

# Stereoselective synthesis and sialidase inhibition properties of KDO-based glycosyloxathiins

Barbara Richichi,<sup>\*a</sup> Jennifer McKimm-Breschkin,<sup>b</sup> Veronica Baldoneschi,<sup>a</sup>  
and Cristina Nativi <sup>a</sup>

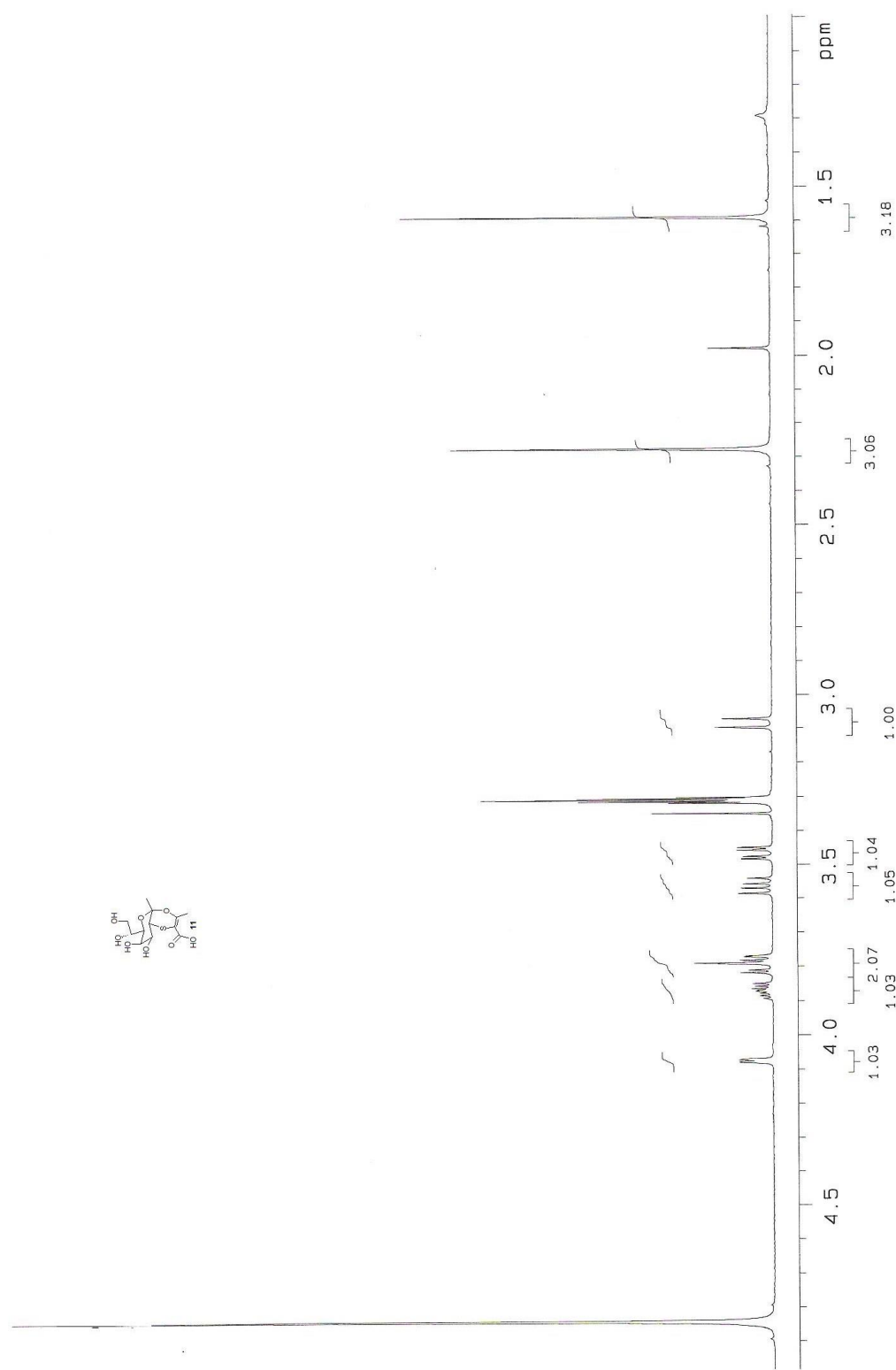
<sup>a</sup> *Dipartimento di Chimica "Ugo Schiff", University of Florence, via della Lastruccia, 13  
I-50019 Sesto Fiorentino (FI), Italy*

<sup>b</sup> *CSIRO Materials Science and Engineering, 343 Royal Parade, Parkville, 3052 Australia  
E-mail: [barbara.richichi@unifi.it](mailto:barbara.richichi@unifi.it)*

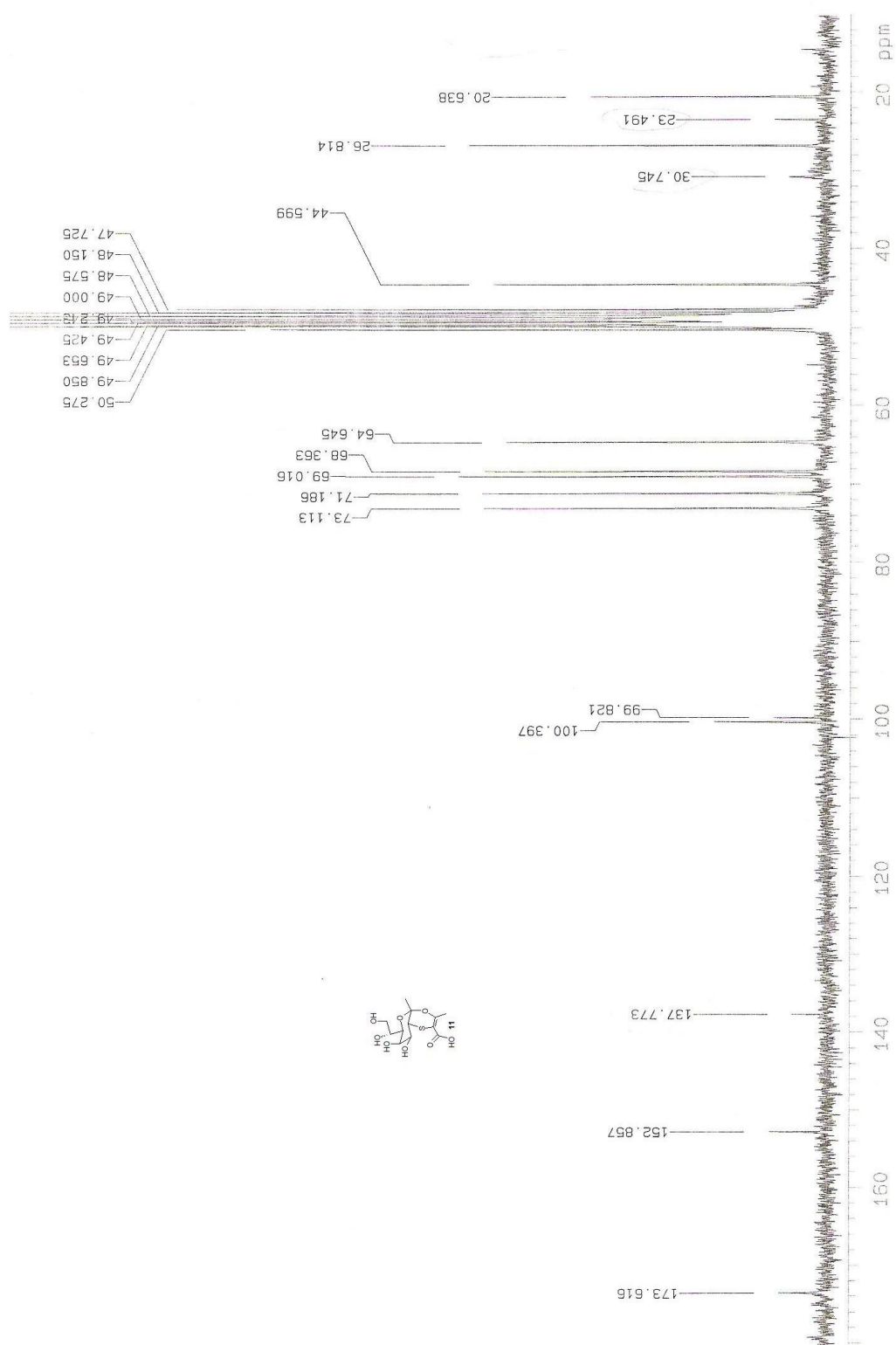
Dedicated to Professor Pierre Vogel on the occasion of his 70<sup>th</sup> anniversary

