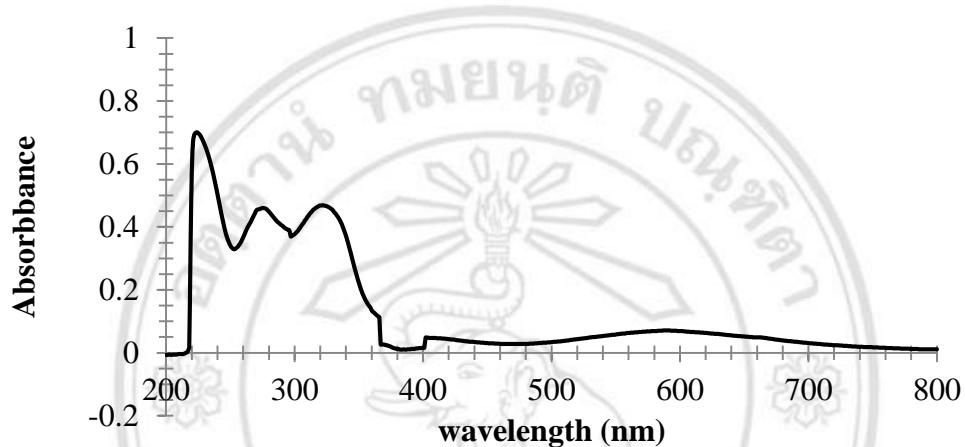
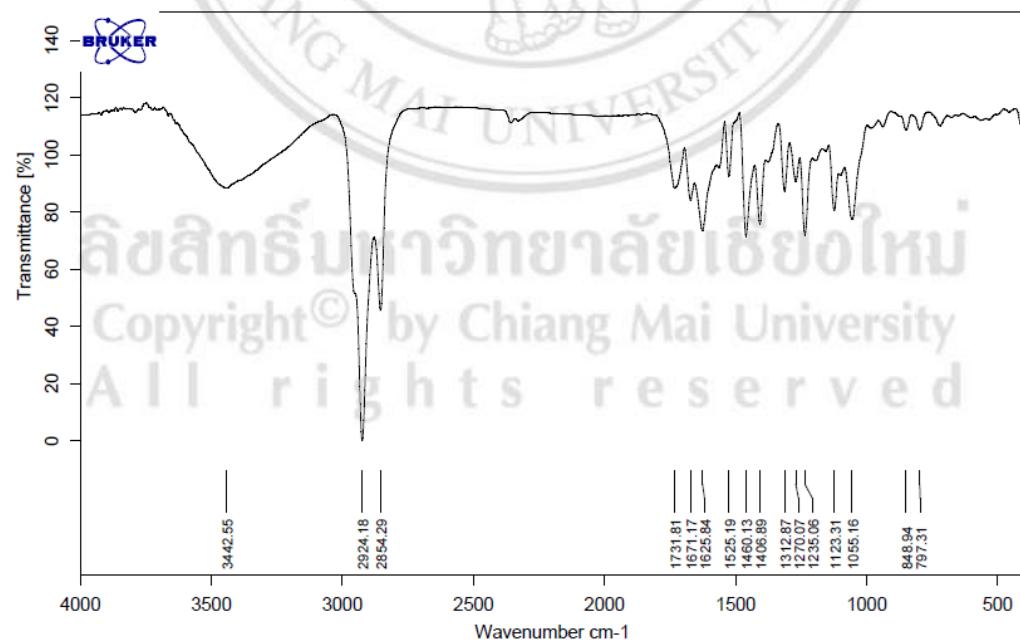


## APPENDIX A

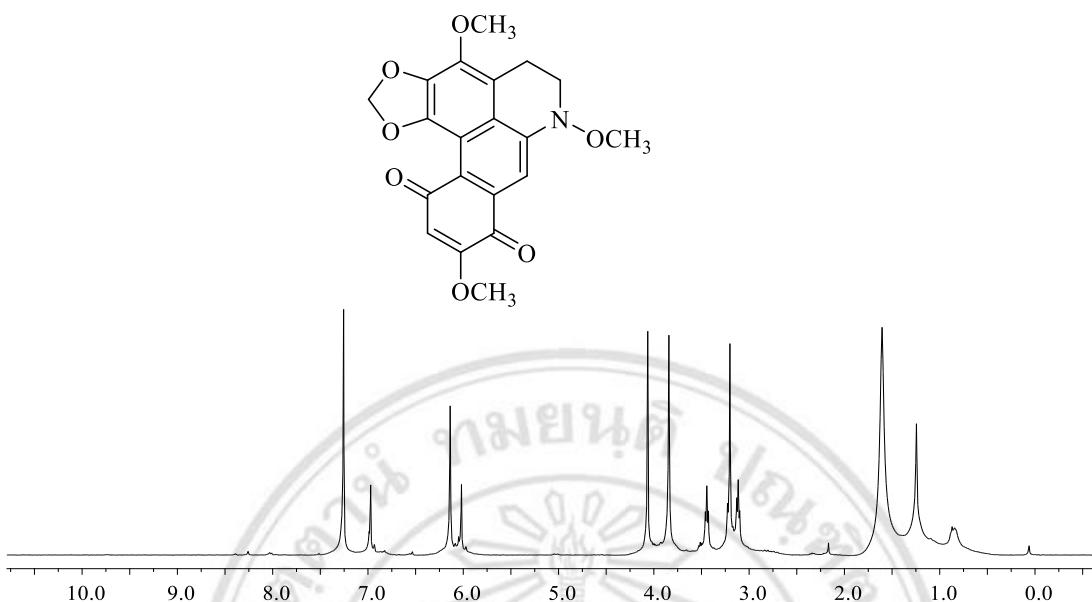
### Spectroscopic Data of Isolated Compounds from *D. yunnanense*



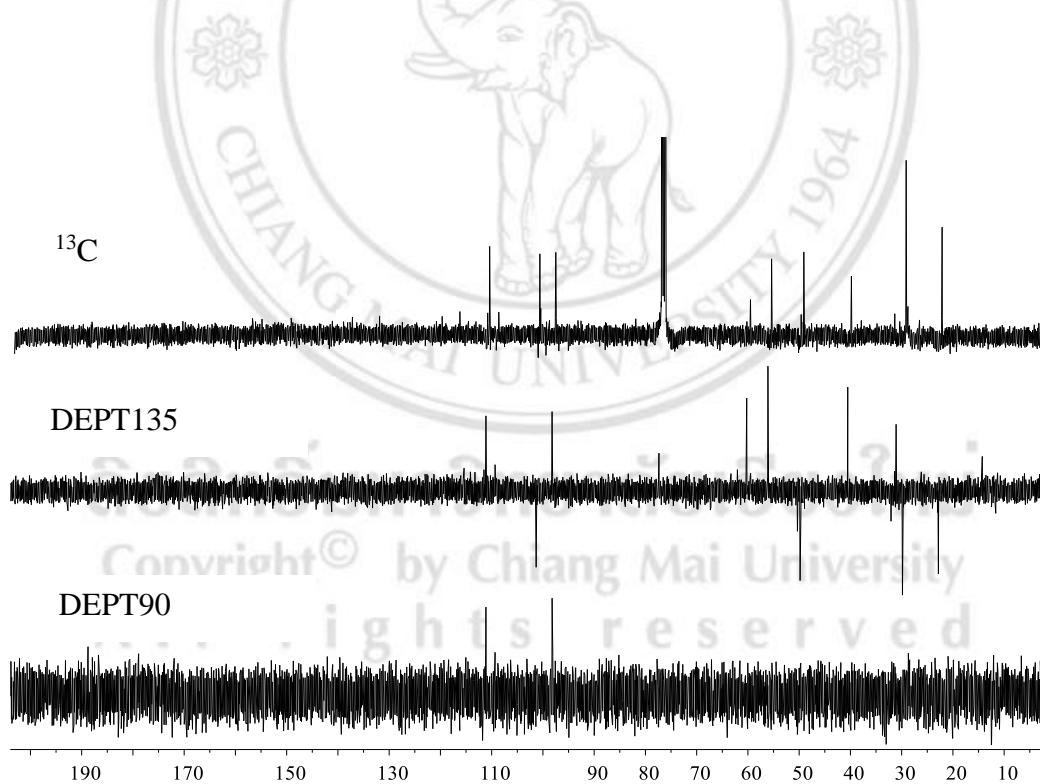
**Figure A1** UV Spectrum of Obtusipetadione (**DY1**)



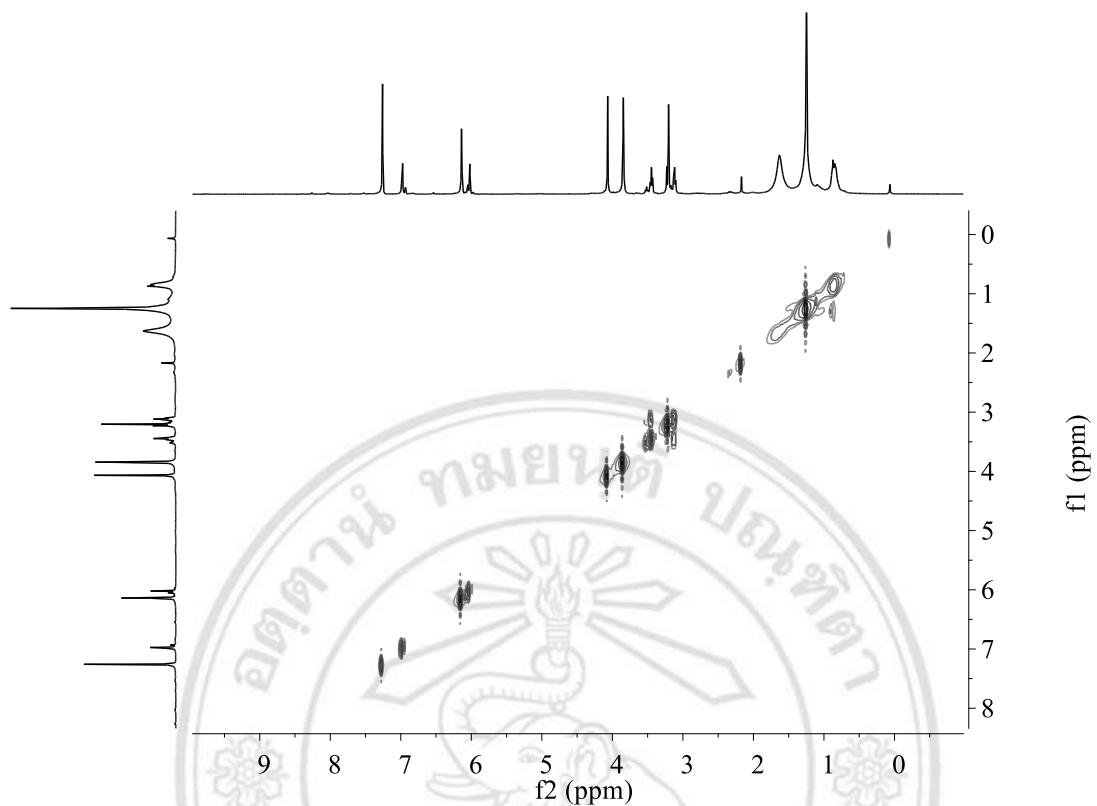
**Figure A2** IR Spectrum of Obtusipetadione (**DY1**)



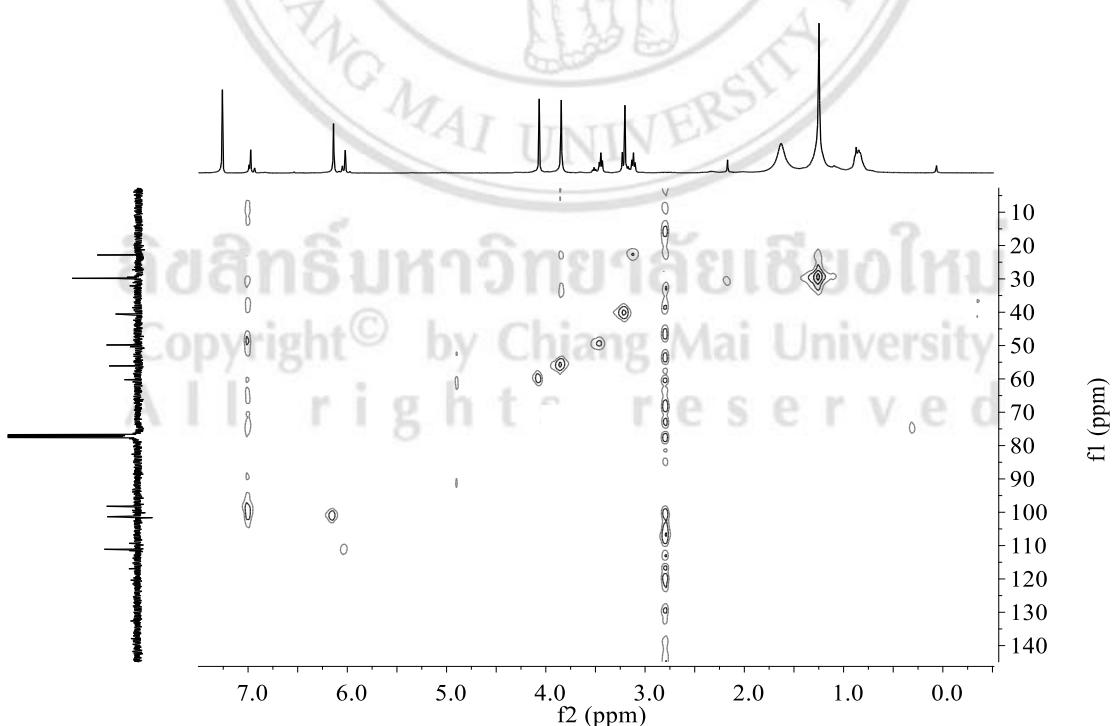
**Figure A3**  $^1\text{H}$  NMR Spectrum ( $\text{CDCl}_3$ , 400 MHz) of Obtusipetadione (**DY1**)



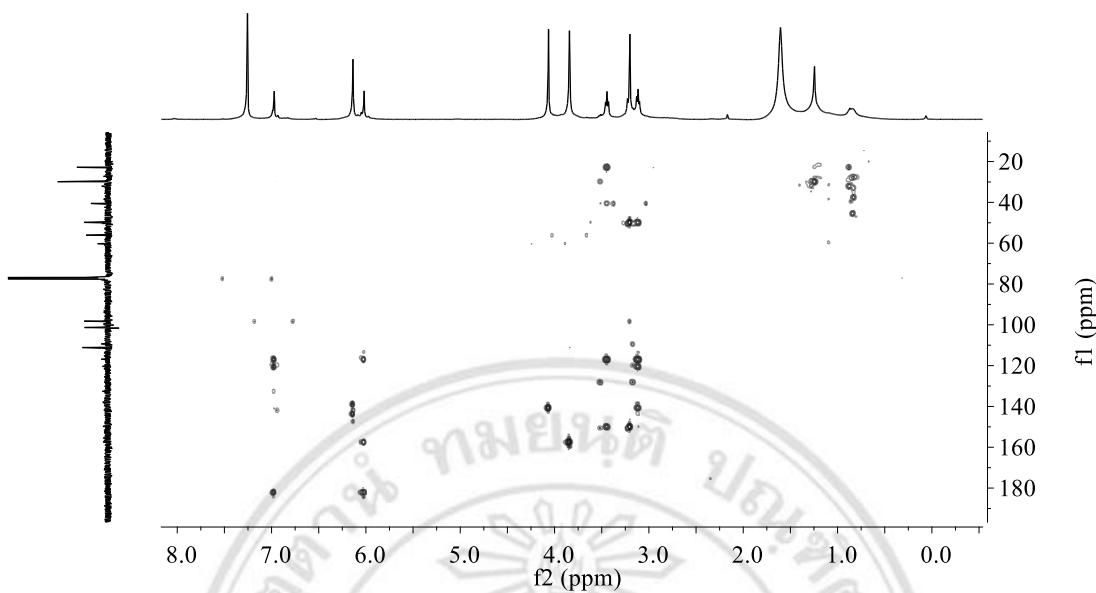
**Figure A4**  $^{13}\text{C}$  NMR, DEPT135 and DEPT90 Spectra ( $\text{CDCl}_3$ , 100 MHz) of Obtusipetadione (**DY1**)



**Figure A5** COSY Spectrum of Obtusipetadione (**DY1**) in  $\text{CDCl}_3$



**Figure A6** HMQC Spectrum of Obtusipetadione (**DY1**) in  $\text{CDCl}_3$



**Figure A7** HMBC Spectrum of Obtusipetadione (**DY1**) in  $\text{CDCl}_3$

**Elemental Composition Report**

**Page 1**

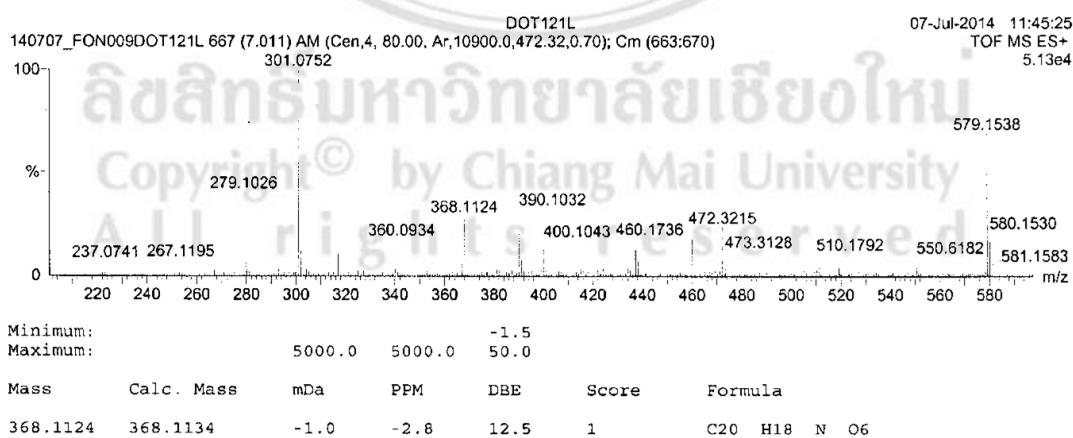
**Single Mass Analysis**

Tolerance = 5000.0 PPM / DBE: min = -1.5, max = 50.0

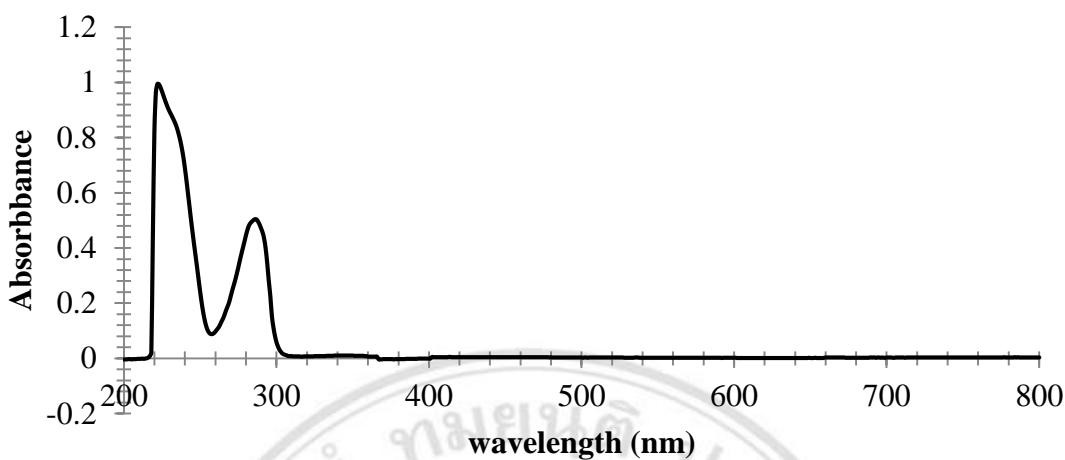
Isotope cluster parameters: Separation = 1.0 Abundance = 1.0%

Monoisotopic Mass, Odd and Even Electron Ions

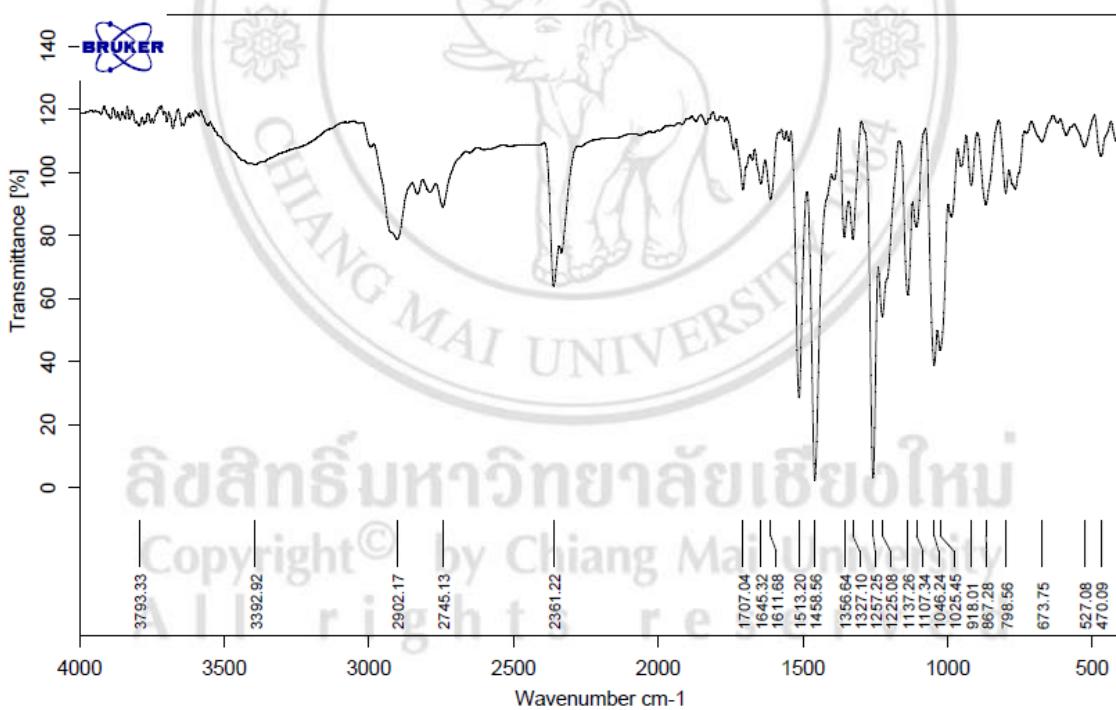
1 formula(e) evaluated with 1 results within limits (up to 50 closest results for each mass)



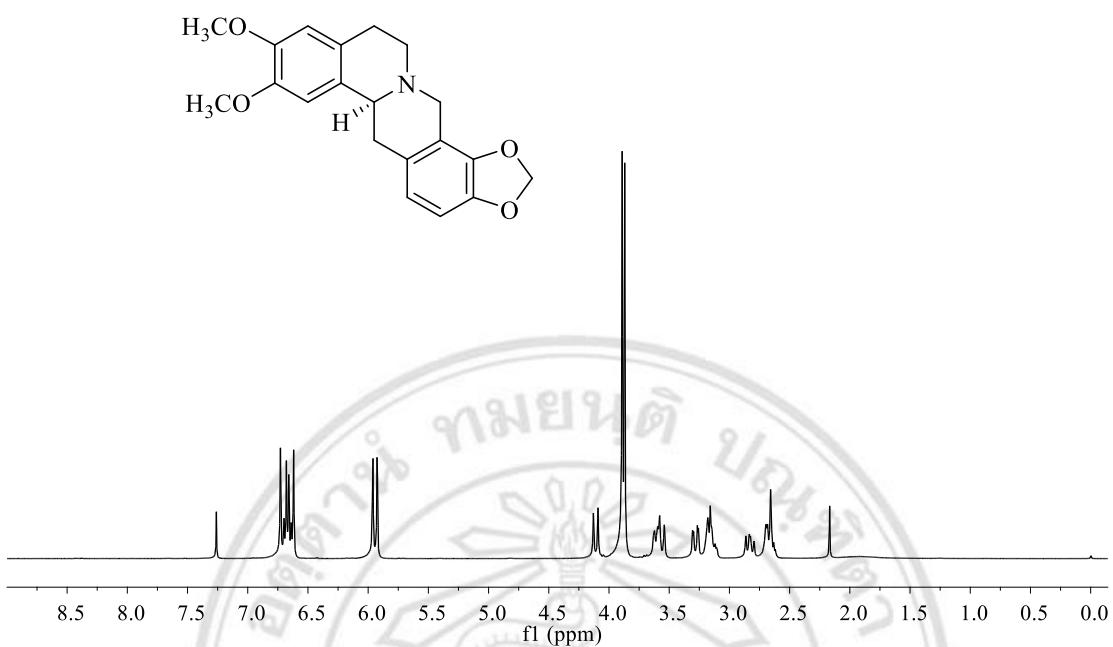
**Figure A8** HRESIMS Spectrum of Obtusipetadione (**DY1**)



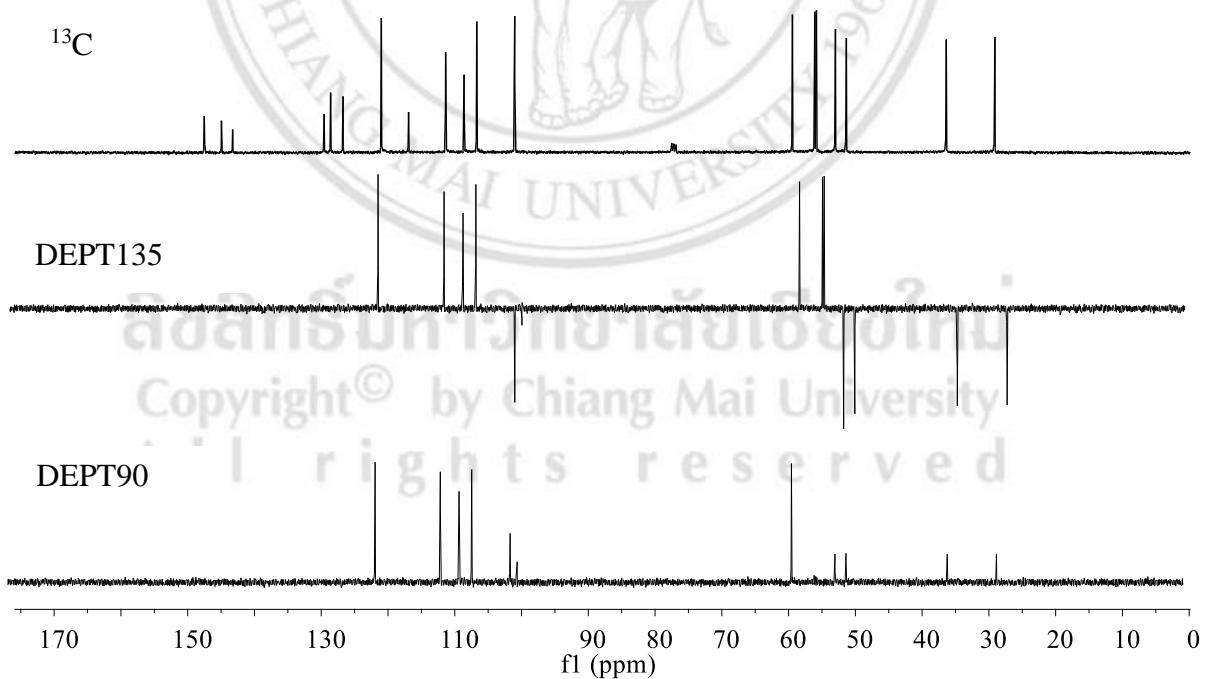
**Figure A9** UV Spectrum of (-)-Sinactine (**DY2**)



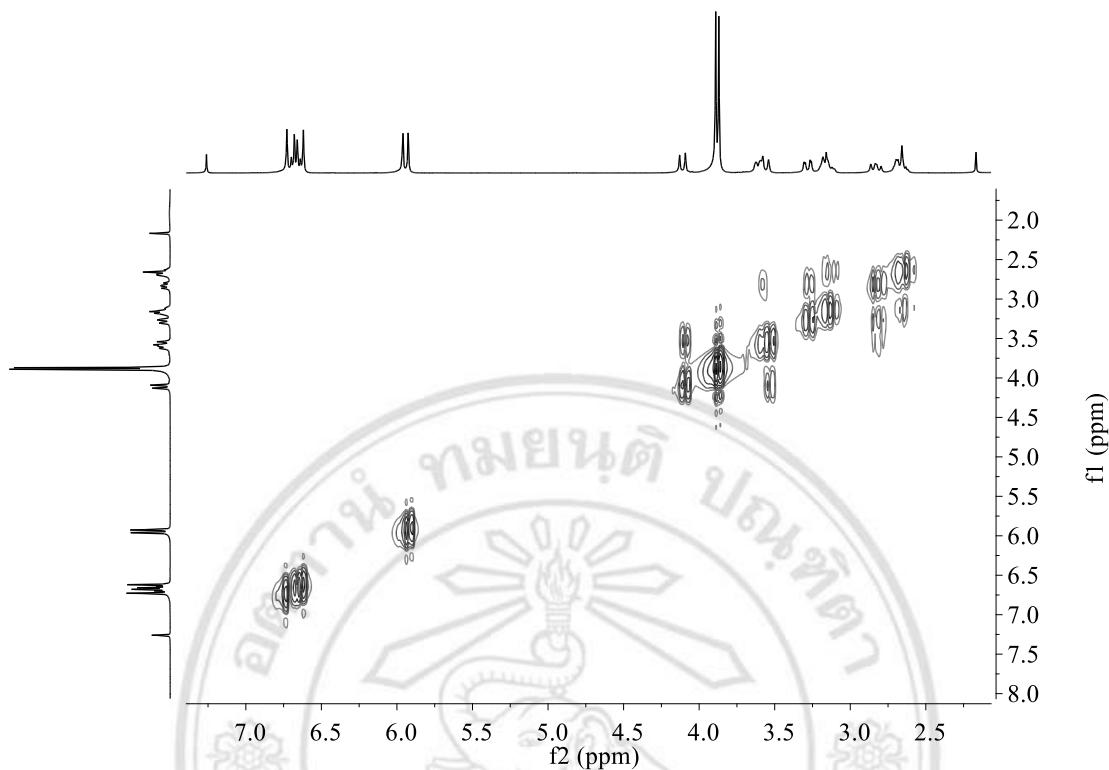
**Figure A10** IR Spectrum of (-)-Sinactine (**DY2**)



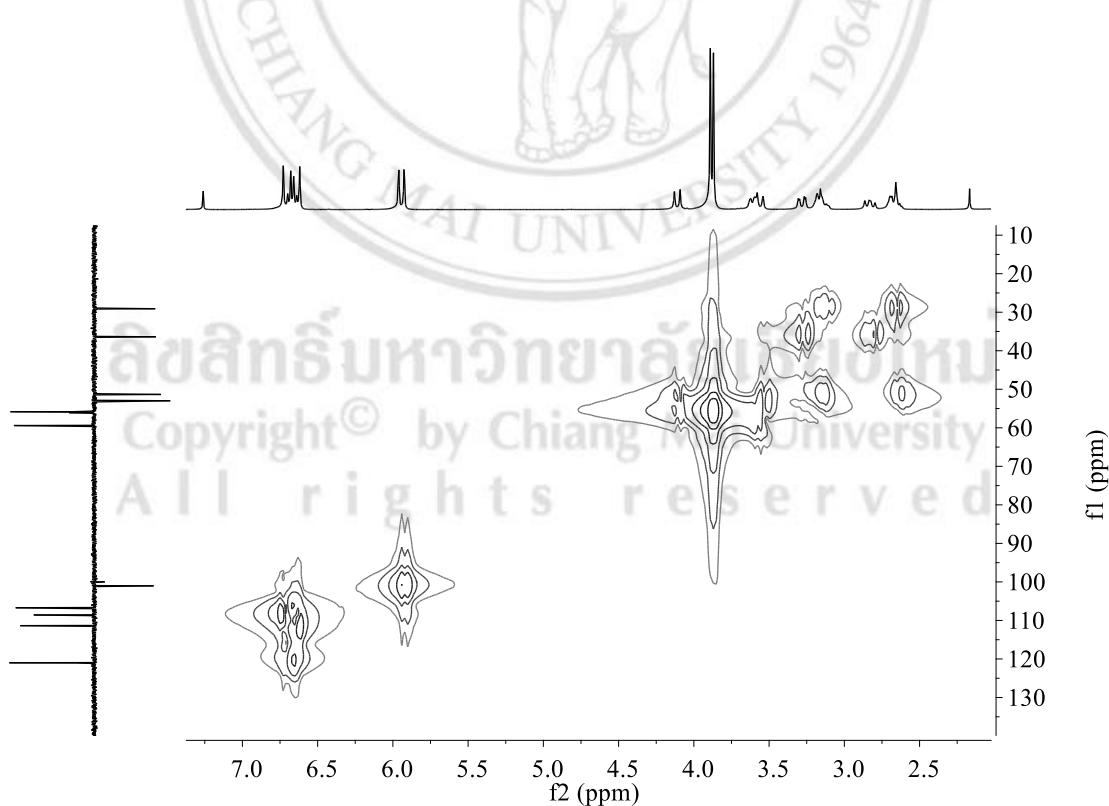
**Figure A11**  $^1\text{H}$  NMR Spectrum ( $\text{CDCl}_3$ , 400 MHz) of ( $-$ )-Sinactine (**DY2**)



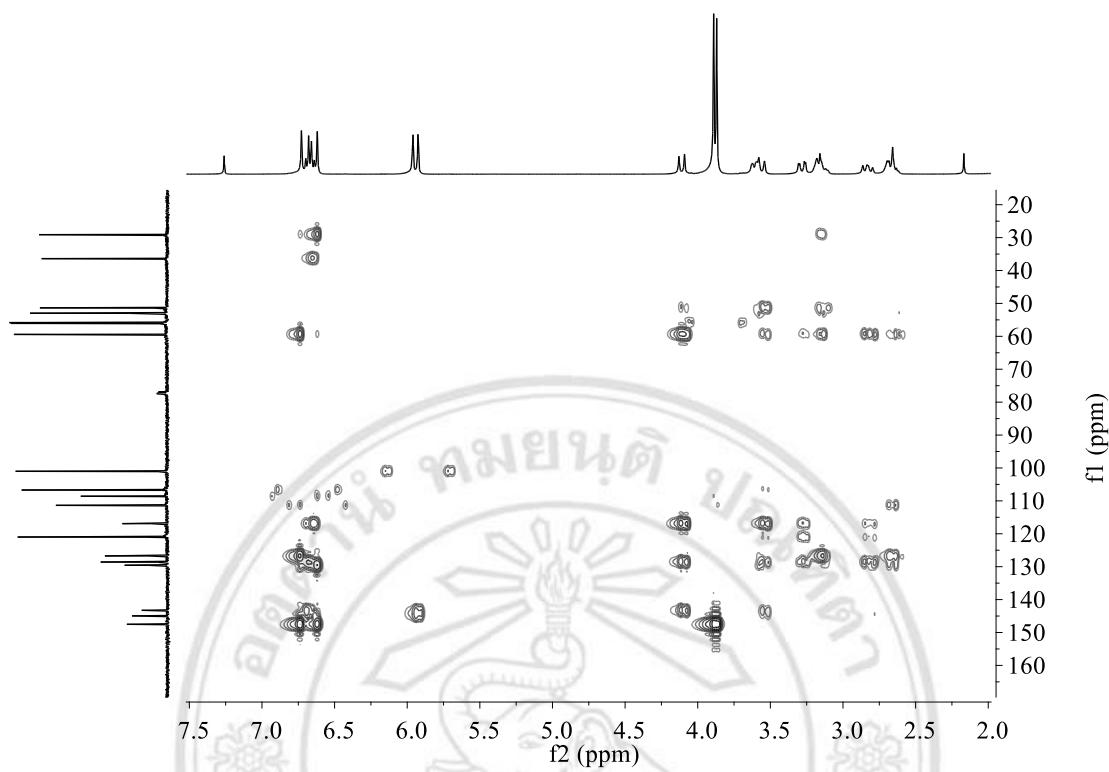
**Figure A12**  $^{13}\text{C}$  NMR, DEPT135 and DEPT90 Spectra ( $\text{CDCl}_3$ , 100 MHz) of ( $-$ )-Sinactine (**DY2**)



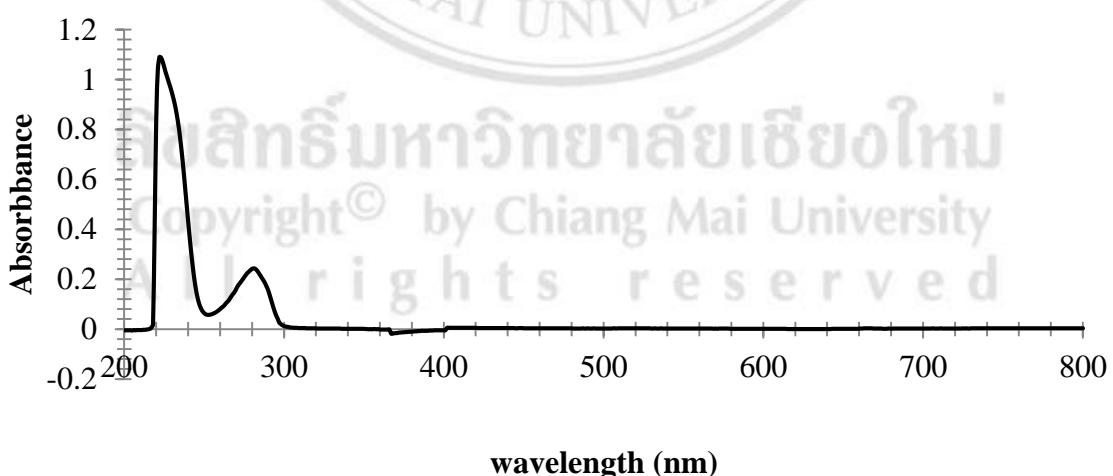
**Figure A13** COSY Spectrum of (-)-Sinactine (DY2) in  $\text{CDCl}_3$



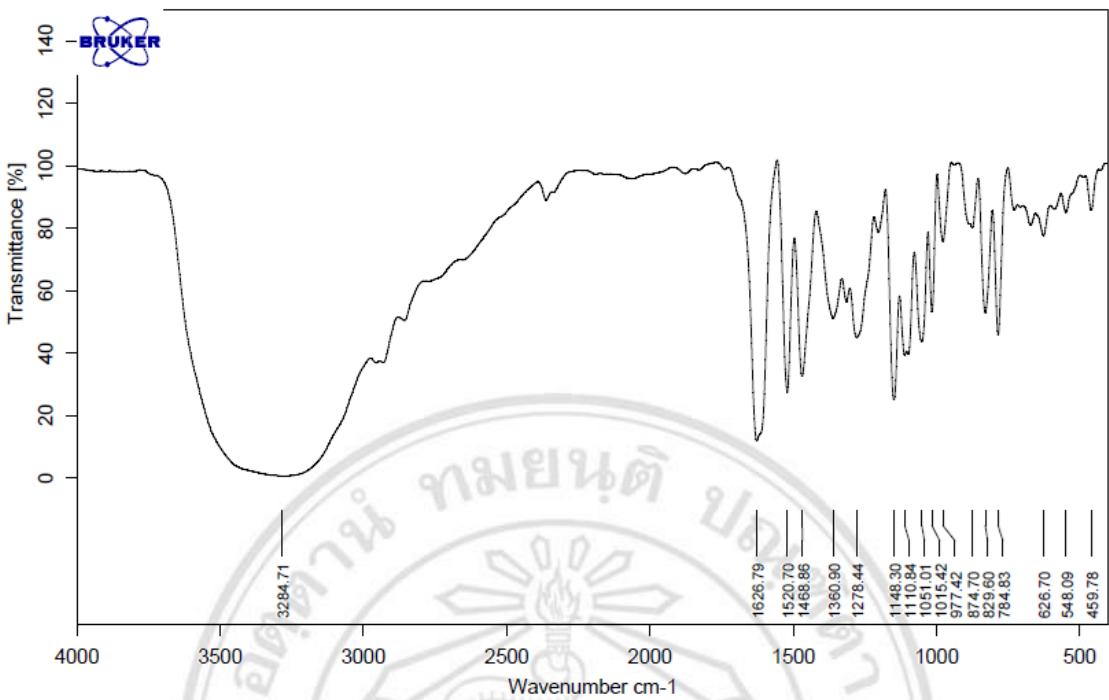
**Figure A14** HMQC Spectrum of (-)-Sinactine (DY2) in  $\text{CDCl}_3$



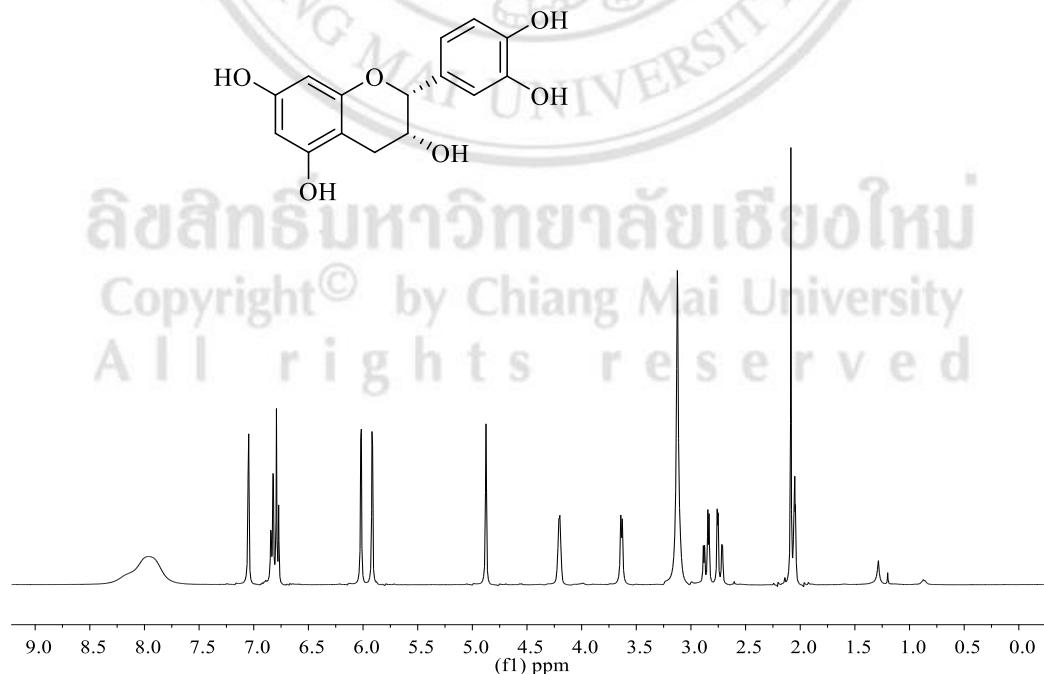
**Figure A15** HMBC Spectrum of (*-*)-Sinactine (**DY2**) in  $\text{CDCl}_3$



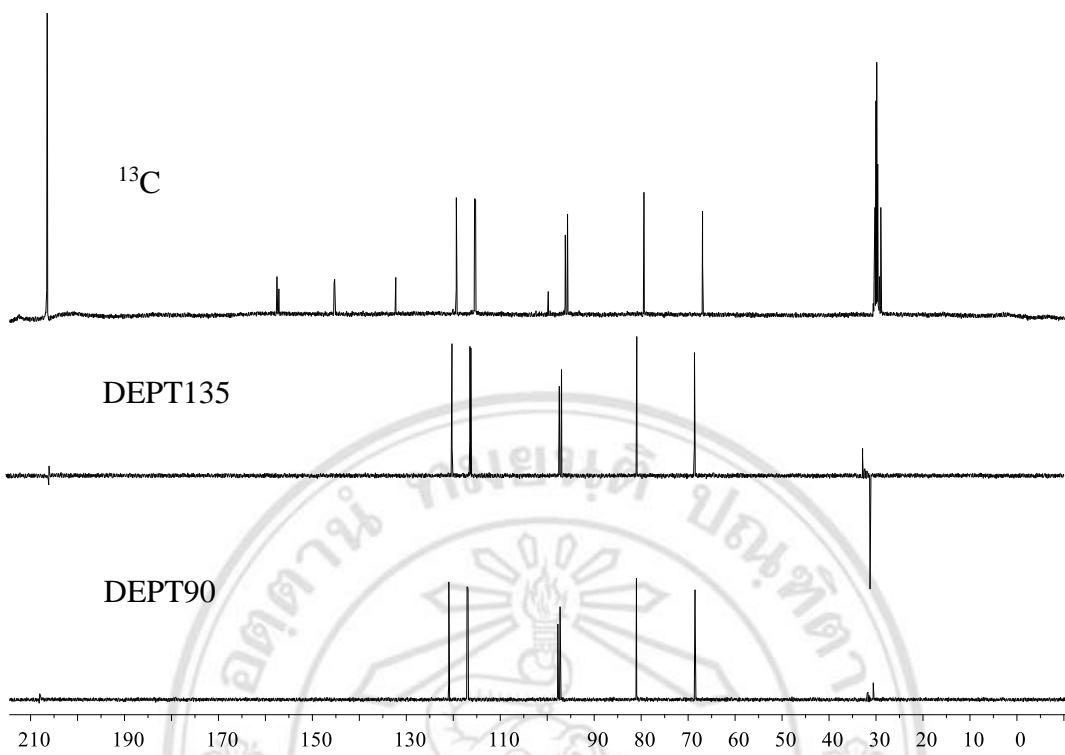
**Figure A16** UV Spectrum of (*-*)-Epicatechin (**DY3**)



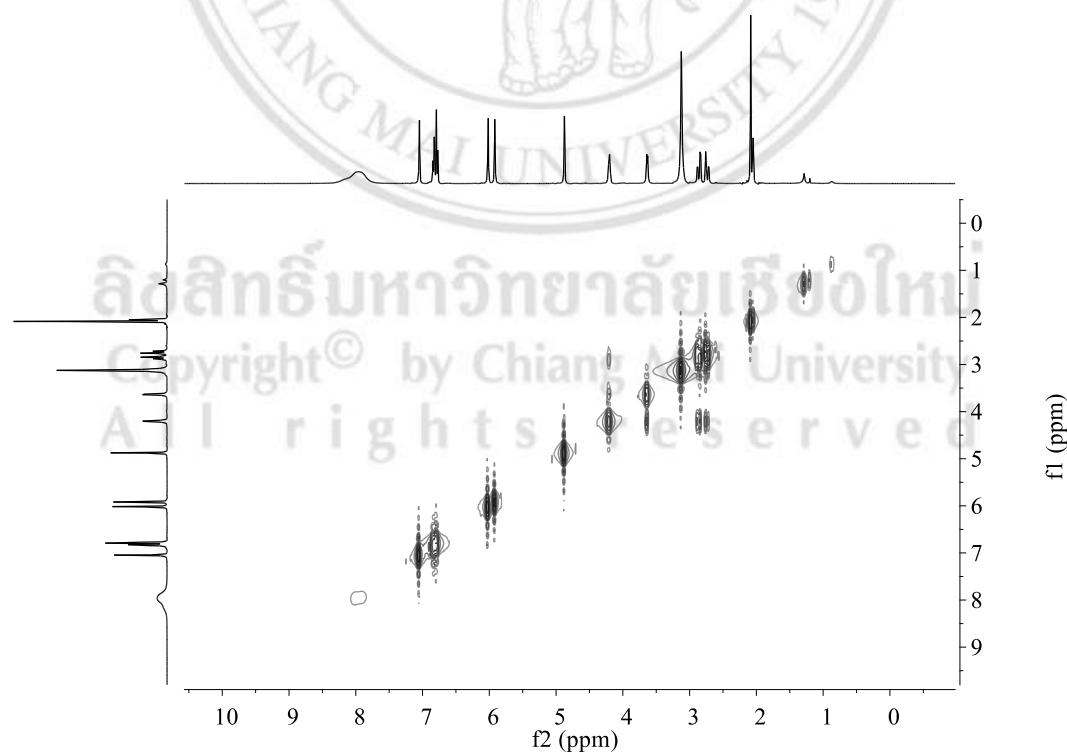
**Figure A17** IR Spectrum of ( $-$ )-Epicatechin (**DY3**)



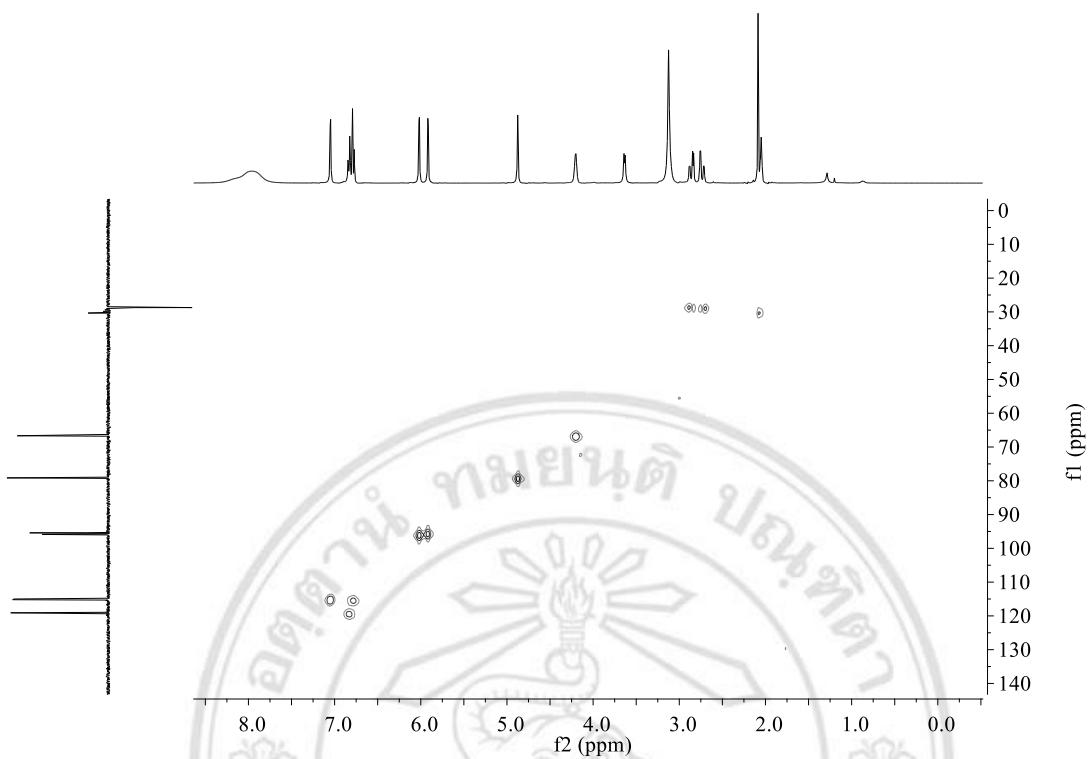
**Figure A18**  $^1\text{H}$  NMR Spectrum (acetone- $d_6$ , 400 MHz) of ( $-$ )-Epicatechin (**DY3**)



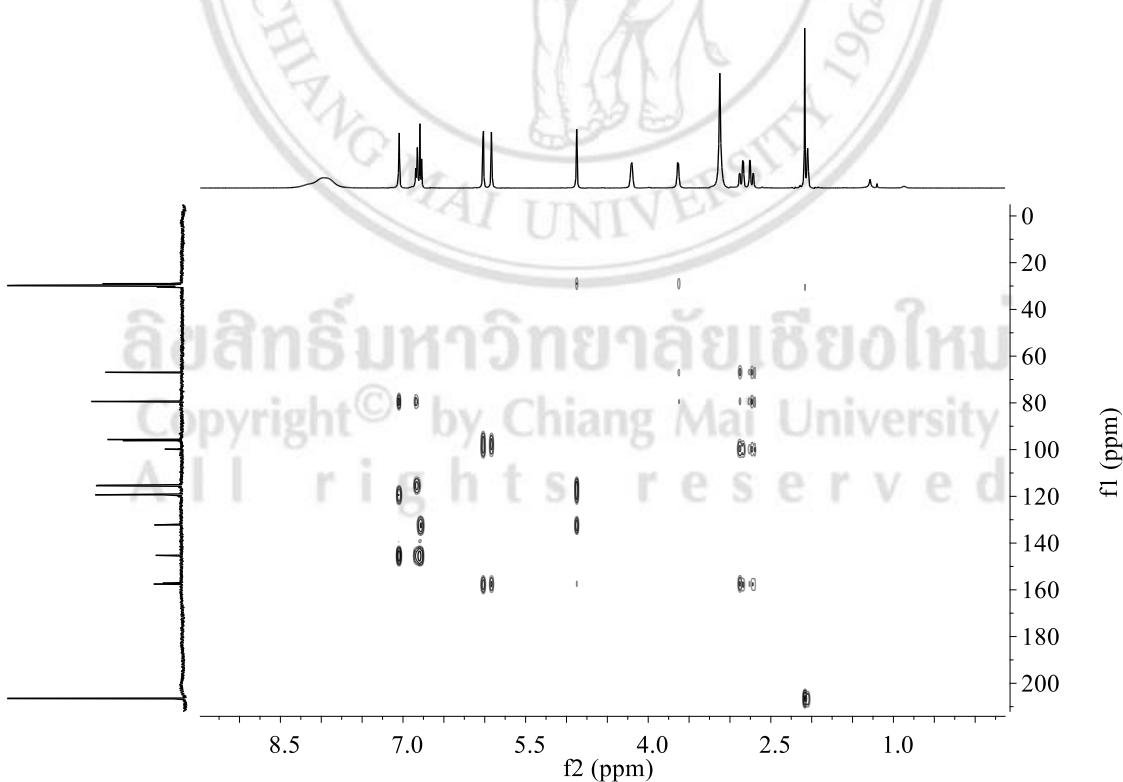
**Figure A19**  $^{13}\text{C}$  NMR, DEPT135 and DEPT90 Spectra (acetone- $d_6$ , 100 MHz) of (-)-Epicatechin (**DY3**)



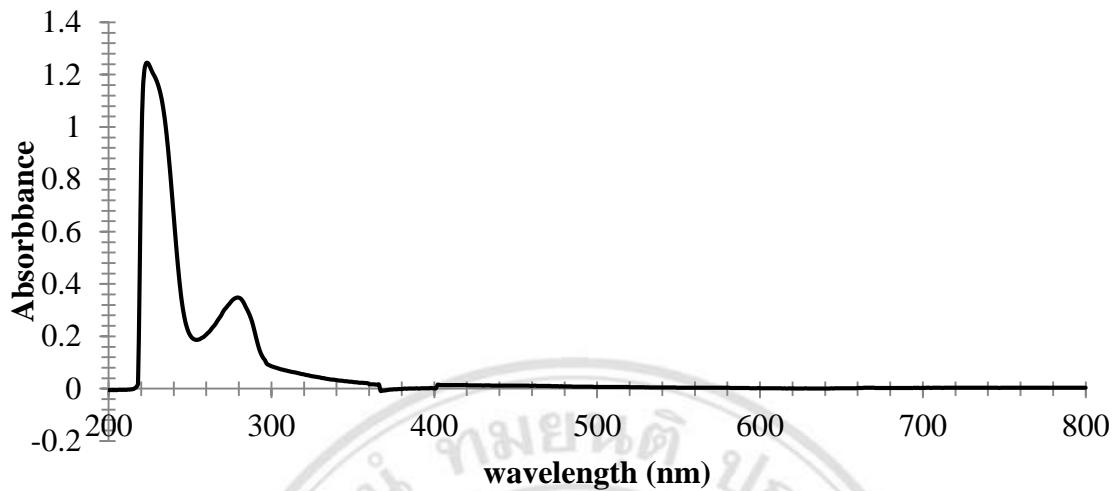
**Figure A20** COSY Spectrum of (-)-Epicatechin (**DY3**) in acetone- $d_6$



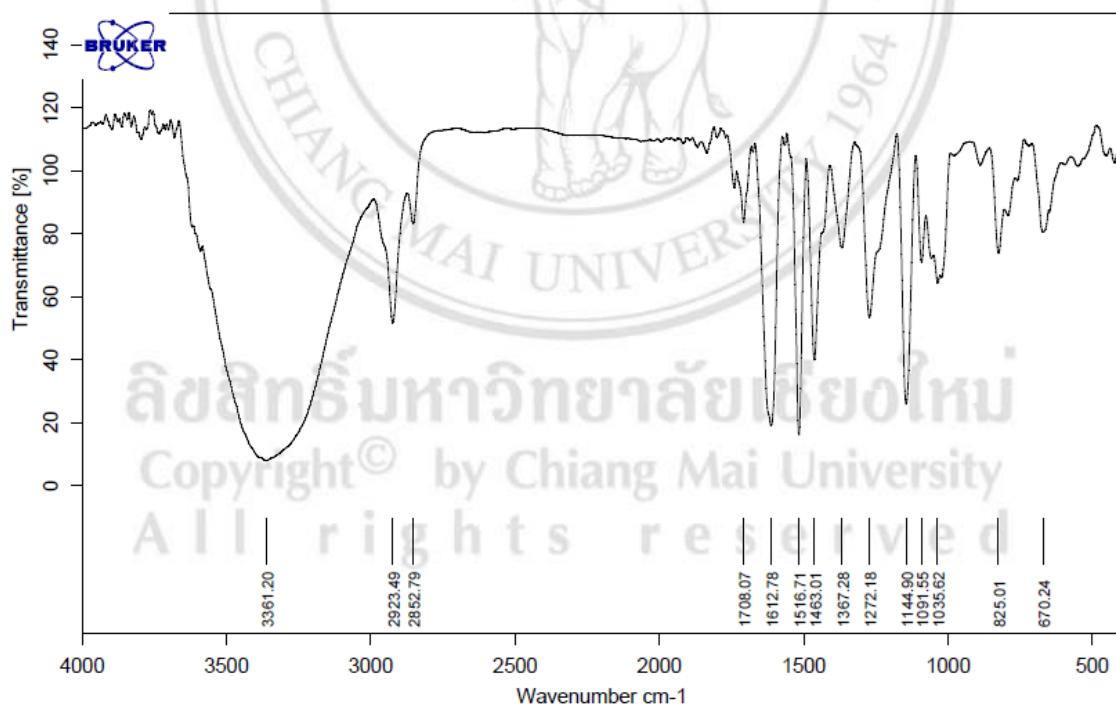
**Figure A21** HMQC Spectrum of (*-*)-Epicatechin (**DY3**) in acetone-*d*<sub>6</sub>



