

Supporting Information

Copies of HR-ESIMS for **1** and **1s/r**; LR-ESIMS for **1A**, **1B**, **1As/r**, **1A's/r**, and **1Bs/r**; and 1D and 2D NMR spectra for **1**, **1s/r**, **1A**, **1B**, **1As/r**, **1A's/r**, and **1Bs/r**; and **Figure S1**.

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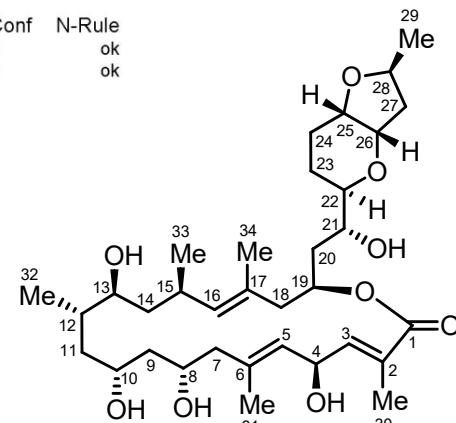
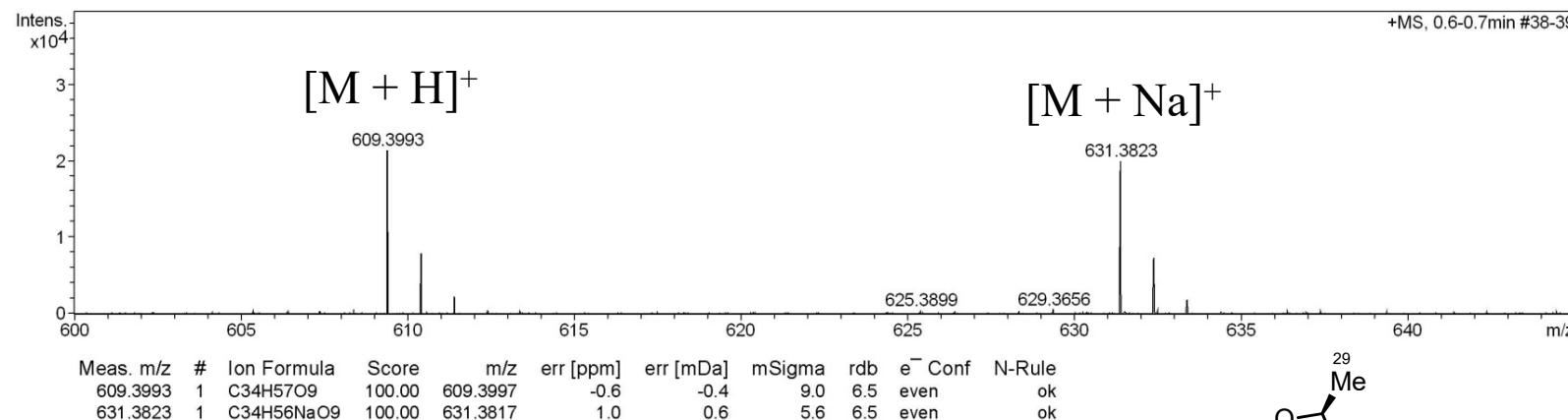
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HR-ESIMS for compound 1

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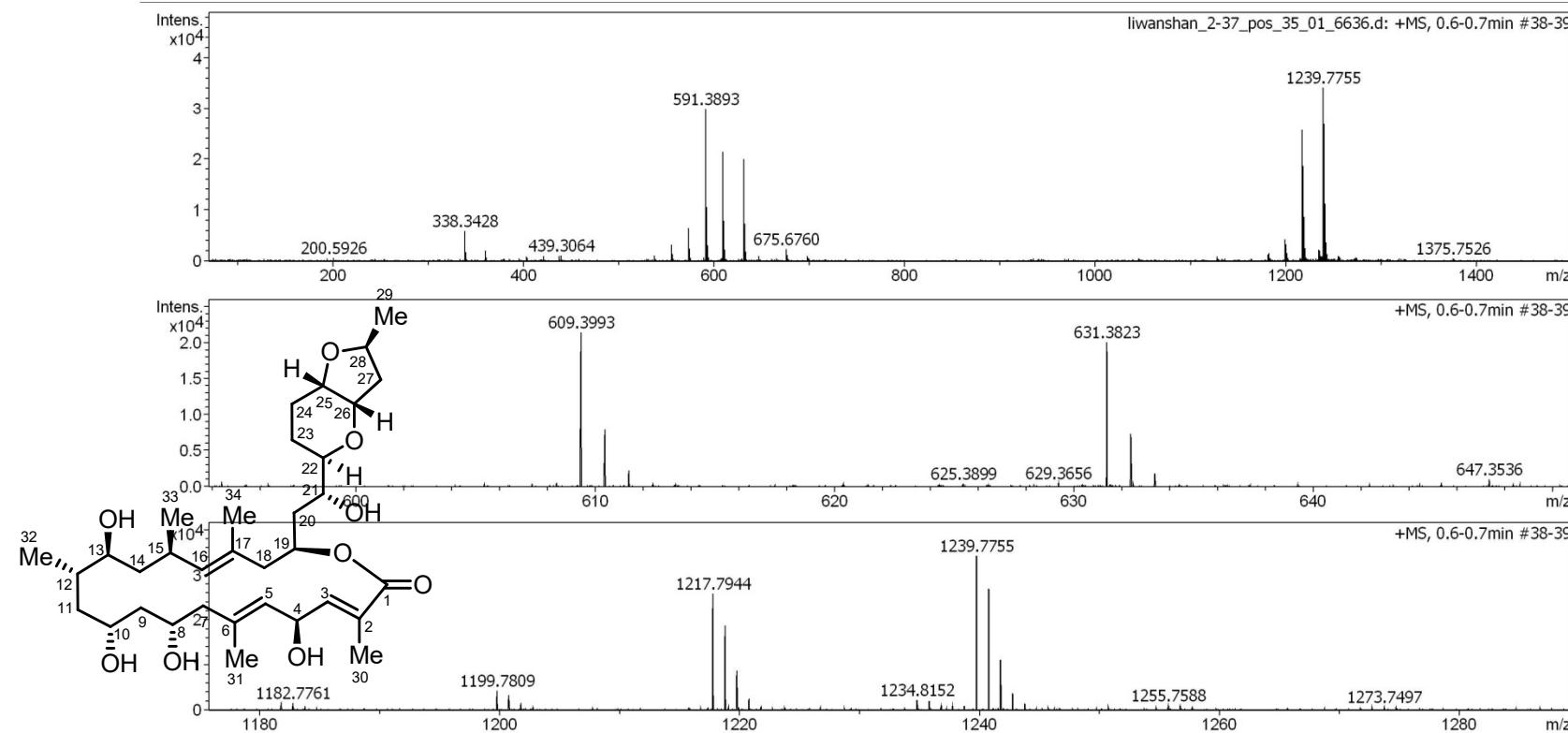
HR-ESIMS for compound 1

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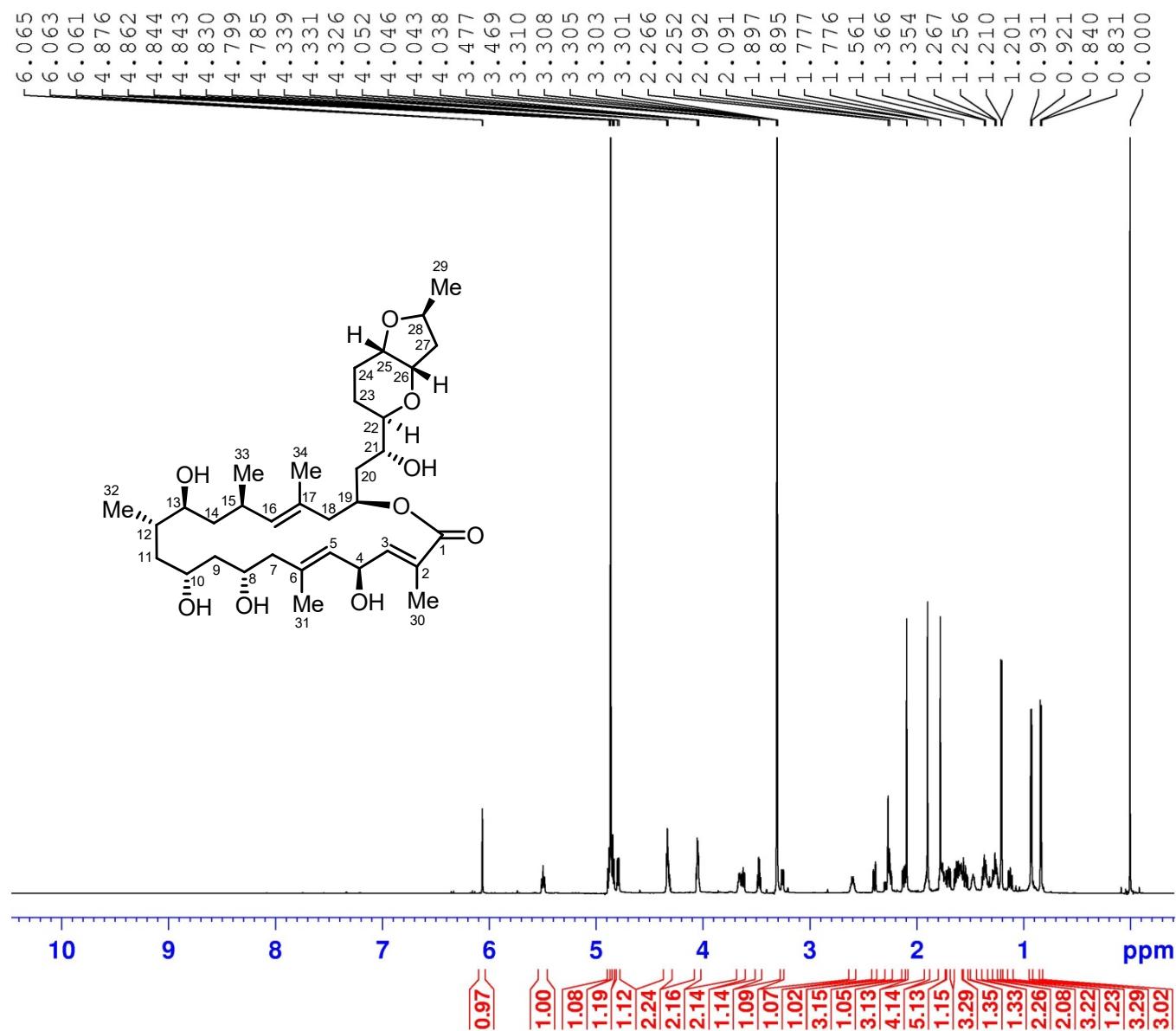
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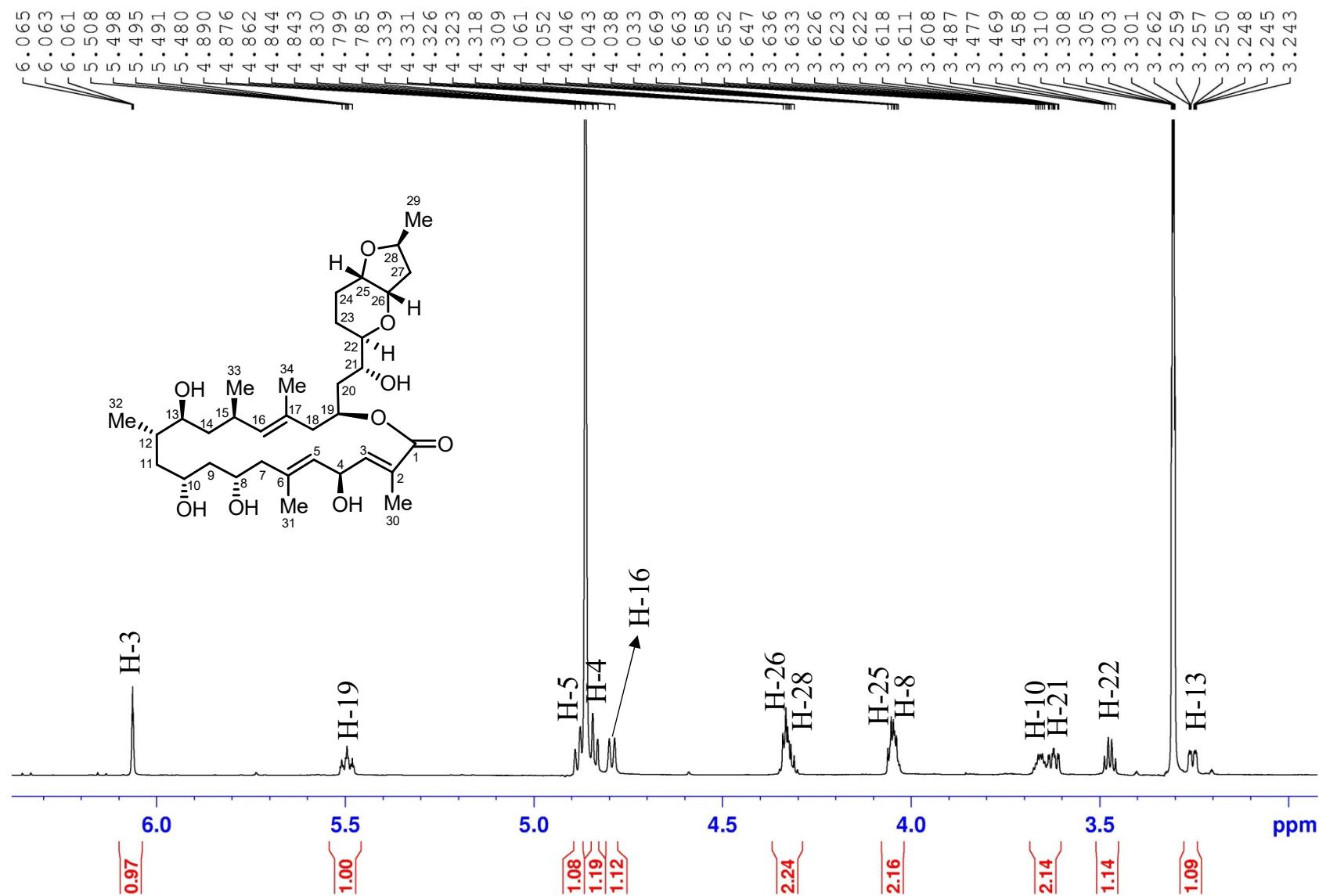
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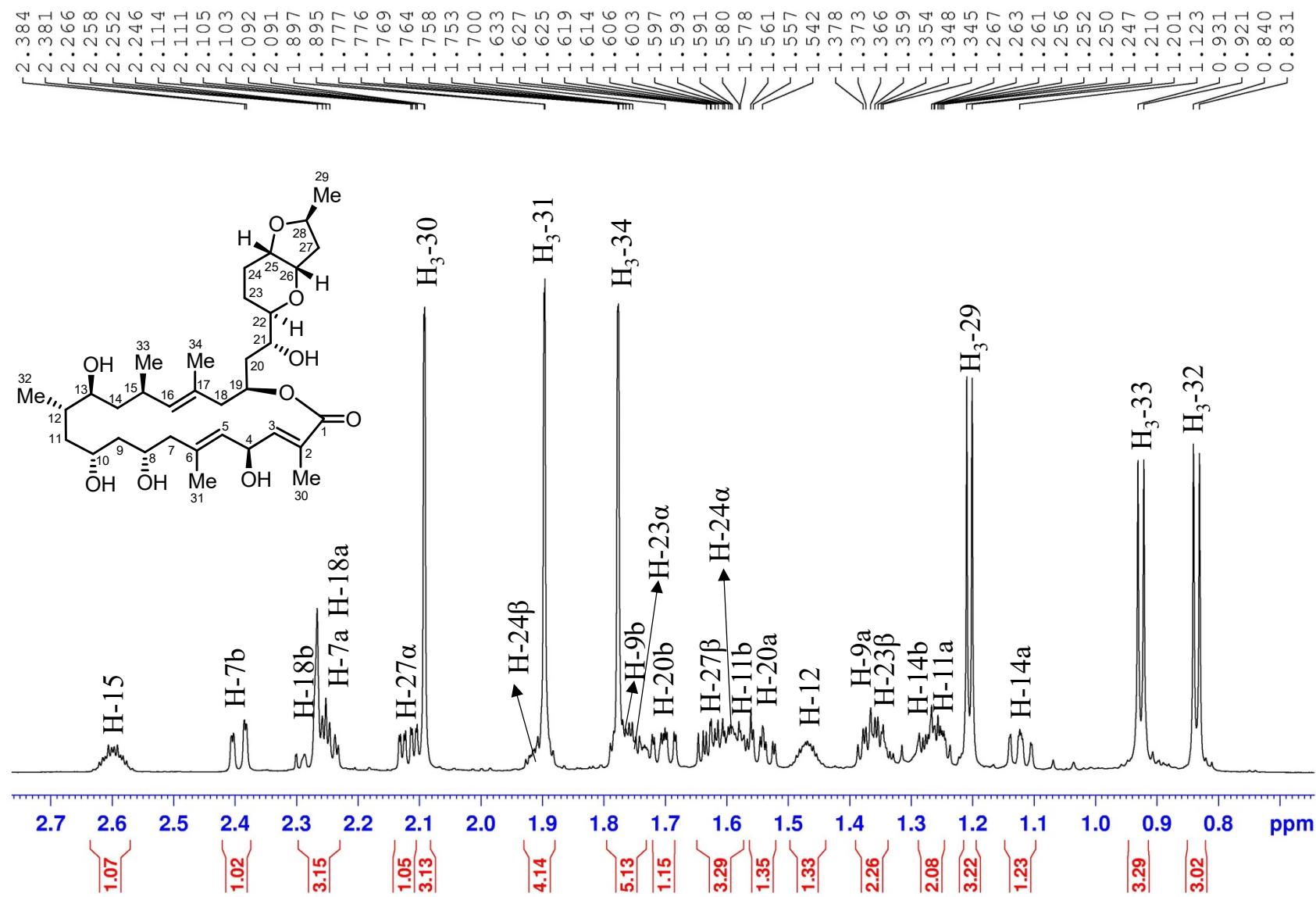
¹H (700 MHz) NMR spectrum of compound 1 in CD₃OD



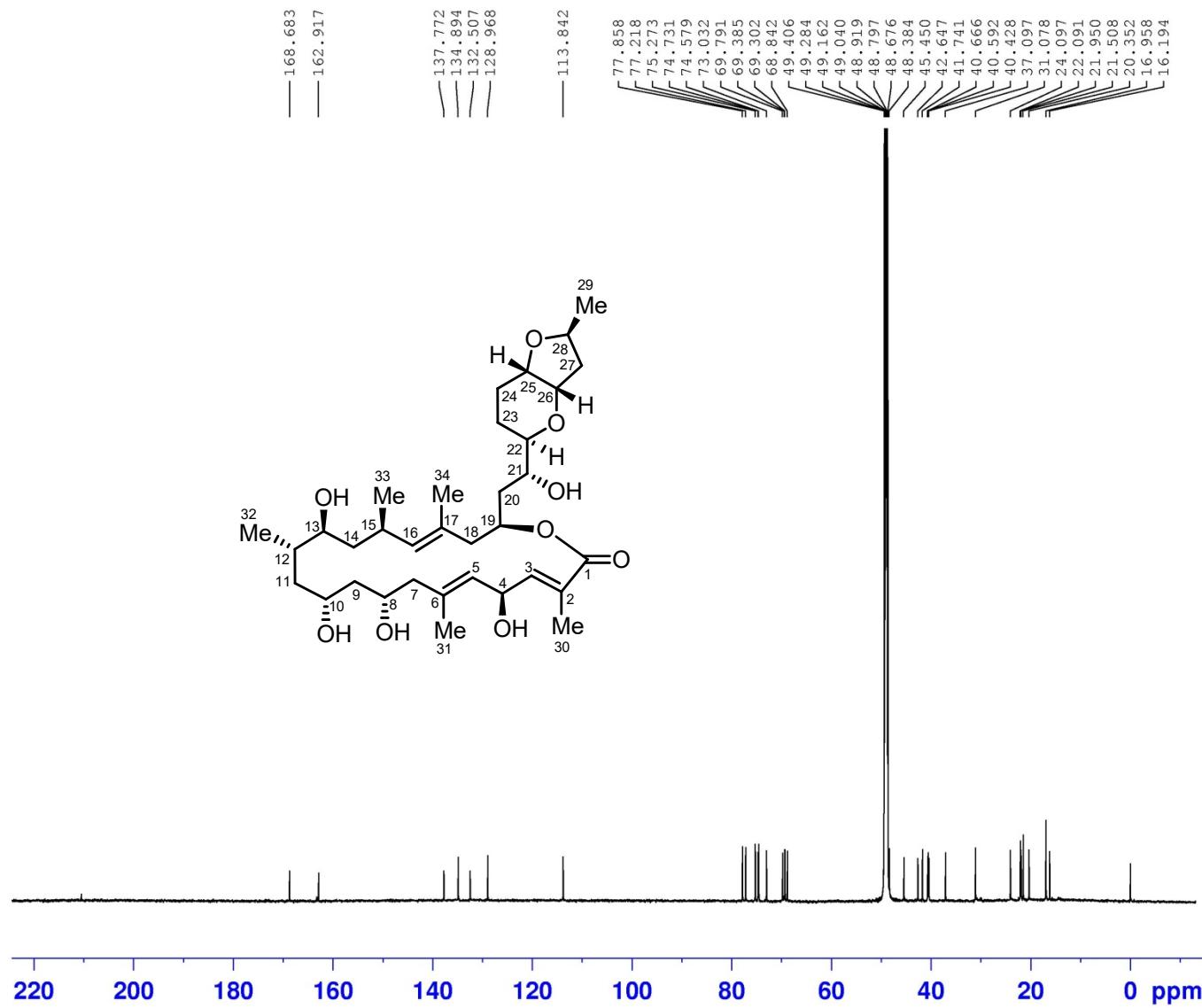
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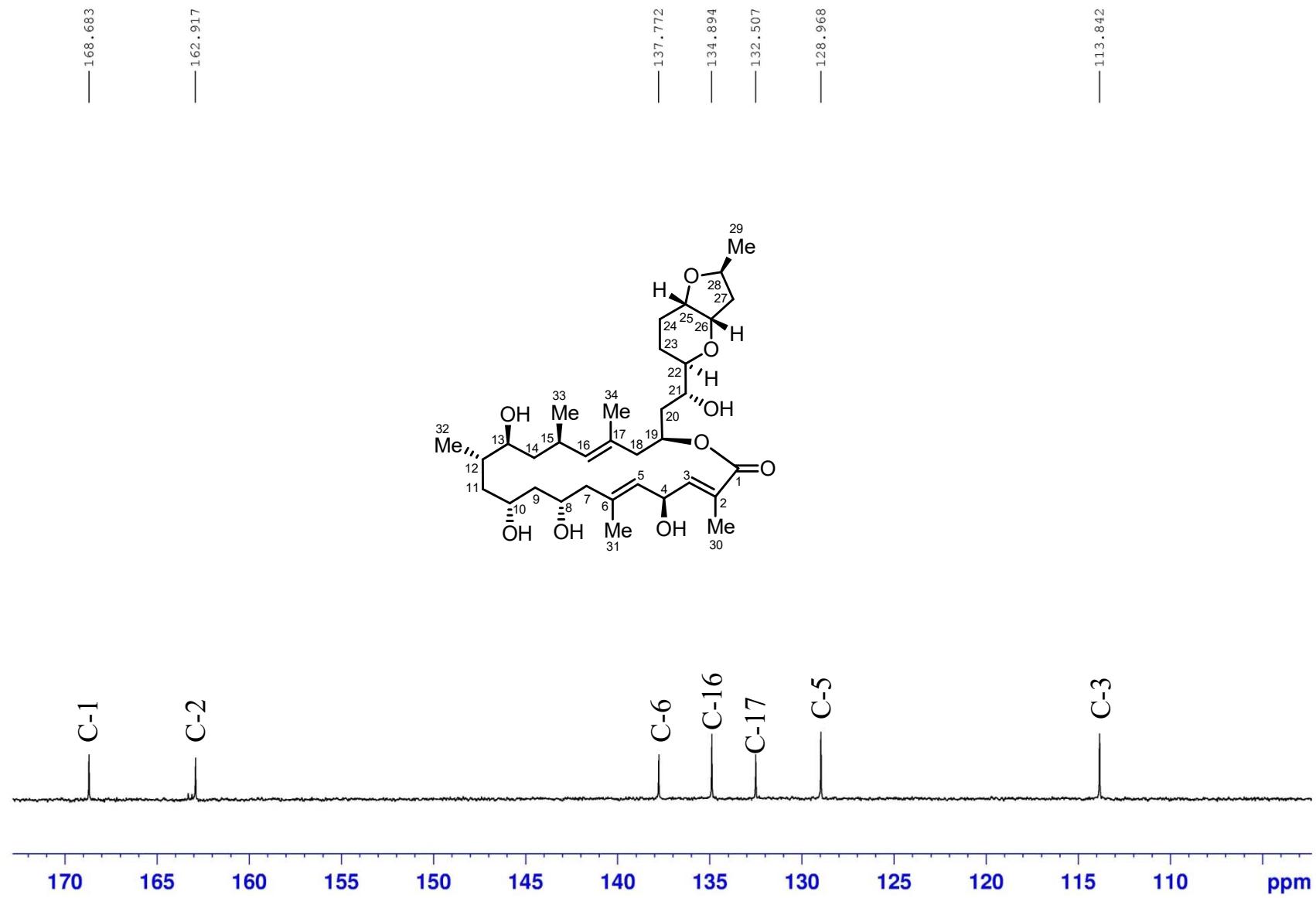
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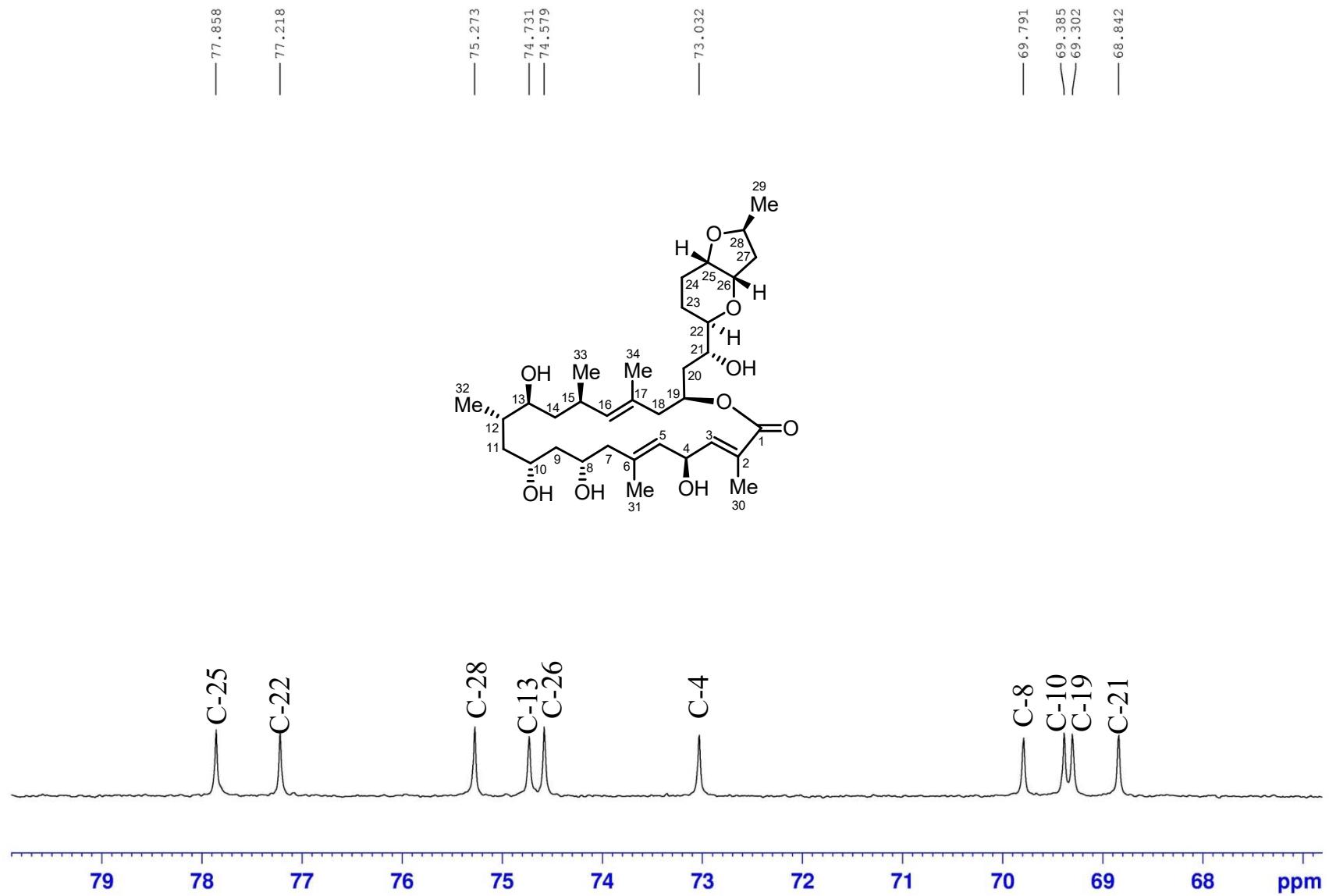
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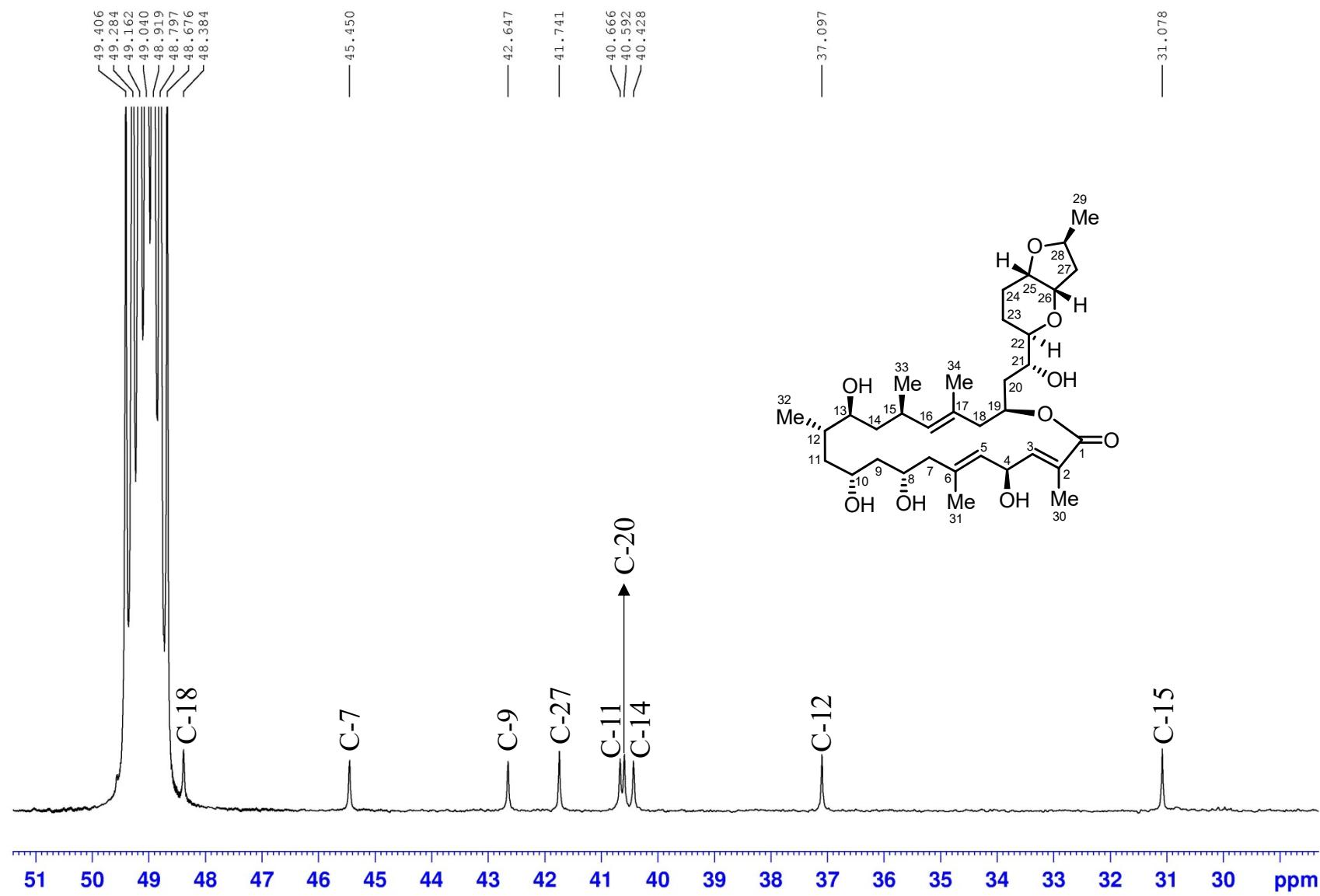
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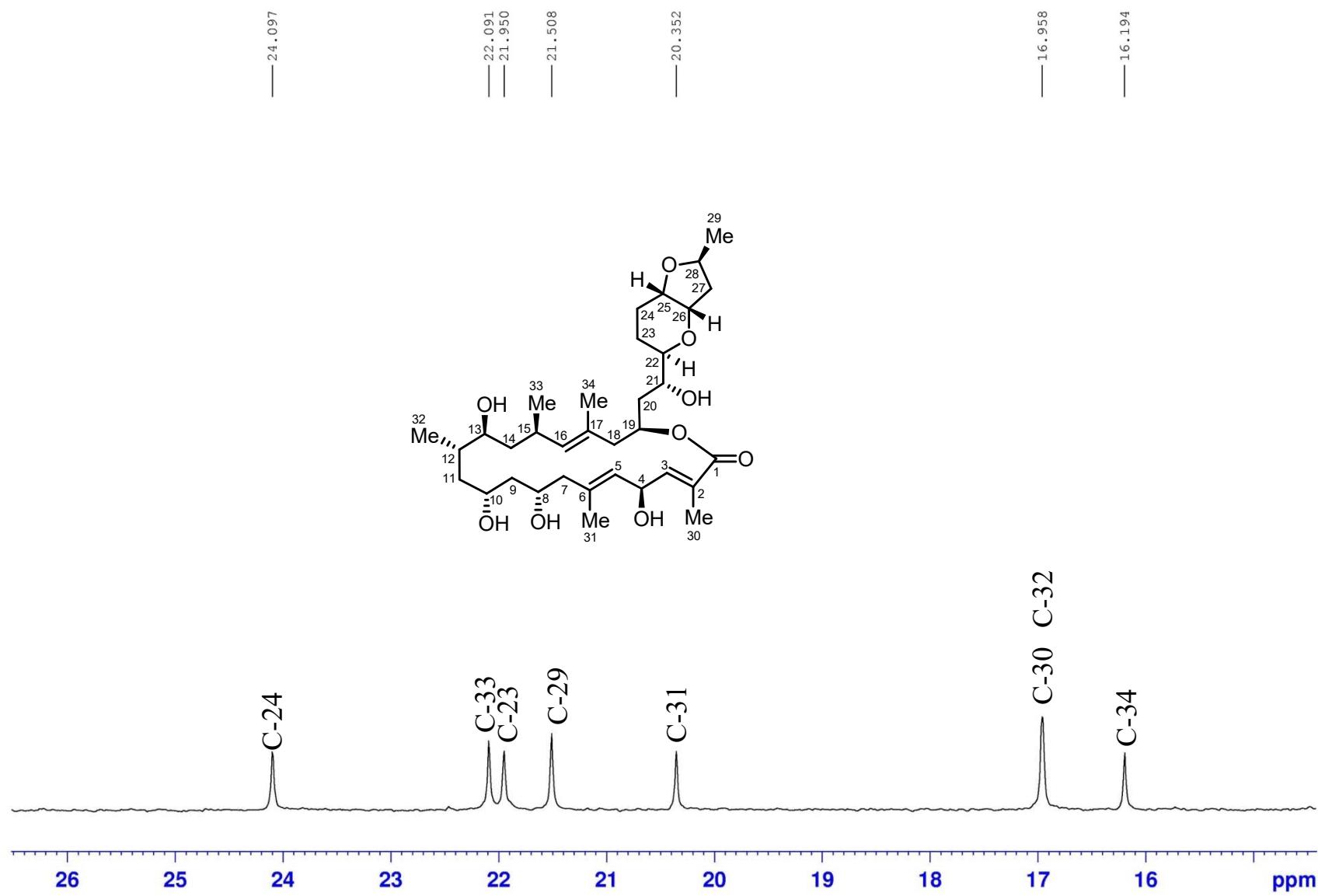
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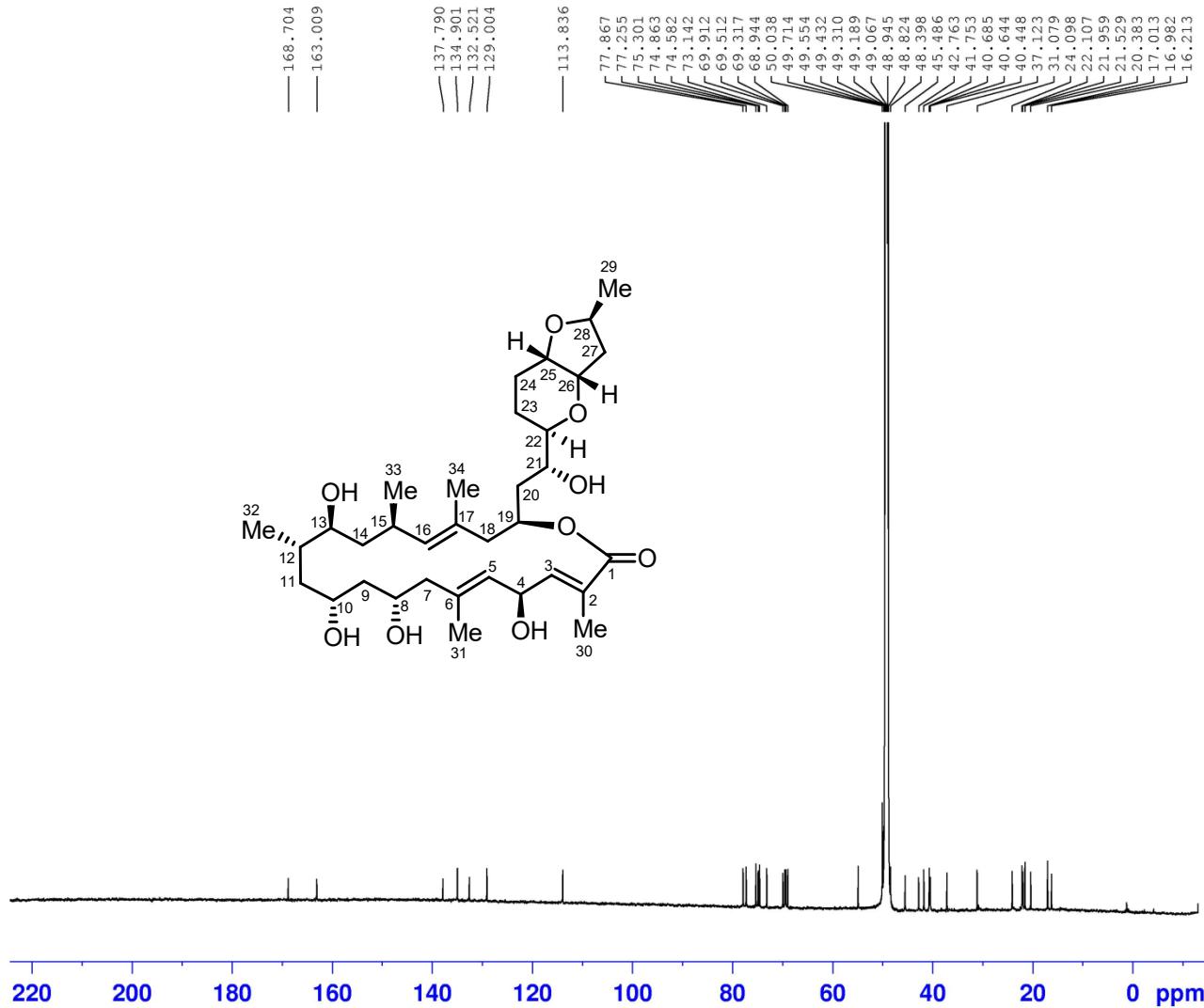
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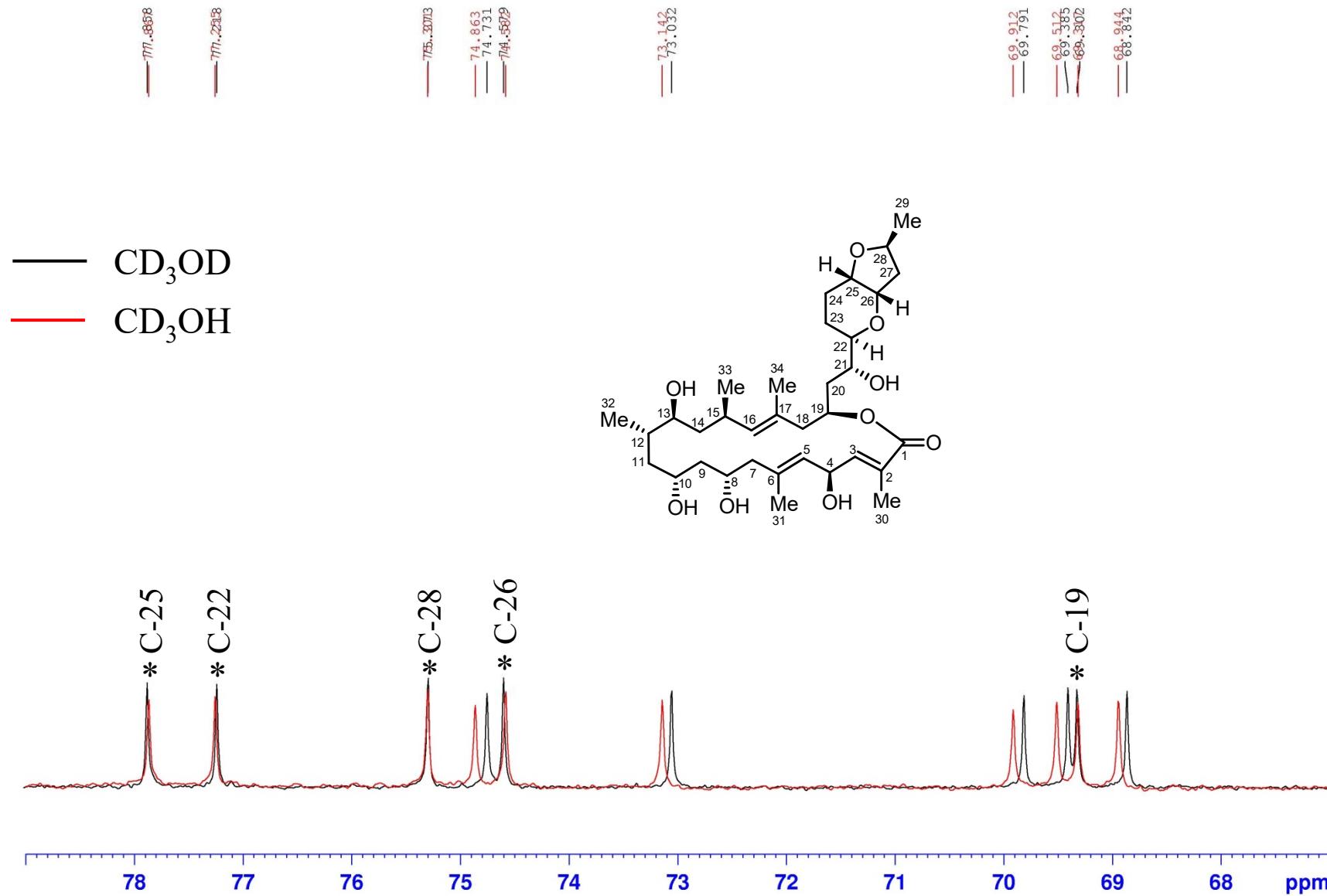
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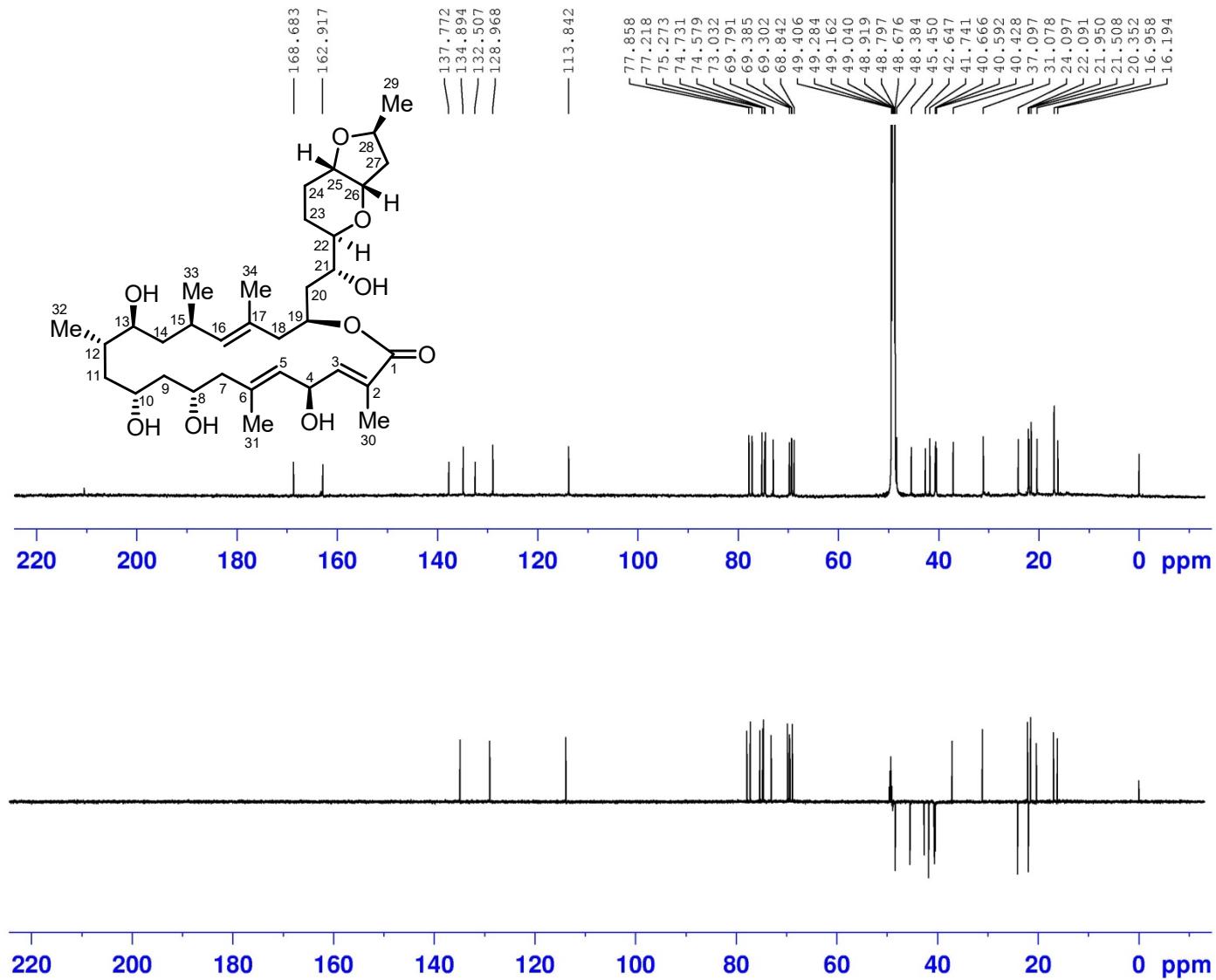
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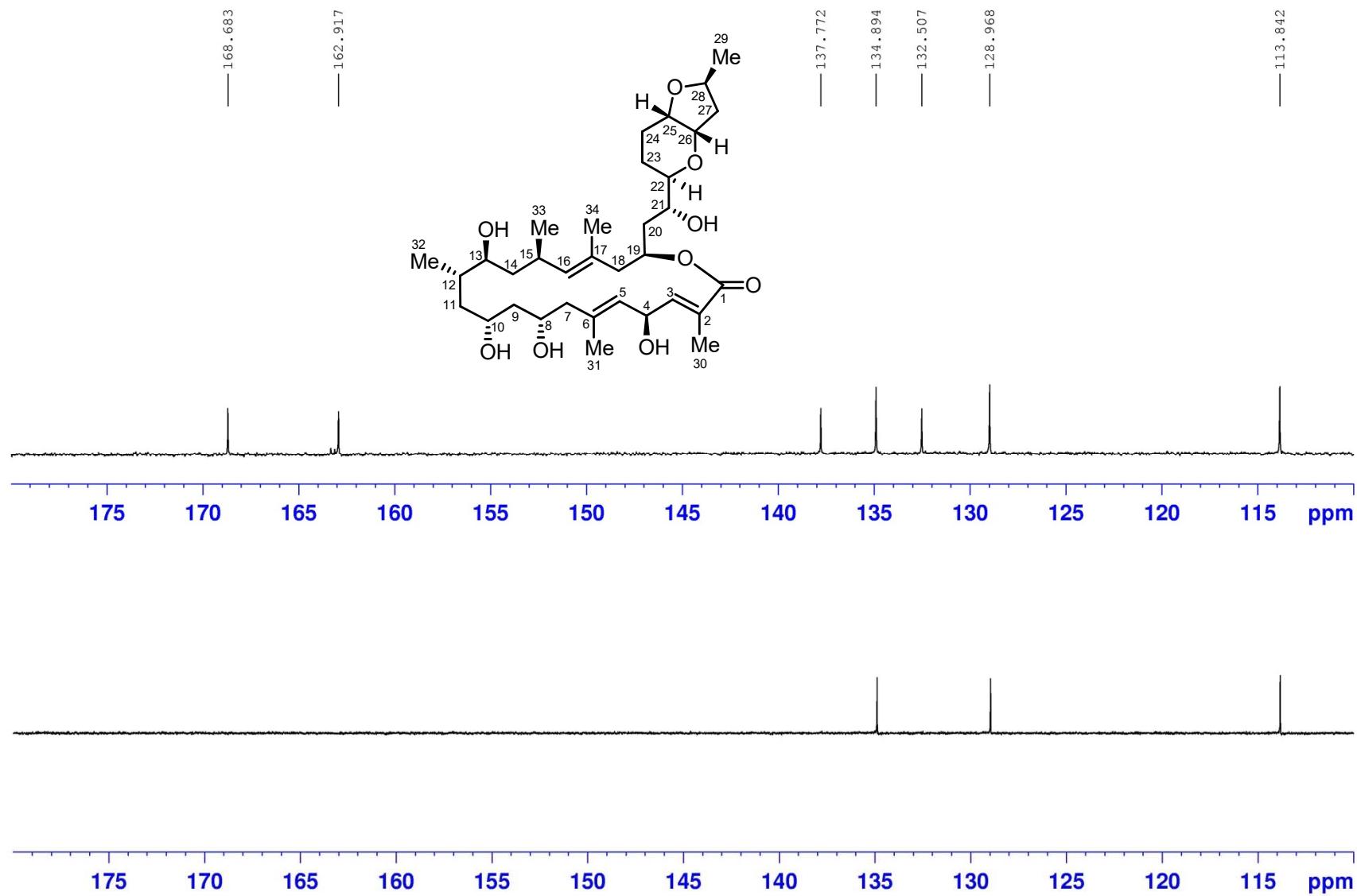
Comparison of ^{13}C (175 MHz) NMR spectrum of compound **1** in CD_3OH with that in CD_3OD



