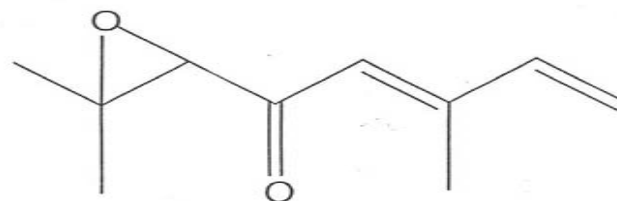


Pulse Sequence: s2pul  
 Solvent: CDCl3  
 Ambient temperature  
 Mercury-200BB "plantkvr200"  
 Relax. delay 1.000 sec  
 Pulse 54.3 degrees  
 Acq. time 1.954 sec  
 Width 3002.0 Hz  
 31 repetitions  
 OBSERVE H1, 199.9702399 MHz  
 DATA PROCESSING  
 FT size 16384  
 Total time 1 min, 35 sec



1-(3,3-Dimethyl-oxiranyl)-3-methyl-penta-2,4-dien-1-one

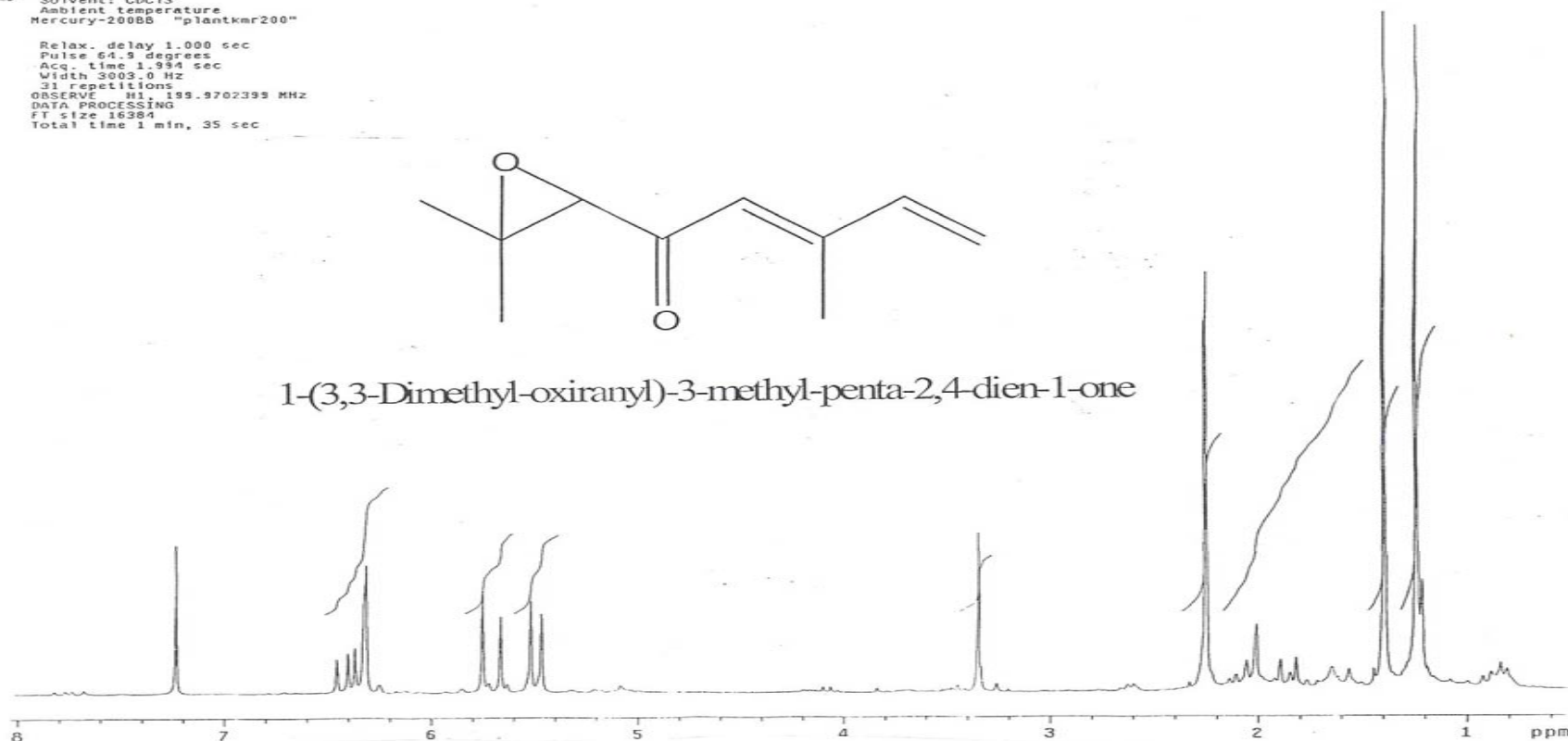


Figure 11. 1:  $^1\text{H}$ - NMR spectrum of compound 2: 1-(3, 3-dimethoxyiranyl)-3-methyl- (2E)