## Table of content

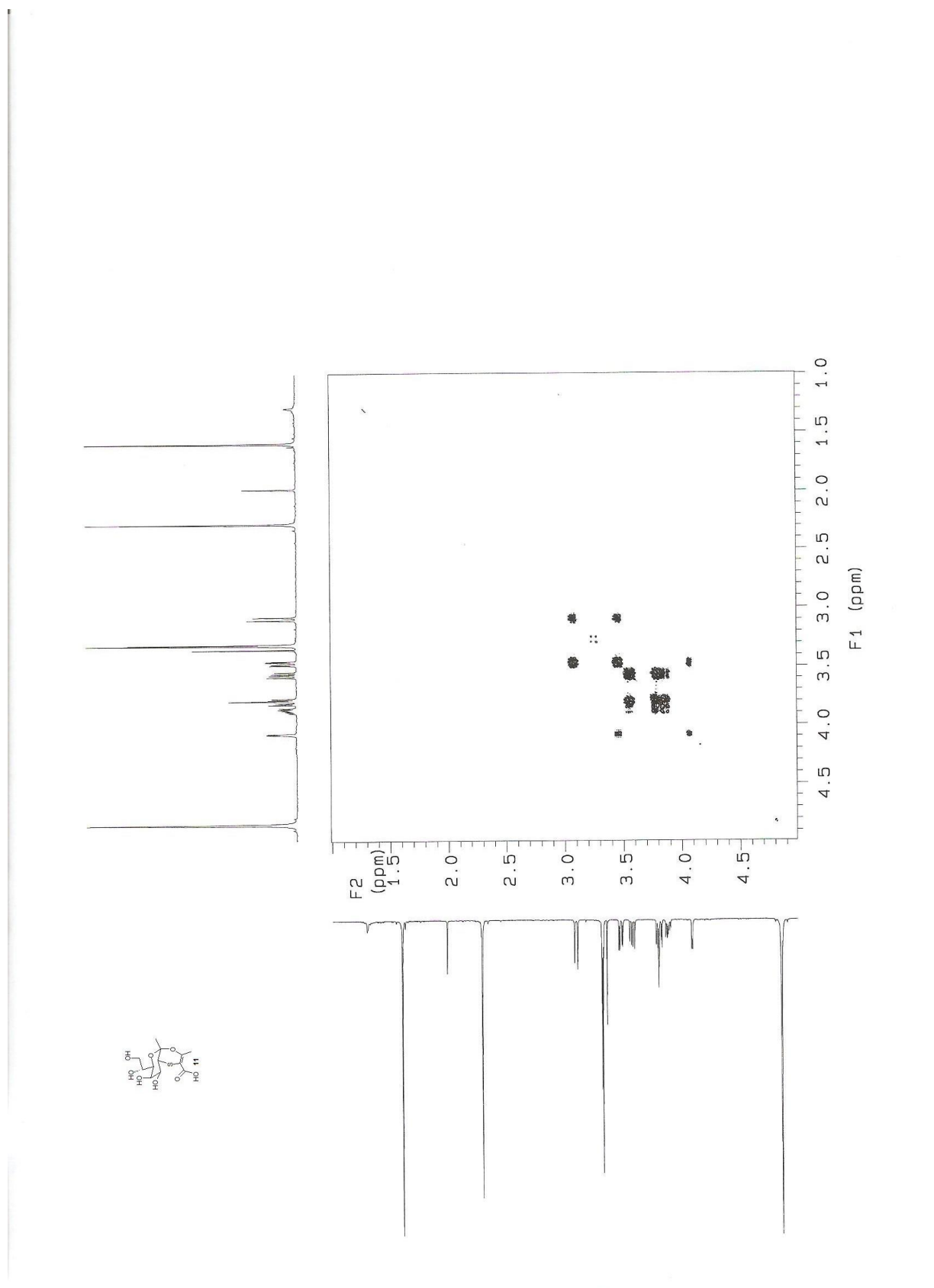
Copies of NMR spectra	Page
<sup>1</sup> H (400MHz, CDCl <sub>3</sub> ) Compound <b>11</b>	S2
<sup>13</sup> C (50MHz, CDCl <sub>3</sub> ) Compound <b>11</b>	S3
gDQCOSY (400MHz, CDCl <sub>3</sub> ) Compound <b>11</b>	S4
gHSQC (400MHz, CDCl <sub>3</sub> ) Compound <b>11</b>	S5
<sup>1</sup> H (400MHz, CD <sub>3</sub> OD) Compound <b>12a</b>	S6
<sup>13</sup> C (50MHz, CD <sub>3</sub> OD) Compound <b>12a</b>	S7
gDQCOSY (400MHz, CD <sub>3</sub> OD) Compound <b>12a</b>	S8
<sup>1</sup> H (400MHz, CDCl <sub>3</sub> ) Compound <b>12b</b>	S9
<sup>13</sup> C (100MHz, CDCl <sub>3</sub> ) Compound <b>12b</b>	S10
gDQCOSY (400MHz, CDCl <sub>3</sub> ) Compound <b>12b</b>	S11
gHSQC (400MHz, CDCl <sub>3</sub> ) Compound <b>12b</b>	S12
<sup>1</sup> H (400MHz, CDCl <sub>3</sub> ) Compound <b>12c</b>	S13
<sup>13</sup> C (50MHz, CDCl <sub>3</sub> ) Compound <b>12c</b>	S14
gDQCOSY (400MHz, CDCl <sub>3</sub> ) Compound <b>12c</b>	S15
gHSQC (400MHz, CDCl <sub>3</sub> ) Compound <b>12c</b>	S16

