

Appendix I

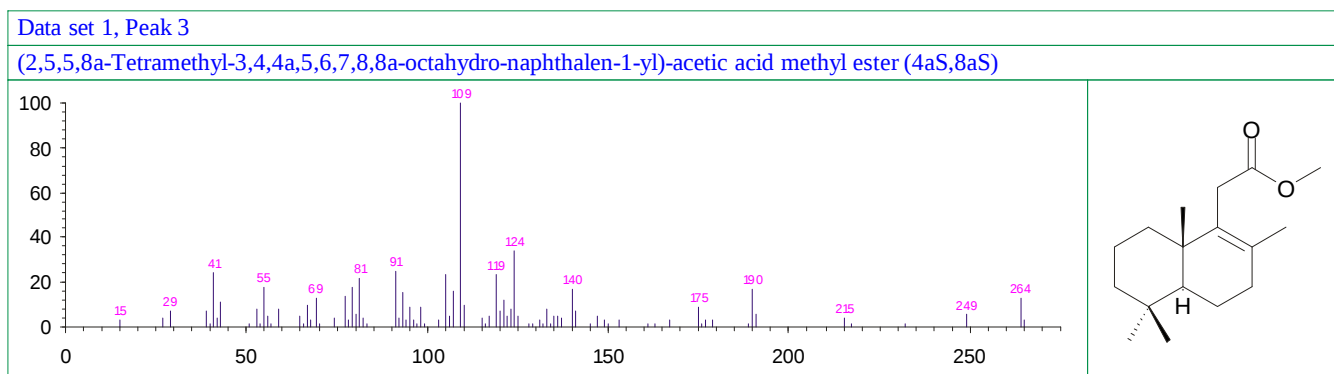
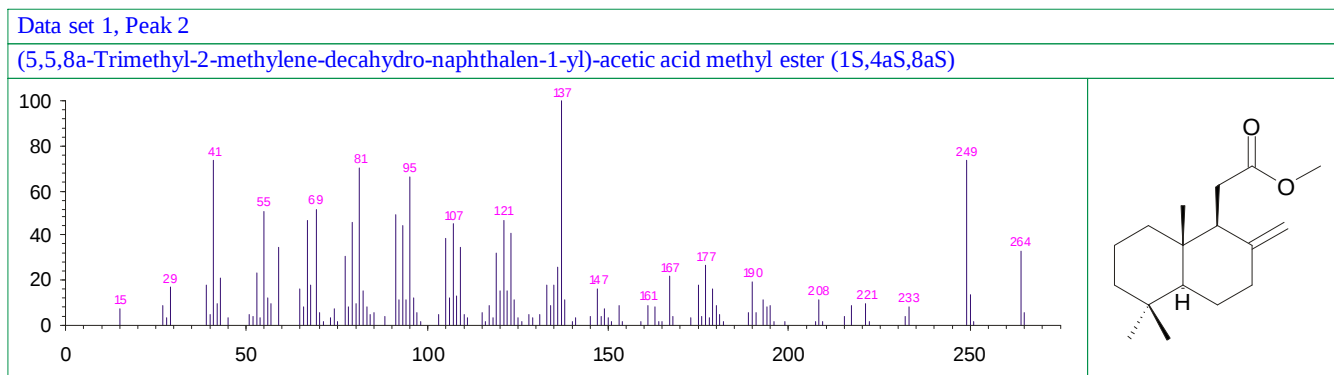
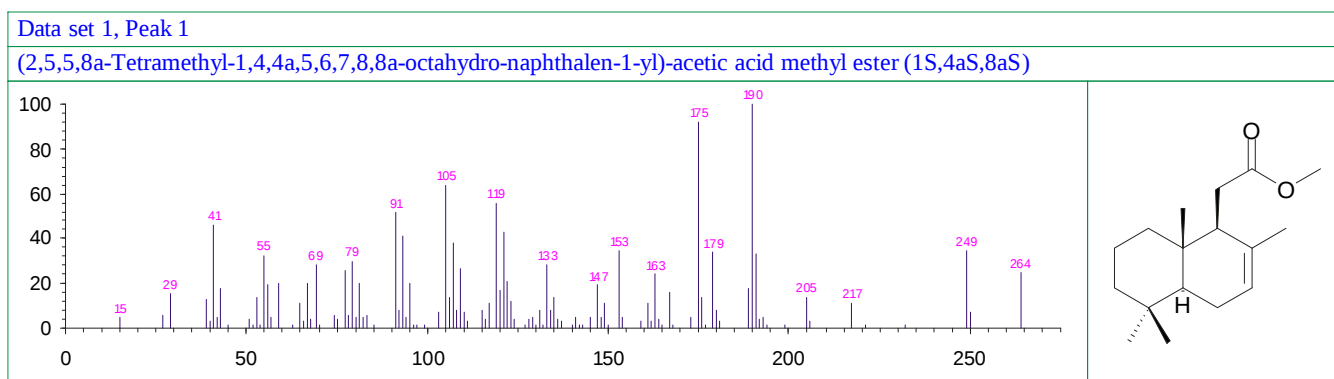
Mass Spectra and/or structural assignments of eluants described in data sets 1-3.

Note, as an aid to readers, frames are color coded for clarity

Data set 1

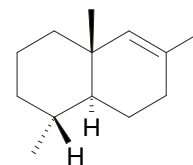
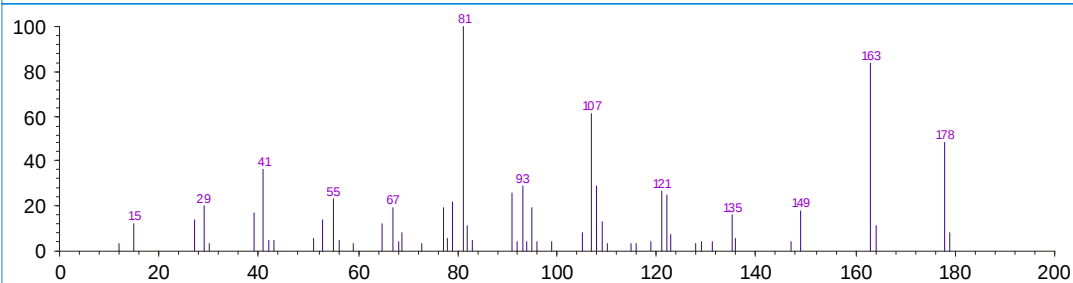
Data set 2