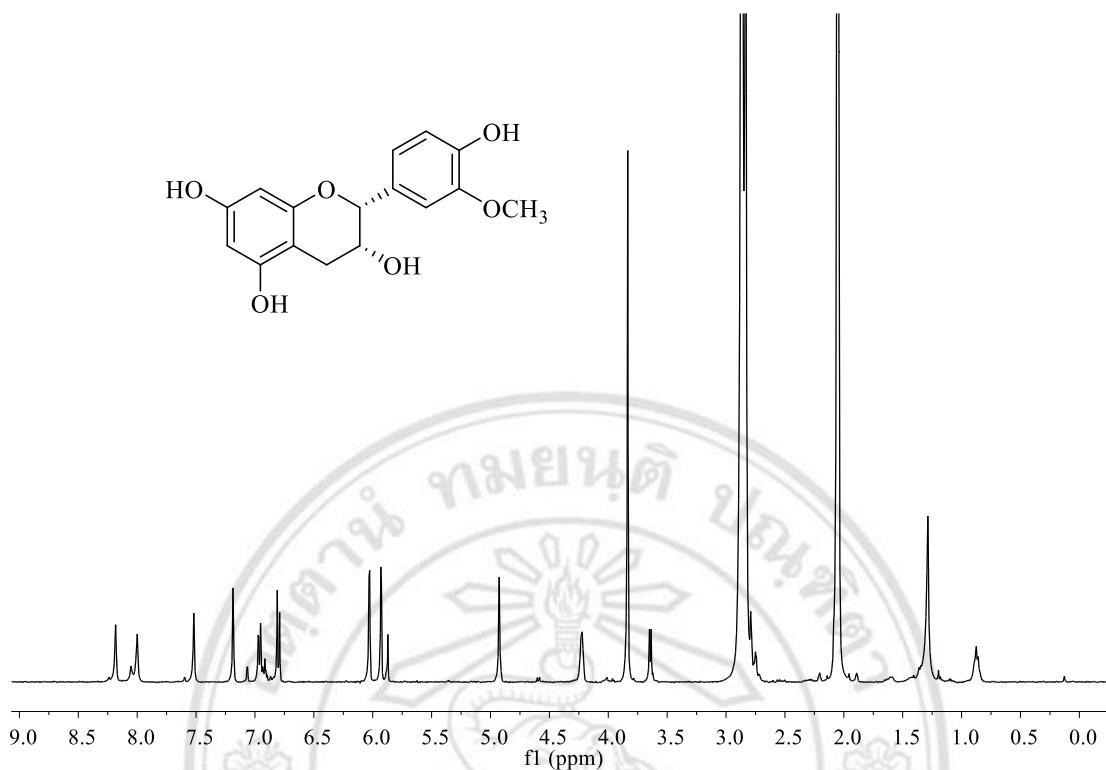
**Figure A22** HMBC Spectrum of (*-*)-Epicatechin (**DY3**) in acetone-*d*<sub>6</sub>



**Figure A23** UV Spectrum of 3'-*O*-Methyl-(−)-epicatechin (**DY4**)

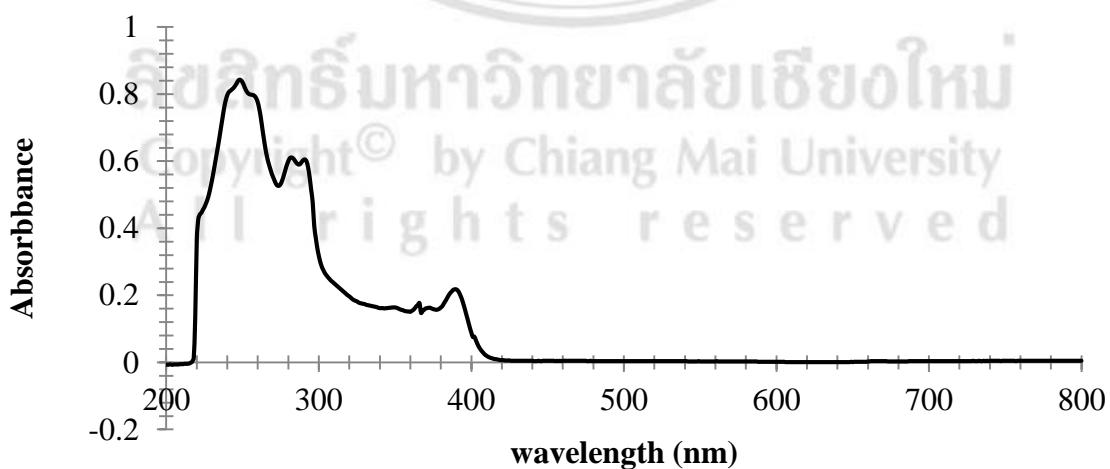


**Figure A24** IR Spectrum of 3'-*O*-Methyl-(−)-epicatechin (**DY4**)

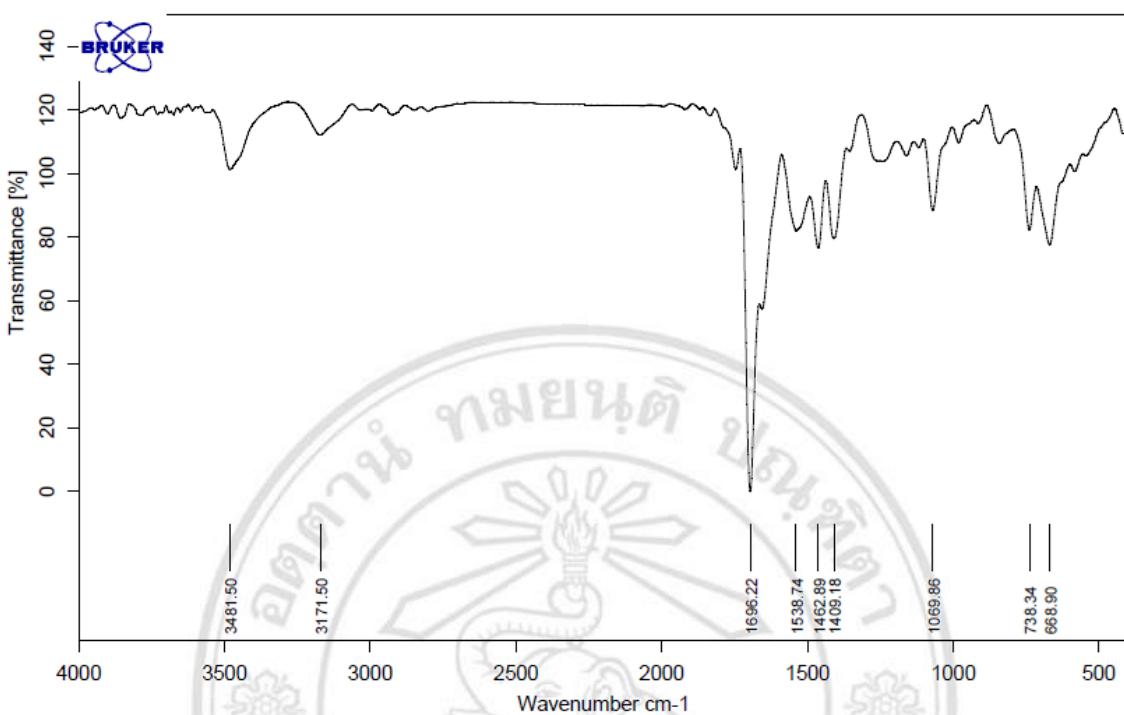


**Figure A25**  $^1\text{H}$  NMR Spectrum (acetone- $d_6$ , 400 MHz) of 3'-*O*-Methyl-(-)-epicatechin

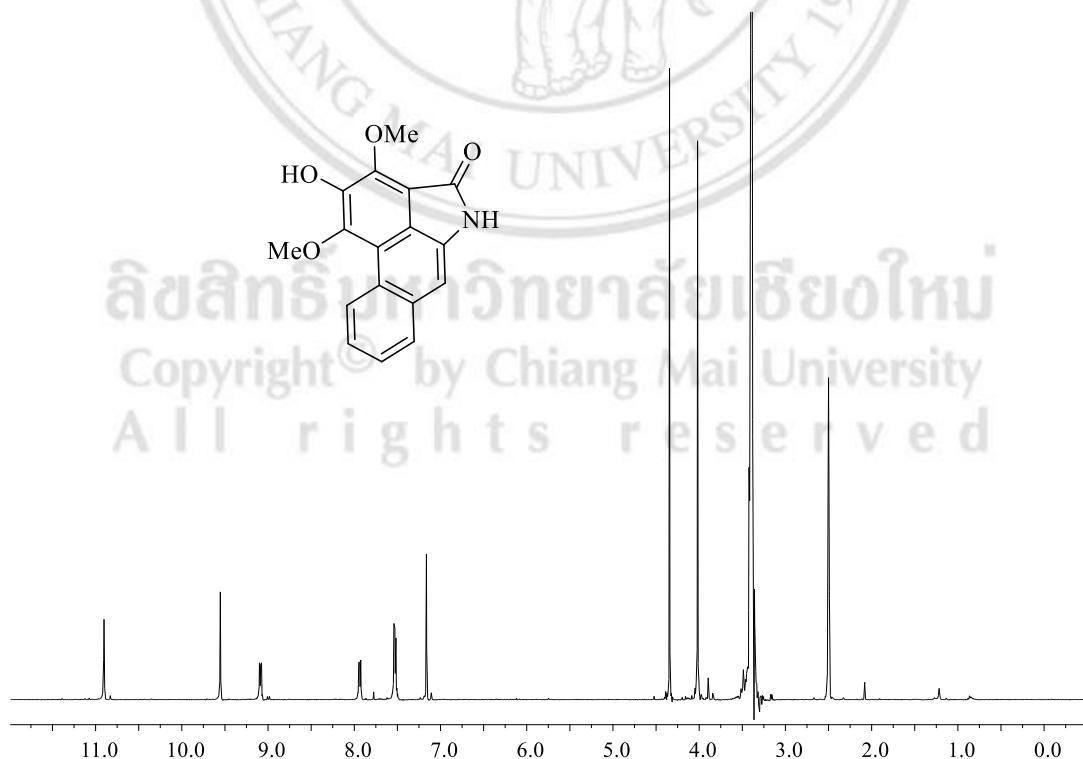
(DY4)



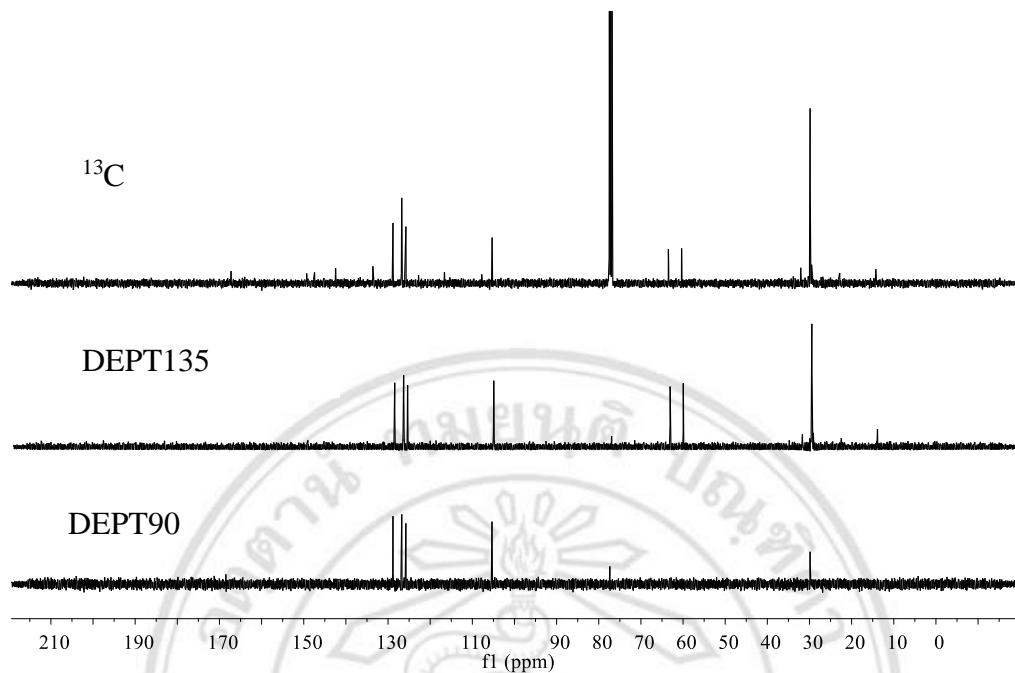
**Figure A26** UV Spectrum of Goniopedaline (DY5)



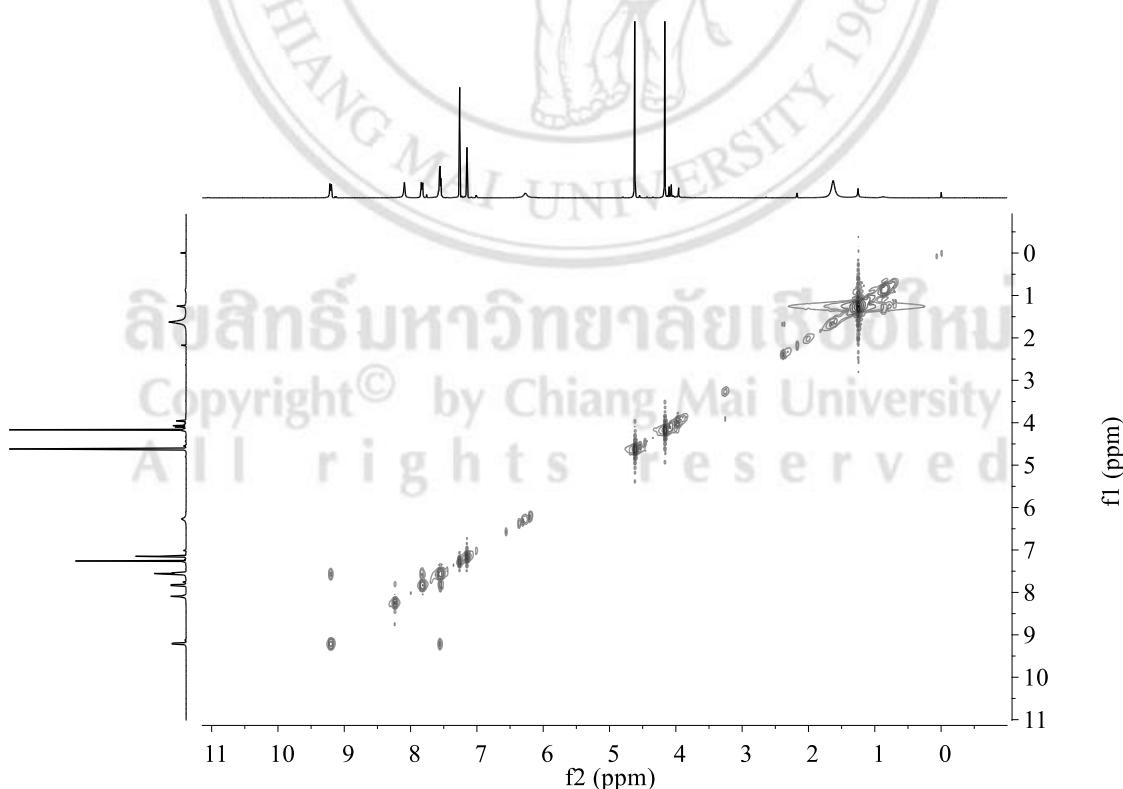
**Figure A27** IR Spectrum of Goniopedaline (**DY5**)



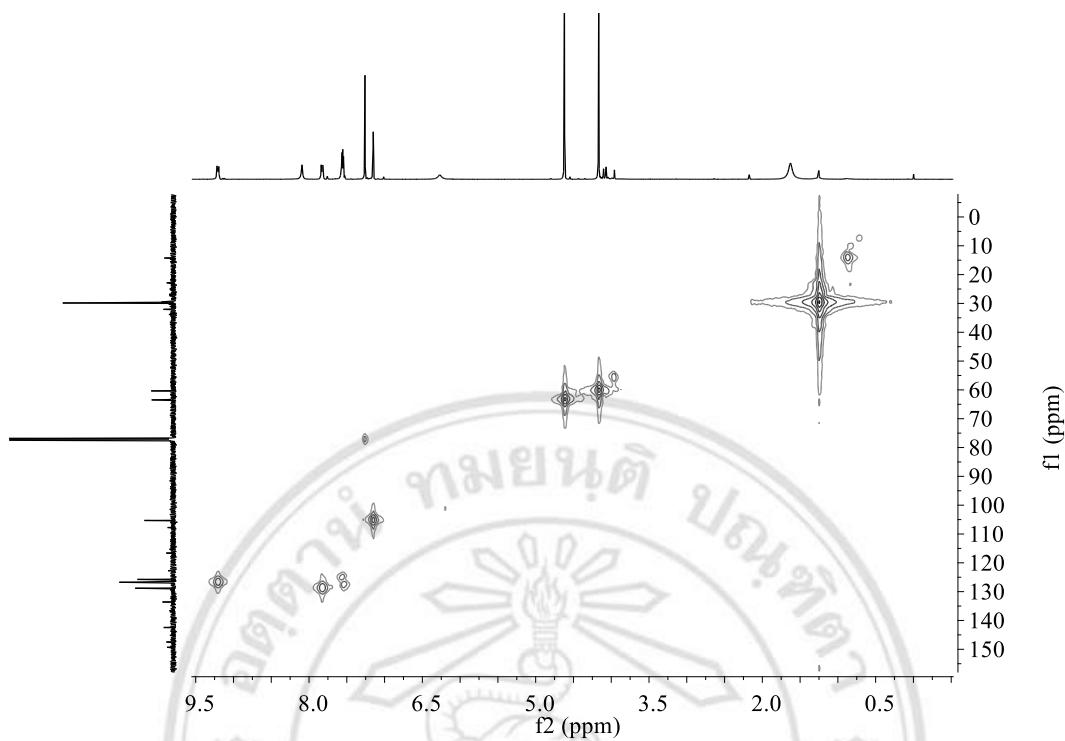
**Figure A28** <sup>1</sup>H NMR Spectrum (DMSO-*d*<sub>6</sub>, 400 MHz) of Goniopedaline (**DY5**)



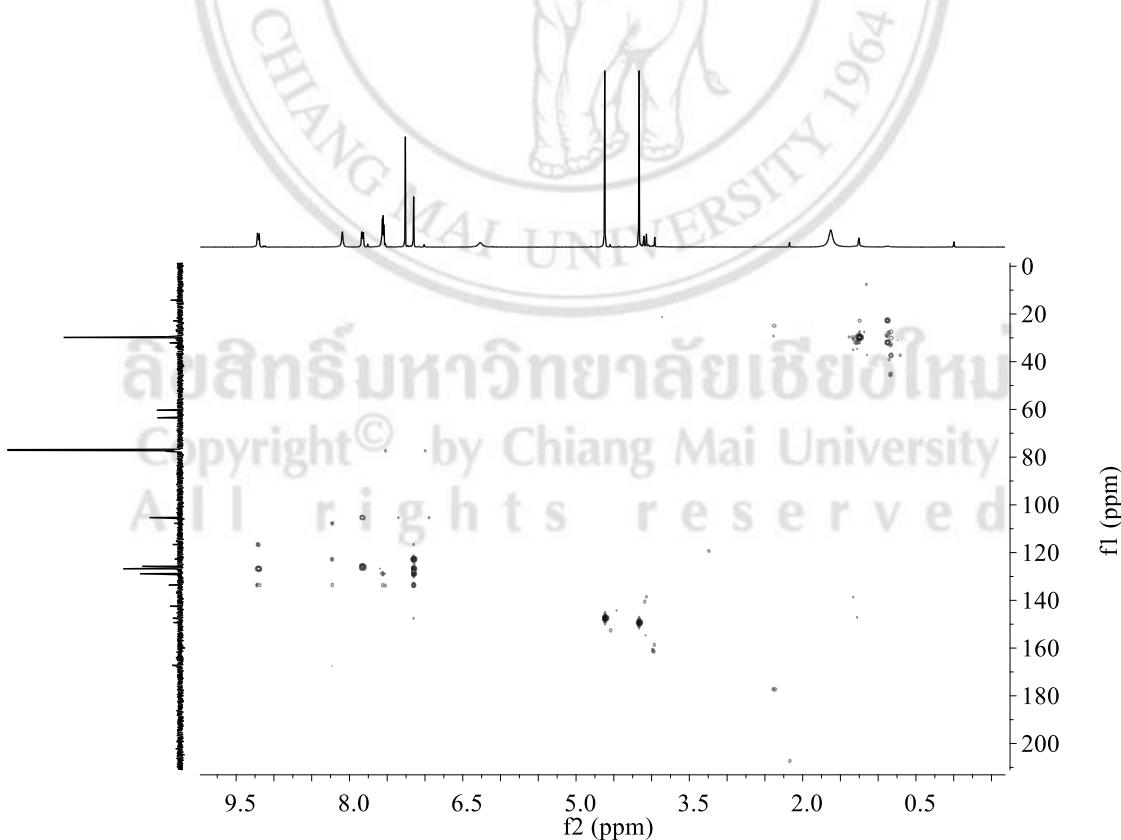
**Figure A29**  $^{13}\text{C}$  NMR, DEPT135 and DEPT90 Spectra ( $\text{CDCl}_3$ , 100 MHz) of Goniopedaline (**DY5**)



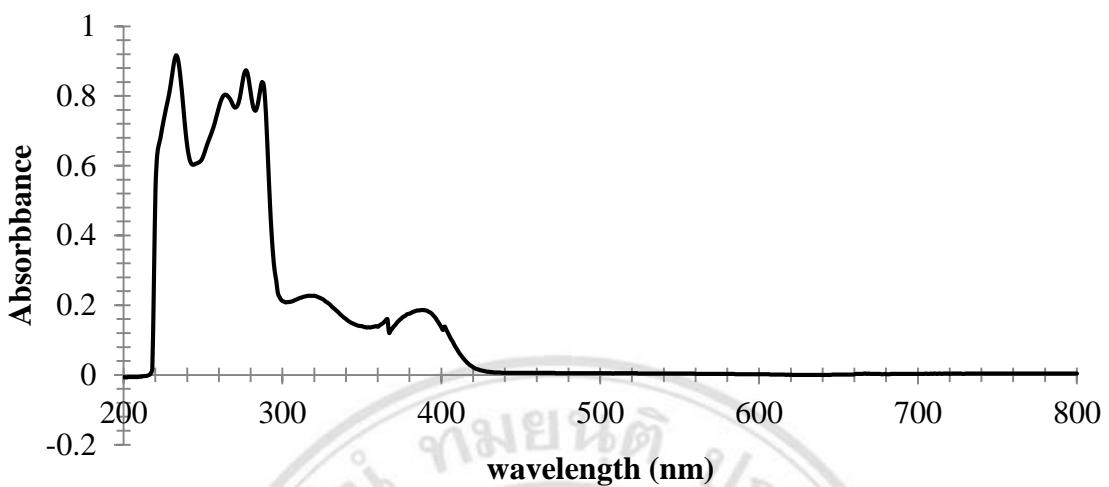
**Figure A30** COSY Spectrum of Goniopedaline (**DY5**) in  $\text{CDCl}_3$



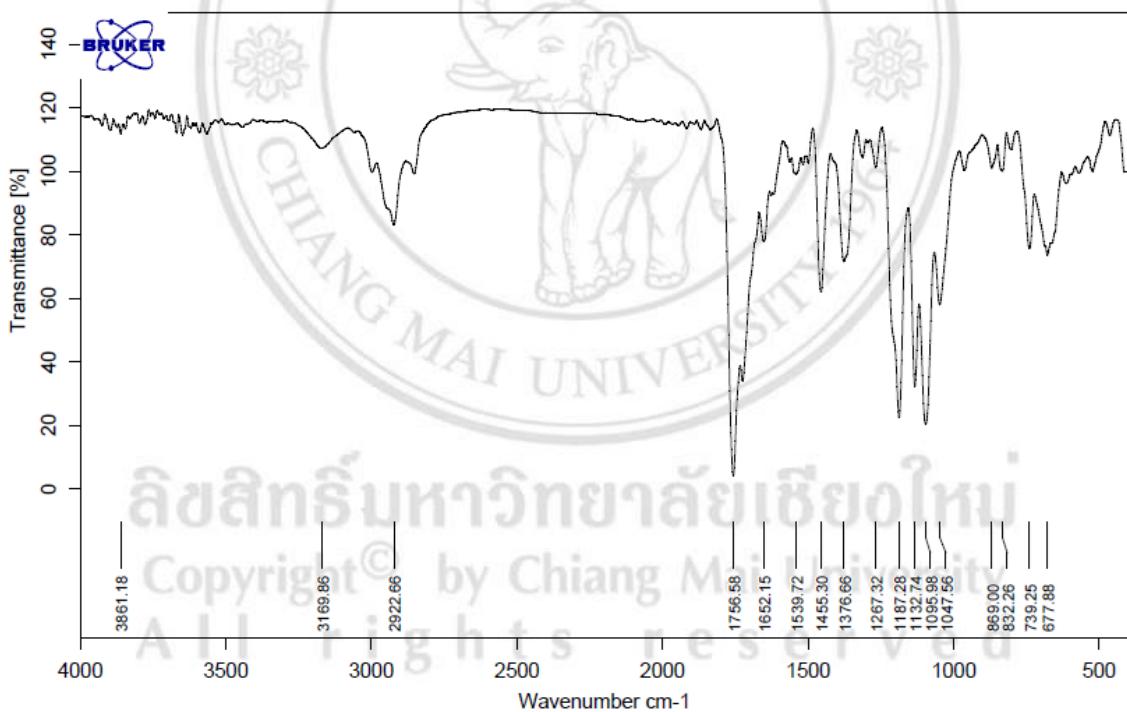
**Figure A31** HMQC Spectrum of Goniopedaline (**DY5**) in  $\text{CDCl}_3$



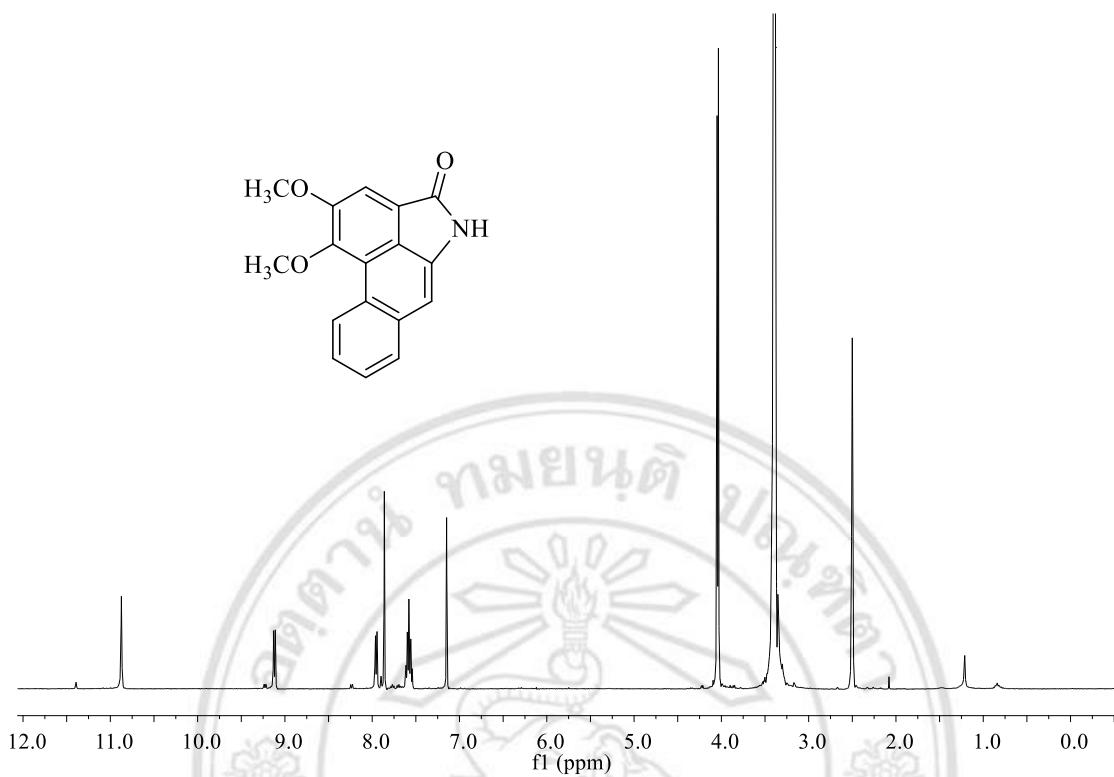
**Figure A32** HMBC Spectrum of Goniopedaline (**DY5**) in  $\text{CDCl}_3$



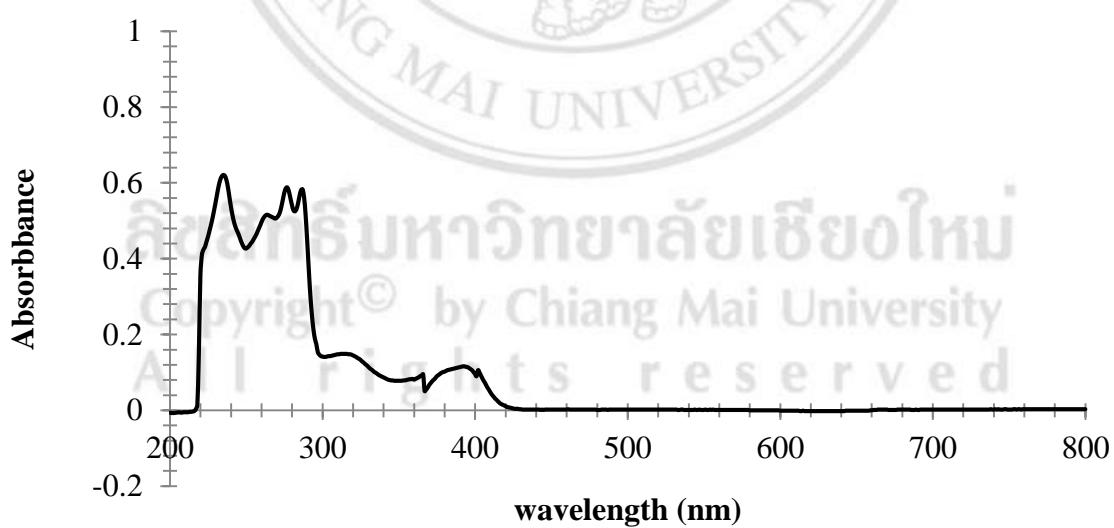
**Figure A33** UV Spectrum of Aristolactam BII (**DY6**)



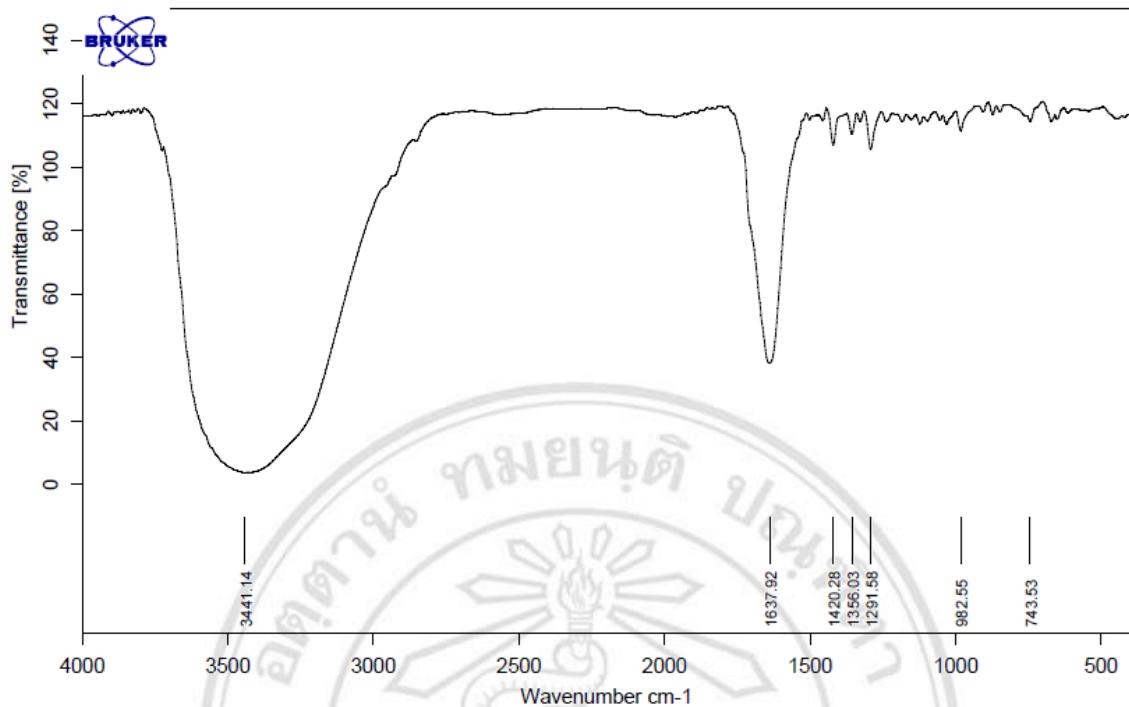
**Figure A34** IR Spectrum of Aristolactam BII (**DY6**)



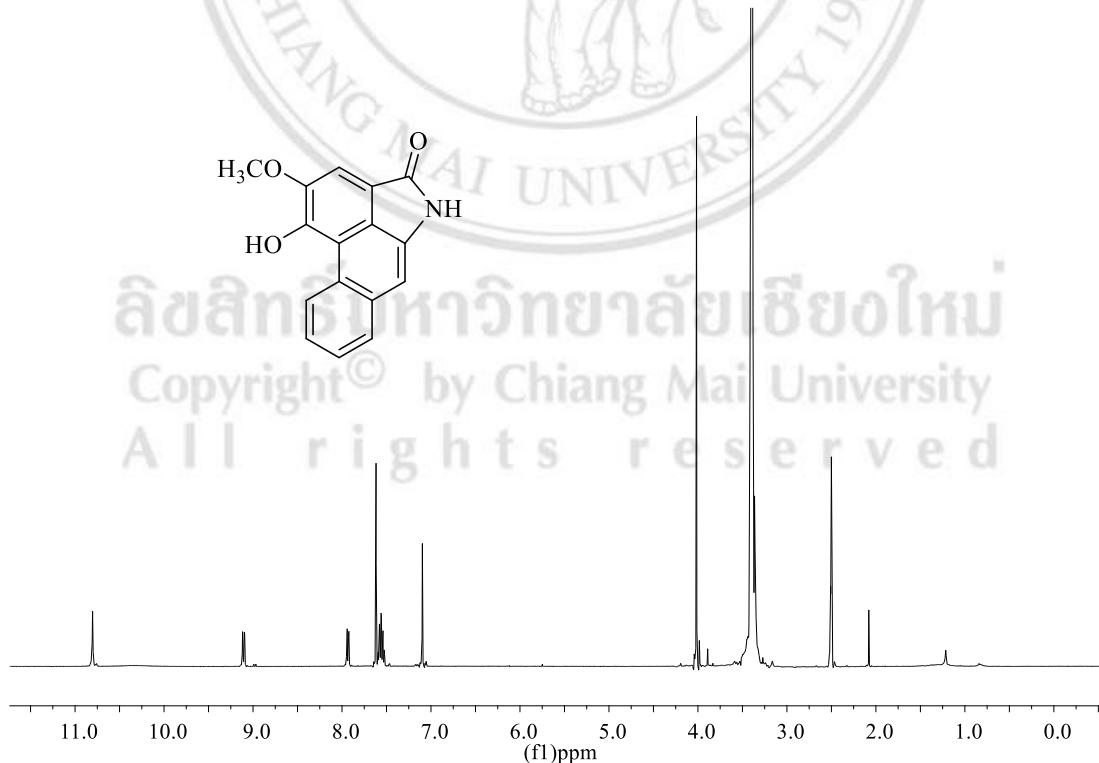
**Figure A35**  $^1\text{H}$  NMR Spectrum (DMSO- $d_6$ , 400 MHz) of Aristolactam BII (**DY6**)



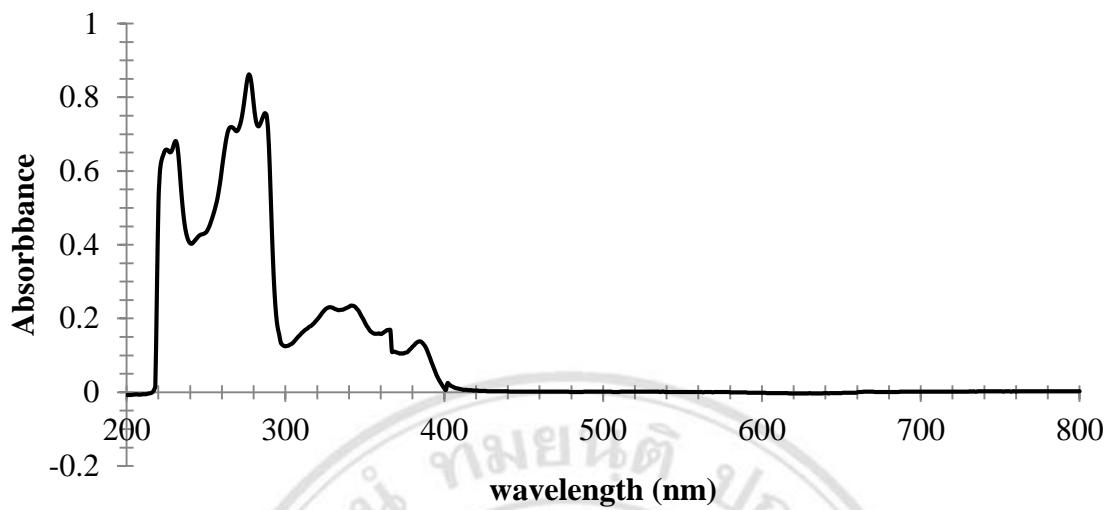
**Figure A36** UV Spectrum of Piperolactam A (**DY7**)



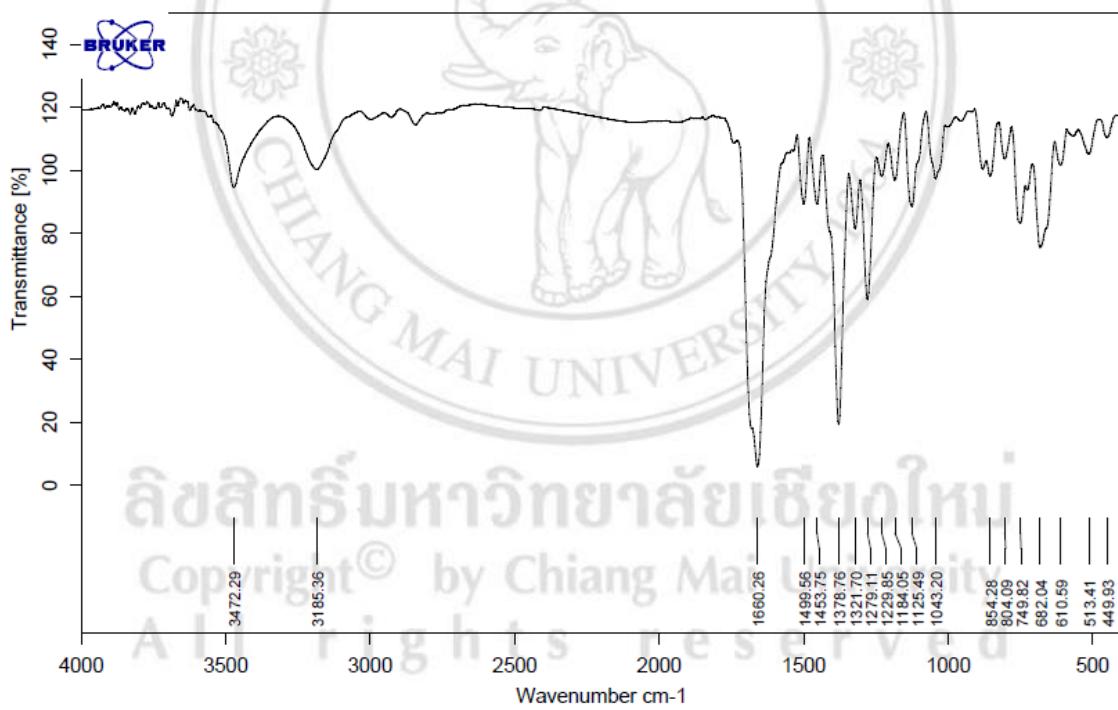
**Figure A37** IR Spectrum of Piperolactam A (**DY7**)



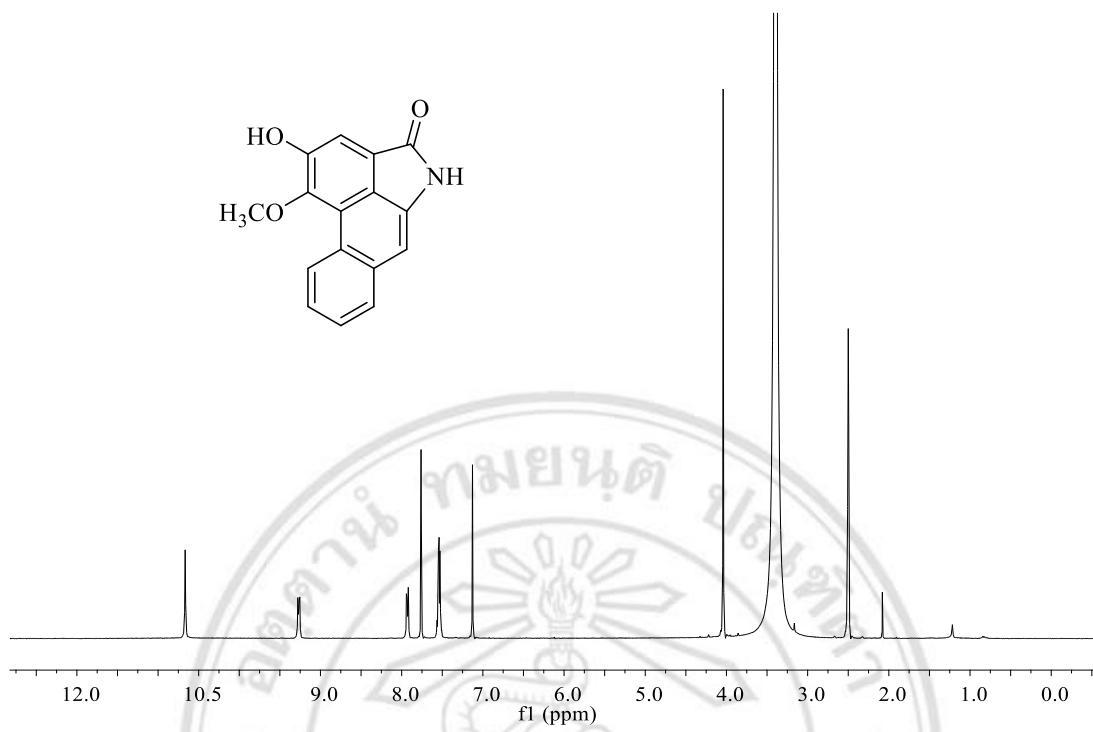
**Figure 38** <sup>1</sup>H NMR Spectrum (DMSO-*d*<sub>6</sub>, 400 MHz) of Piperolactam A (**DY7**)



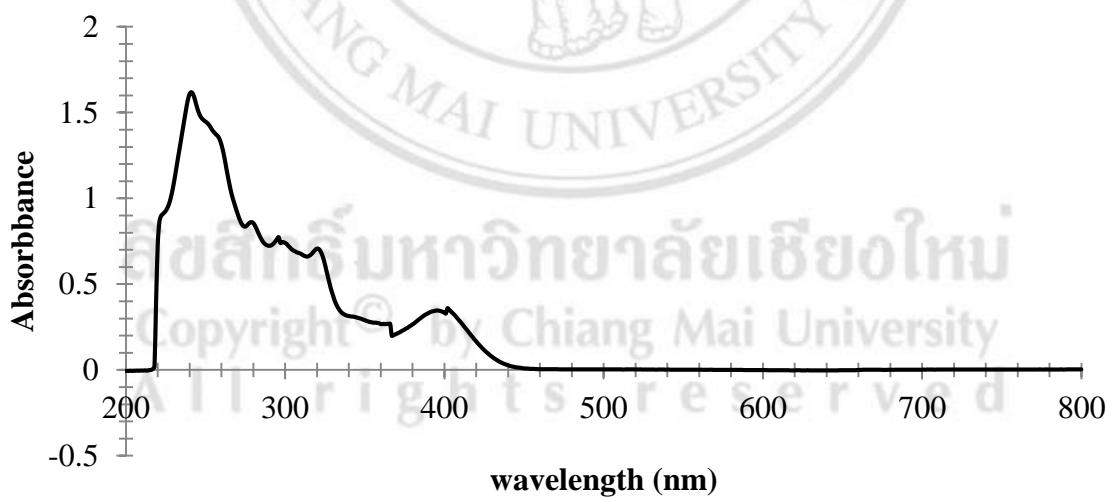
**Figure A39** UV Spectrum of Aristolactam AII (**DY8**)



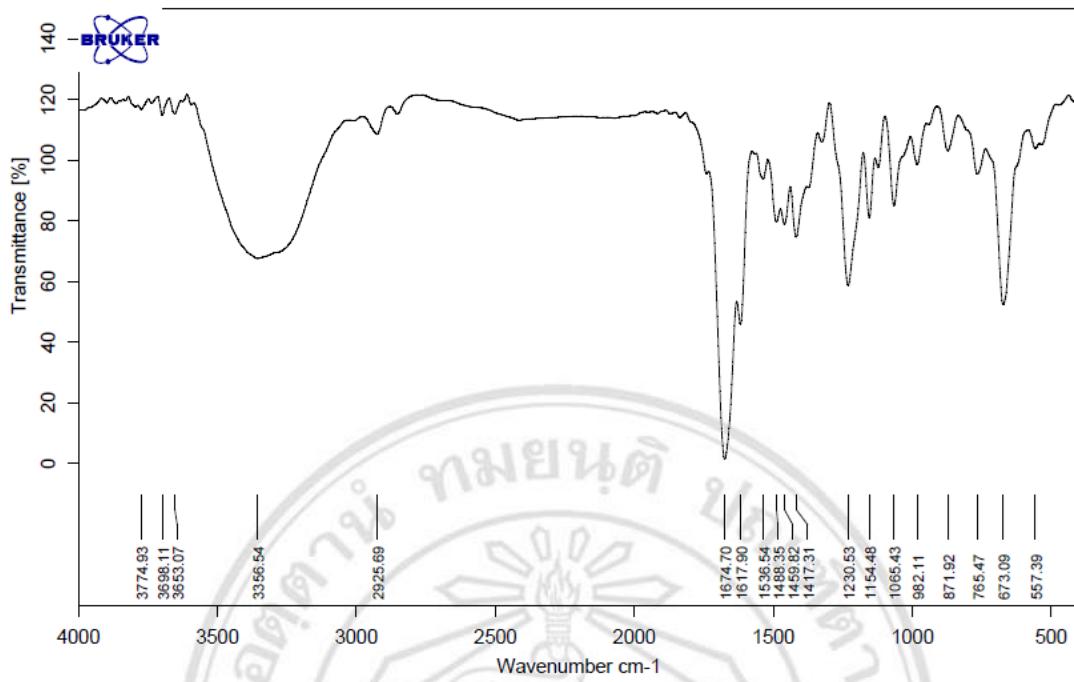
**Figure A40** IR Spectrum of Aristolactam AII (**DY8**)



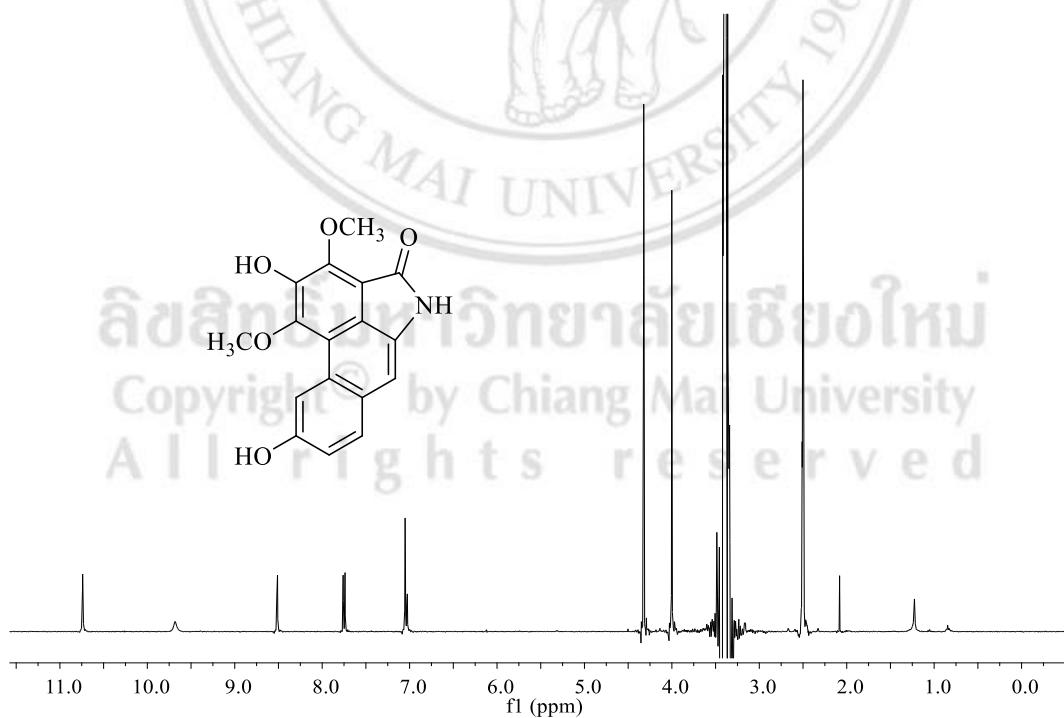
**Figure A41**  $^1\text{H}$  NMR Spectrum (DMSO- $d_6$ , 400 MHz) of Aristolactam AII (**DY8**)



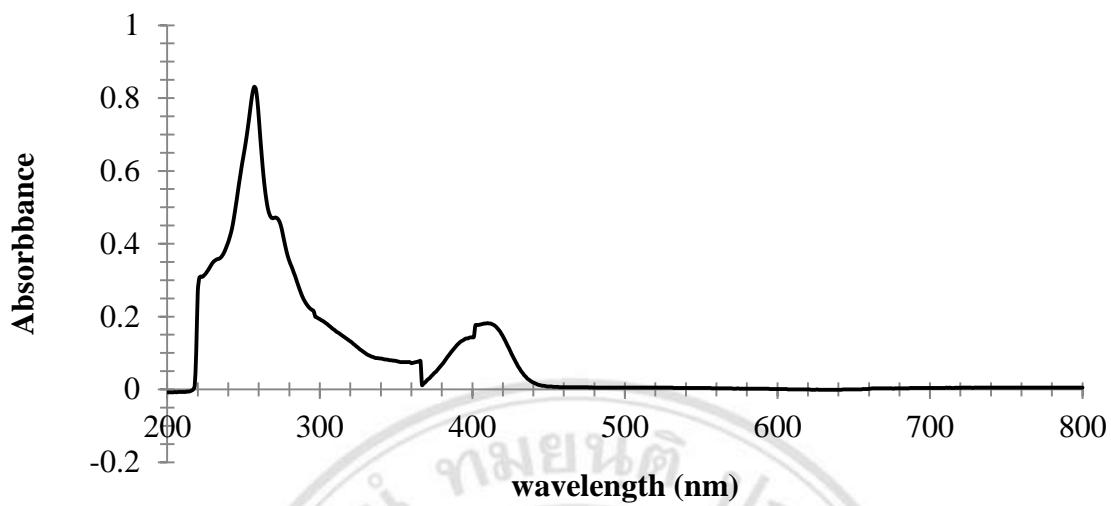
**Figure A42** UV Spectrum of 10-Amino-3,6-dihydroxy-2,4-dimethoxyphenanthrene-1-carboxylic acid lactam (**DY9**)



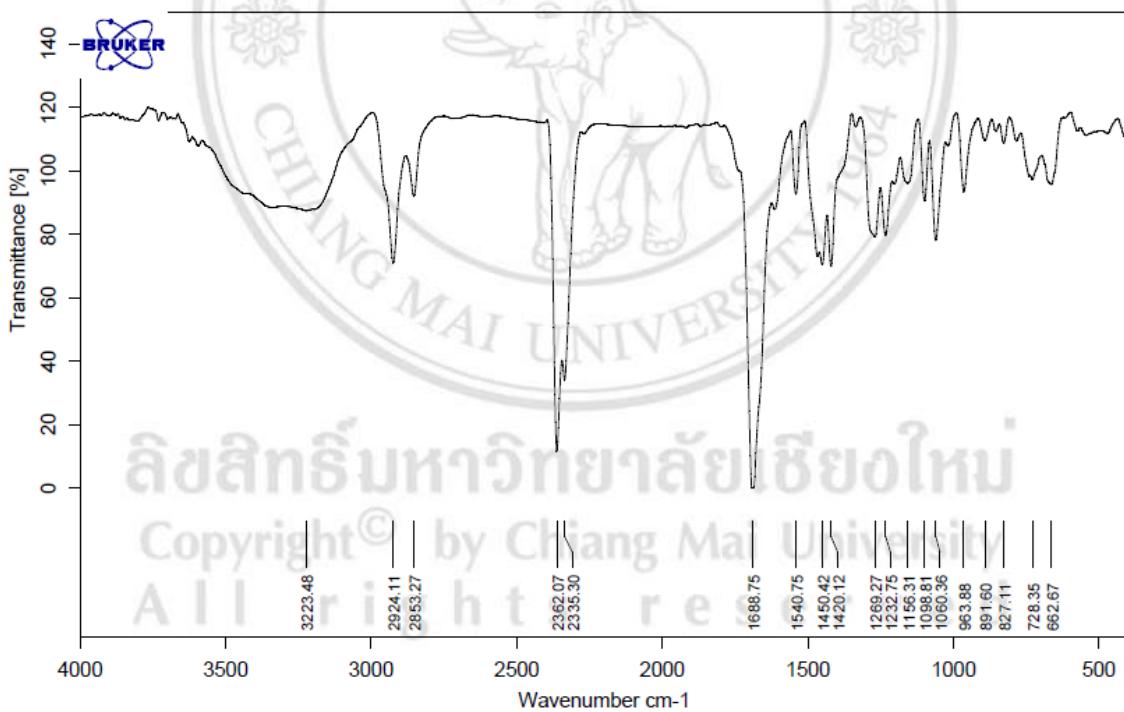
**Figure A43** IR Spectrum of 10-Amino-3,6-dihydroxy-2,4-dimethoxyphenanthrene-1-carboxylic acid lactam (**DY9**)



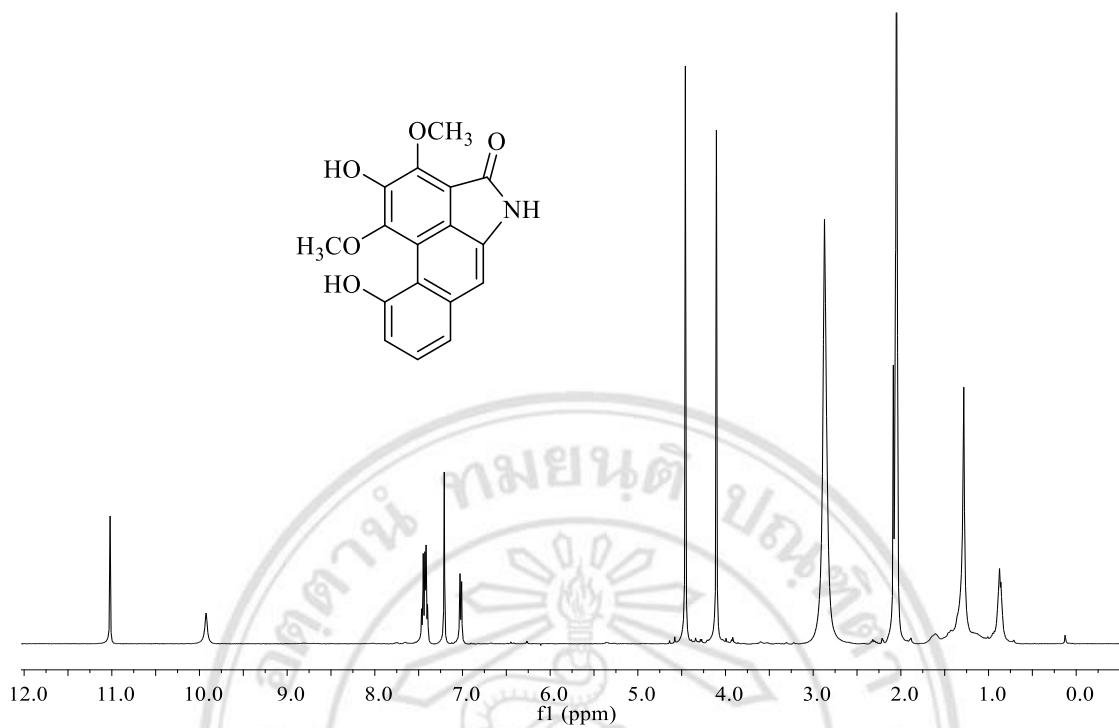
**Figure A44**  $^1\text{H}$  NMR Spectrum ( $\text{DMSO}-d_6$ , 400 MHz) of 10-Amino-3,6-dihydroxy-2,4-dimethoxyphenanthrene-1-carboxylic acid lactam (**DY9**)