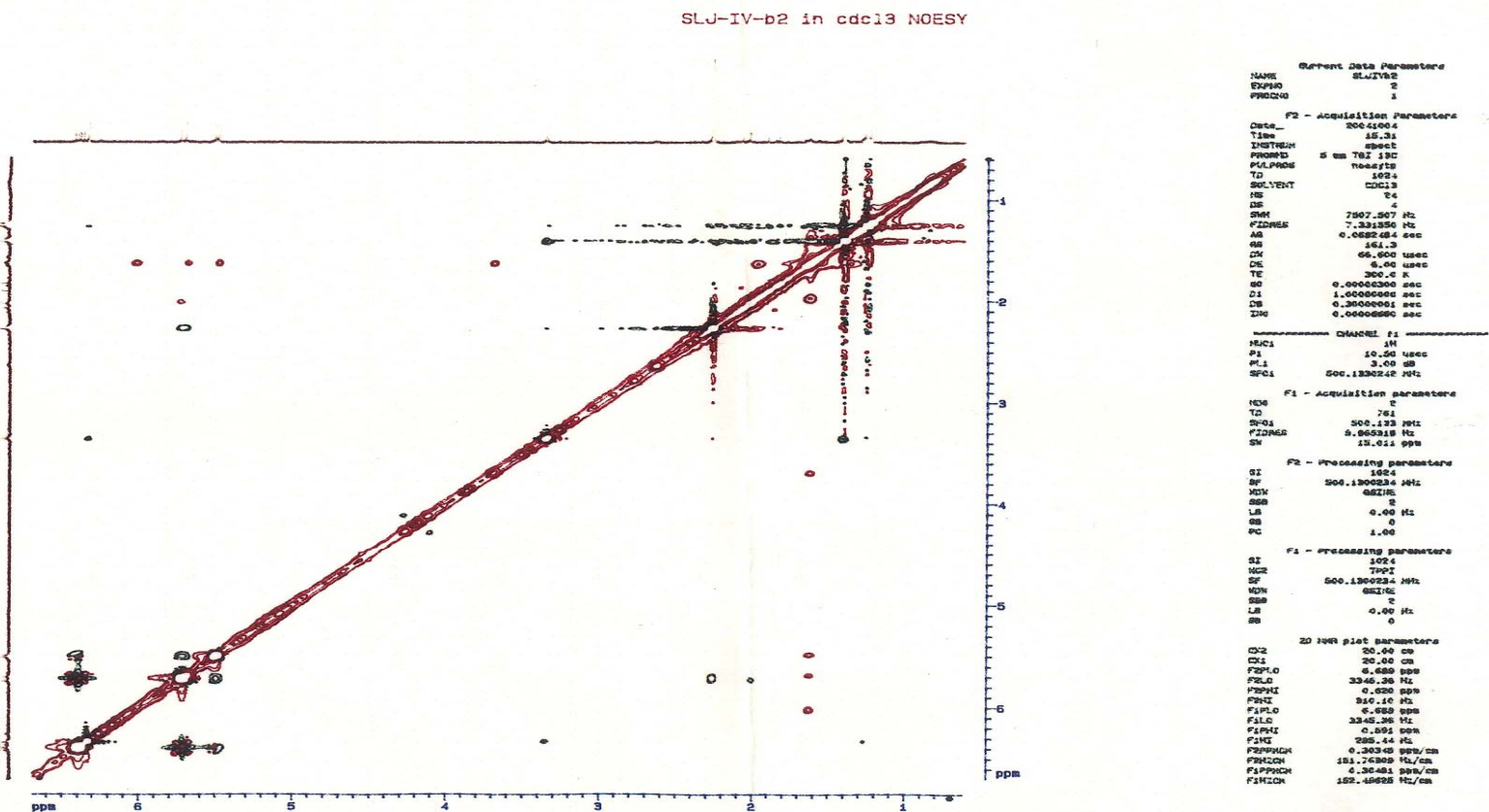