Data set 3



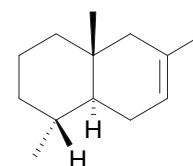
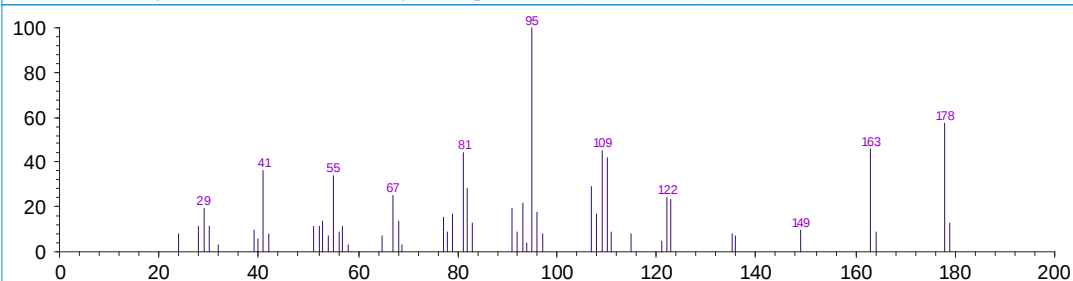
Data set 2, Peak 1

4,7,8a-Trimethyl-1,2,3,4,4a,5,6,8a-octahydro-naphthalene (4R,4aS,8aS)



Data set 2, Peak 2

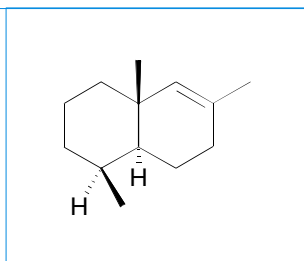
1,4a,6-Trimethyl-1,2,3,4,4a,5,8,8a-octahydro-naphthalene (1R,4aR,8aS)



Data set 2, Peak 3

4,7,8a-Trimethyl-1,2,3,4,4a,5,6,8a-octahydro-naphthalene (4S,4aS,8aS)

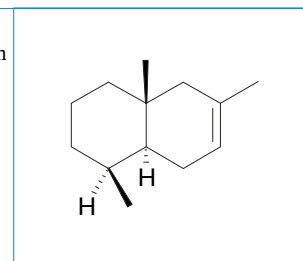
Due to the low abundance of this eluant assignment is based on (i) the presence of characteristics ions, (ii) correspondence of the chromatographic behavior with the chromatographic behavior of the assigned compound, and (iii) the occurrence of other members of this series of compounds in this sample.



Data set 2, Peak 4

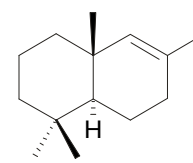
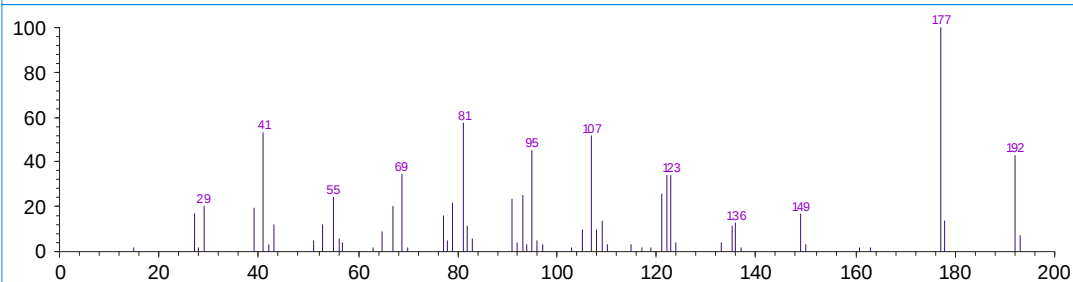
1,4a,6-Trimethyl-1,2,3,4,4a,5,8,8a-octahydro-naphthalene (1S,4aR,8aS)

Due to the low abundance of this eluant assignment is based on (i) the presence of characteristics ions, (ii) correspondence of the chromatographic behavior with the chromatographic behavior of the assigned compound, and (iii) the occurrence of other members of this series of compounds in this sample.



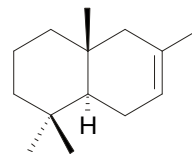
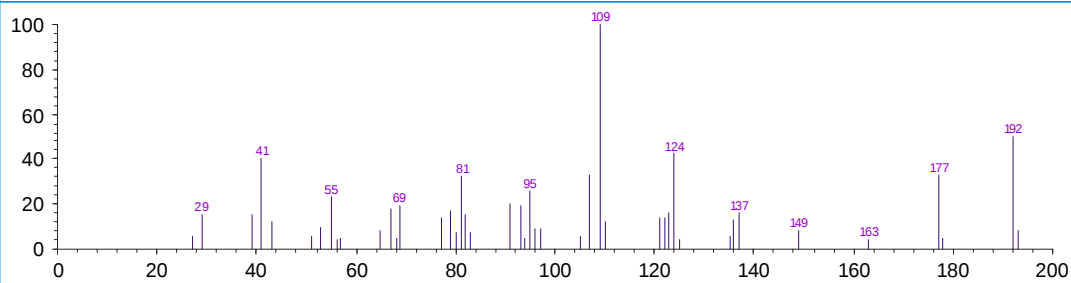
Data set 2, Peak 5

4,4,7,8a-Tetramethyl-1,2,3,4,4a,5,6,8a-octahydro-naphthalene (4aS,8aR)



