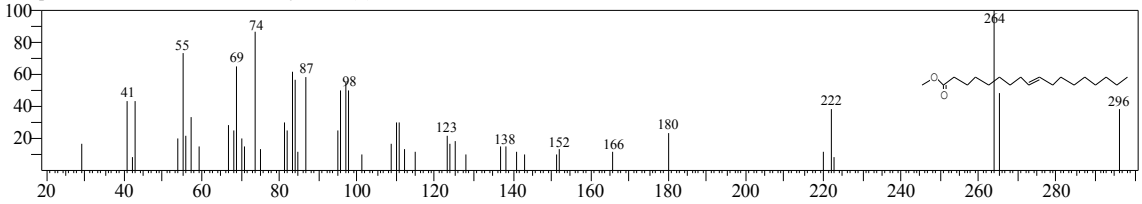

Hit#:3 Entry:172442 Library:NIST17.lib
SI:87 Formula:C19H36O2 CAS:2777-58-4 MolWeight:296 RetIndex:2085
CompName:6-Octadecenoic acid, methyl ester, (Z)-



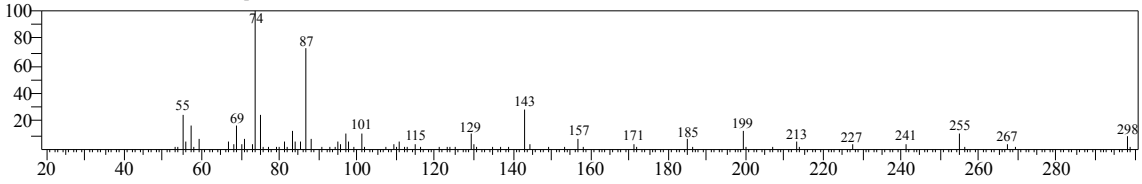

Hit#:4 Entry:172449 Library:NIST17.lib
SI:86 Formula:C19H36O2 CAS:1937-62-8 MolWeight:296 RetIndex:2085
CompName:9-Octadecenoic acid, methyl ester, (E)-



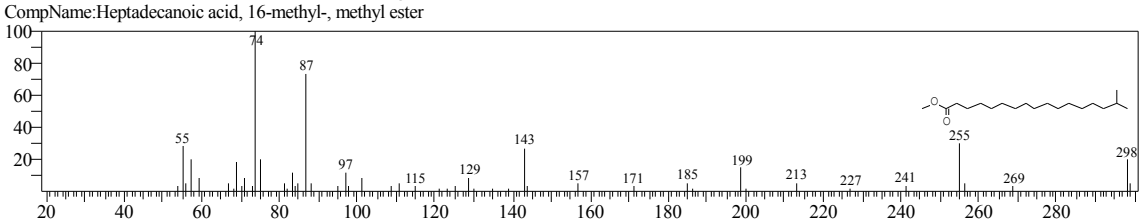

Hit#:5 Entry:172455 Library:NIST17.lib
SI:86 Formula:C19H36O2 CAS:1937-62-8 MolWeight:296 RetIndex:2085
CompName:9-Octadecenoic acid, methyl ester, (E)-



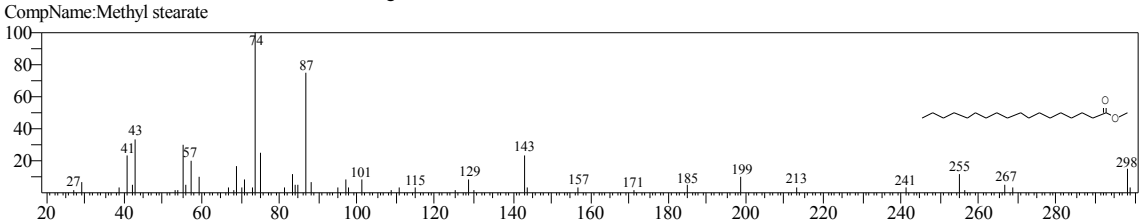
<< Target >>
Line#:8 R.Time:23.192(Scan#:2424) MassPeaks:79
RawMode:Averaged 23.183-23.200(2423-2425) BasePeak:74.00(122335)
BG Mode:Calc. from Peak Group 1 - Event 1