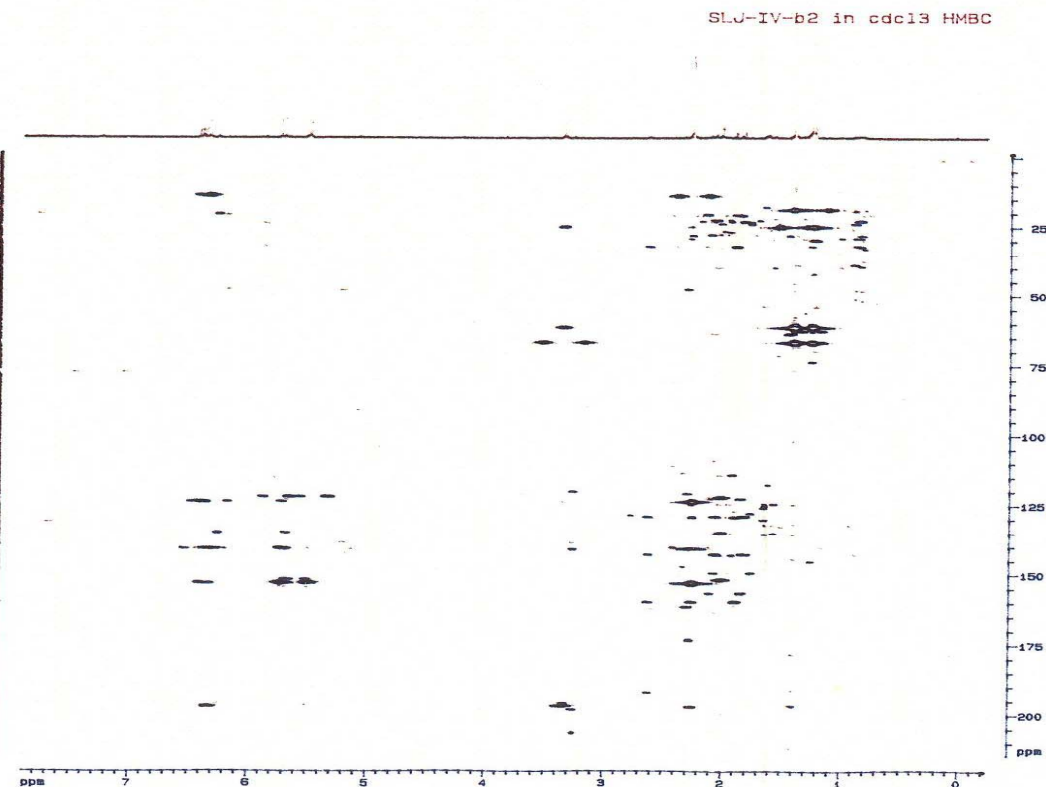