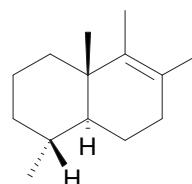
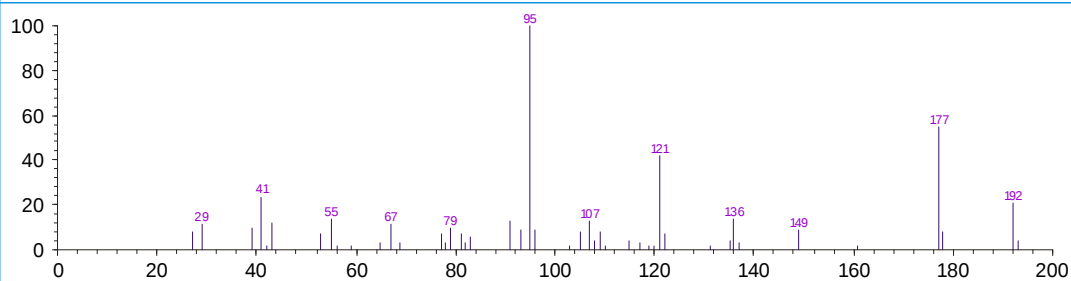
Data set 2, Peak 6

1,1,4a,6-Tetramethyl-1,2,3,4,4a,5,8,8a-octahydro-naphthalene (4aR,8aS)



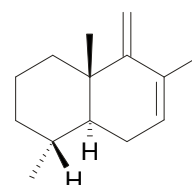
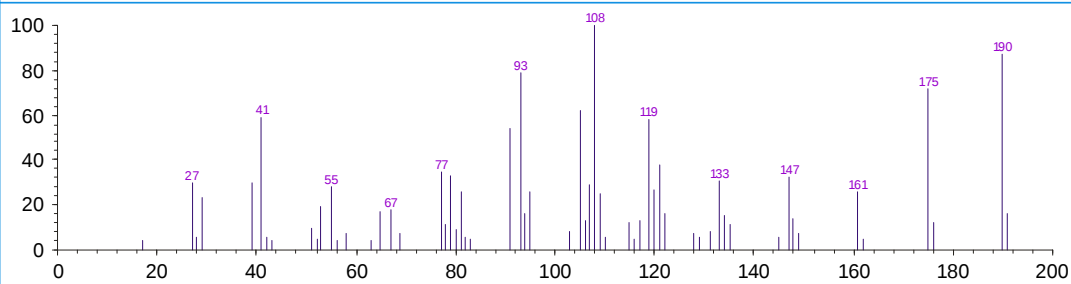
Data set 2, Peak 7

4,7,8,8a-Tetramethyl-1,2,3,4,4a,5,6,8a-octahydro-naphthalene (4R,4aS,8aS)



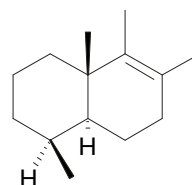
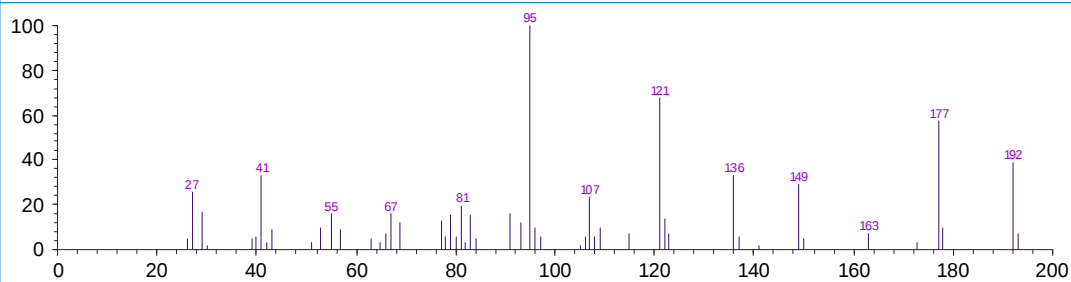
Data set 2, Peak 8

1,4a,6-Trimethyl-5-methylene-1,2,3,4,4a,5,8,8a-octahydro-naphthalene (1R,4aS,8aS)



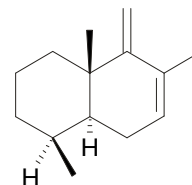
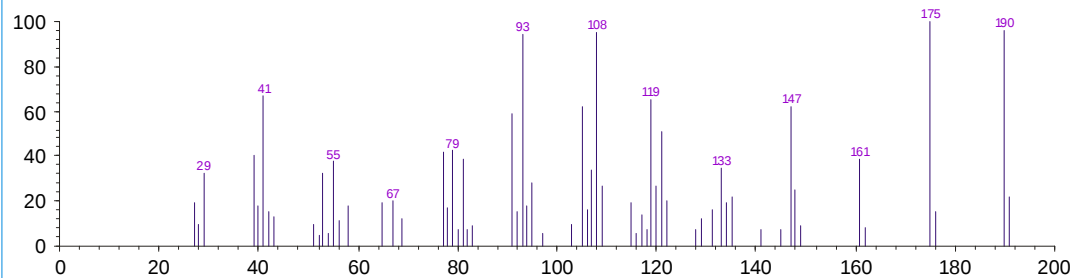
Data set 2, Peak 9

4,7,8,8a-Tetramethyl-1,2,3,4,4a,5,6,8a-octahydro-naphthalene (4S,4aS,8aS)



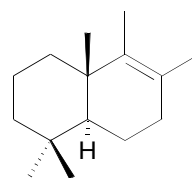
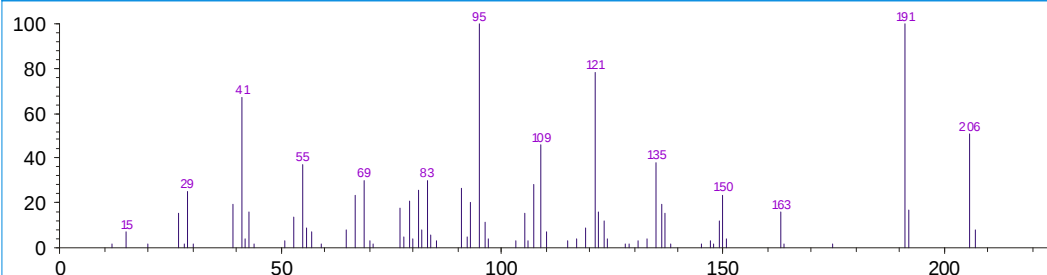
Data set 2, Peak 10

1,4a,6-Trimethyl-5-methylene-1,2,3,4,4a,5,8,8a-octahydro-naphthalene (1S,4aS,8aS)