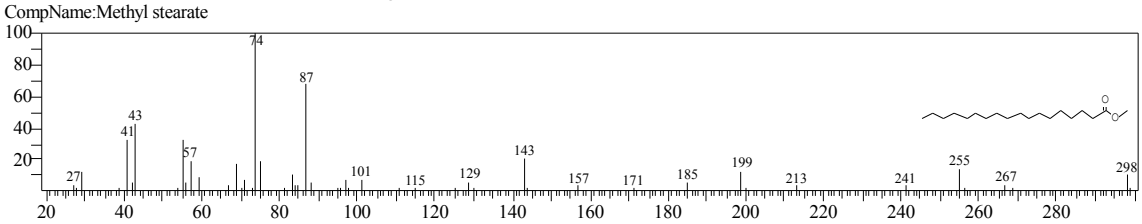
Hit#:1 Entry:174889 Library:NIST17.lib
SI:95 Formula:C19H38O2 CAS:5129-61-3 MolWeight:298 RetIndex:2013
CompName:Heptadecanoic acid, 16-methyl-, methyl ester



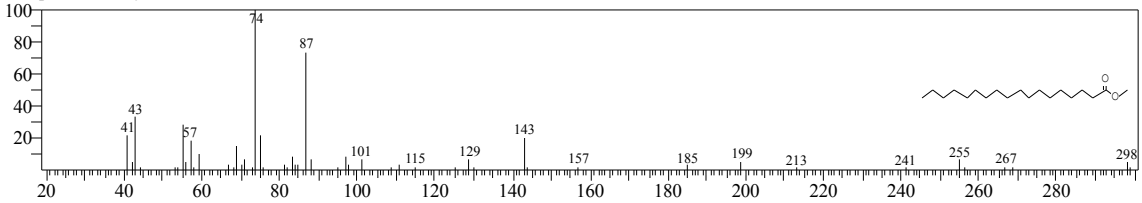
Hit#:2 Entry:174840 Library:NIST17.lib
SI:95 Formula:C19H38O2 CAS:112-61-8 MolWeight:298 RetIndex:2077
CompName:Methyl stearate



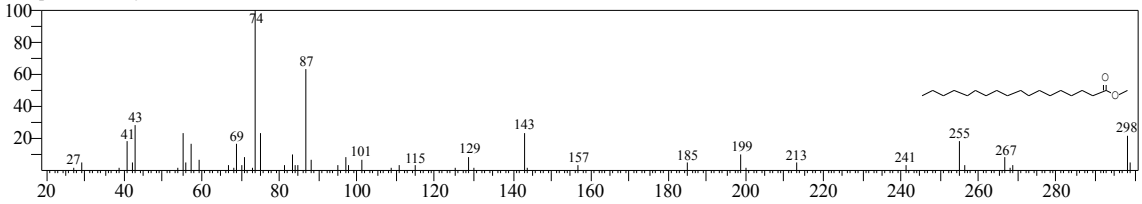
Hit#:3 Entry:174885 Library:NIST17.lib
SI:94 Formula:C19H38O2 CAS:112-61-8 MolWeight:298 RetIndex:2077
CompName:Methyl stearate