Figure 11.2: NOESY spectrum of compound 2: 1-(3, 3-dimethoxyiranyl)-3-methyl- (2E)



```

Current Data Parameters
NAME          SLU-IV-b2
EXPNO        1
PROCNO       1

F2 - Acquisition Parameters
Date_        20041007
Time         0.44
INSTRUM      spect
PROBHD       5 mm BBO 125
PULPROG      invgpr1p3rev
TD           65536
SOLVENT      CDCl3
NS           128
DS           4
SWH           7307.267 Hz
F2A1         7.308000 MHz
AQ           0.0002484 sec
RG           1024
AQ           0.0002484 sec
DM           0.0000000 sec
DE           2.00 umax
WF           300.0 X
DELTA        1.0000000 sec
CP           0.0000000 sec
D1           1.0000000 sec
SFO          0.0000000 sec
SFO          0.0000000 sec
SFO          0.0000000 sec
SFO          0.0000000 sec
SFO          0.0000000 sec
SFO          0.0000000 sec
SFO          0.0000000 sec

===== CHANNEL f1 =====
NUC1         13C
P1           12.00 umax
PR           21.00 umax
PL1          2.00 dB
SFO1         100.628350 MHz

===== CHANNEL f2 =====
NUC2         13C
P2           12.00 umax
PR           21.00 dB
SFO2         100.628350 MHz

===== GRADIENT CHANNEL =====
P1G          1000.00 umax

F1 - Acquisition parameters
NUC1         13C
P1           12.00 umax
PR           21.00 dB
PL1          2.00 dB
SFO1         100.628350 MHz

F2 - Processing parameters
SI           65536
SF           100.628350 MHz
WDW          EM
SSB           0
LB           0.00 Hz
GB           0
PC           1.00

F1 - Processing parameters
SI           1024
SF           100.628350 MHz
WDW          EM
SSB           0
LB           0.00 Hz
GB           0
PC           1.00

ZD 2D 1H/13C parameters
CQZ          30.00 cm
CQY          30.00 cm
PCPC         7.000 ppm
PFLC         2046.00 Hz
PFRF         -0.216 ppm
PFRF         -107.00 Hz
PFLP         214.380 ppm
PFLA         2000.00 Hz
PFLM         -1.020 ppm
PFLM         -100.00 Hz
PFRVCH1     0.00000 ppm/cm
PFRVCH2     200.71700 Hz/cm
PFRVCH3     10.73000 ppm/cm
PFRVCH4     1.305.00400 Hz/cm
    
```

Figure 11.3: HMBC spectrum of compound 2: 1-(3, 3-dimethoxyiranyl)-3-methyl- (2E)