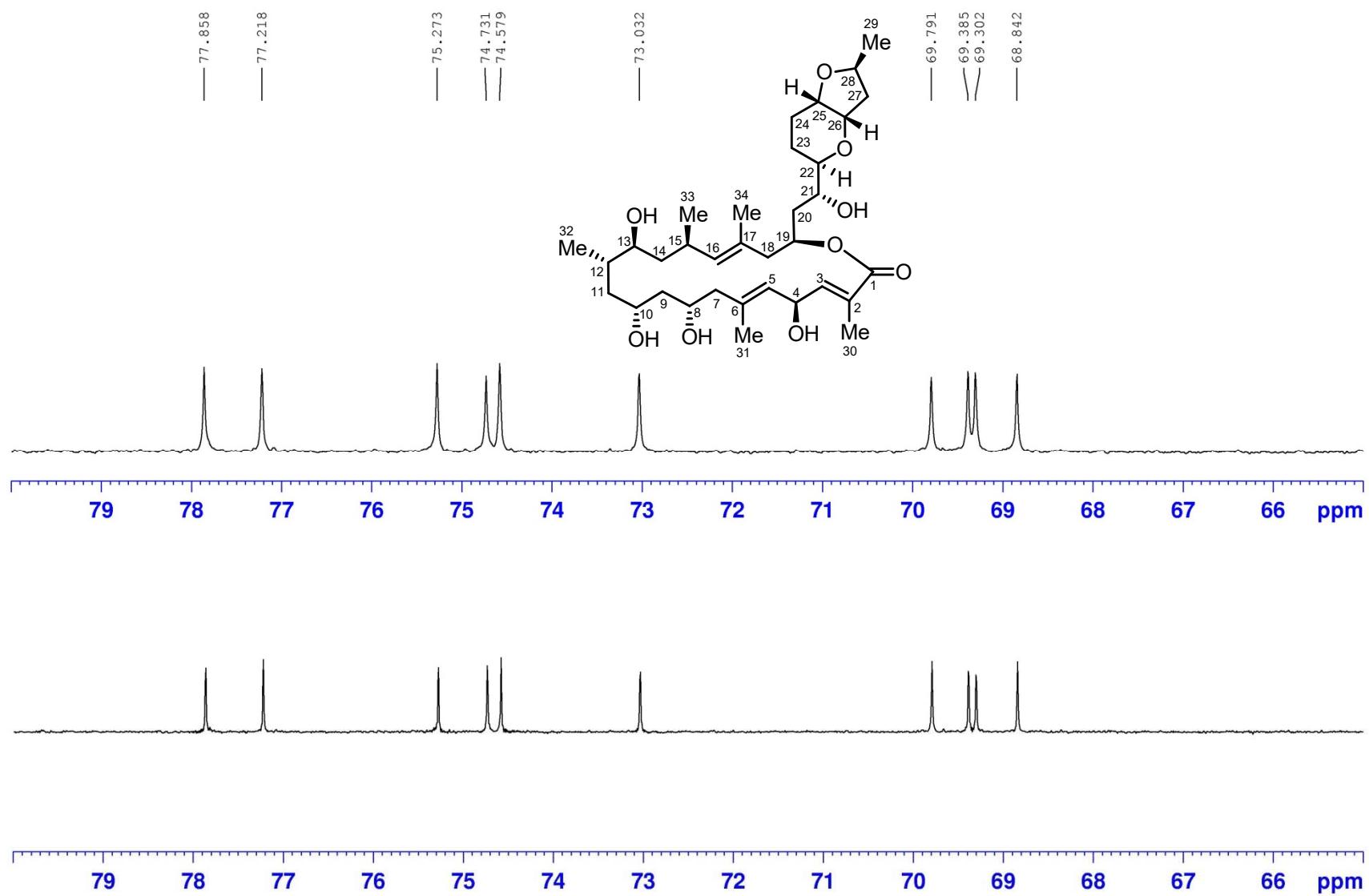
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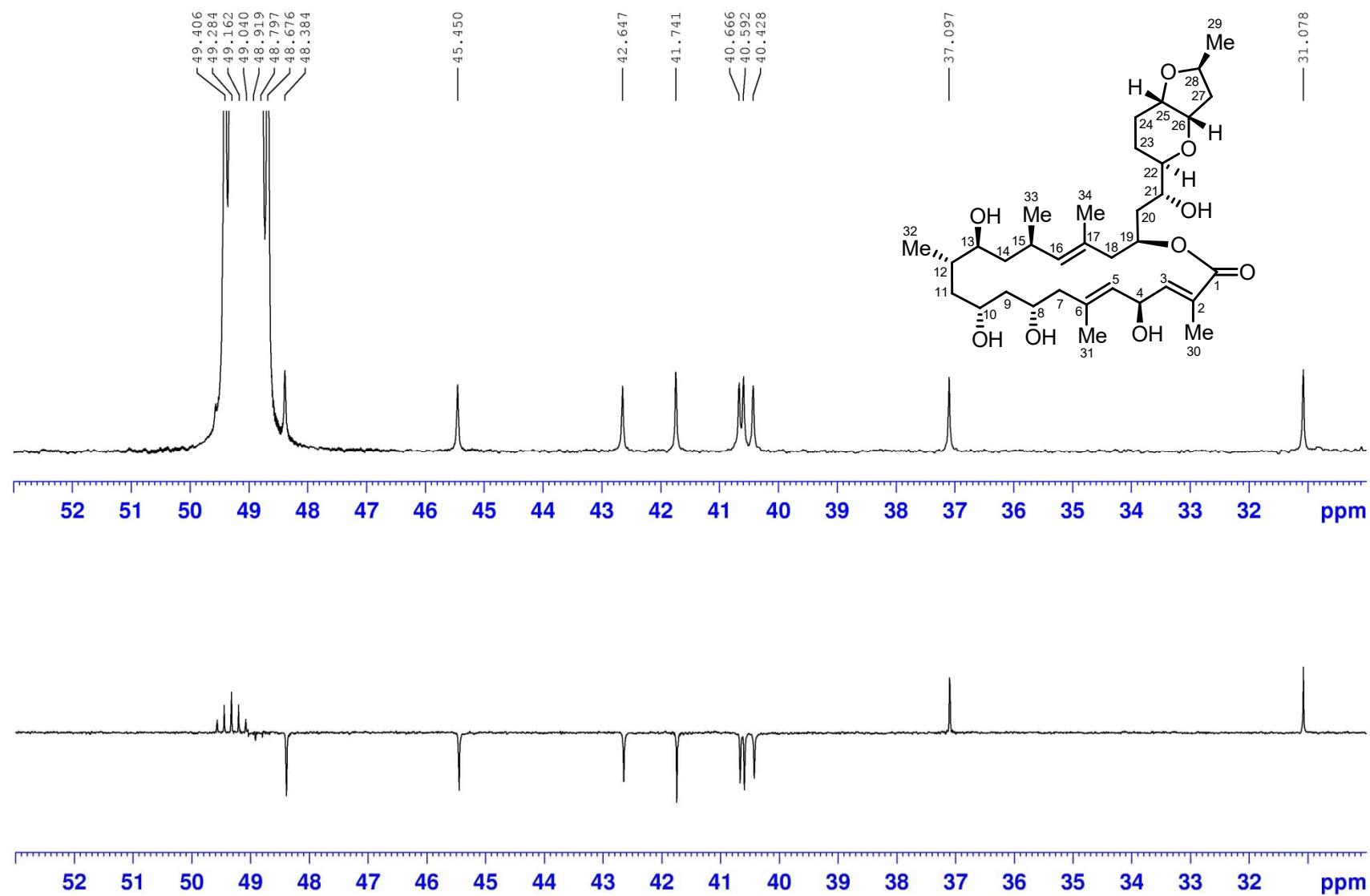
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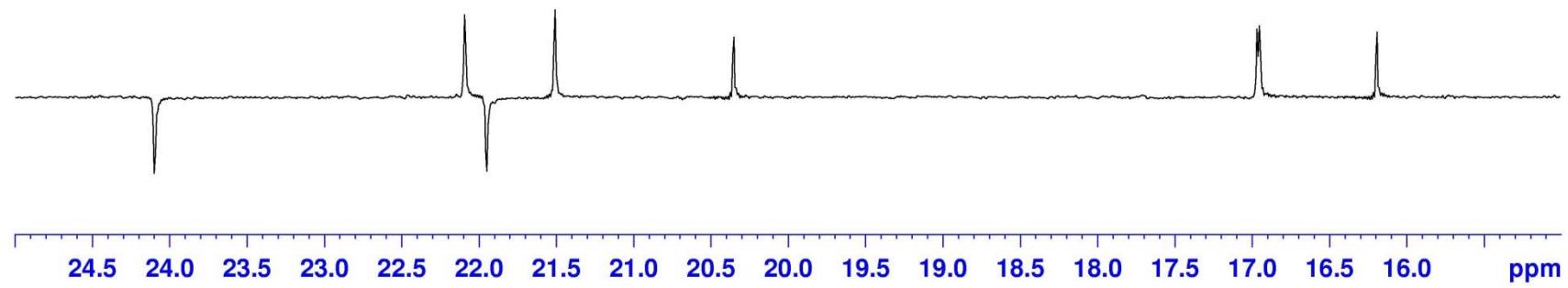
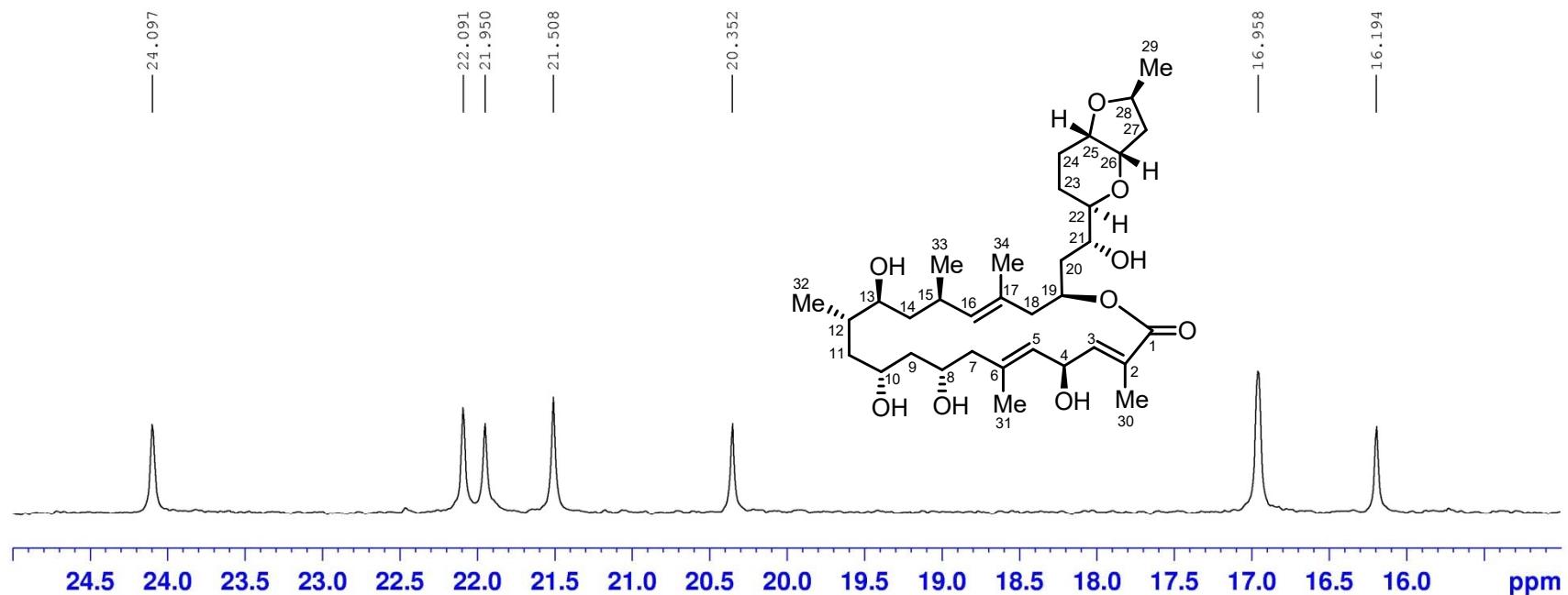
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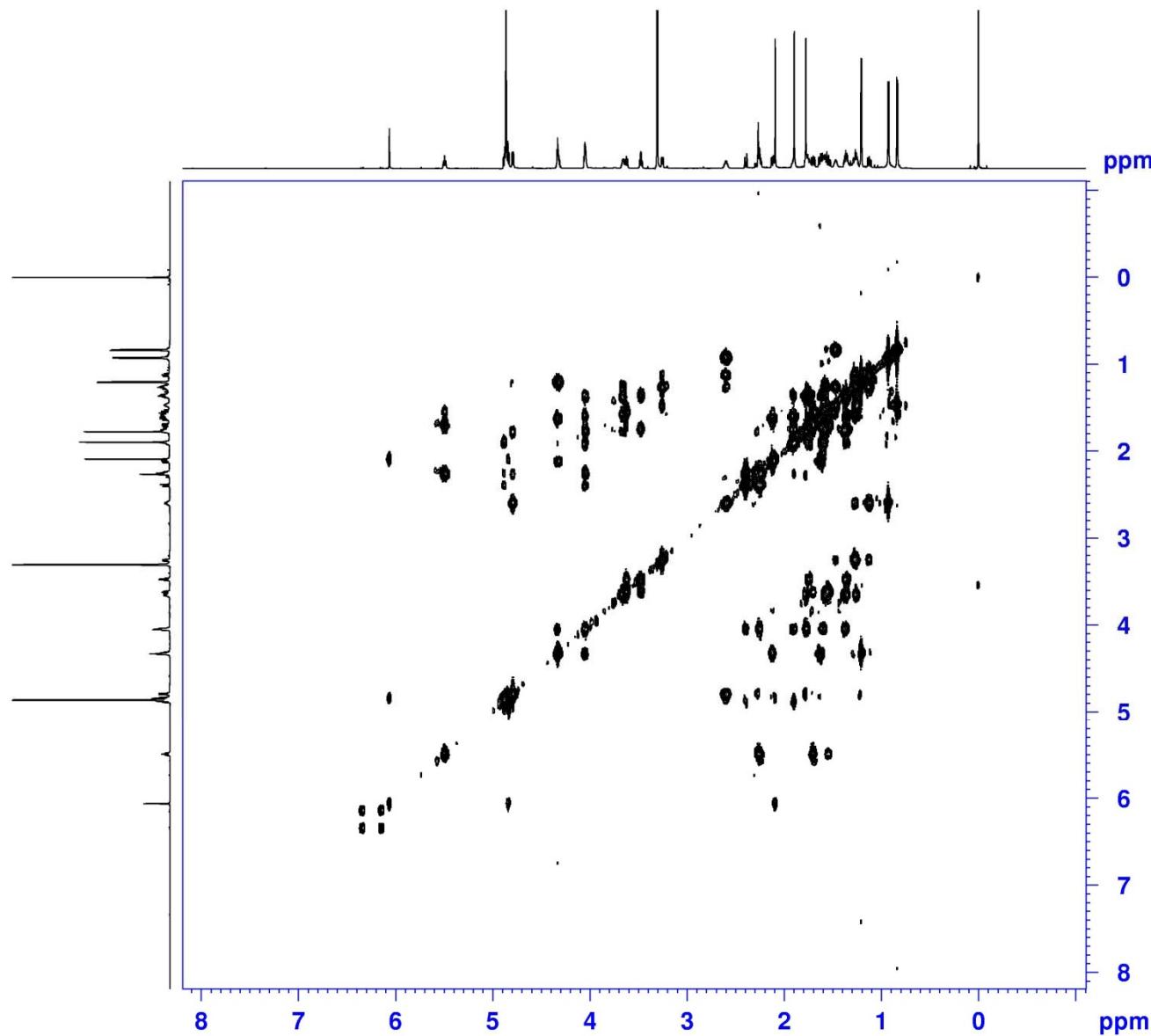
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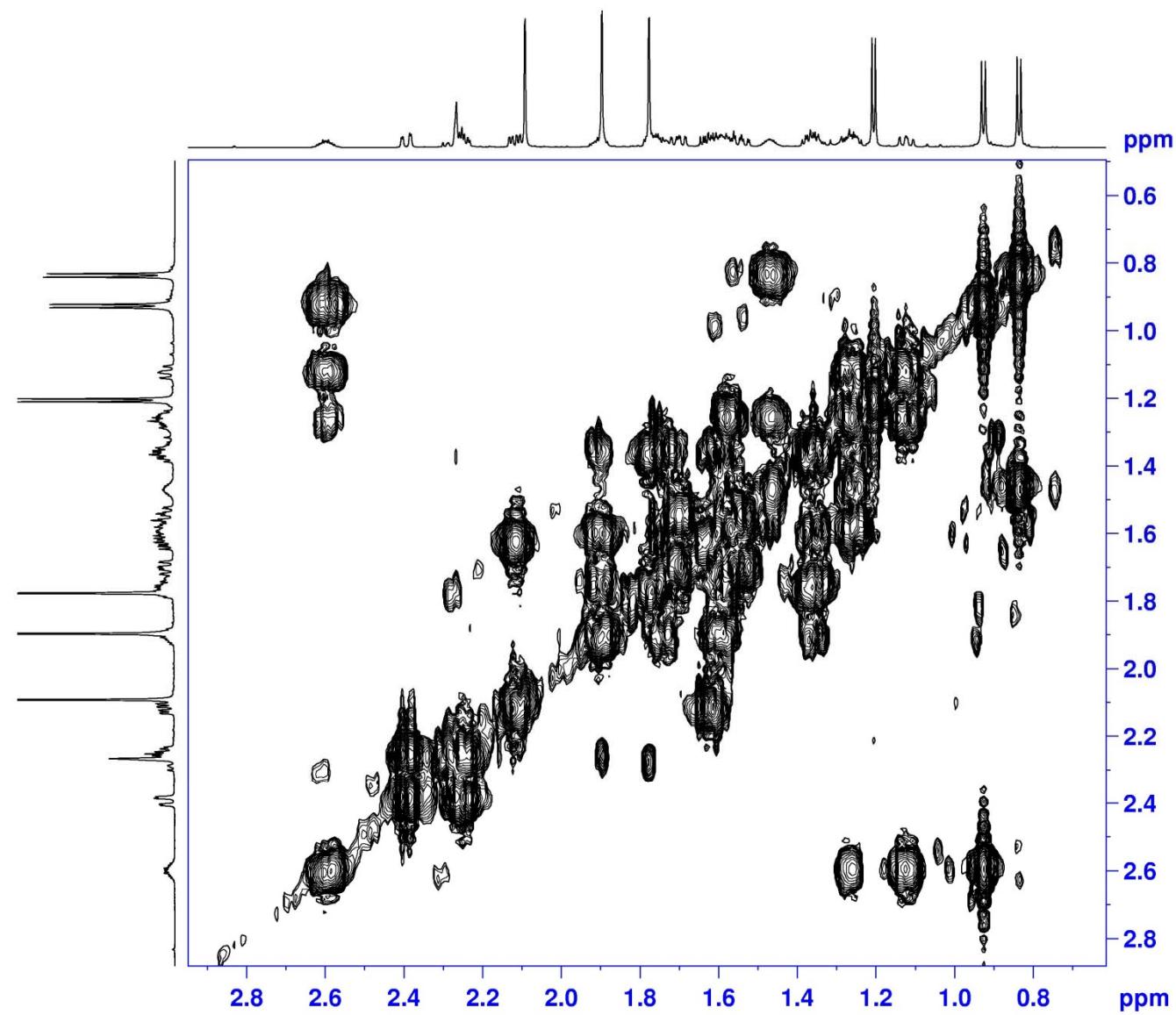
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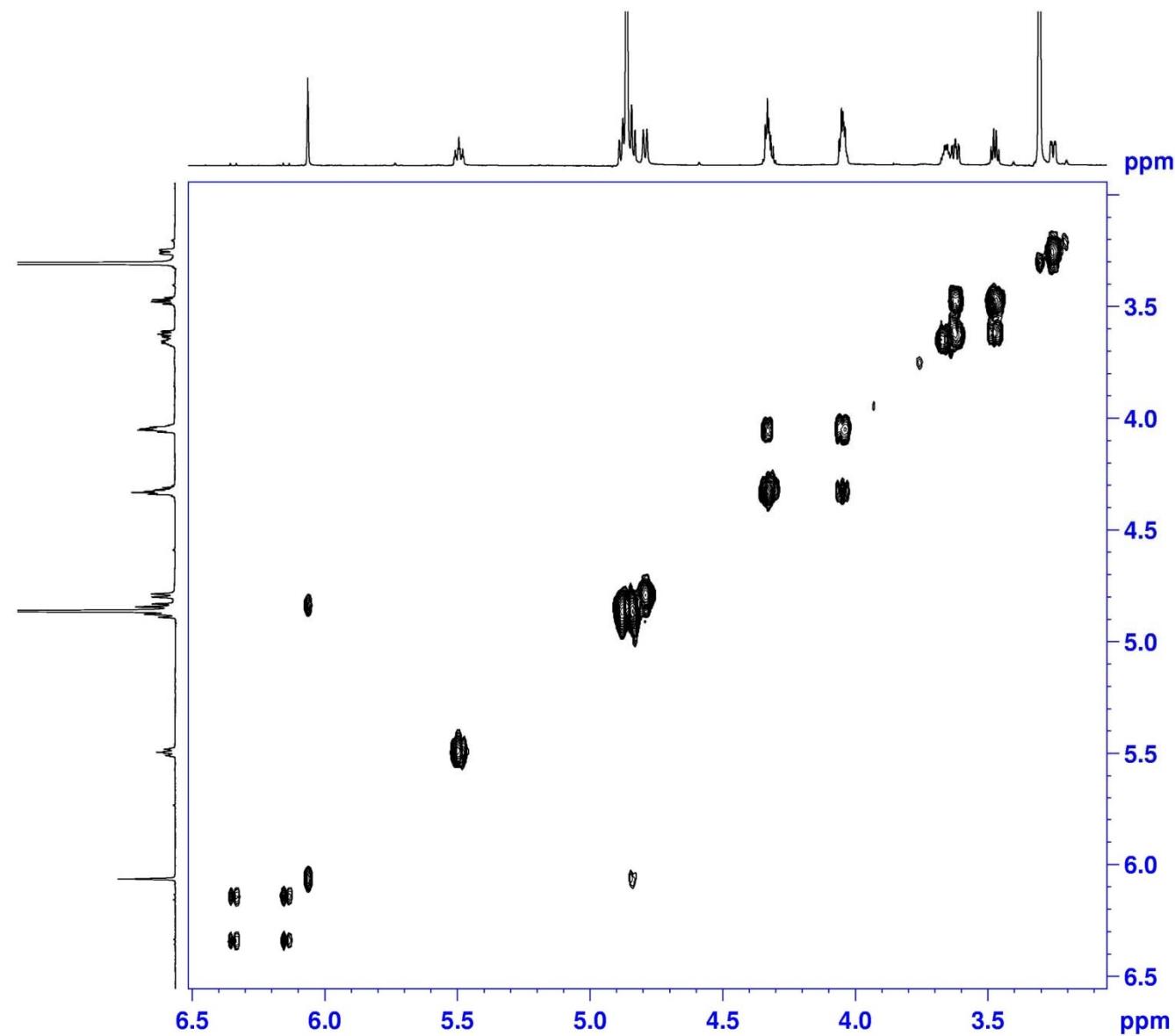
¹H–¹H COSY (700 MHz) spectrum of compound **1** in CD₃OD