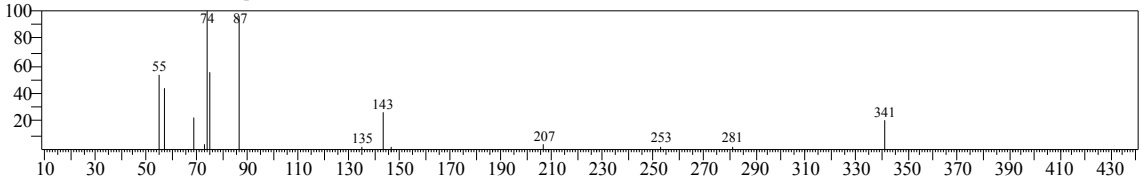
Hit#:4 Entry:174887 Library:NIST17.lib
SI:93 Formula:C19H38O2 CAS:112-61-8 MolWeight:298 RetIndex:2077
CompName:Methyl stearate



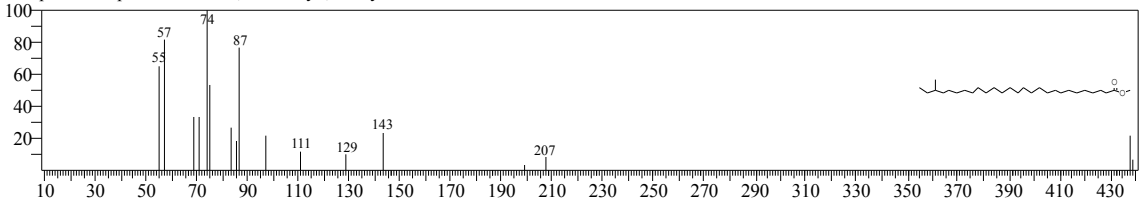
Hit#:5 Entry:174888 Library:NIST17.lib
SI:93 Formula:C19H38O2 CAS:112-61-8 MolWeight:298 RetIndex:2077
CompName:Methyl stearate



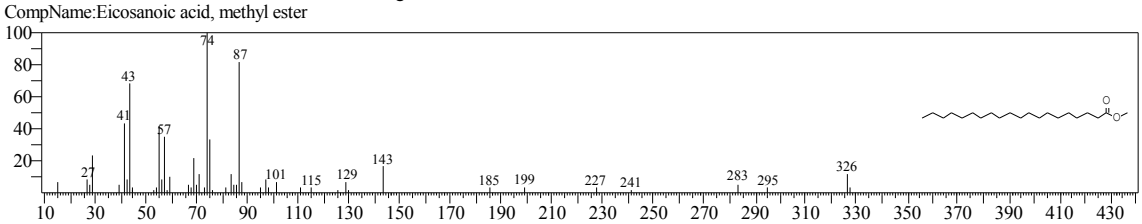
<< Target >>
Line#:9 R.Time:26.042(Scan#:2766) MassPeaks:14
RawMode:Averaged 26.033-26.050(2765-2767) BasePeak:74.00(2638)
BG Mode:Calc. from Peak Group 1 - Event 1



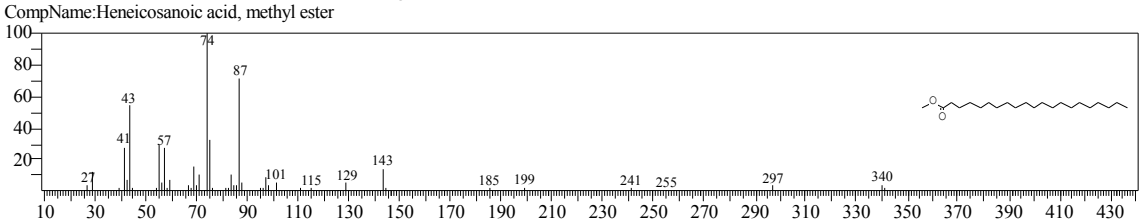

Hit#:1 Entry:281726 Library:NIST17.lib
SI:78 Formula:C29H58O2 CAS:0-00-0 MolWeight:438 RetIndex:3007
CompName:Heptacosanoic acid, 25-methyl-, methyl ester