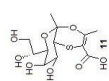


$^1\text{H}$  NMR spectrum (400MHz,  $\text{CDCl}_3$ ), Compound **11**

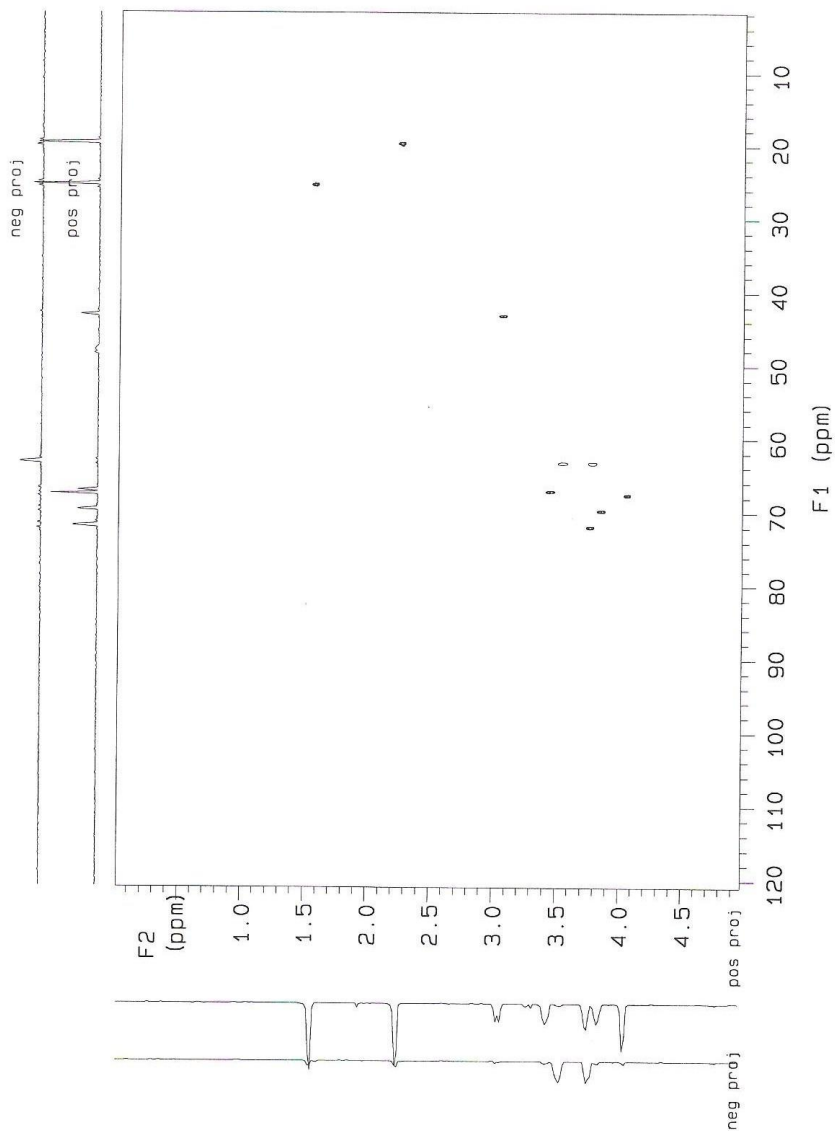


$^{13}\text{C}$  NMR spectrum (50MHz,  $\text{CDCl}_3$ ), Compound **11**

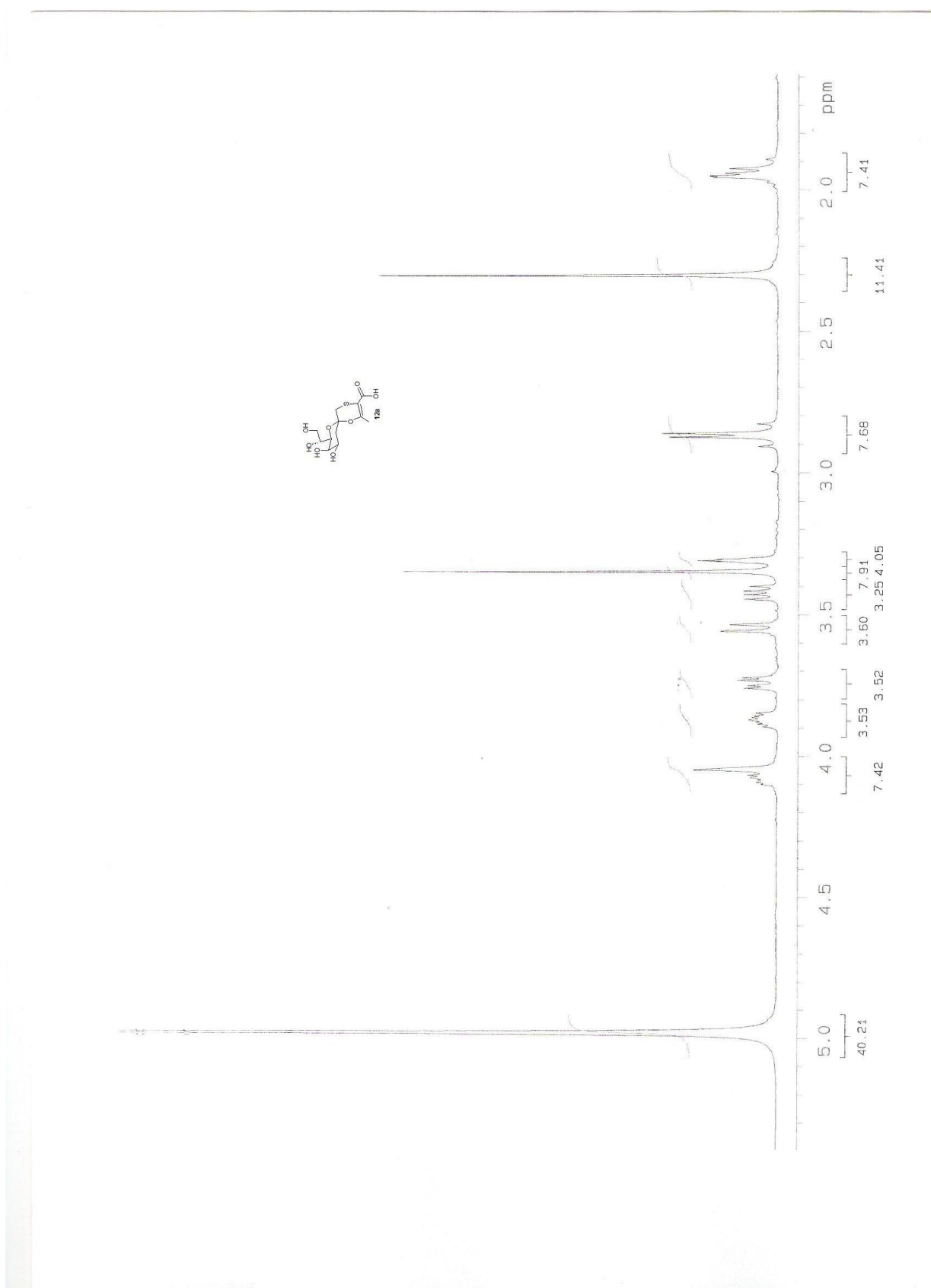
gDQCOSY NMR spectrum (400MHz, CDCl<sub>3</sub>), Compound **11**