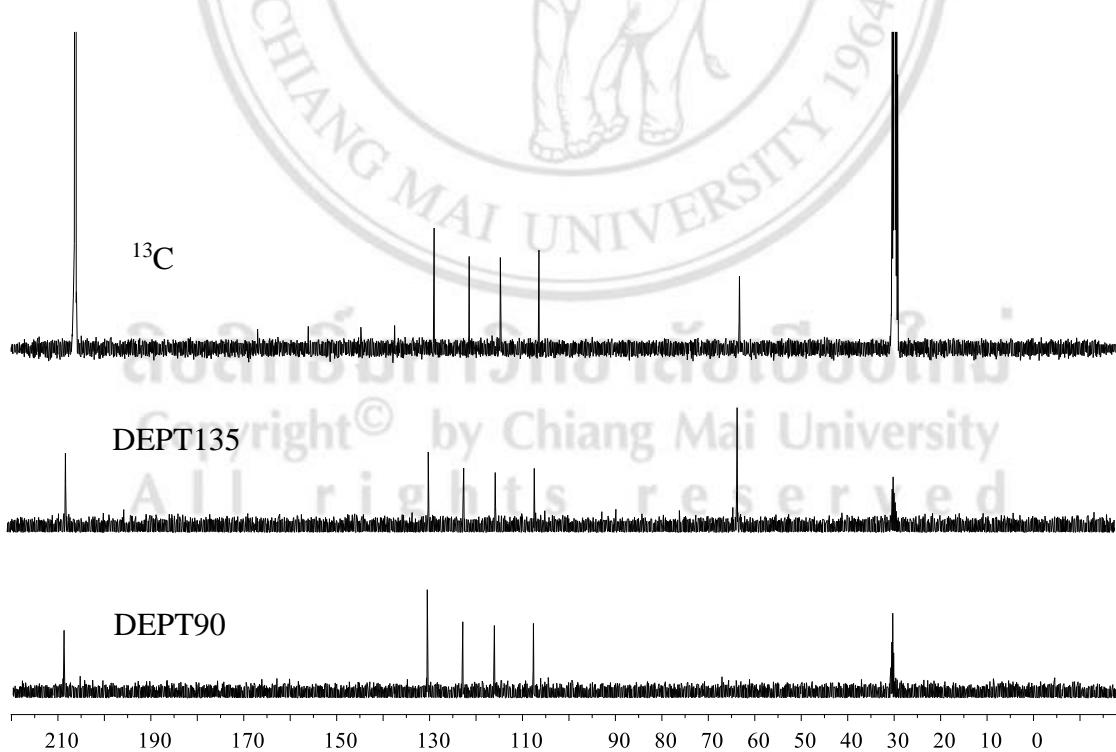
**Figure A45** UV Spectrum of 3,5-Dihydroxy-2,4-dimethoxyaristolactam (**DY10**)



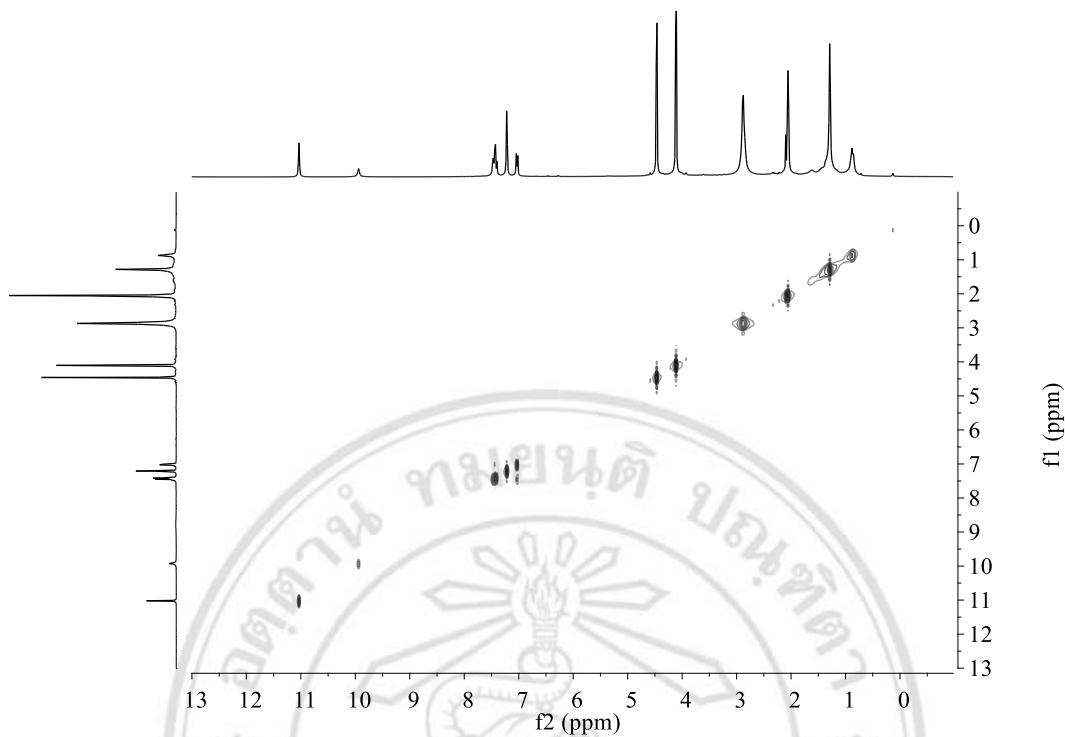
**Figure A46** IR Spectrum of 3,5-Dihydroxy-2,4-dimethoxyaristolactam (**DY10**)



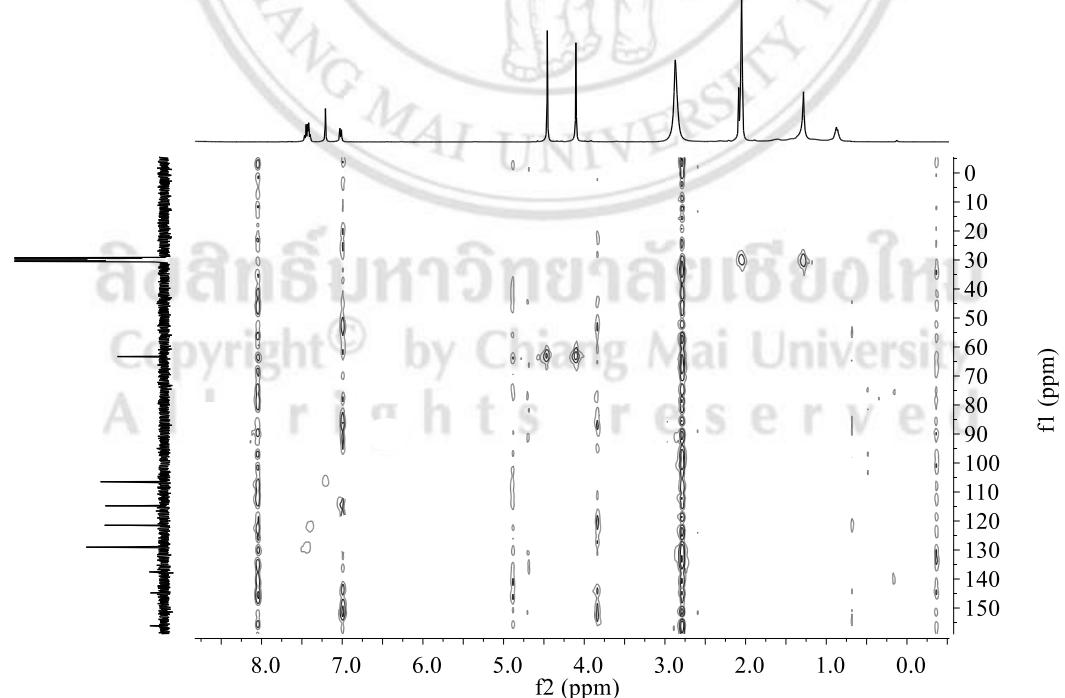
**Figure A47**  $^1\text{H}$  NMR Spectrum (Acetone- $d_6$ , 400 MHz) of 3,5-Dihydroxy-2,4-dimethoxyaristolactam (**DY10**)



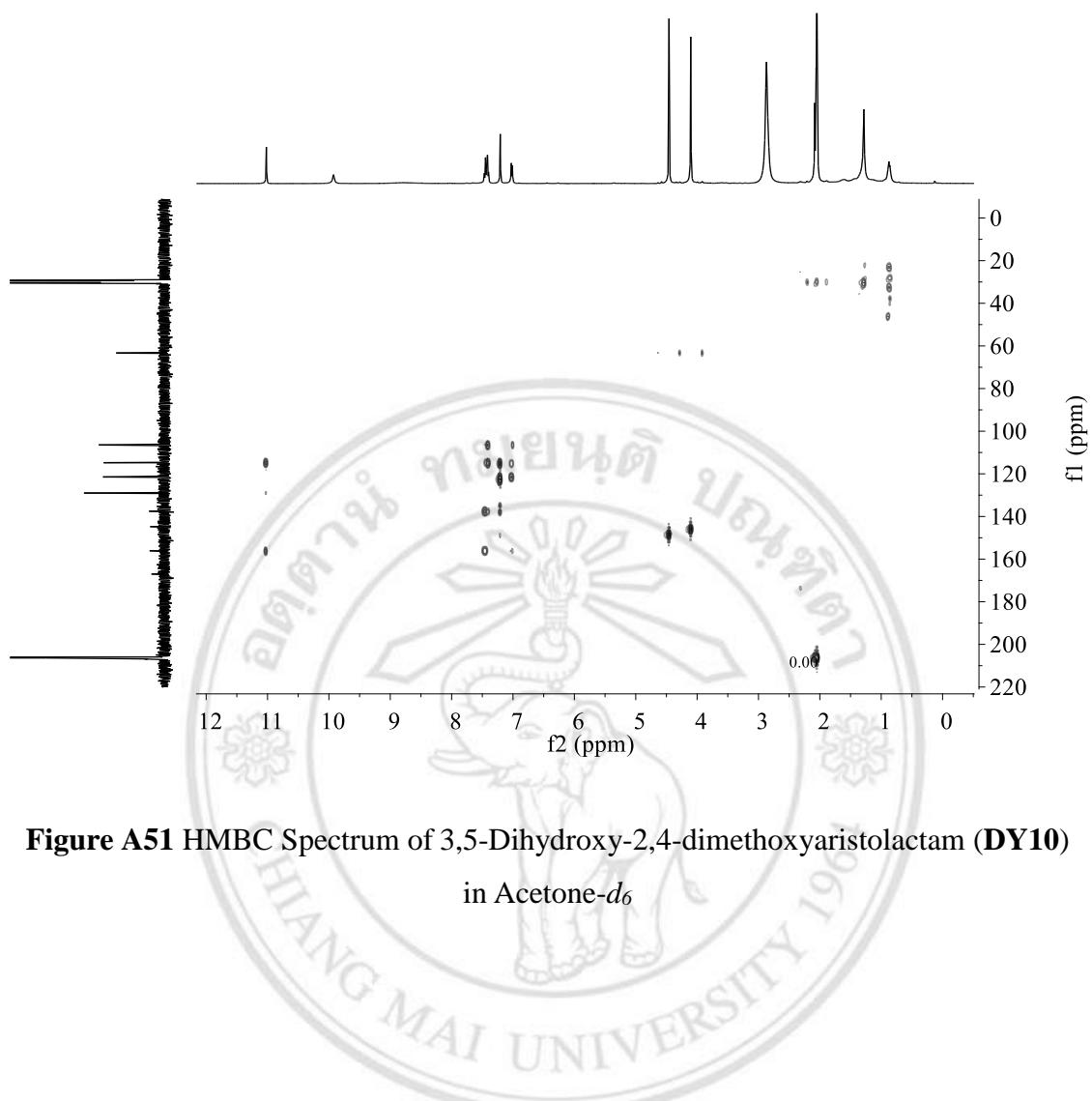
**Figure A48**  $^{13}\text{C}$  NMR, DEPT135 and DEPT90 Spectra (acetone- $d_6$ , 100 MHz) of 3,5-Dihydroxy-2,4-dimethoxyaristolactam (**DY10**)



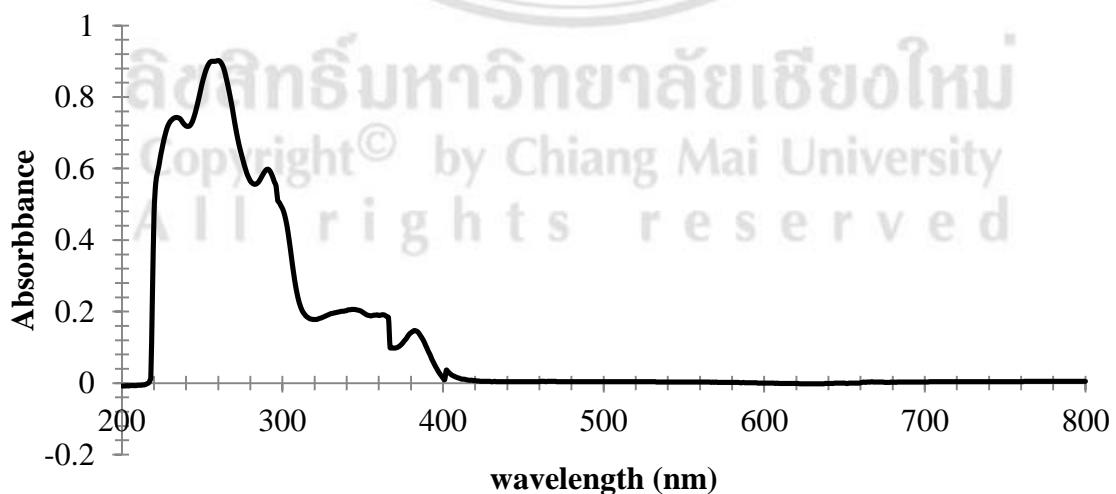
**Figure A49** COSY Spectrum of 3,5-Dihydroxy-2,4-dimethoxyaristolactam (**DY10**)  
in Acetone-*d*<sub>6</sub>



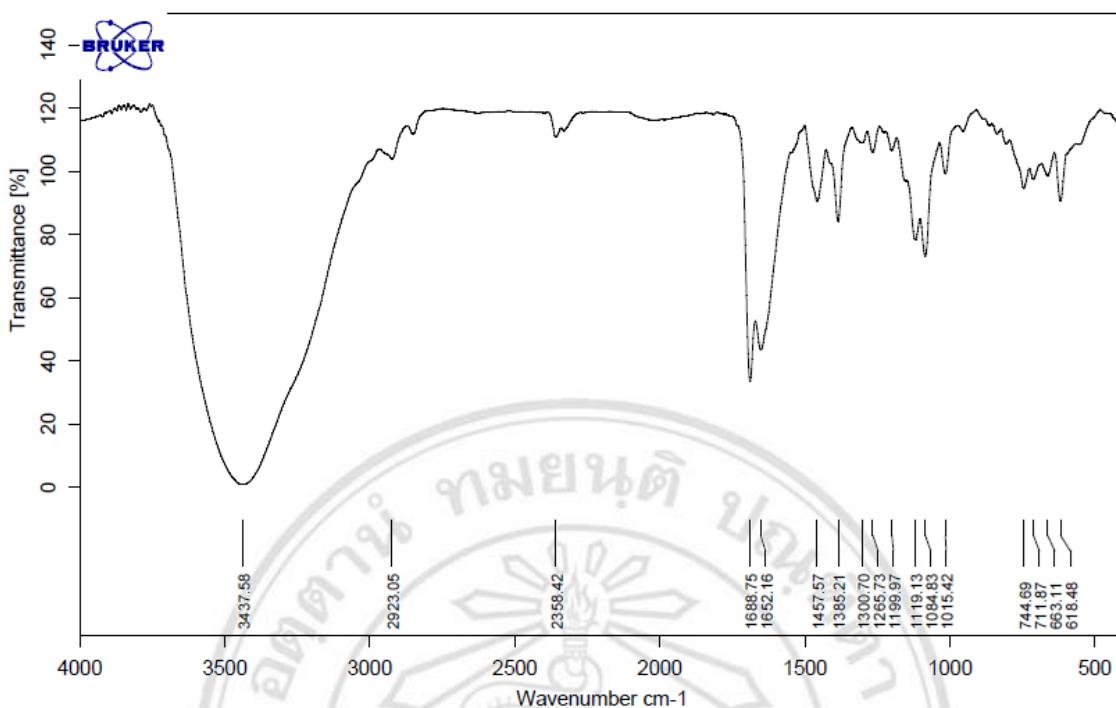
**Figure A50** HMQC Spectrum of 3,5-Dihydroxy-2,4-dimethoxyaristolactam (**DY10**)  
in Acetone-*d*<sub>6</sub>



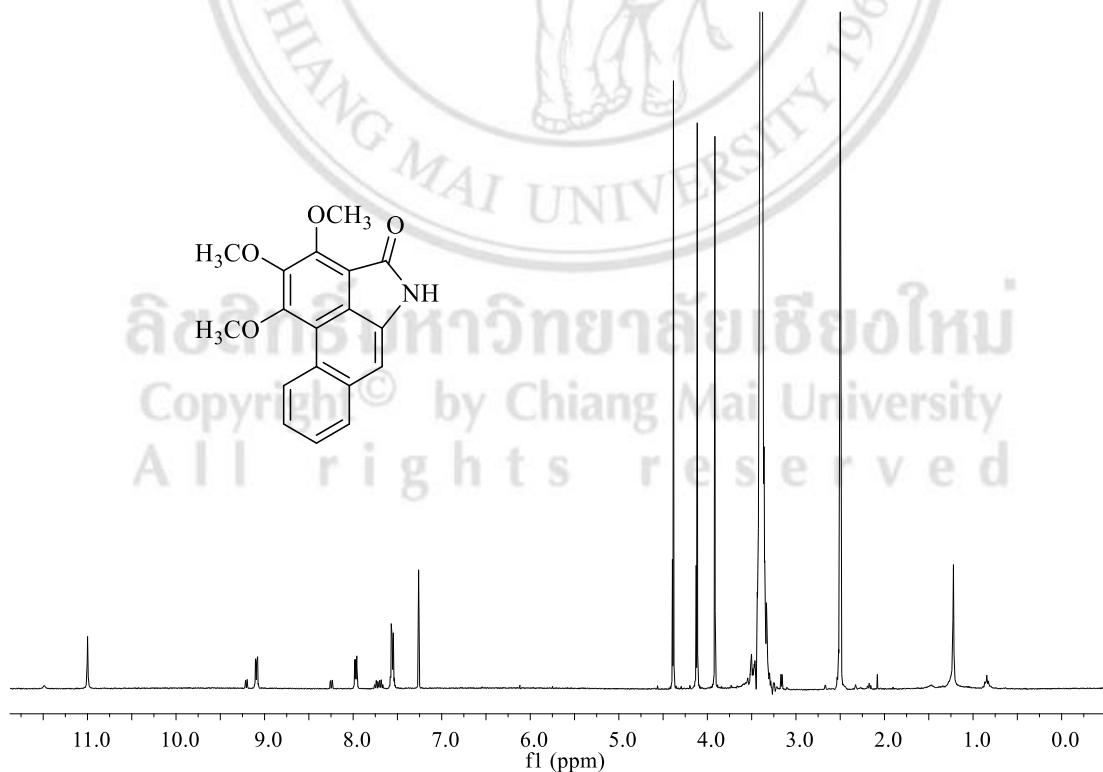
**Figure A51** HMBC Spectrum of 3,5-Dihydroxy-2,4-dimethoxyaristolactam (**DY10**)  
in Acetone-*d*<sub>6</sub>



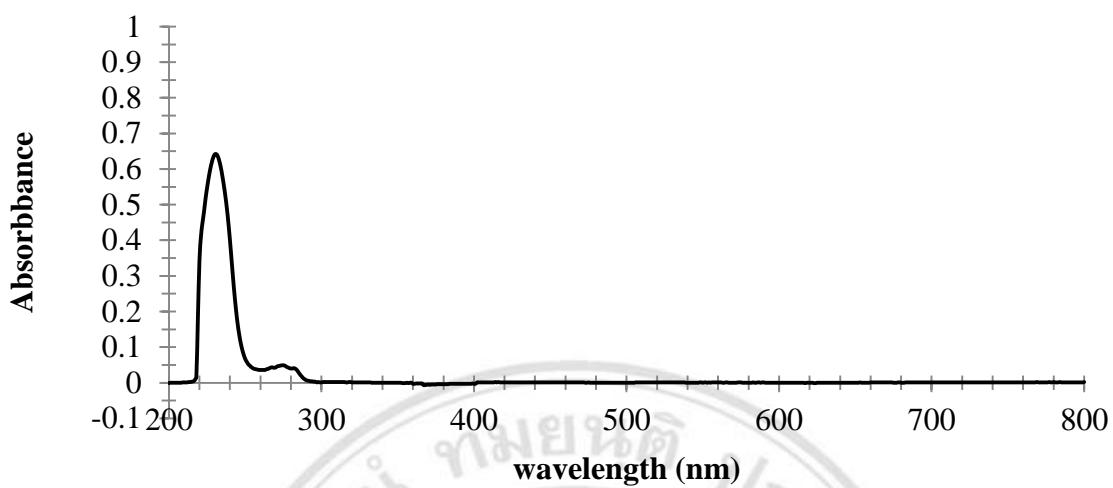
**Figure A52** UV Spectrum of Piperolactam C (**DY11**)



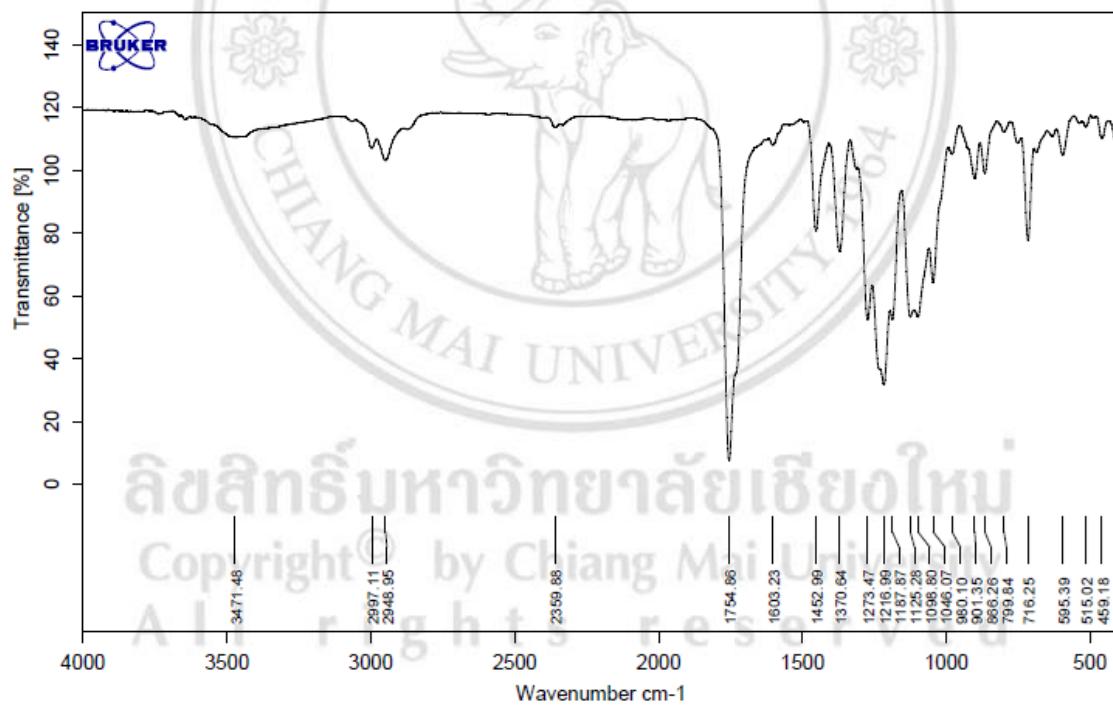
**Figure A53** IR Spectrum of Piperolactam C (**DY11**)



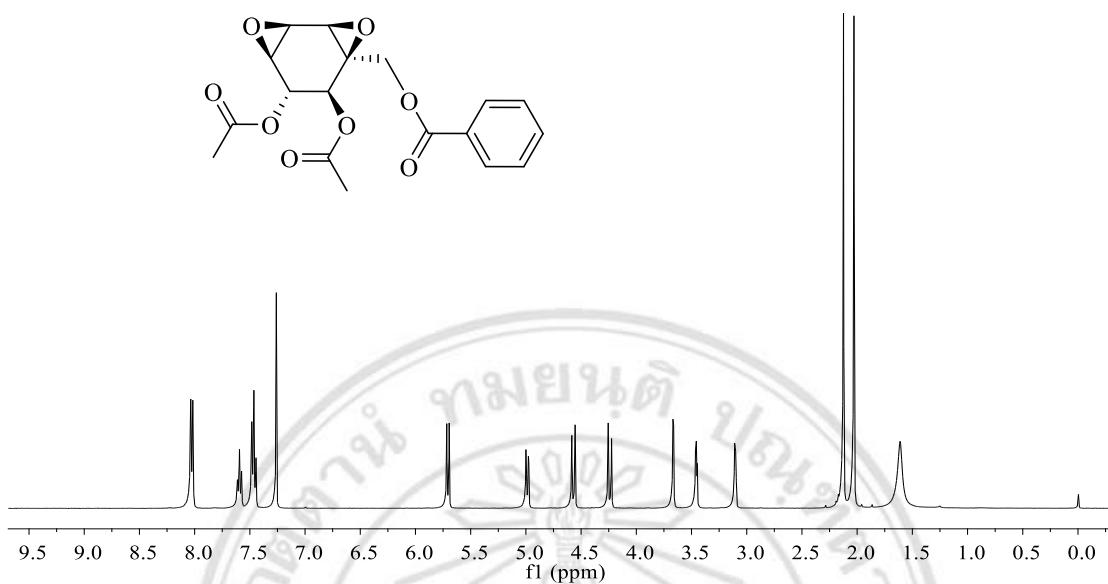
**Figure A54**  $^1\text{H}$  NMR Spectrum (DMSO- $d_6$ , 400 MHz) of Piperolactam C (**DY11**)



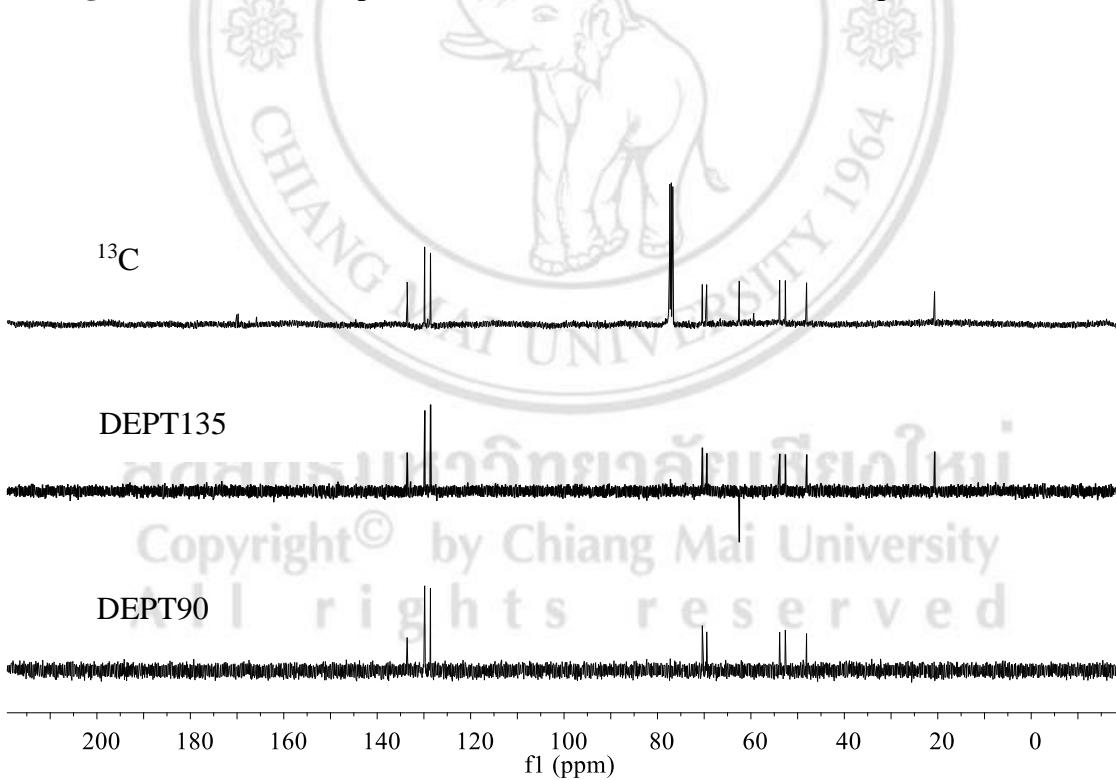
**Figure A55** UV Spectrum of (+)-Crotepoxide (**DY12**)



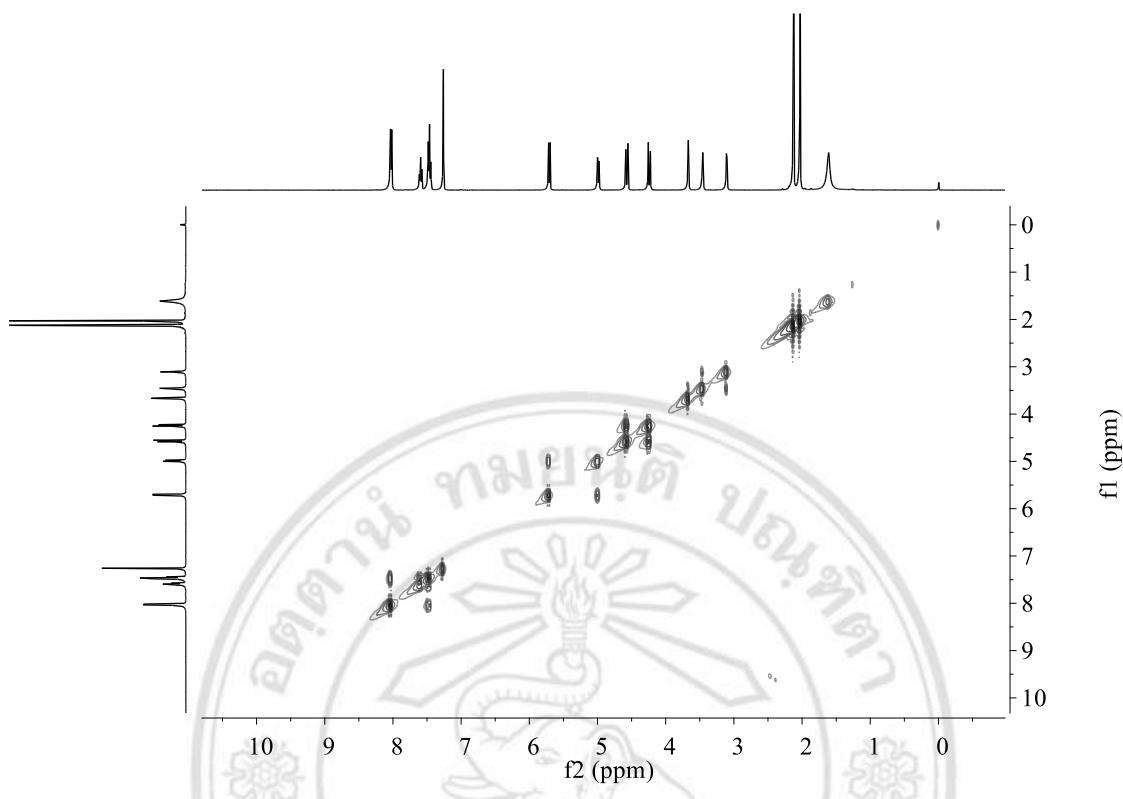
**Figure A56** IR Spectrum of (+)-Crotepoxide (**DY12**)



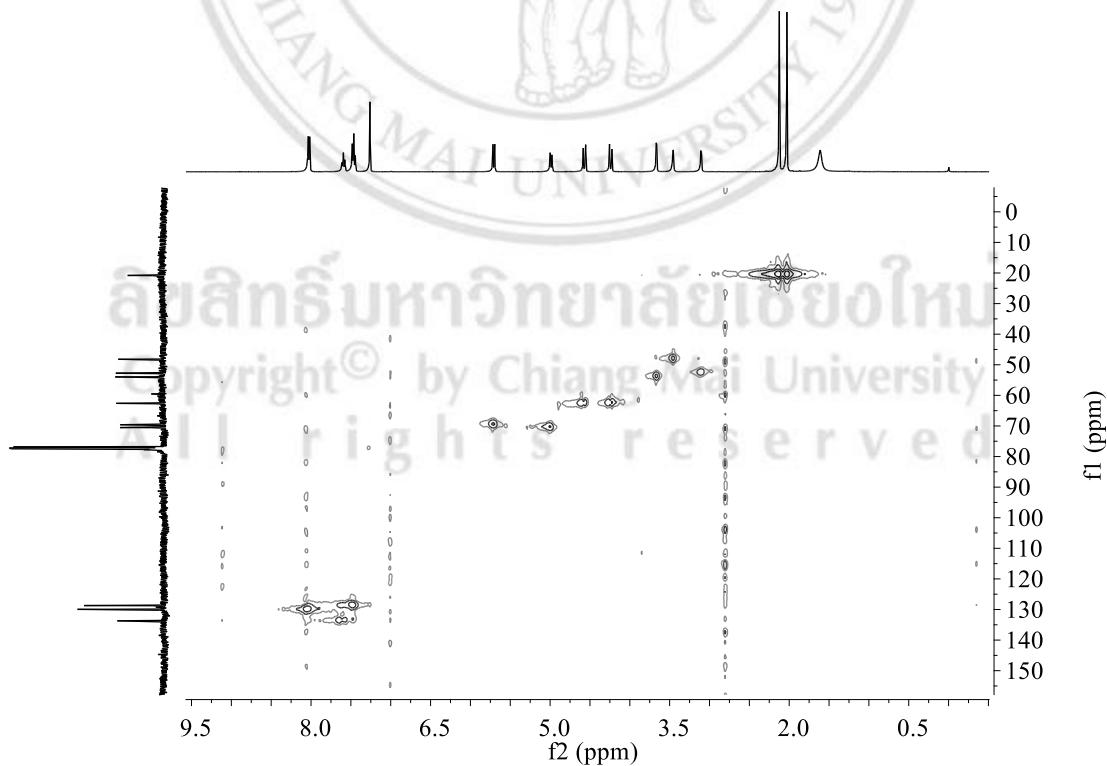
**Figure A57**  $^1\text{H}$  NMR Spectrum ( $\text{CDCl}_3$ , 400 MHz) of (+)-Crotepoxide (**DY12**)



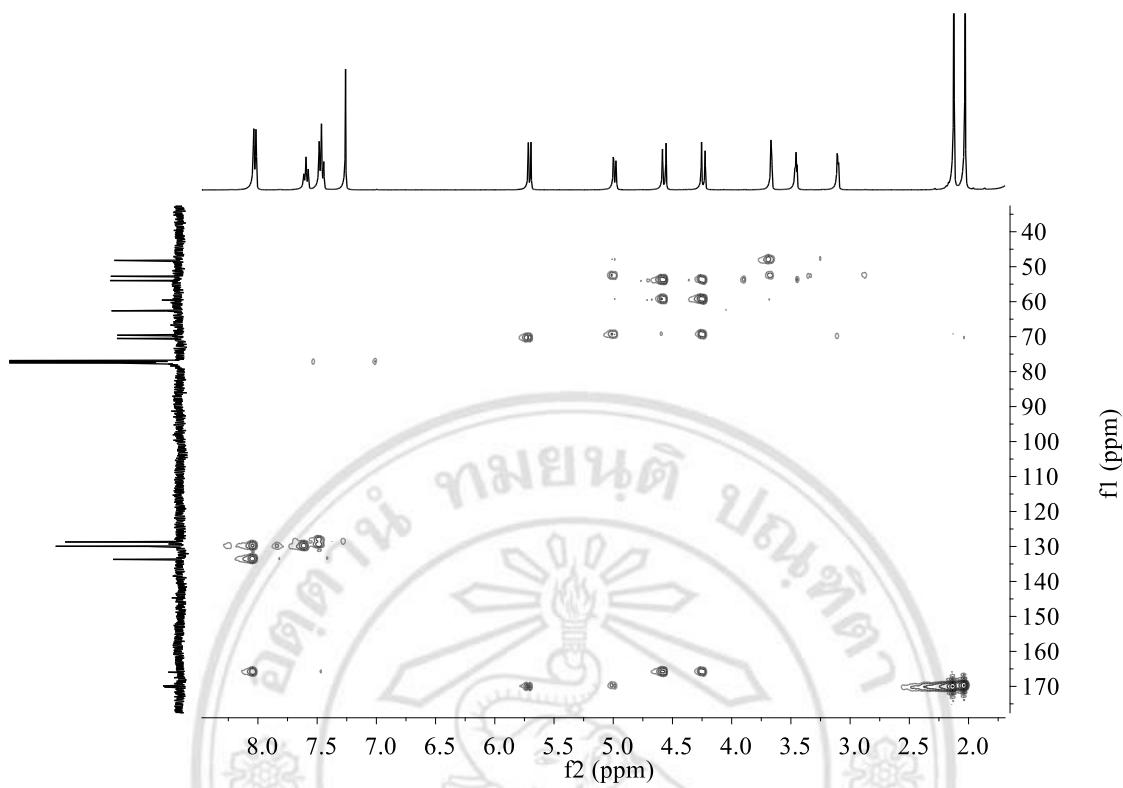
**Figure A58**  $^{13}\text{C}$  NMR, DEPT135 and DEPT90 Spectra ( $\text{CDCl}_3$ , 100 MHz) of (+)-Crotepoxide (**DY12**)



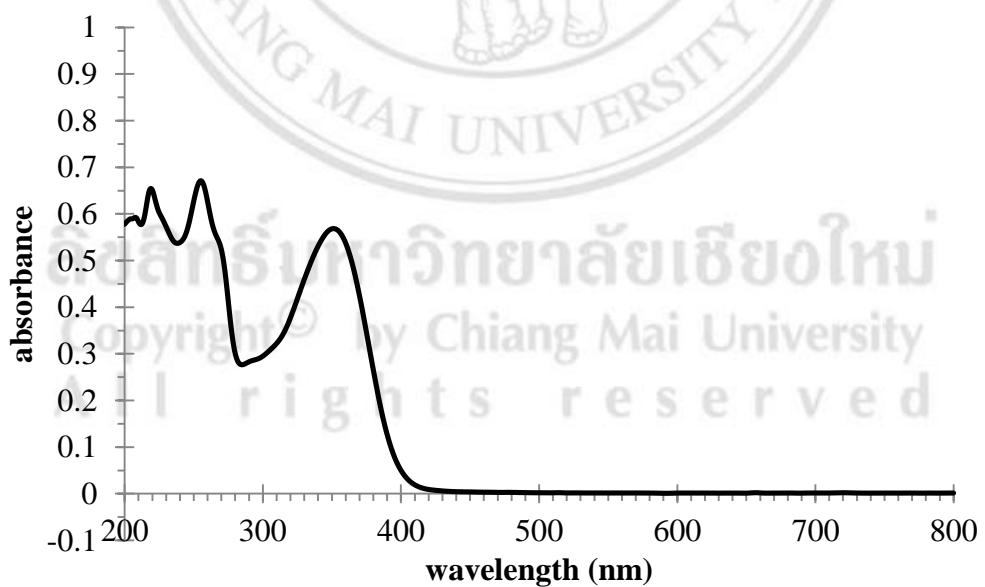
**Figure A59** COSY Spectrum of (+)-Crotexoxide (**DY12**) in  $\text{CDCl}_3$



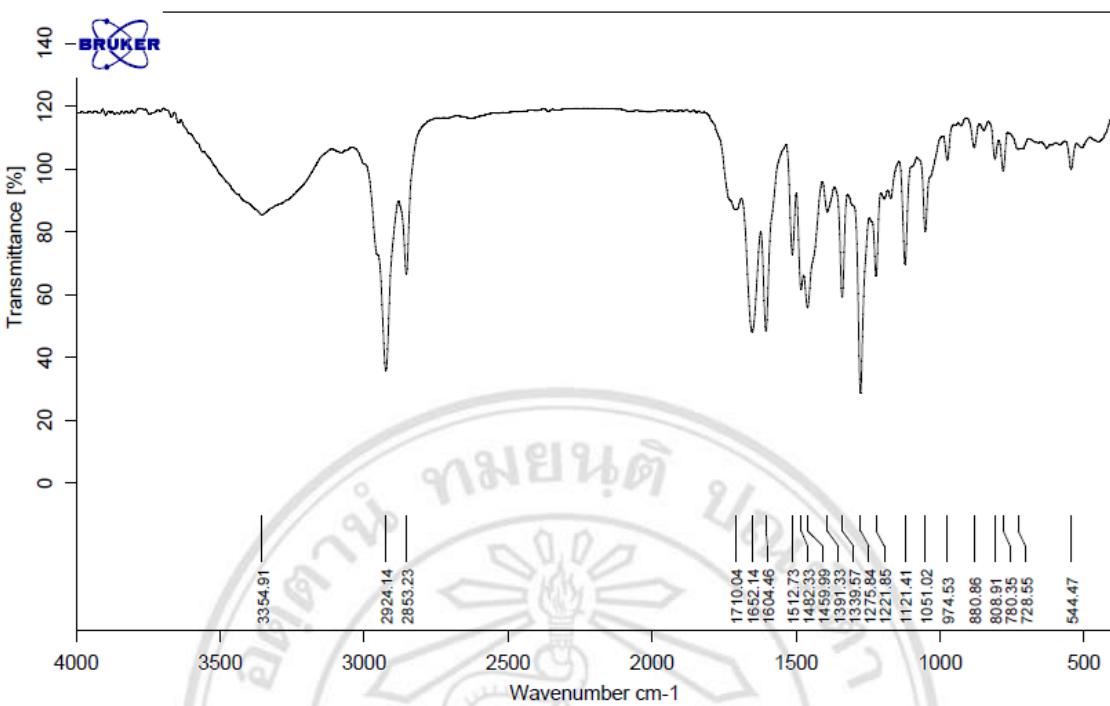
**Figure A60** HMQC Spectrum of (+)-Crotexoxide (**DY12**) in  $\text{CDCl}_3$



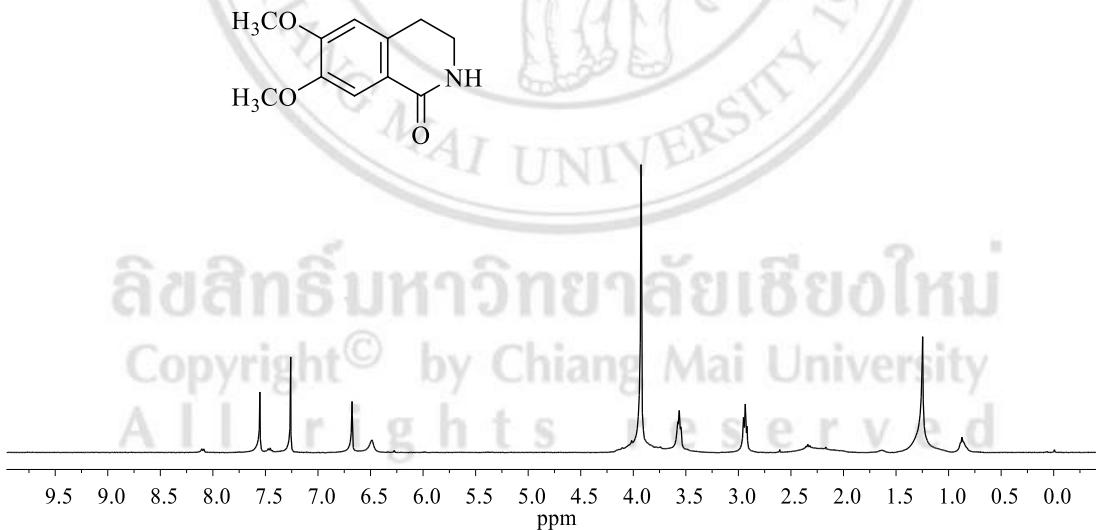
**Figure A61** HMBC Spectrum of (+)-Crotepoxide (**DY12**) in  $\text{CDCl}_3$



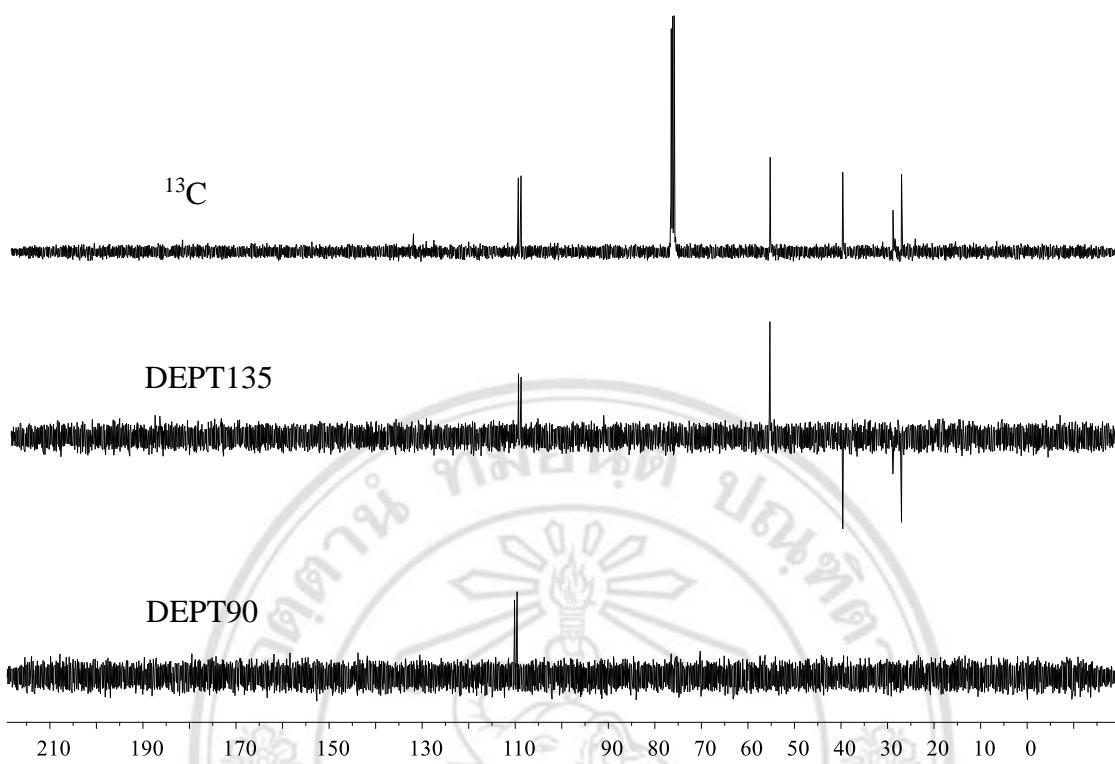
**Figure A62** UV Spectrum of Corydaldine (**DY13**)



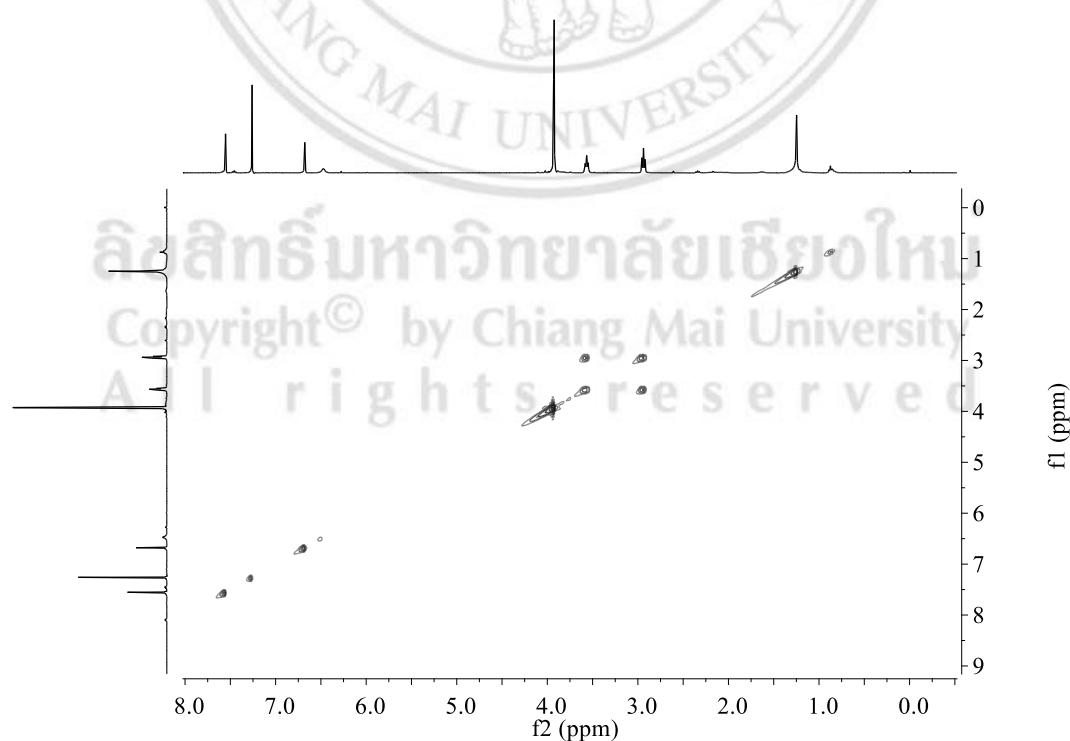
**Figure A63** IR Spectrum of Corydaldine (**DY13**)



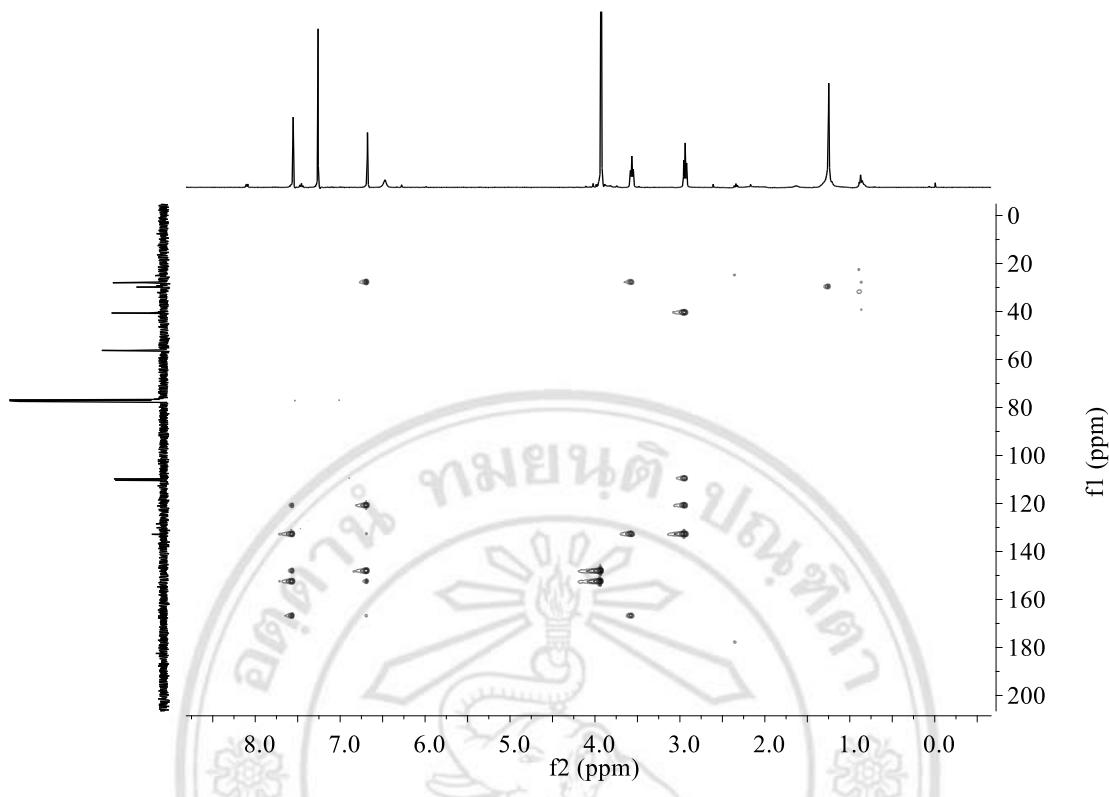
**Figure A64** <sup>1</sup>H NMR Spectrum (CDCl<sub>3</sub>, 400 MHz) of Corydaldine (**DY13**)



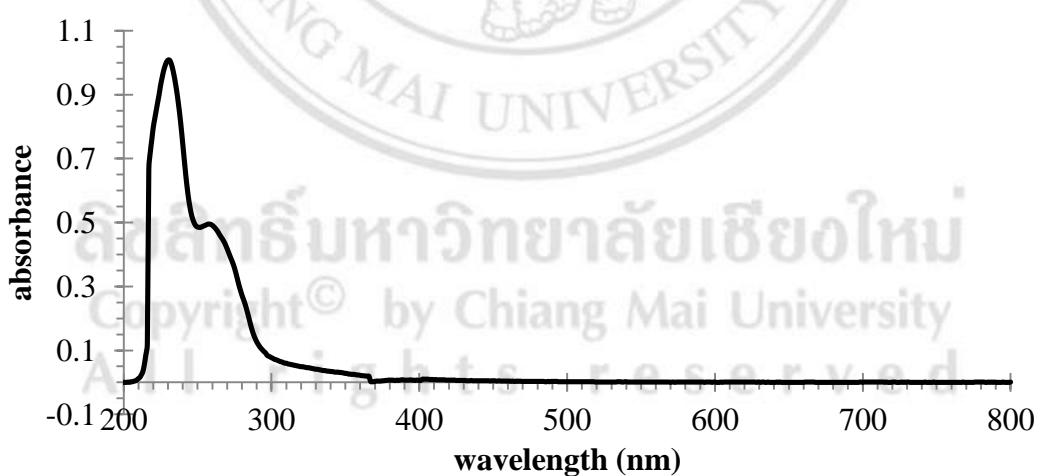
**Figure A65**  $^{13}\text{C}$  NMR, DEPT135 and DEPT90 Spectra ( $\text{CDCl}_3$ , 100 MHz) of Corydaldine (**DY13**)



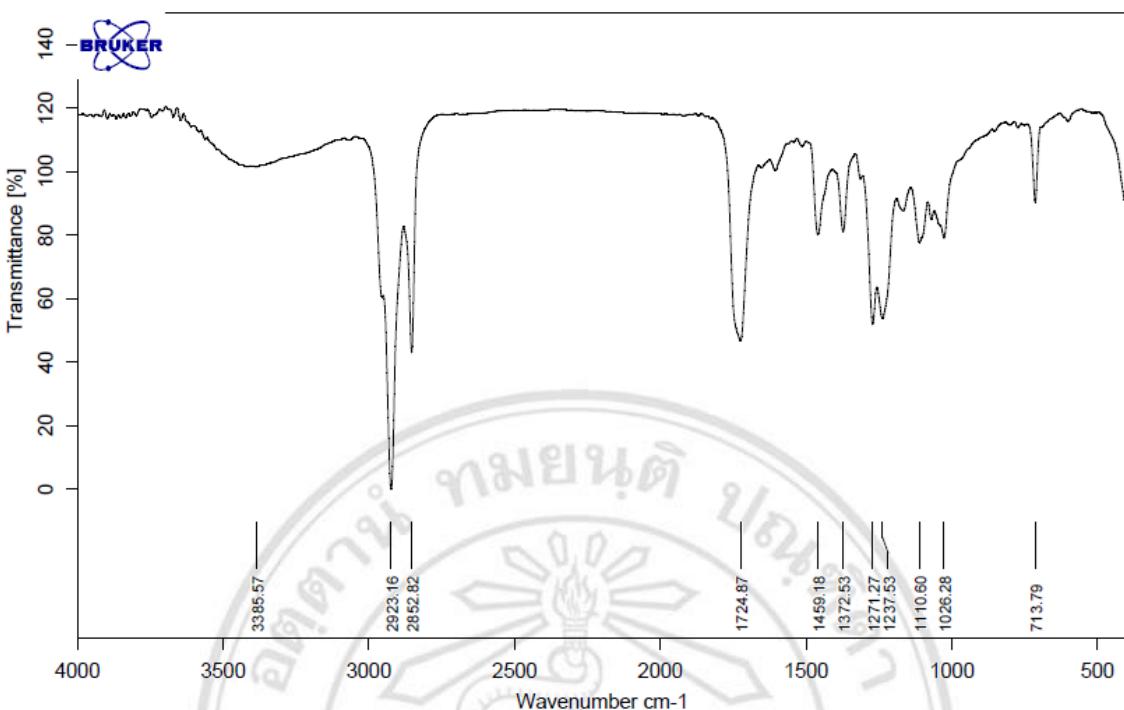
**Figure A66** COSY Spectrum of Corydaldine (**DY13**) in  $\text{CDCl}_3$