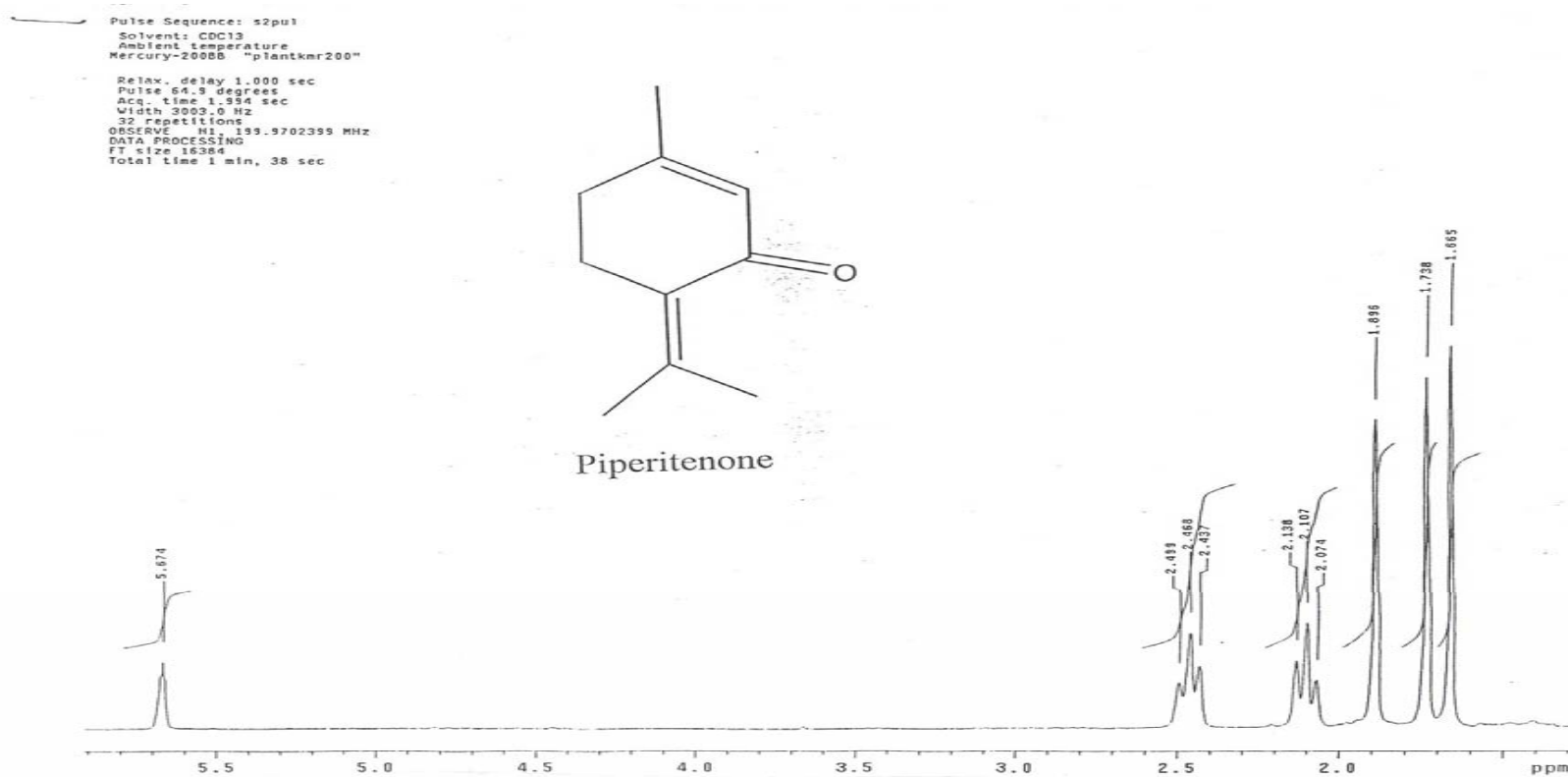


Figure 11.4: <sup>1</sup>H-NMR spectrum of compound 4: piperitenone