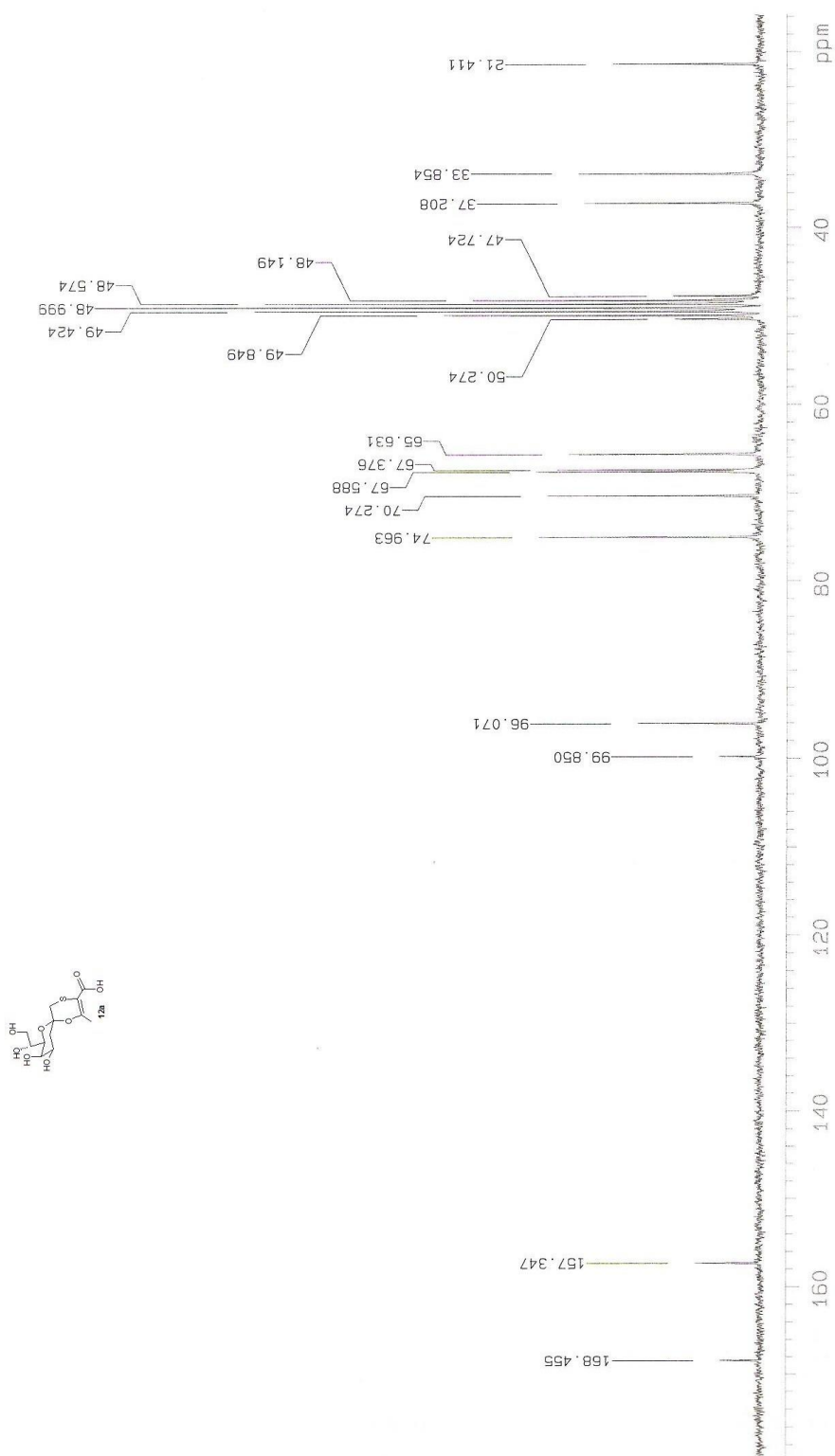
Relax. delay 1.000 sec  
 Acq. time 0.150 sec  
 Width 6410.3 Hz  
 2D Width 24154.6 Hz  
 8 repetitions  
 2 x 512 increments  
 OBSERVE H1, 399.9417858 MHz  
 DECOUPLE C13, 100.5760014 MHz  
 Power 38 dB  
 on during acquisition  
 off during delay  
 GARP-1 modulated  
 DATA PROCESSING  
 Gauss apodization 0.069 sec  
 F1 DATA PROCESSING  
 Gauss apodization 0.039 sec  
 FT size 2048 x 8192  
 Total time 0 min, -1 sec



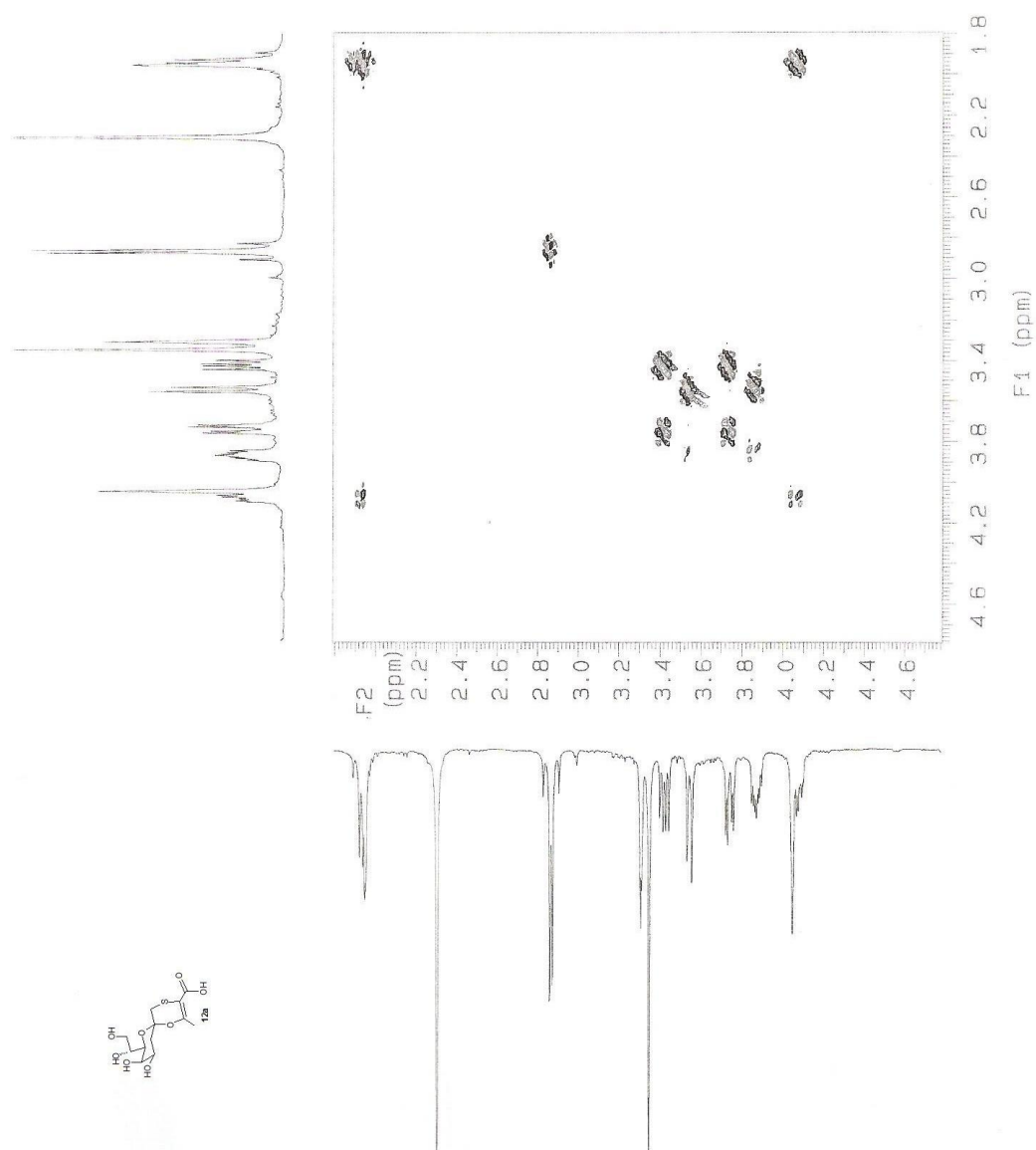
gHSQC NMR spectrum (400MHz,  $\text{CDCl}_3$ ), Compound 11