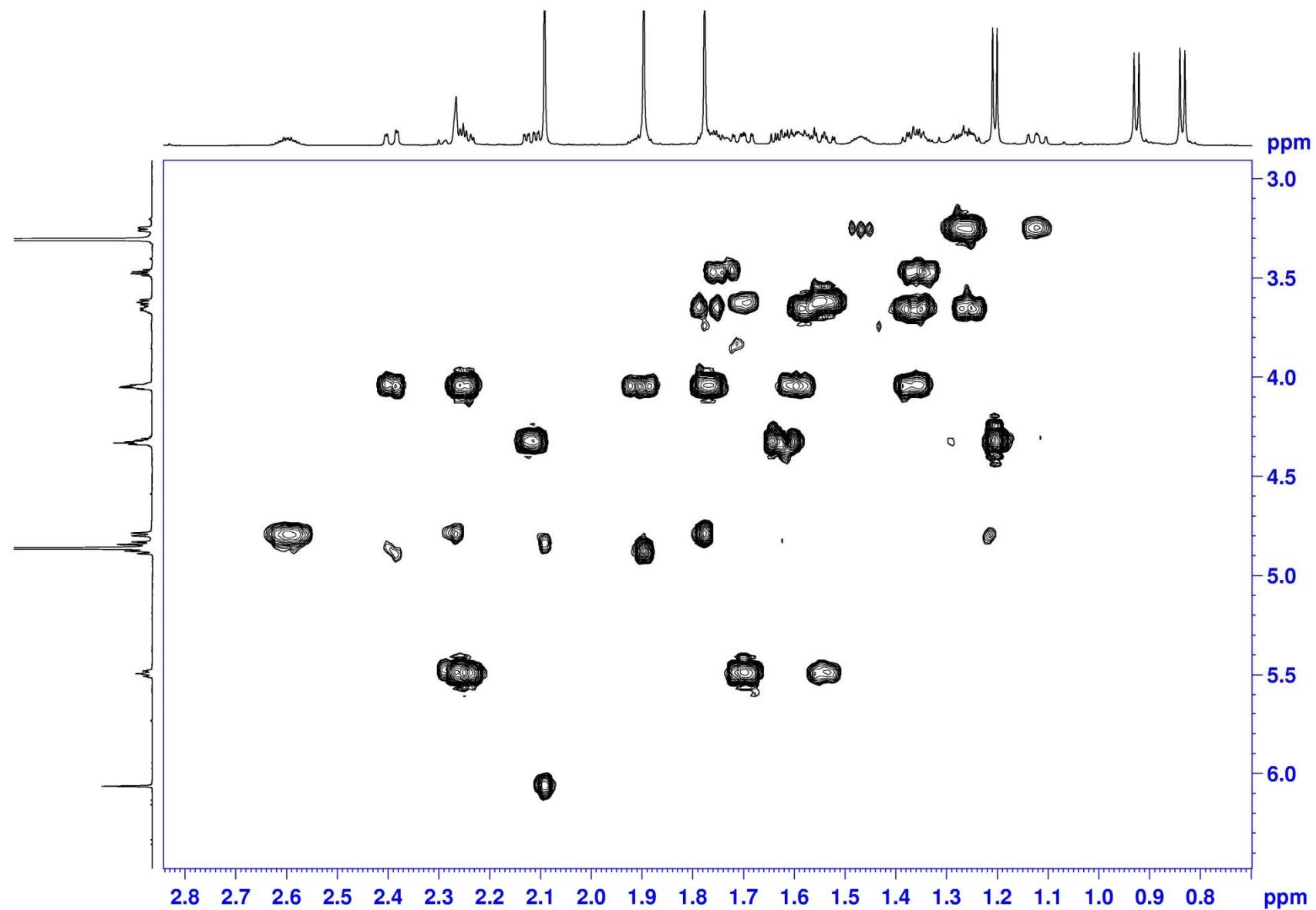
^1H - ^1H COSY (700 MHz) spectrum of compound **1** in CD_3OD



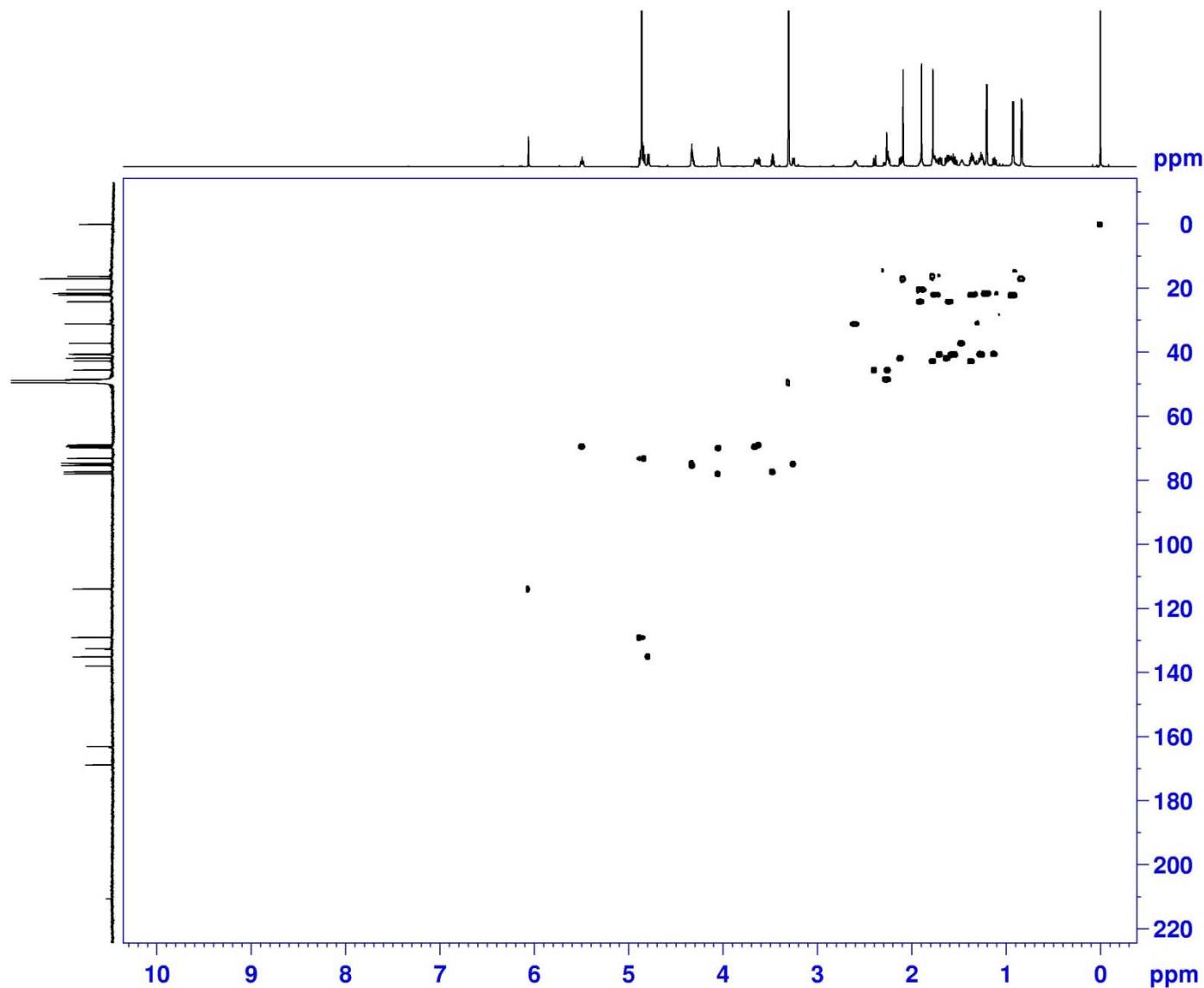
^1H - ^1H COSY (700 MHz) spectrum of compound **1** in CD_3OD



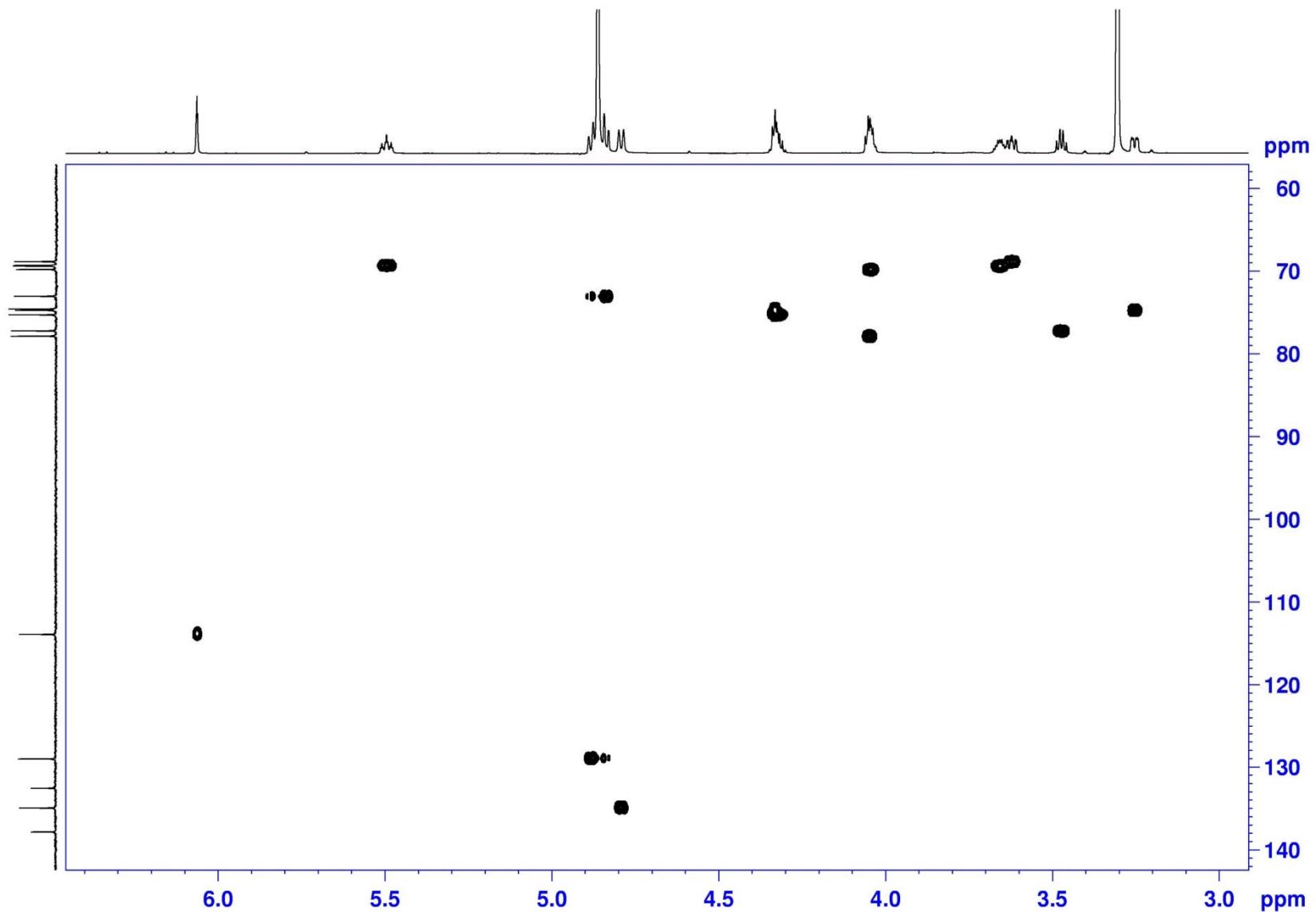
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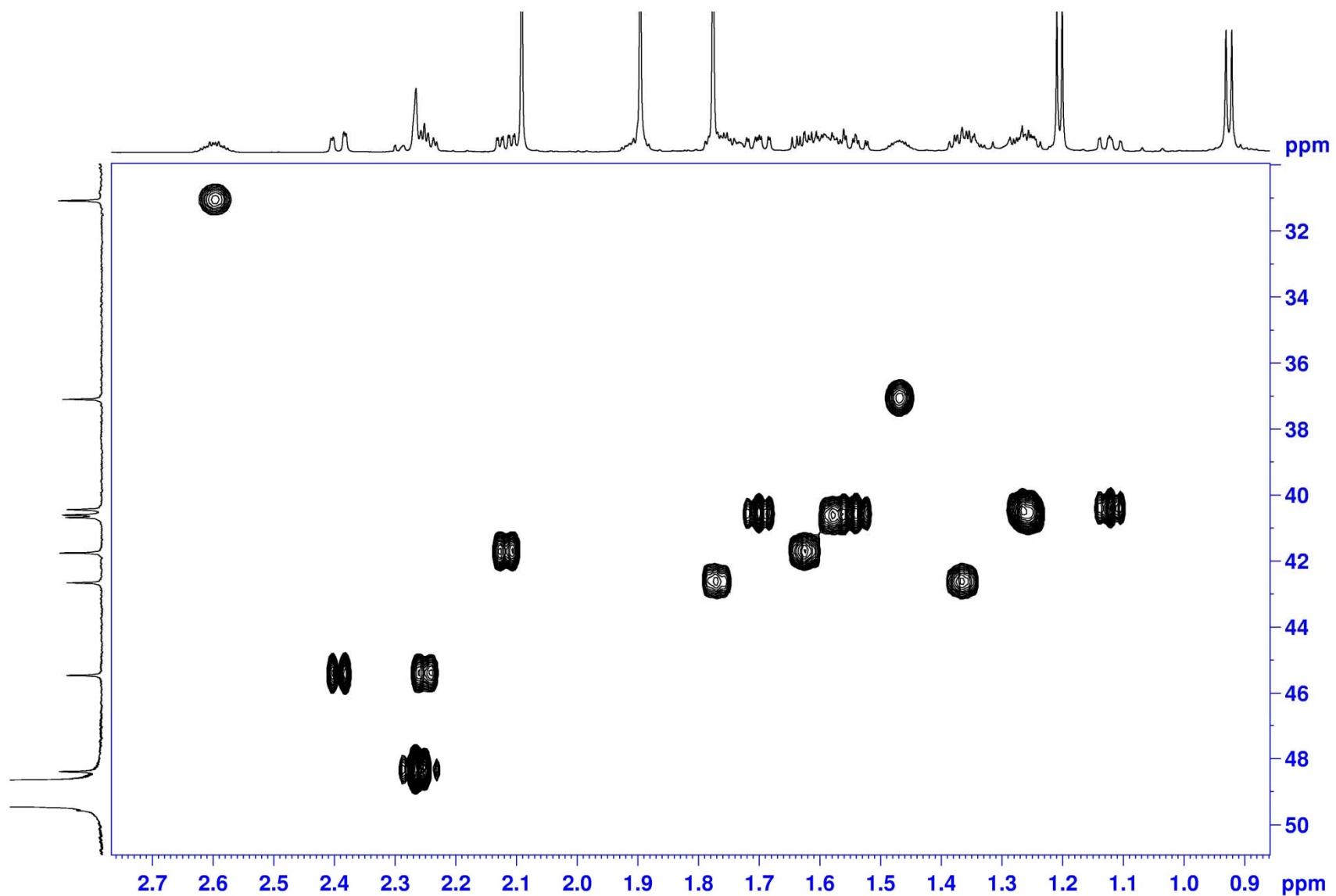
HSQC (700 MHz) spectrum of compound **1** in CD₃OD