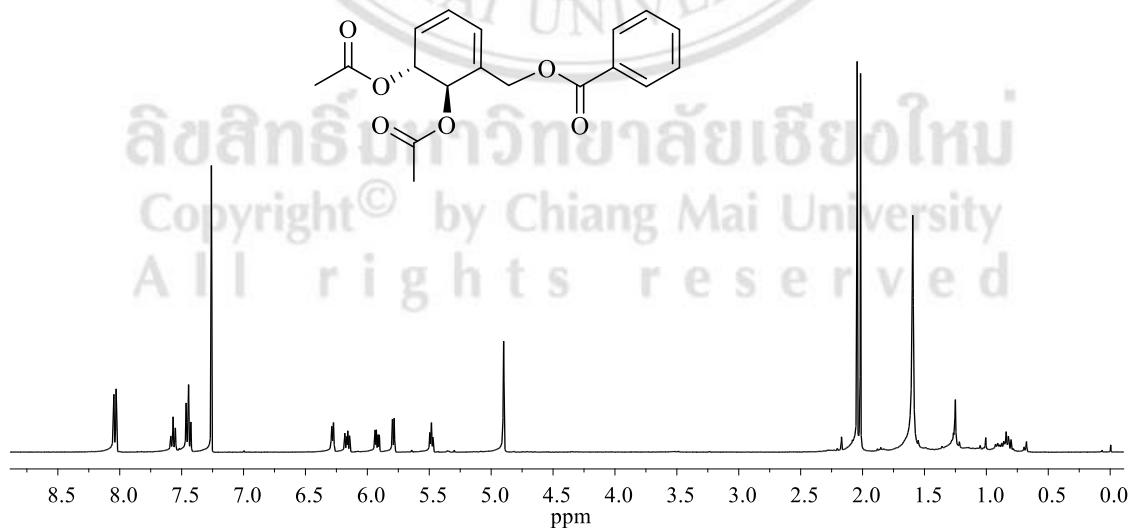
**Figure A67** HMBC Spectrum of Corydaldine (**DY13**) in  $\text{CDCl}_3$



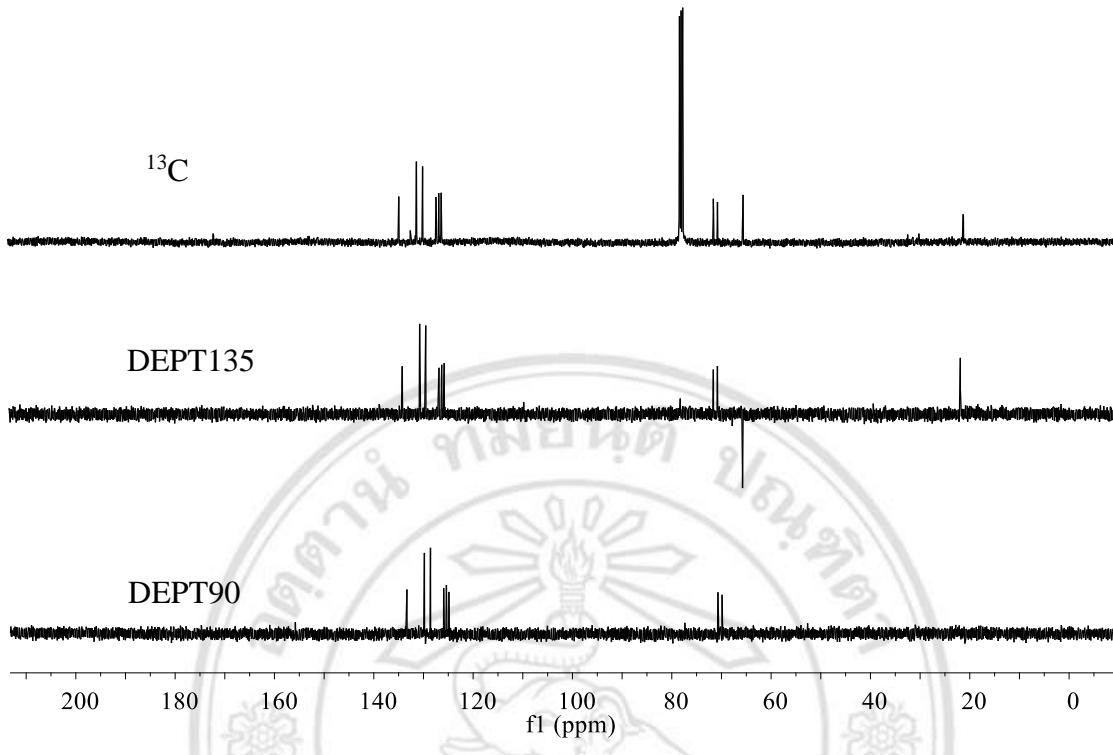
**Figure A68** UV Spectrum of *trans*-5,6-Diacetoxy-1-(benzoyloxymethyl)-1,3-cyclohexadiene (**DY14**)



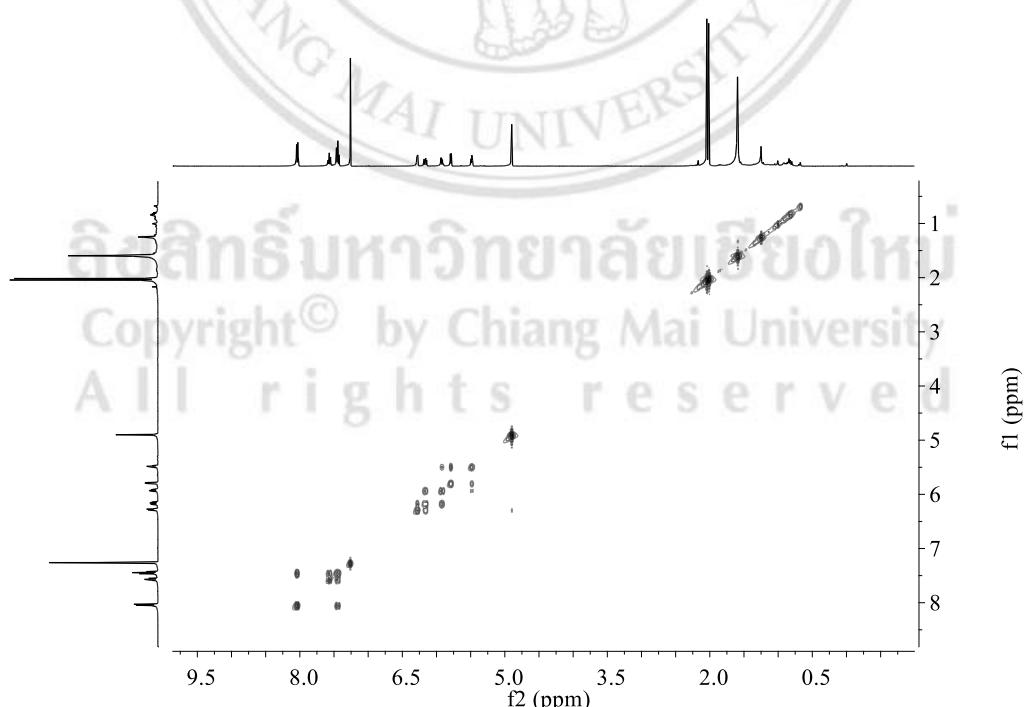
**Figure A69** IR Spectrum of *trans*-5,6-Diacetoxy-1-(benzoyloxymethyl)-1,3-cyclohexadiene (**DY14**)



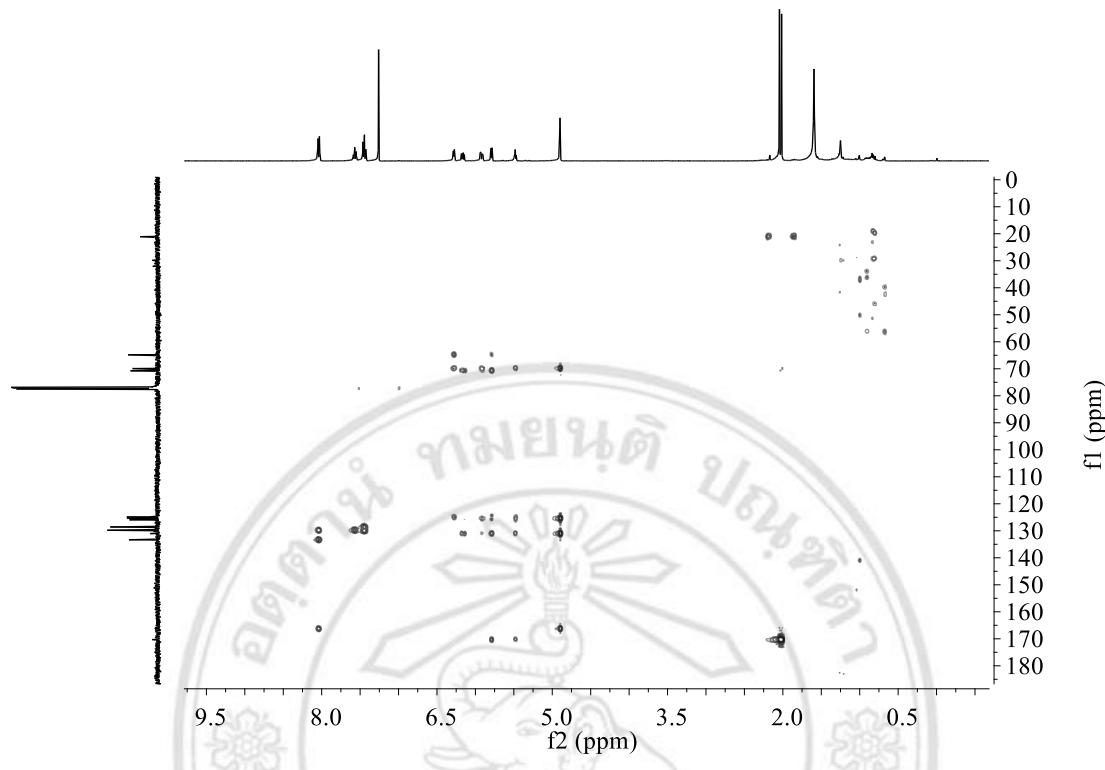
**Figure A70**  $^1\text{H}$  NMR Spectrum ( $\text{CDCl}_3$ , 400 MHz) of *trans*-5,6-Diacetoxy-1-(benzoyloxymethyl)-1,3-cyclohexadiene (**DY14**)



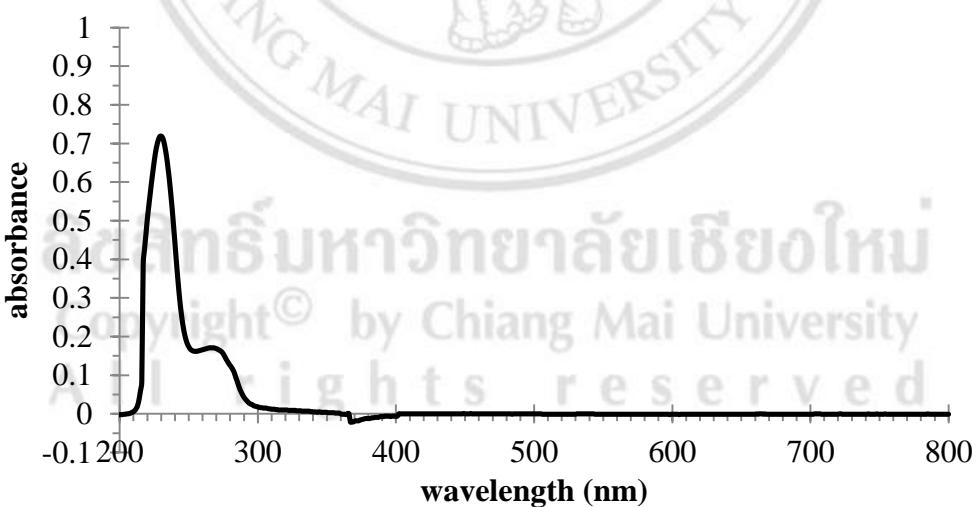
**Figure A71**  $^{13}\text{C}$  NMR, DEPT135 and DEPT90 Spectra ( $\text{CDCl}_3$ , 100 MHz) of *trans*-5,6-Diacetoxy-1-(benzoyloxymethyl)-1,3-cyclohexadiene (**DY14**)



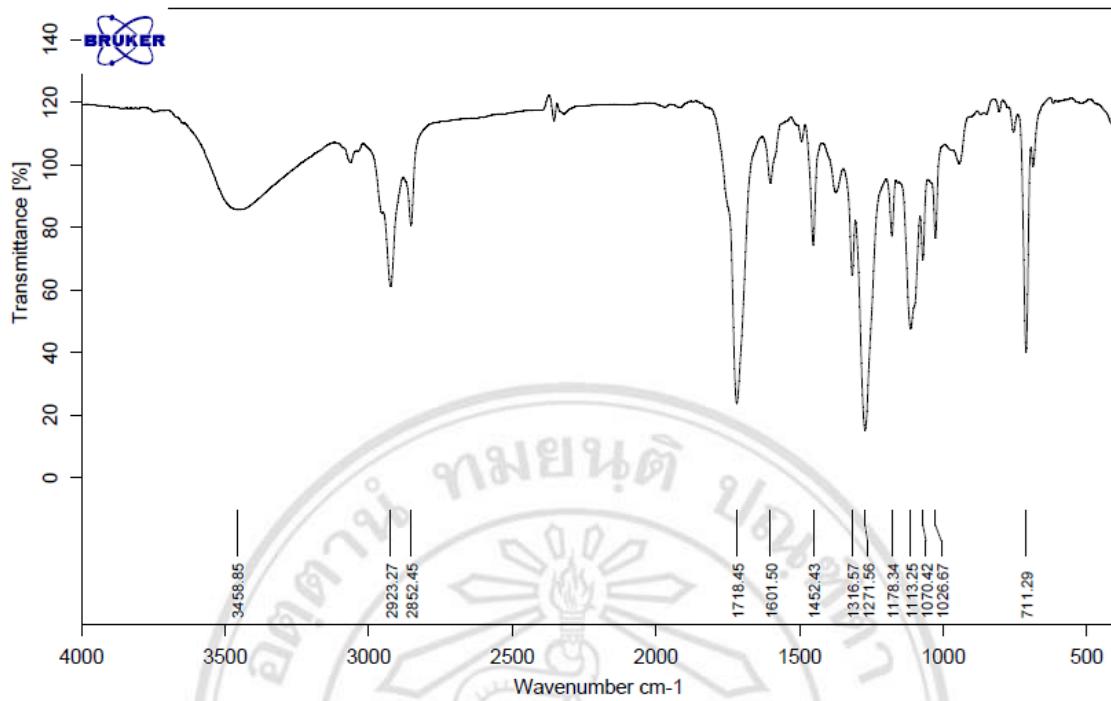
**Figure A72** COSY Spectrum of *trans*-5,6-Diacetoxy-1-(benzoyloxymethyl)-1,3-cyclohexadiene (**DY14**) in  $\text{CDCl}_3$



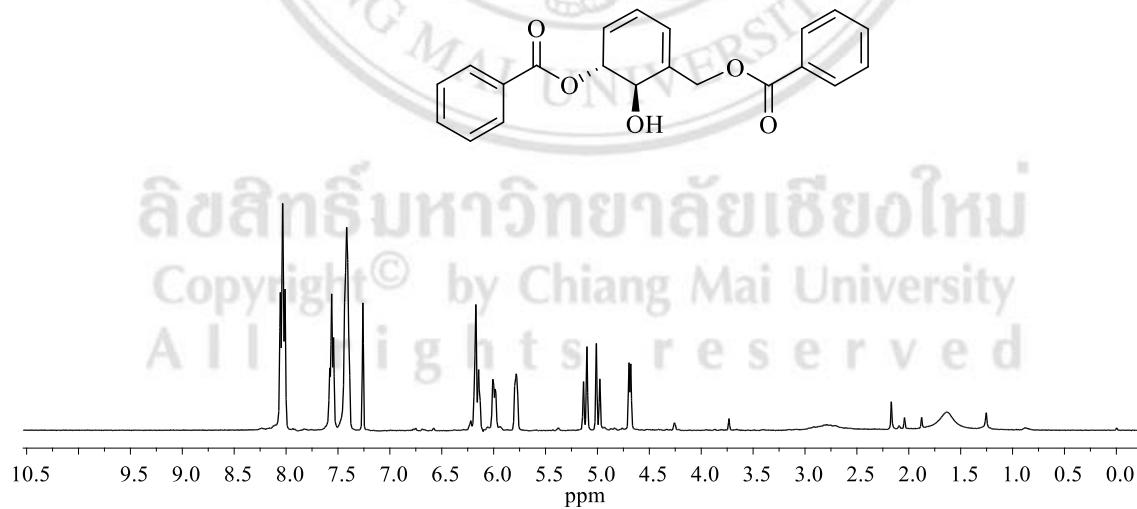
**Figure A73** HMBC Spectrum of *trans*-5,6-Diacetoxy-1-(benzoyloxymethyl)-1,3-cyclohexadiene (**DY14**) in  $\text{CDCl}_3$



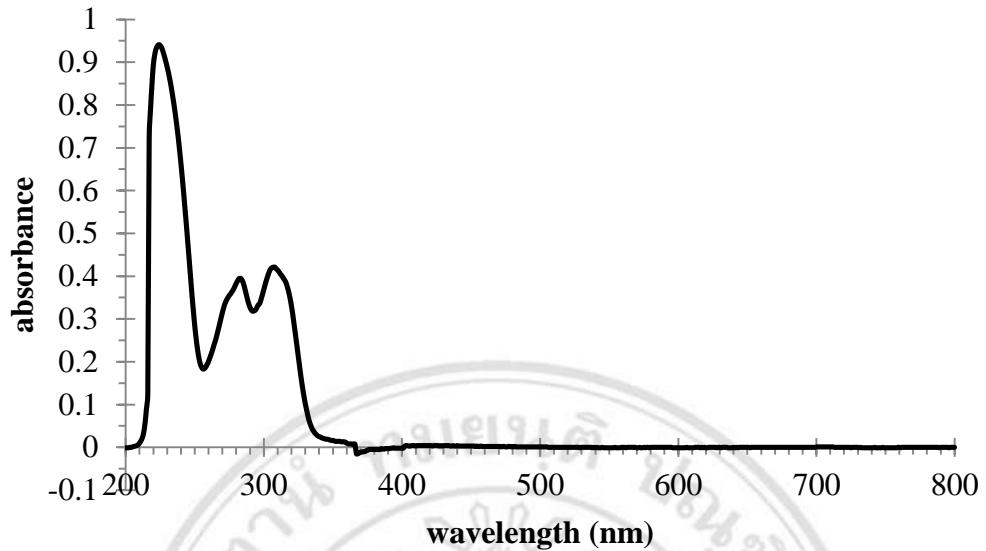
**Figure A74** UV Spectrum of (-)-Desoxypipoxide (**DY15**)



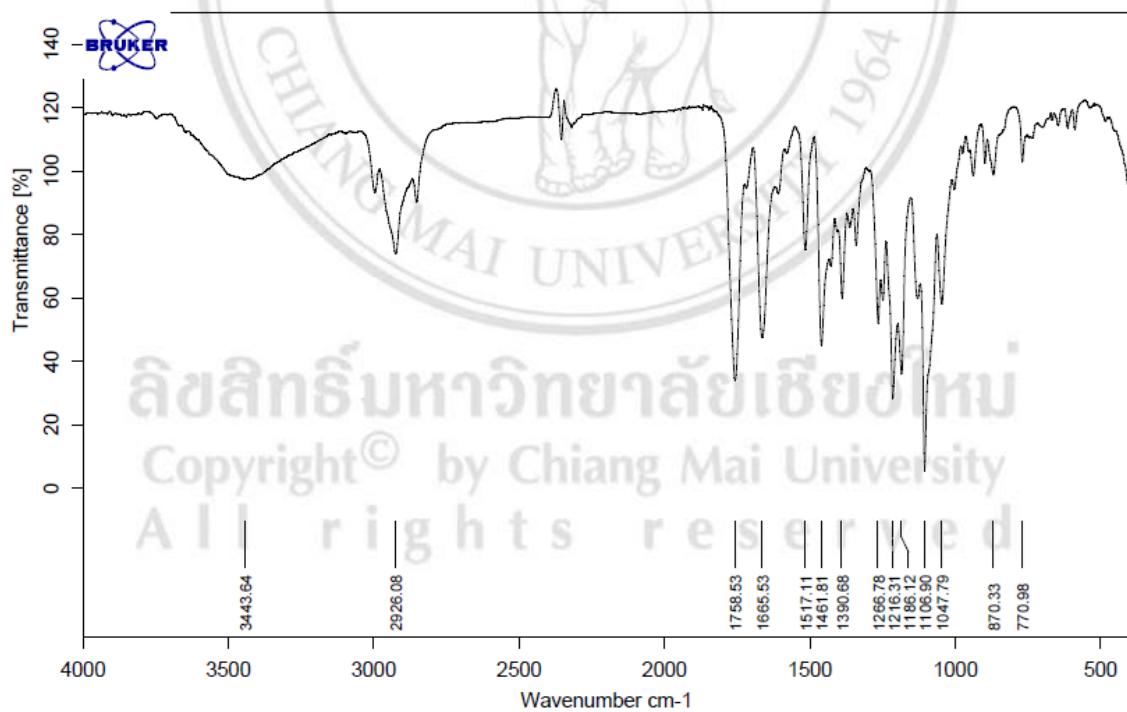
**Figure A75** IR Spectrum of (*-*)-Desoxypipoxide (**DY15**)



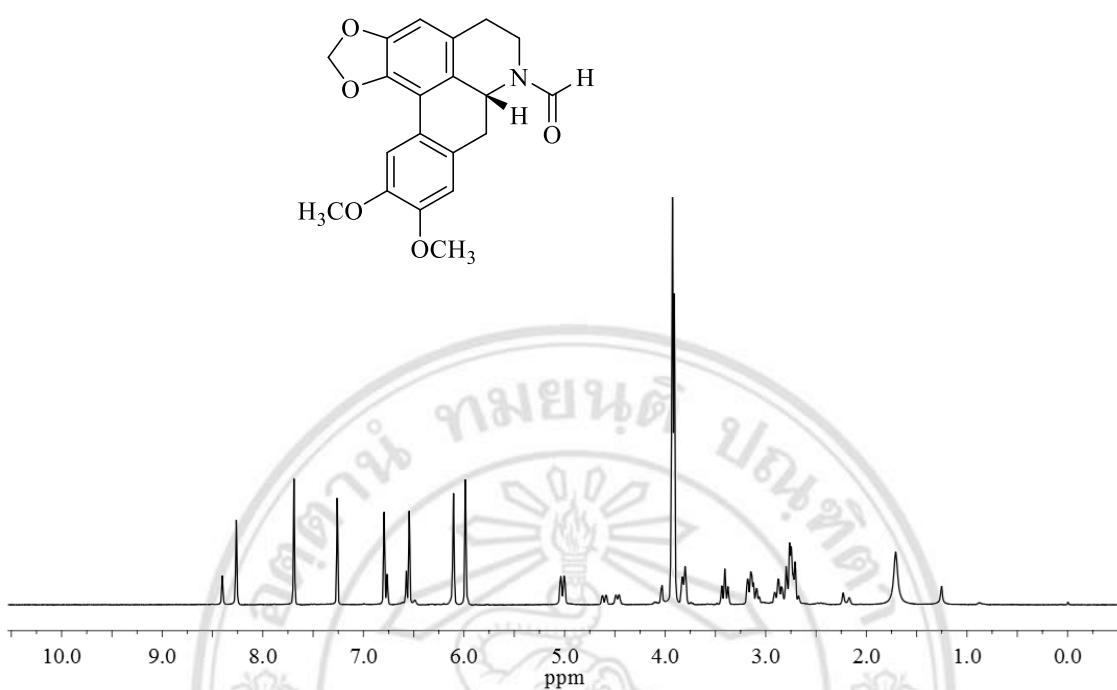
**Figure A76**  $^1\text{H}$  NMR Spectrum ( $\text{CDCl}_3$ , 400 MHz) of (*-*)-Desoxypipoxide (**DY15**)



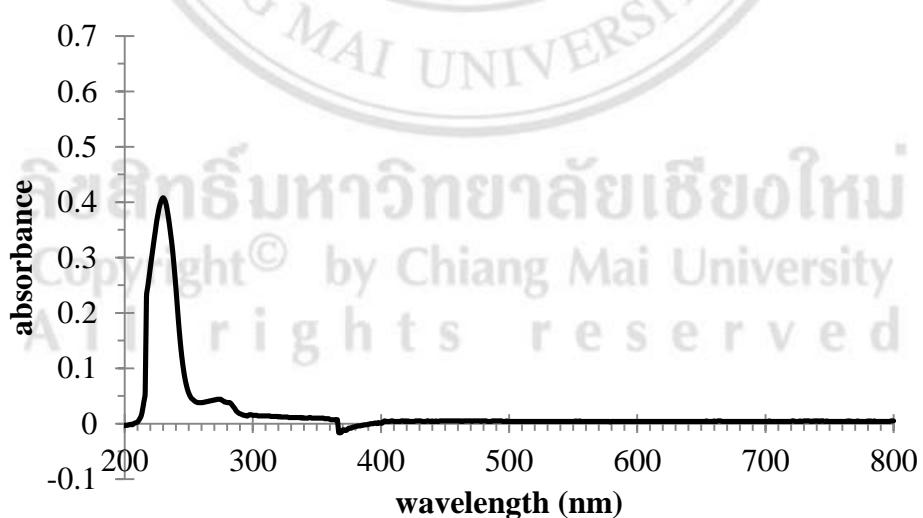
**Figure A77** UV Spectrum of (-)-Arcabucoine (**DY16**)



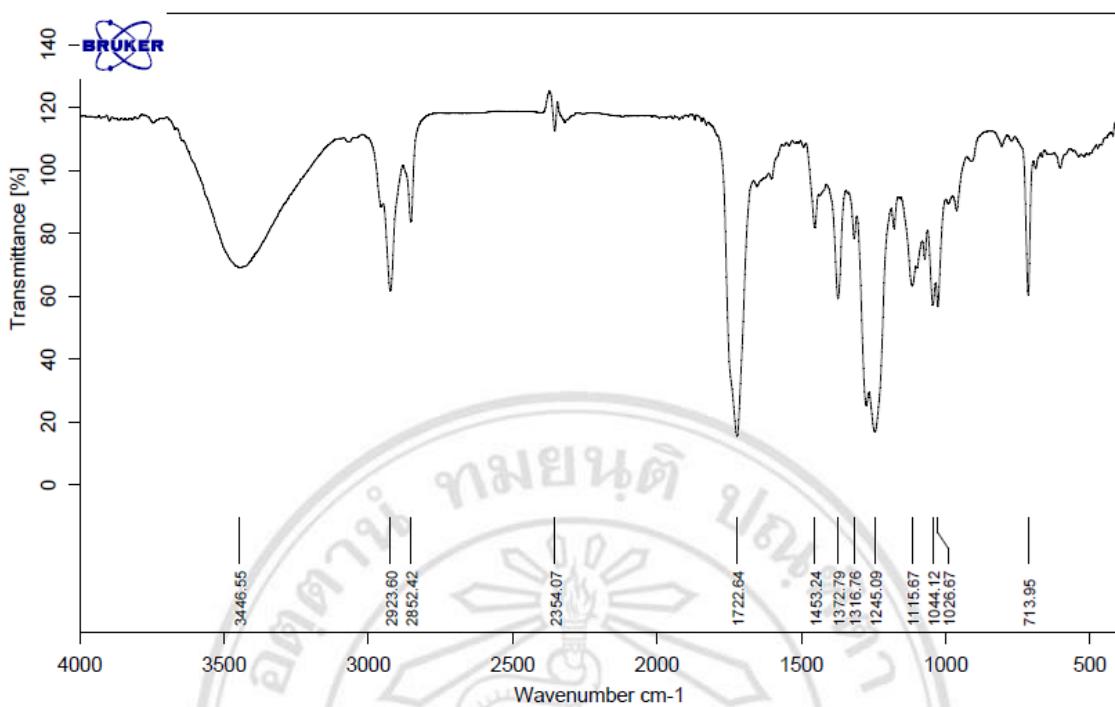
**Figure A78** IR Spectrum of (-)-Arcabucoine (**DY16**)



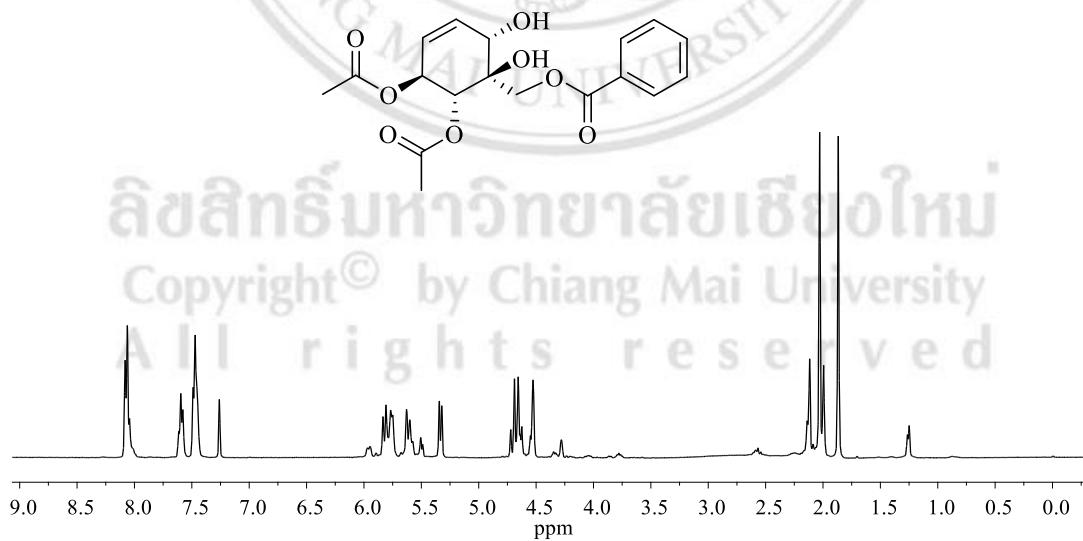
**Figure A79**  $^1\text{H}$  NMR Spectrum ( $\text{CDCl}_3$ , 400 MHz) of ( $-$ )-Arcabucone (**DY16**)



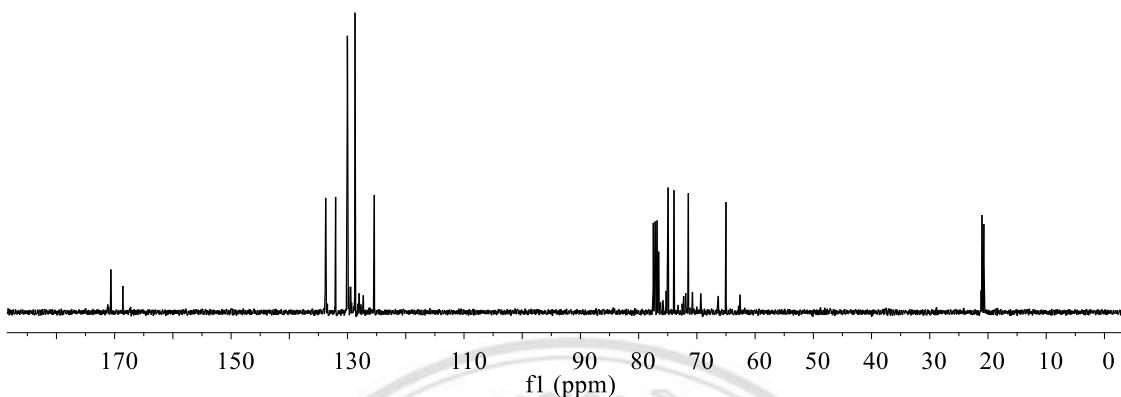
**Figure A80** UV Spectrum of (+)-Senediol (**DY17**)



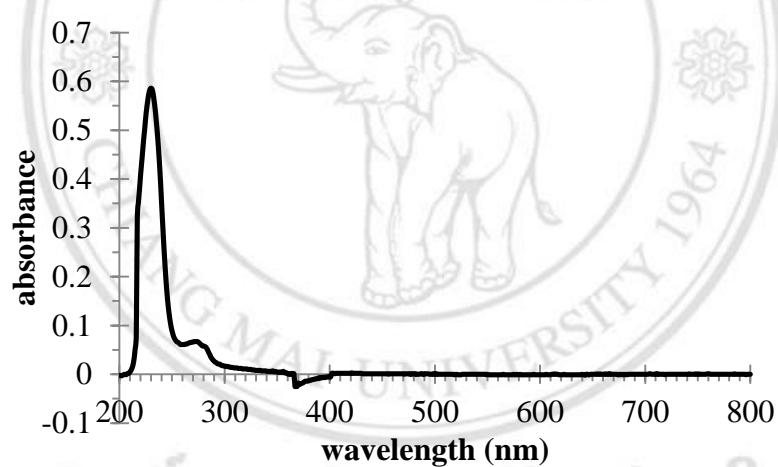
**Figure A81** IR Spectrum of (+)-Senediol (**DY17**)



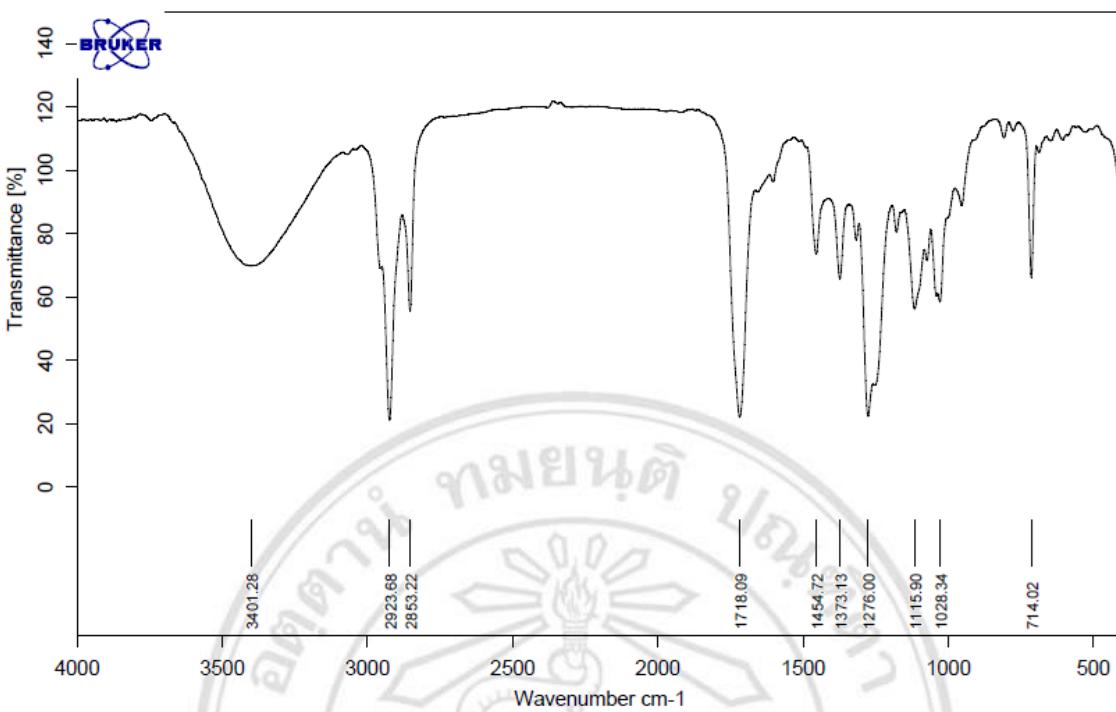
**Figure A82**  $^1\text{H}$  NMR Spectrum ( $\text{CDCl}_3$ , 400 MHz) of (+)-Senediol (**DY17**)



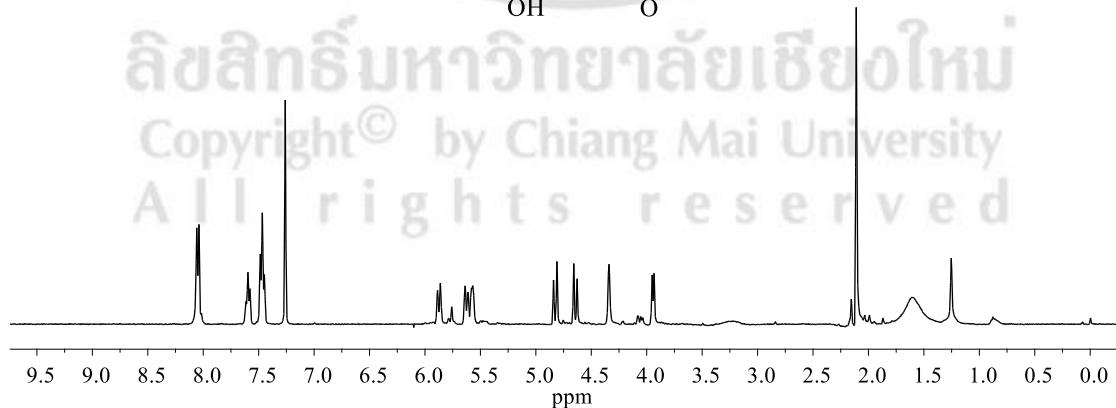
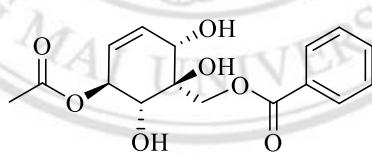
**Figure A83**  $^{13}\text{C}$  NMR Spectrum ( $\text{CDCl}_3$ , 100 MHz) of (+)-Senediol (DY17)



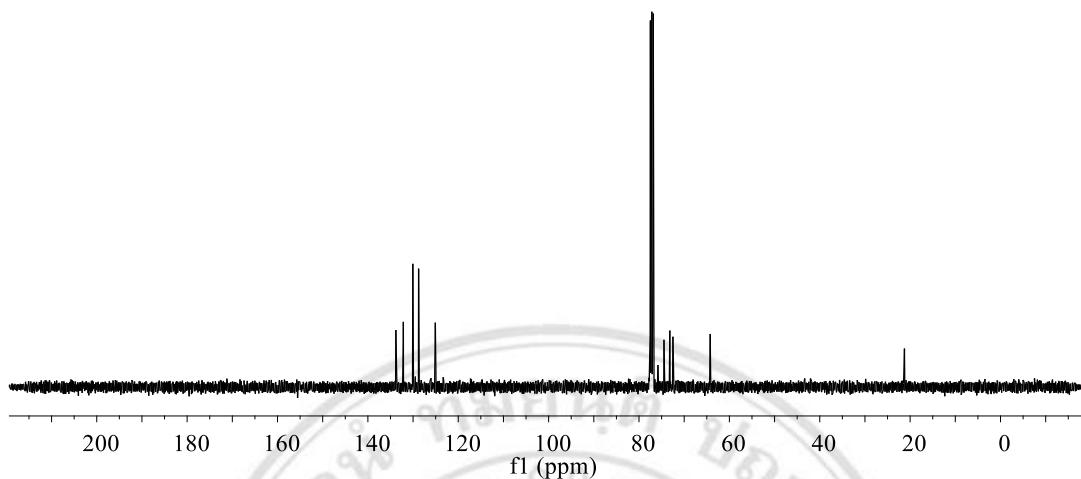
**Figure A84** UV Spectrum of 1S,2R,3R,4S-2-[(Benzoyloxy)methyl]cyclohex-5-ene-1,2,3,4-tetrol-4-acetate (DY18)



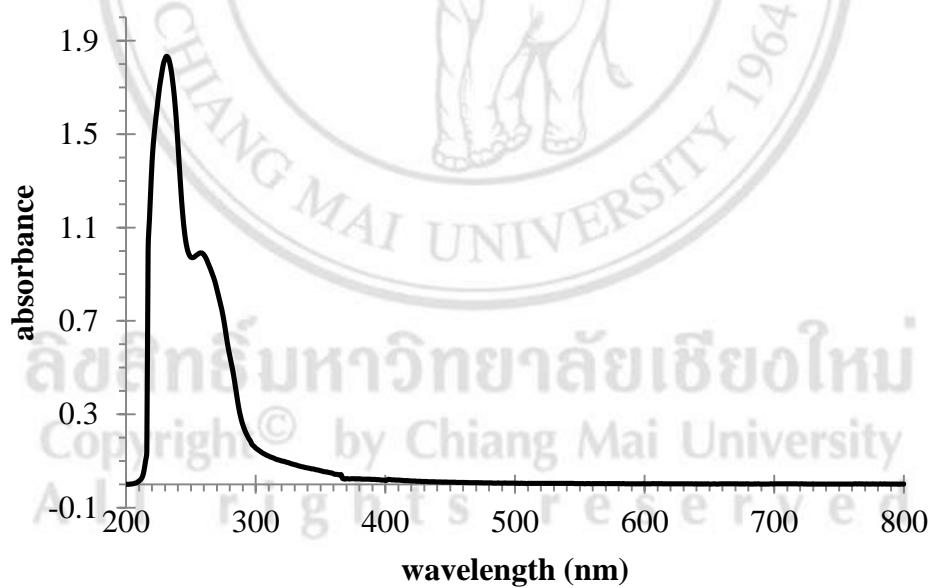
**Figure A85** IR Spectrum of 1*S*,2*R*,3*R*,4*S*-2-[(Benzoyloxy)methyl]cyclohex-5-ene-1,2,3,4-tetrol-4-acetate (**DY18**)



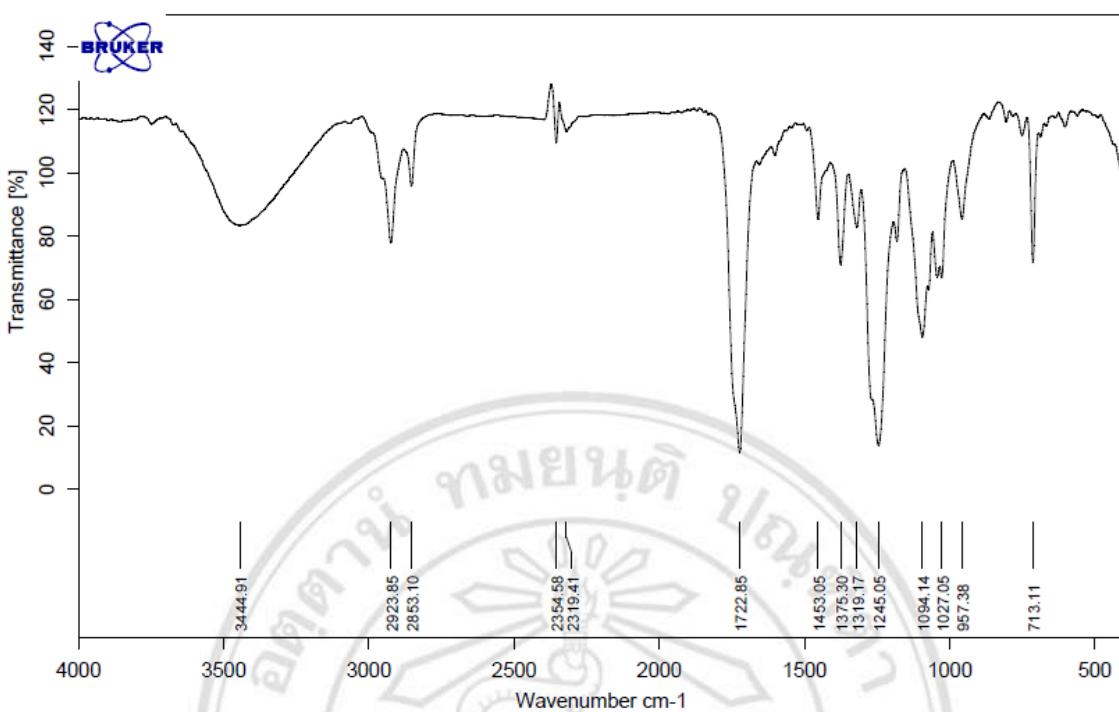
**Figure A86** <sup>1</sup>H NMR Spectrum (CDCl<sub>3</sub>, 400 MHz) of 1*S*,2*R*,3*R*,4*S*-2-[(Benzoyloxy)methyl]cyclohex-5-ene-1,2,3,4-tetrol-4-acetate (**DY18**)



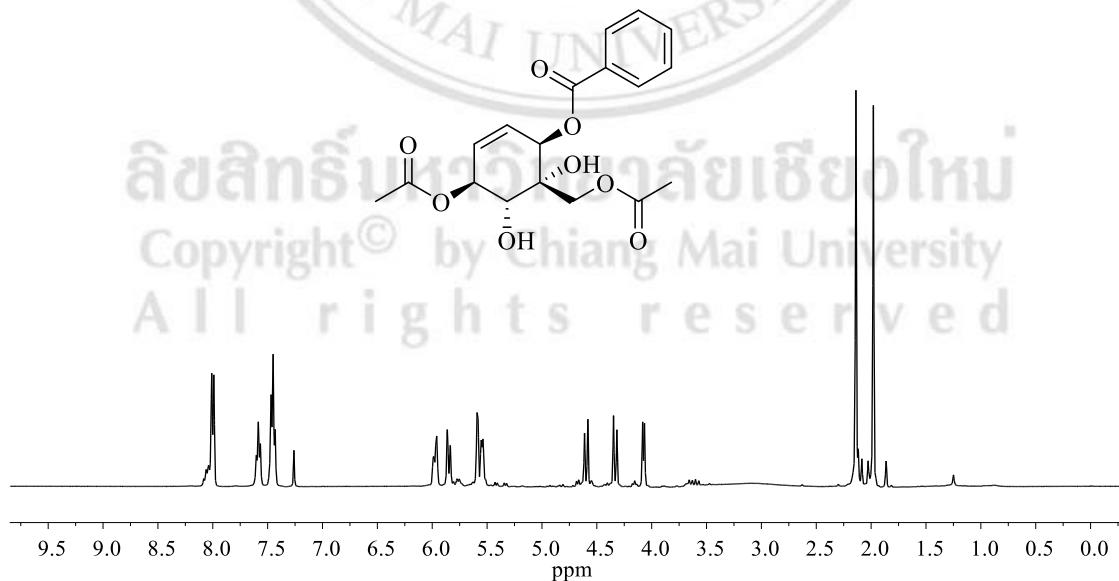
**Figure A87**  $^{13}\text{C}$  NMR Spectrum ( $\text{CDCl}_3$ , 100 MHz) of  $1S,2R,3R,4S$ -2-[(Benzoyloxy)methyl]cyclohex-5-ene-1,2,3,4-tetrol-4-acetate (**DY18**)



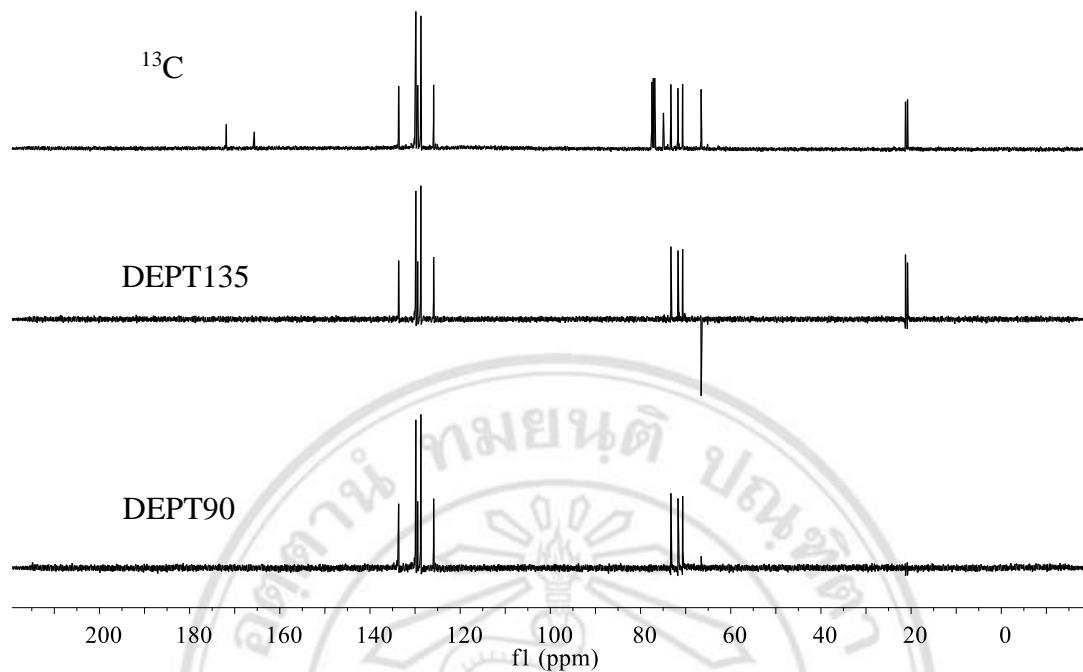
**Figure A88** UV Spectrum of Uvaribonol G (**DY19**)



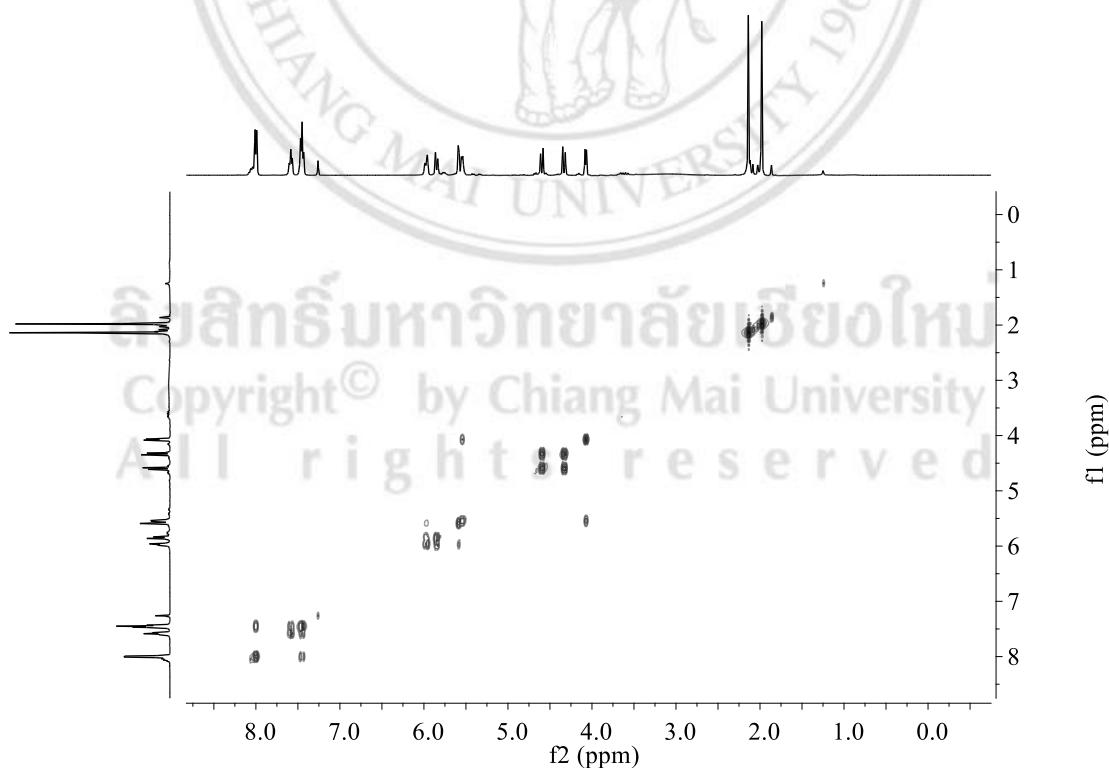
**Figure A89** IR Spectrum of Uvaribonol G (**DY19**)



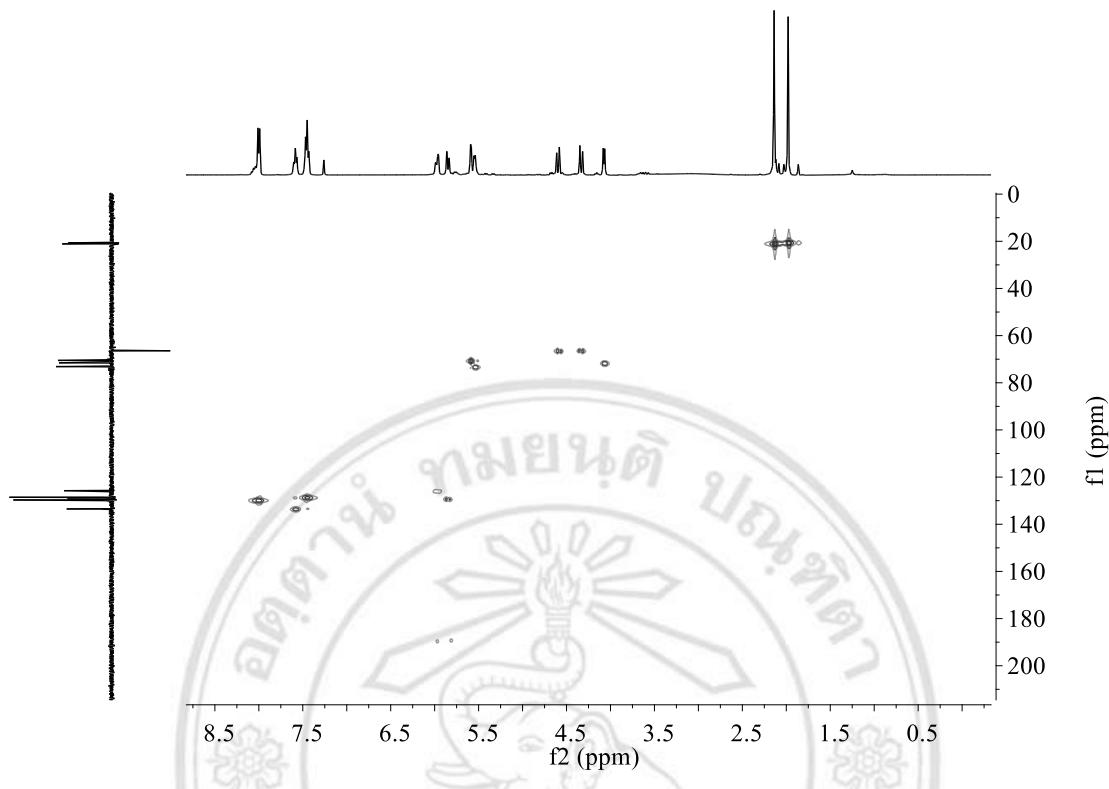
**Figure A90**  $^1\text{H}$  NMR Spectrum ( $\text{CDCl}_3$ , 400 MHz) of Uvaribonol G (**DY19**)



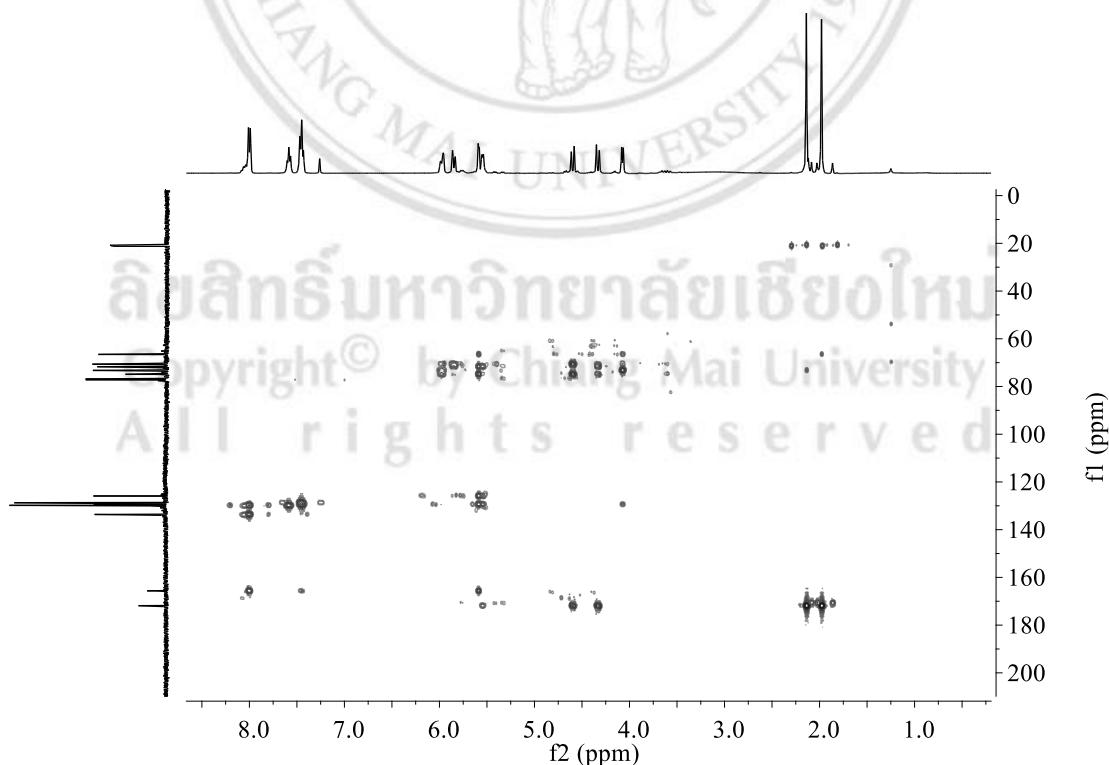
**Figure A91**  $^{13}\text{C}$  NMR, DEPT135 and DEPT90 Spectra ( $\text{CDCl}_3$ , 100 MHz) of Uvaribonol G (DY19)