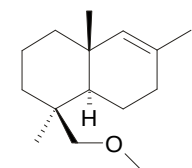
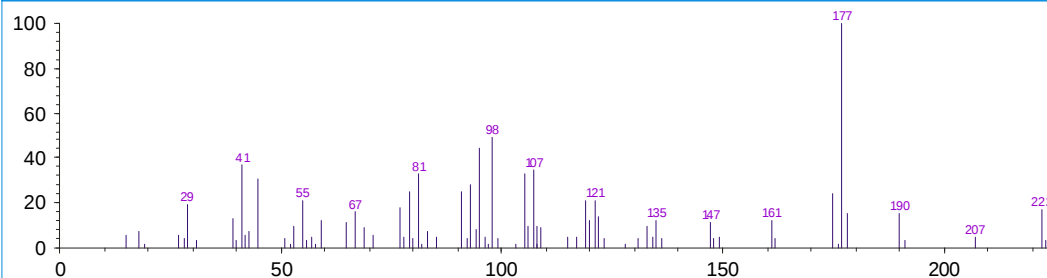
Data set 2, Peak 11

4,4,7,8,8a-Pentamethyl-1,2,3,4,4a,5,6,8a-octahydro-naphthalene (4aS,8aS)



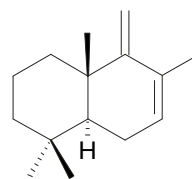
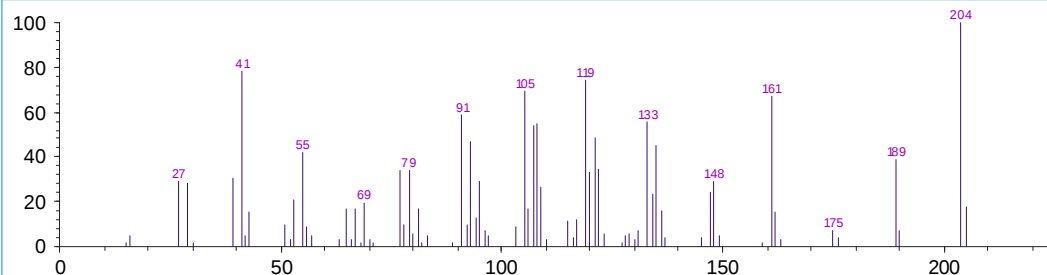
Data set 2, Peak 12

4-Methoxymethyl-4,7,8a-trimethyl-1,2,3,4,4a,5,6,8a-octahydro-naphthalene (4S,4aR,8aR)



Data set 2, Peak 13

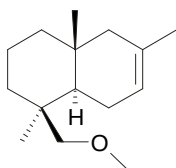
1,1,4a,6-Tetramethyl-5-methylene-1,2,3,4,4a,5,8,8a-octahydro-naphthalene (4aS,8aS)



Data set 2, Peak 14

1-Methoxymethyl-1,4a,6-trimethyl-1,2,3,4,4a,5,8,8a-octahydro-naphthalene (1S,4aR,8aR)

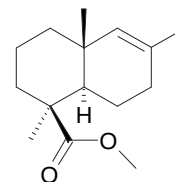
Due to the low abundance of this eluant assignment is based on (i) the presence of characteristics ions, (ii) correspondence of the chromatographic behavior with the chromatographic behavior of the assigned compound, and (iii) the occurrence of other members of this series of compounds in this sample.



Data set 2, Peak 15

1,4a,6-Trimethyl-1,2,3,4,4a,7,8,8a-octahydro-naphthalene-1-carboxylic acid methyl ester (1S,4aR,8aR)

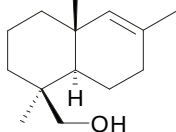
Due to the low abundance of this eluant assignment is based on (i) the presence of characteristics ions, (ii) correspondence of the chromatographic behavior with the chromatographic behavior of the assigned compound, and (iii) the occurrence of other members of this series of compounds in this sample.



Data set 2, Peak 16

(1,4a,6-Trimethyl-1,2,3,4,4a,7,8,8a-octahydro-naphthalen-1-yl)-methanol (1S,4aR,8aR)

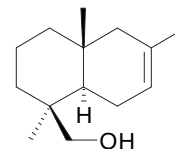
MS data for this eluant strongly support the assignment given. However, in this case, MS data also indicate the presence of a minor unknown co-eluant. Therefore, assignment is based on (i) characteristics ions, (ii) chromatographic behavior and (iii) the occurrence of other members of this series of compounds in this sample.



Data set 2, Peak 17

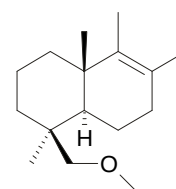
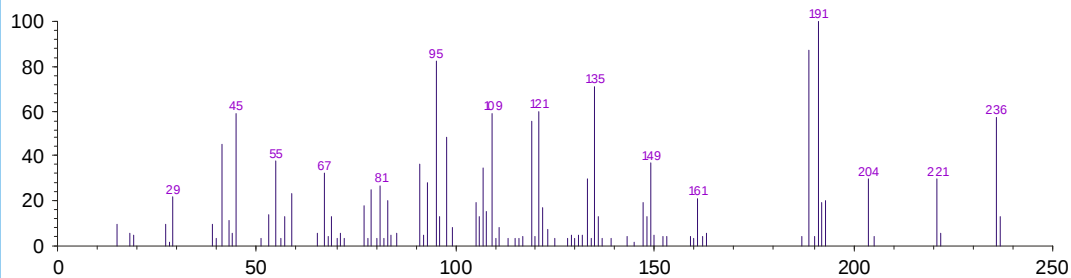
(1,4a,6-Trimethyl-1,2,3,4,4a,5,8,8a-octahydro-naphthalen-1-yl)methanol (1S,4aR,8aR)

Due to the low abundance and partial co-elution of this eluant with the adjacent peak, assignment is based on (i) the presence of characteristics ions, (ii) correspondence of the chromatographic behavior with the chromatographic behavior of the assigned compound, and (iii) the occurrence of other members of this series of compounds in this sample.