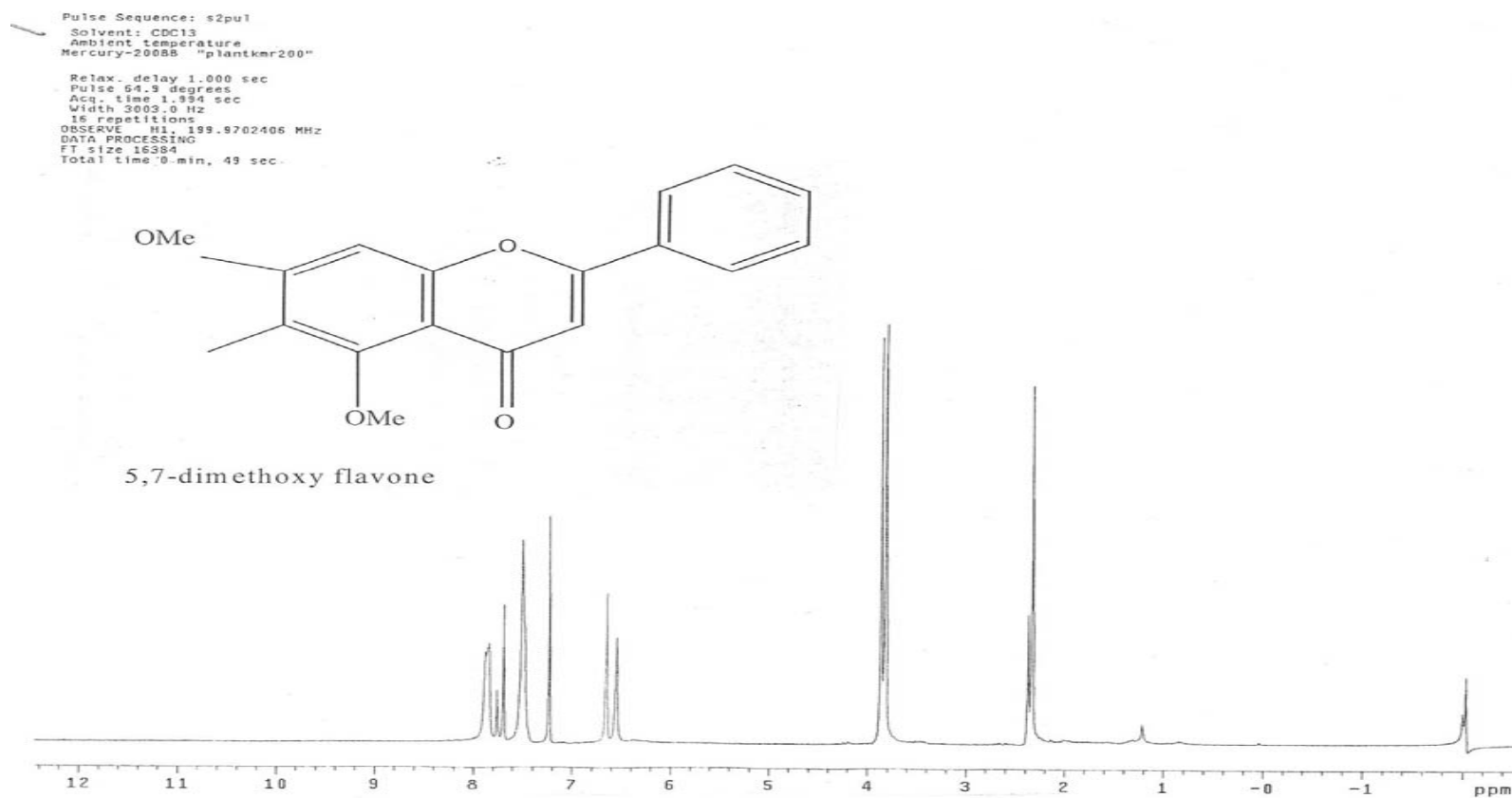


Figure 11.5: <sup>1</sup>H-NMR spectrum of compound 1: 5, 7- dimethoxy-6-methylflavone