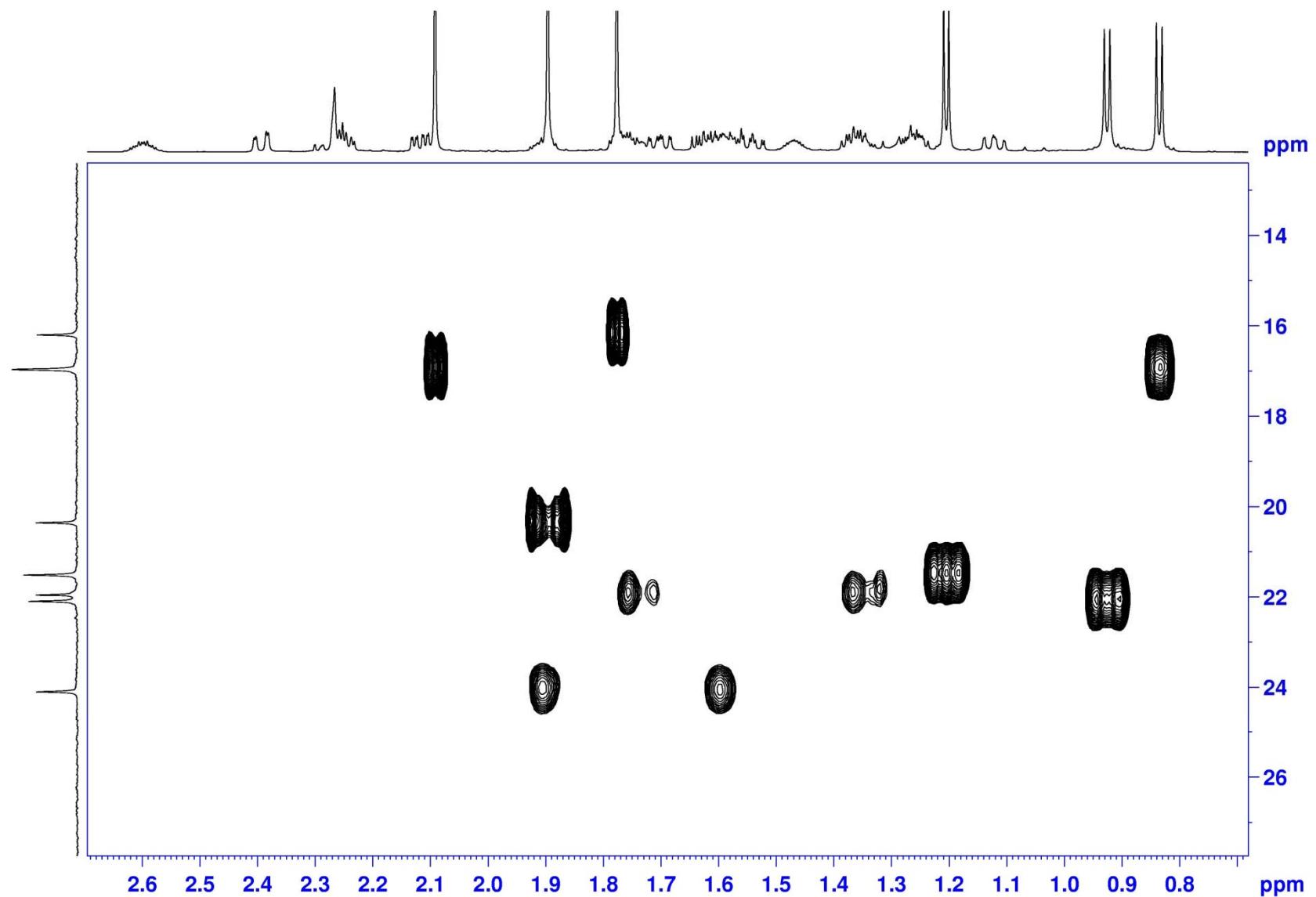
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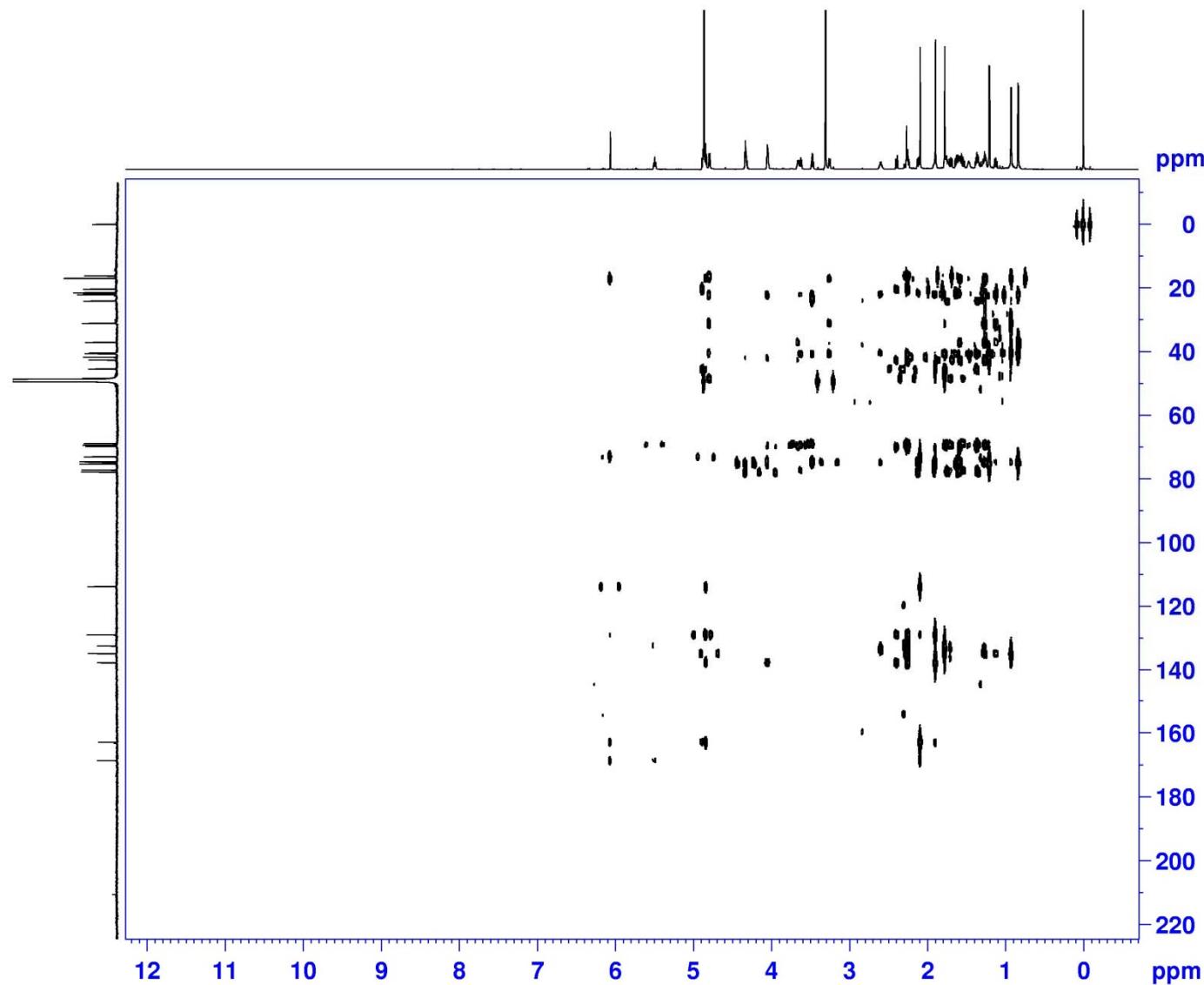
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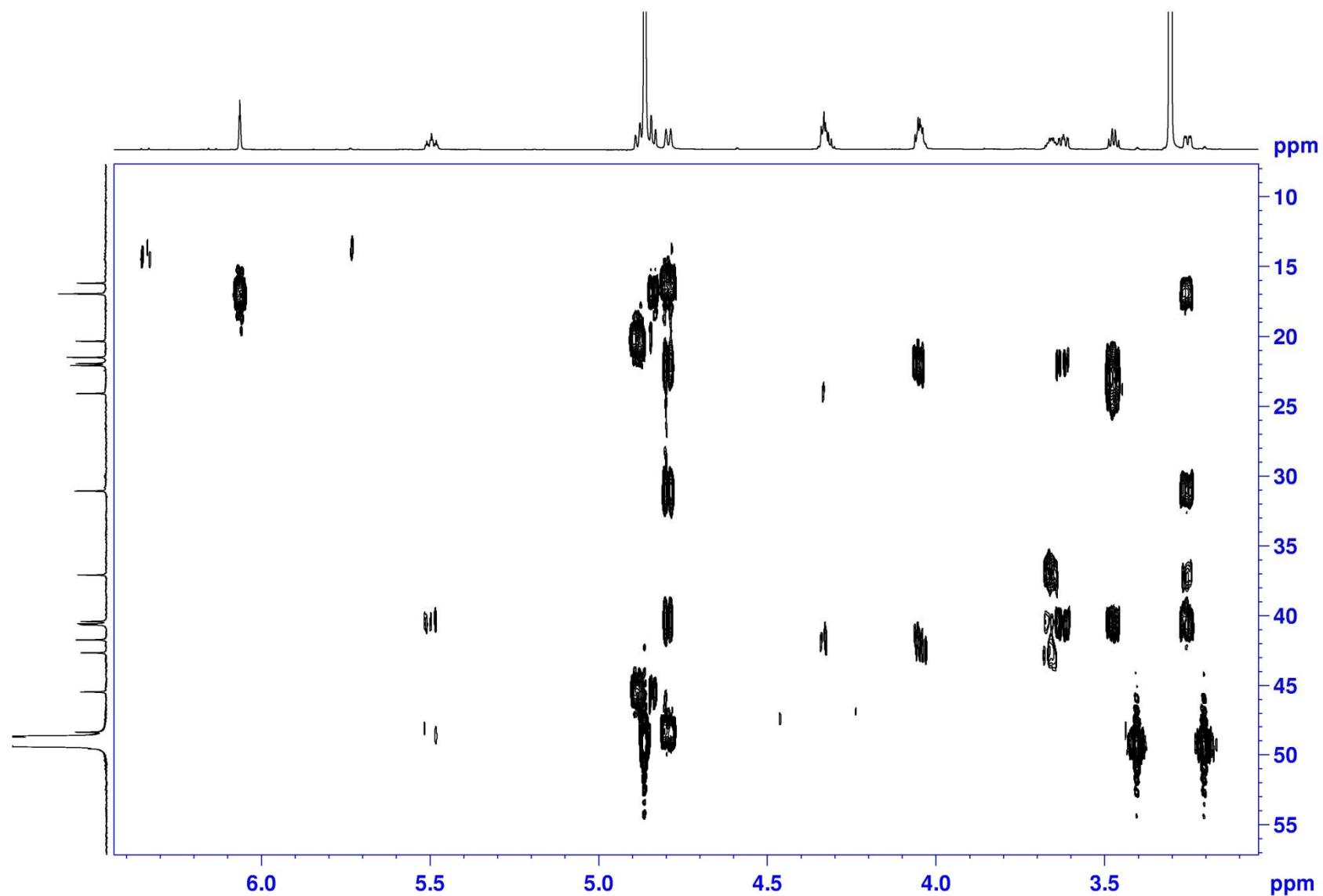
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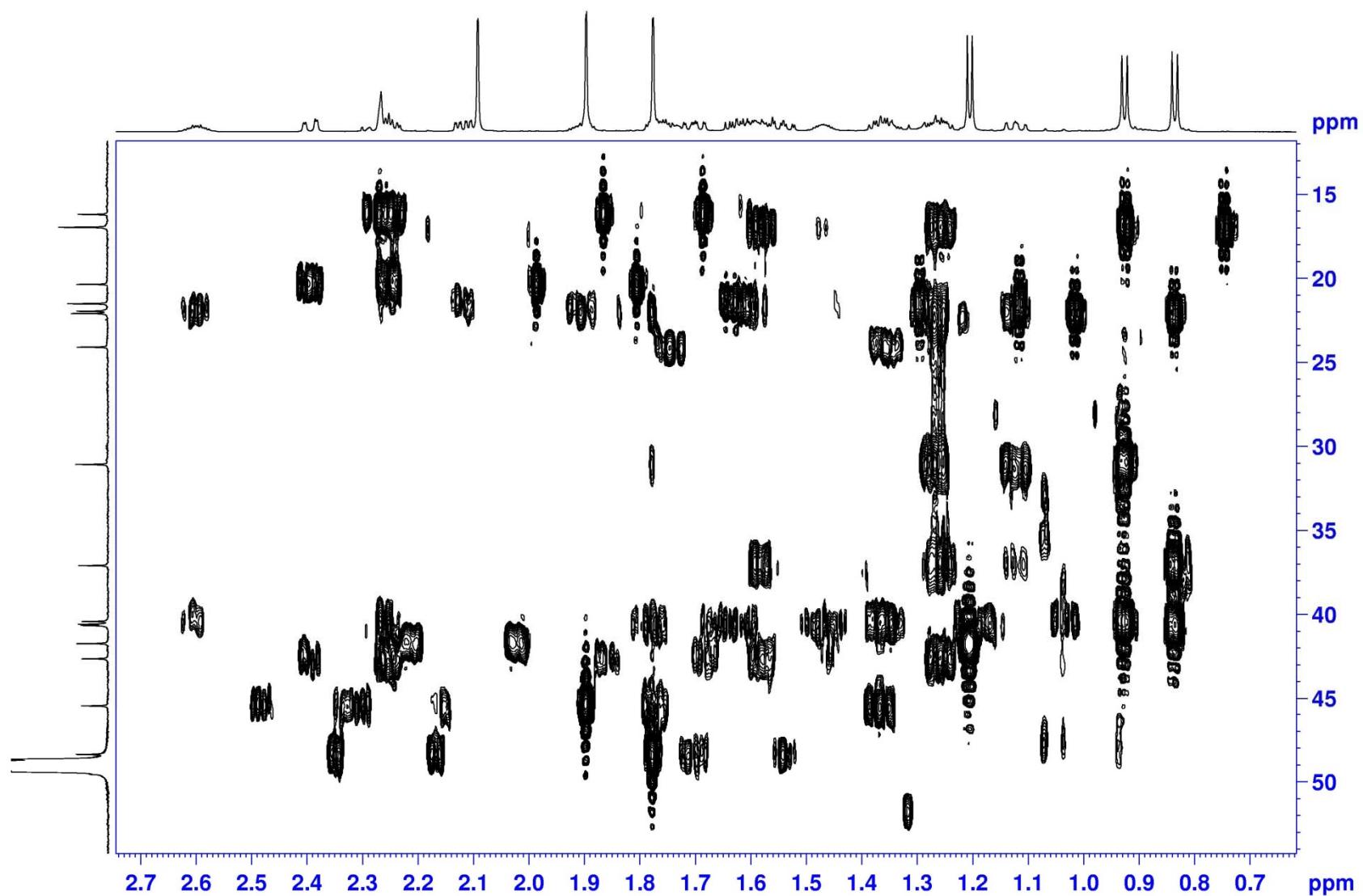
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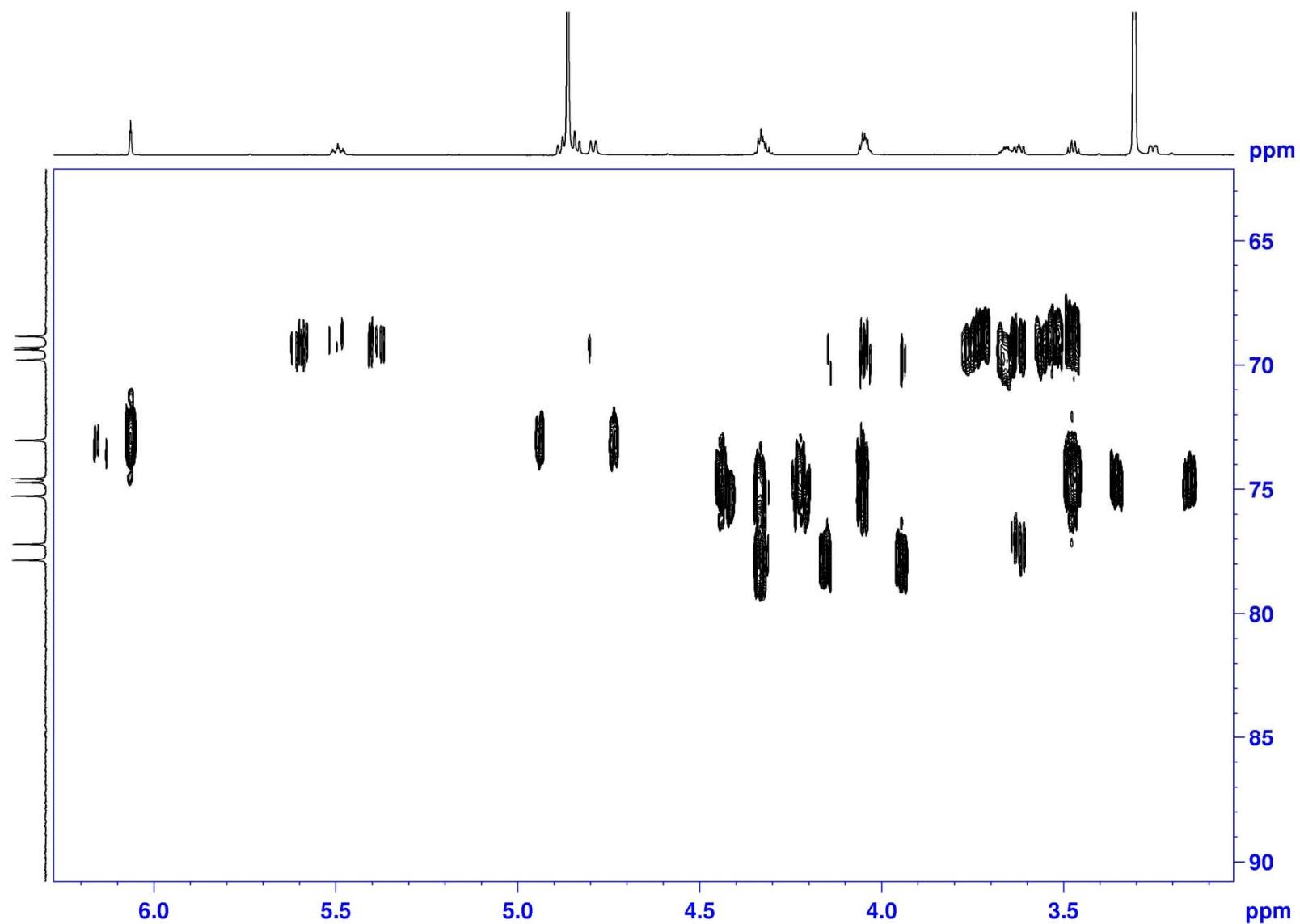
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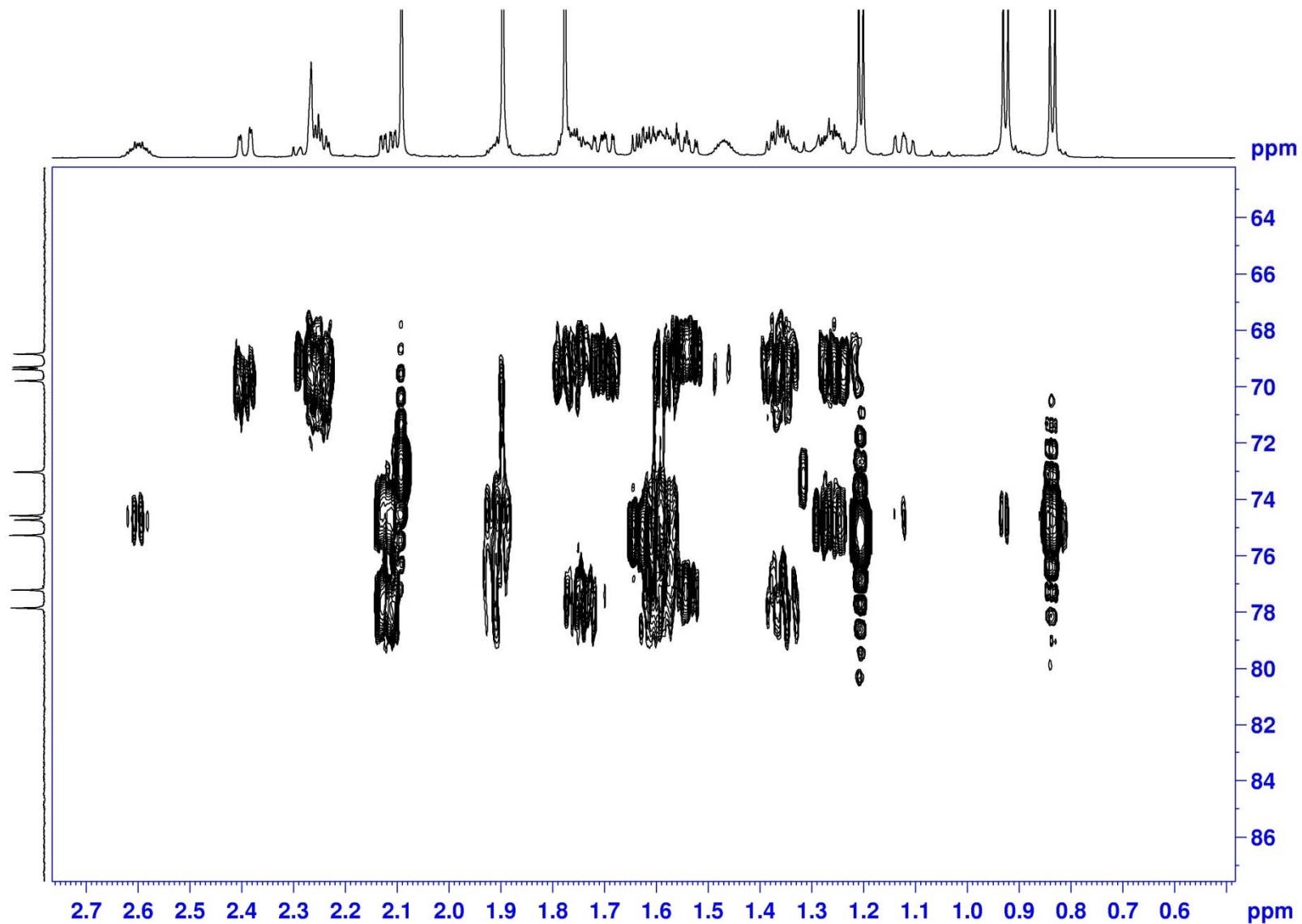
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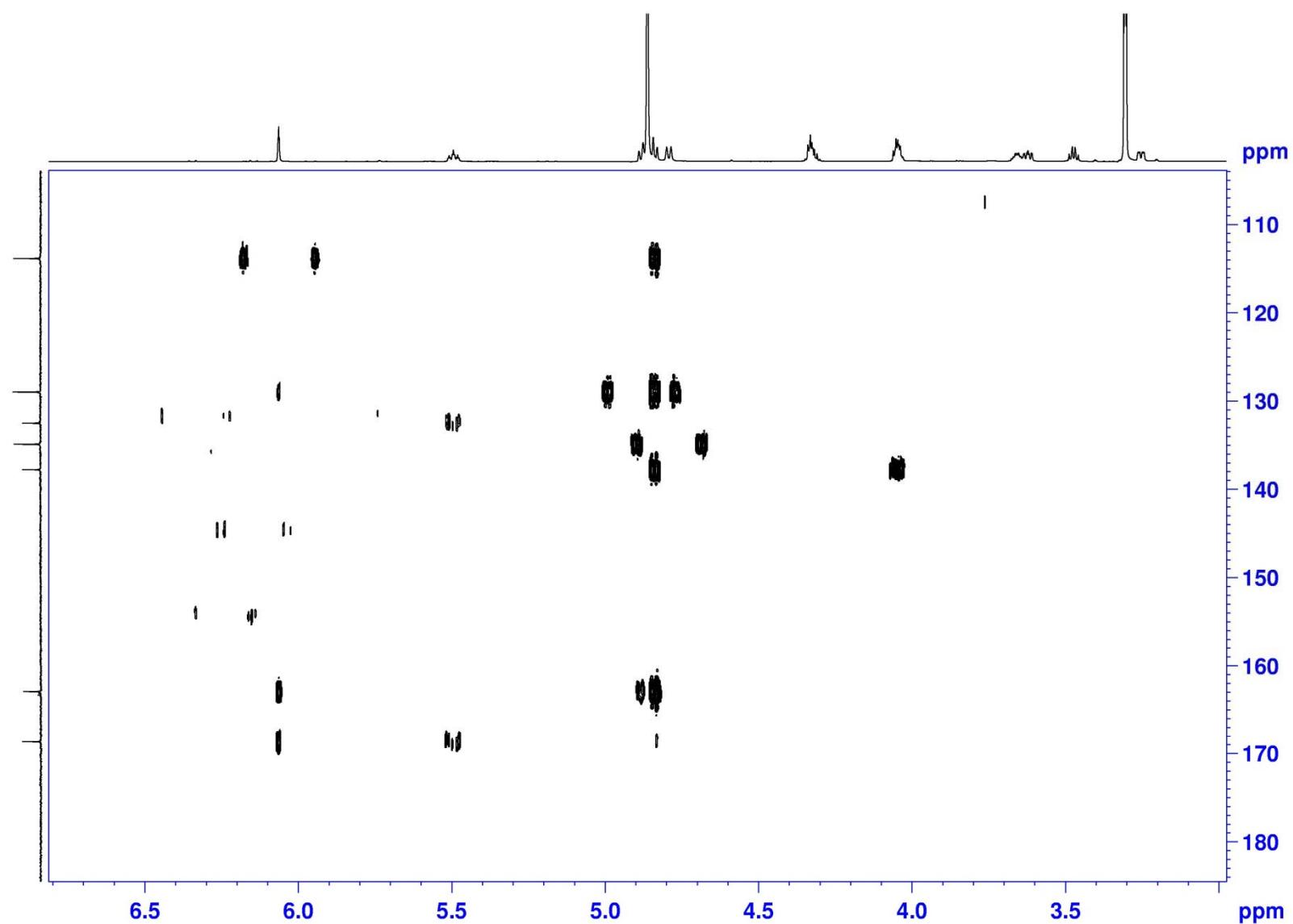
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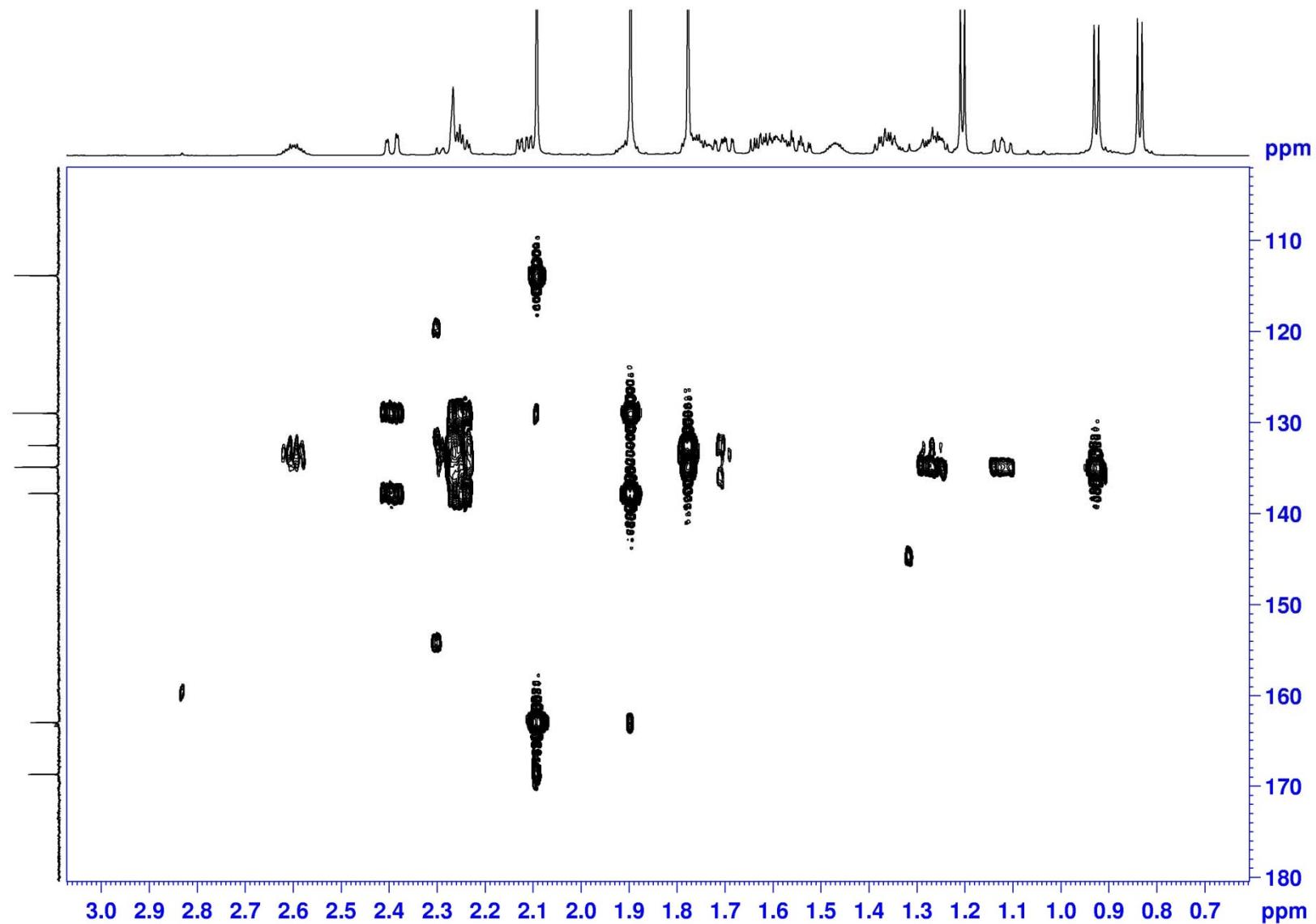
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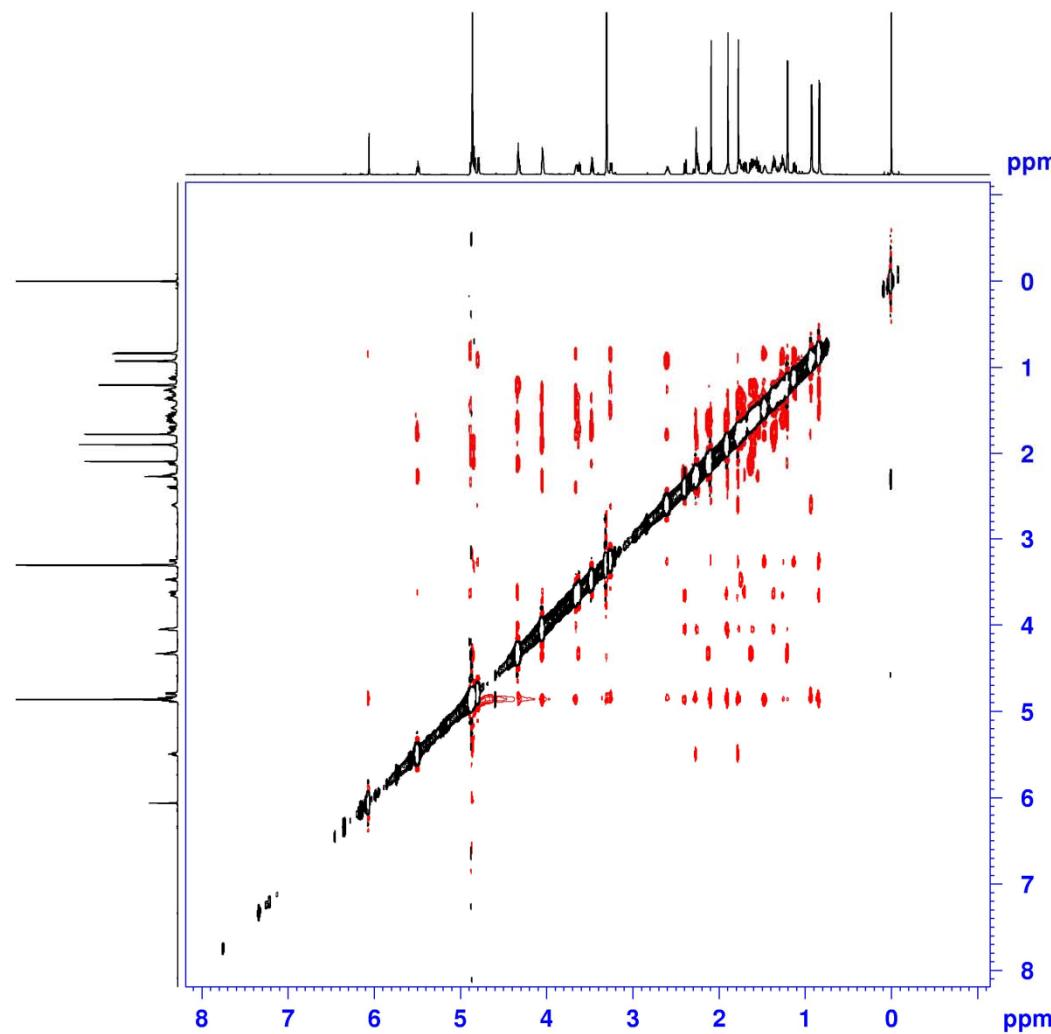
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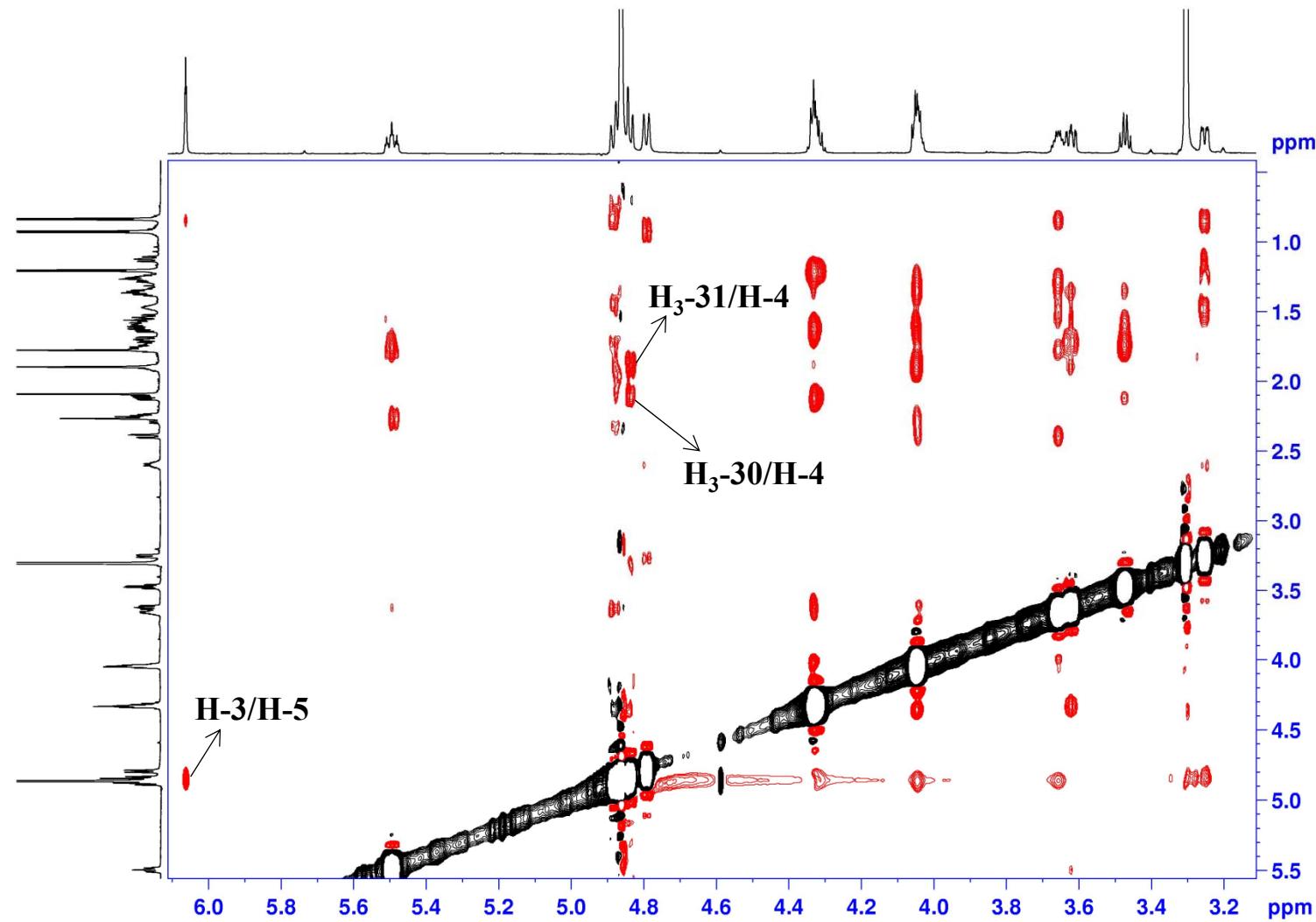
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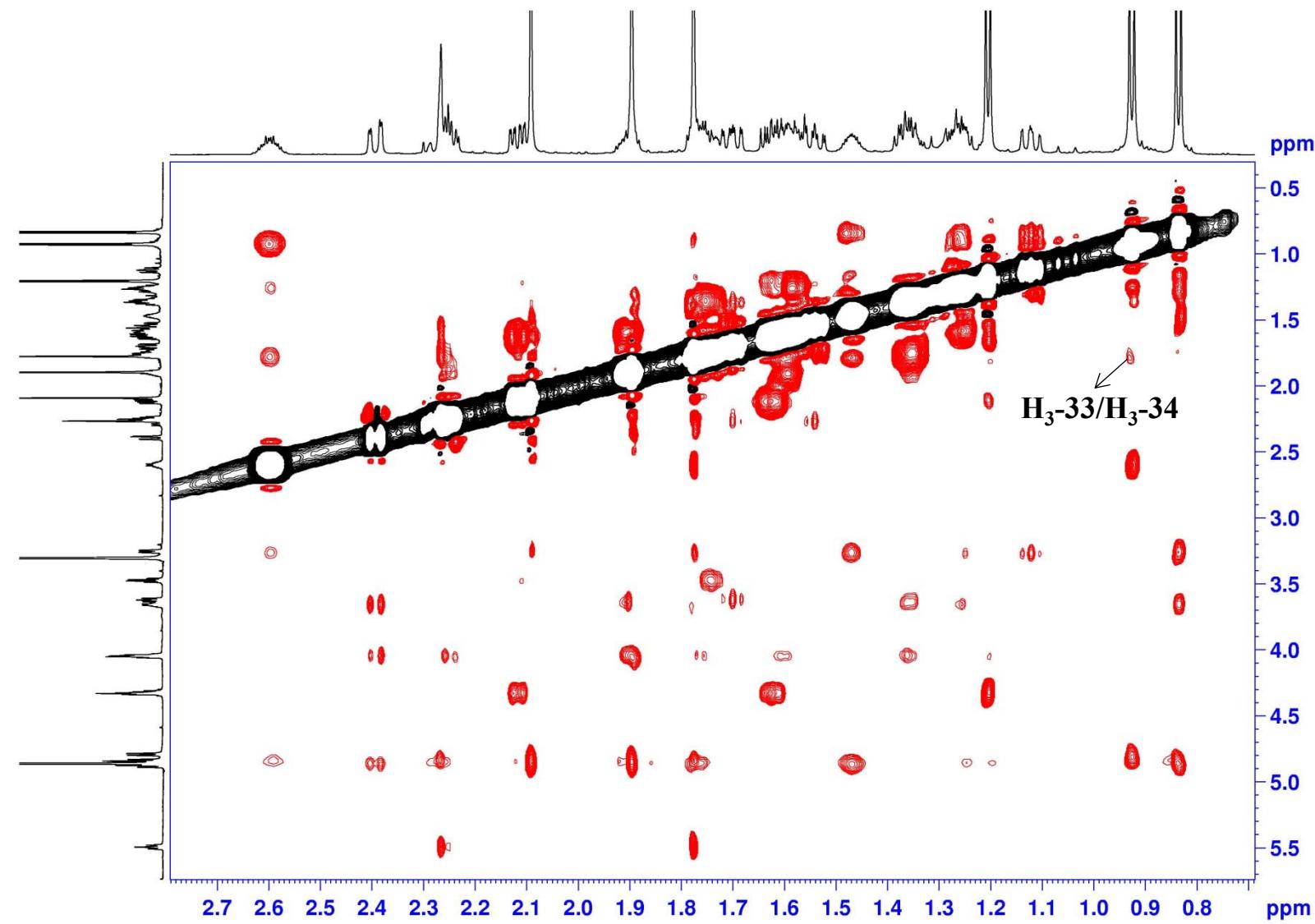
NOESY (700 MHz) spectrum of compound **1** in CD₃OD



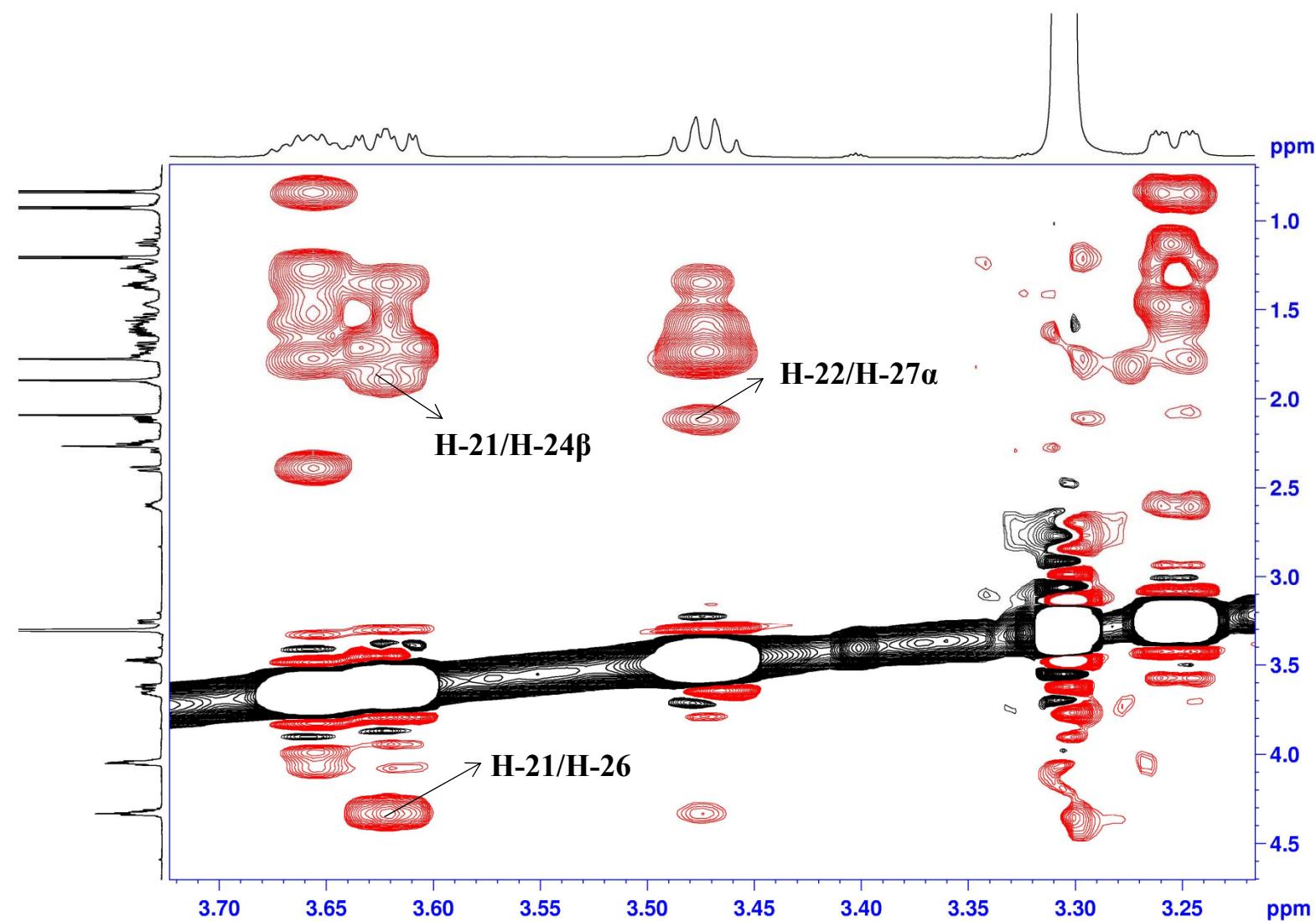
NOESY (700 MHz) spectrum of compound **1** in CD_3OD