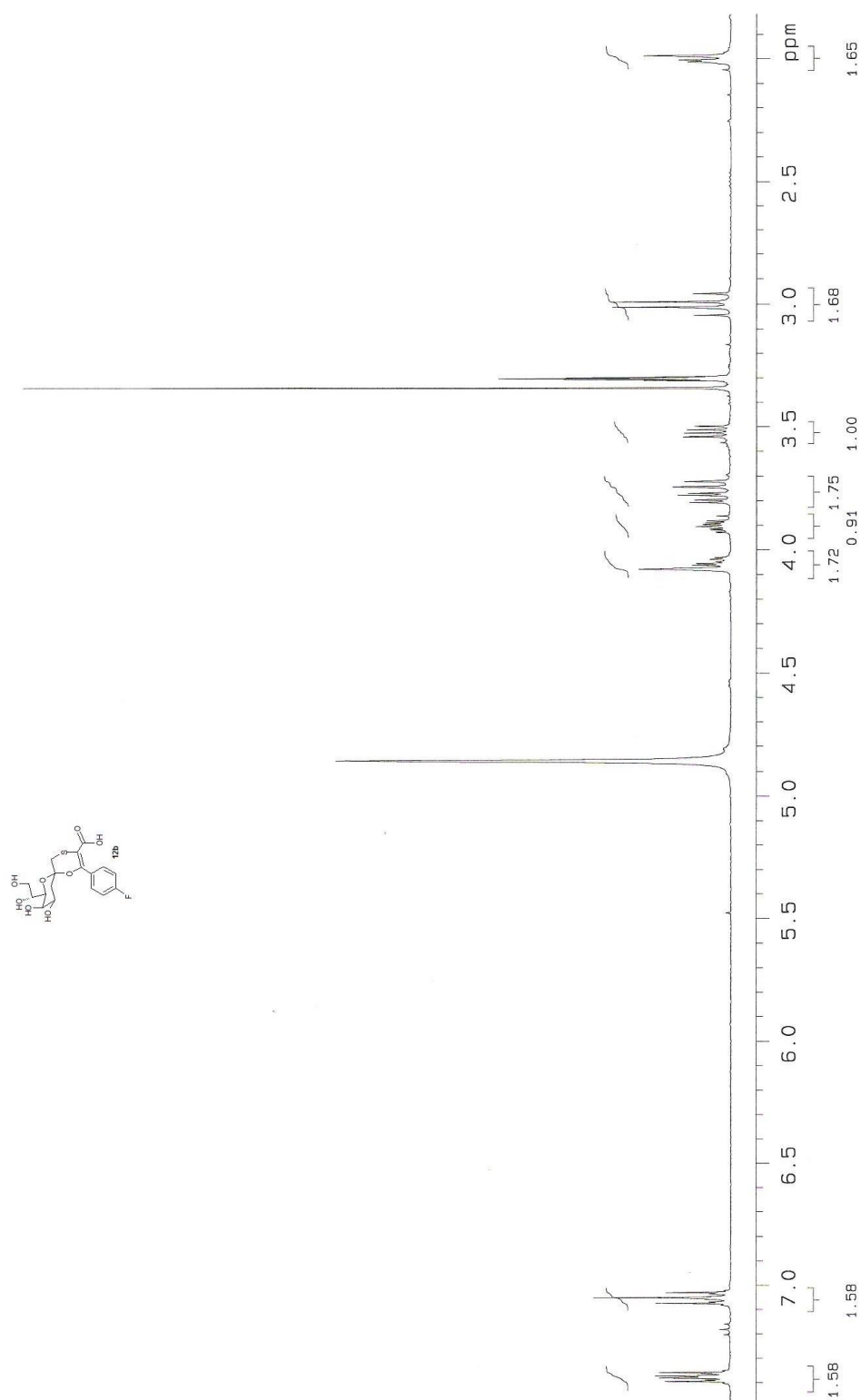
<sup>1</sup>H NMR spectrum (400MHz, CD<sub>3</sub>OD) Compound **12a**



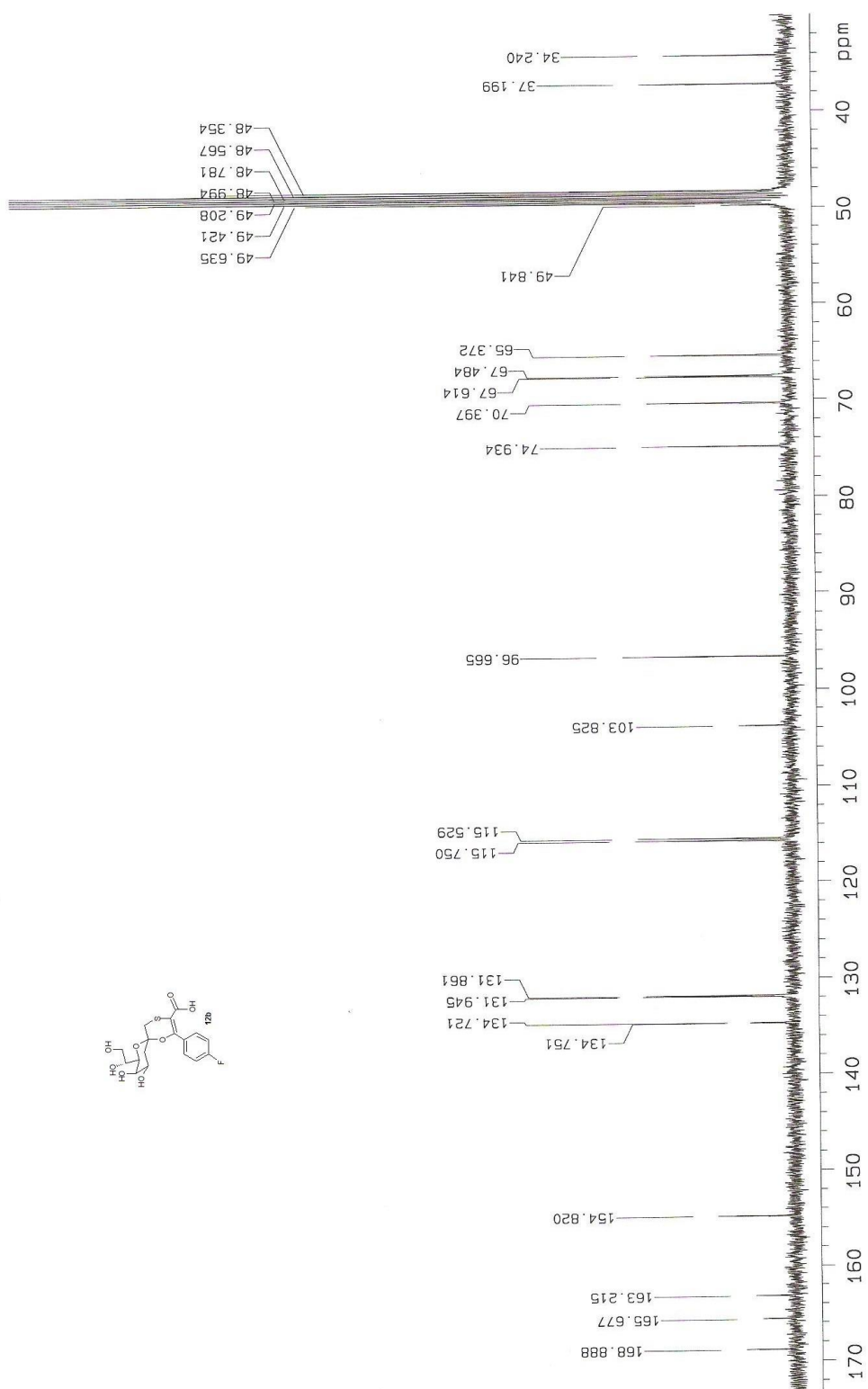
$^{13}\text{C}$  NMR spectrum (50MHz,  $\text{CD}_3\text{OD}$ ) Compound **12a**