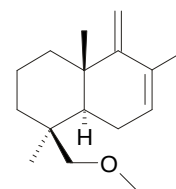
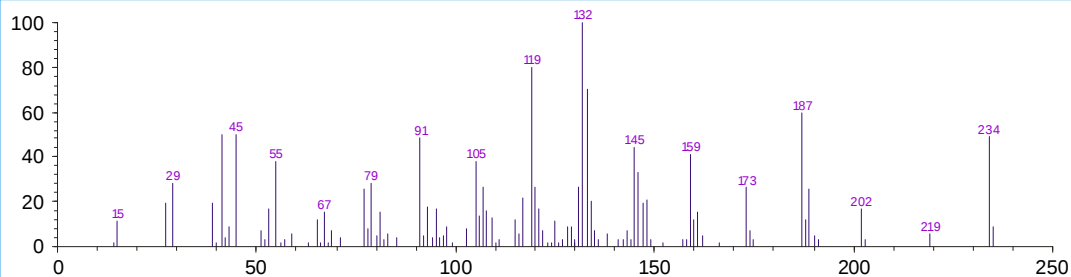
Data set 2, Peak 18

4-Methoxymethyl-4,7,8a-tetramethyl-1,2,3,4,4a,5,6,8a-octahydro-naphthalene (4S,4aR,8aS)



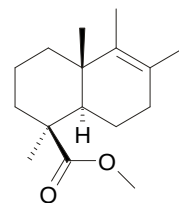
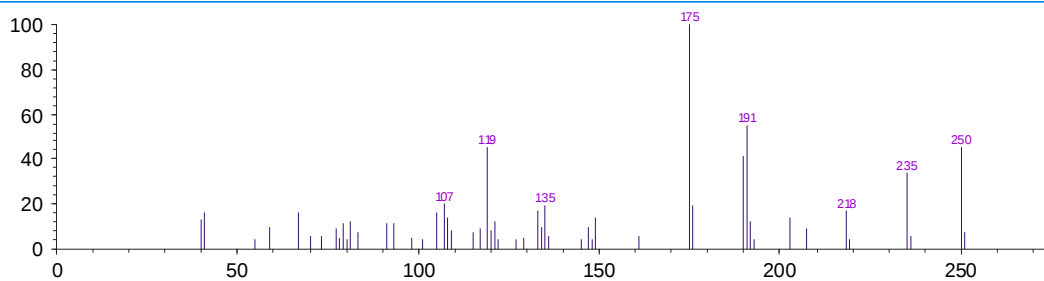
Data set 2, Peak 19

1-Methoxymethyl-1,4a,6-trimethyl-5-methylene-1,2,3,4,4a,5,8,8a-octahydro-naphthalene (1S,4aS,8aR)



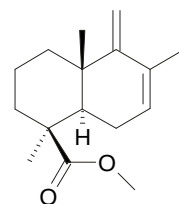
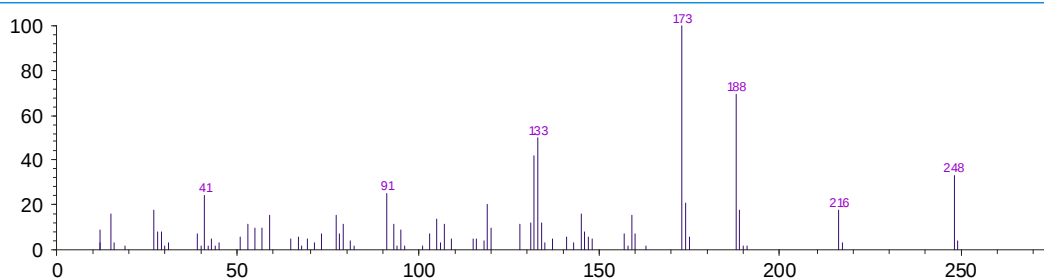
Data set 2, Peak 20

1,4a,5,6-Tetramethyl-1,2,3,4,4a,7,8,8a-octahydro-naphthalene-1-carboxylic acid methyl ester (1S,4aS,8aR)



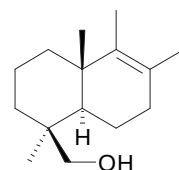
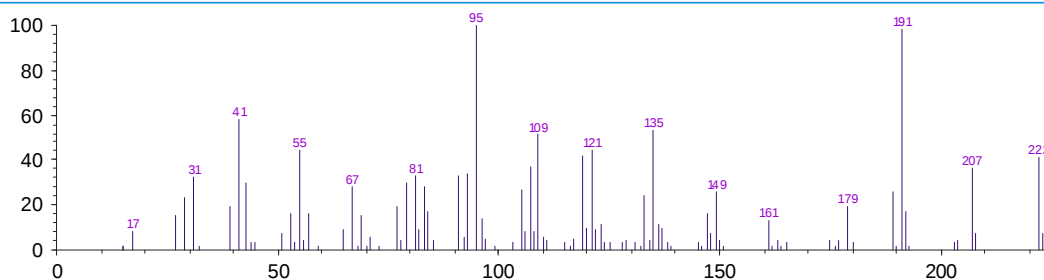
Data set 2, Peak 21

1,4a,6-Trimethyl-5-methylene-1,2,3,4,4a,5,8,8a-octahydro-naphthalene-1-carboxylic acid methyl ester (1S,4aS,8aR)



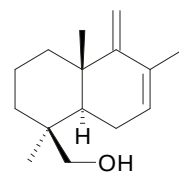
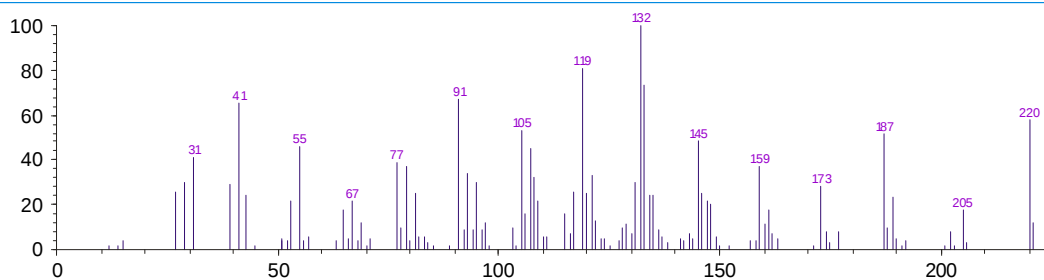
Data set 2, Peak 22