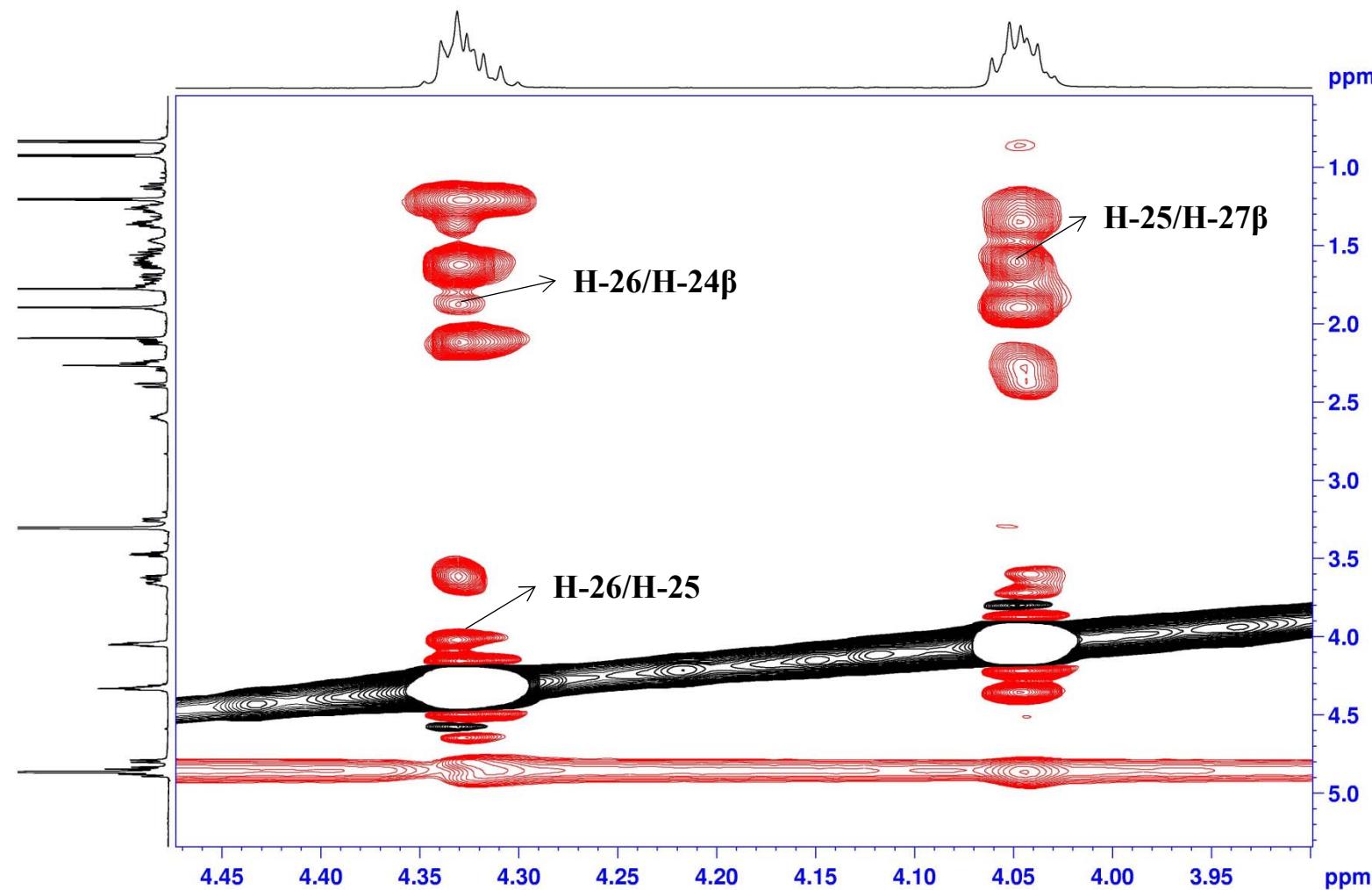
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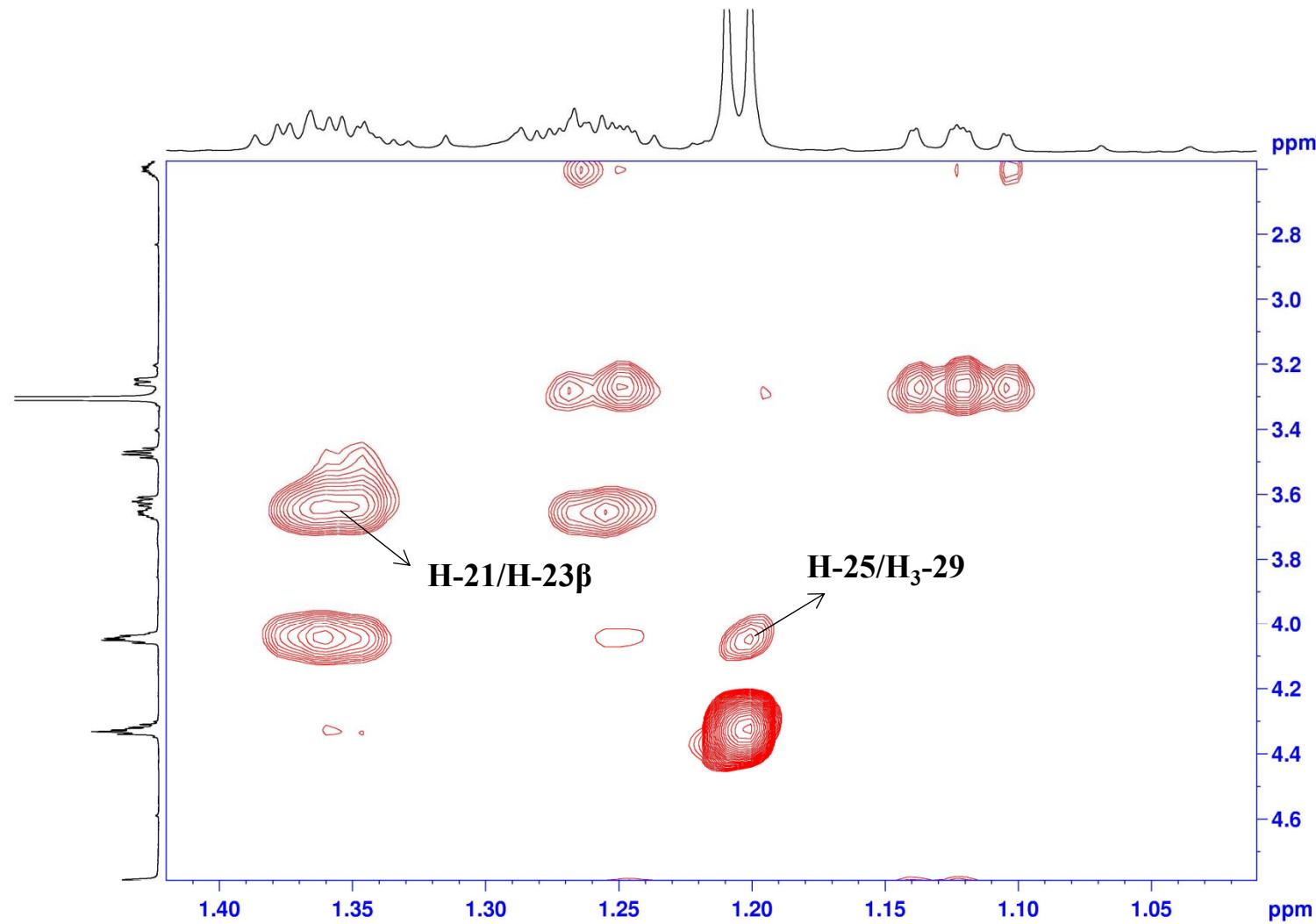
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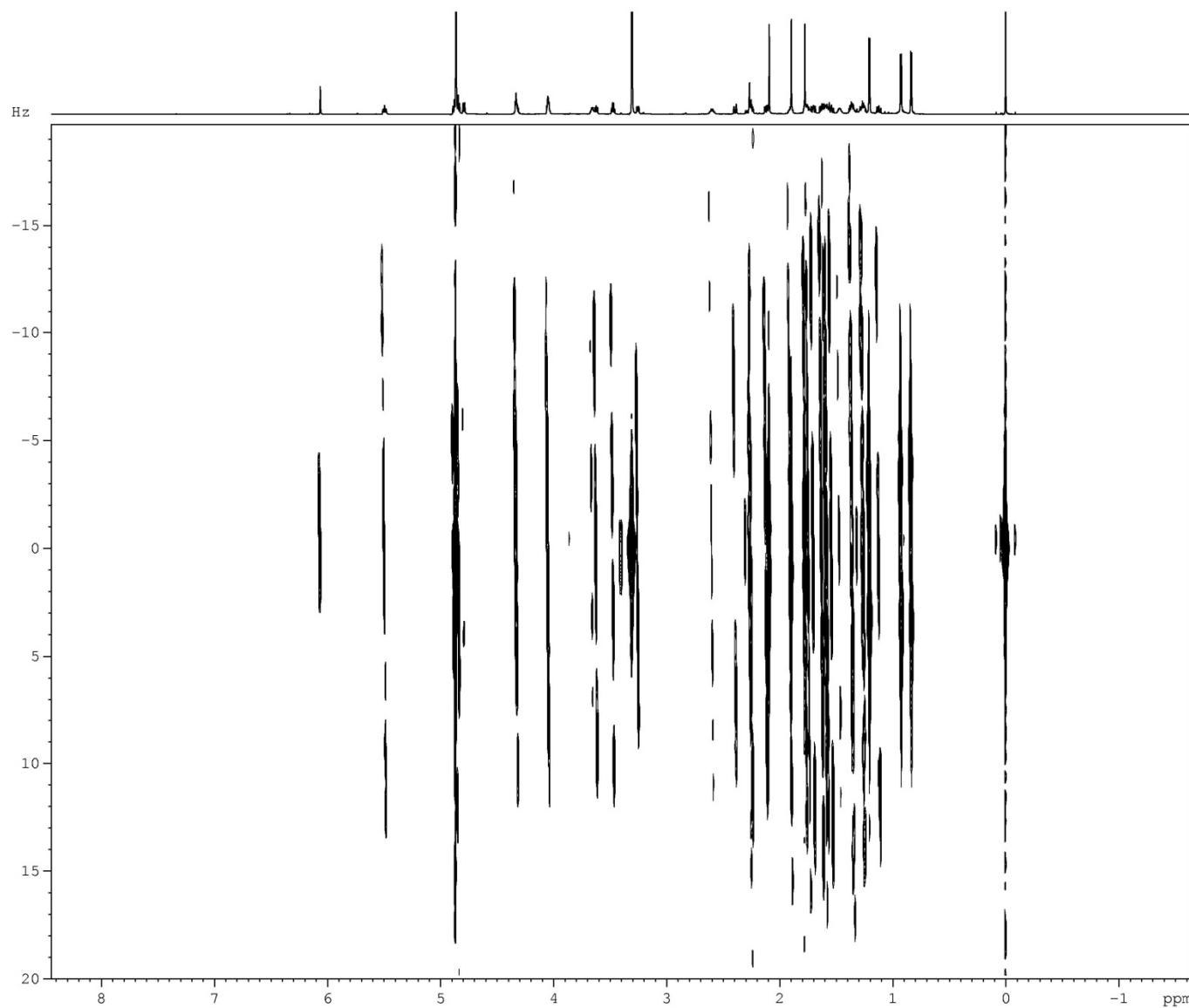
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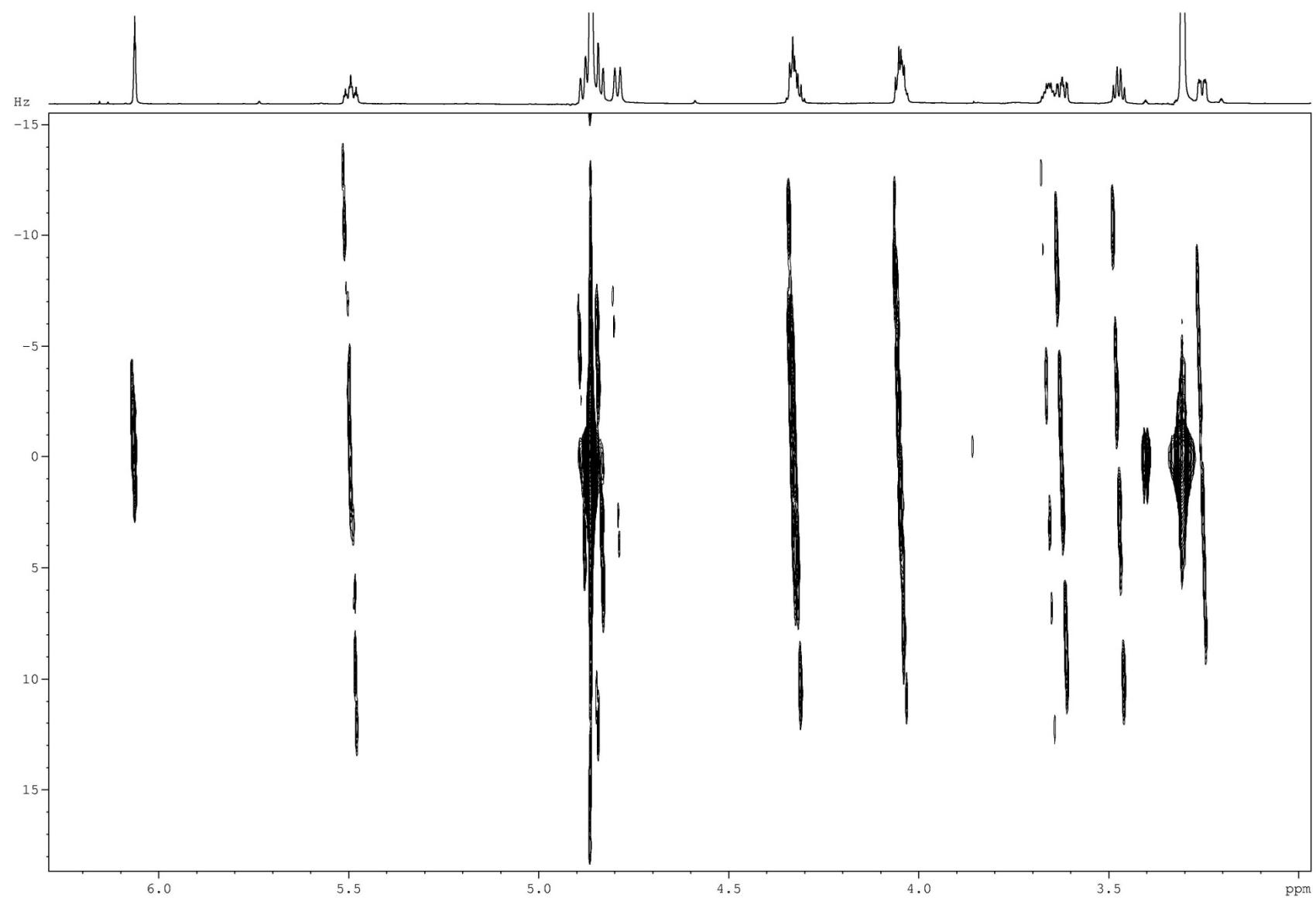
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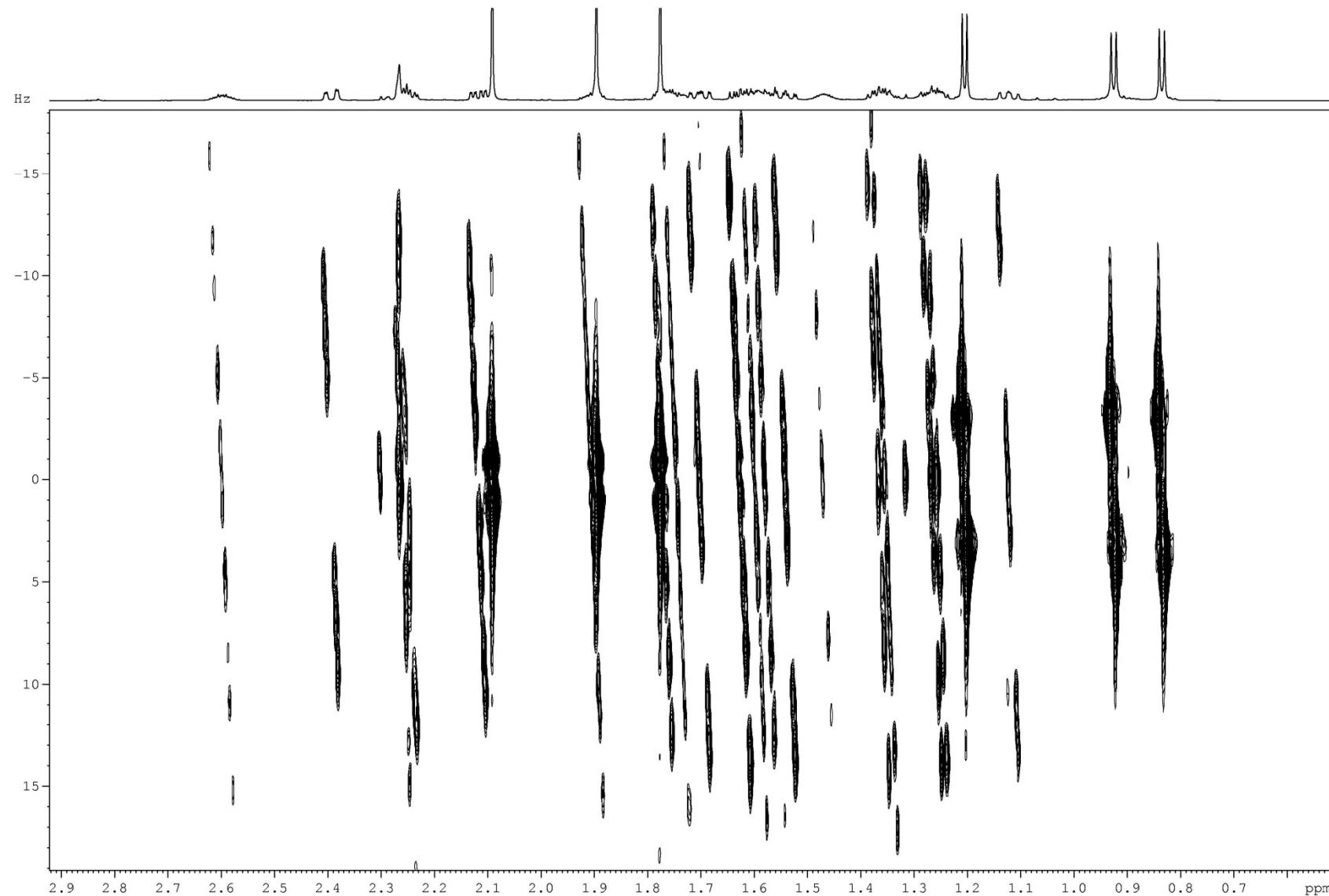
2D *J*RES (700 MHz) spectrum of compound **1** in CD₃OD



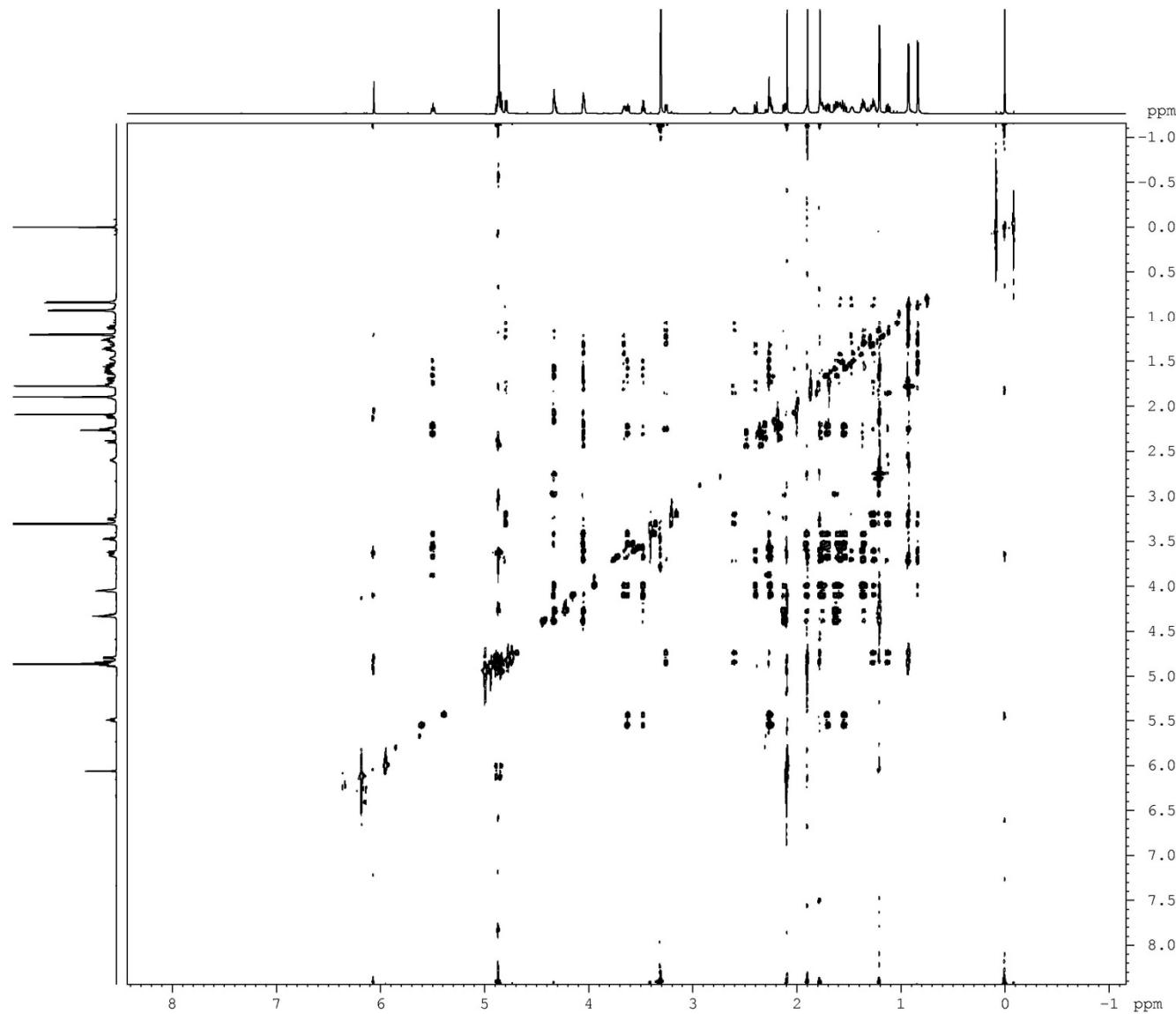
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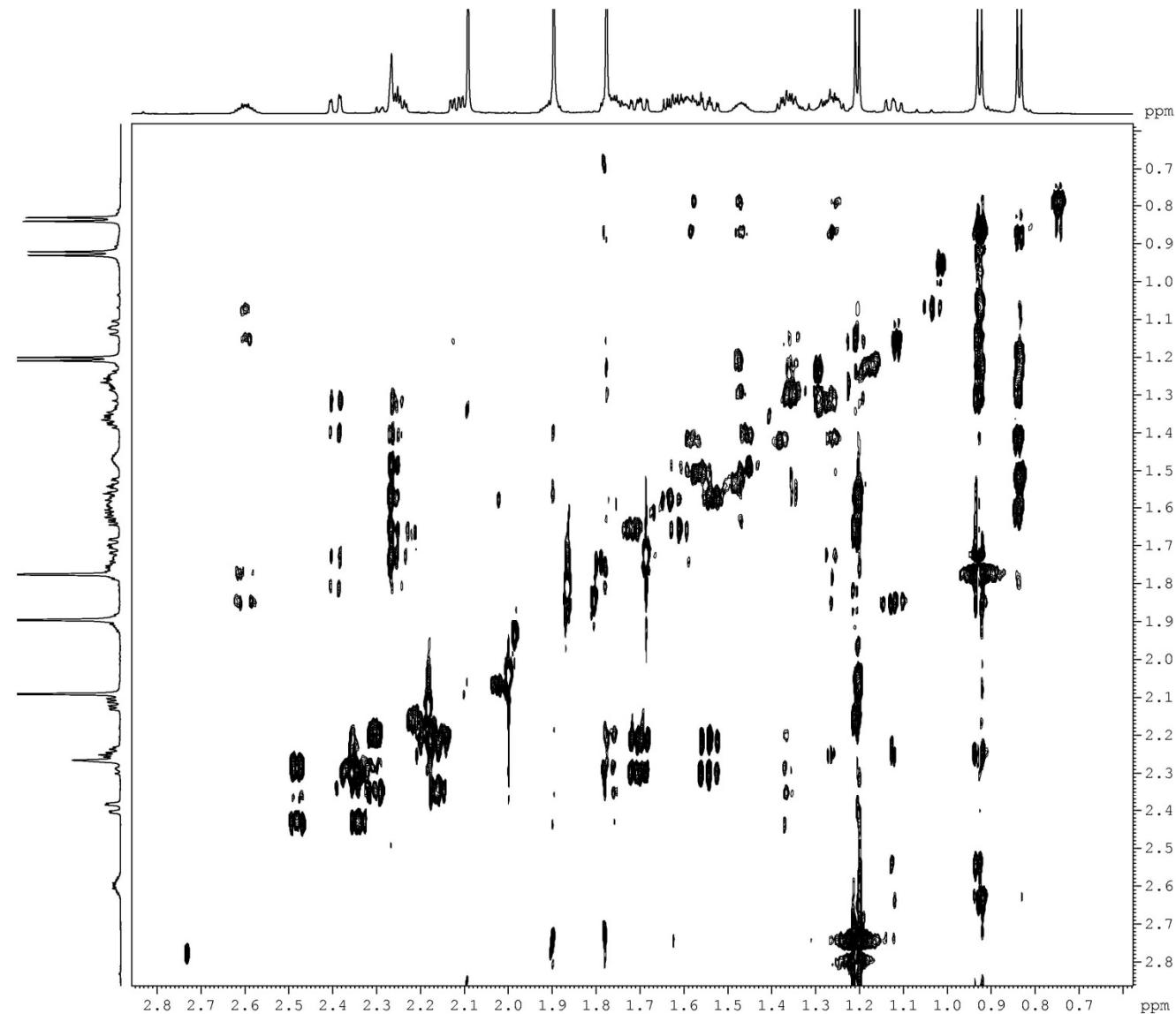
2D *J*RES (700 MHz) spectrum of compound **1** in CD₃OD



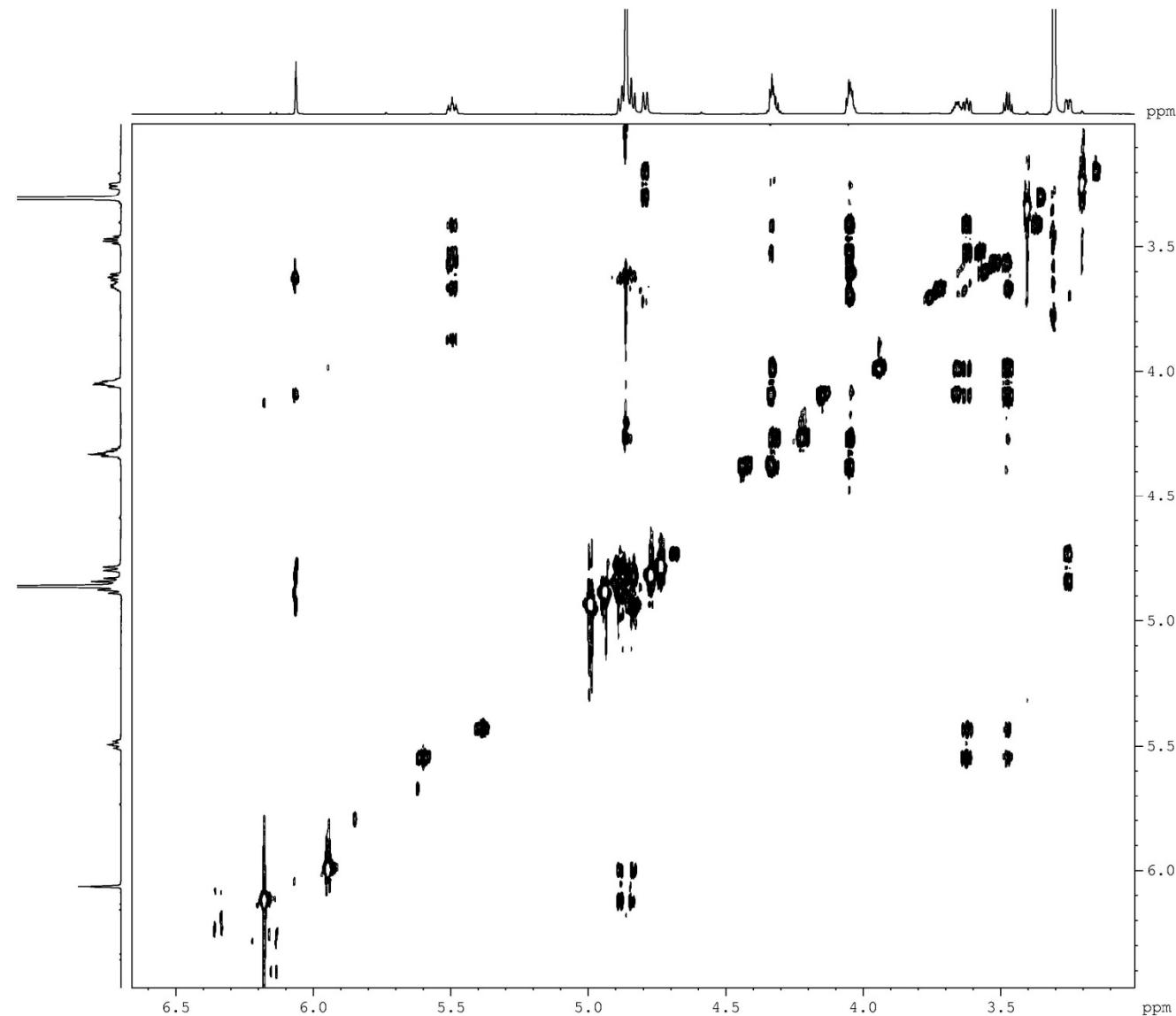
HETLOC (700 MHz) spectrum of compound **1** in CD₃OD



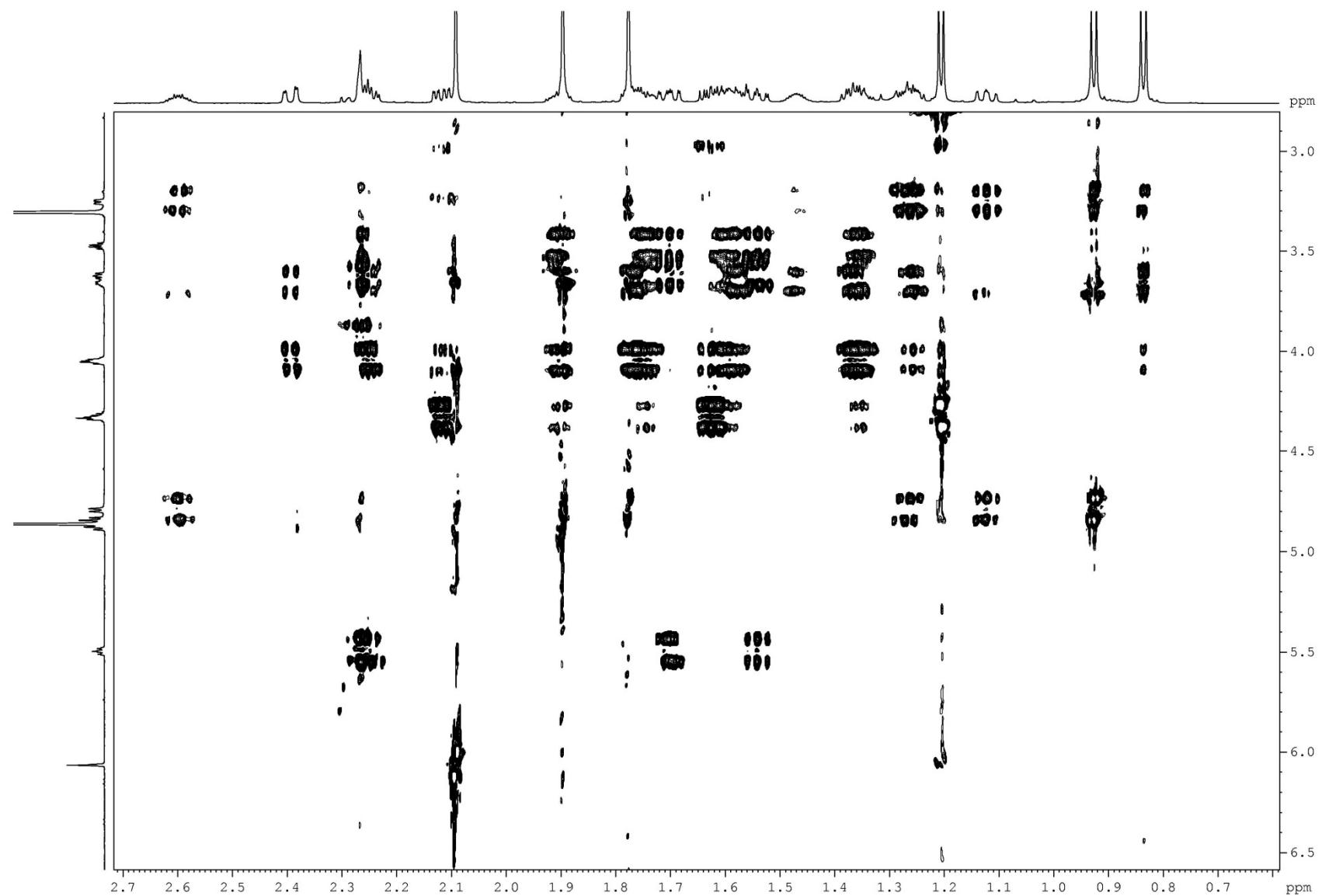
HETLOC (700 MHz) spectrum of compound **1** in CD₃OD



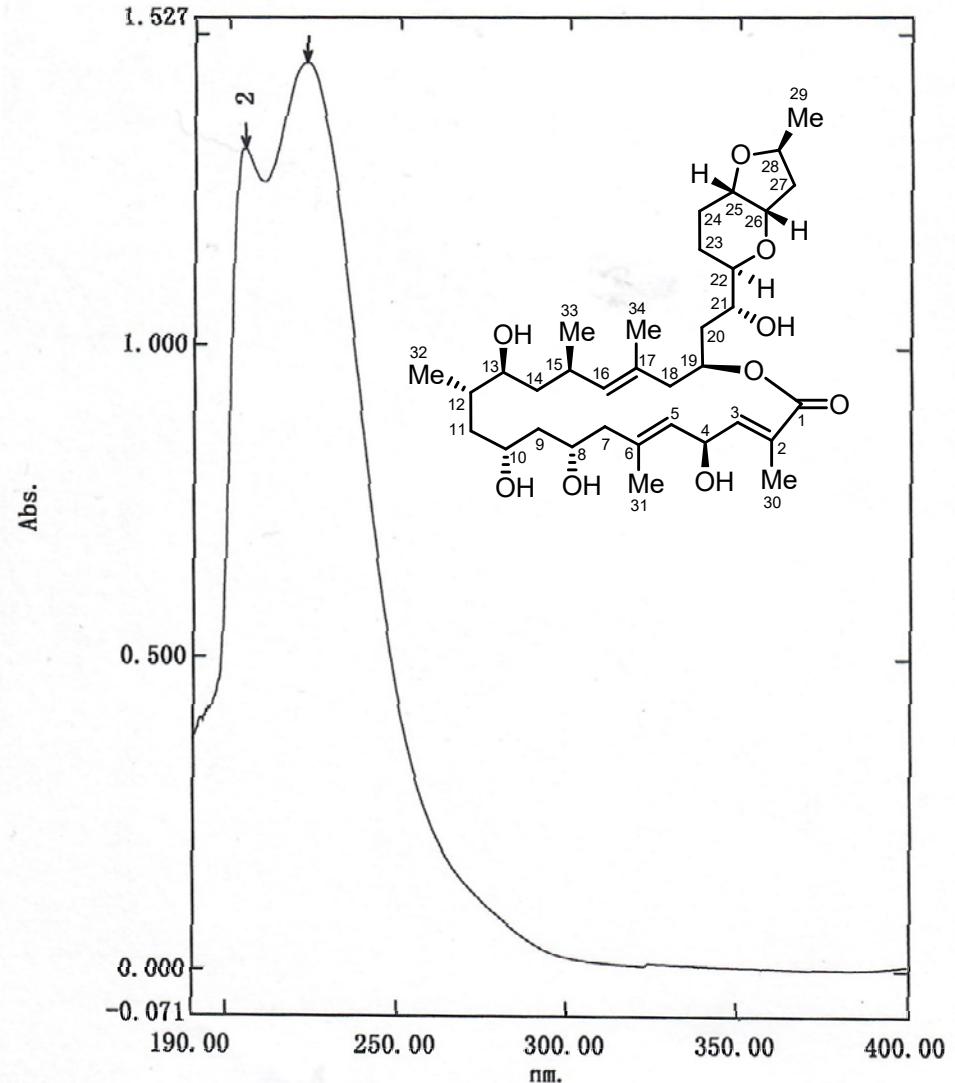
HETLOC (700 MHz) spectrum of compound **1** in CD₃OD