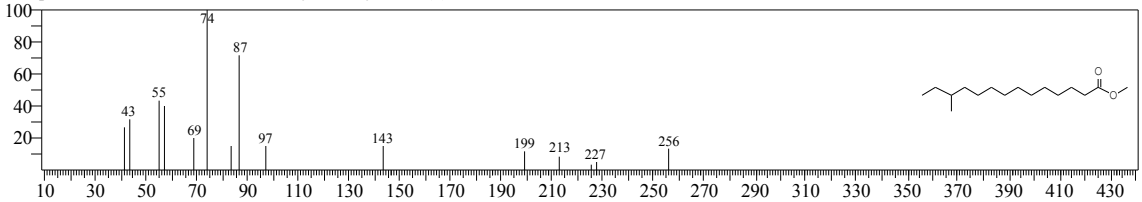

Hit#:2 Entry:204998 Library:NIST17.lib
SI:77 Formula:C21H42O2 CAS:1120-28-1 MolWeight:326 RetIndex:2276
CompName:Eicosanoic acid, methyl ester



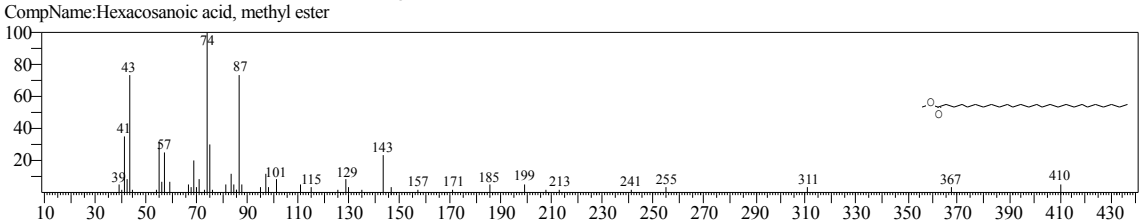

Hit#:3 Entry:219517 Library:NIST17.lib
SI:77 Formula:C22H44O2 CAS:6064-90-0 MolWeight:340 RetIndex:2375
CompName:Heneicosanoic acid, methyl ester



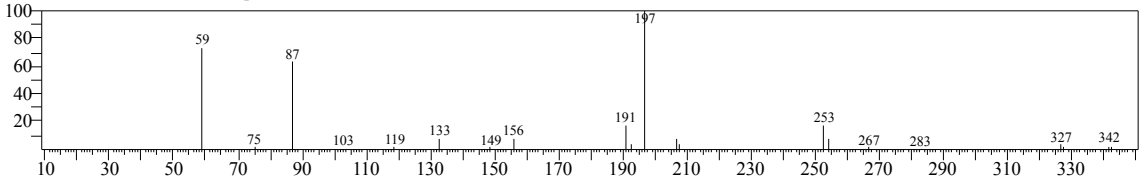

Hit#:4 Entry:129361 Library:NIST17.lib
SI:76 Formula:C16H32O2 CAS:62691-05-8 MolWeight:256 RetIndex:1715
CompName:Tetradecanoic acid, 12-methyl-, methyl ester, (S)-



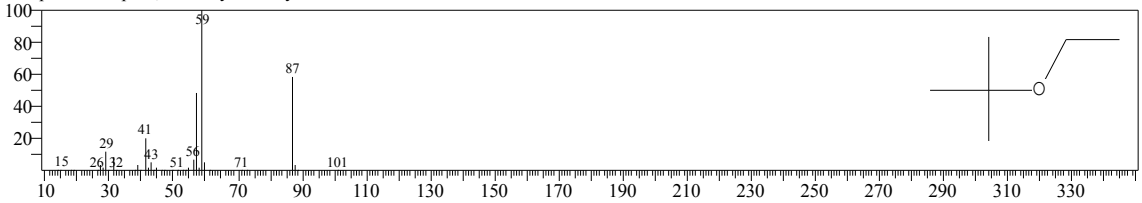

Hit#:5 Entry:270367 Library:NIST17.lib
SI:76 Formula:C27H54O2 CAS:5802-82-4 MolWeight:410 RetIndex:2872
CompName:Hexacosanoic acid, methyl ester