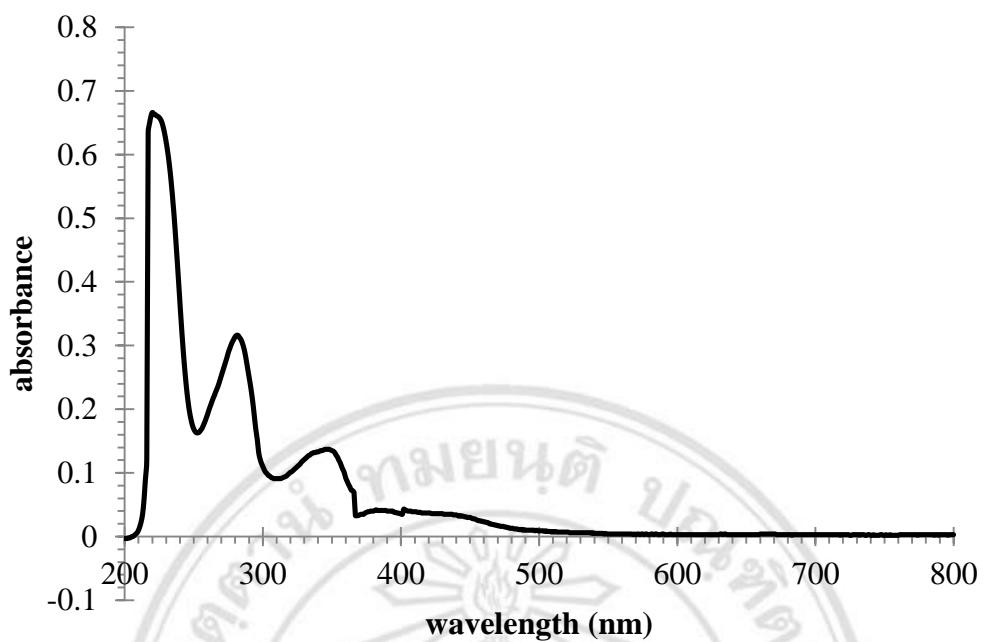
**Figure A92** COSY Spectrum of Uvaribonol G (DY19) in  $\text{CDCl}_3$



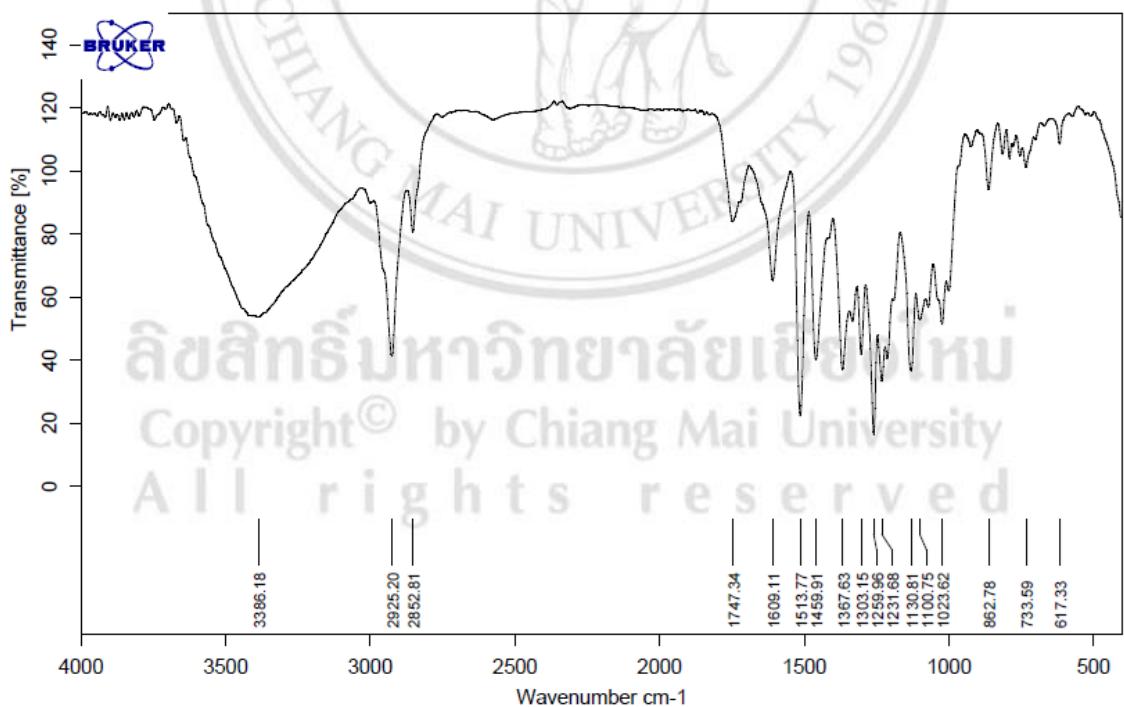
**Figure A93** HMQC Spectrum of Uvaribonol G (**DY19**) in  $\text{CDCl}_3$



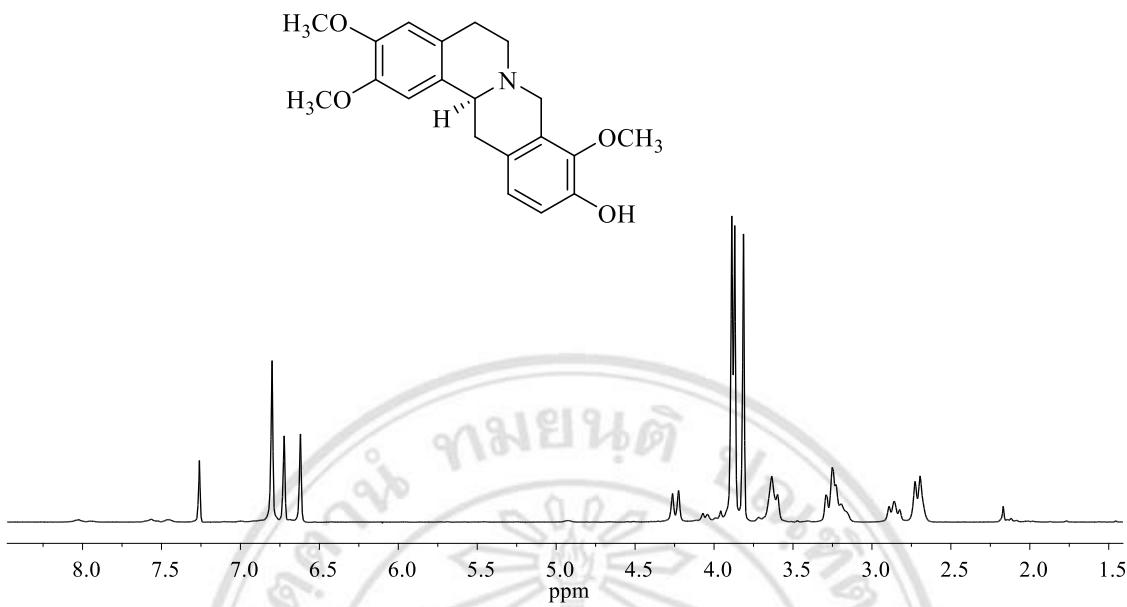
**Figure A94** HMBC Spectrum of Uvaribonol G (**DY19**) in  $\text{CDCl}_3$



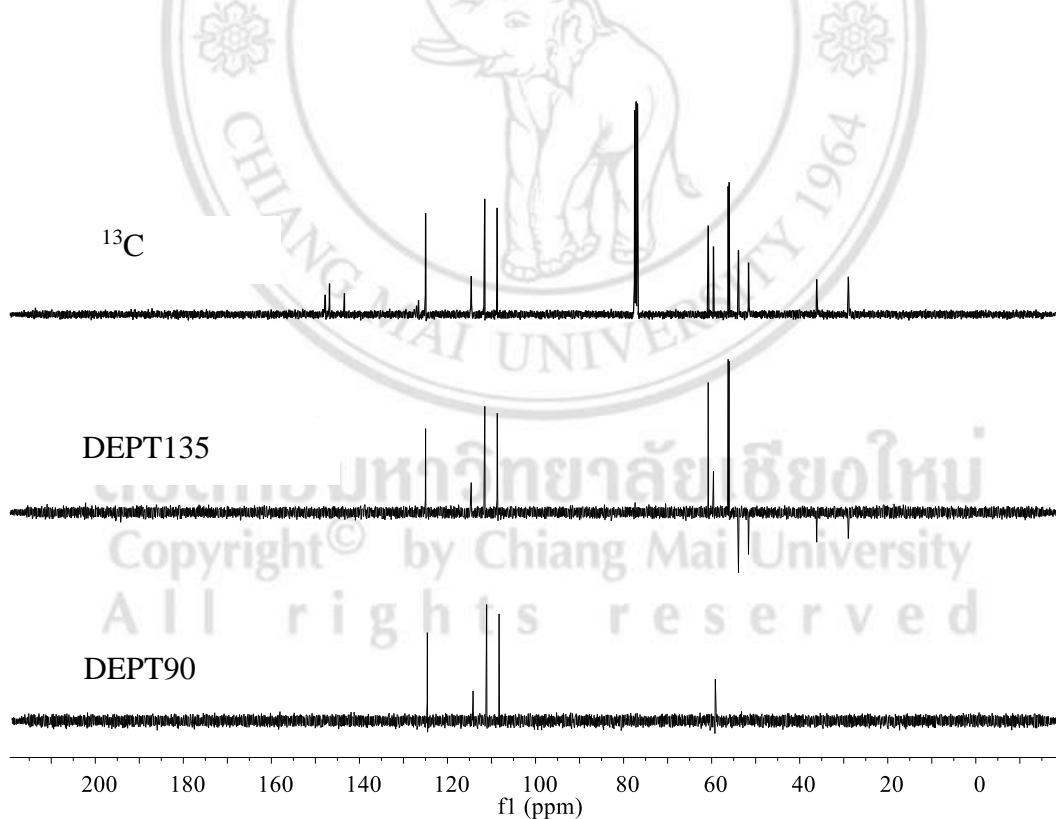
**Figure A95** UV Spectrum of (-)-Corydalmine (**DY20**)



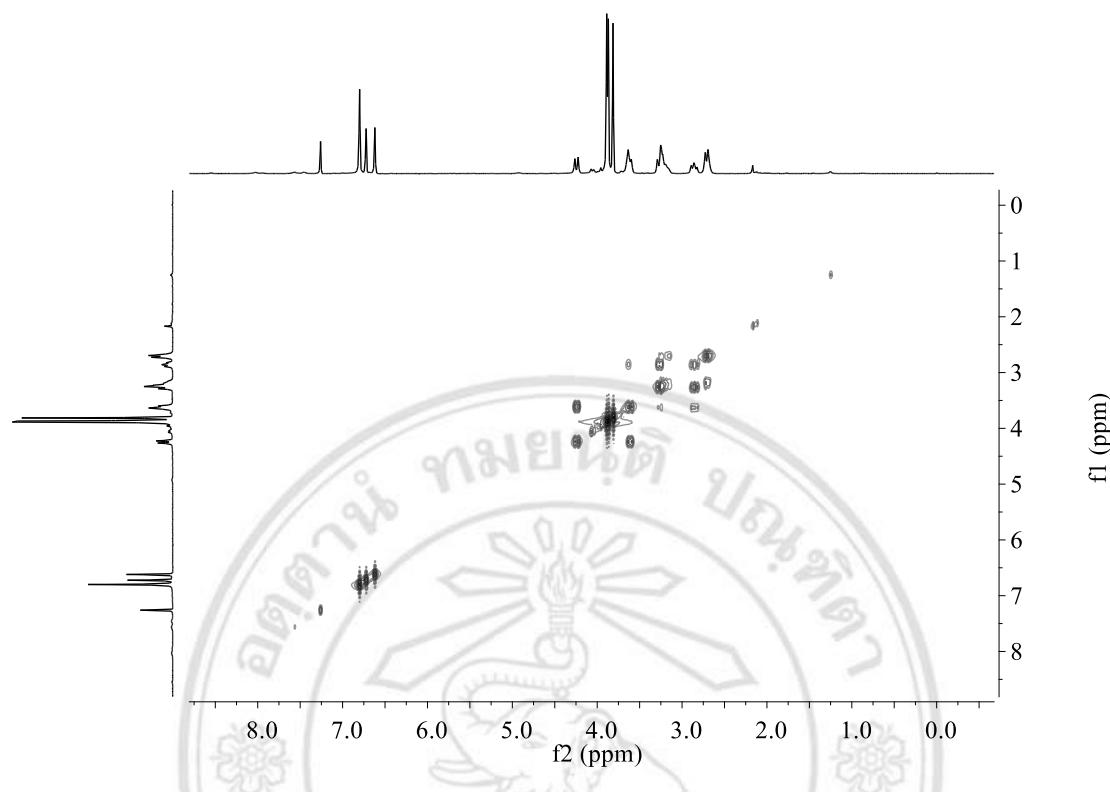
**Figure A96** IR Spectrum of (-)-Corydalmine (**DY20**)



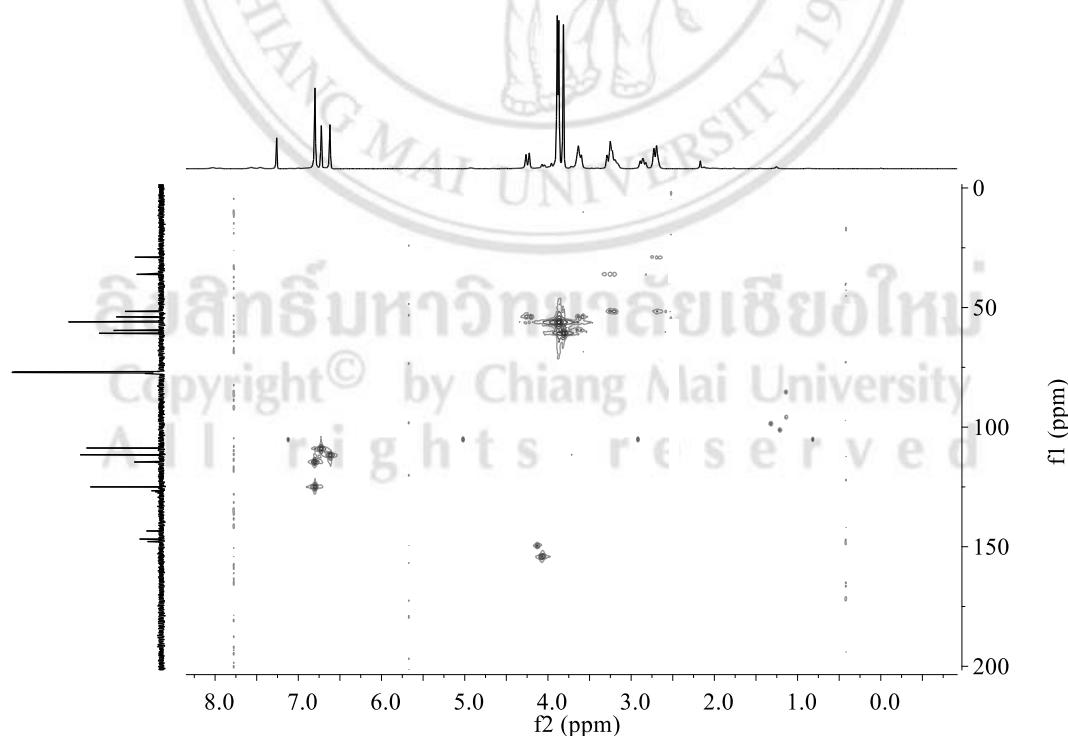
**Figure A97**  $^1\text{H}$  NMR Spectrum ( $\text{CDCl}_3$ , 400 MHz) of ( $-$ )-Corydalmine (**DY20**)



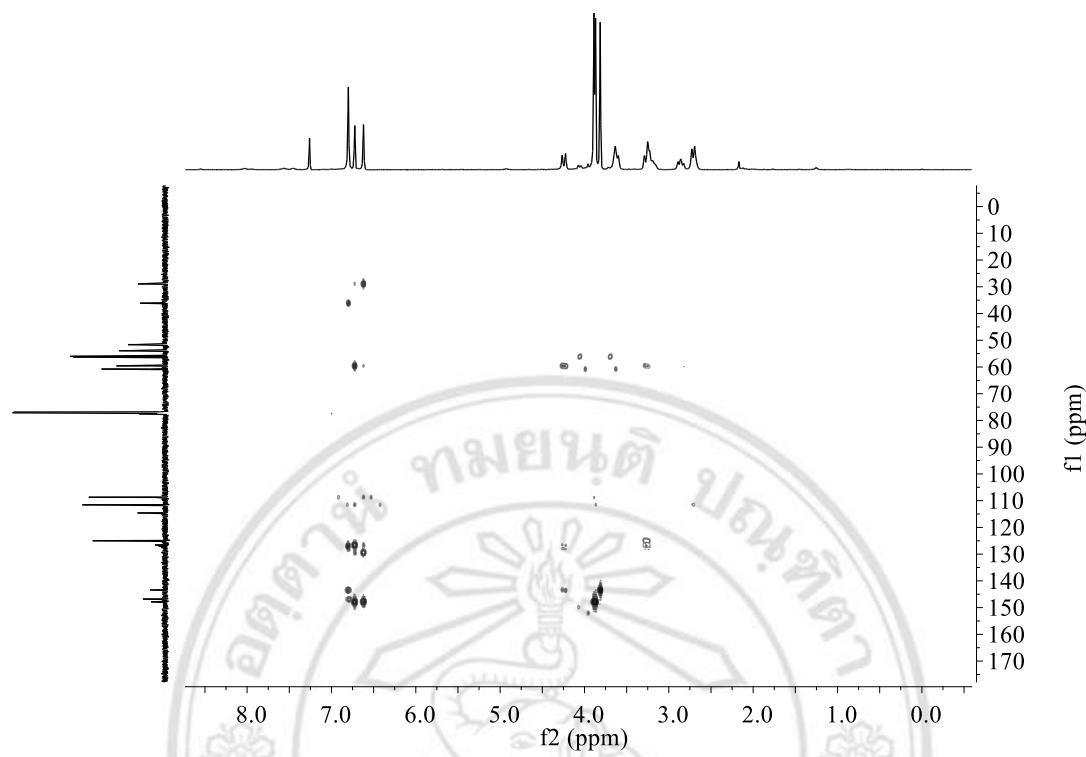
**Figure A98**  $^{13}\text{C}$  NMR, DEPT135 and DEPT90 Spectra ( $\text{CDCl}_3$ , 100 MHz) of ( $-$ )-Corydalmine (**DY20**)



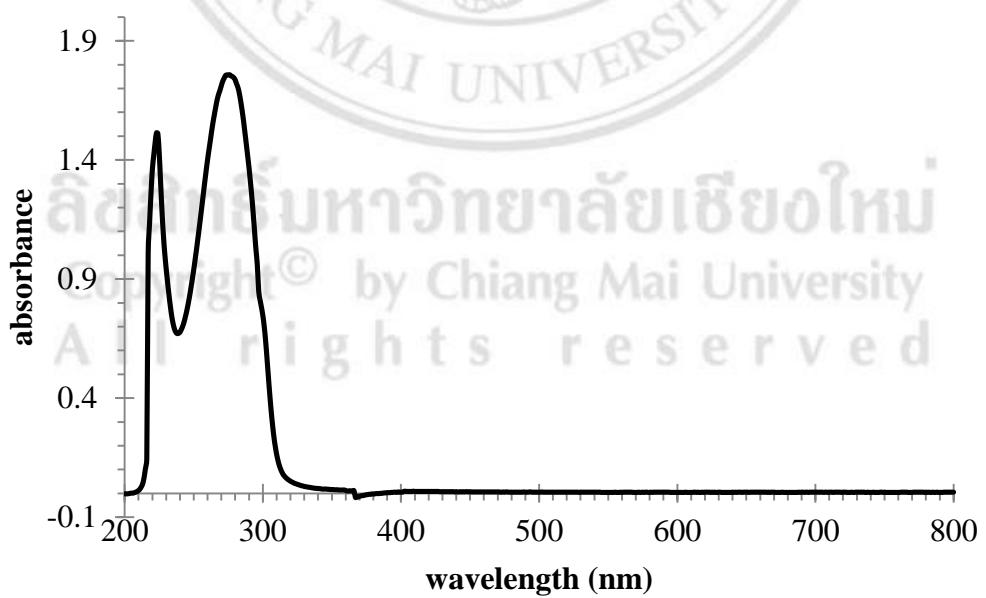
**Figure A99** COSY Spectrum of (-)-Corydalmine (**DY20**) in  $\text{CDCl}_3$



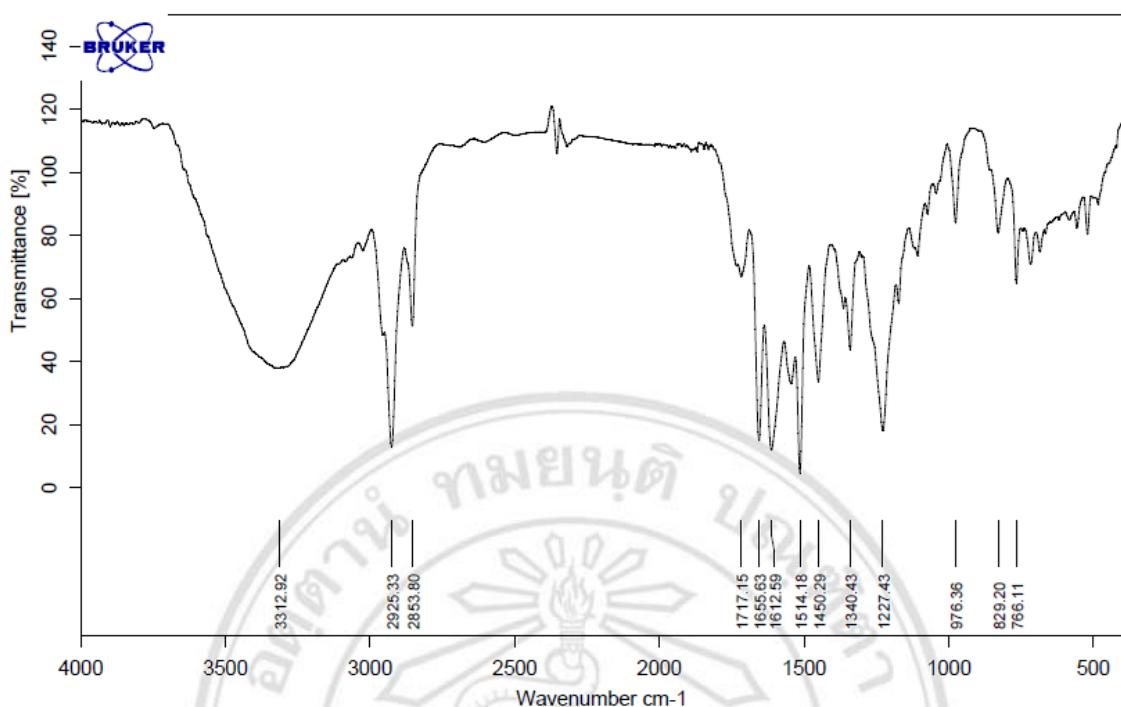
**Figure A100** HMQC Spectrum of (-)-Corydalmine (**DY20**) in  $\text{CDCl}_3$



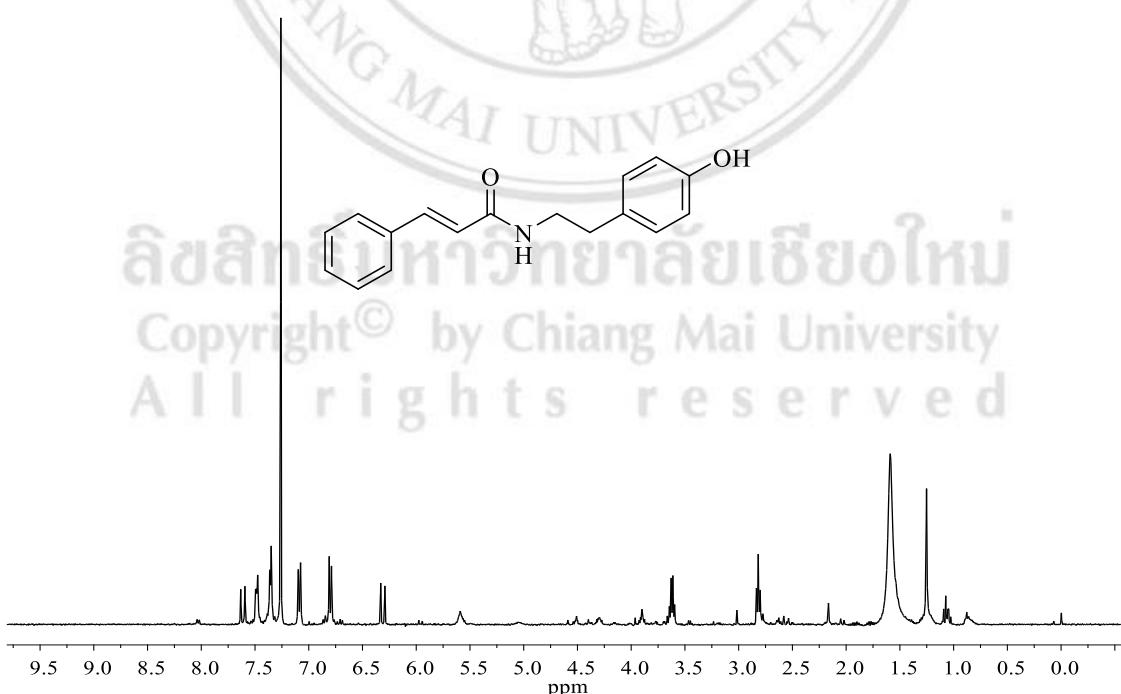
**Figure A101** HMBC Spectrum of (*-*)-Corydalmine (**DY20**) in  $\text{CDCl}_3$



**Figure A102** UV Spectrum of *trans*-*N*-Cinnamoyltyramine (**DY21**)



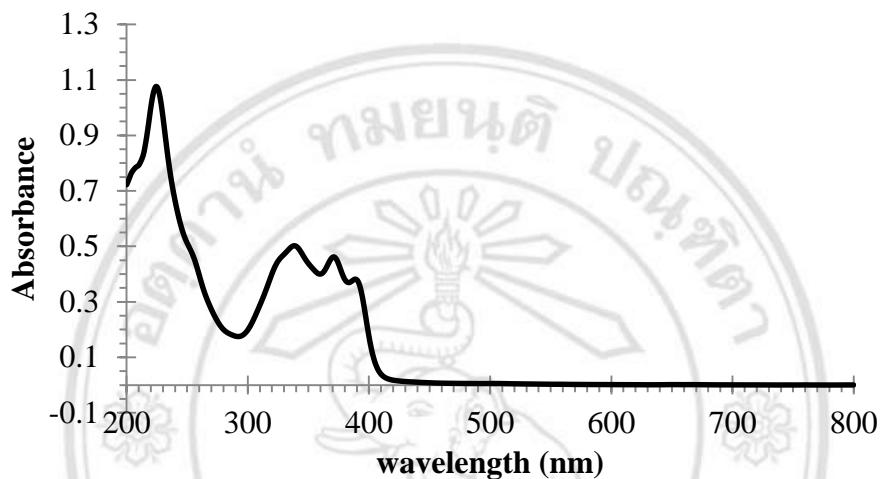
**Figure A103** IR Spectrum of *trans*-N-Cinnamoyltyramine (**DY21**)



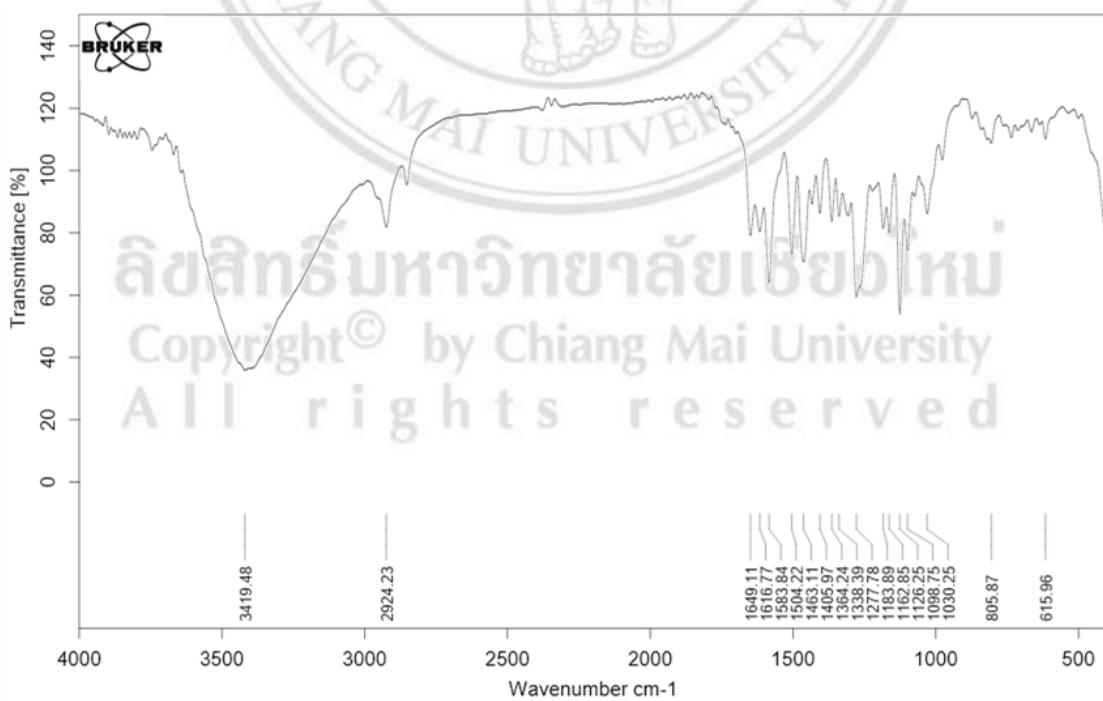
**Figure A104**  $^1\text{H}$  NMR Spectrum ( $\text{acetone-}d_6$ , 400 MHz) of *trans*-N-Cinnamoyltyramine (**DY21**)

## APPENDIX B

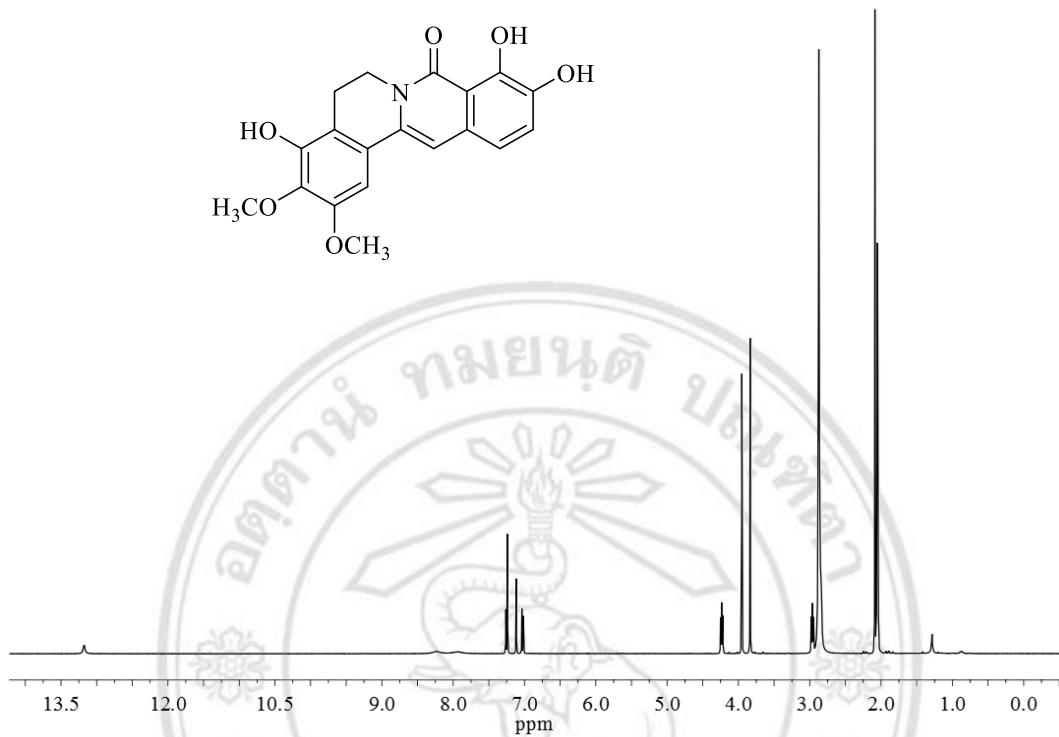
### Spectroscopic Data of Isolated Compounds from *M. cuneata*



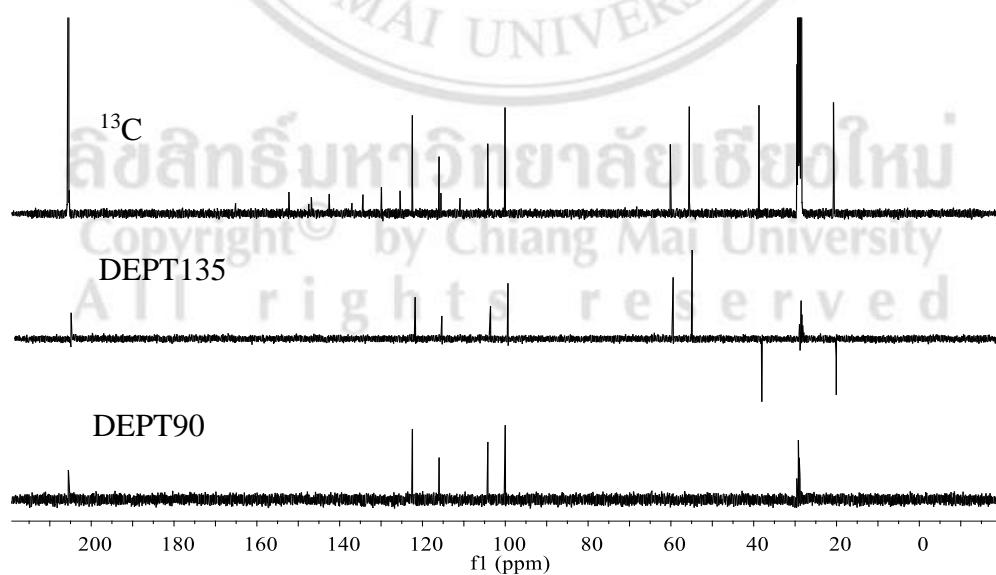
**Figure B1** UV Spectrum of Miliusacunine A (MC1)



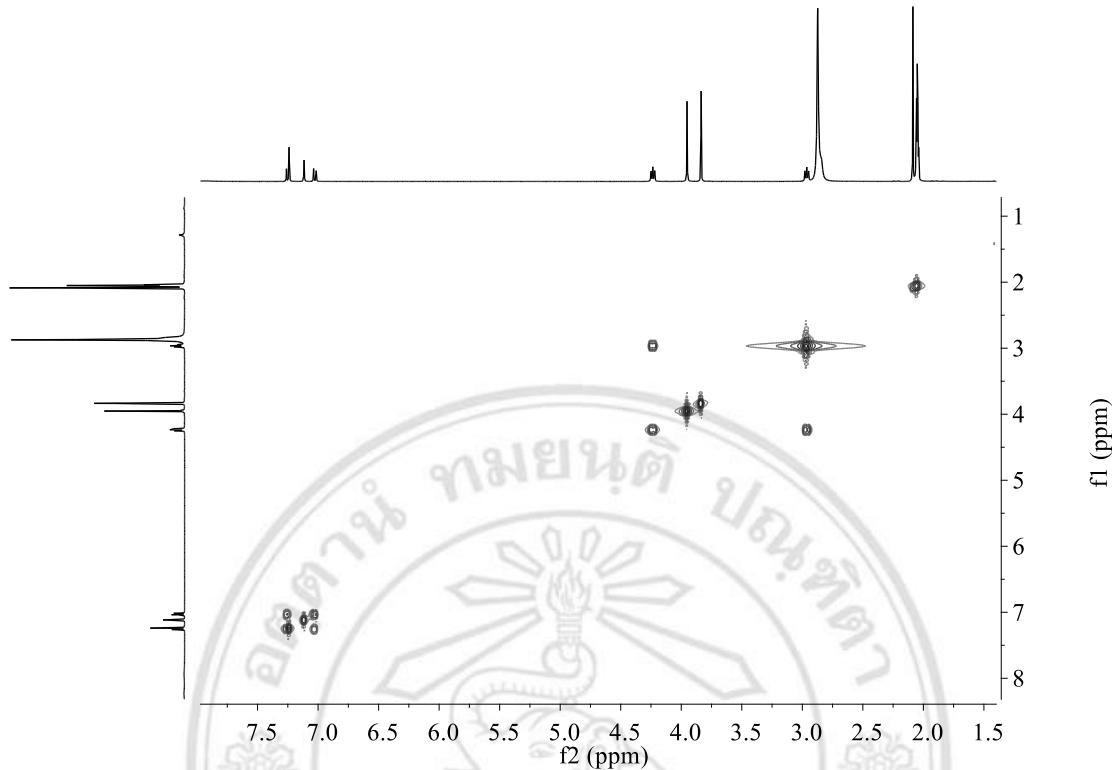
**Figure B2** IR Spectrum of Miliusacunine A (MC1)



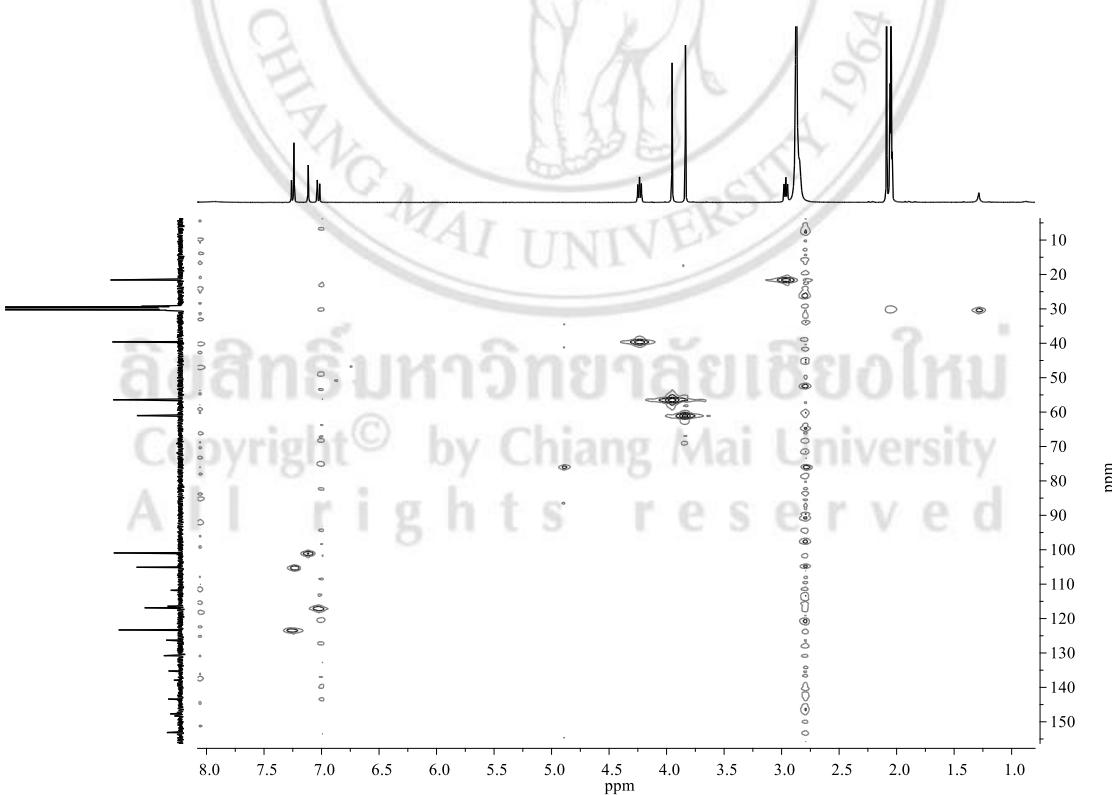
**Figure B3**  $^1\text{H}$  NMR Spectrum (acetone- $d_6$ , 400 MHz) of Miliusacunine A (**MC1**)



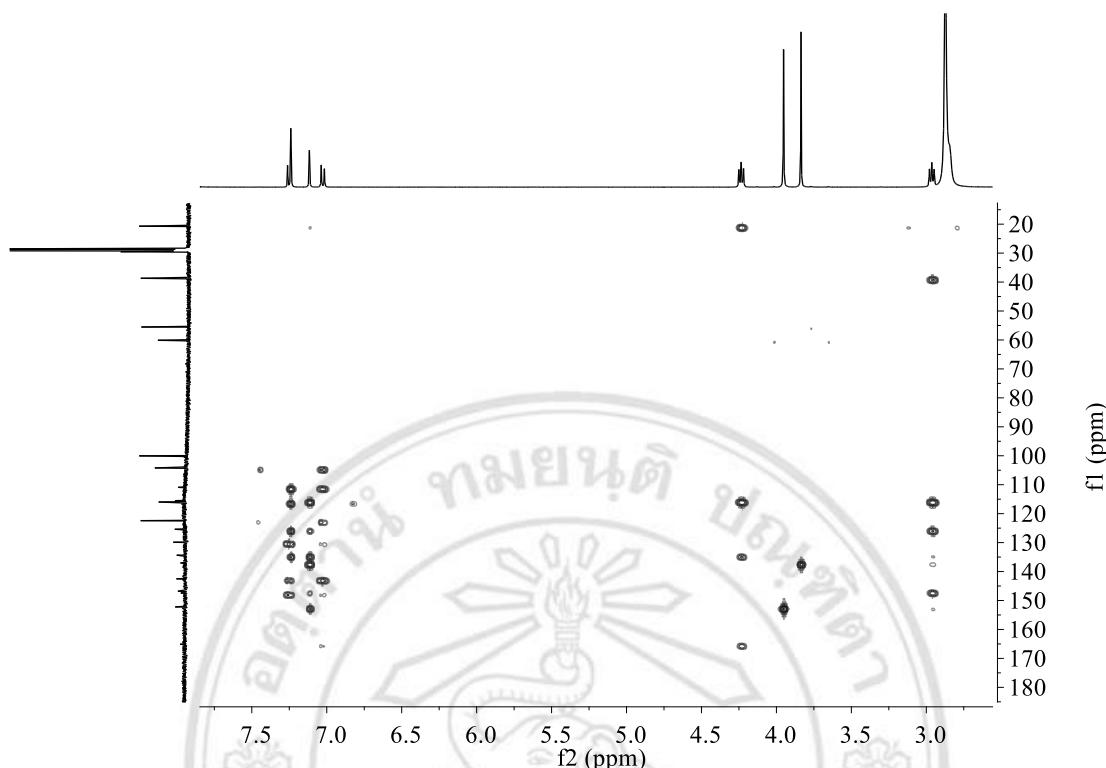
**Figure B4**  $^{13}\text{C}$  NMR, DEPT135 and DEPT90 Spectra (acetone- $d_6$ , 100 MHz) of Miliusacunine A (**MC1**)



**Figure B5** COSY Spectrum of Miliusacunine A (**MC1**) in acetone-*d*<sub>6</sub>



**Figure B6** HMQC Spectrum of Miliusacunine A (**MC1**) in Acetone-*d*<sub>6</sub>



**Figure B7** HMBC Spectrum of Miliusacunine A (MC1) in Acetone-*d*6

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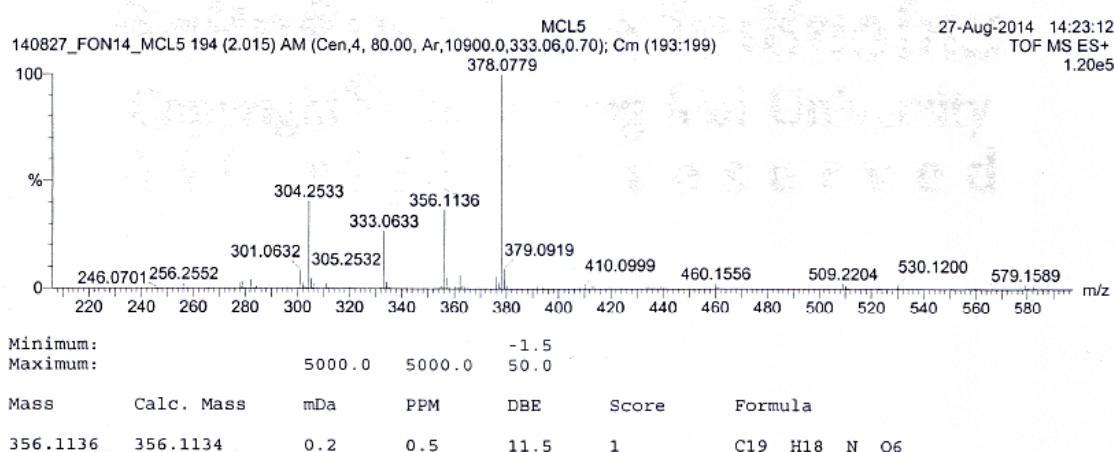
##### Single Mass Analysis

Tolerance = 5000.0 PPM / DBE: min = -1.5, max = 50.0

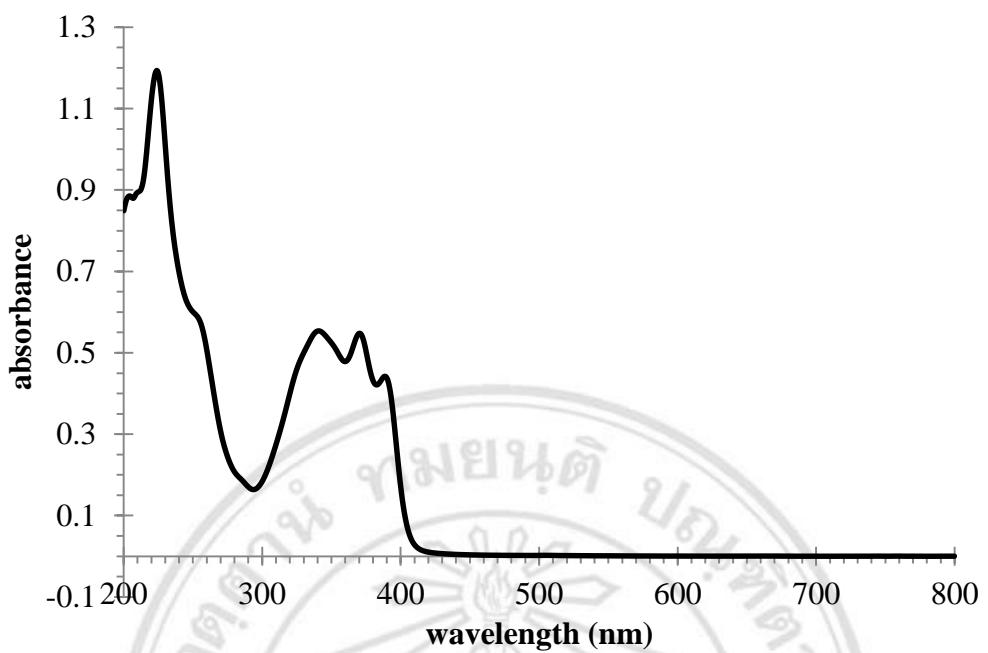
Isotope cluster parameters: Separation = 1.0 Abundance = 1.0%

Monoisotopic Mass, Odd and Even Electron Ions

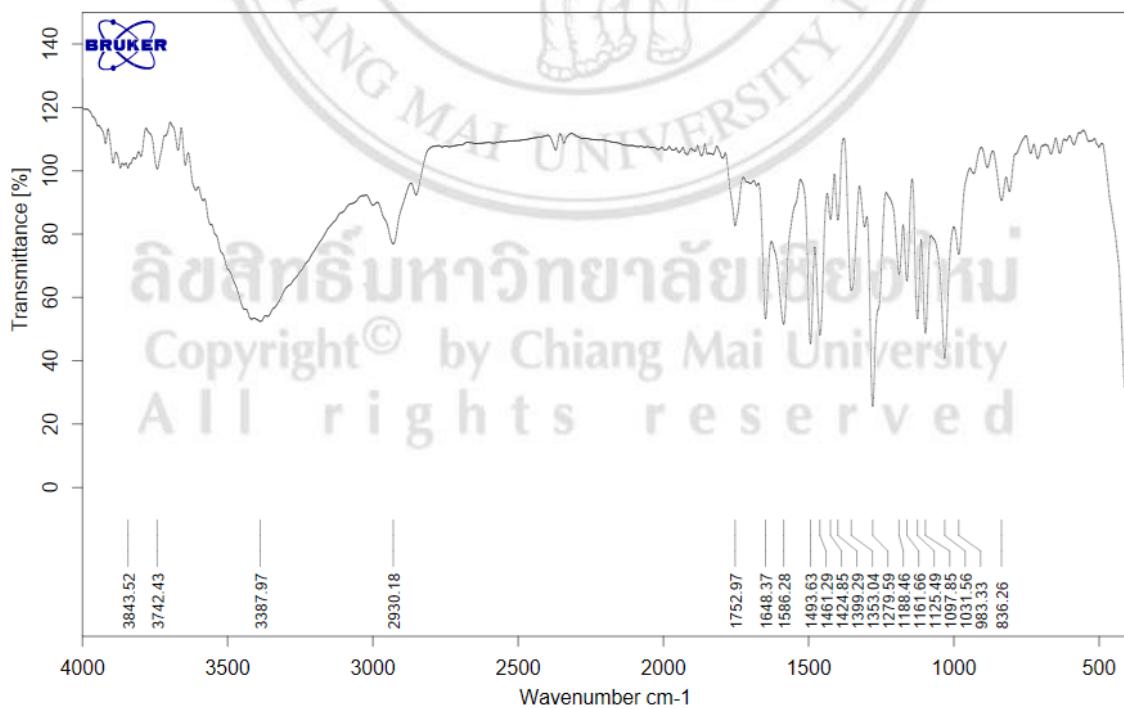
1 formula(e) evaluated with 1 results within limits (up to 50 closest results for each mass)



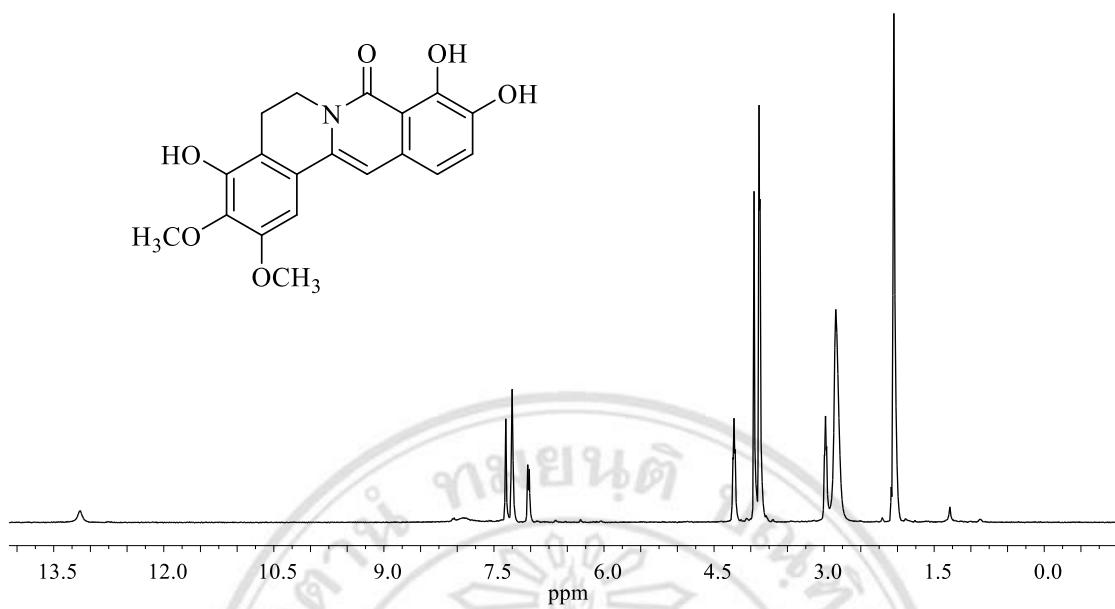
**Figure B8** HRESIMS Spectrum of Miliusacunine A (MC1)



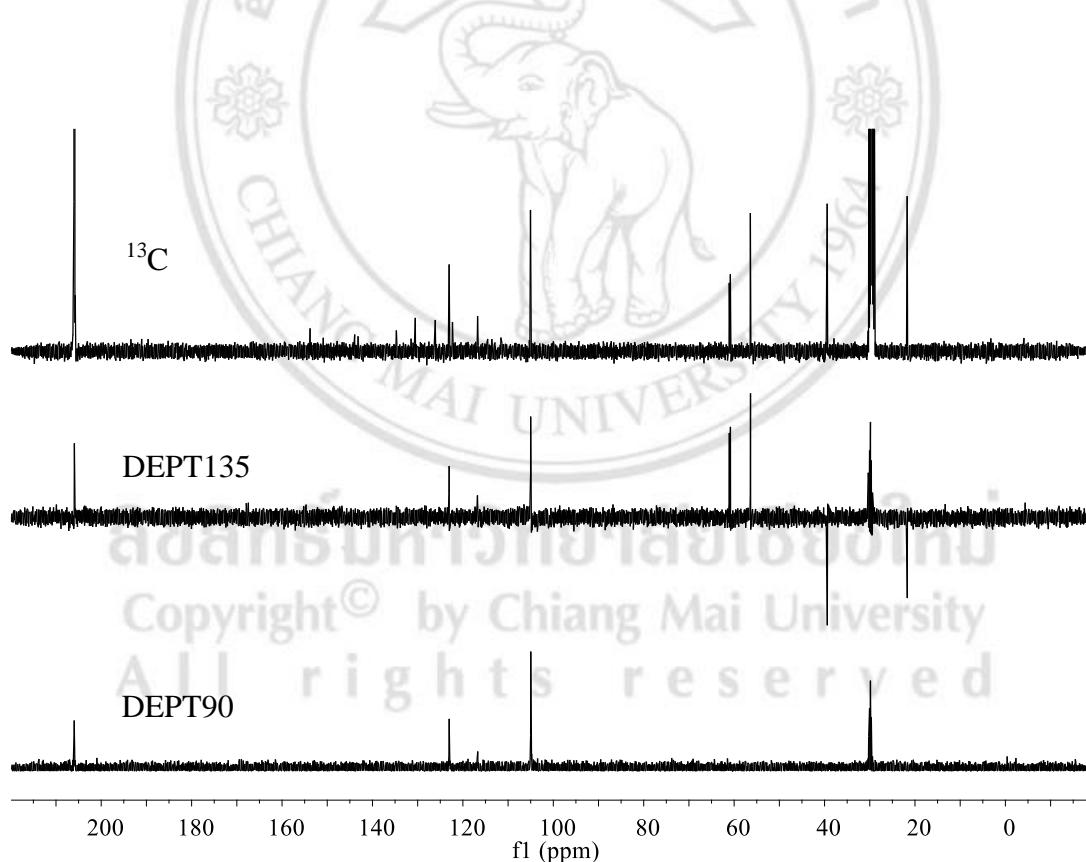
**Figure B9** UV Spectrum of Miliusacunine B (MC2)



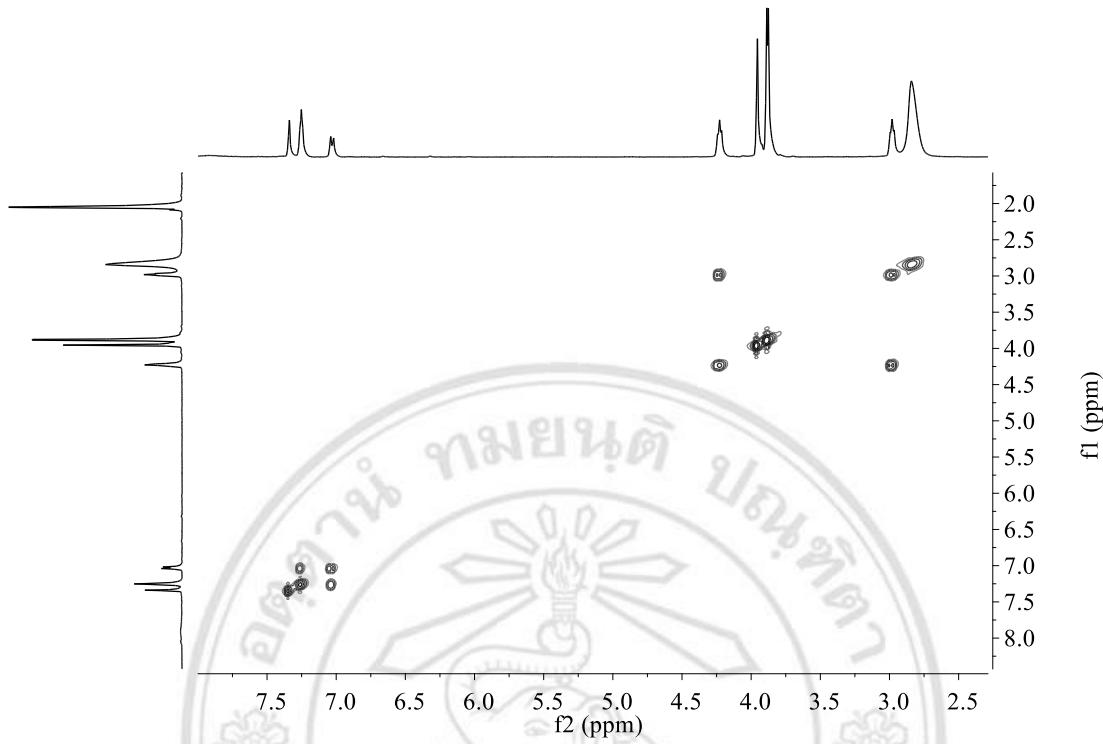
**Figure B10** IR Spectrum of Miliusacunine B (MC2)