(1,4a,5,6-Tetramethyl-1,2,3,4,4a,7,8,8a-octahydro-naphthalen-1-yl)-methanol (1S,4aS,8aR)



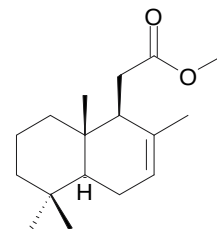
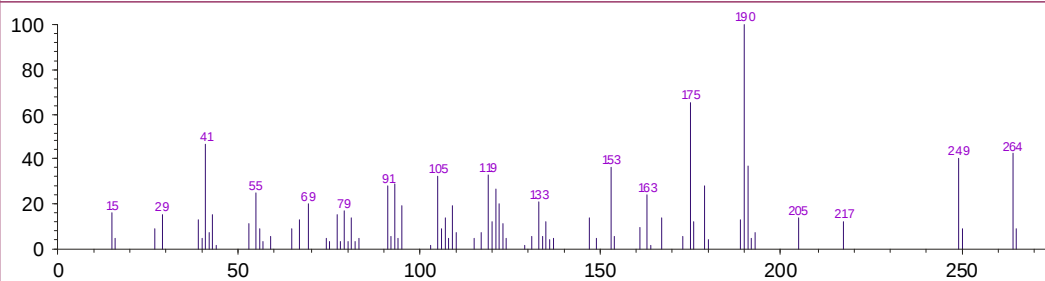
Data set 2, Peak 23

(1,4a,6-Trimethyl-5-methylene-1,2,3,4,4a,5,8,8a-octahydro-naphthalen-1-yl)-methanol (1S,4aS,8aR)



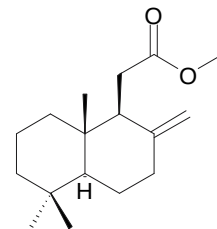
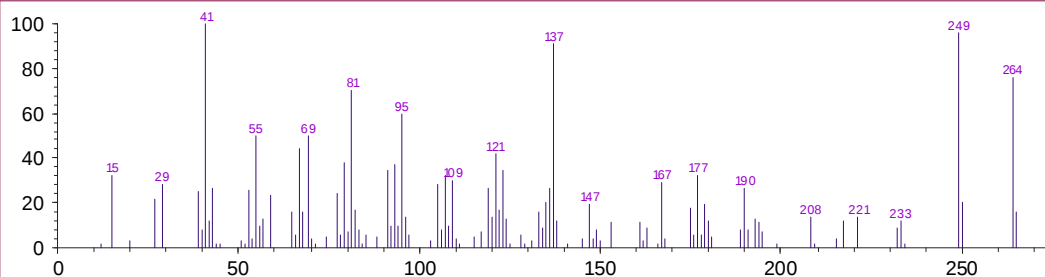
Data set 3, Peak 1

(2,5,5,8a-Tetramethyl-1,4,4a,5,6,7,8,8a-octahydro-naphthalen-1-yl)-acetic acid methyl ester (1S,4aS,8aS)



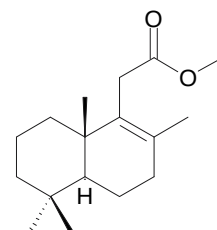
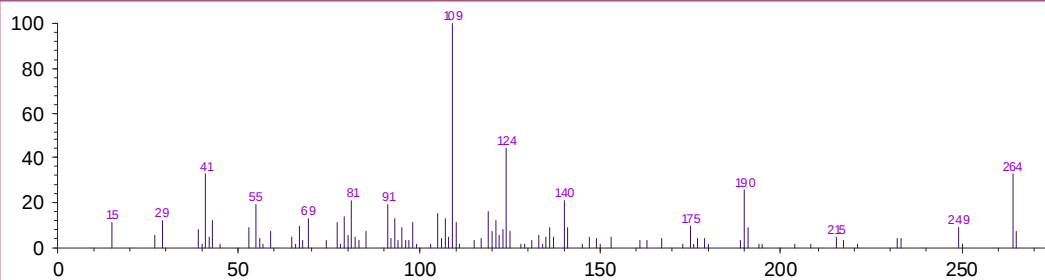
Data set 3, Peak 2

(5,5,8a-Trimethyl-2-methylene-decahydro-naphthalen-1-yl)-acetic acid methyl ester (1S,4aS,8aS)

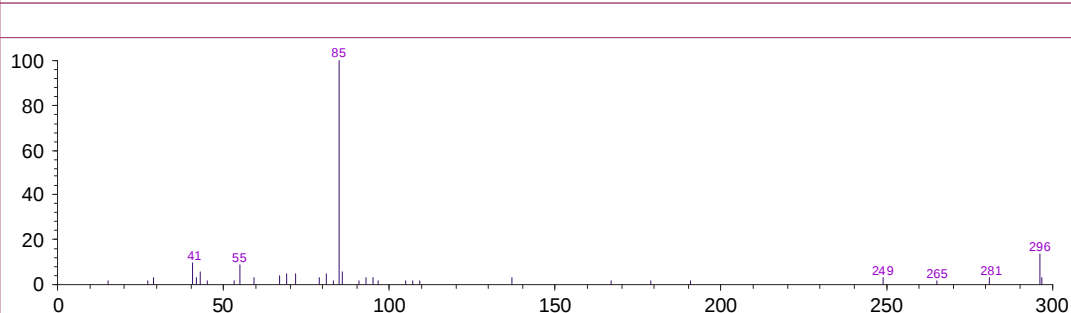


Data set 3, Peak 3

(2,5,5,8a-Tetramethyl-3,4,4a,5,6,7,8,8a-octahydro-naphthalen-1-yl)-acetic acid methyl ester (4aS,8aS)