HETLOC (700 MHz) spectrum of compound **1** in CD₃OD

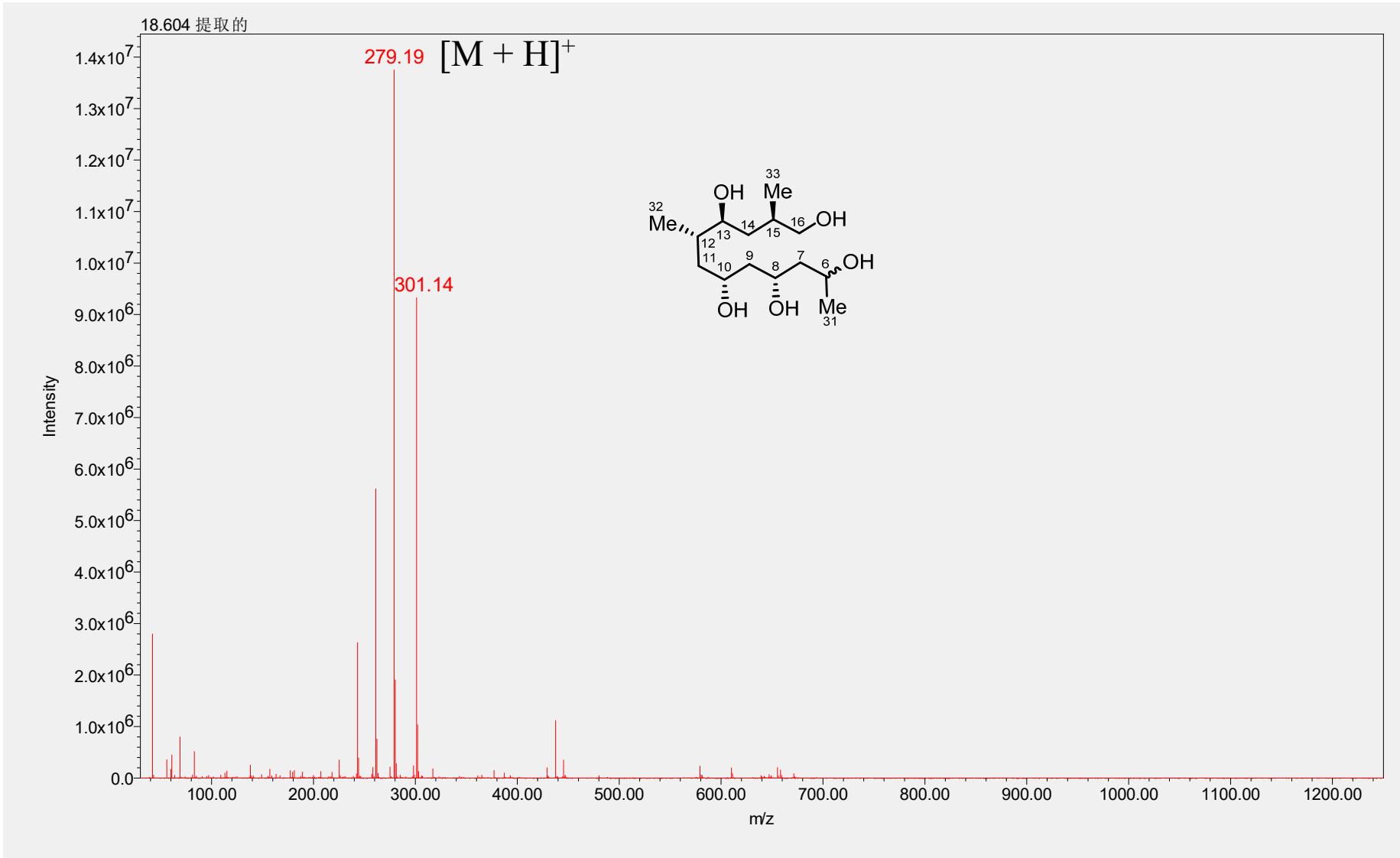


UV spectrum of compound 1

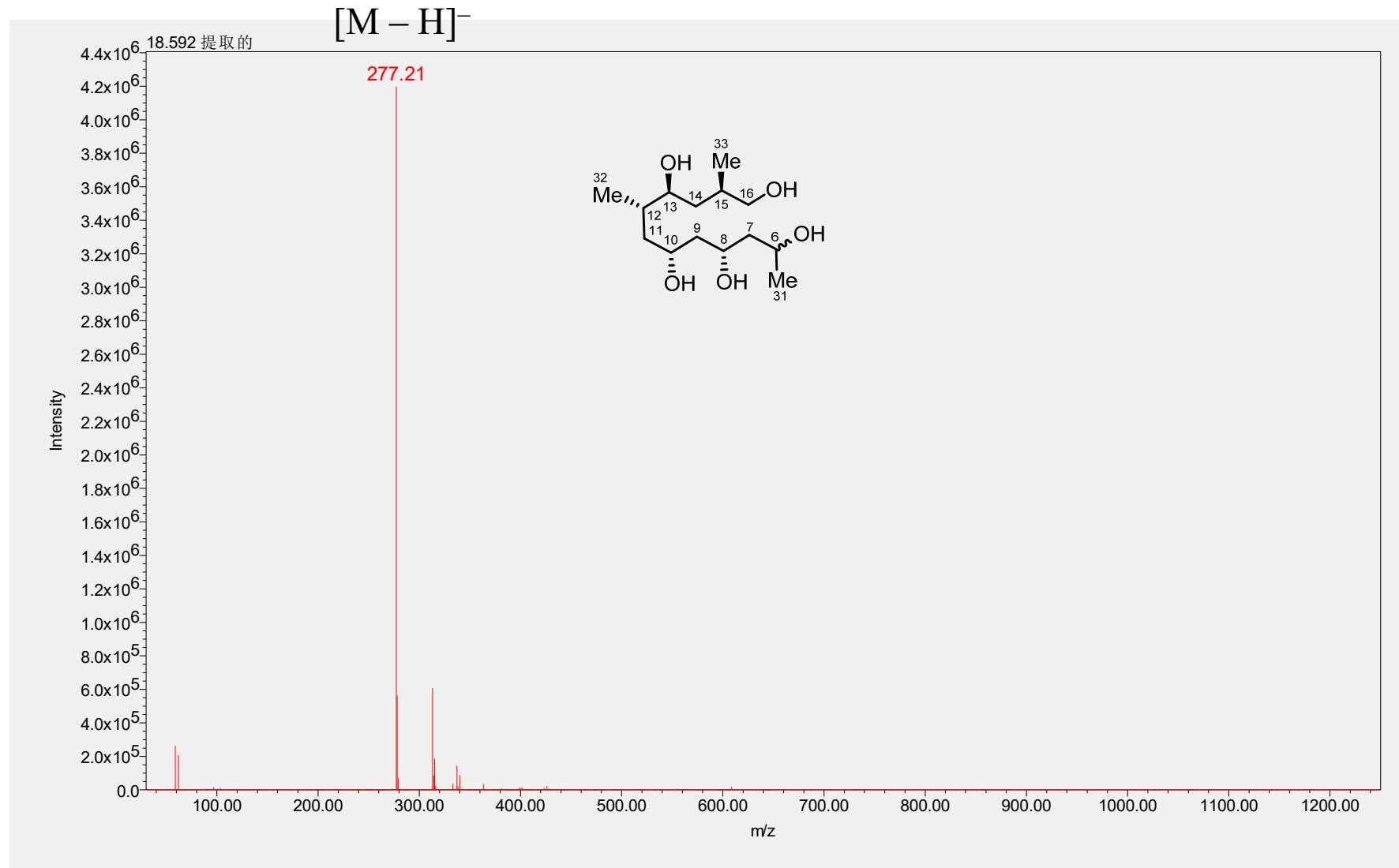


No.	P/V	(nm)	
1	↑	223.20	1.455
2	↑	204.80	1.312

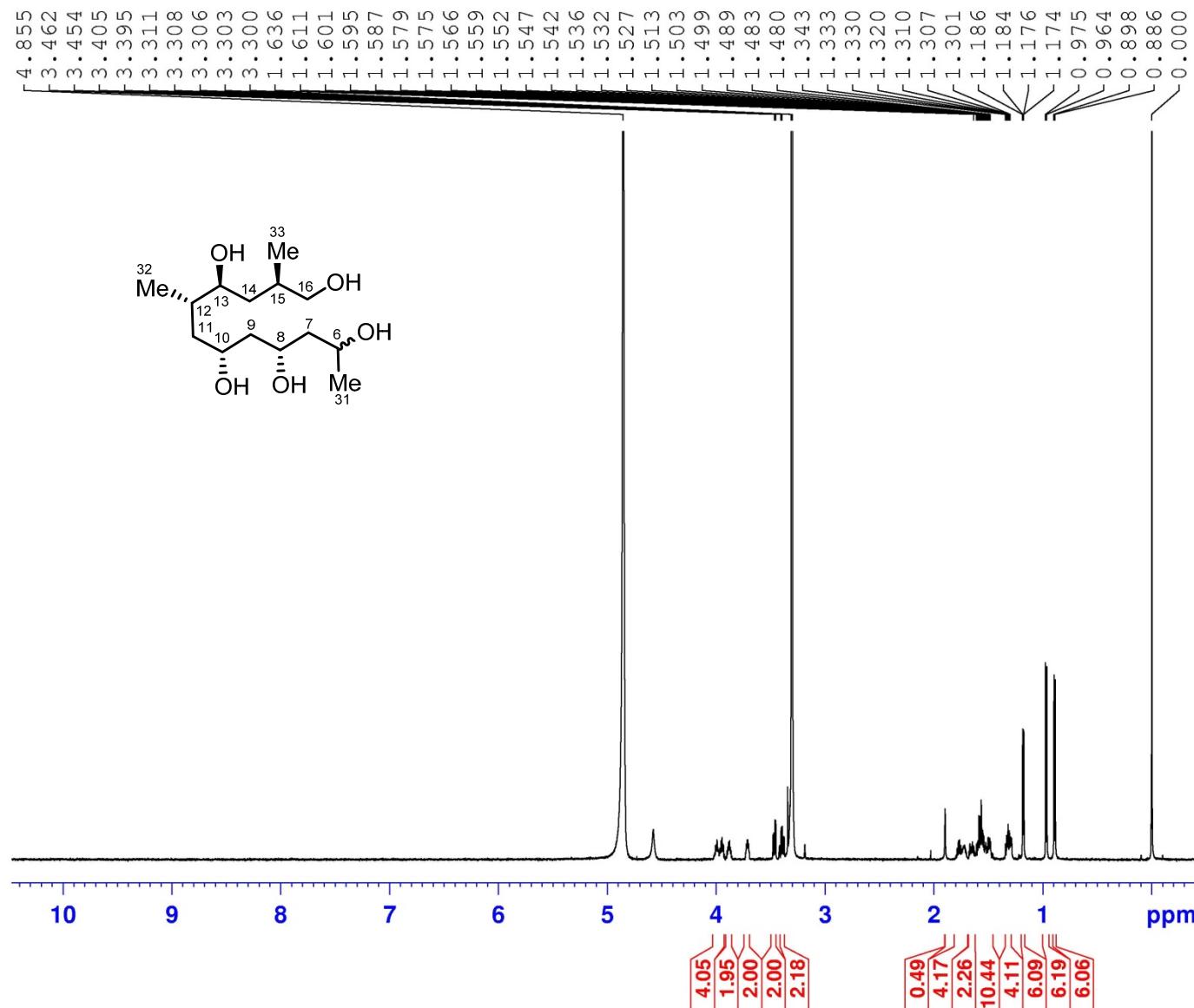
LR-ESIMS for the fragment 1A



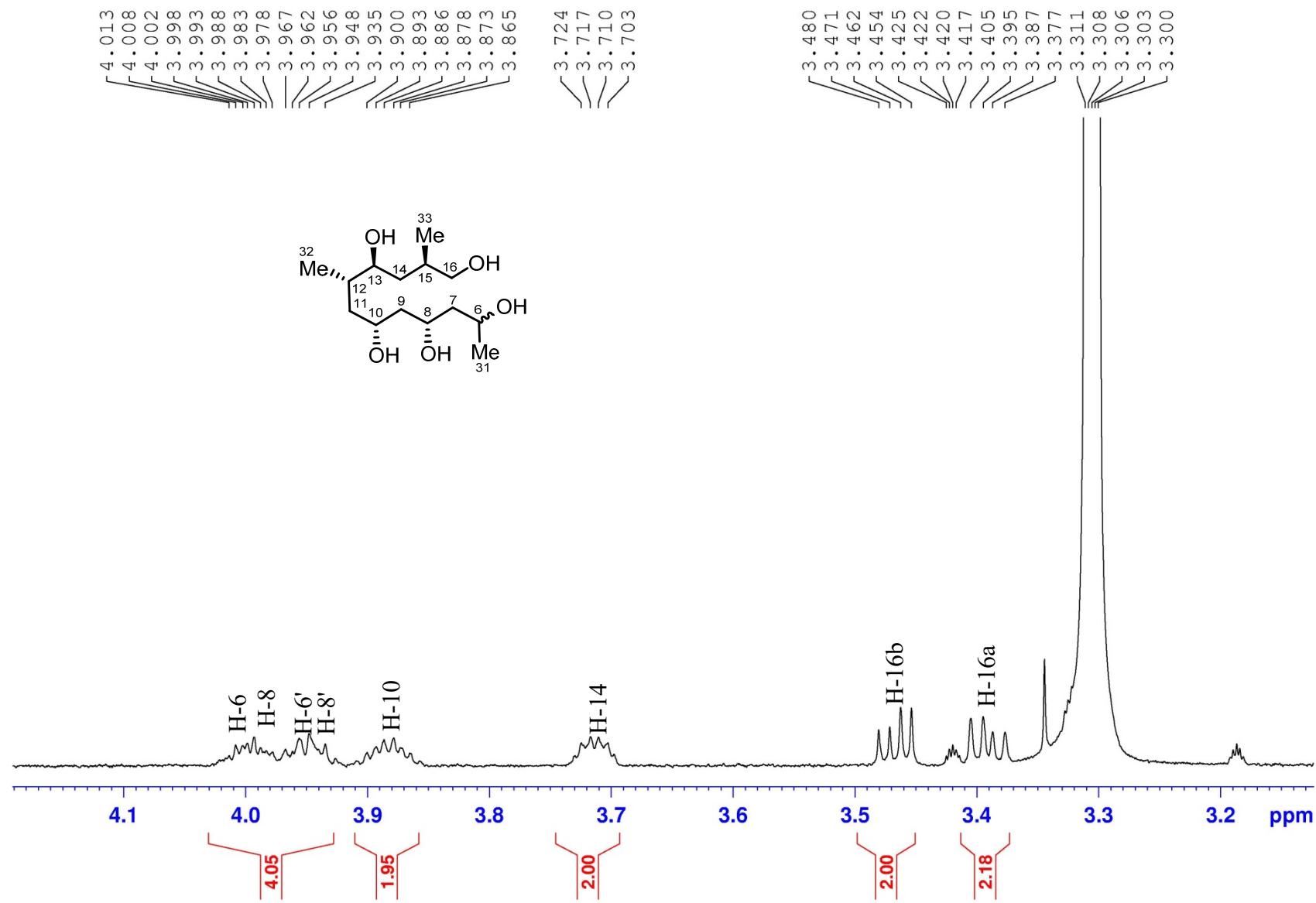
LR-ESIMS for the fragment 1A



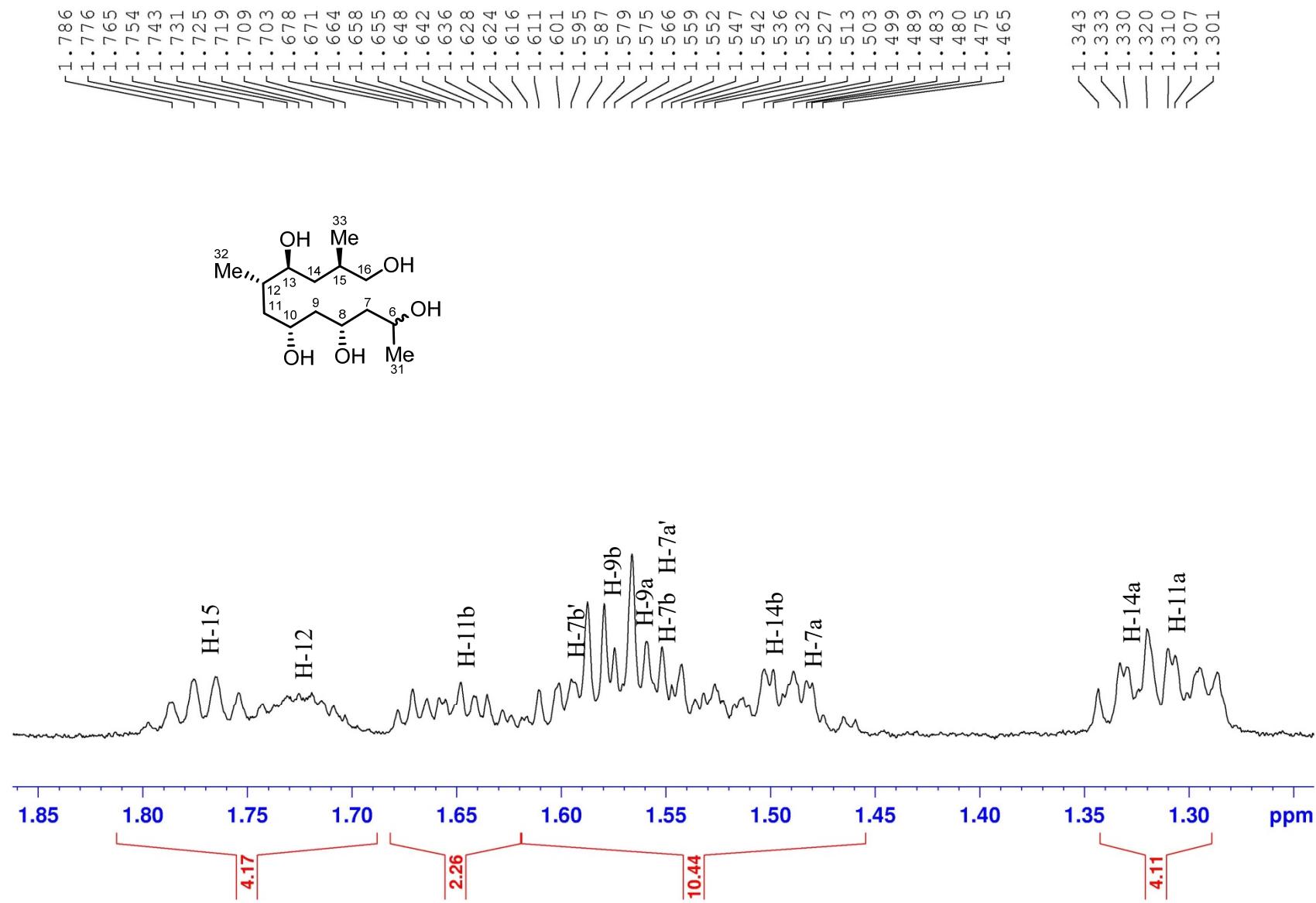
¹H (600 MHz) NMR spectrum of the fragment **1A** in CD₃OD



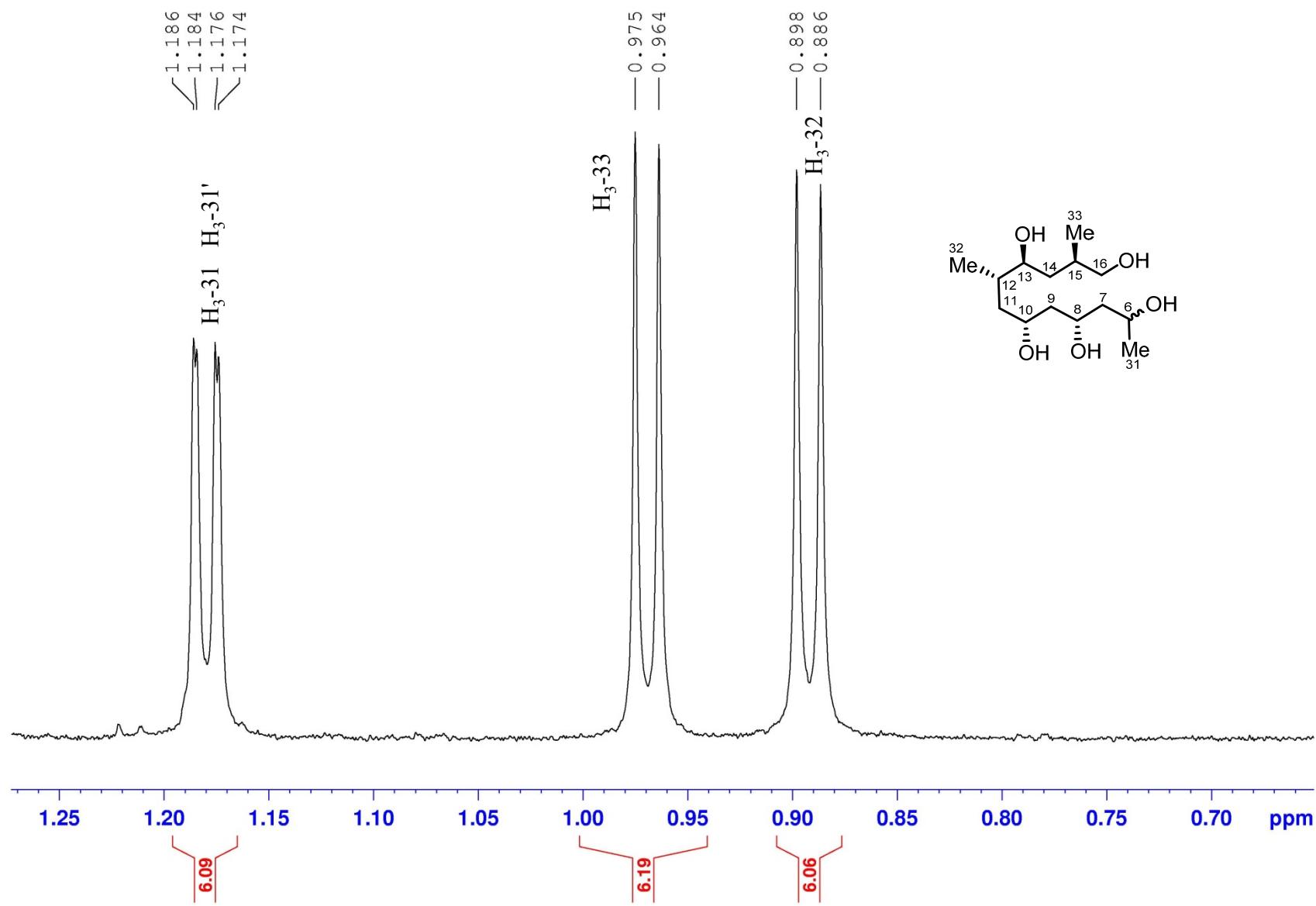
¹H (600 MHz) NMR spectrum of the fragment **1A** in CD₃OD



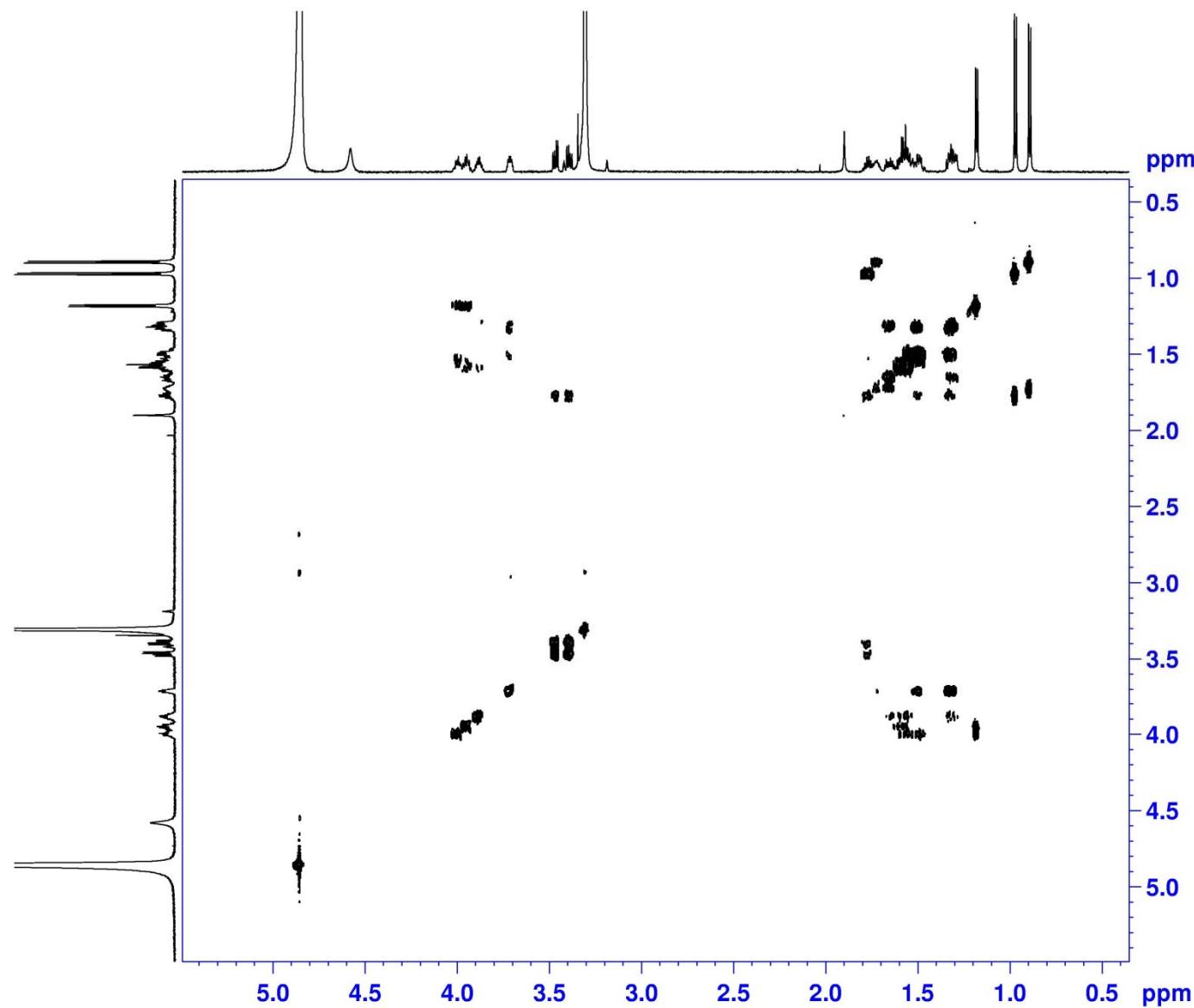
¹H (600 MHz) NMR spectrum of the fragment **1A** in CD₃OD



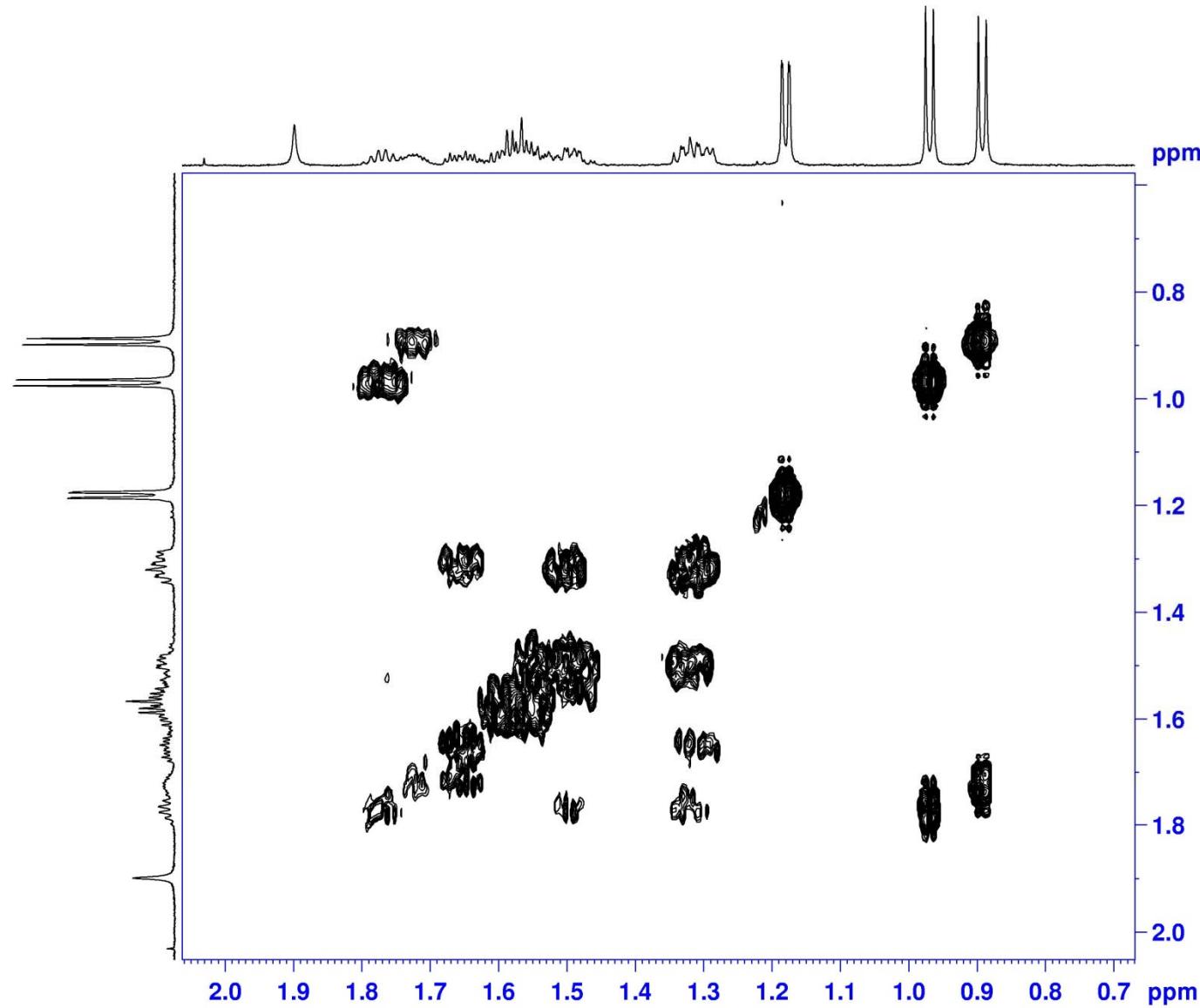
¹H (600 MHz) NMR spectrum of the fragment **1A** in CD₃OD



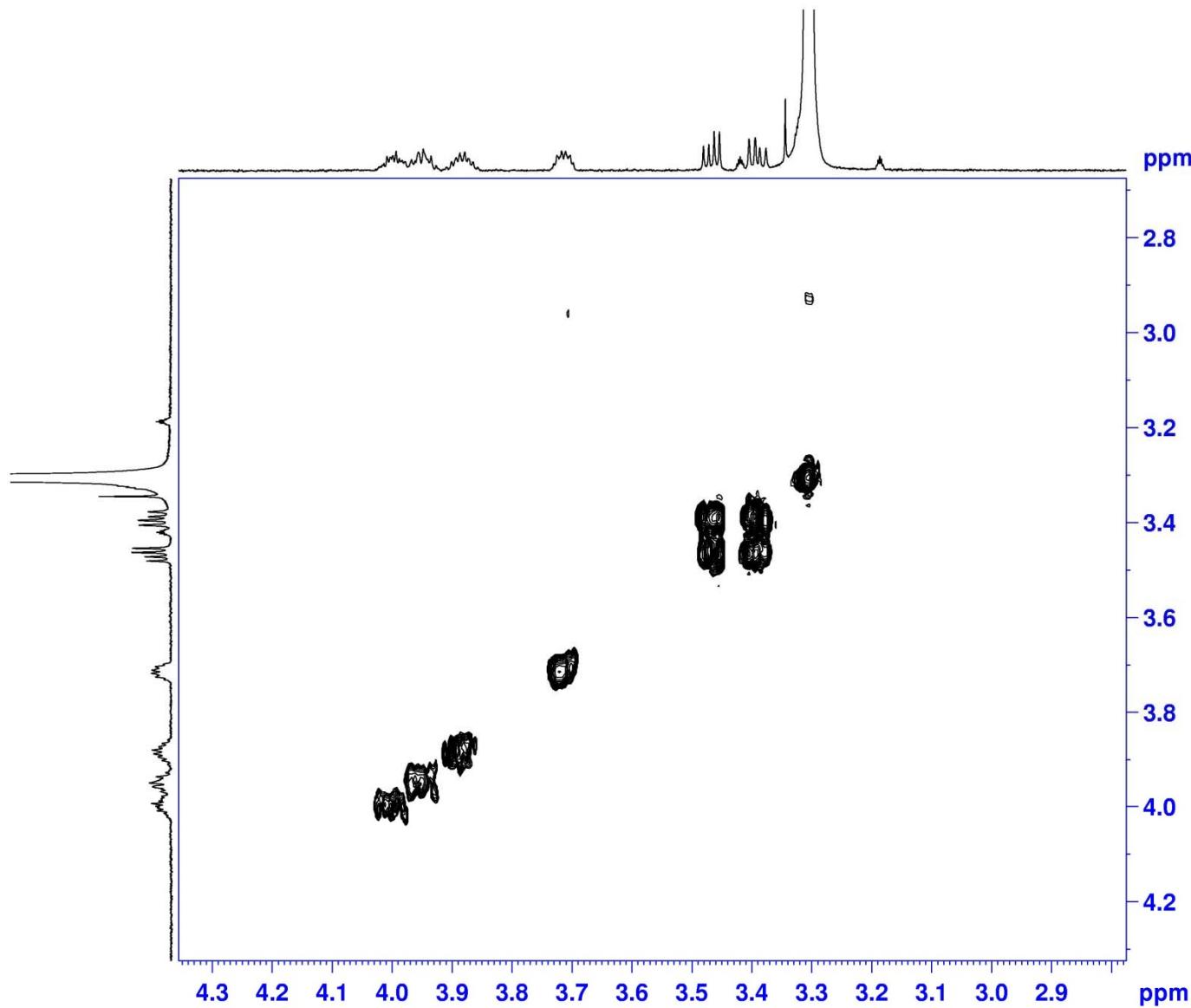
^1H - ^1H COSY (600 MHz) spectrum of the fragment **1A** in CD_3OD



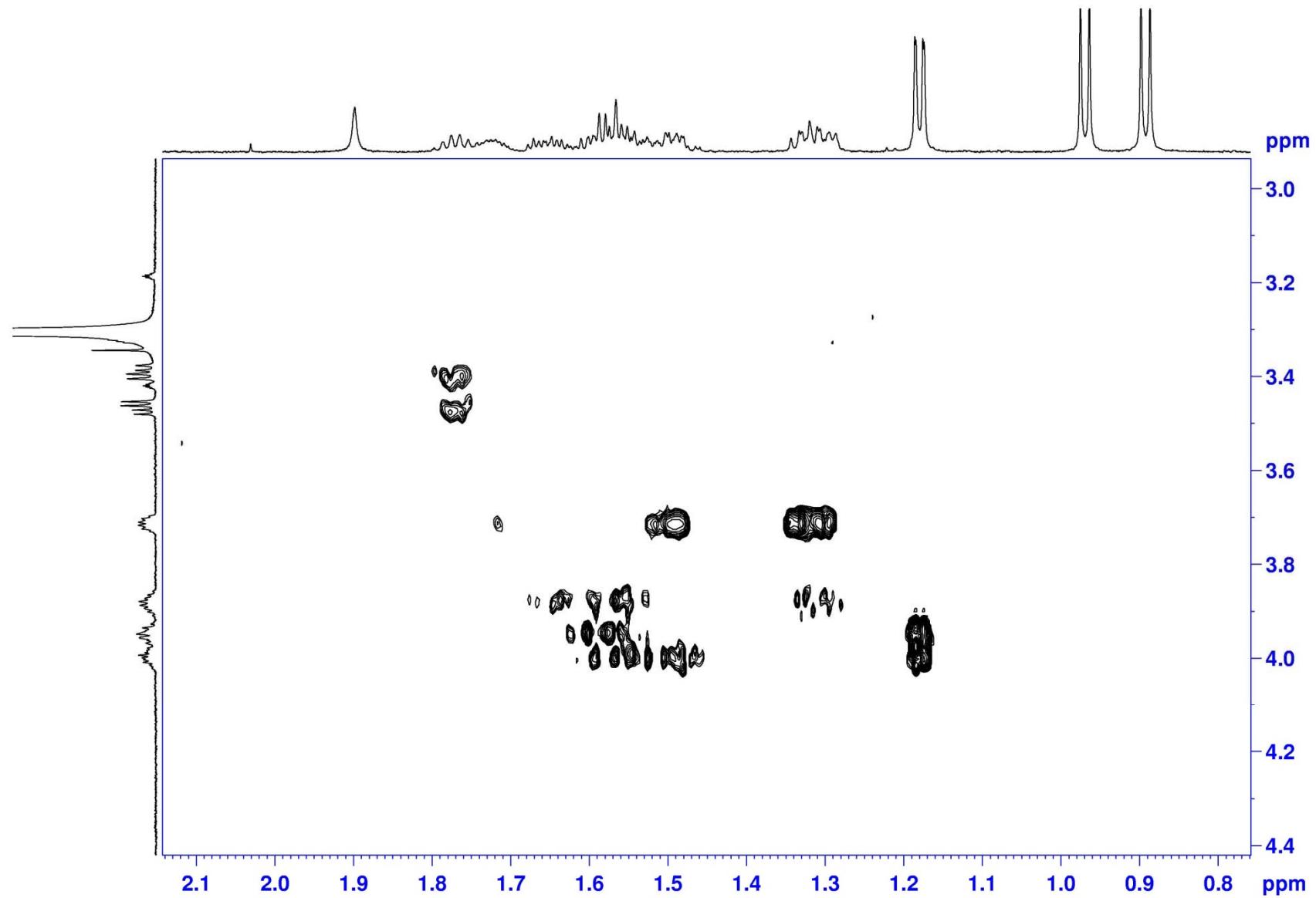
^1H - ^1H COSY (600 MHz) spectrum of the fragment **1A** in CD_3OD