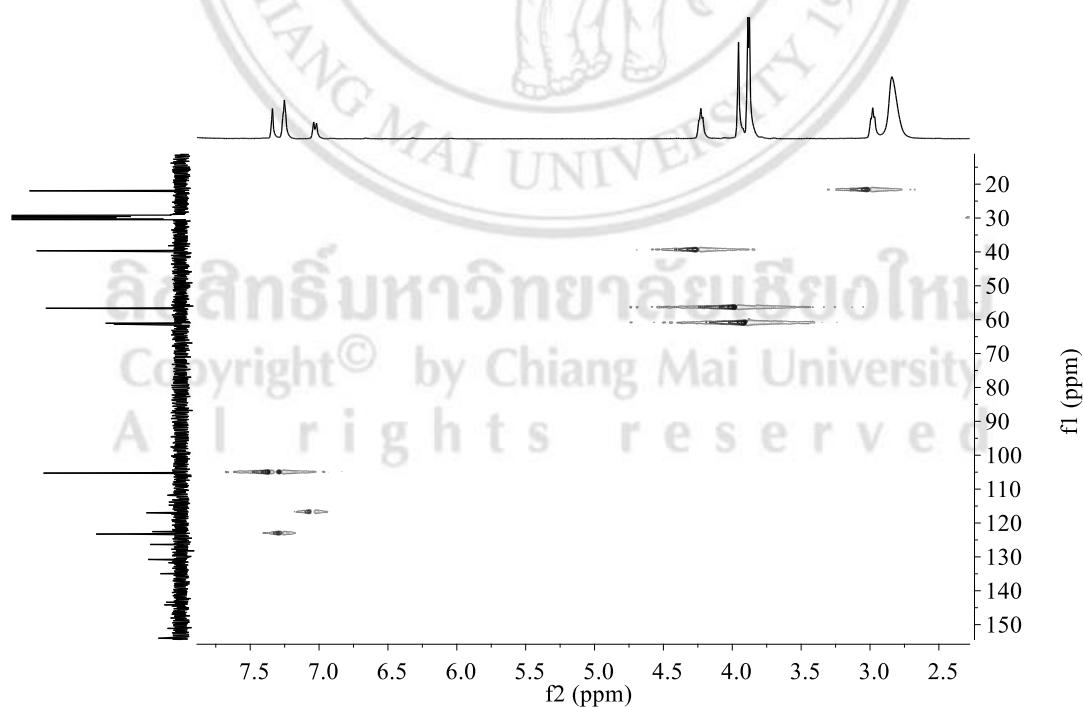
**Figure B11**  $^1\text{H}$  NMR Spectrum (acetone- $d_6$ , 400 MHz) of Miliusacunine B (**MC2**)



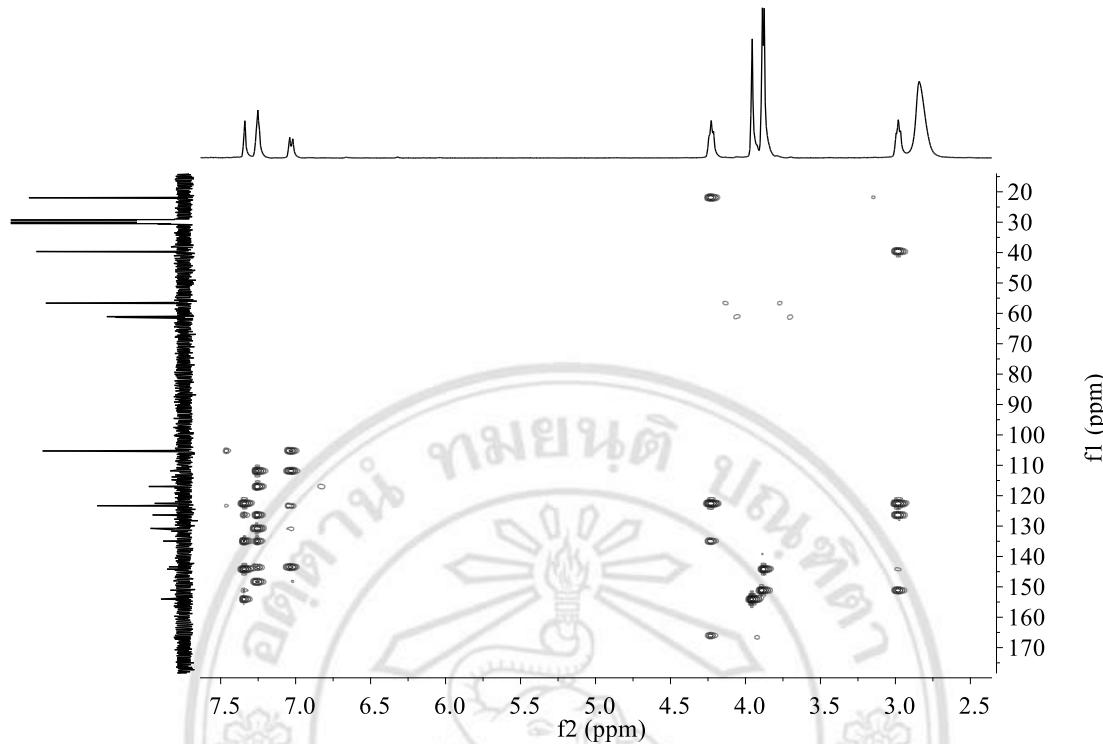
**Figure B12**  $^{13}\text{C}$  NMR, DEPT135 and DEPT90 Spectra (acetone- $d_6$ , 100 MHz) of Miliusacunine B (**MC2**)



**Figure B13** COSY Spectrum of Miliusacunine B (**MC2**) in Acetone-*d*<sub>6</sub>



**Figure B14** HMQC Spectrum of Miliusacunine B (**MC2**) in Acetone-*d*<sub>6</sub>



**Figure B15** HMBC Spectrum of Miliusacunine B (**MC2**) in Acetone-*d*<sub>6</sub>

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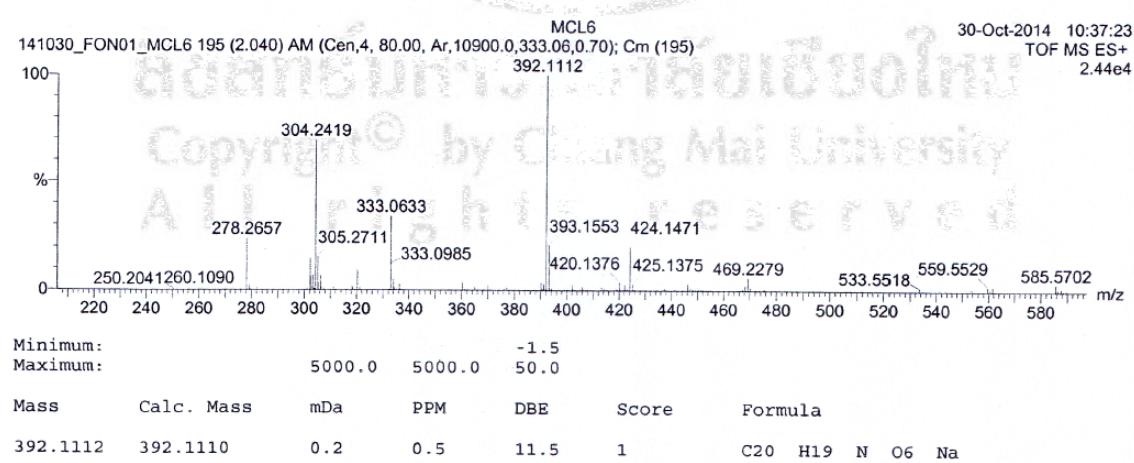
##### Single Mass Analysis

Tolerance = 5000.0 PPM / DBE: min = -1.5, max = 50.0

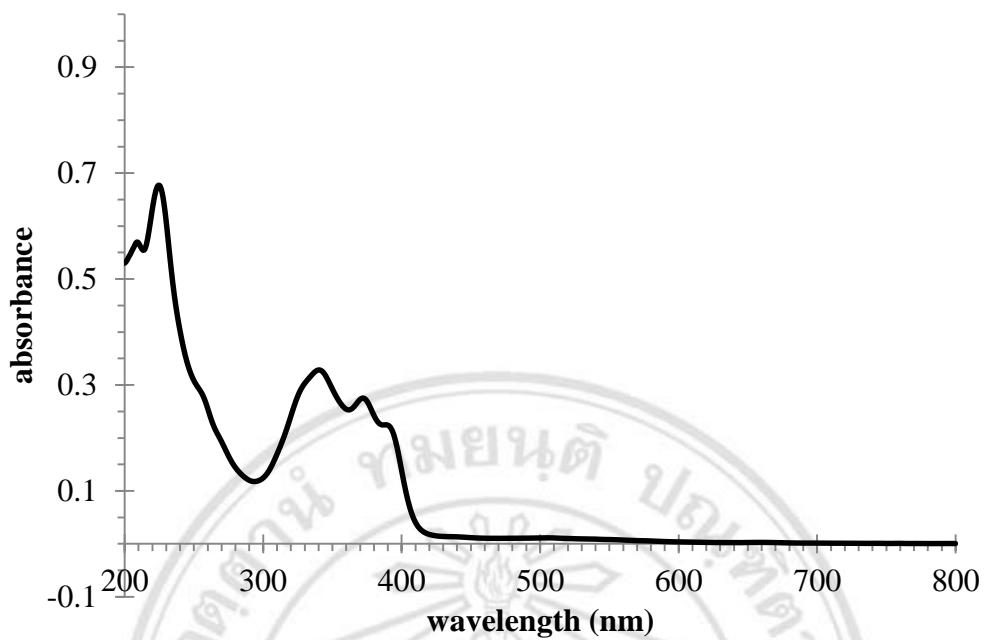
Isotope cluster parameters: Separation = 1.0 Abundance = 1.0%

Monoisotopic Mass, Odd and Even Electron Ions

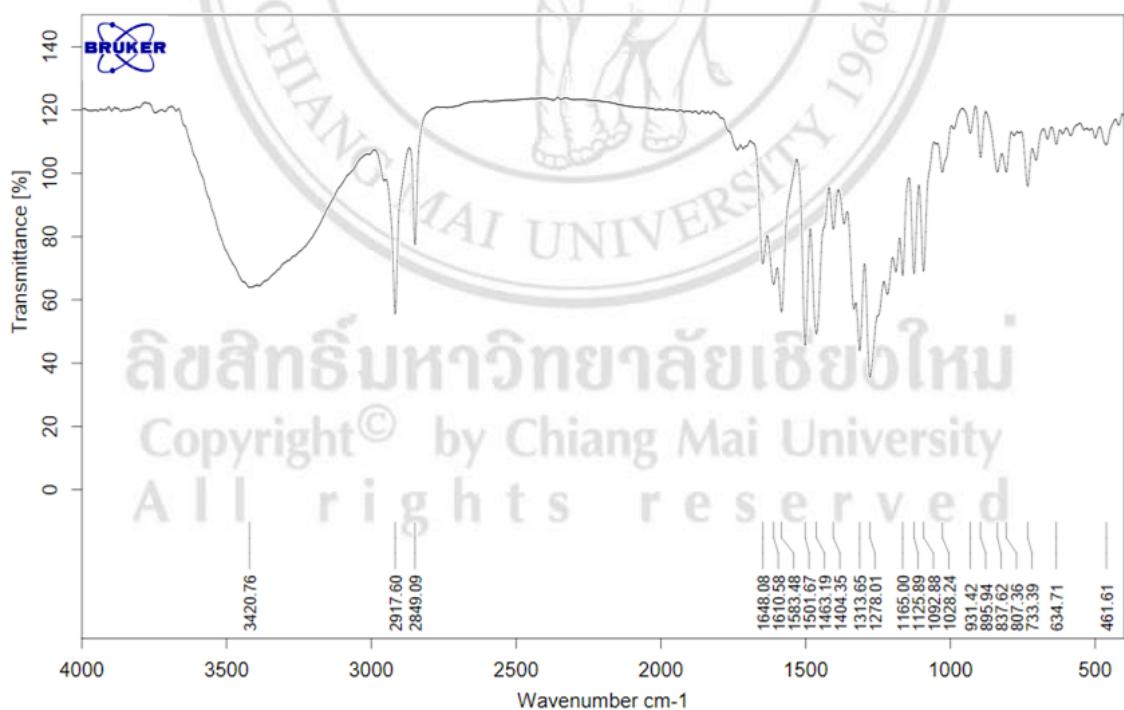
1 formula(e) evaluated with 1 results within limits (up to 50 closest results for each mass)



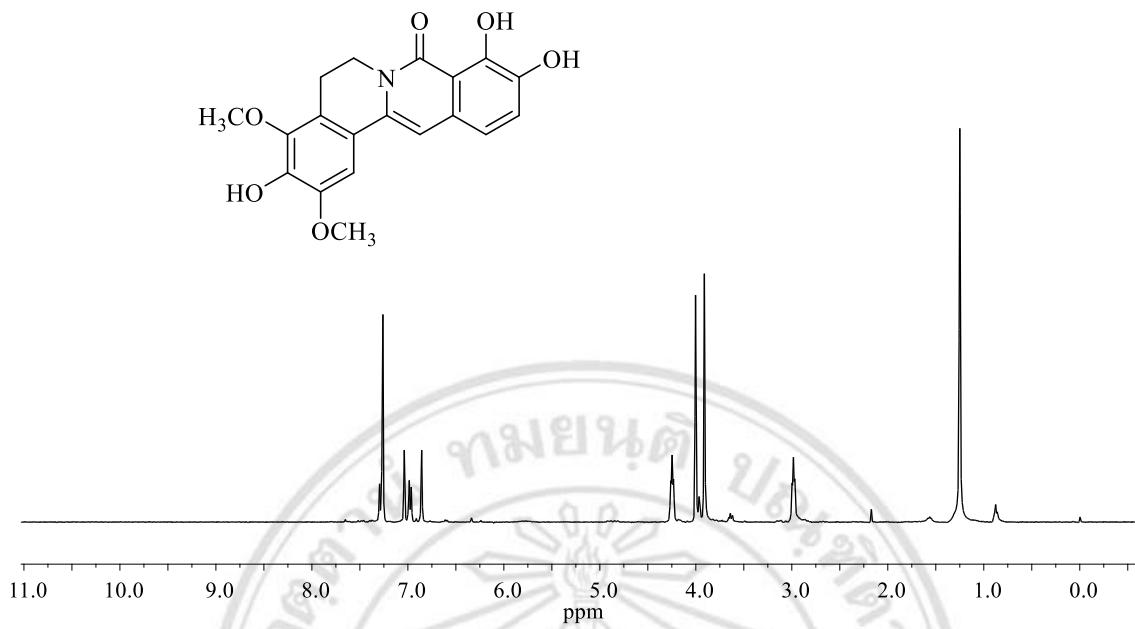
**Figure B16** HRESIMS Spectrum of Miliusacunine B (**MC2**)



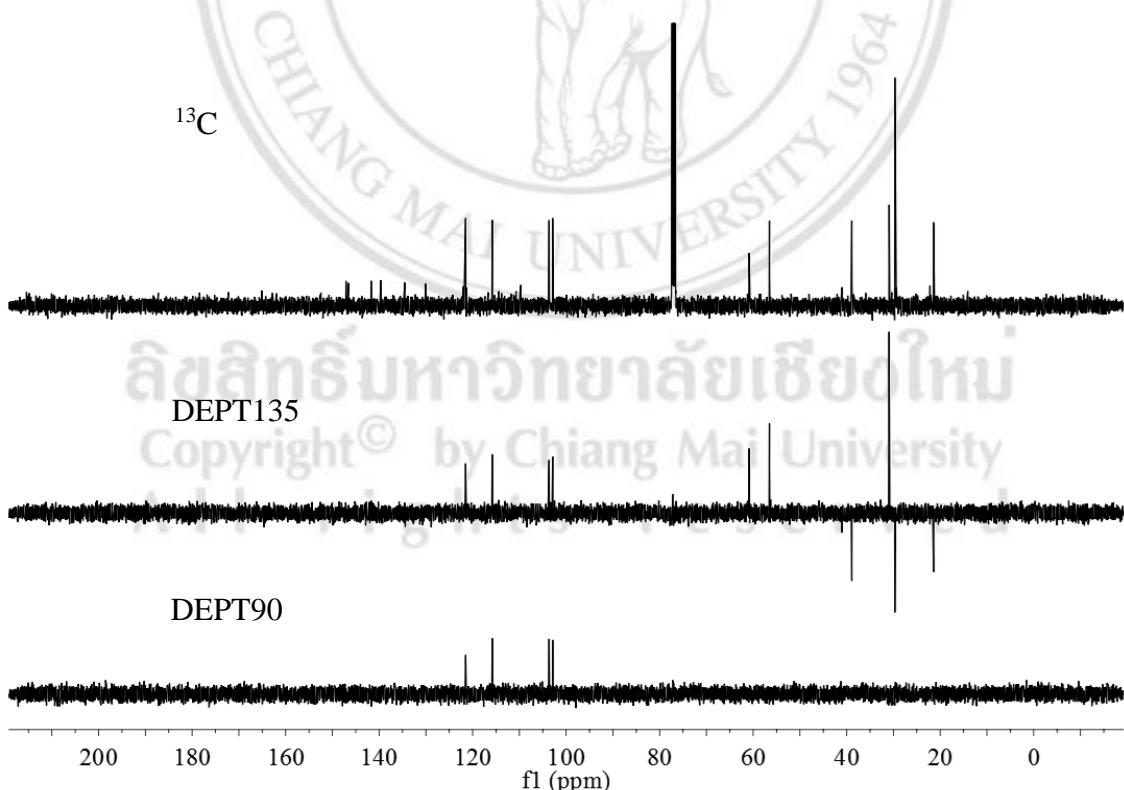
**Figure B17** UV Spectrum of Miliusacunine C (MC3)



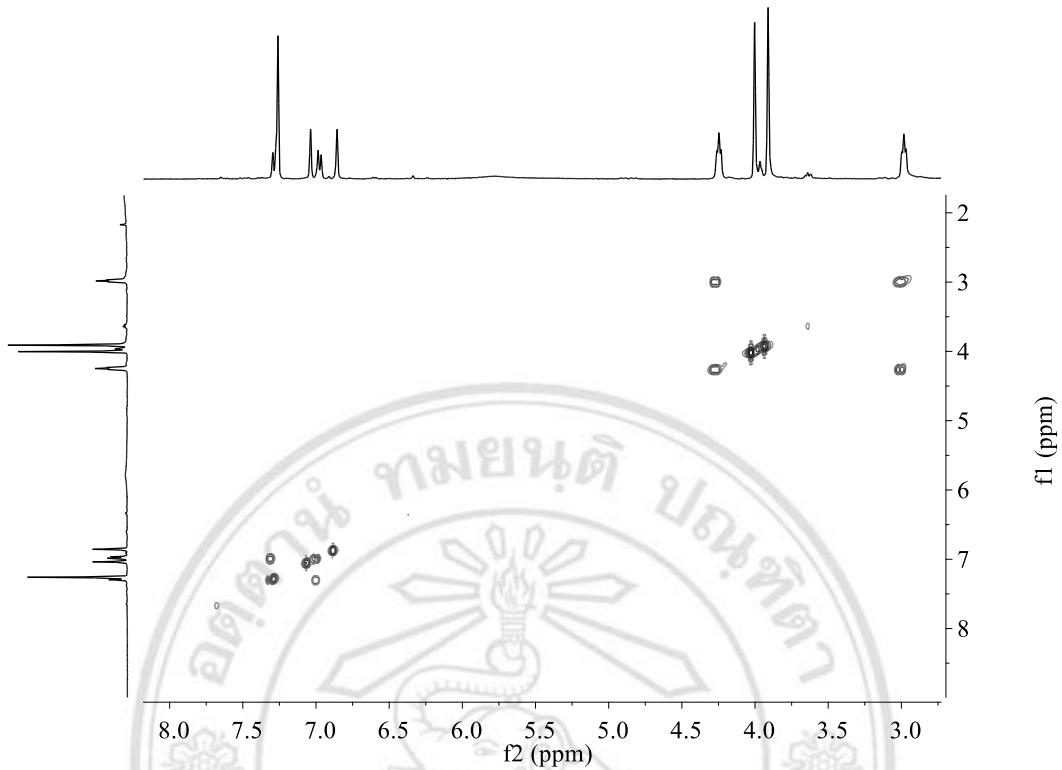
**Figure B18** IR Spectrum of Miliusacunine C (MC3)



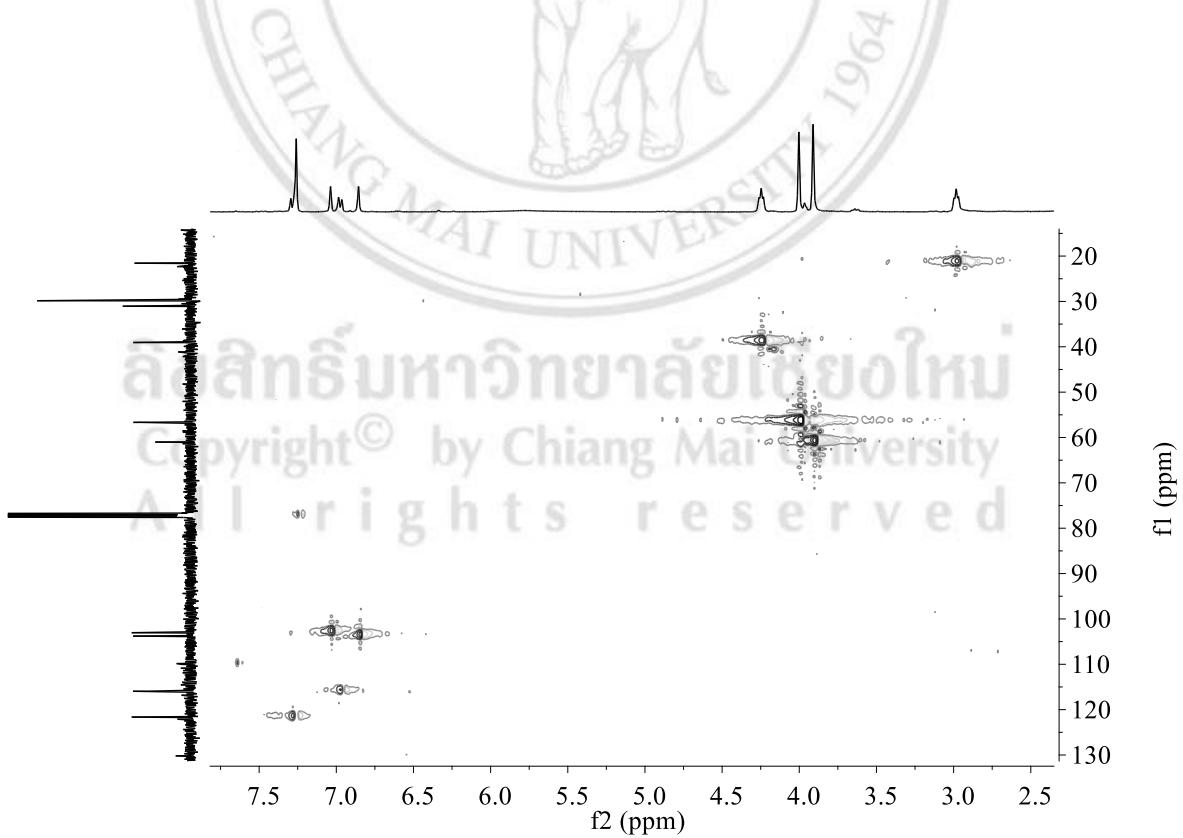
**Figure B19** <sup>1</sup>H NMR Spectrum (CDCl<sub>3</sub>, 400 MHz) of Miliusacunine C (**MC3**)



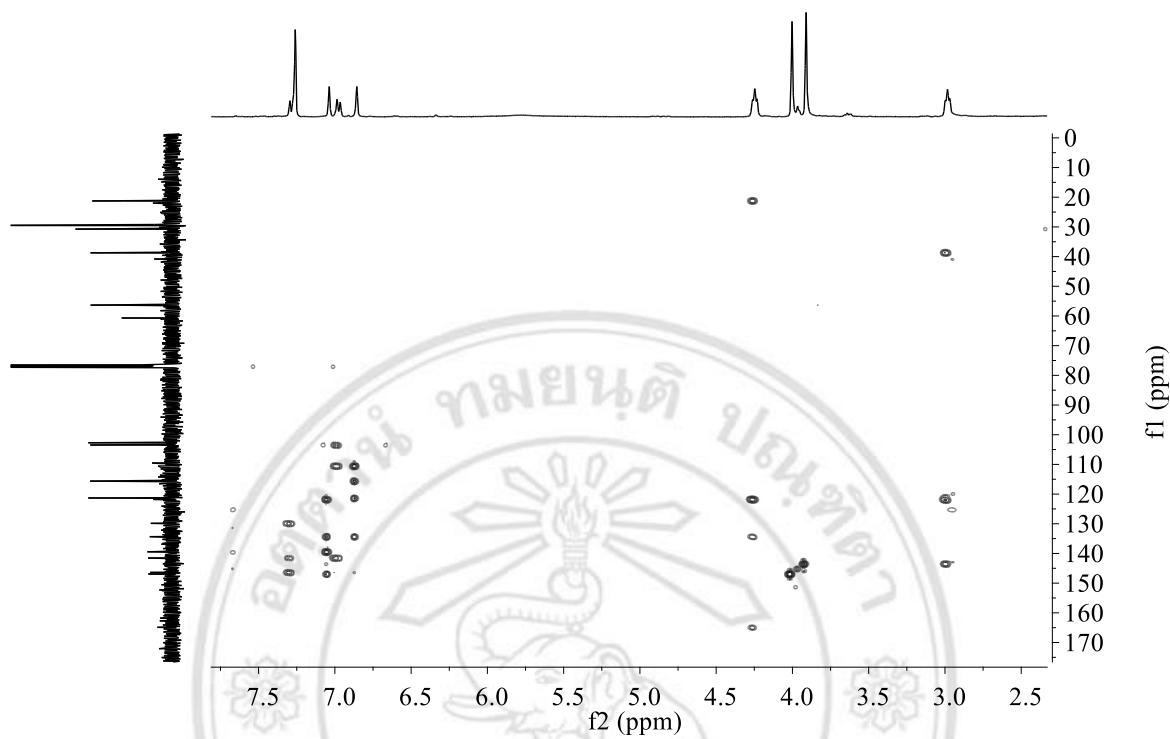
**Figure B20** <sup>13</sup>C NMR, DEPT135 and DEPT90 Spectra (CDCl<sub>3</sub>, 100 MHz) of Miliusacunine C (**MC3**)



**Figure B21** COSY Spectrum of Miliusacunine C (**MC3**) in  $\text{CDCl}_3$



**Figure B22** HMQC Spectrum of Miliusacunine C (**MC3**) in  $\text{CDCl}_3$



**Figure B23** HMBC Spectrum of Miliusacunine C (**MC3**) in  $\text{CDCl}_3$

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#### Single Mass Analysis

Tolerance = 8.0 PPM / DBE: min = -1.5, max = 120.0

Element prediction: Off

Number of isotope peaks used for i-FIT = 3

#### Monoisotopic Mass, Even Electron Ions

1004 formula(e) evaluated with 6 results within limits (up to 20 closest results for each mass)

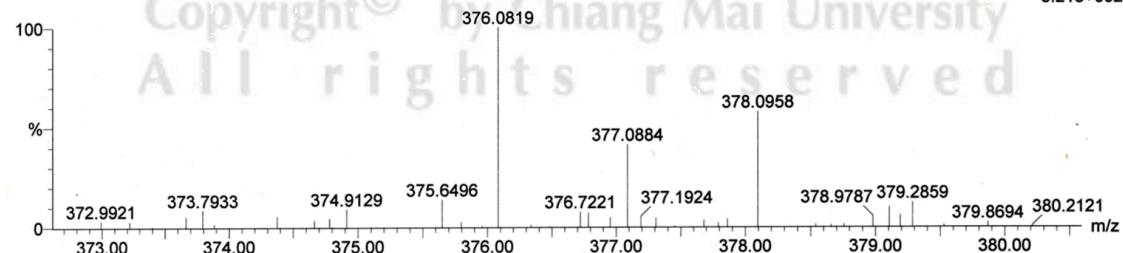
Elements Used:

C: 8-40 H: 0-70 N: 0-10 O: 0-12 Na: 0-1

MC 3

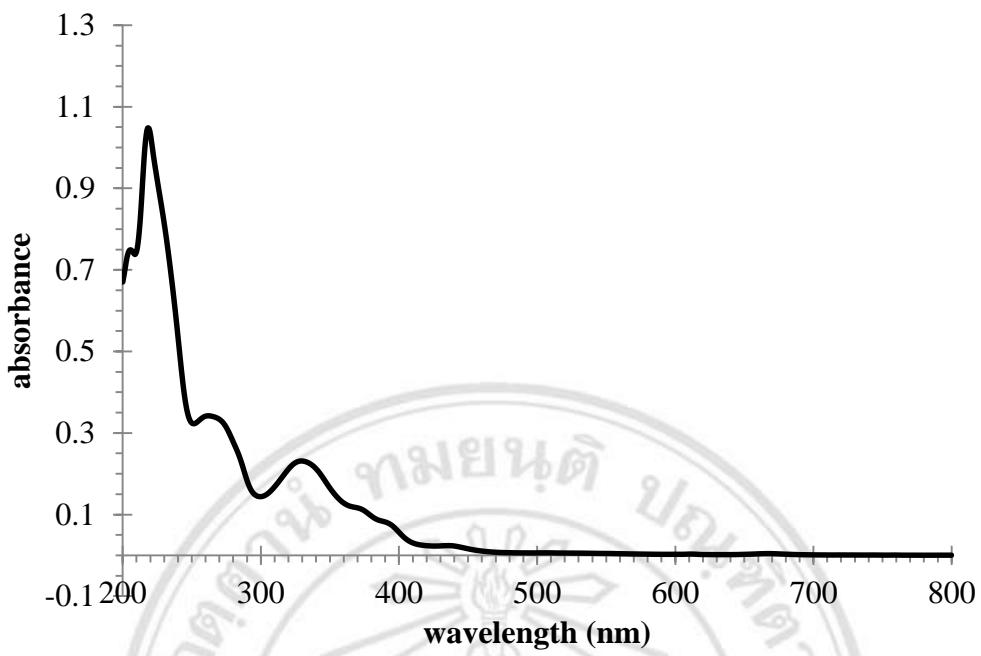
SP Thanaphat MC.3 73 (1.754) AM2 (Ar,8000.0,0.00,0.57); ABS; Cm (71:73)

1: TOF MS ES+  
5.21e+002

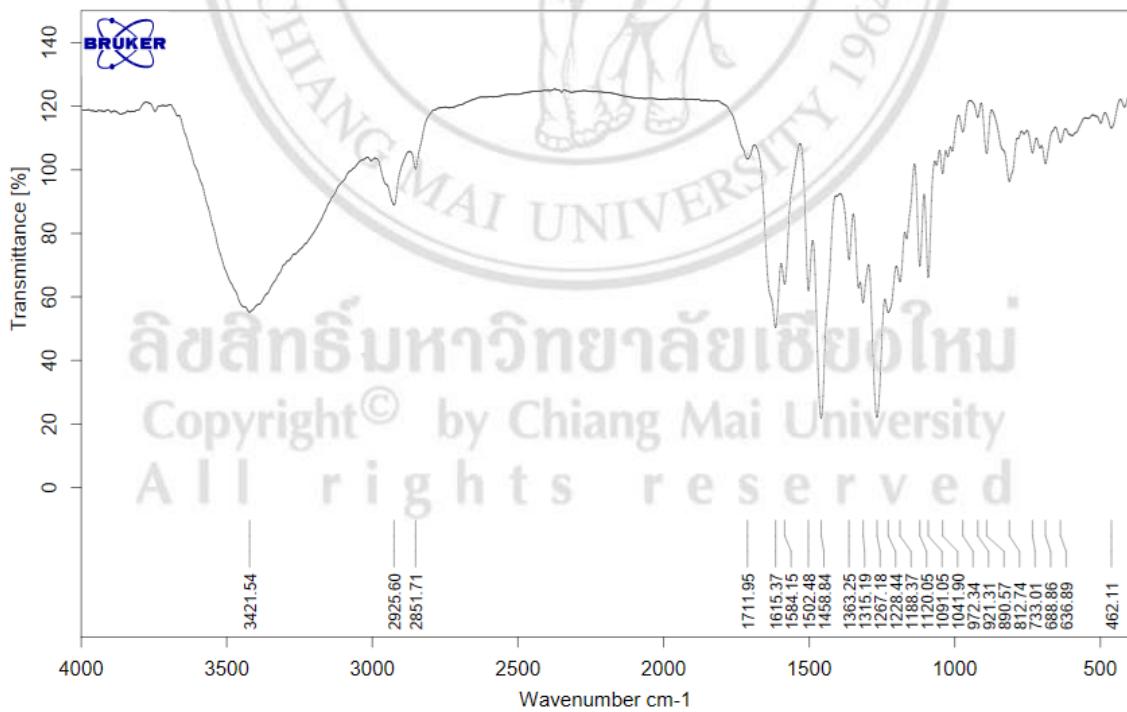


Mass	Calc. Mass	mDa	PPM	DBE	i-FIT	i-FIT (Norm)	Formula
378.0958	378.0954	0.4	1.1	-1.5	11.5	59.8	1.9

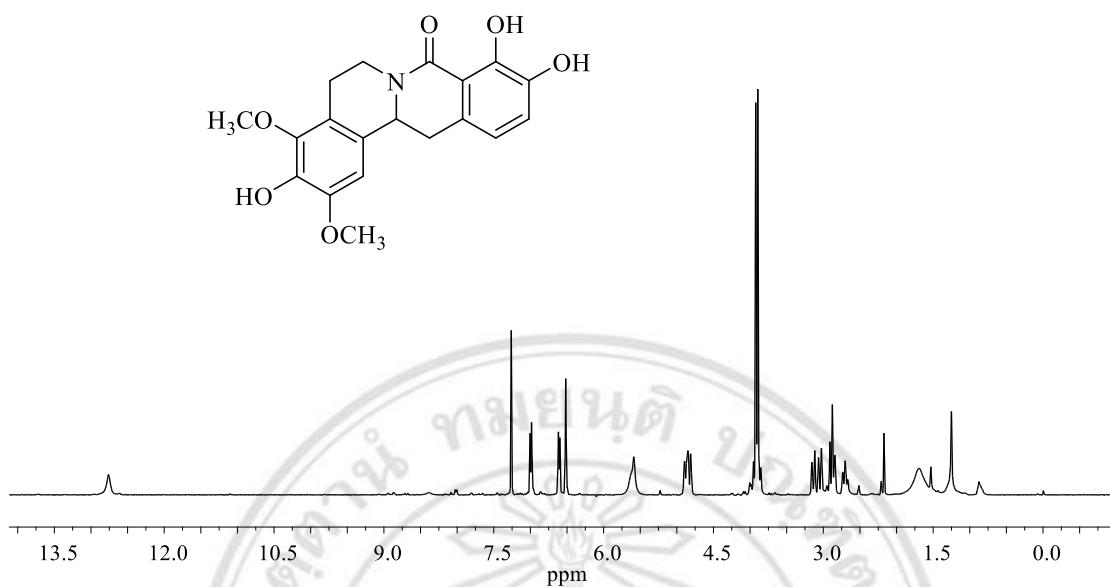
**Figure B24** HRESIMS Spectrum of Miliusacunine C (**MC3**)



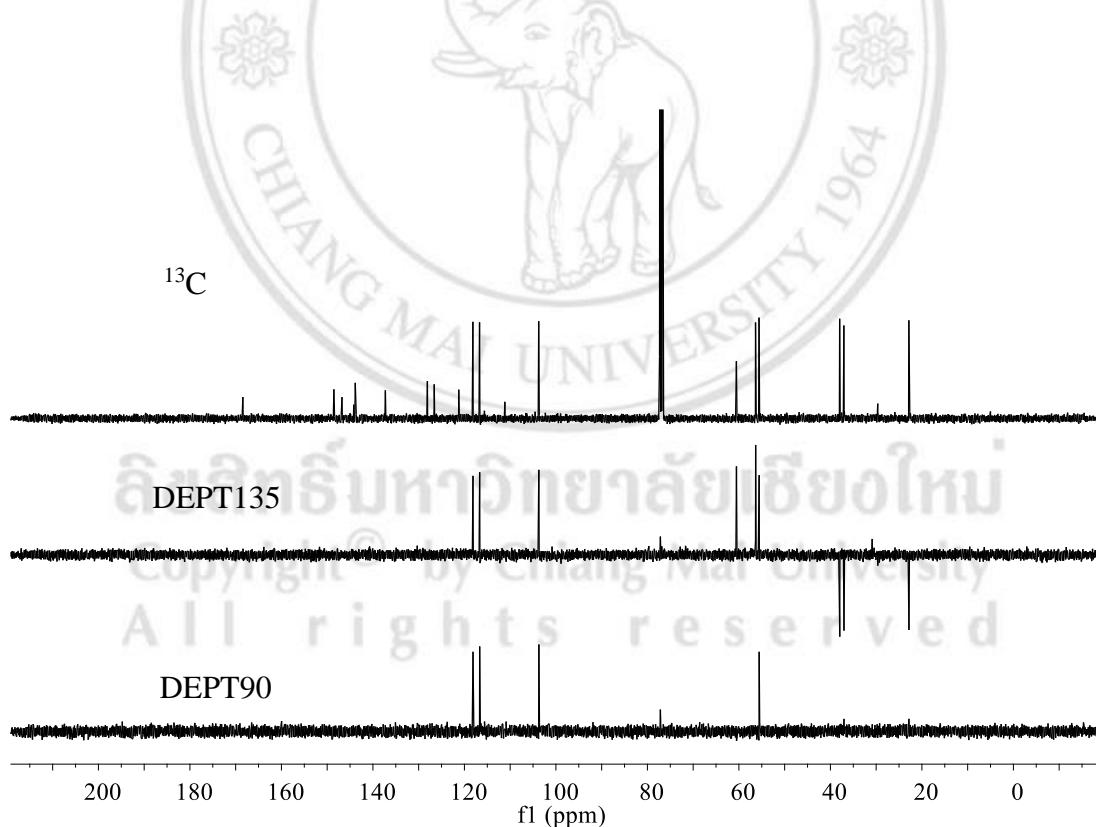
**Figure B25** UV Spectrum of Miliusacunine D (MC4)



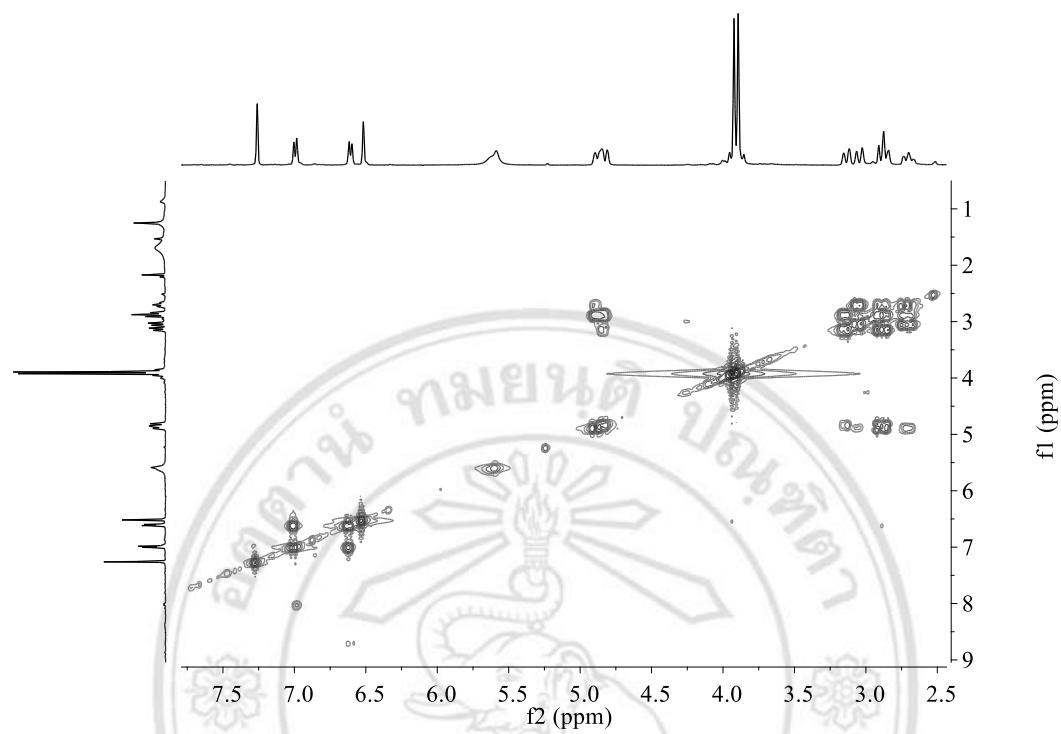
**Figure B26** IR Spectrum of Miliusacunine D (MC4)



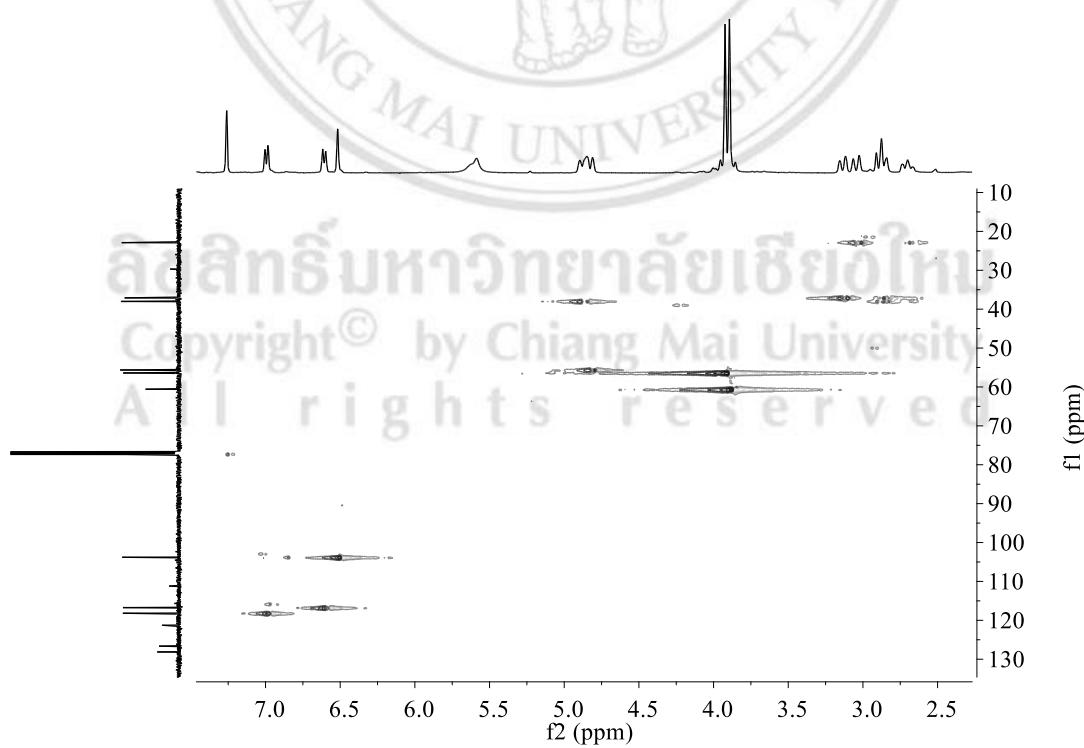
**Figure B27** <sup>1</sup>H NMR Spectrum (CDCl<sub>3</sub>, 400 MHz) of Miliusacunine D (**MC4**)



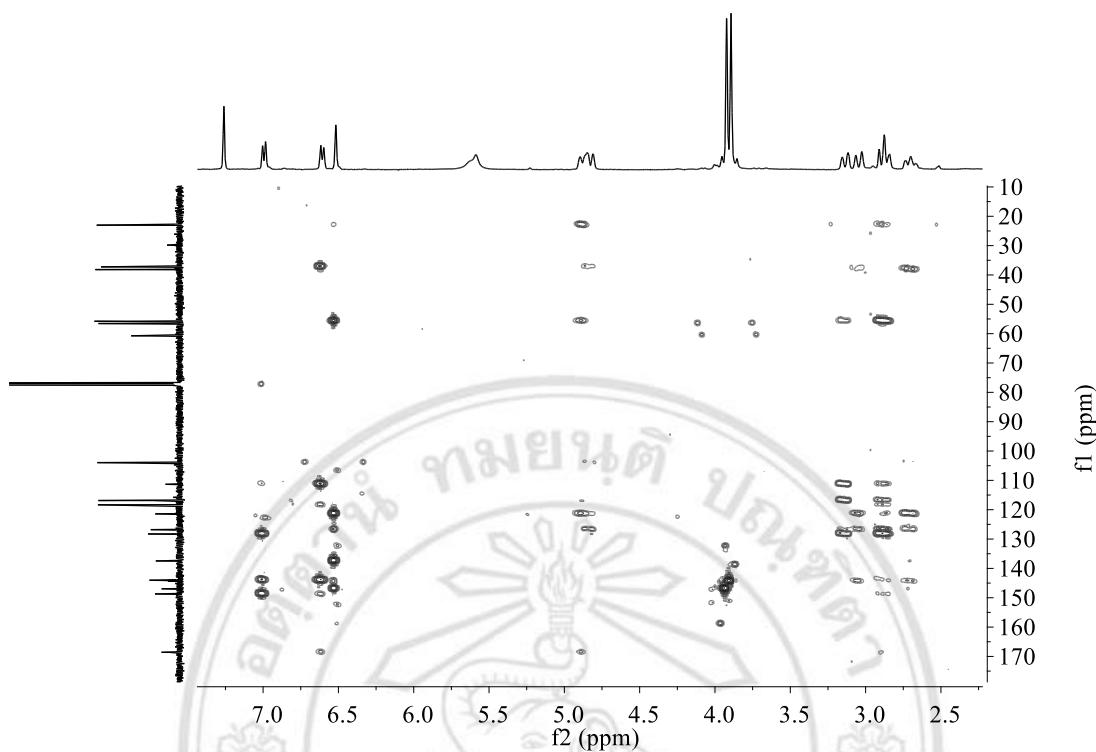
**Figure B28** <sup>13</sup>C NMR, DEPT135 and DEPT90 Spectra (CDCl<sub>3</sub>, 100 MHz) of Miliusacunine D (**MC4**)



**Figure B29** COSY Spectrum of Miliusacunine D (**MC4**) in  $\text{CDCl}_3$



**Figure B30** HMQC Spectrum of Miliusacunine D (**MC4**) in  $\text{CDCl}_3$



**Figure B31** HMBC Spectrum of Miliusacunine D (**MC4**) in  $\text{CDCl}_3$

#### Elemental Composition Report

Page 1

##### Single Mass Analysis

Tolerance = 8.0 PPM / DBE: min = -1.5, max = 120.0

Element prediction: Off

Number of isotope peaks used for i-FIT = 3

Monoisotopic Mass, Even Electron Ions

1013 formula(e) evaluated with 7 results within limits (up to 20 closest results for each mass)

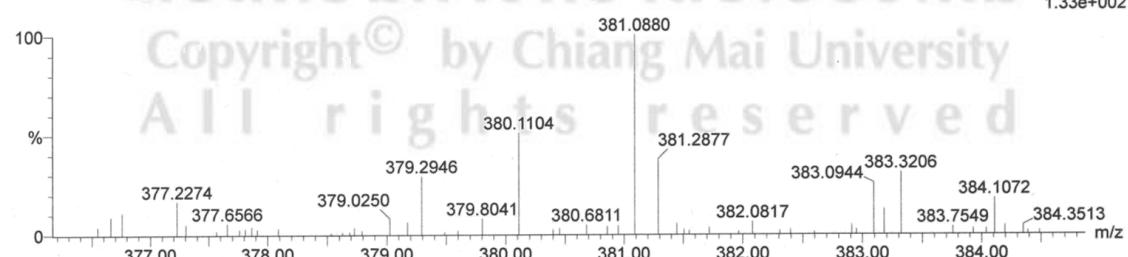
Elements Used:

C: 8-40 H: 0-70 N: 0-10 O: 0-12 Na: 0-1

MC 4

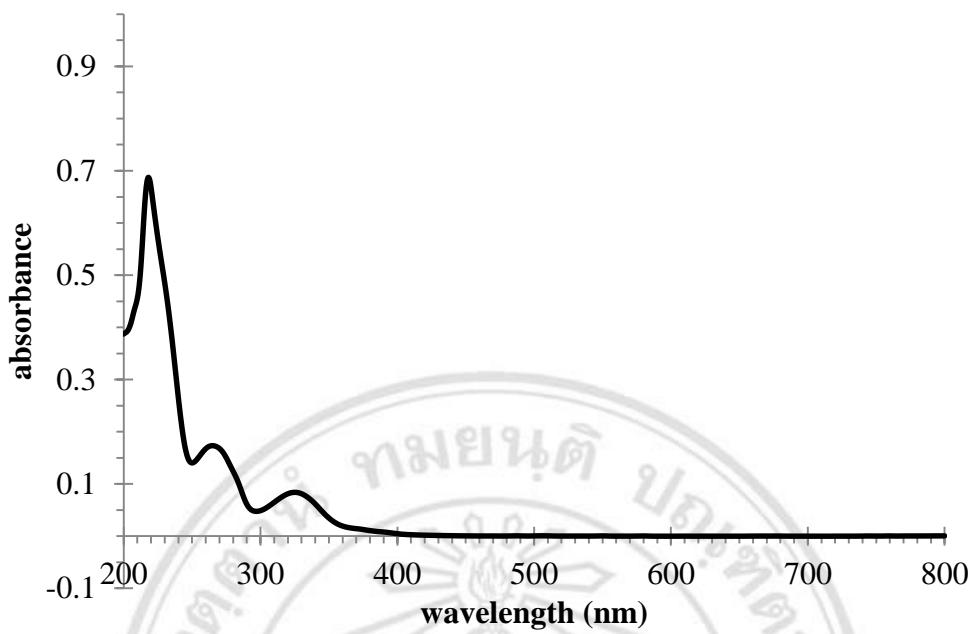
SP Thanaphat MC 4 37 (0.904) AM2 (Ar,10000.0,0.00,1.00); ABS; Cm (36:37)

1: TOF MS ES+  
1.33e+002

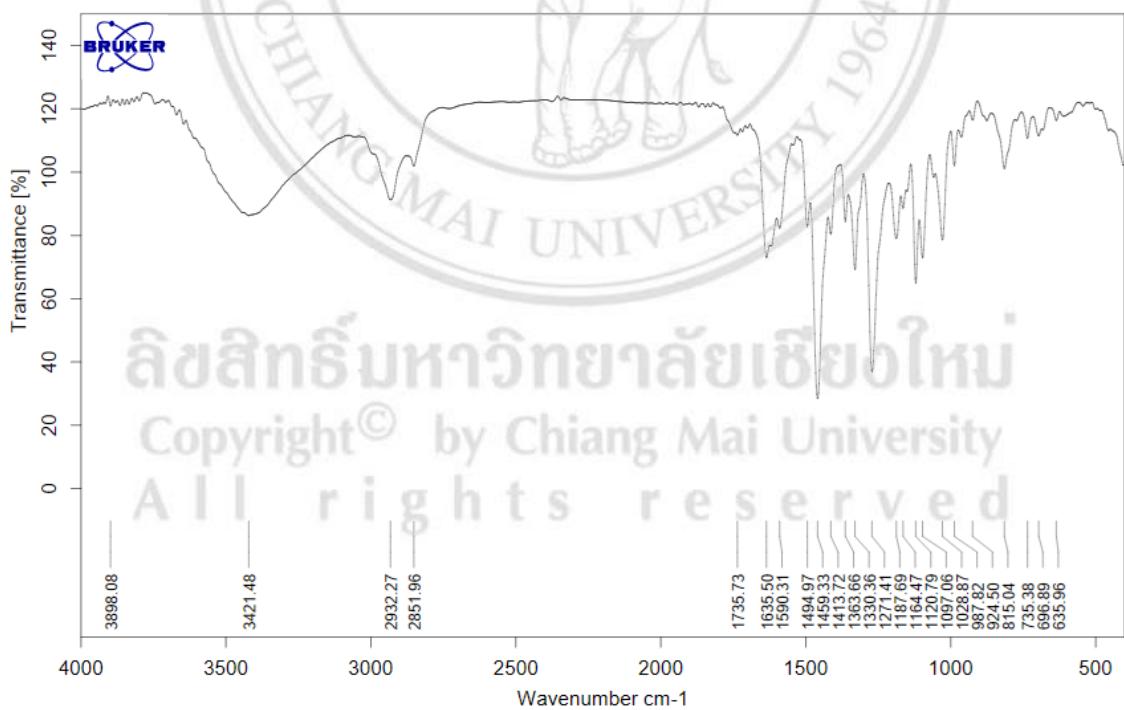


Mass	Calc. Mass	mDa	PPM	DBE	i-FIT	i-FIT (Norm)	Formula
380.1104	380.1107	-0.3	-0.8	14.5	68.8	2.1	C17 H14 N7 O4 Na
	380.1110	-0.6	-1.6	10.5	68.9	2.2	C19 H19 N O6

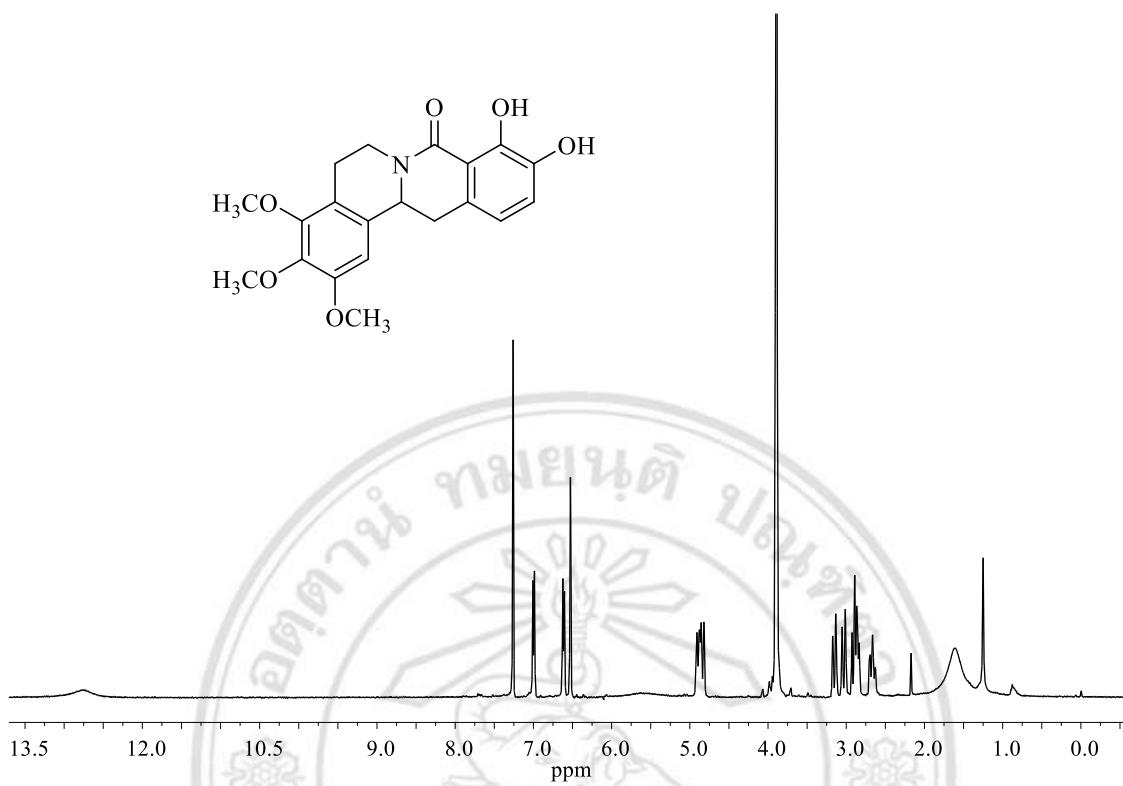
**Figure B32** HRESIMS Spectrum of Miliusacunine D (**MC4**)