gDQCOSY NMR spectrum (400MHz, CD<sub>3</sub>OD) Compound **12a**

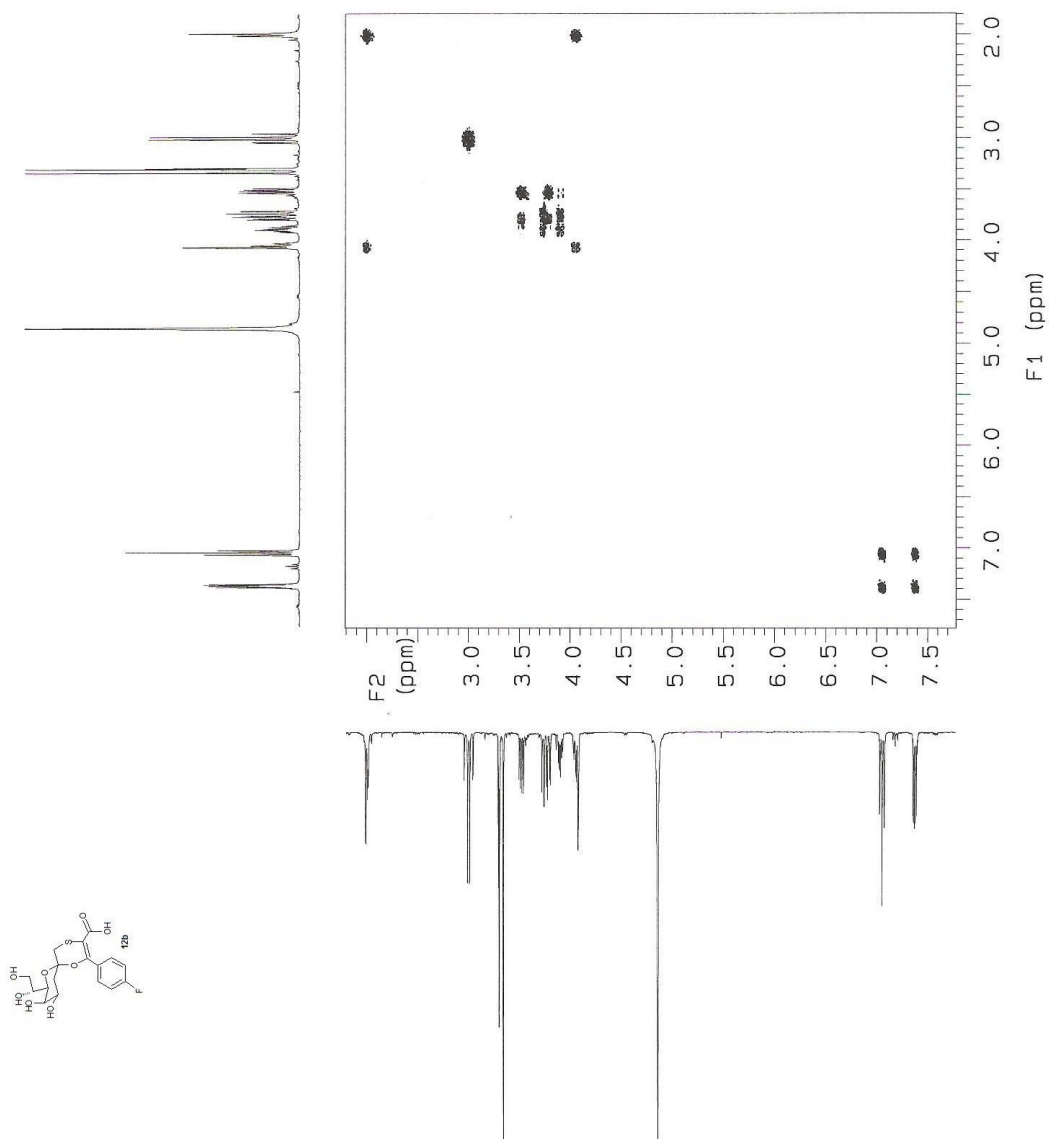


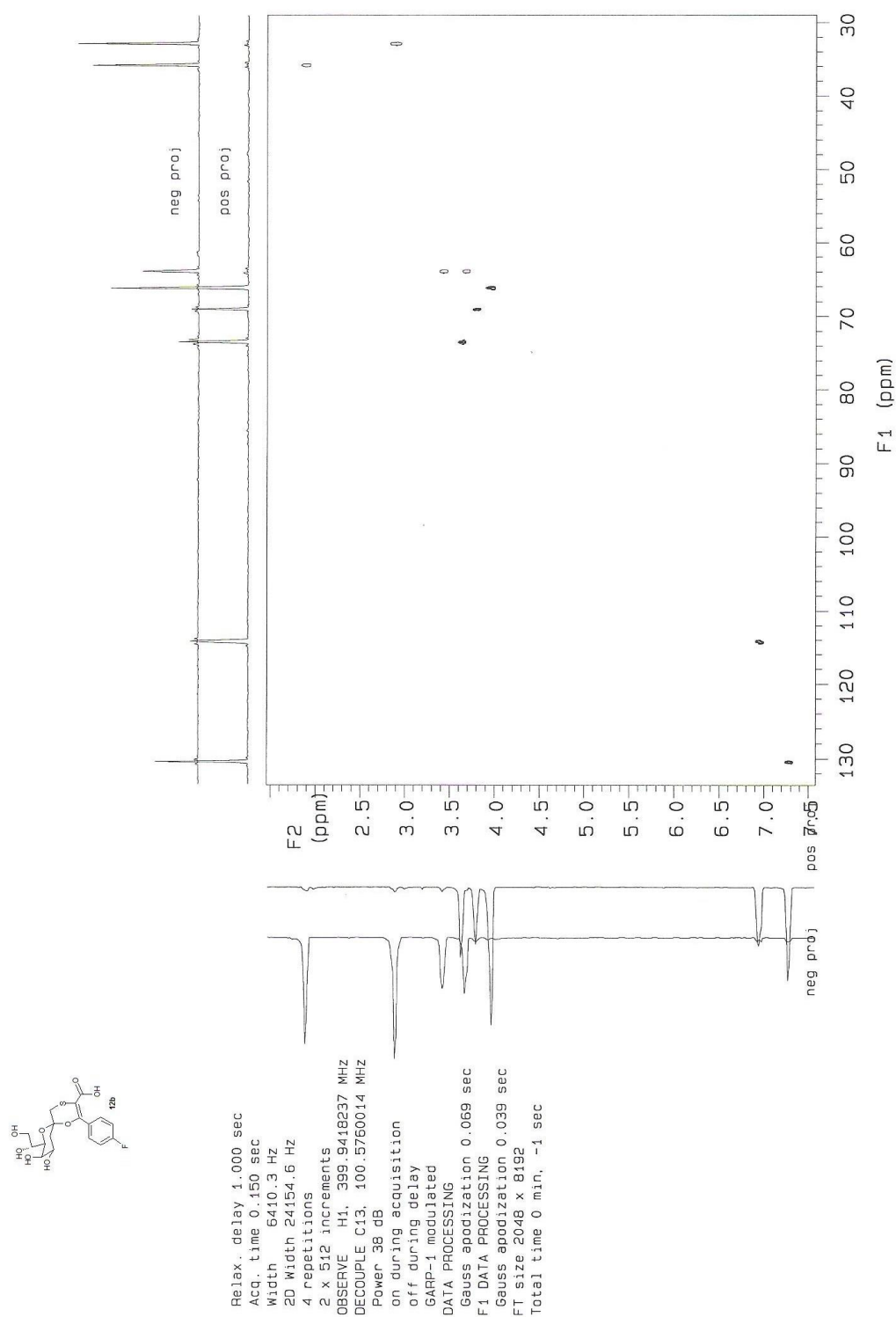


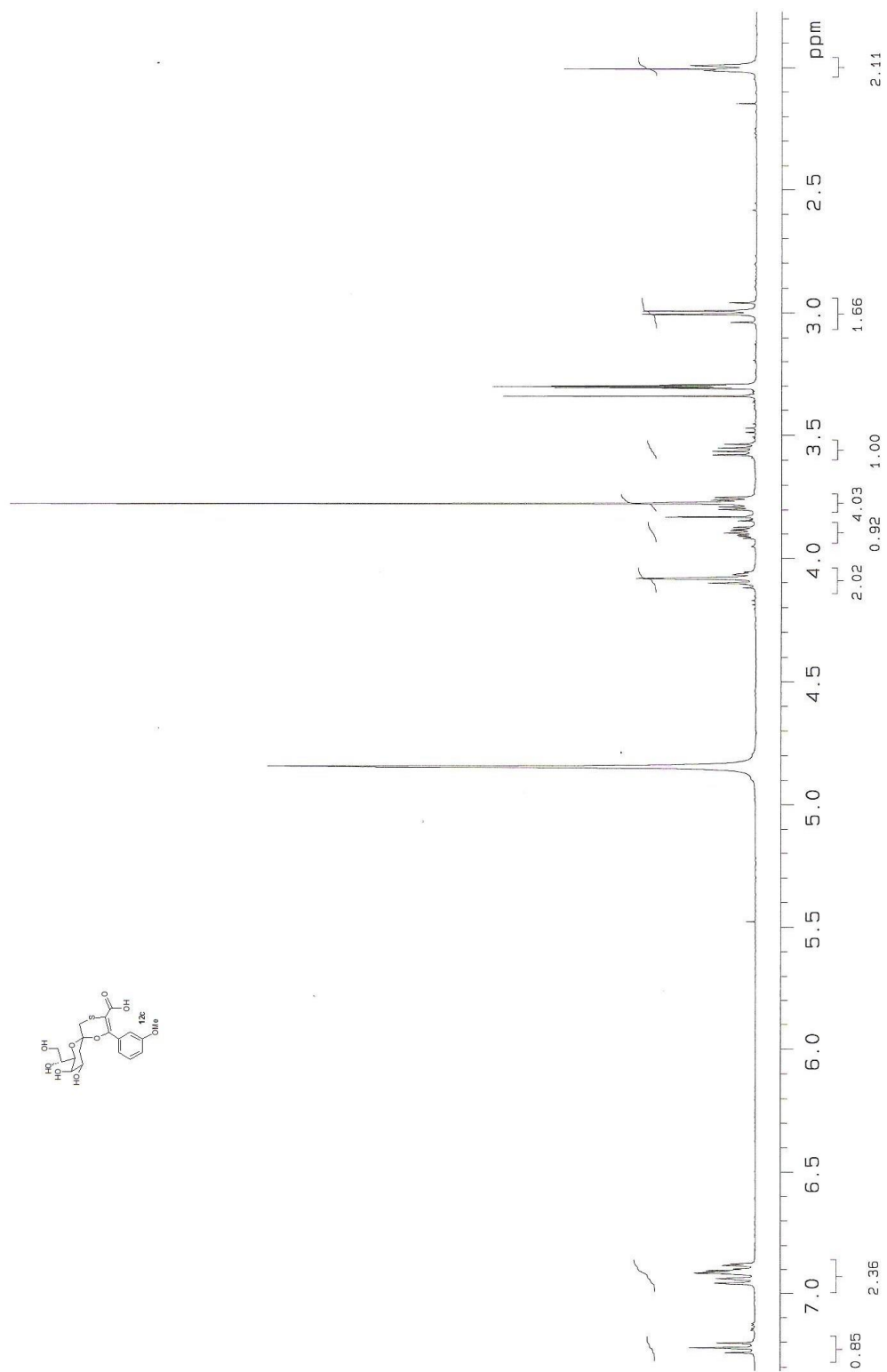