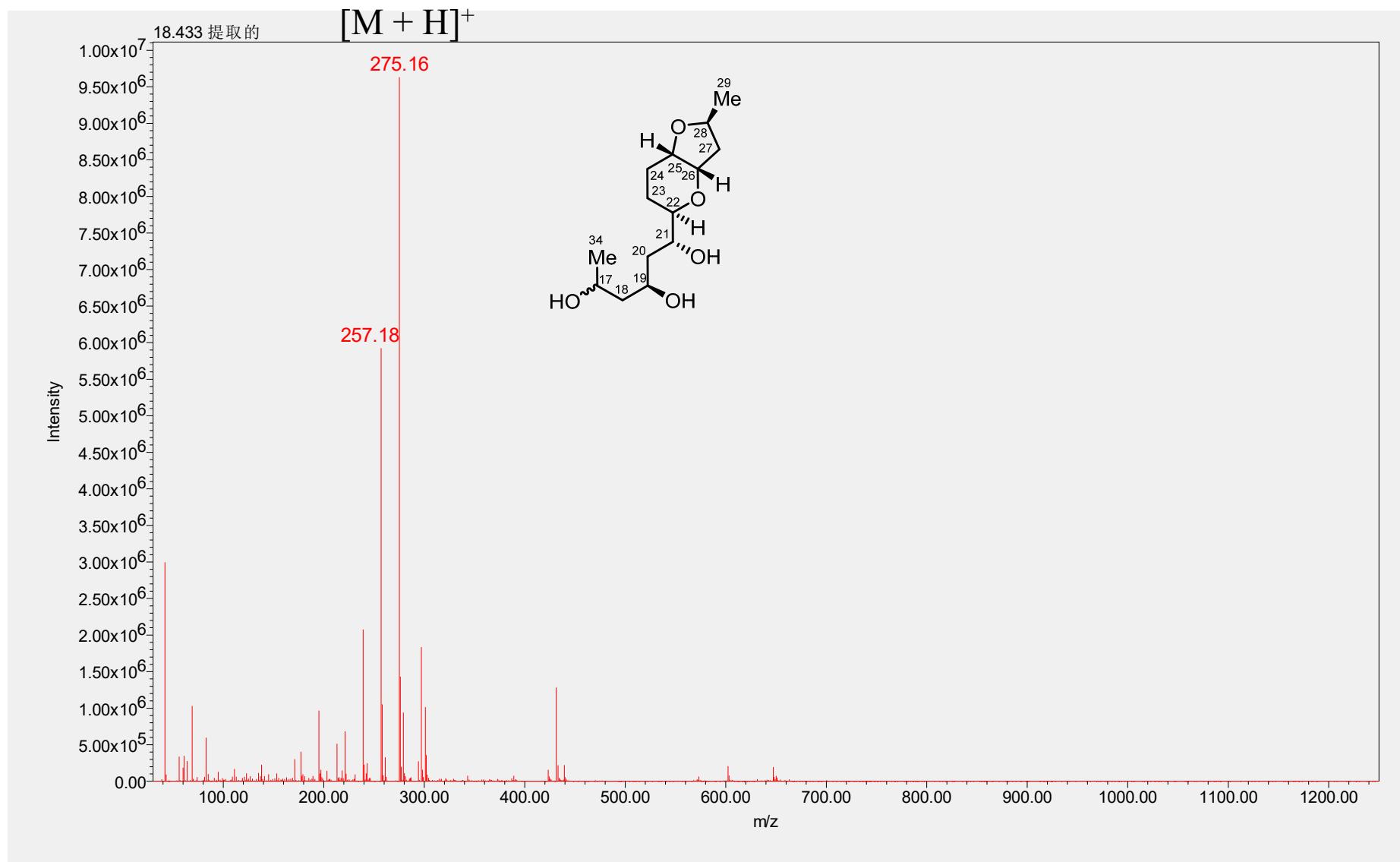
^1H - ^1H COSY (600 MHz) spectrum of the fragment **1A** in CD_3OD



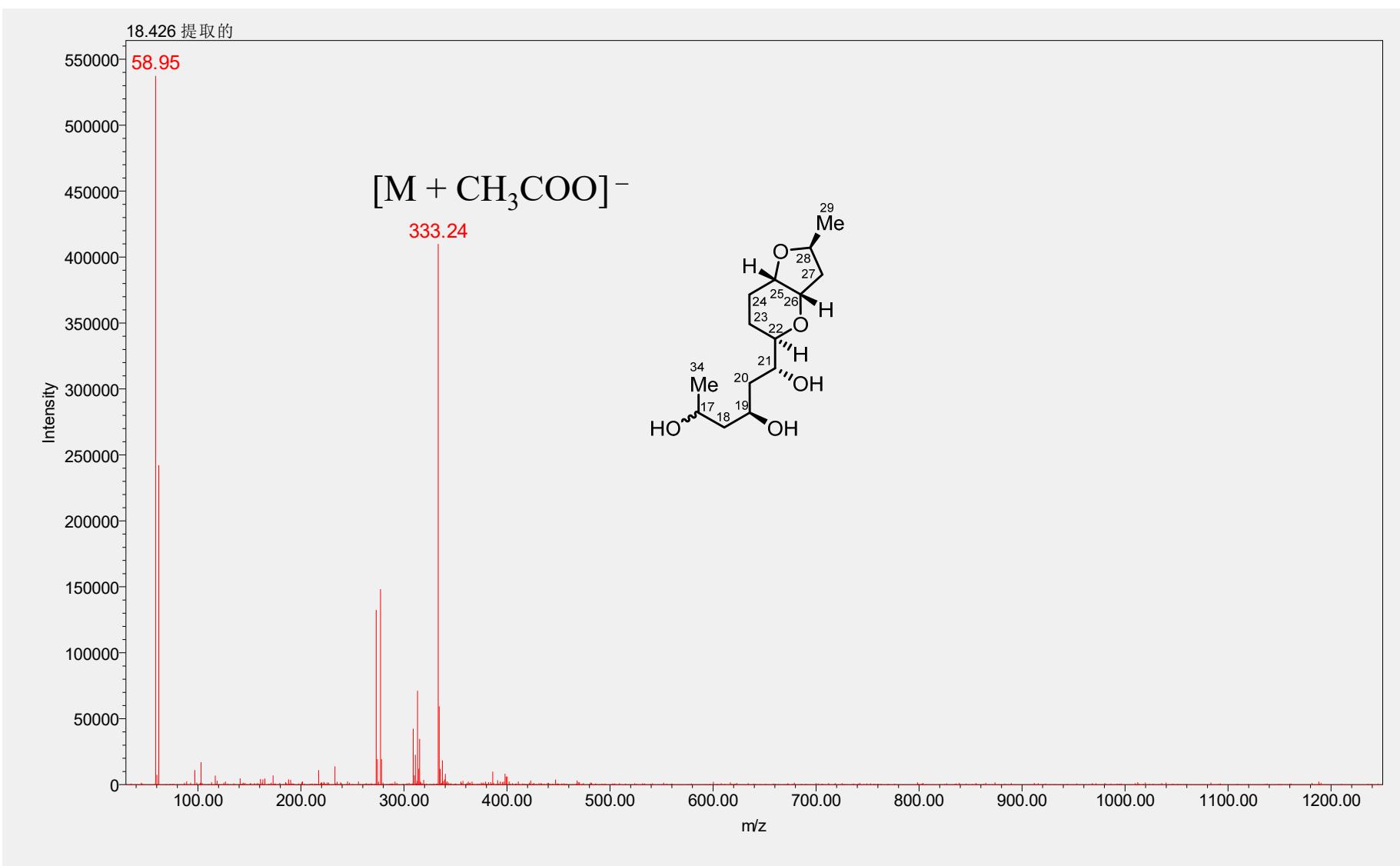
^1H - ^1H COSY (600 MHz) spectrum of the fragment **1A** in CD_3OD



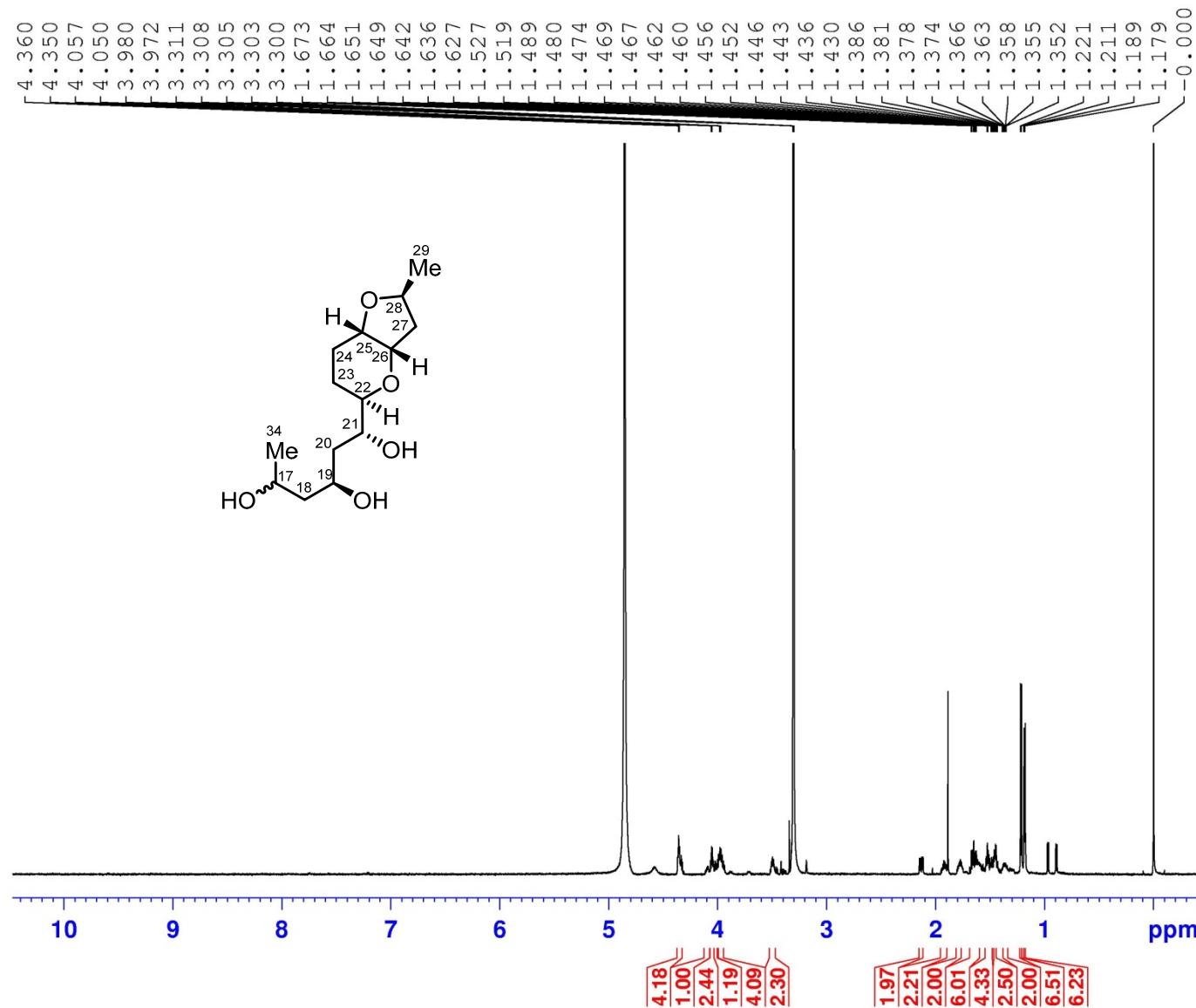
LR-ESIMS for the fragment **1B**



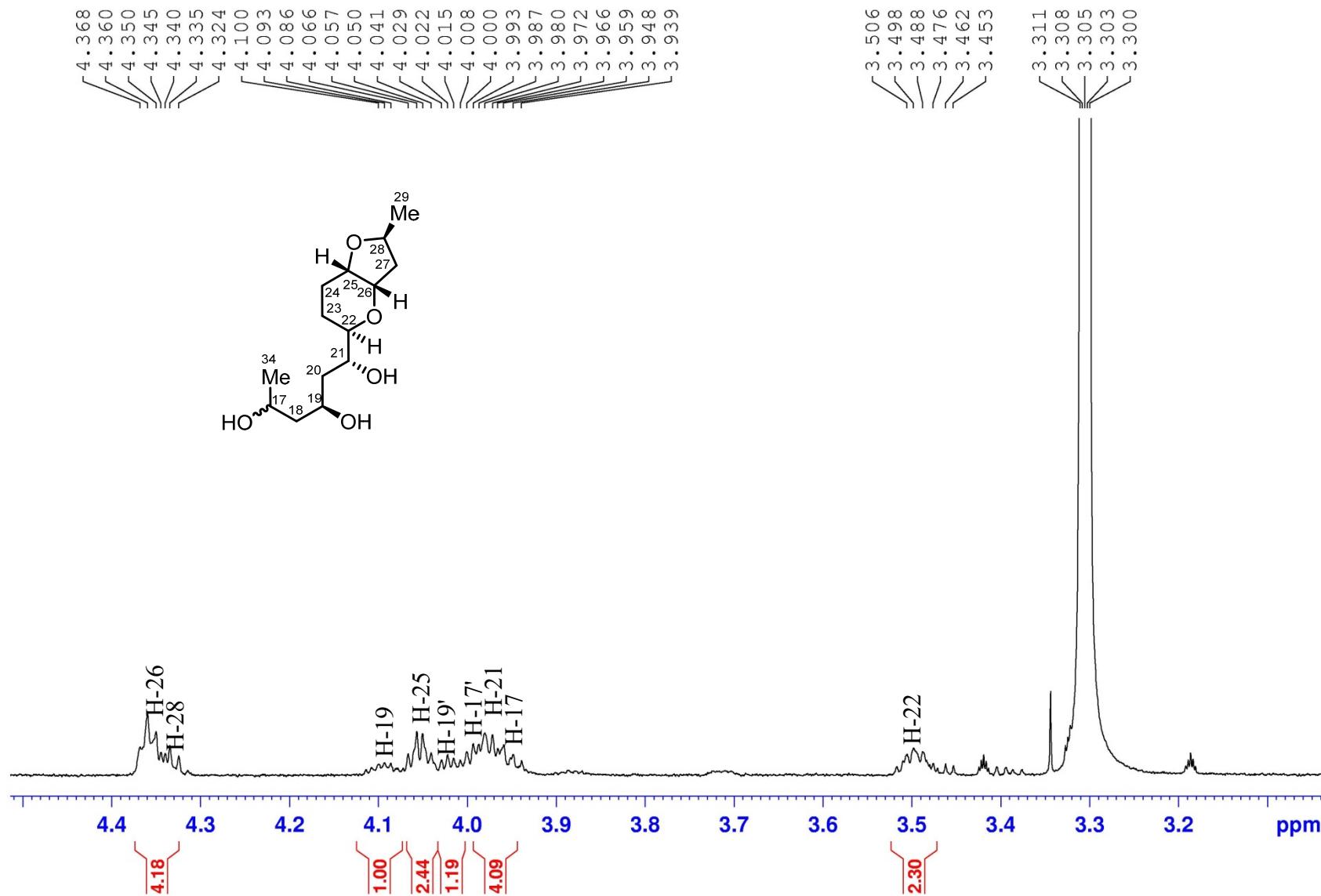
LR-ESIMS for the fragment **1B**



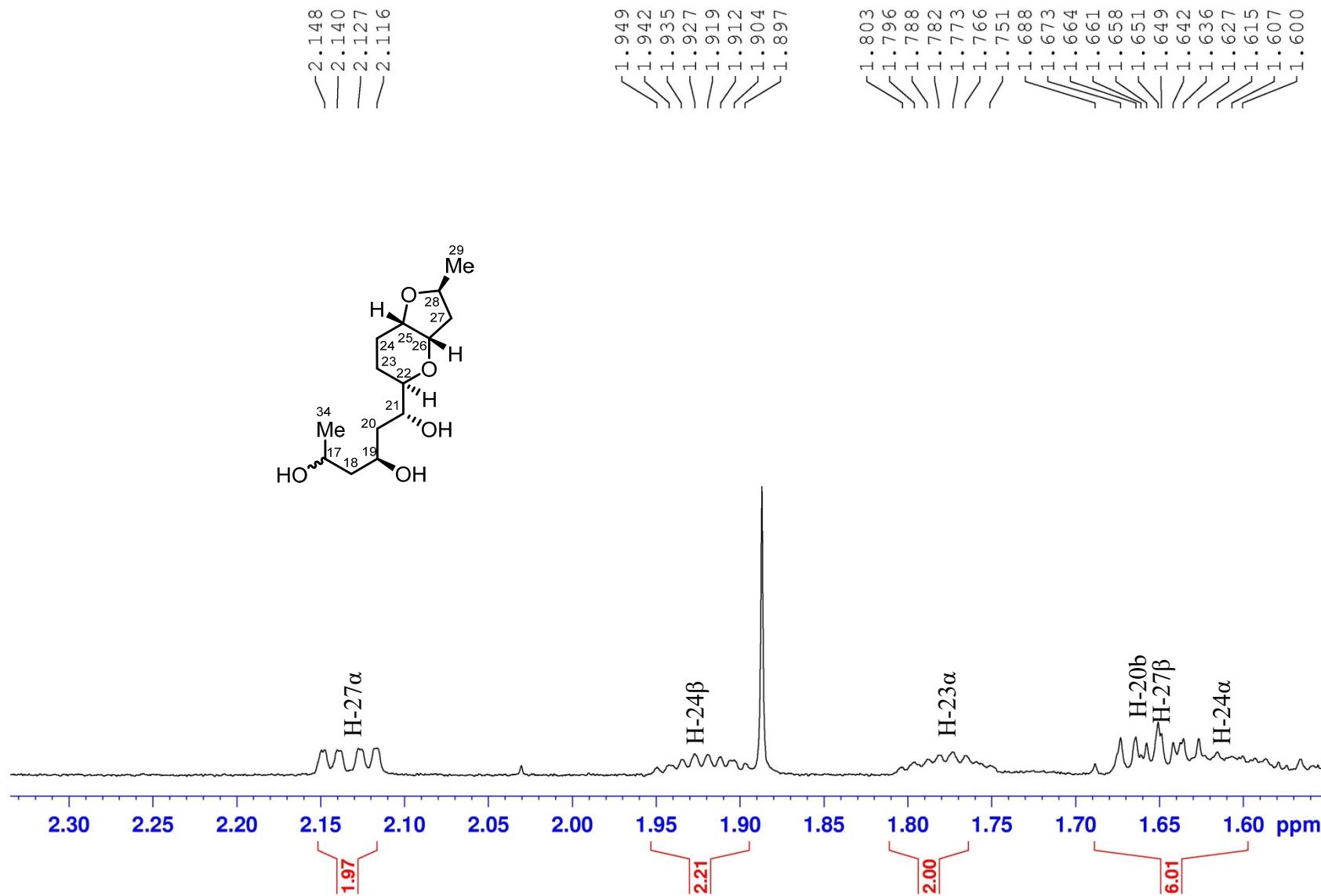
¹H (600 MHz) NMR spectrum of the fragment **1B** in CD₃OD



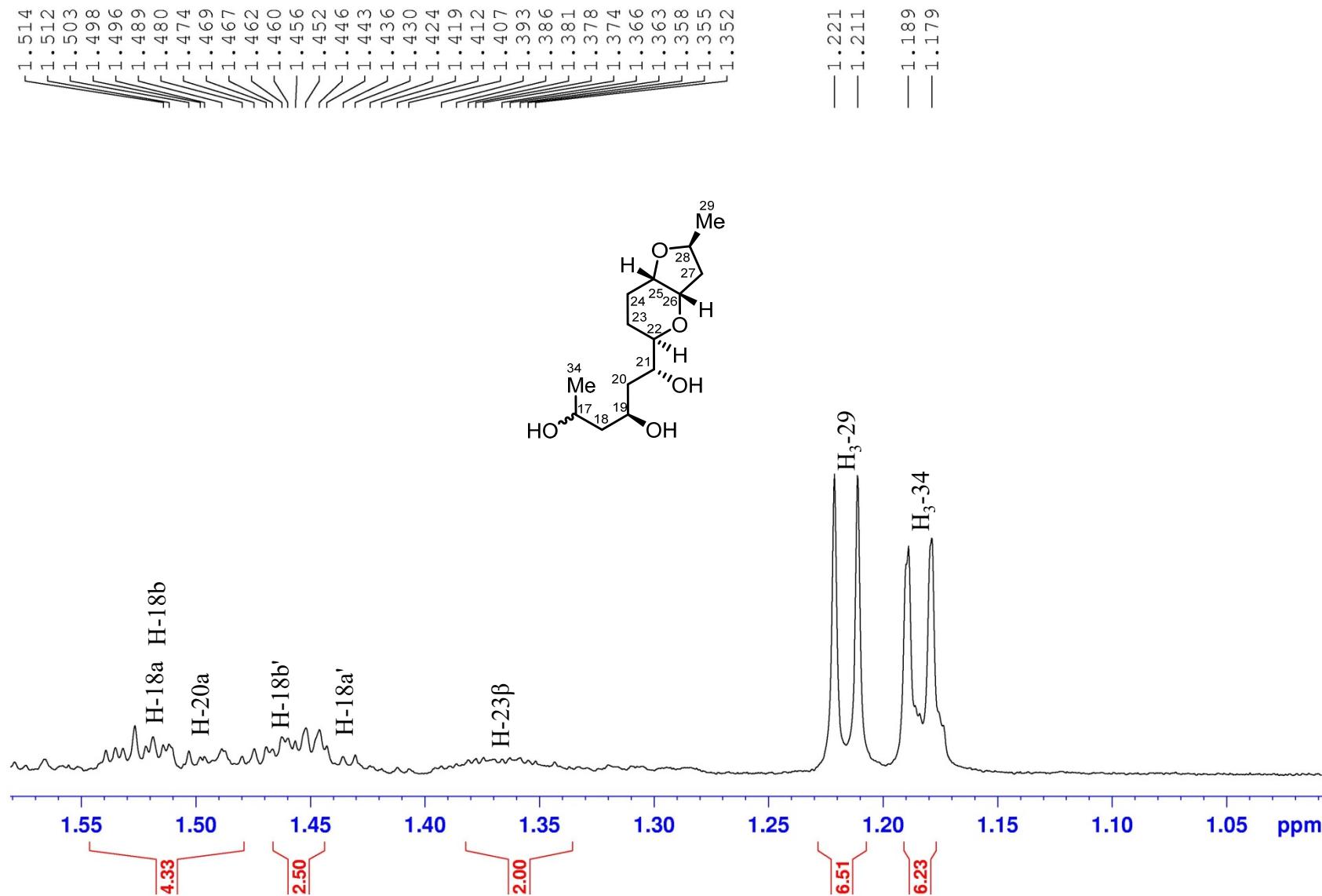
¹H (600 MHz) NMR spectrum of the fragment **1B** in CD₃OD



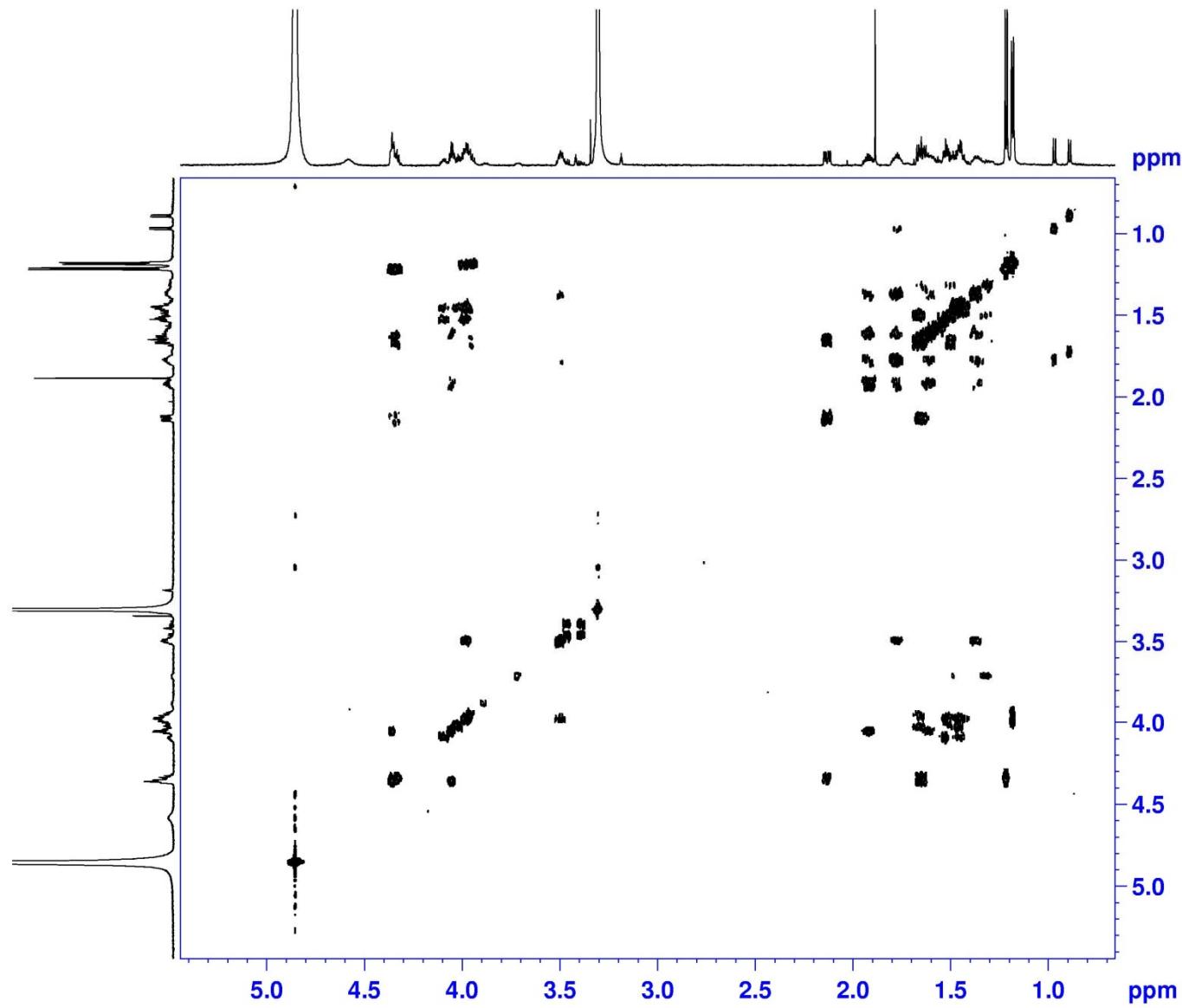
¹H (600 MHz) NMR spectrum of the fragment **1B** in CD₃OD



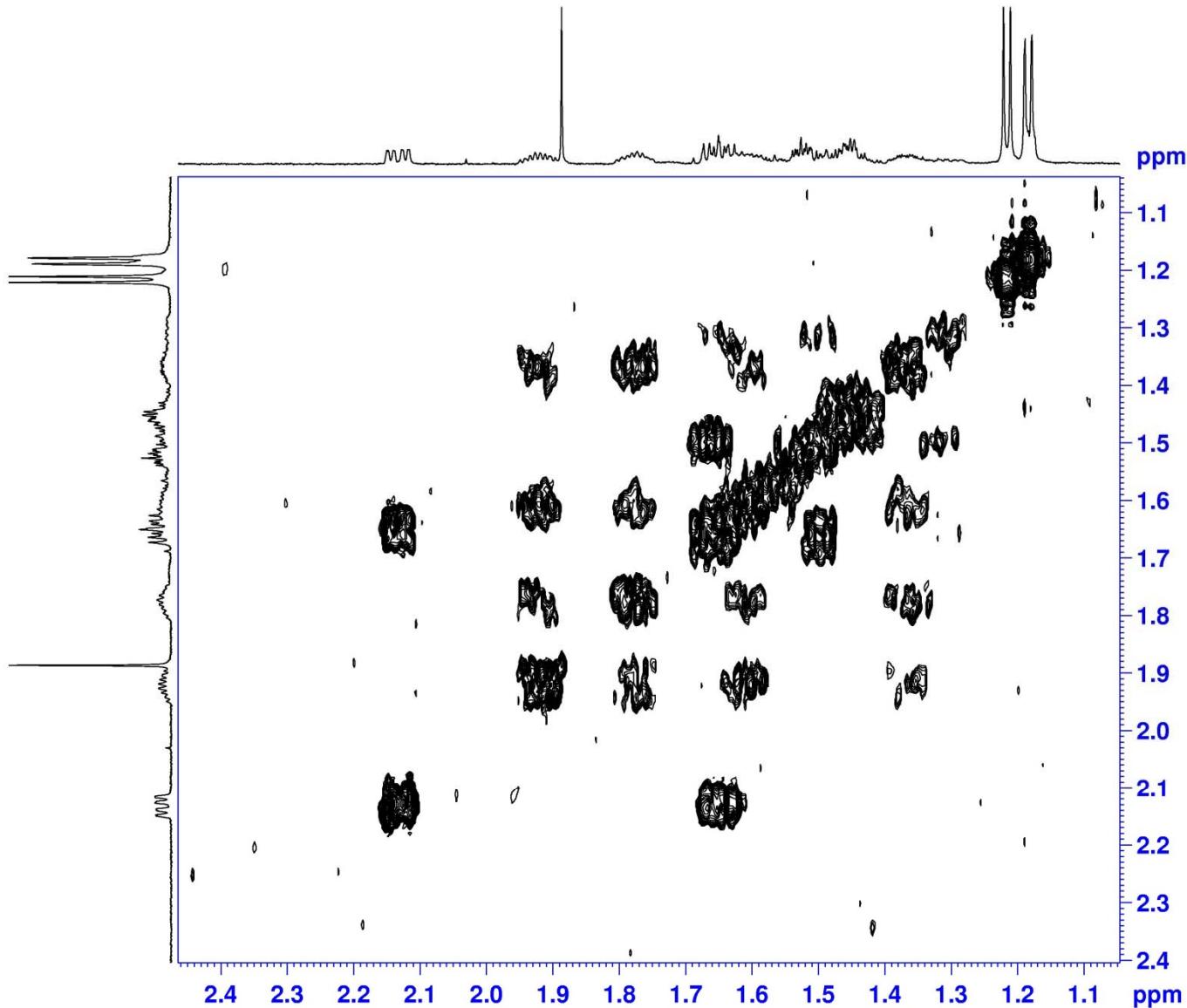
¹H (600 MHz) NMR spectrum of the fragment **1B** in CD₃OD



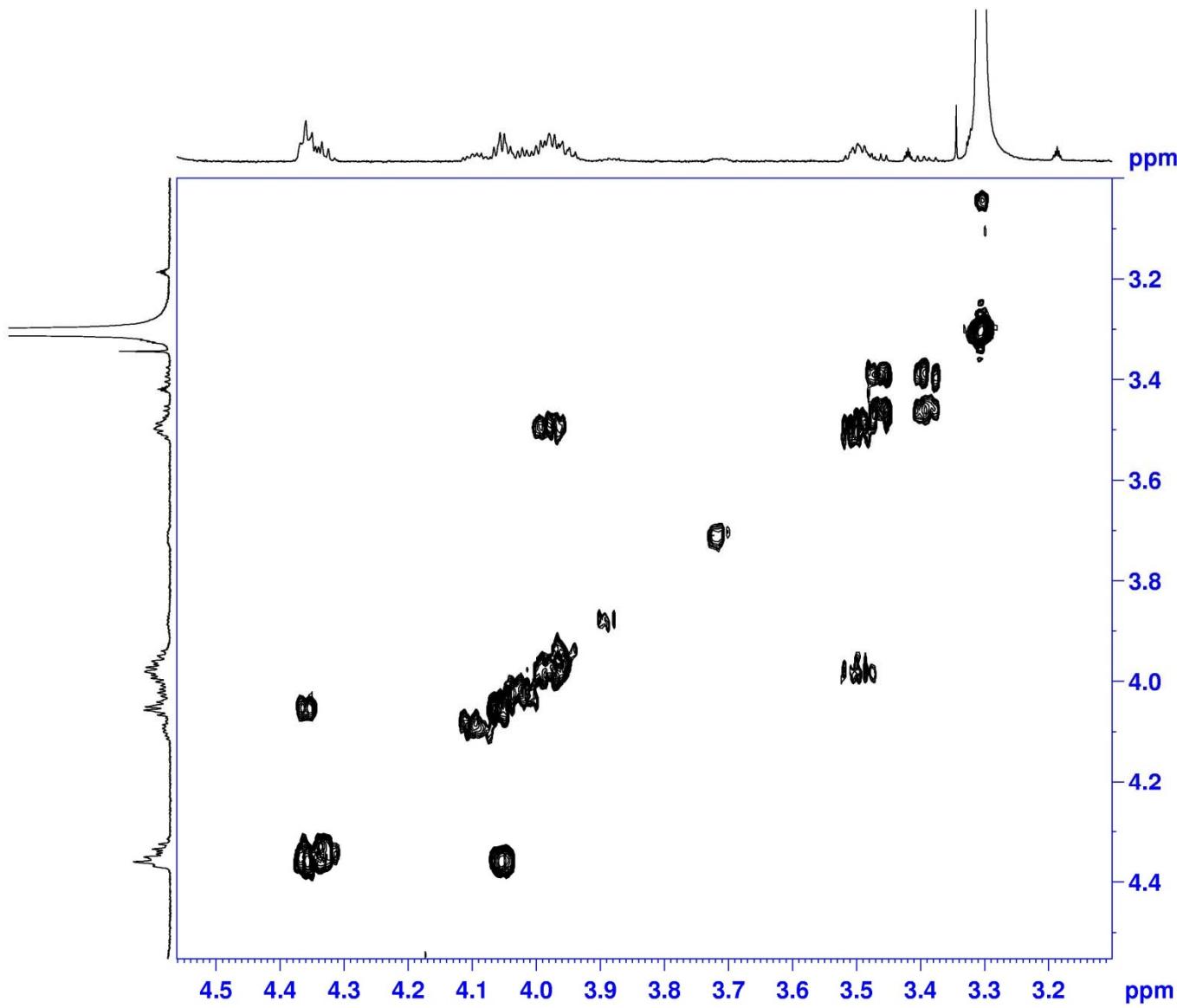
^1H - ^1H COSY (600 MHz) spectrum of the fragment **1B** in CD_3OD



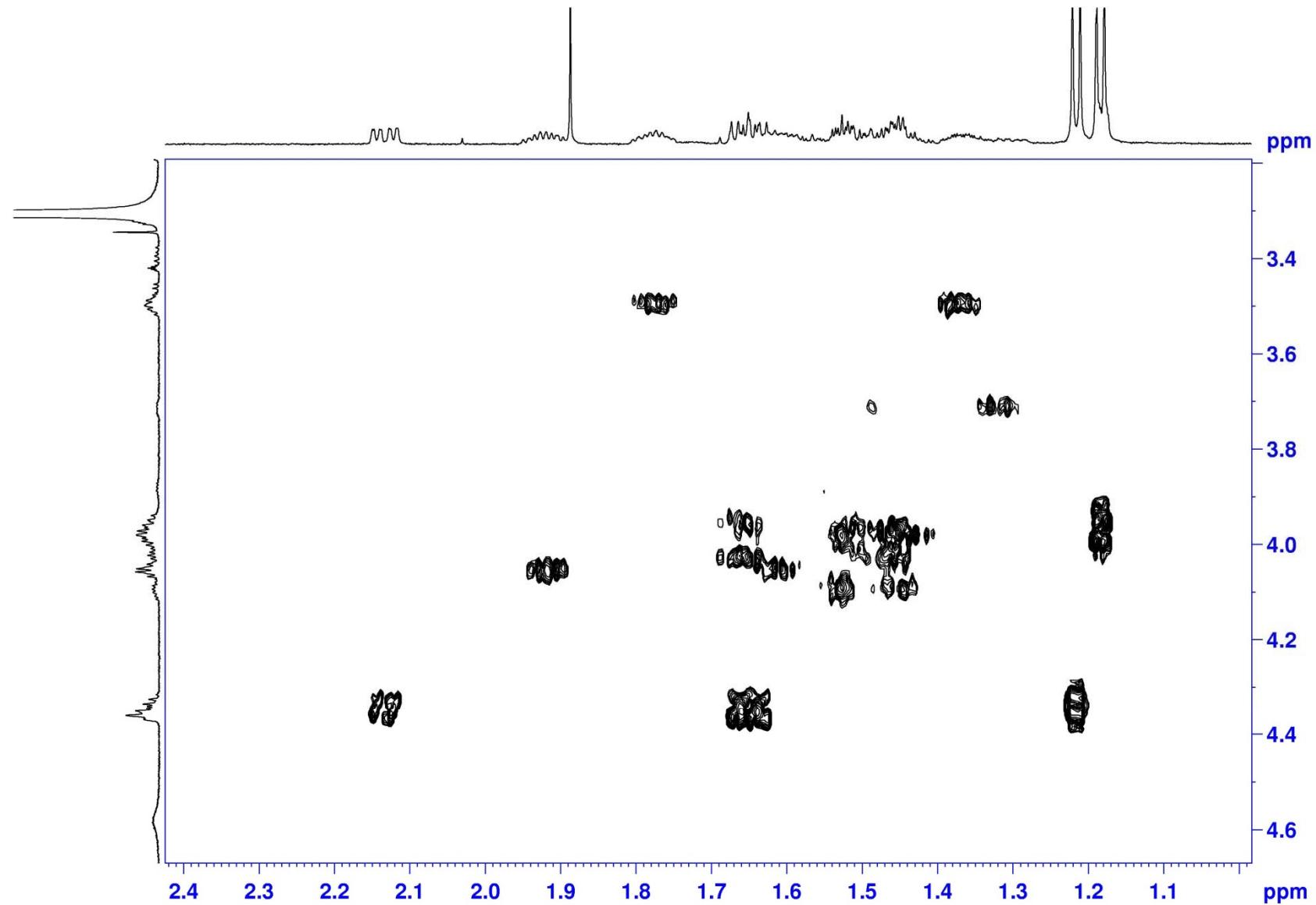
^1H - ^1H COSY (600 MHz) spectrum of the fragment **1B** in CD_3OD