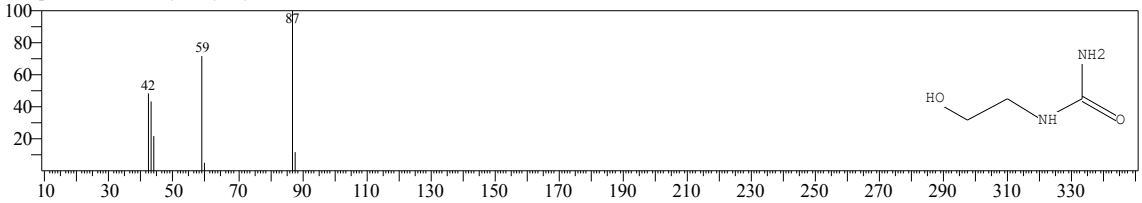
<< Target >>
Line#:10 R.Time:27.975(Scan#:2998) MassPeaks:21
RawMode:Averaged 27.967-27.983(2997-2999) BasePeak:197.00(934)
BG Mode:Calc. from Peak Group 1 - Event 1



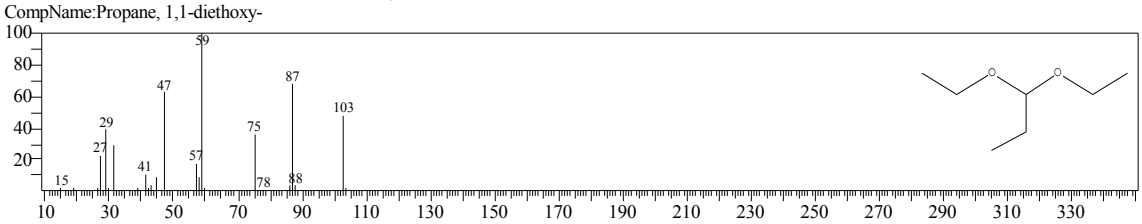

Hit#:1 Entry:4990 Library:NIST17.lib
SI:58 Formula:C6H14O CAS:637-92-3 MolWeight:102 RetIndex:609
CompName:Propane, 2-ethoxy-2-methyl-



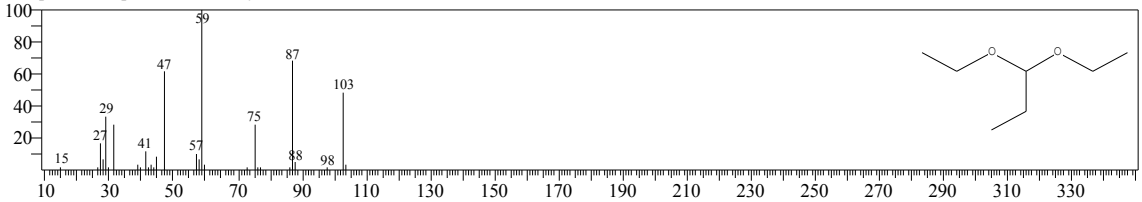

Hit#:2 Entry:5162 Library:NIST17.lib
SI:57 Formula:C3H8N2O2 CAS:2078-71-9 MolWeight:104 RetIndex:1170
CompName:Urea, (2-hydroxyethyl)-




Hit#:3 Entry:16026 Library:NIST17.lib
SI:57 Formula:C7H16O2 CAS:4744-08-5 MolWeight:132 RetIndex:805
CompName:Propane, 1,1-diethoxy-




Hit#:4 Entry:16025 Library:NIST17.lib
SI:57 Formula:C7H16O2 CAS:4744-08-5 MolWeight:132 RetIndex:805
CompName:Propane, 1,1-diethoxy-




Hit#:5 Entry:16019 Library:NIST17.lib
SI:56 Formula:C7H16O2 CAS:4744-08-5 MolWeight:132 RetIndex:805
CompName:Propane, 1,1-diethoxy-