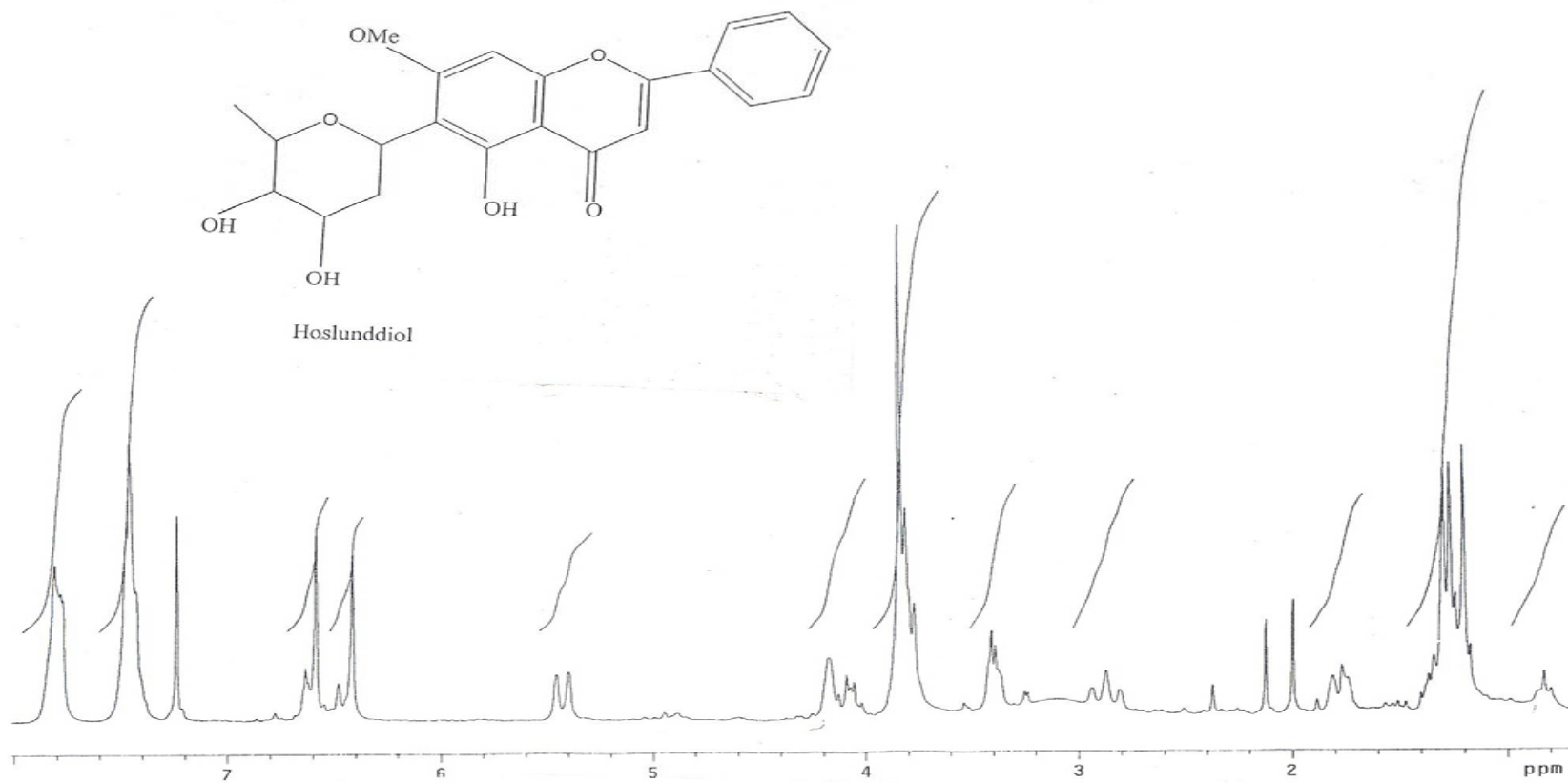


Figure 11.6 <sup>1</sup>H-NMR spectrum of compound 2: 6-C-β-digoxopyranosyltectochoyrisin or hoslunddiol