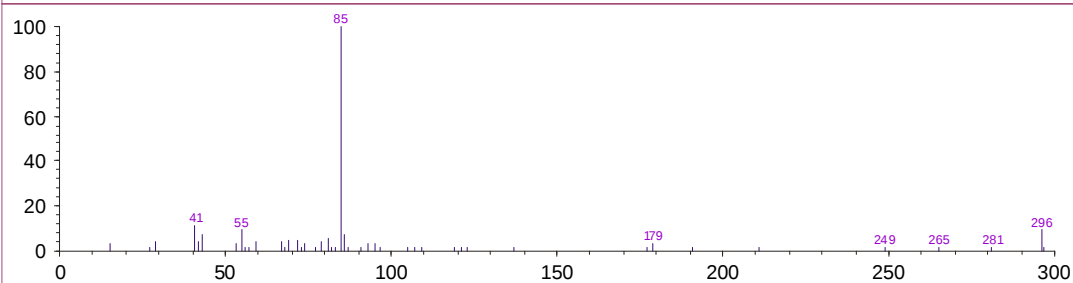


Data set 3, Peak 4



Structure of
this eluant is
Unassigned

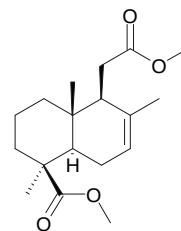
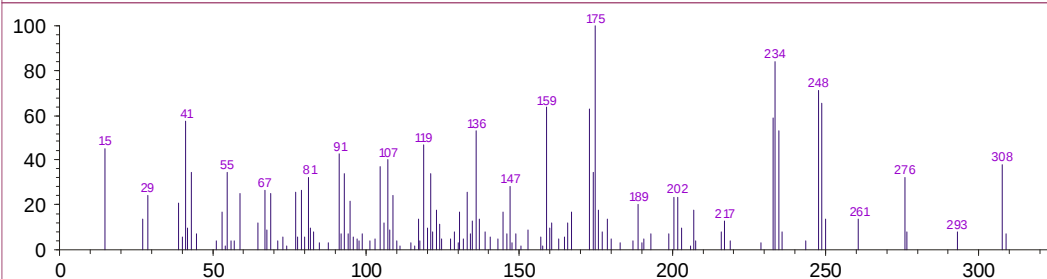
Data set 3, Peak 5



Structure of this eluant is
Unassigned

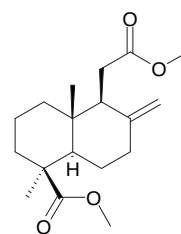
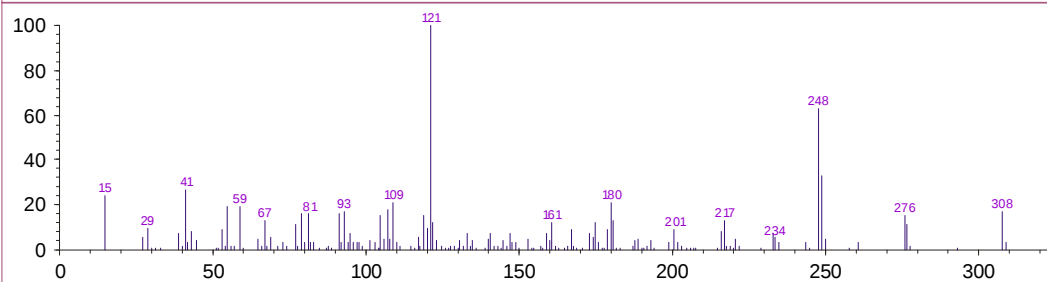
Data set 3, Peak 6

5-Methoxycarbonylmethyl-1,4a-dimethyl-6-methylene-decahydro-naphthalene-1-carboxylic acid methyl ester (1S,4aR,5S,8aR)



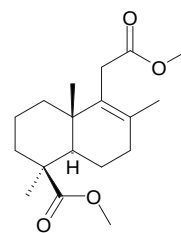
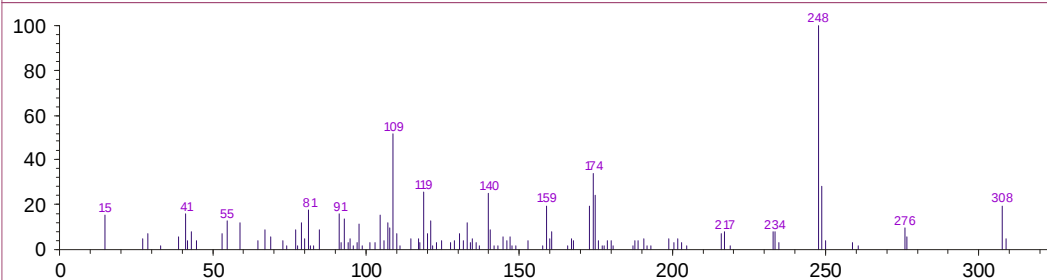
Data set 3, Peak 7

5-Methoxycarbonylmethyl-1,4a,6-trimethyl-1,2,3,4,4a,7,8,8a-octahydro-naphthalene-1-carboxylic acid methyl ester (1S,4aS,8aR)

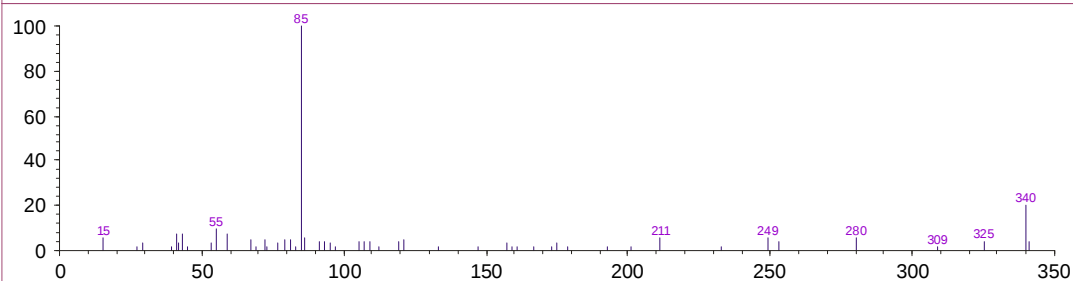


Data set 3, Peak 8

5-Methoxycarbonylmethyl-1,4a,6-trimethyl-1,2,3,4,4a,5,8,8a-octahydro-naphthalene-1-carboxylic acid methyl ester (1S,4aR,5S,8aR)