<sup>1</sup>H NMR spectrum (400MHz, CDCl<sub>3</sub>) Compound **12b**



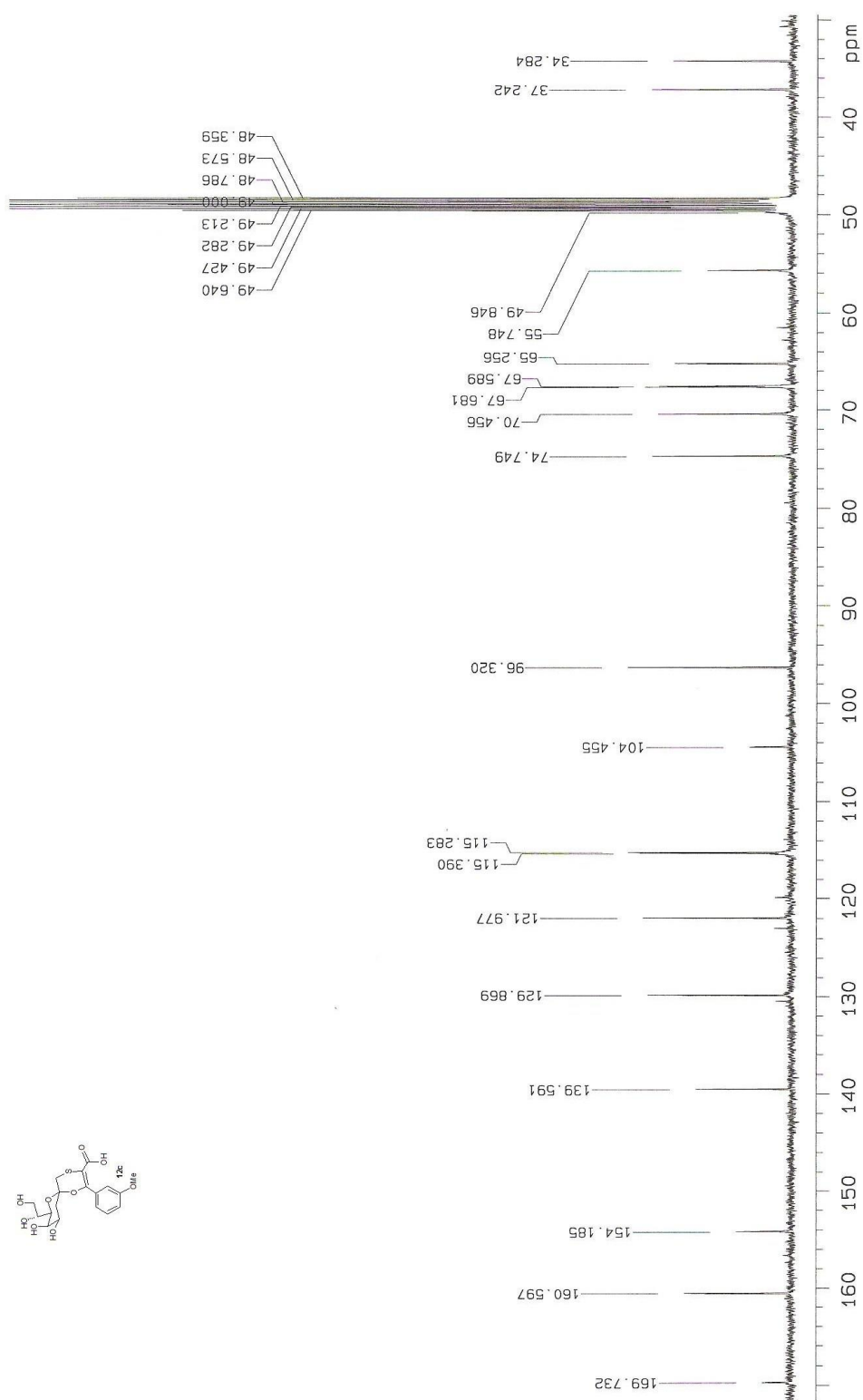
<sup>13</sup>C MNR spectrum (100MHz, CDCl<sub>3</sub>) Compound 12b