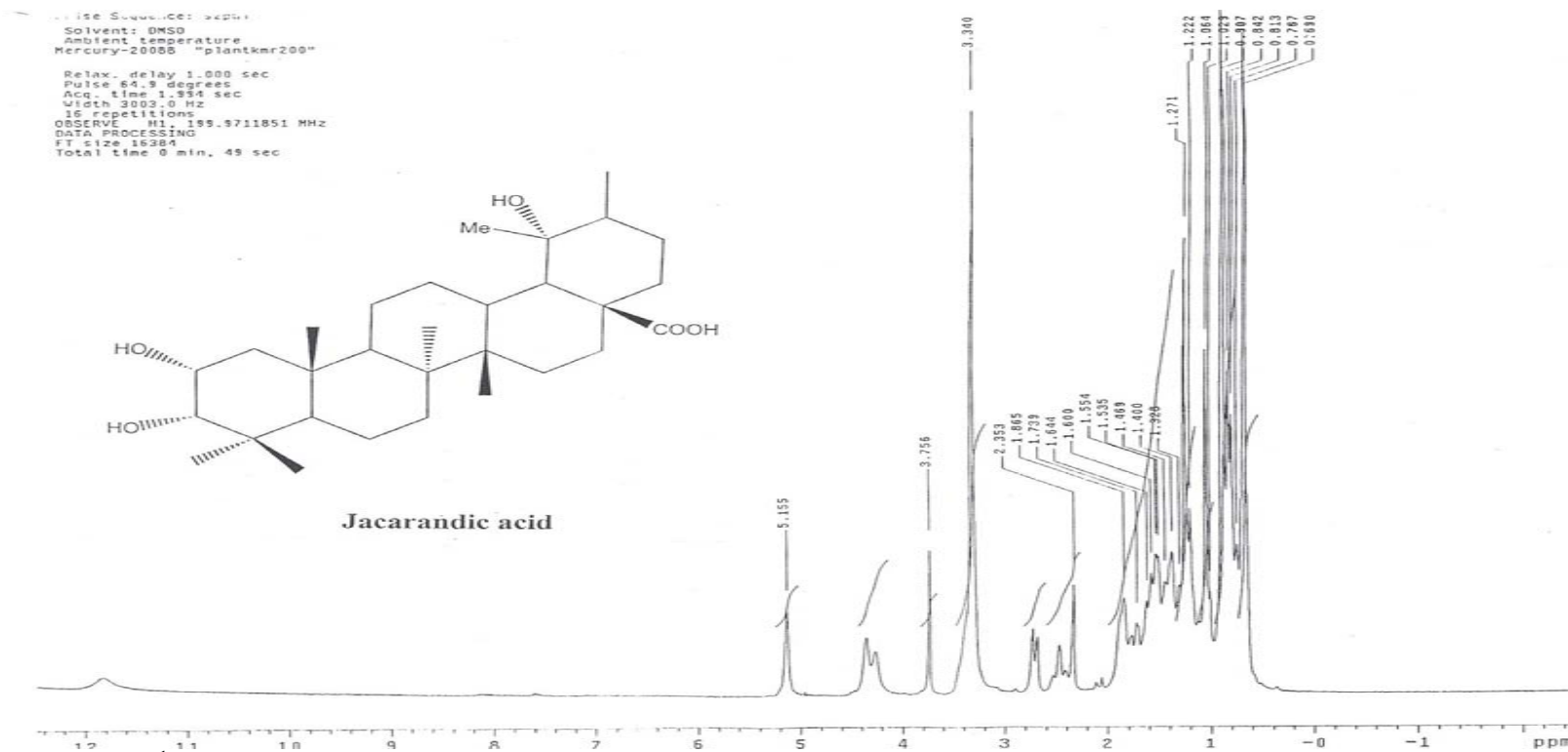


Figure 11.7  $^1\text{H}$ -NMR spectrum of compound 3: Jacarandic acid or euscaphic acid



## 2.1 Manuscripts resulting from this thesis

Mujovo, Silva, F., Ahmed A. Hussein, J.J. Marion Meyer., B. Fourie, Tshilidzi Muthivhi and Lall Namrita, 2008. Bioactive compounds from *Lippia javanica* and *Hoslundia opposita*, Natural Product Research, **22**: 12, 1047-1054.

Mujovo, S. F, Lall, N., Mphahlele, M., Fourie, P., Muthivhi, T. N, Meyer, J.J.M. 2007. Antituberculosis and antibacterial activity of medicinal plants collected in Mozambique. South Africa Journal of Botany (In preparation).

Evaluation of medicinal plants from Mozambique for anti-HIV activity (In Preparation).

## 2.2 Conference contributions from this thesis

Paper: S. F. Mujovo, N. Lall, J.H., Isaza Martinez & J.J.M Meyer.2002.

Screening of some Mozambican medicinal plants for antibacterial activity. **28<sup>th</sup> Annual Congress of SAAB (South African Association of Botanists)**, University of Pretoria (South Africa).

Poster: S. F. Mujovo, N. Lall & J.J.M Meyer, 2003. Identification of bioactive compounds from *Lippia javanica*. - **Indigenous Plant Use Forum (IPUF)**, Rustenburg (South Africa)



Poster: S. F. Mujovo, N. Lall, M. van de Venter & J.J.M Meyer. Antimicrobial and antiviral activity of *Cassia abbreviata*. **30<sup>th</sup> Annual Congress of SAAB (South African Association of Botanists)**, University of KwaZulu- Natal (South Africa)