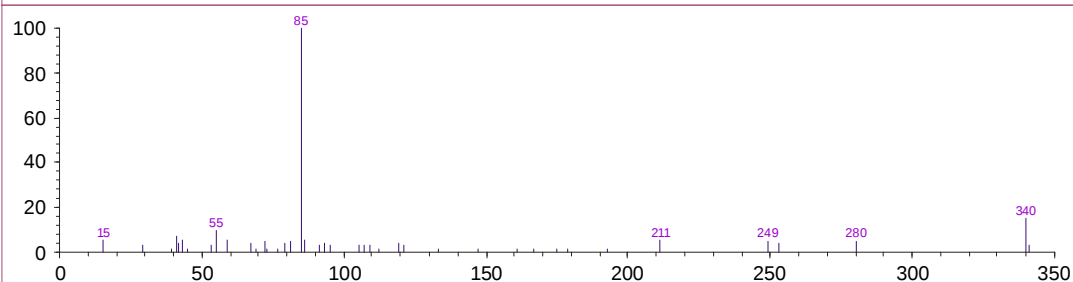


Data set 3, Peak 9



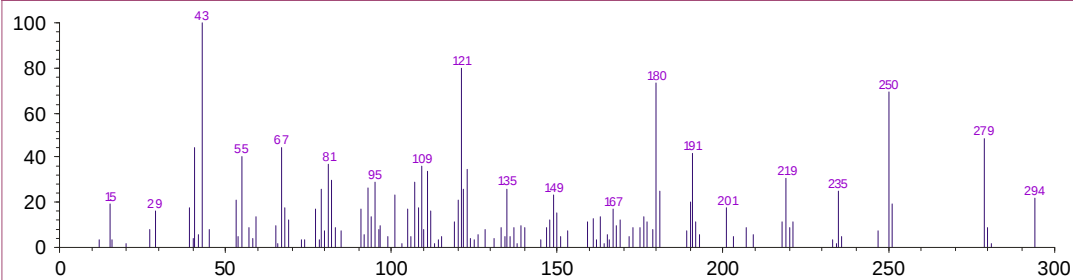
Structure of
this eluant is
Unassigned

Data set 3, Peak 10



Structure of
this eluant is
Unassigned

Data set 3, Peak 11

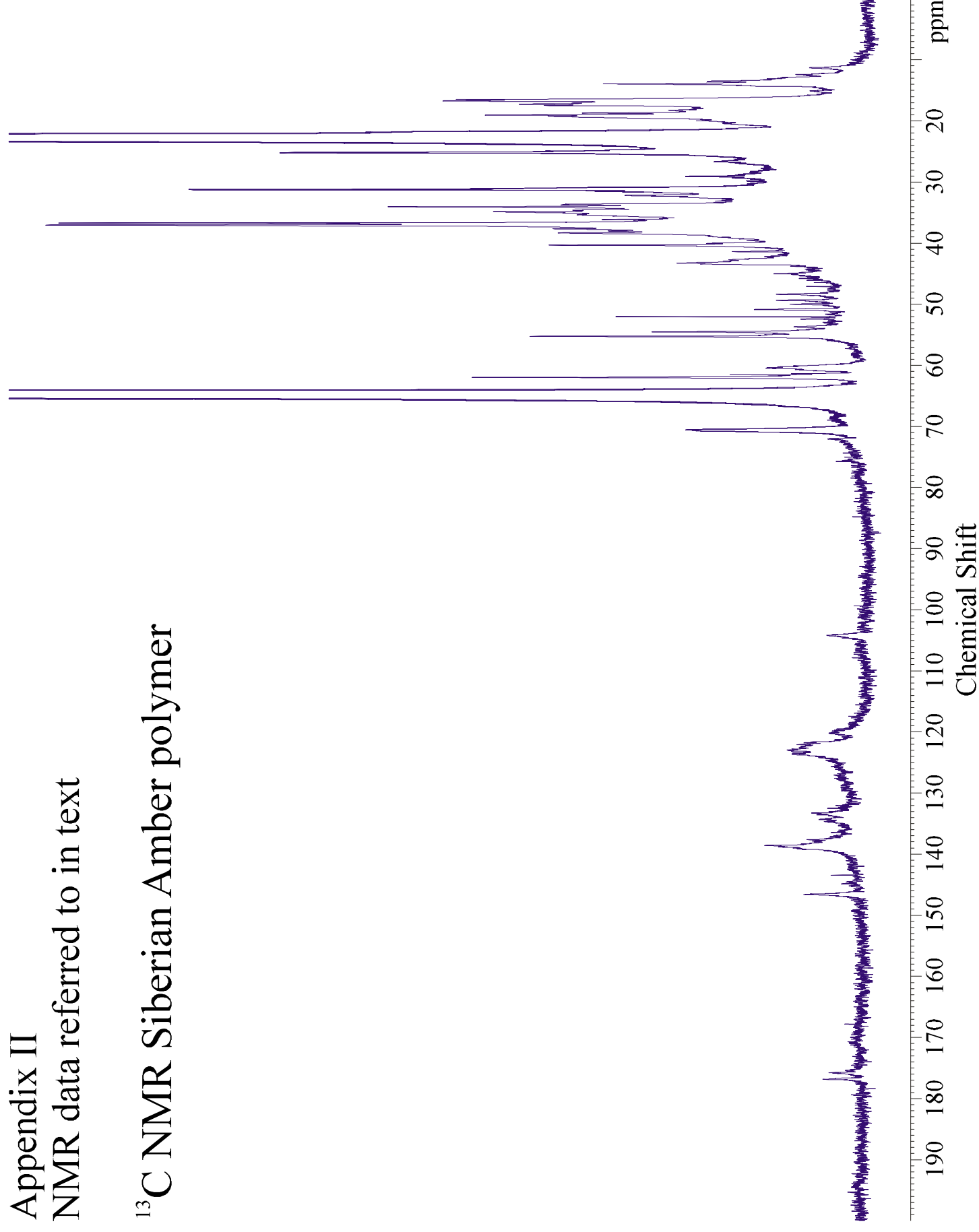


Structure of
this eluant is
Unassigned

Appendix II

^{13}C NMR data referred to in text

^{13}C NMR Siberian Amber polymer



^1H NMR Siberian Amber polymer