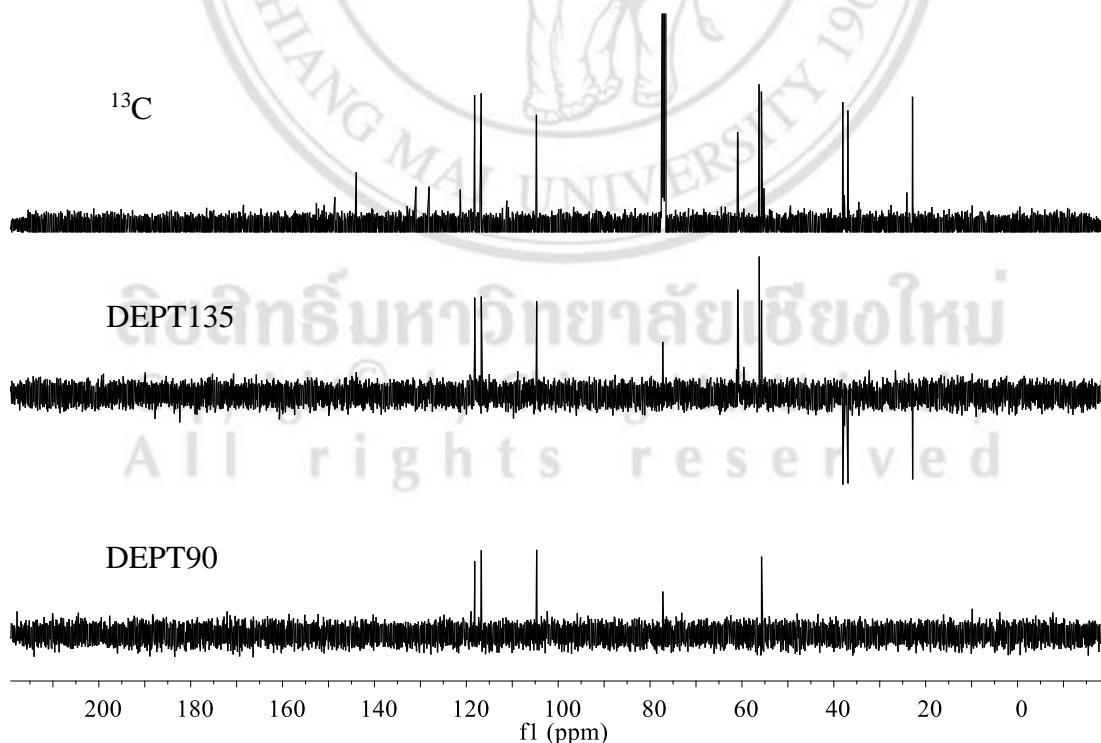
**Figure B33** UV Spectrum of Miliusacunine E (MC5)



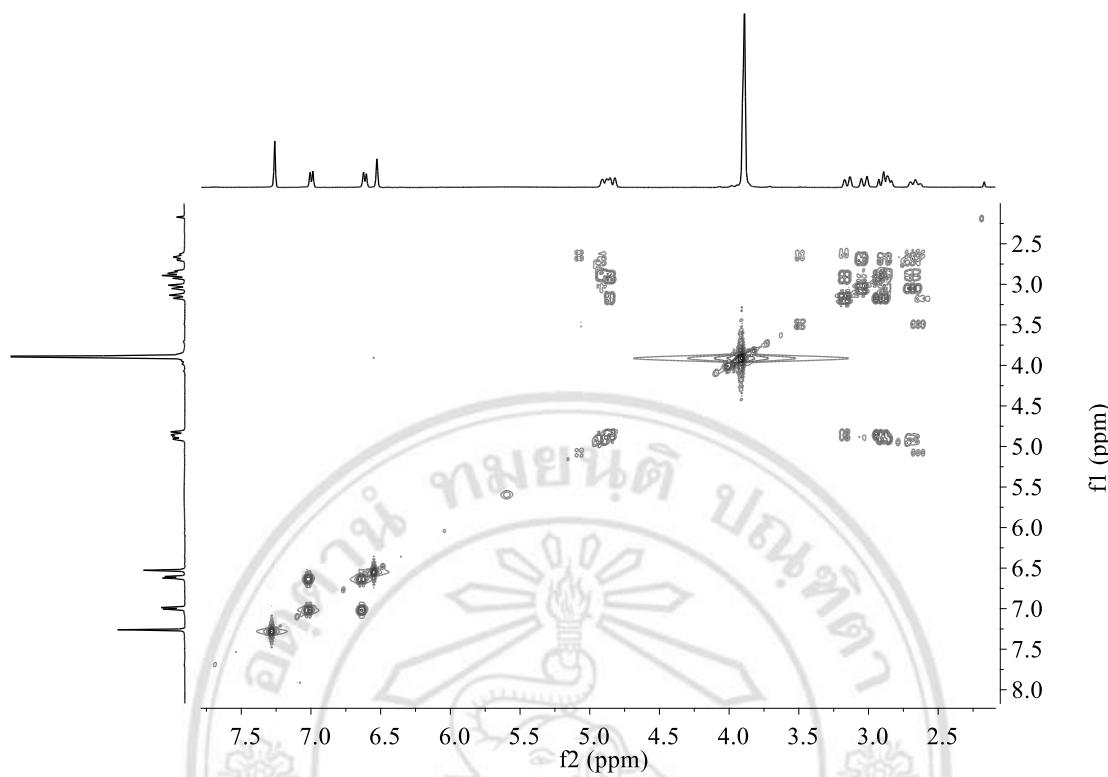
**Figure B34** IR Spectrum of Miliusacunine E (MC5)



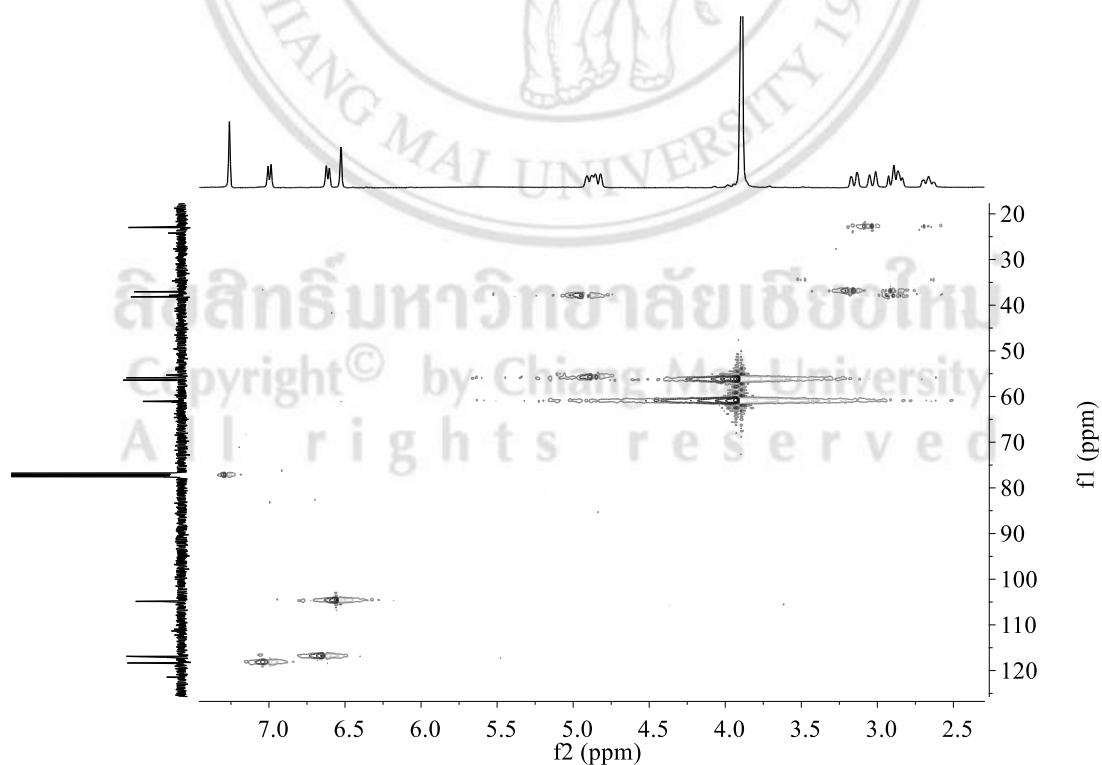
**Figure B35**  $^1\text{H}$  NMR Spectrum ( $\text{CDCl}_3$ , 400 MHz) of Miliusacunine E (**MC5**)



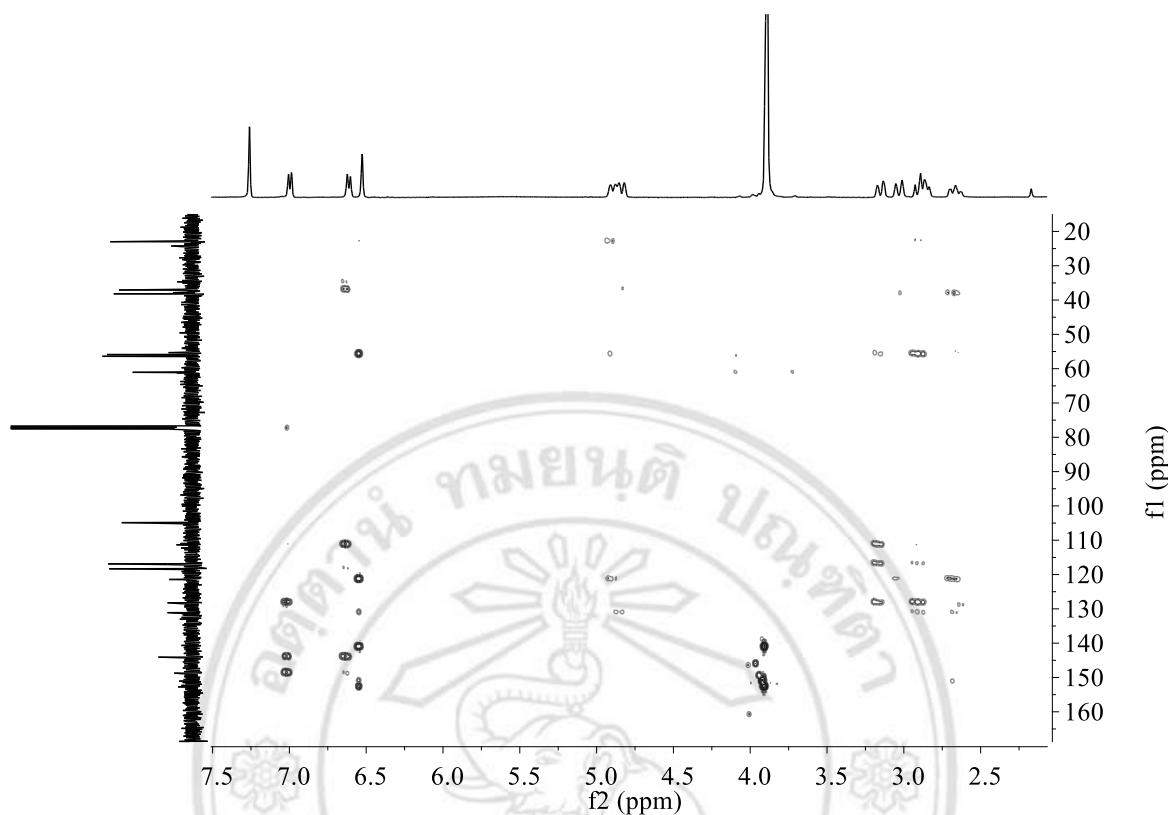
**Figure B36**  $^{13}\text{C}$  NMR, DEPT135 and DEPT90 Spectra ( $\text{CDCl}_3$ , 100 MHz) of Miliusacunine E (**MC5**)



**Figure B37** COSY Spectrum of Miliusacunine E (**MC5**) in  $\text{CDCl}_3$



**Figure B38** HMQC Spectrum of Miliusacunine E (**MC5**) in  $\text{CDCl}_3$



**Figure B39** HMBC Spectrum of Miliusacunine E (**MC5**) in  $\text{CDCl}_3$

**Elemental Composition Report**

**Page 1**

**Single Mass Analysis**

Tolerance = 8.0 PPM / DBE: min = -1.5, max = 120.0  
 Element prediction: Off  
 Number of isotope peaks used for i-FIT = 3

Monoisotopic Mass, Even Electron Ions

979 formula(e) evaluated with 6 results within limits (up to 20 closest results for each mass)

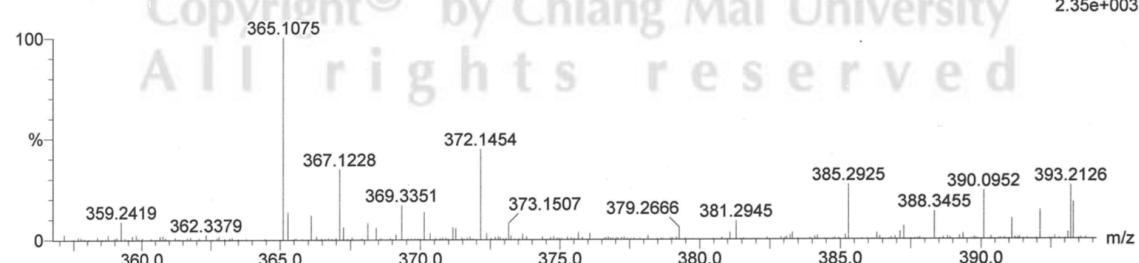
Elements Used:

C: 8-40 H: 0-70 N: 0-10 O: 0-12 Na: 0-1

MC 5

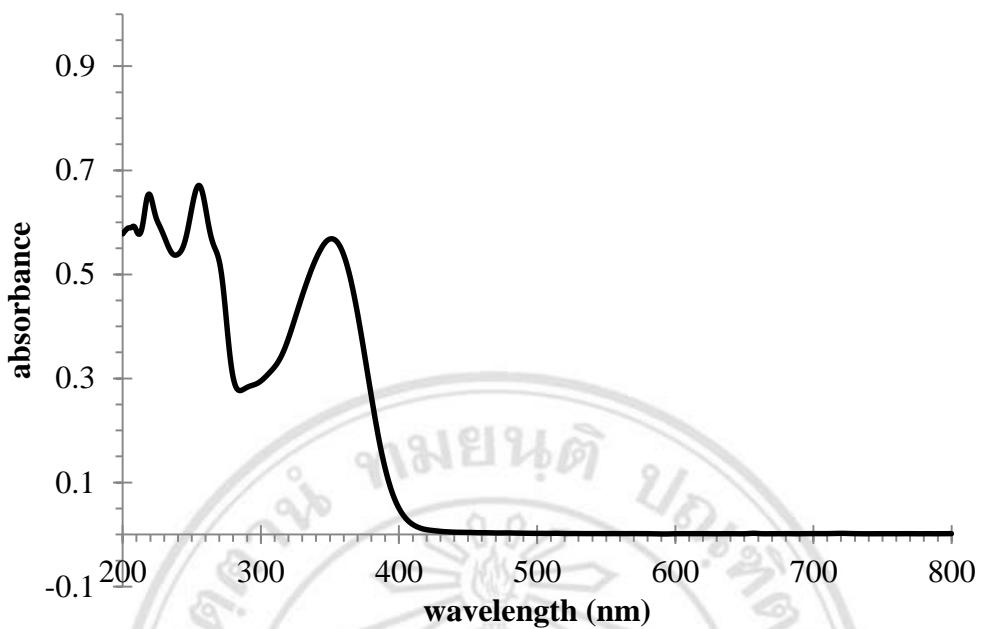
SP Thanaphat MC 5 54 (1.292) AM2 (Ar,8000.0,0.00,0.57); ABS; Cm (52:54)

1: TOF MS ES+  
 $2.35e+003$

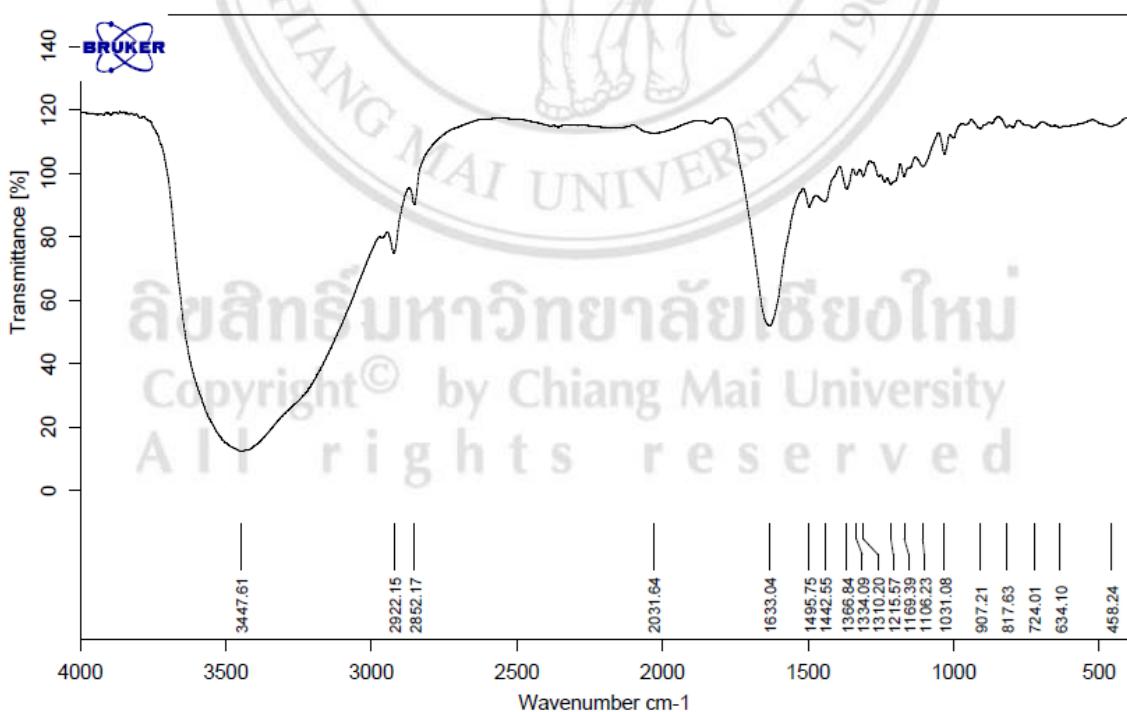


Mass	Calc. Mass	mDa	PPM	DBE	i-FIT	i-FIT (Norm)	Formula
372.1454	372.1447	0.7	1.9	-1.5 -1.5 8.0 120.0	10.5	94.7	1.5 C20 H22 N O6

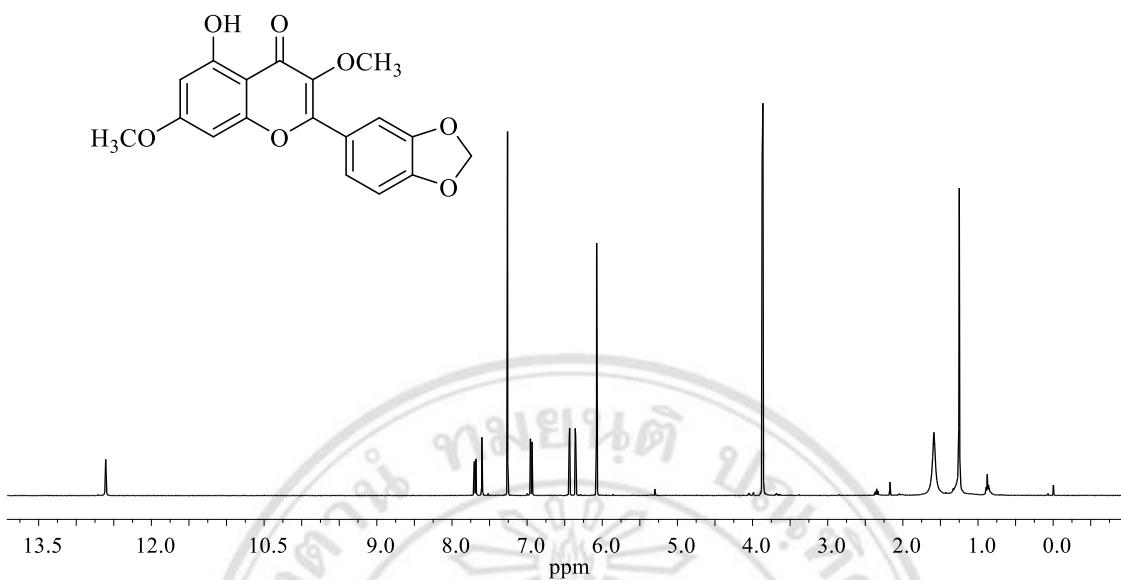
**Figure B40** HRESIMS Spectrum of Miliusacunine E (**MC5**)



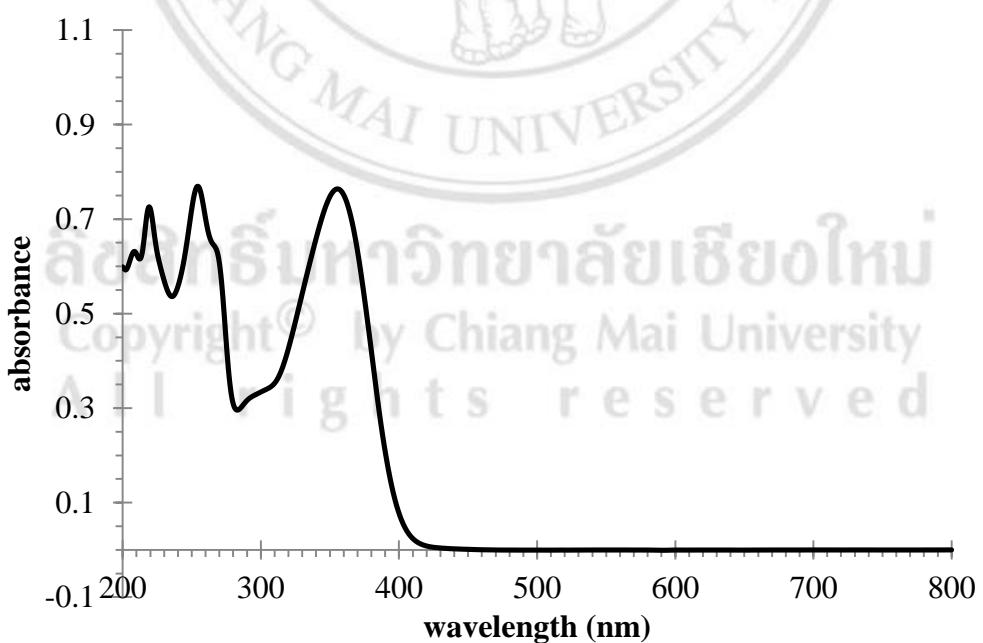
**Figure B41** UV Spectrum of 5-Hydroxy-3,7-dimethoxy-3',4'-methylenedioxyflavone (**MC6**)



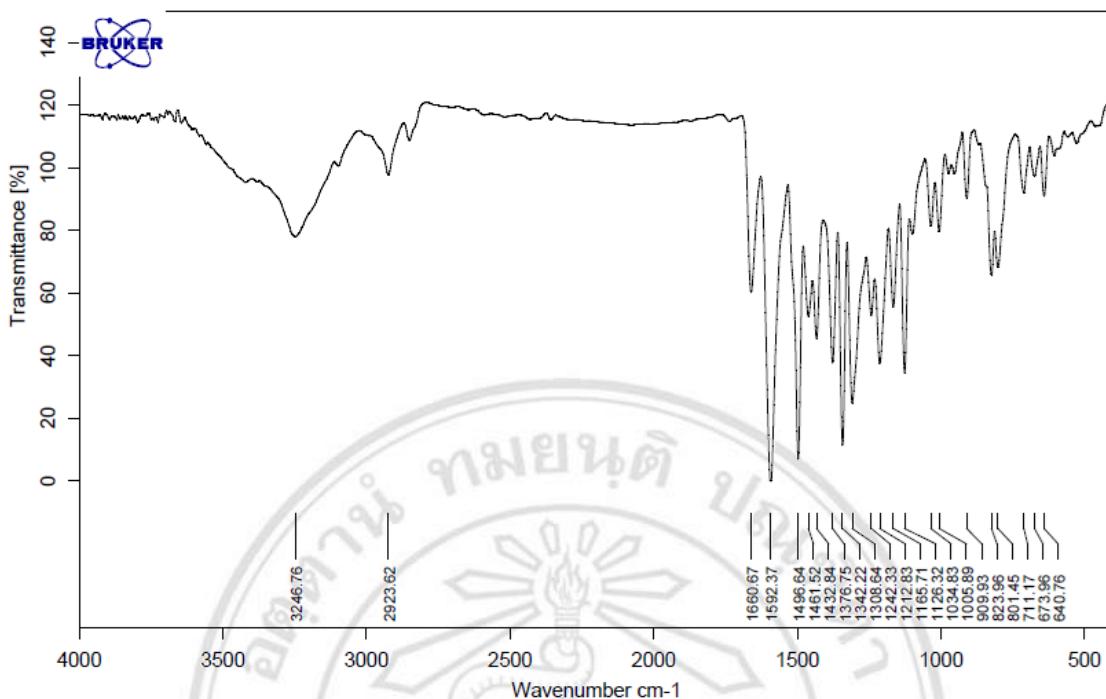
**Figure B42** IR Spectrum of 5-Hydroxy-3,7-dimethoxy-3',4'-methylenedioxyflavone (**MC6**)



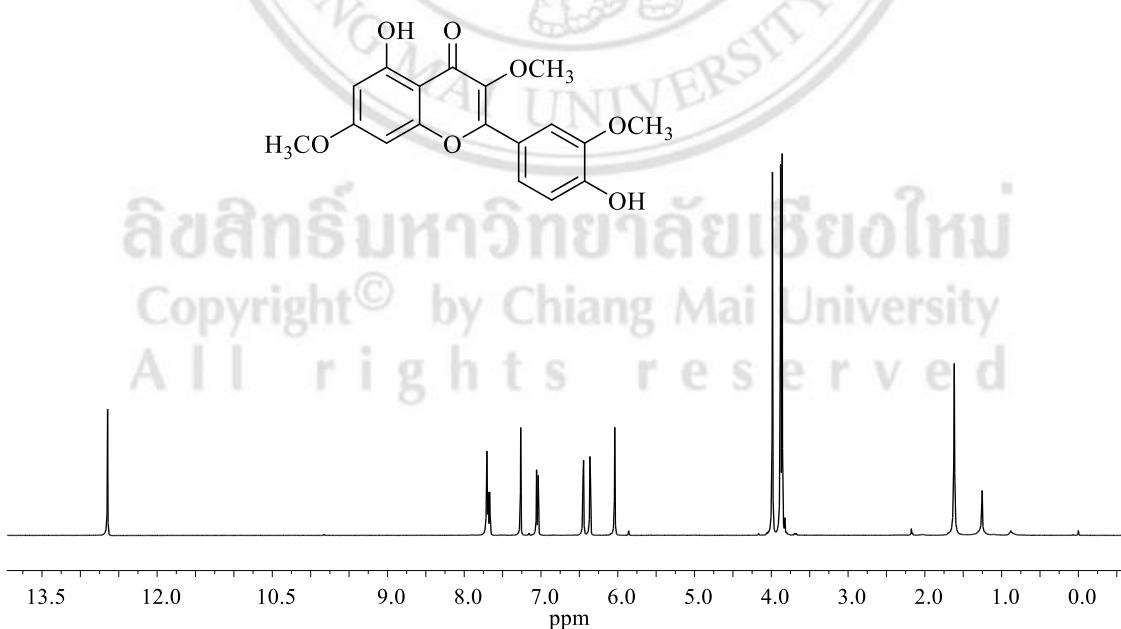
**Figure B43**  $^1\text{H}$  NMR Spectrum ( $\text{CDCl}_3$ , 400 MHz) of 5-Hydroxy-3,7-dimethoxy-3',4'-methylenedioxyflavone (**MC6**)



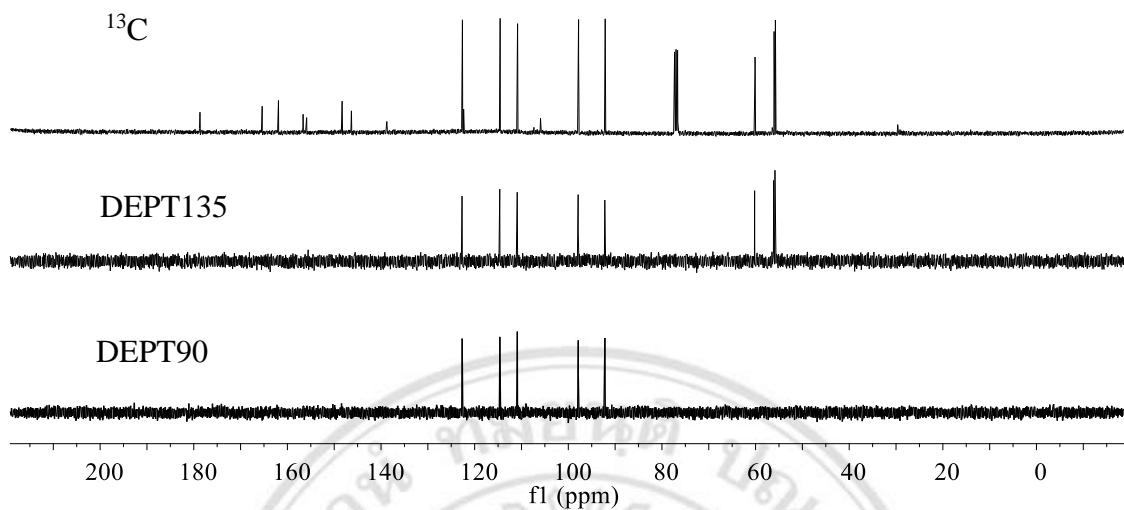
**Figure B44** UV Spectrum of Pachypodol (**MC7**)



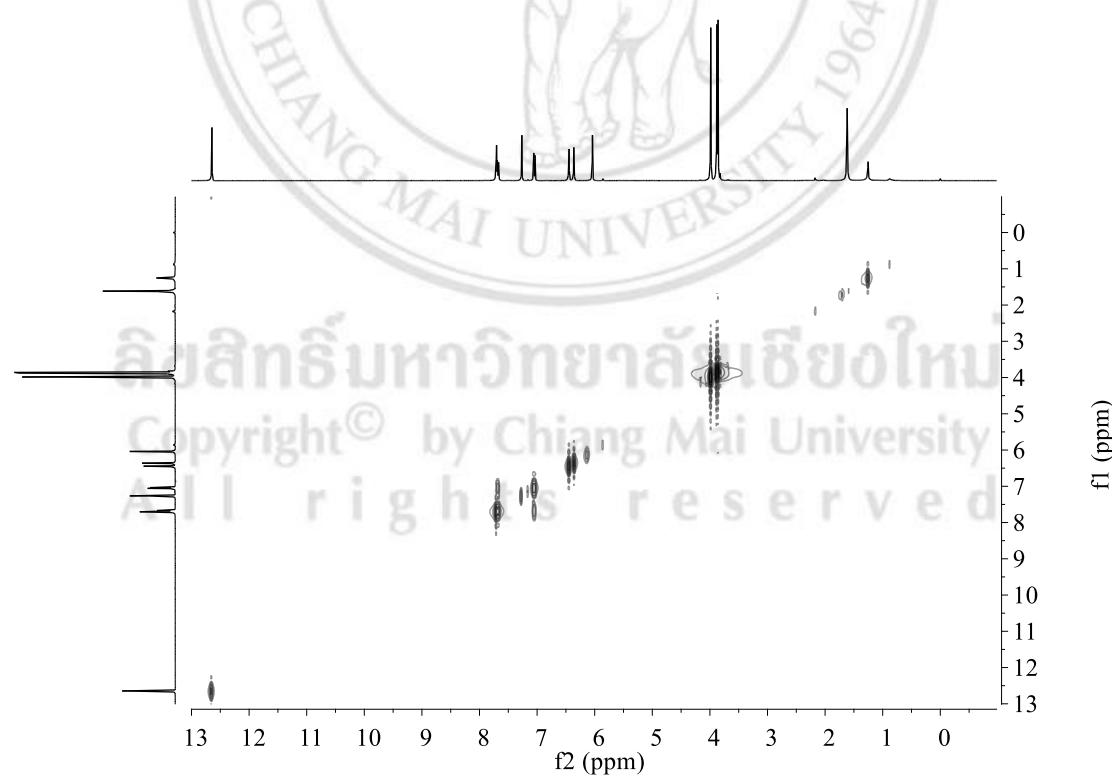
**Figure B45** IR Spectrum of Pachypodol (**MC7**)



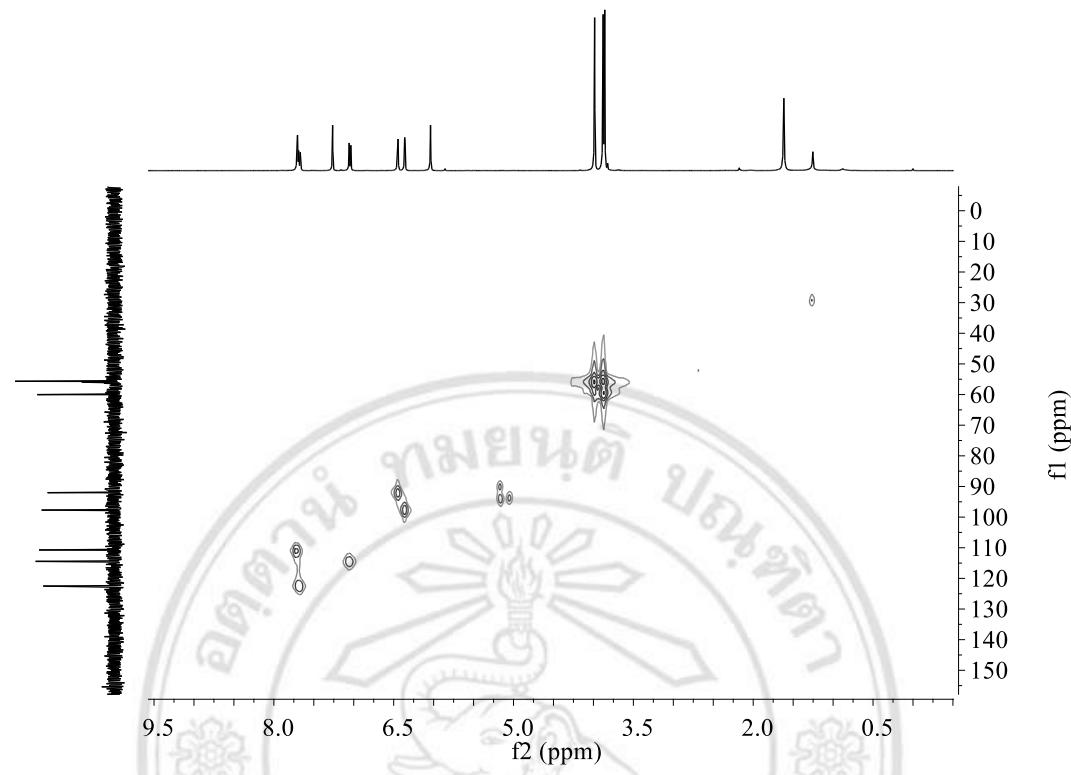
**Figure B46** <sup>1</sup>H NMR Spectrum (CDCl<sub>3</sub>, 400 MHz) of Pachypodol (**MC7**)



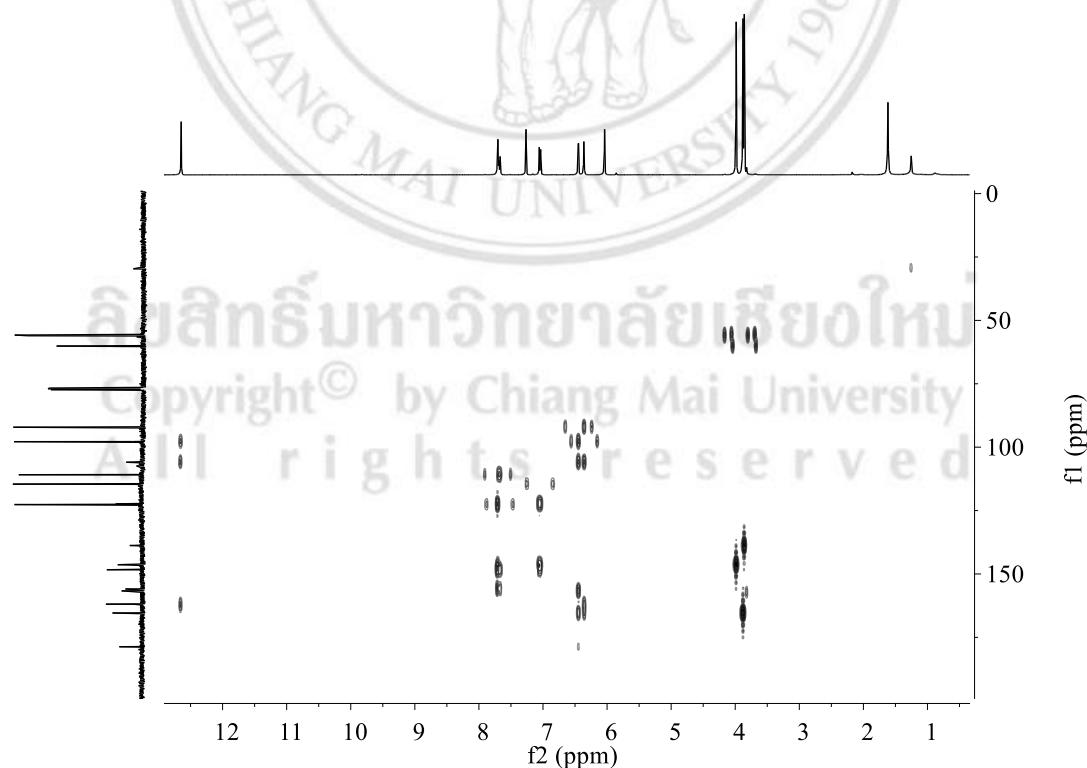
**Figure B47**  $^{13}\text{C}$  NMR, DEPT135 and DEPT90 Spectra ( $\text{CDCl}_3$ , 100 MHz) of Pachypodol (MC7)



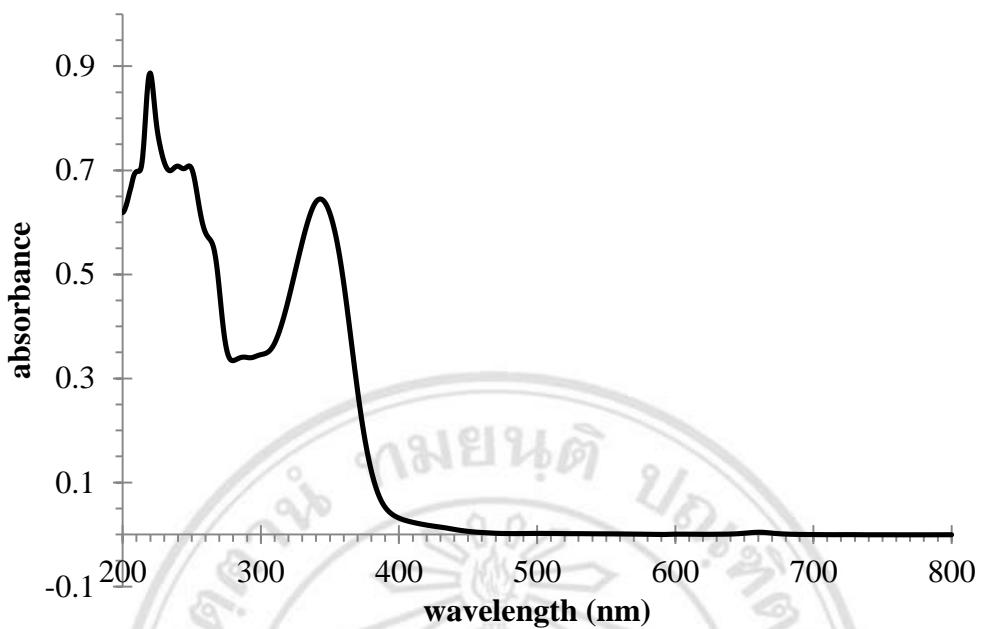
**Figure B48** COSY Spectrum of Pachypodol (MC7) in  $\text{CDCl}_3$



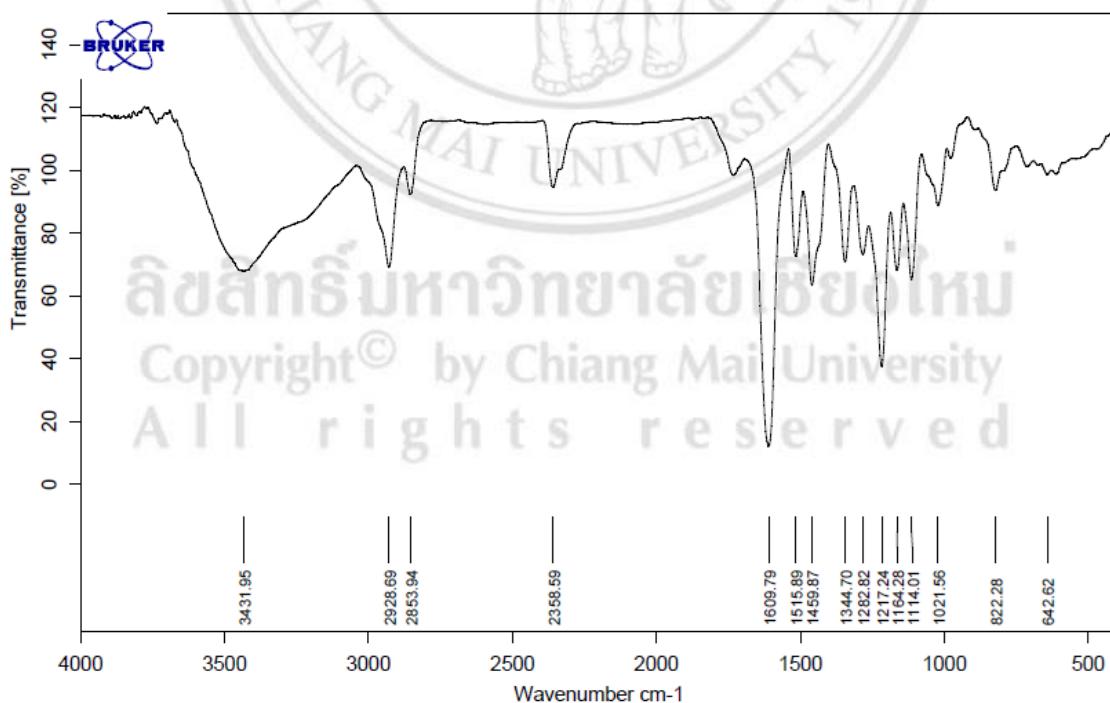
**Figure B49** HMQC Spectrum of Pachypodol (**MC7**) in  $\text{CDCl}_3$



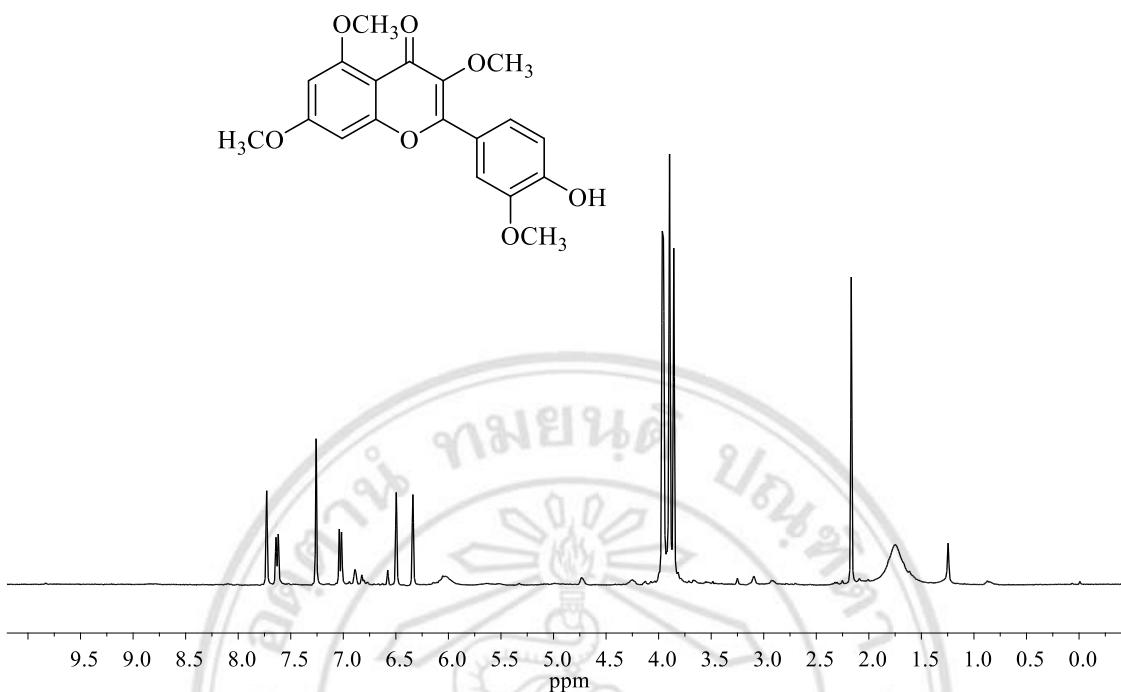
**Figure B50** HMBC Spectrum of Pachypodol (**MC7**) in  $\text{CDCl}_3$



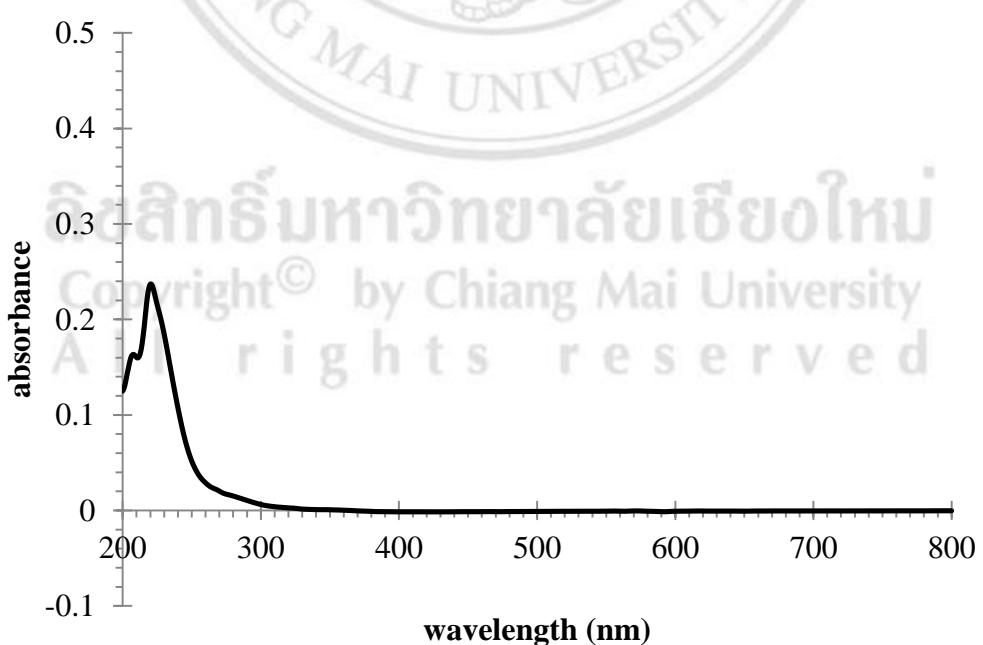
**Figure B51** UV Spectrum of 4'-Hydroxy-3,5,7,3'-tetramethoxyflavone (**MC8**)



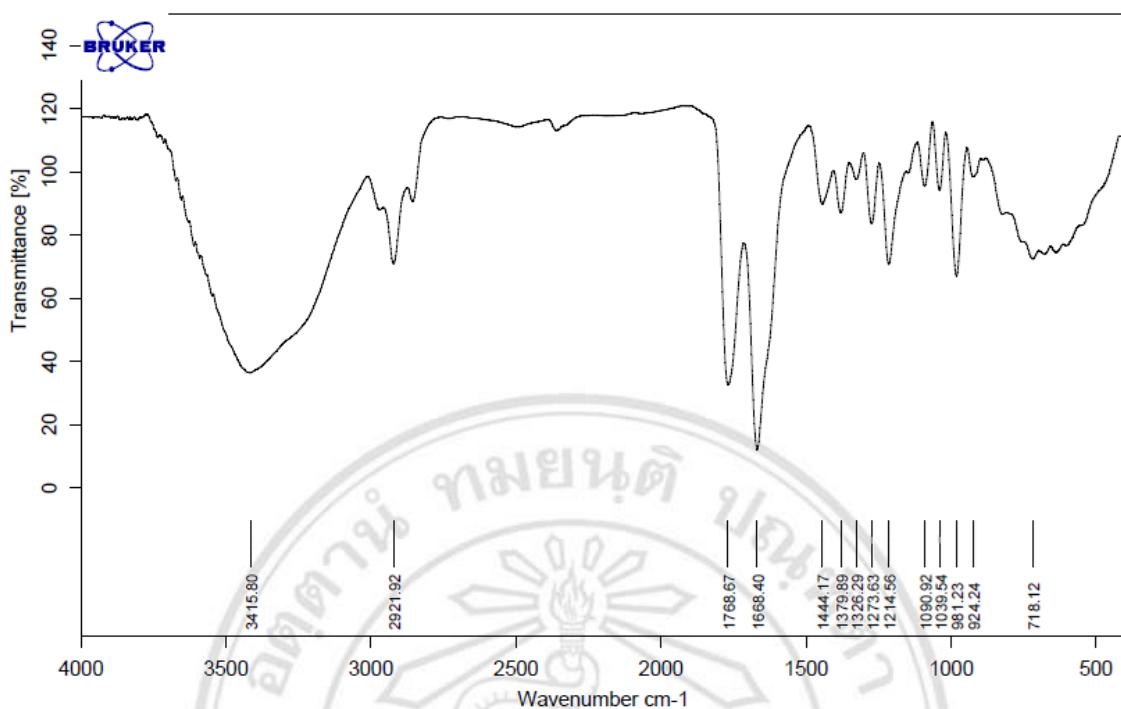
**Figure B52** IR Spectrum of 4'-Hydroxy-3,5,7,3'-tetramethoxyflavone (**MC8**)



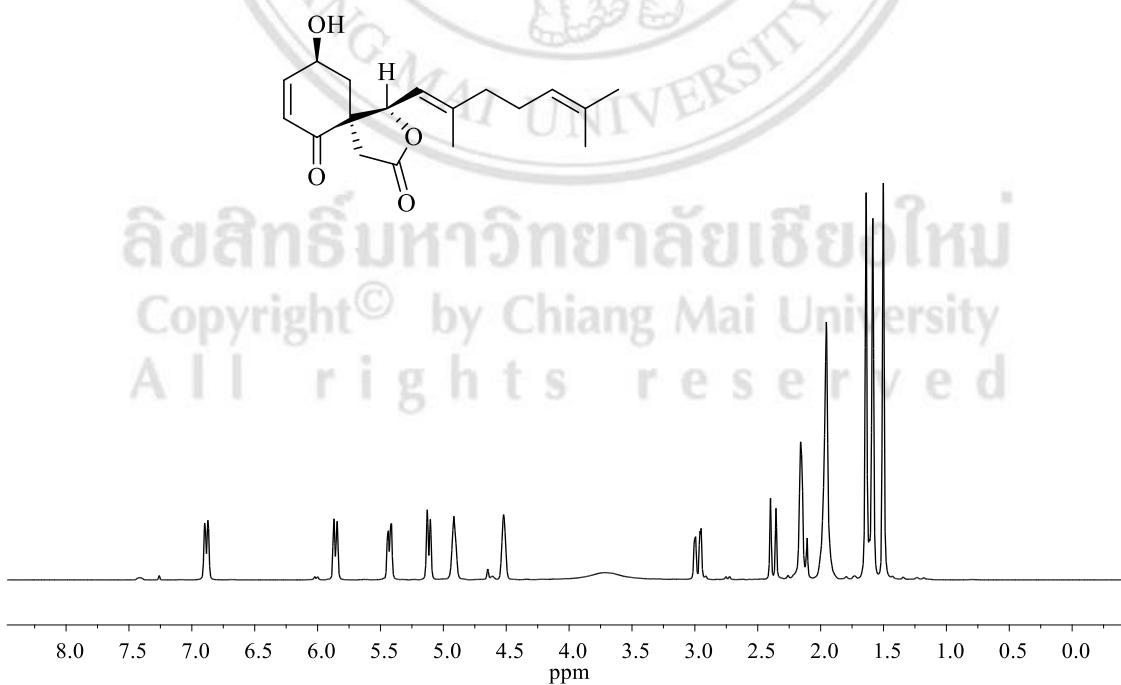
**Figure B53**  $^1\text{H}$  NMR Spectrum ( $\text{CDCl}_3$ , 400 MHz) of 4'-Hydroxy-3,5,7,3'-tetramethoxyflavone (**MC8**)



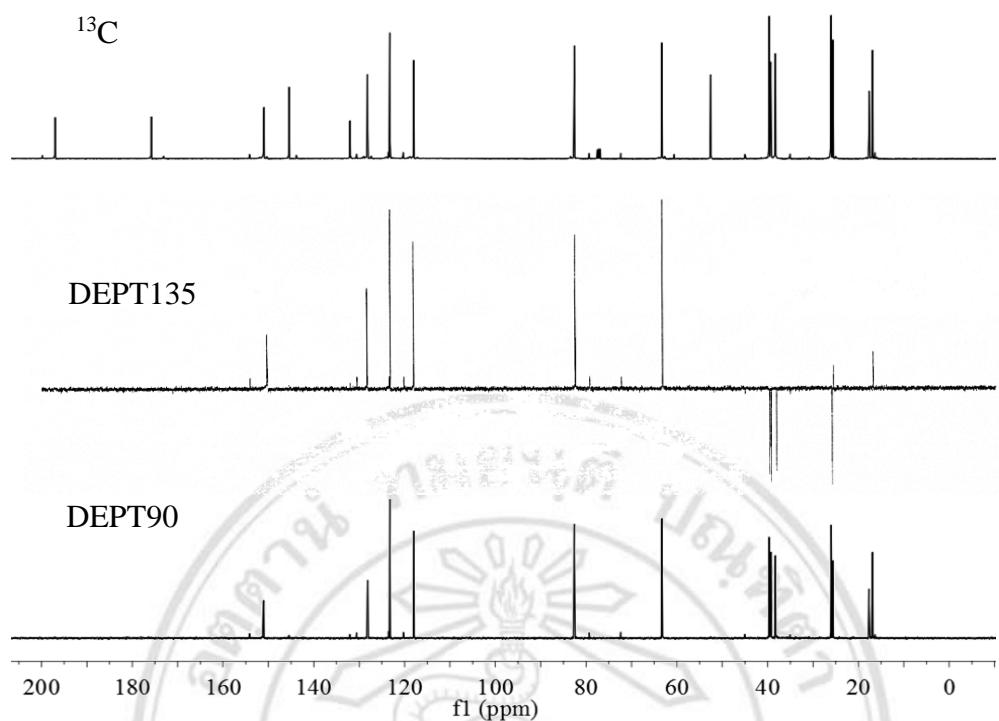
**Figure B54** UV Spectrum of (+)-Miliusol (**MC9**)



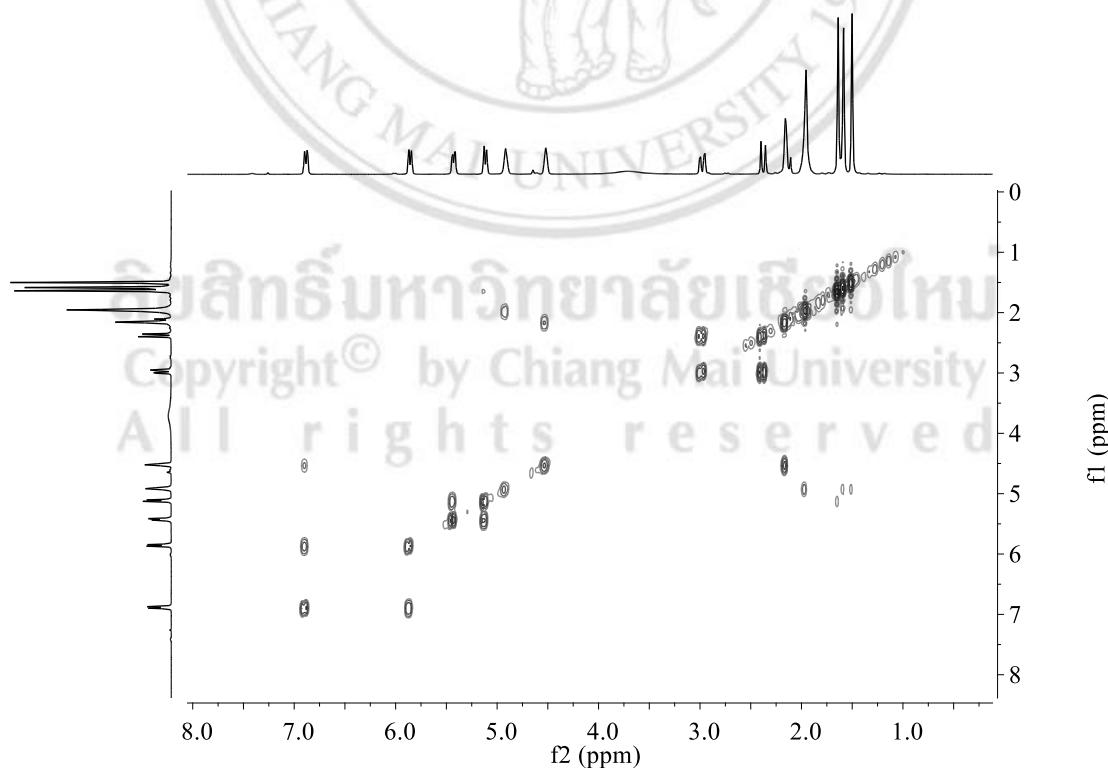
**Figure B55** IR Spectrum of (+)-Miliusol (**MC9**)