gDQCOSY NMR spectrum (400MHz, CDCl<sub>3</sub>) Compound **12b**

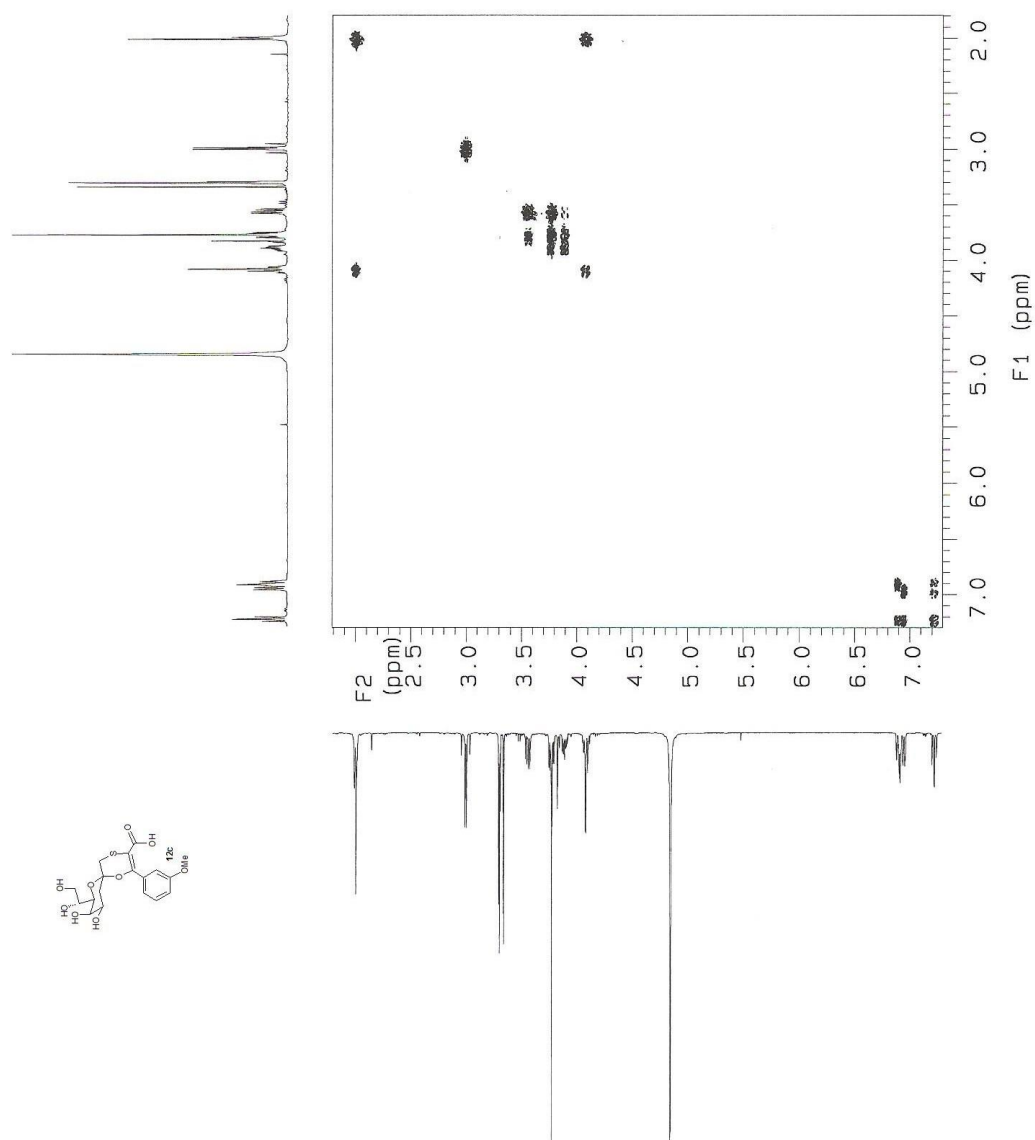
gHSQC NMR spectrum (400MHz, CDCl<sub>3</sub>) Compound **12b**

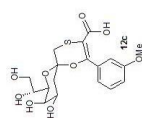


<sup>1</sup>H NMR spectrum (400MHz, CDCl<sub>3</sub>) Compound 12c

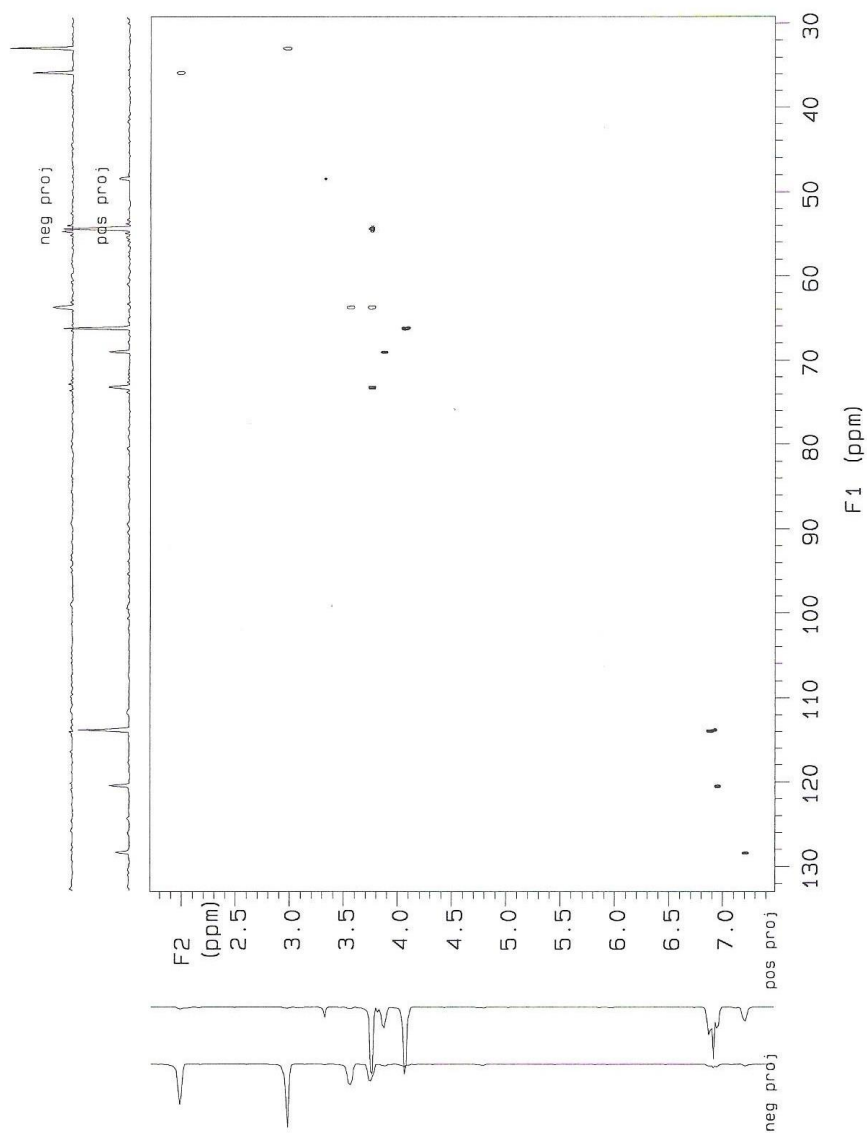


<sup>13</sup>C NMR spectrum (50MHz, CDCl<sub>3</sub>) Compound 12c

gDQCOSY NMR spectrum (400MHz, CD<sub>3</sub>OD), Compound **12c**



Relax. delay 1.000 sec  
 Acq. time 0.150 sec  
 Width 6410.3 Hz  
 2D Width 24154.6 Hz  
 4 repetitions  
 2 x 512 increments  
 OBSERVE H1, 399.9417858 MHz  
 DECOUPLE C13, 100.5760014 MHz  
 Power 38 dB  
 on during acquisition  
 off during delay  
 GARP-1 modulated  
 DATA PROCESSING  
 Gauss apodization 0.069 sec  
 F1 DATA PROCESSING  
 Gauss apodization 0.039 sec  
 FT size 2048 x 8192  
 Total time 0 min, -1 sec



gHSQC NMR spectrum (400MHz, CDCl<sub>3</sub>), Compound **12c**