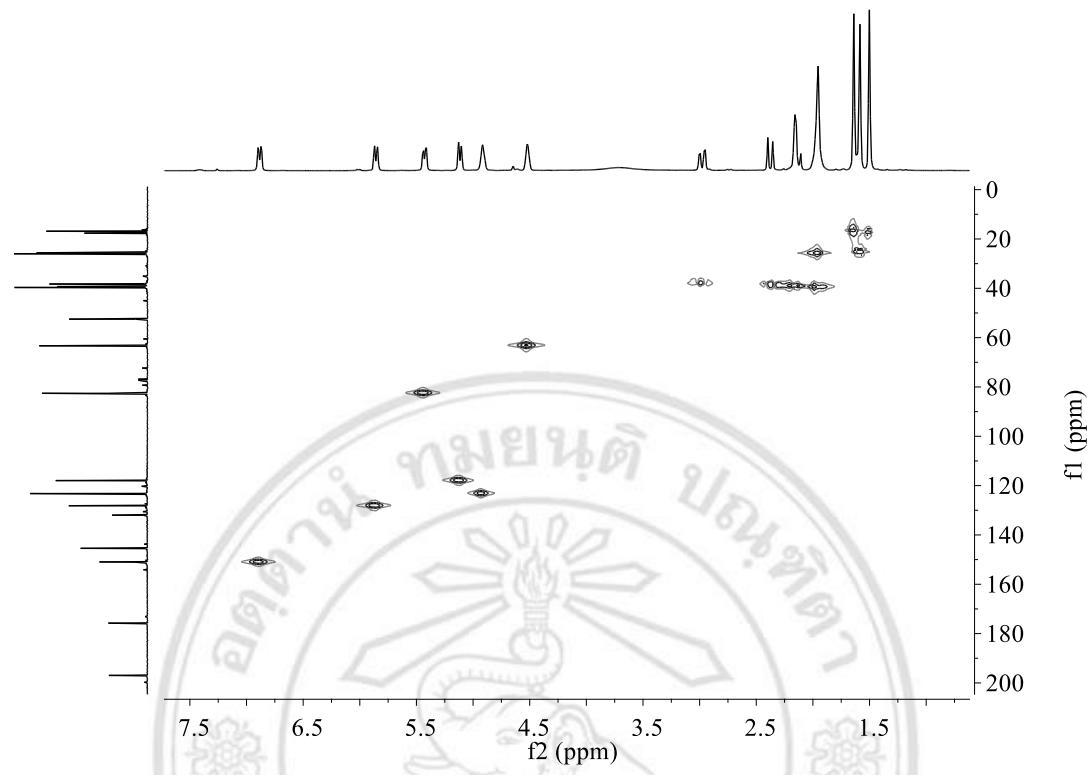
**Figure B56**  $^1\text{H}$  NMR Spectrum ( $\text{CDCl}_3$ , 400 MHz) of (+)-Miliusol (**MC9**)



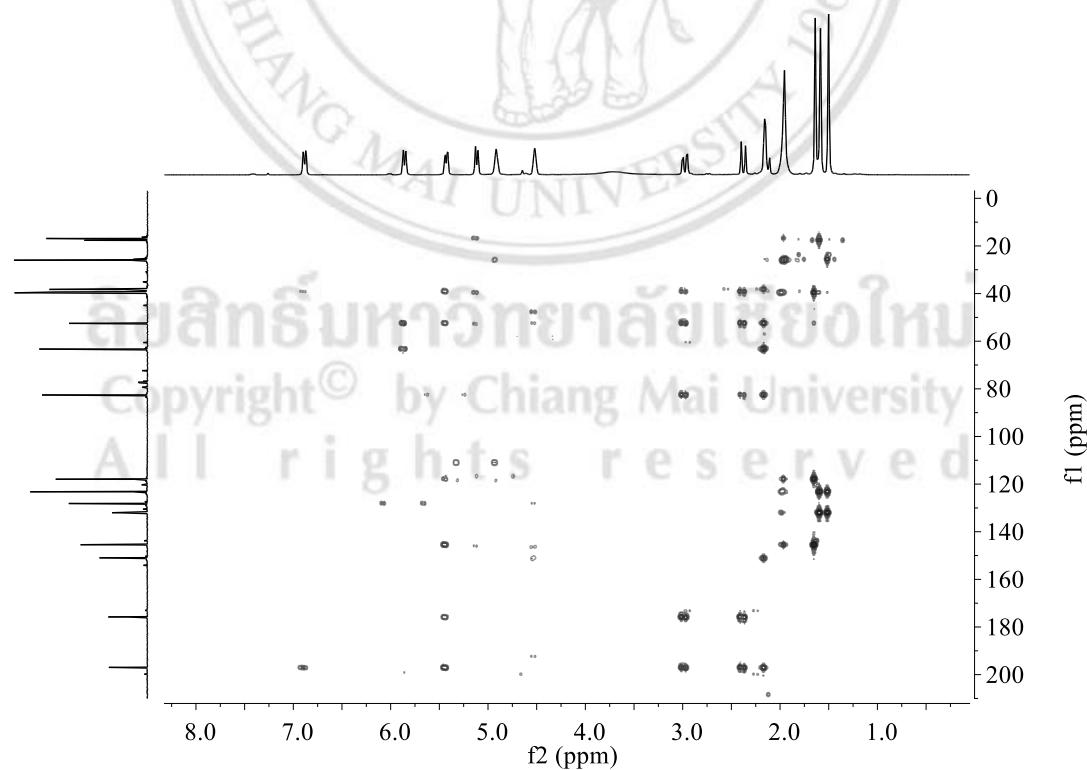
**Figure B57**  $^{13}\text{C}$  NMR, DEPT135 and DEPT90 Spectra ( $\text{CDCl}_3$ , 100 MHz) of (+)-Miliusol (MC9)



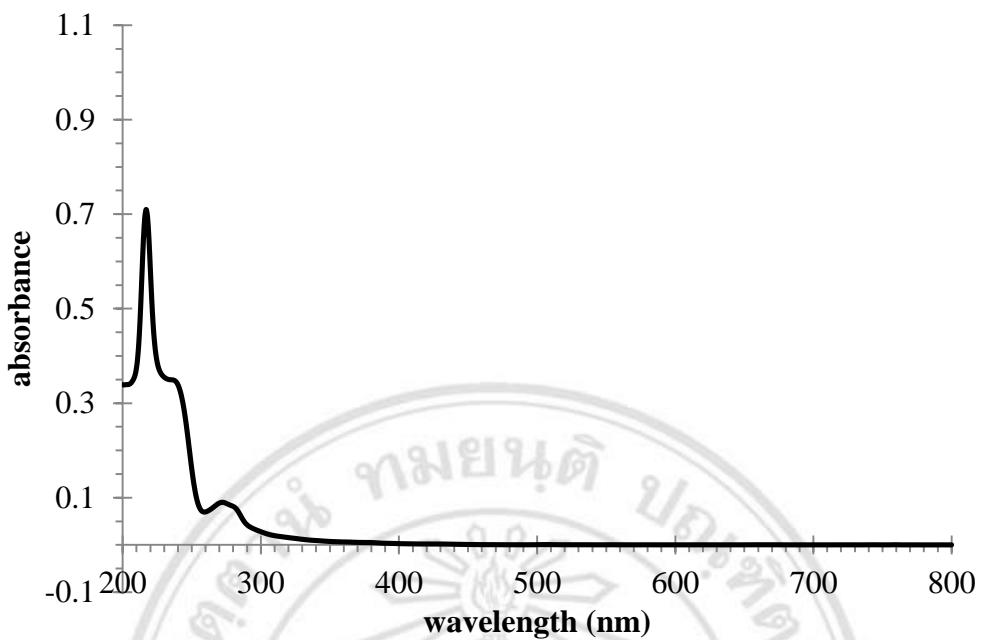
**Figure B58** COSY Spectrum of (+)-Miliusol (MC9) in  $\text{CDCl}_3$



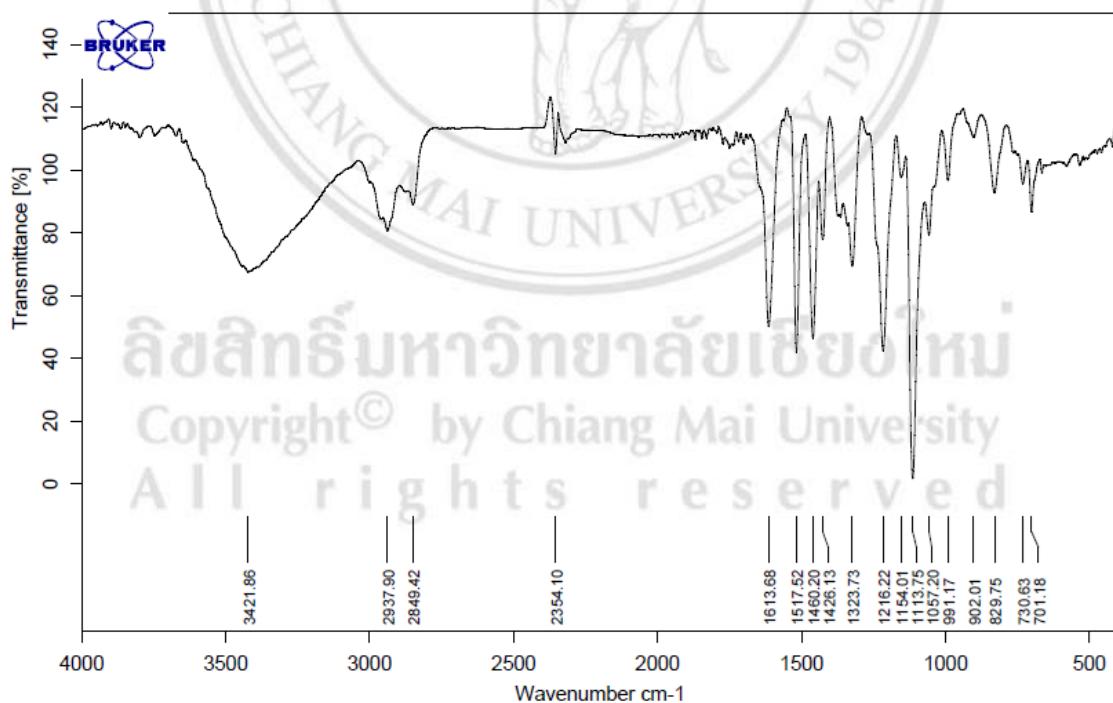
**Figure B59** HMQC Spectrum of (+)-Miliusol (**MC9**) in  $\text{CDCl}_3$



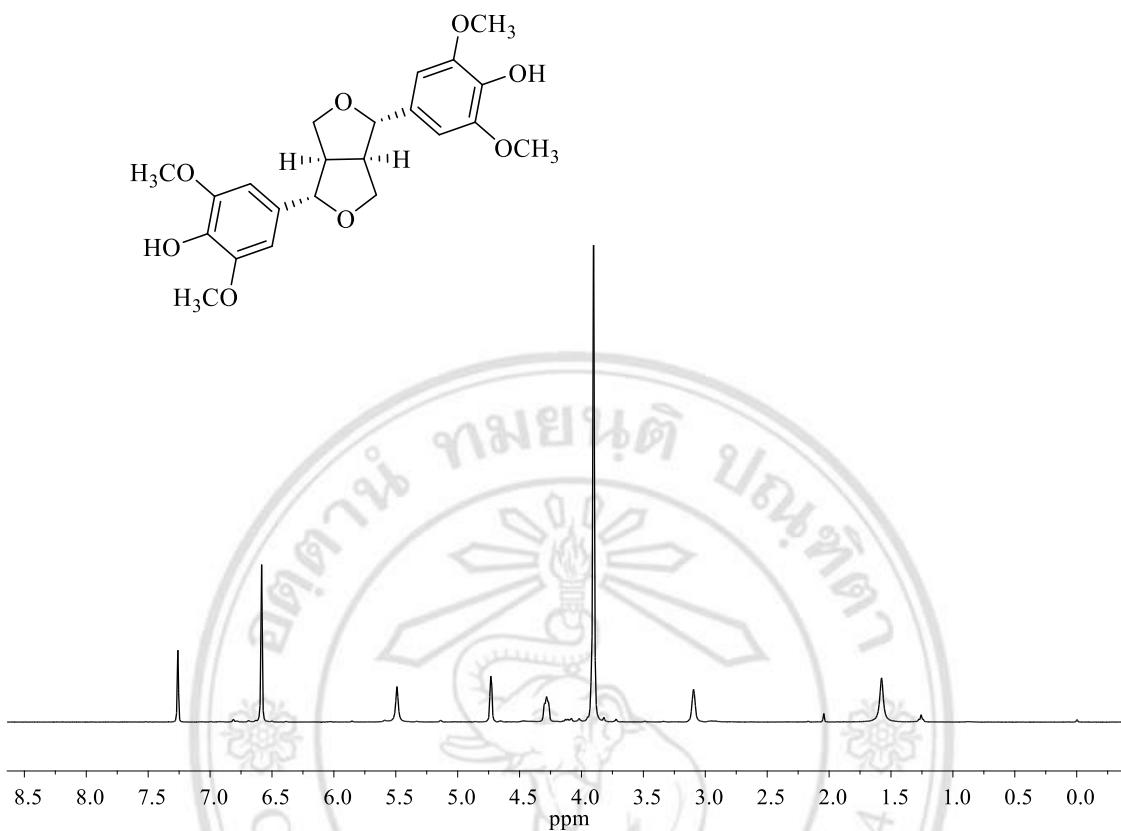
**Figure B60** HMBC Spectrum of (+)-Miliusol (**MC9**) in  $\text{CDCl}_3$



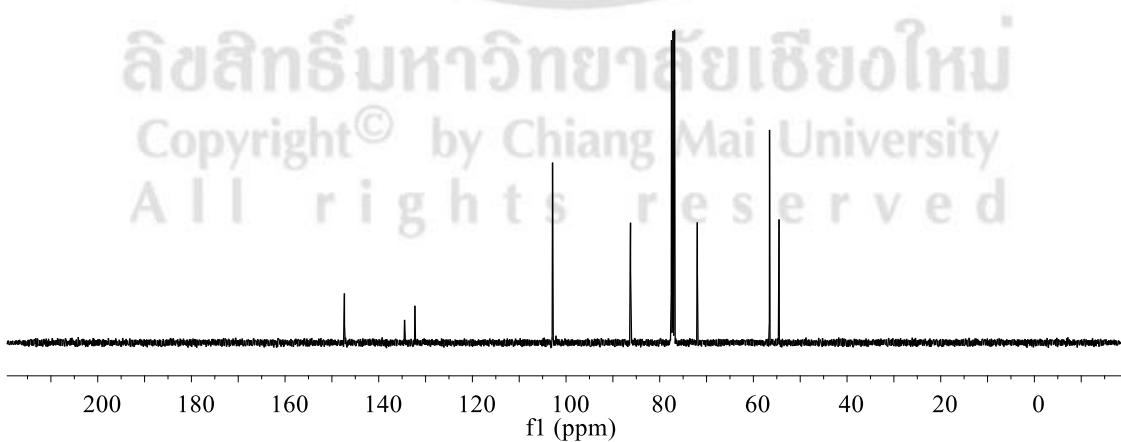
**Figure B61** UV Spectrum of (+)-Syringaresinol (**MC10**)



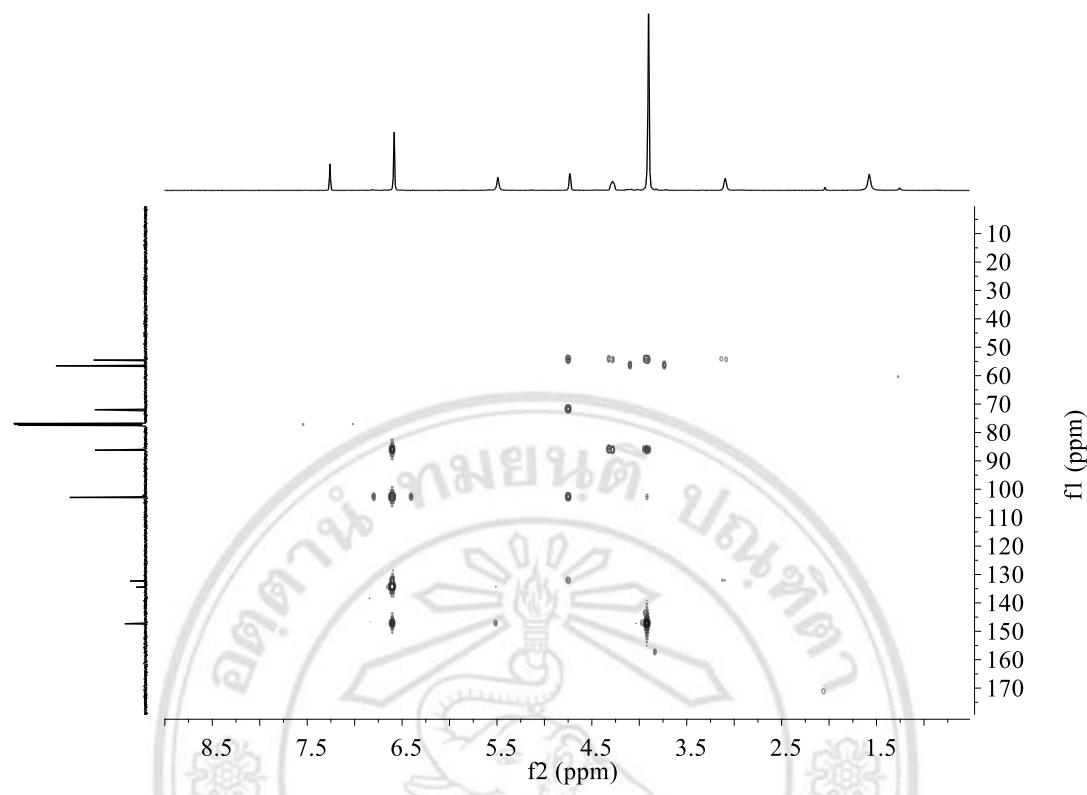
**Figure B62** IR Spectrum of (+)-Syringaresinol (**MC10**)



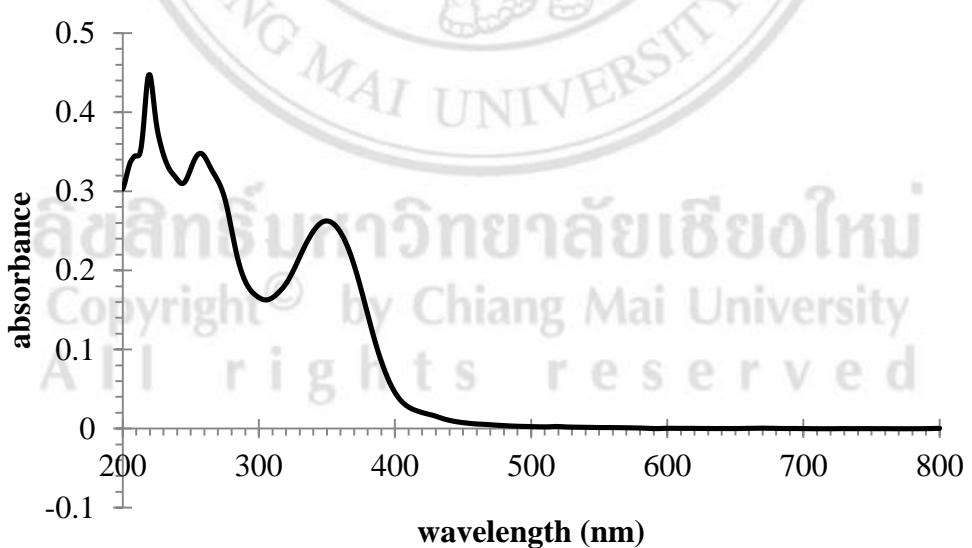
**Figure B63**  $^1\text{H}$  NMR Spectrum ( $\text{CDCl}_3$ , 400 MHz) of (+)-Syringaresinol (**MC10**)



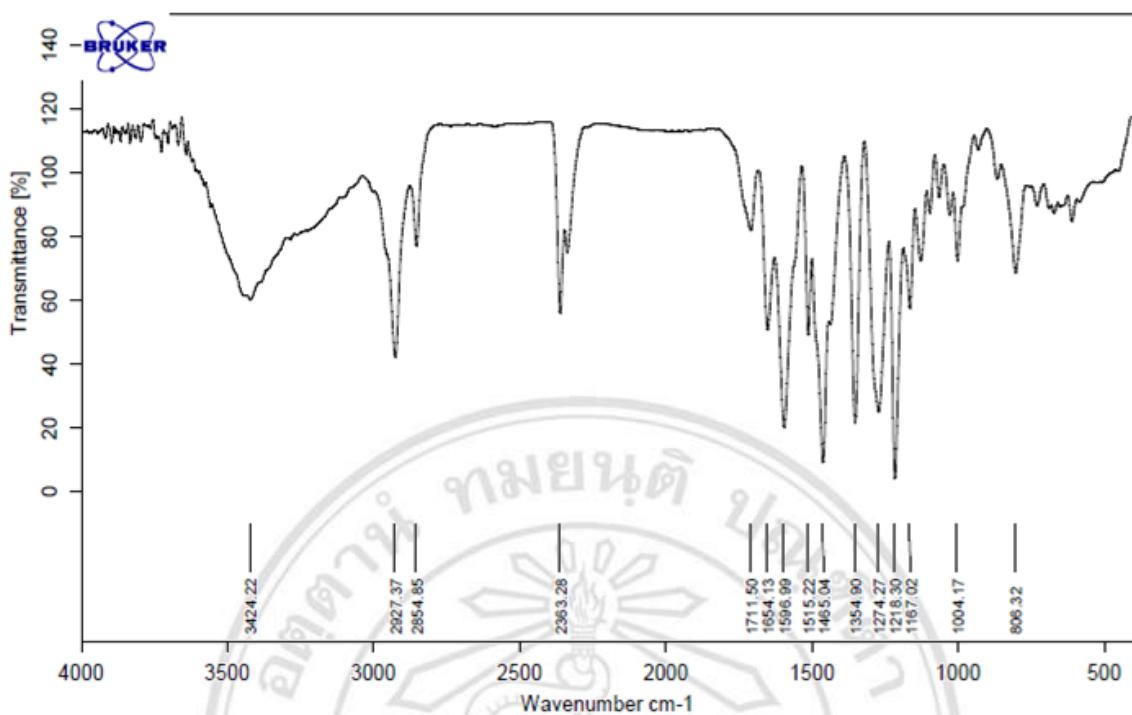
**Figure B64**  $^{13}\text{C}$  NMR Spectrum ( $\text{CDCl}_3$ , 100 MHz) of (+)-Syringaresinol (**MC10**)



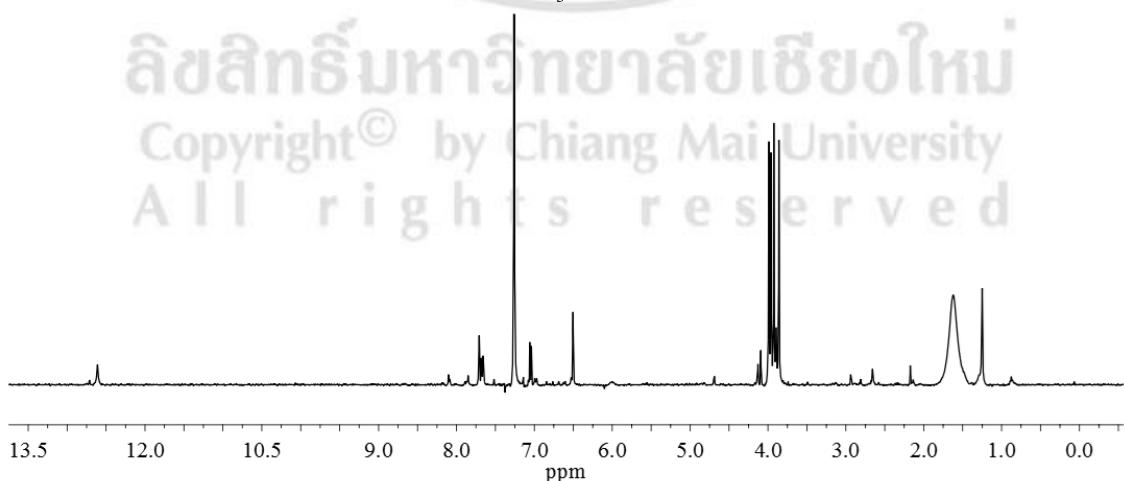
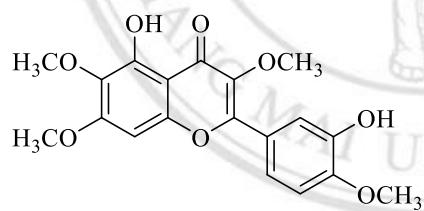
**Figure B65** HMBC Spectrum of (+)-Syringaresinol (**MC10**) in  $\text{CDCl}_3$



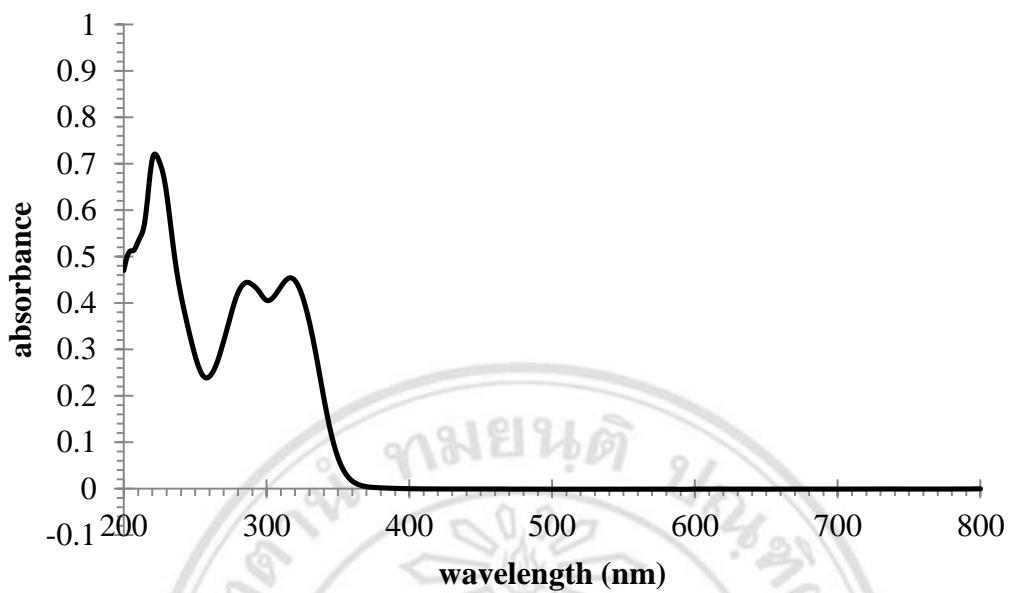
**Figure B66** UV Spectrum of Chrysoplenetin (**MC11**)



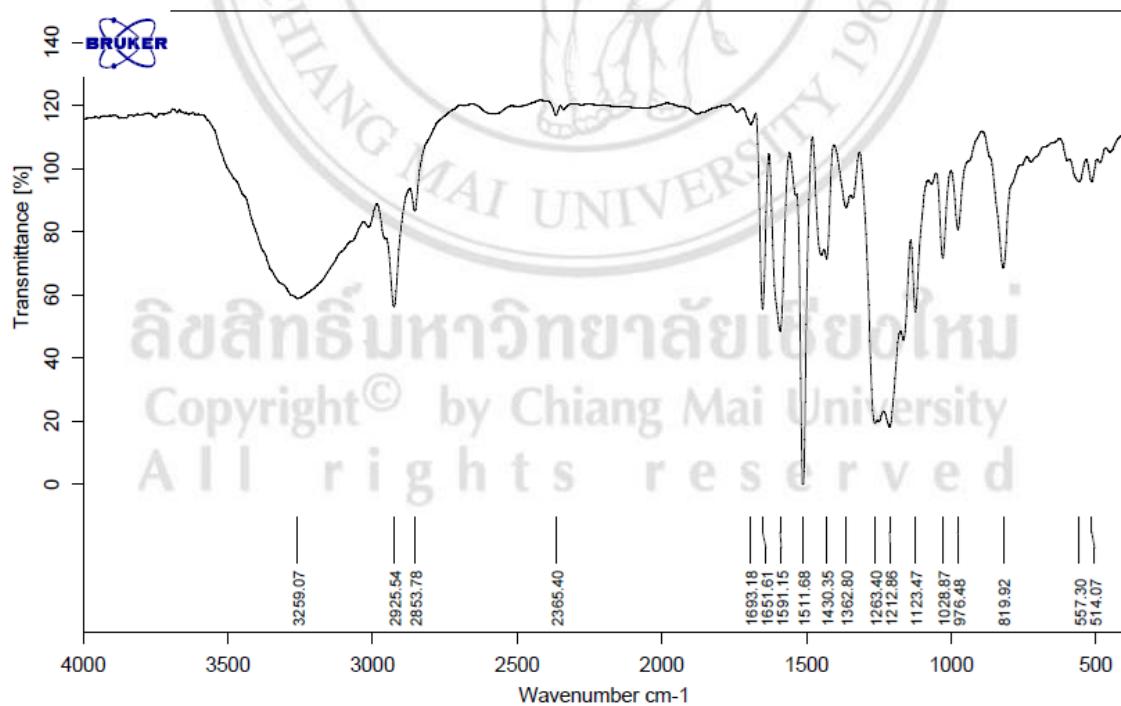
**Figure B67** IR Spectrum of Chrysoplenetin (**MC11**)



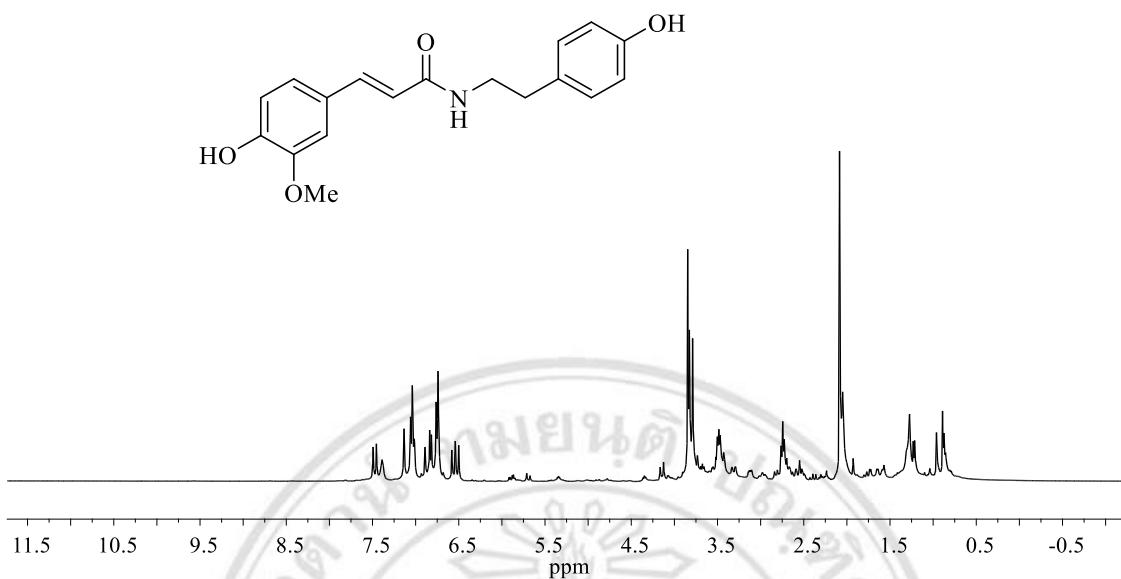
**Figure B68**  $^1\text{H}$  NMR Spectrum ( $\text{CDCl}_3$ , 400 MHz) of Chrysoplenetin (**MC11**)



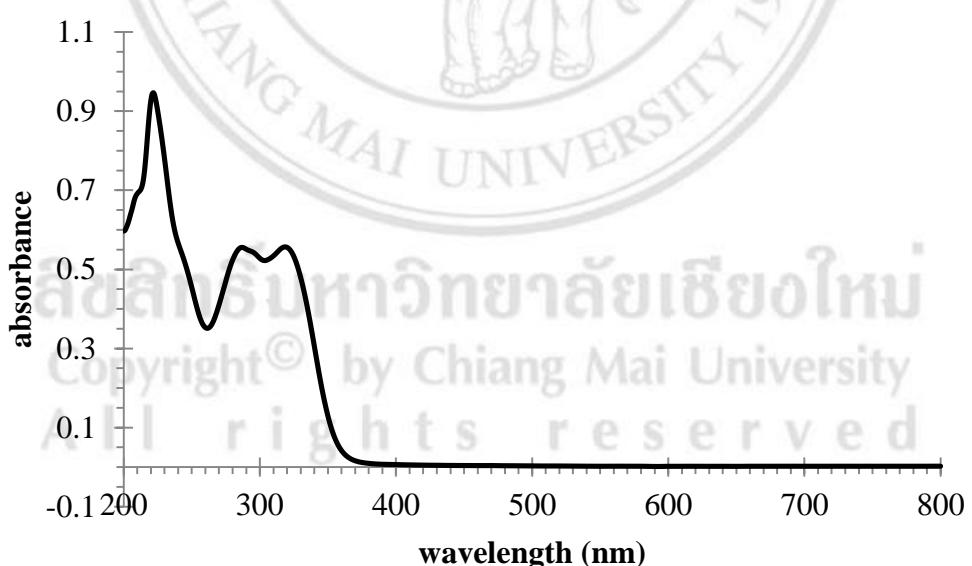
**Figure B69** UV Spectrum of *trans*-N-Feruloyltyramine (**MC12**)



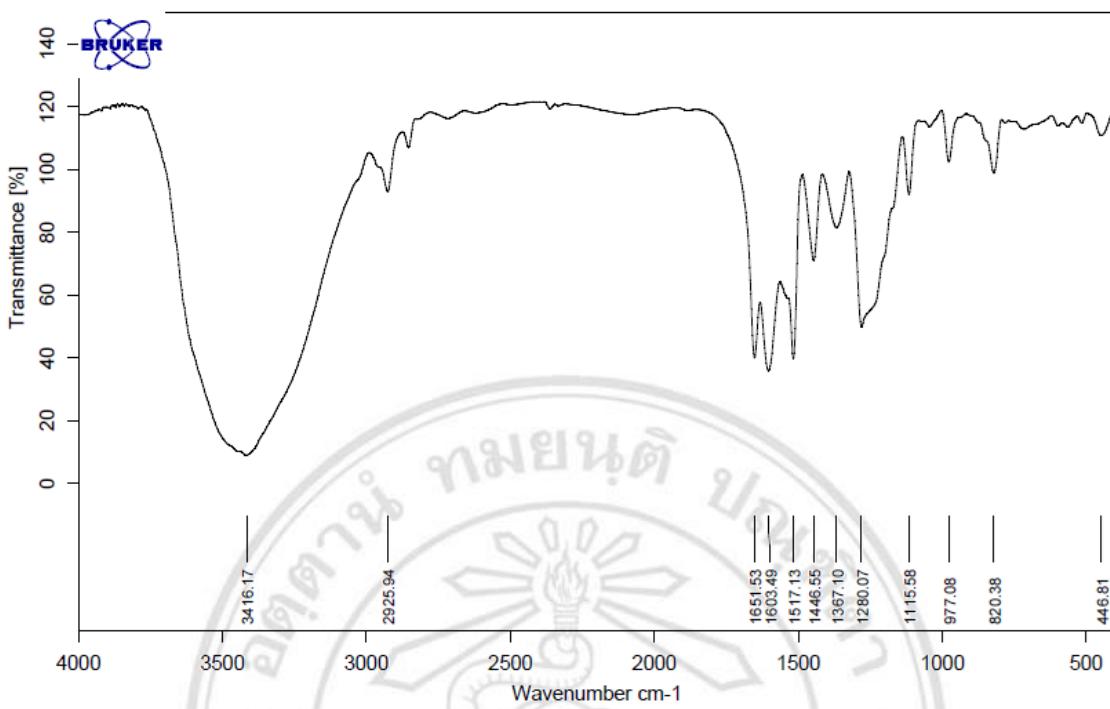
**Figure B70** IR Spectrum of *trans*-N-Feruloyltyramine (**MC12**)



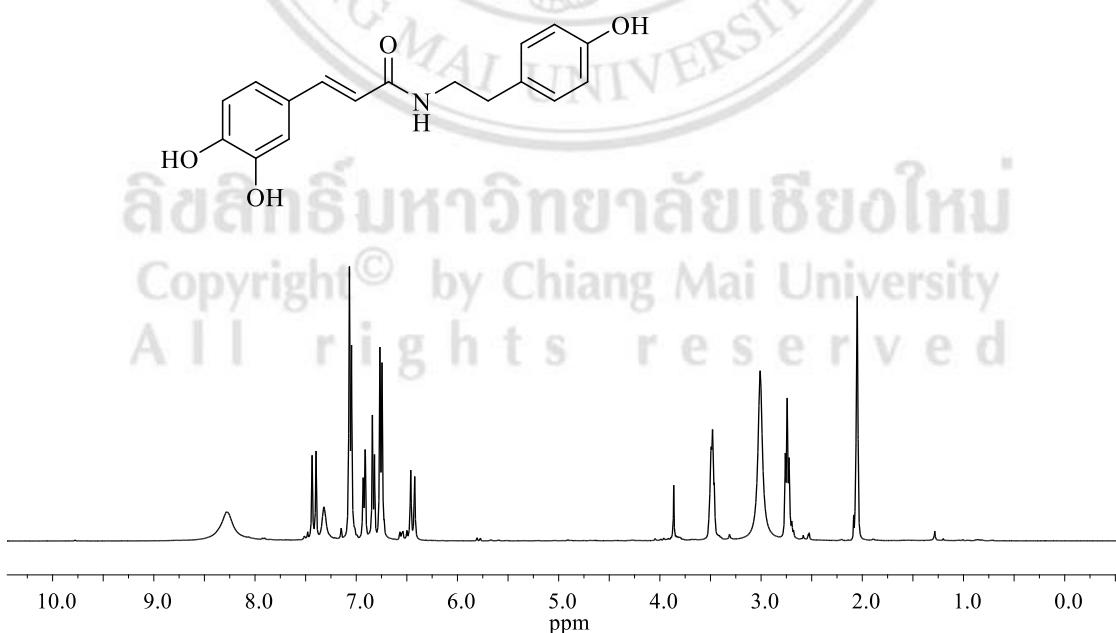
**Figure B71**  $^1\text{H}$  NMR Spectrum (acetone- $d_6$ , 400 MHz) of *trans*-*N*-Feruloyltyramine (**MC12**)



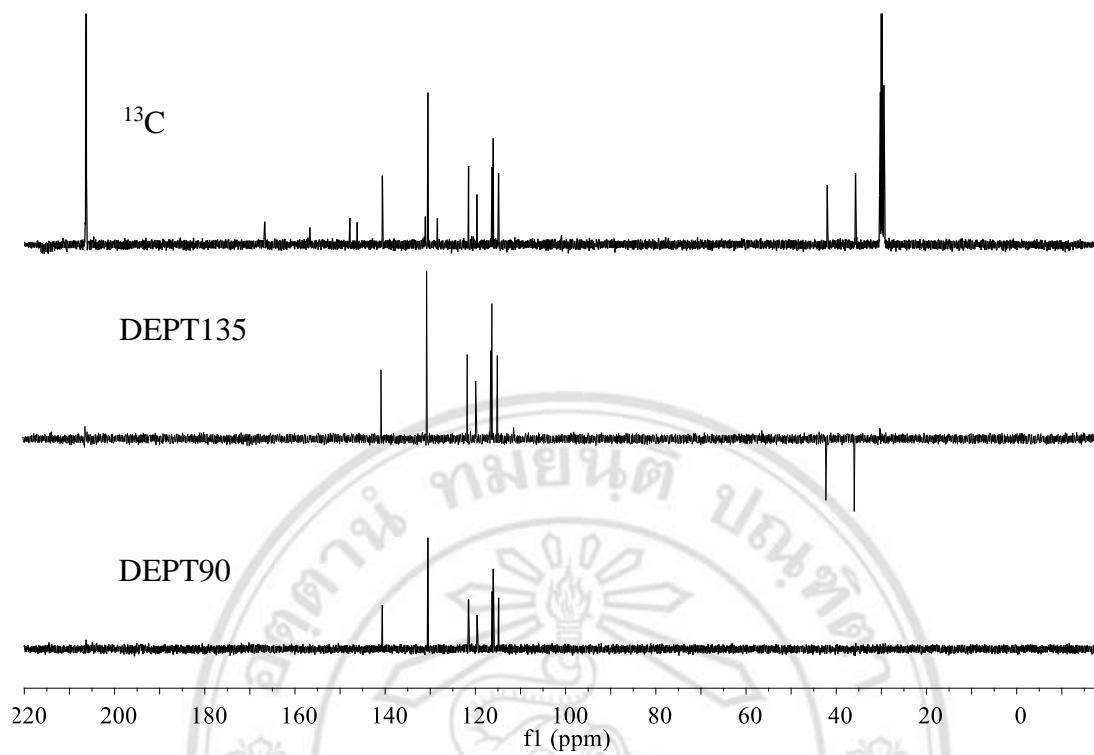
**Figure B72** UV Spectrum of *trans*-*N*-Caffeoyltyramine (**MC13**)



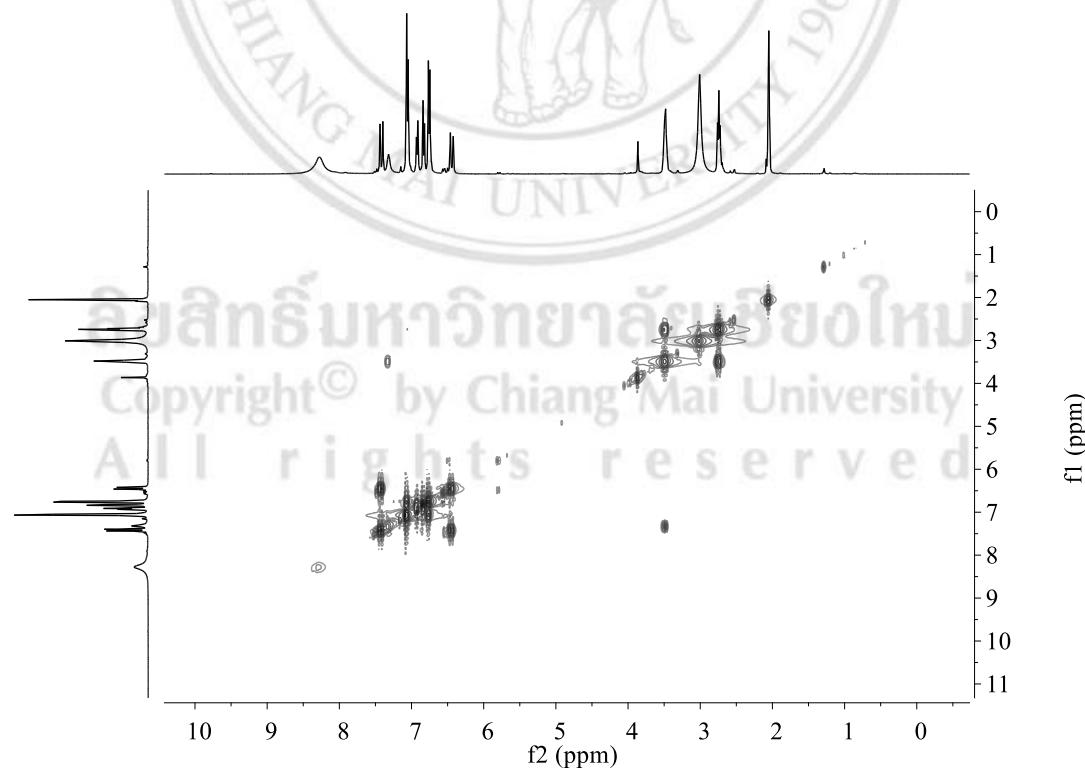
**Figure B73** IR Spectrum of *trans*-N-Caffeoyltyramine (**MC13**)



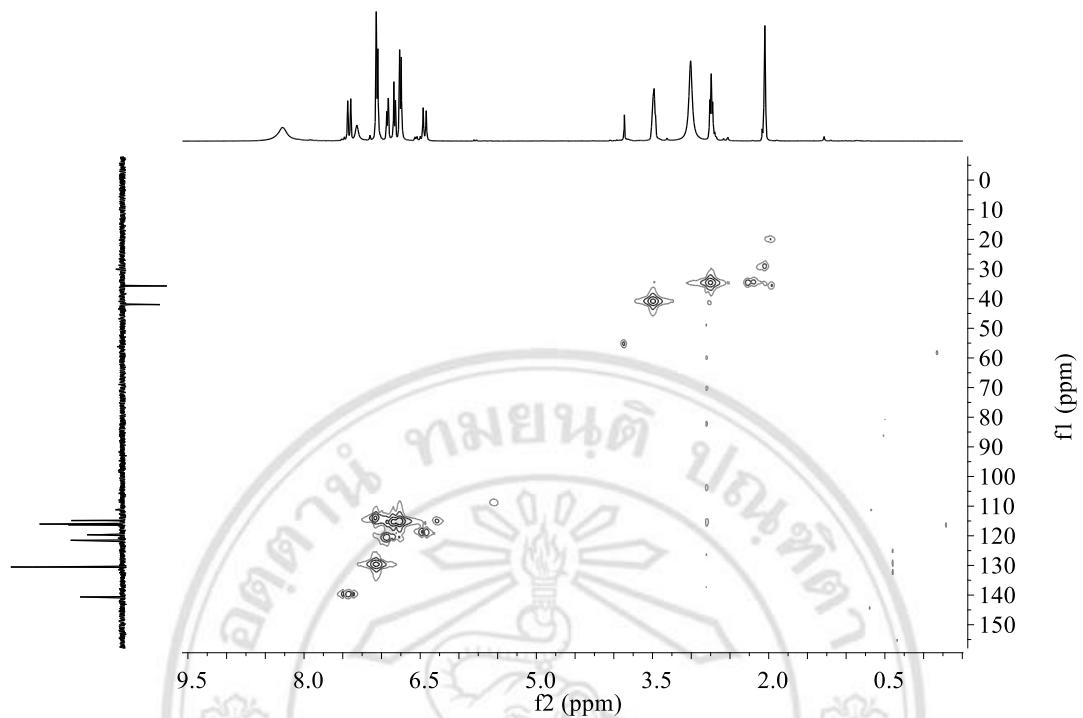
**Figure B74** <sup>1</sup>H NMR Spectrum (acetone-*d*<sub>6</sub>, 400 MHz) of *trans*-N-Caffeoyltyramine (**MC13**)



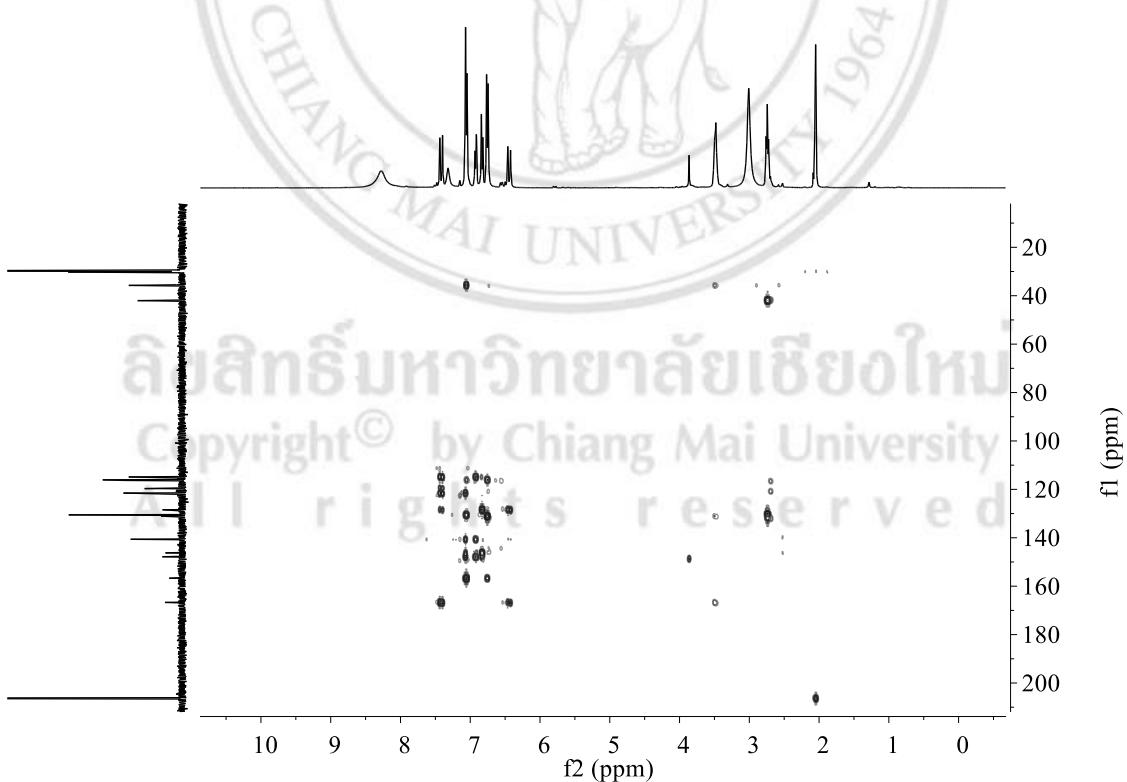
**Figure B75**  $^{13}\text{C}$  NMR, DEPT135 and DEPT90 Spectra (acetone- $d_6$ , 100 MHz) of *trans*-N-Caffeoyltyramine (**MC13**)



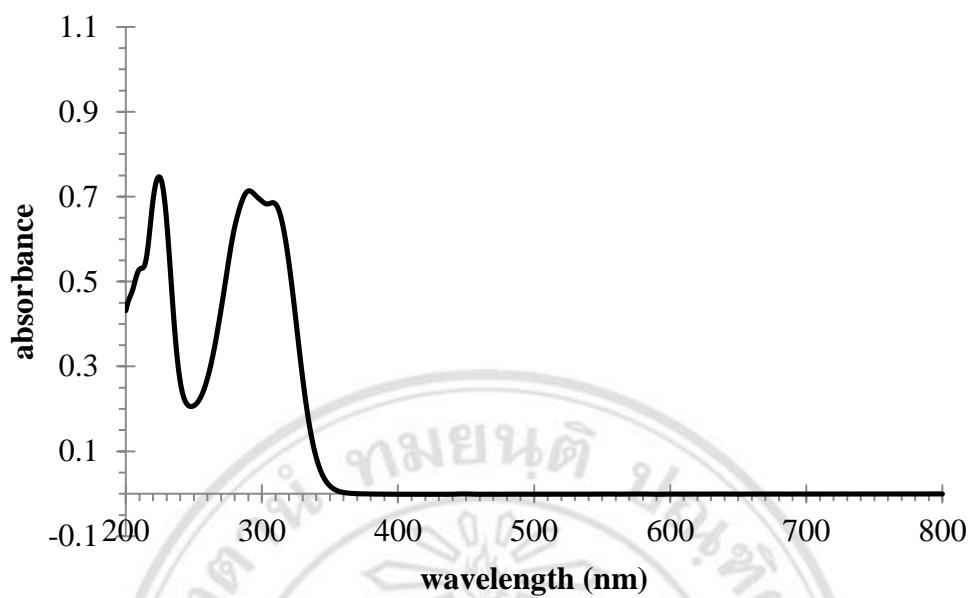
**Figure B76** COSY Spectrum of *trans*-N-Caffeoyltyramine (**MC13**) in Acetone- $d_6$



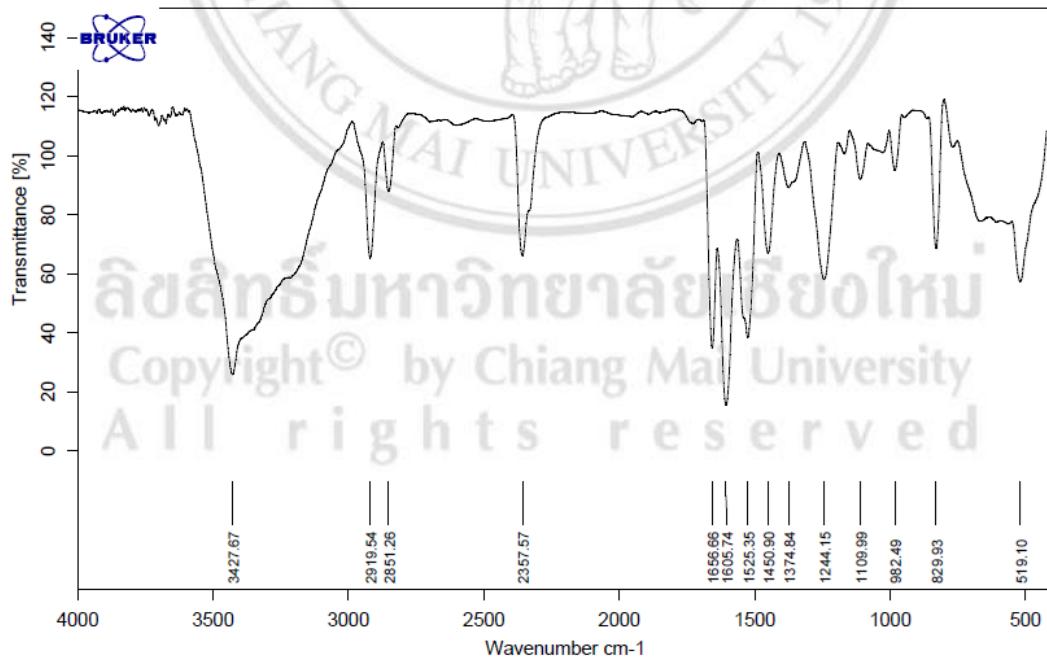
**Figure B77** HMQC Spectrum of *trans*-N-Caffeoyltyramine (**MC13**) in Acetone-*d*<sub>6</sub>



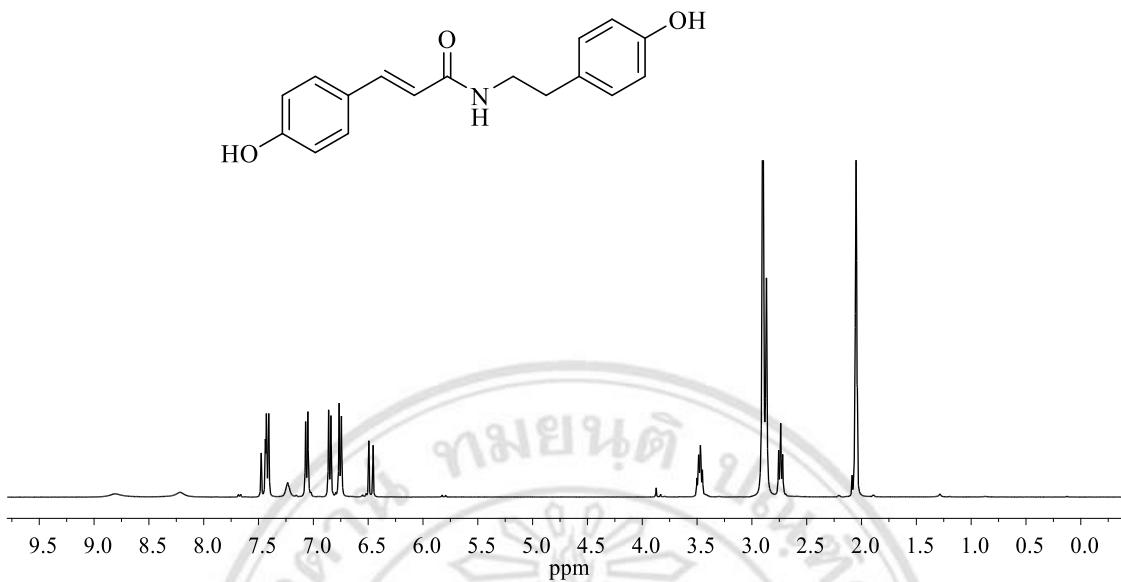
**Figure B78** HMBC Spectrum of *trans*-N-Caffeoyltyramine (**MC13**) in Acetone-*d*<sub>6</sub>



**Figure B79** UV Spectrum of *trans*-N-Coumaroyltyramine (**MC14**)



**Figure B80** IR Spectrum of *trans*-N-Coumaroyltyramine (**MC14**)



**Figure B81** <sup>1</sup>H NMR Spectrum (acetone-*d*<sub>6</sub>, 400 MHz) of *trans*-N-Coumaroyltyramine (MC14)

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## CURRICULUM VITAE

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Scholarships	2012-2014	Human Resource Development in science Project (Science Achievement Scholarship of Thailand, SAST)
	2015	Graduate school, Chiang Mai University



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