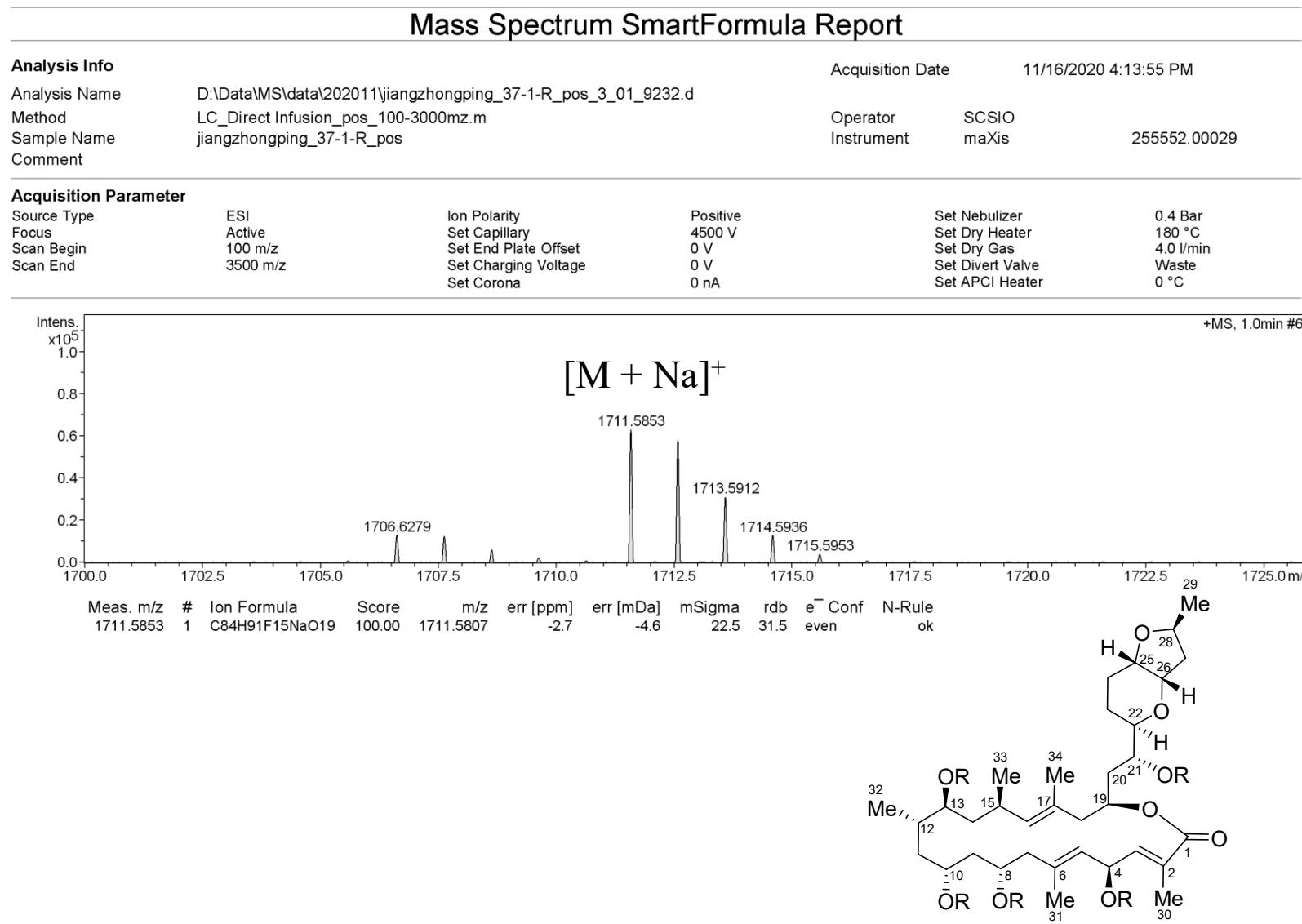
^1H - ^1H COSY (600 MHz) spectrum of the fragment **1B** in CD_3OD



^1H - ^1H COSY (600 MHz) spectrum of the fragment **1B** in CD_3OD



HR-ESIMS for compound 1s



HR-ESIMS for compound **1s**

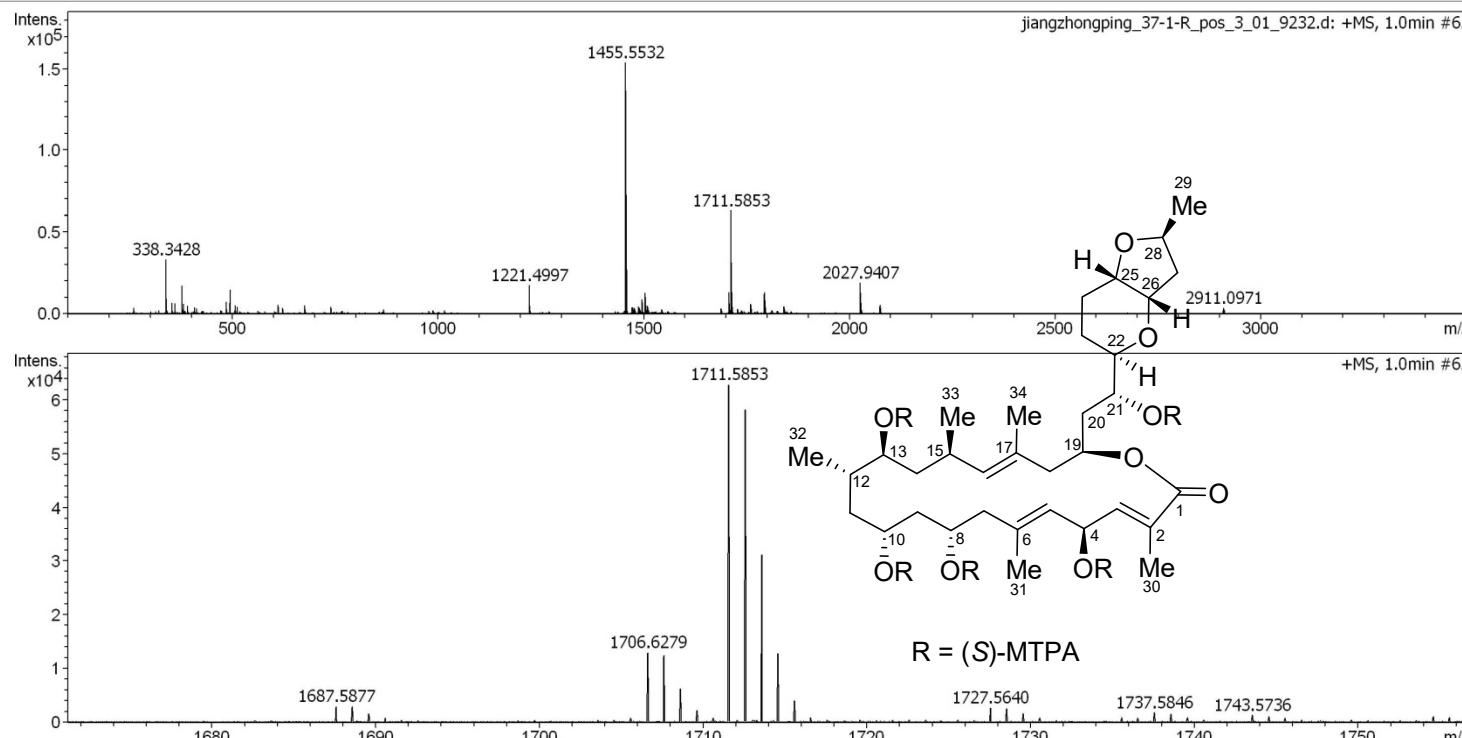
Generic Display Report

Analysis Info

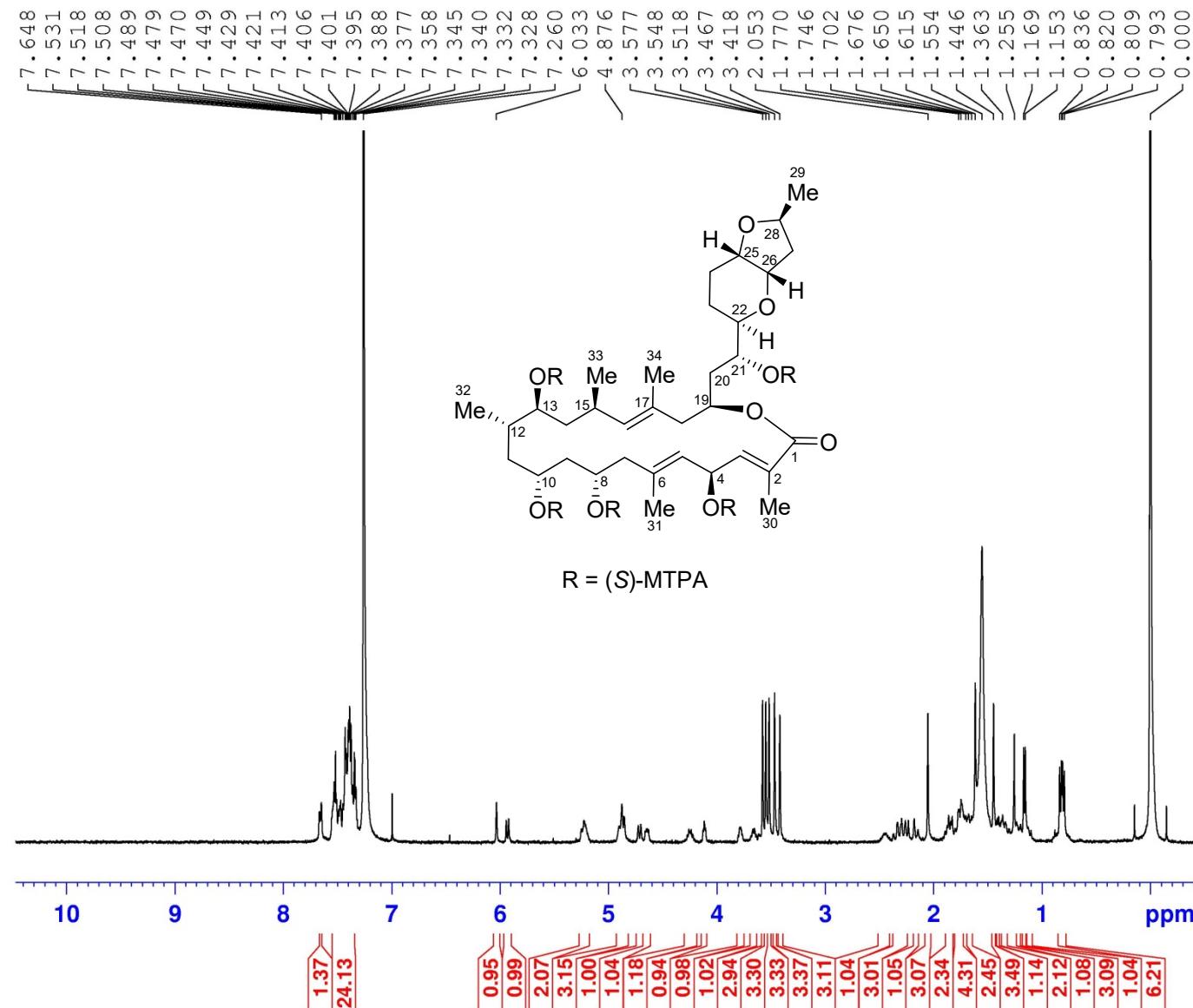
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Comment

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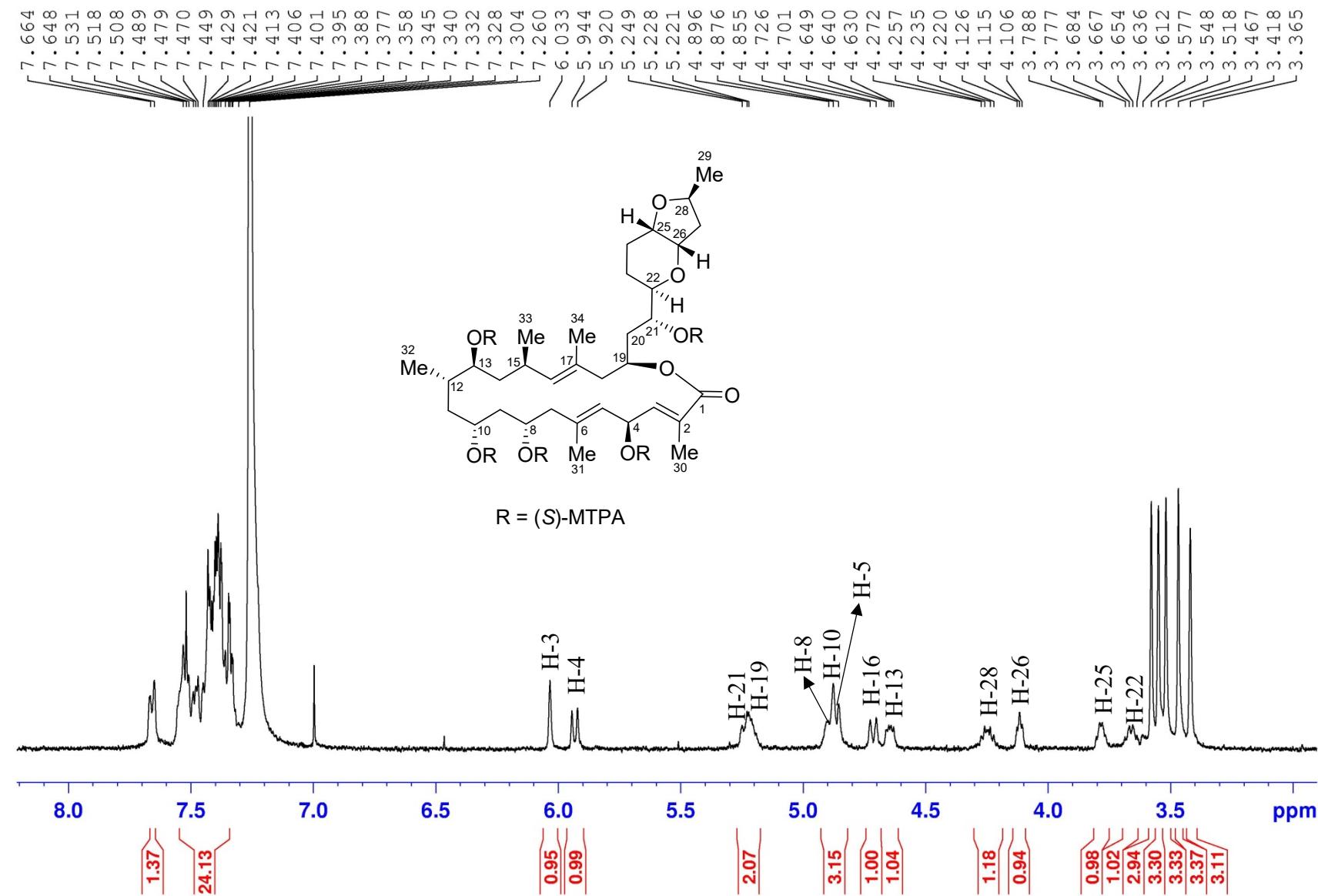
Operator SCSIO
Instrument maXis



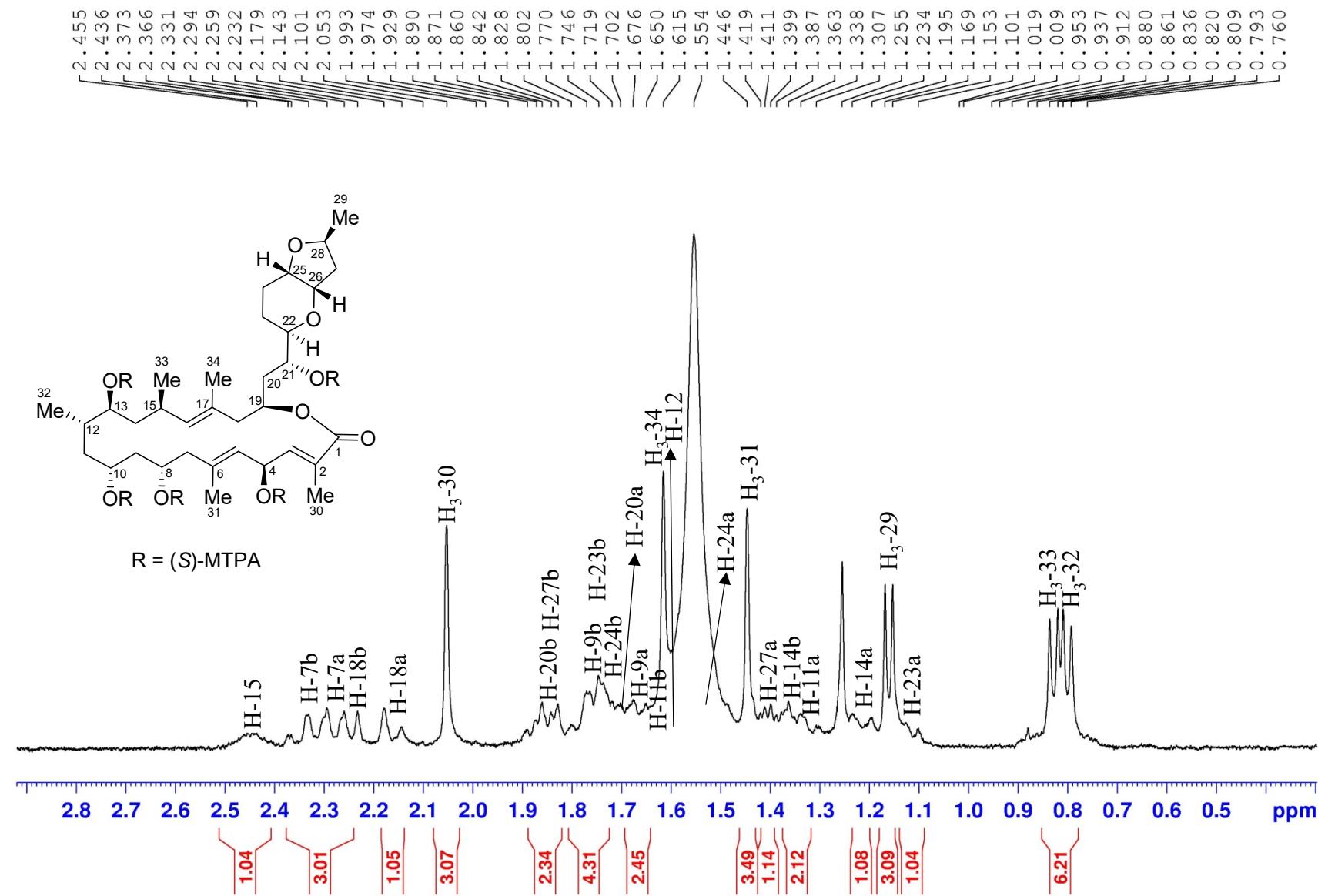
¹H (400 MHz) NMR spectrum of compound **1s** in CDCl₃



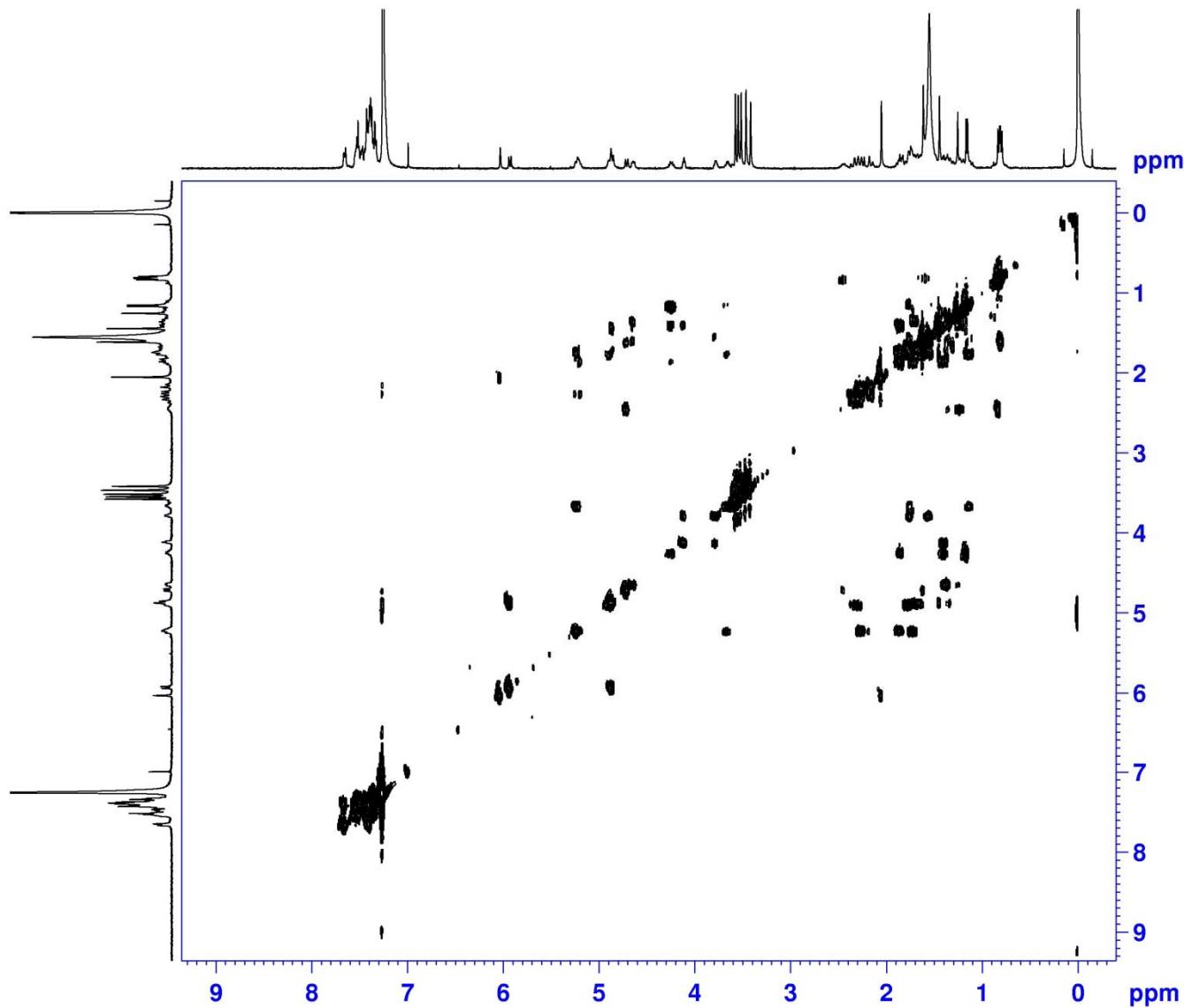
¹H (400 MHz) NMR spectrum of compound **1s** in CDCl₃



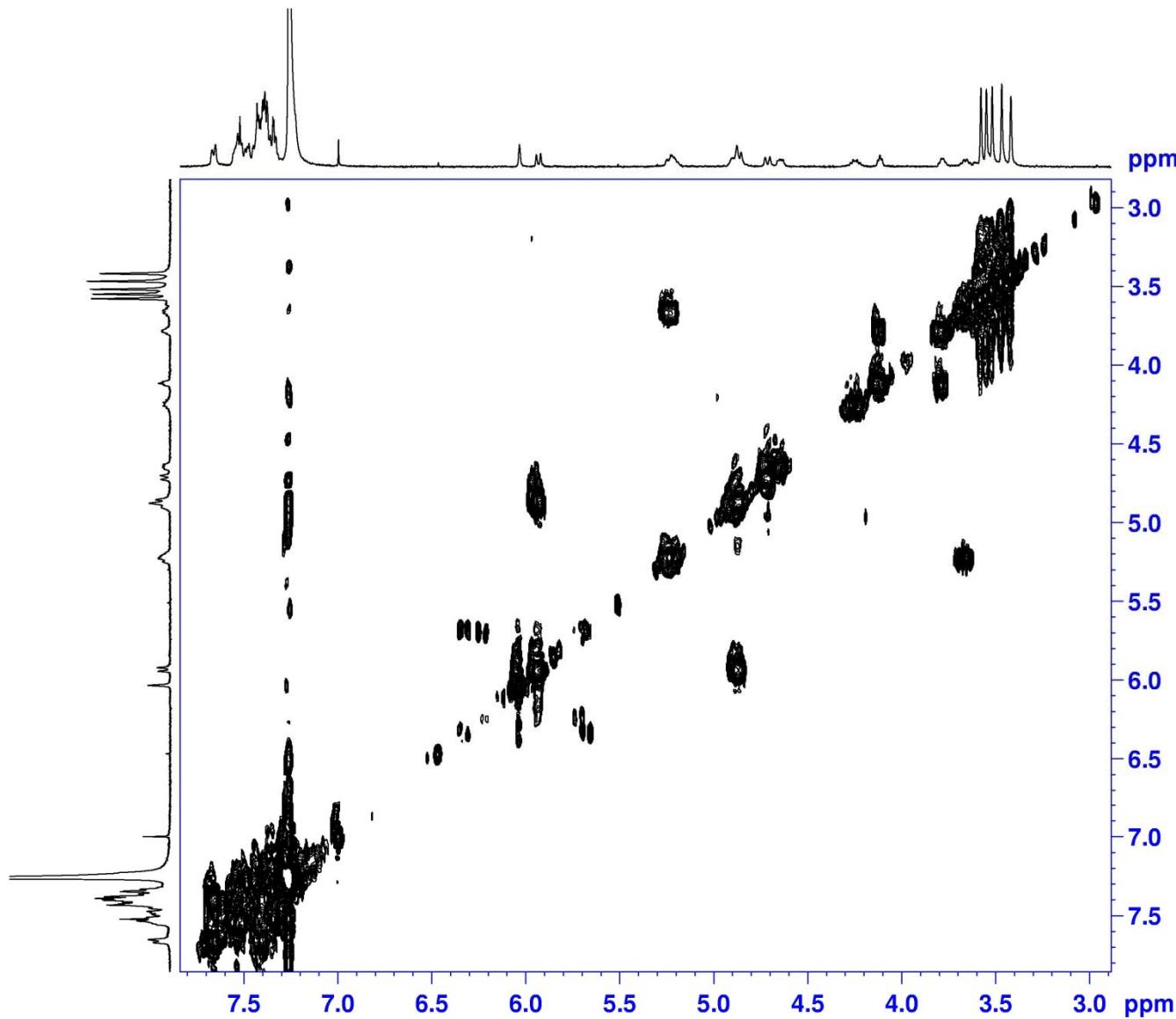
¹H (400 MHz) NMR spectrum of compound **1s** in CDCl₃



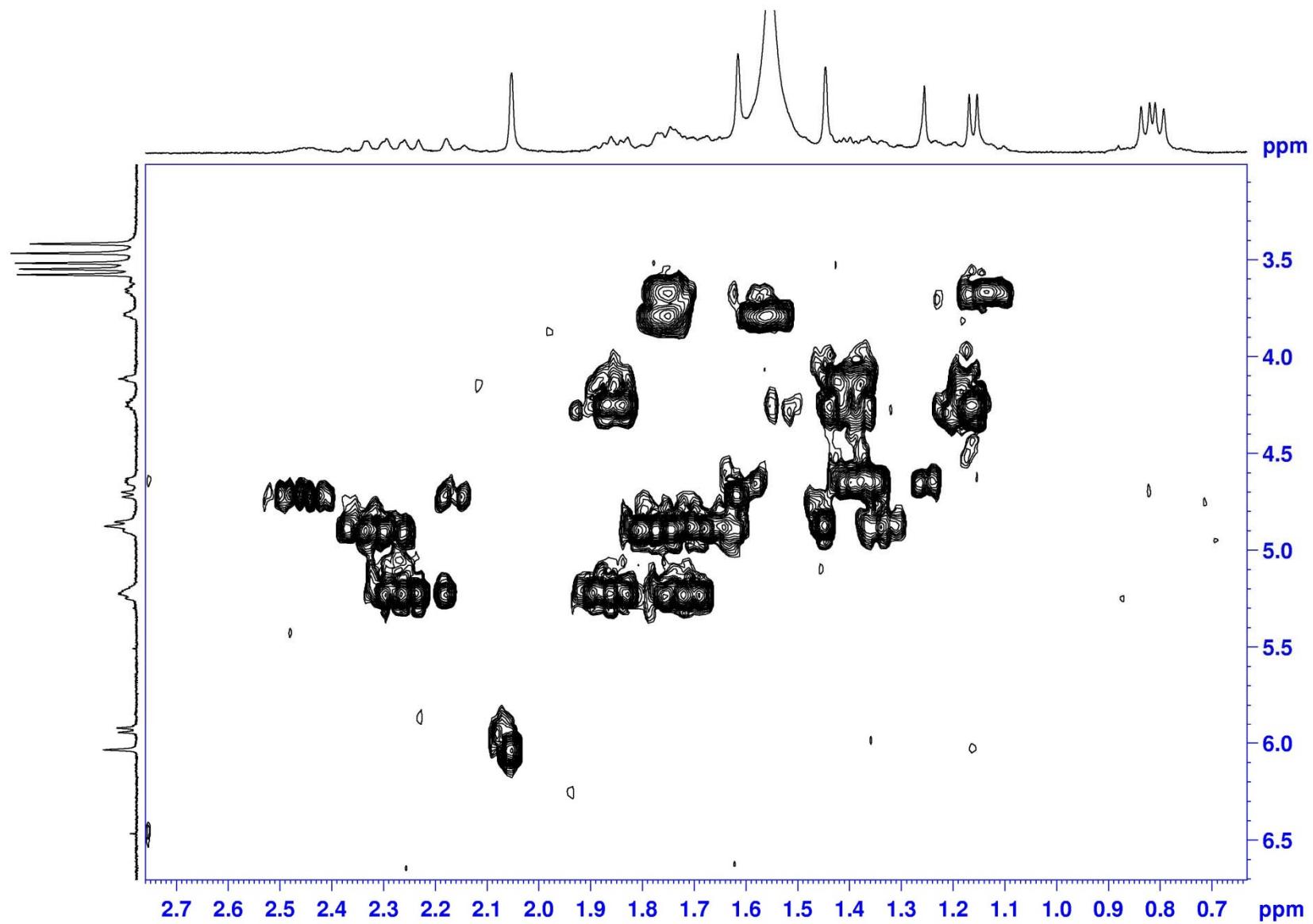
^1H - ^1H COSY (400 MHz) spectrum of compound **1s** in CDCl_3



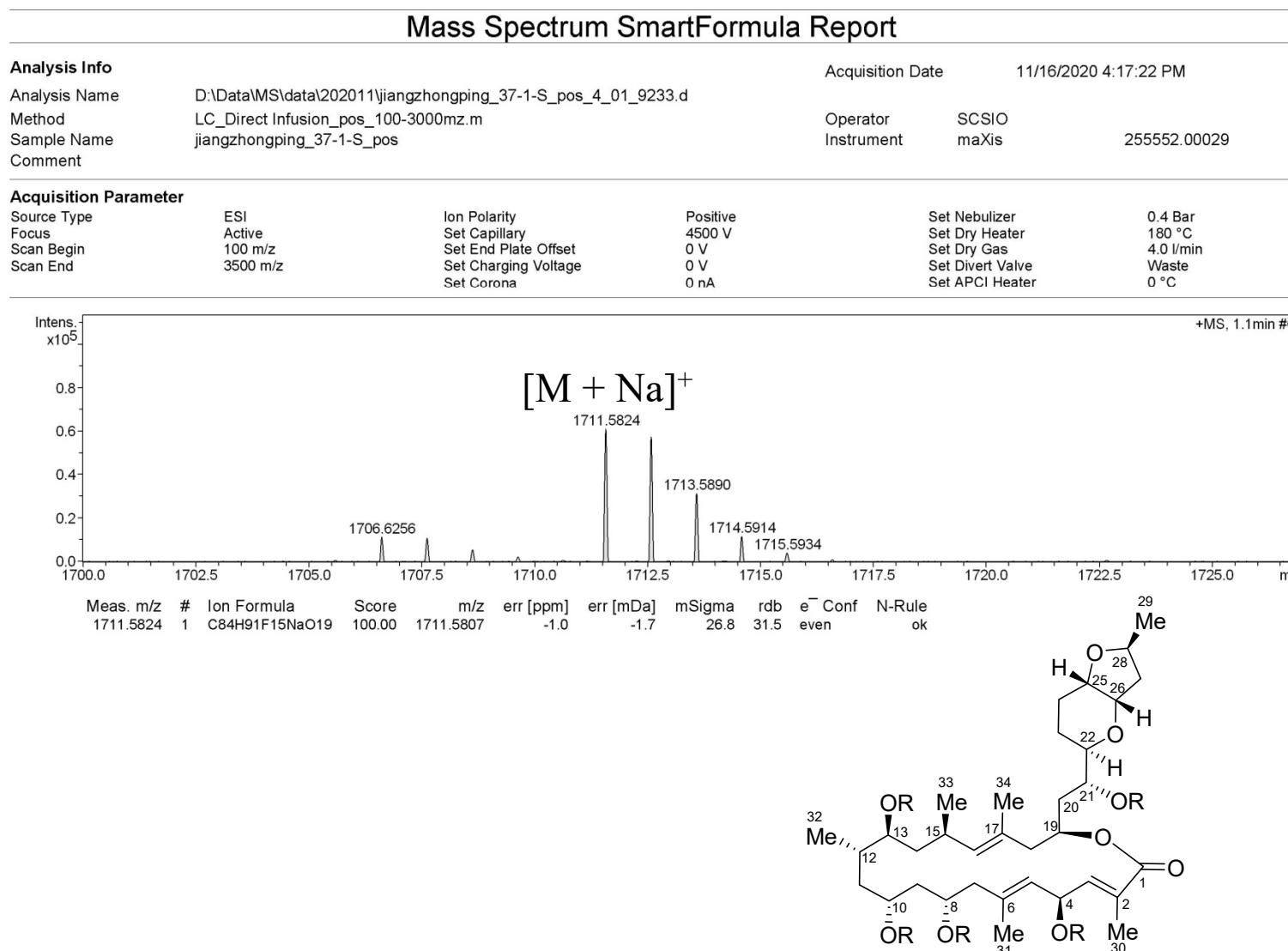
^1H - ^1H COSY (400 MHz) spectrum of compound **1s** in CDCl_3



^1H - ^1H COSY (400 MHz) spectrum of compound **1s** in CDCl_3



HR-ESIMS for compound 1r



R = (R)-MTPA

S78

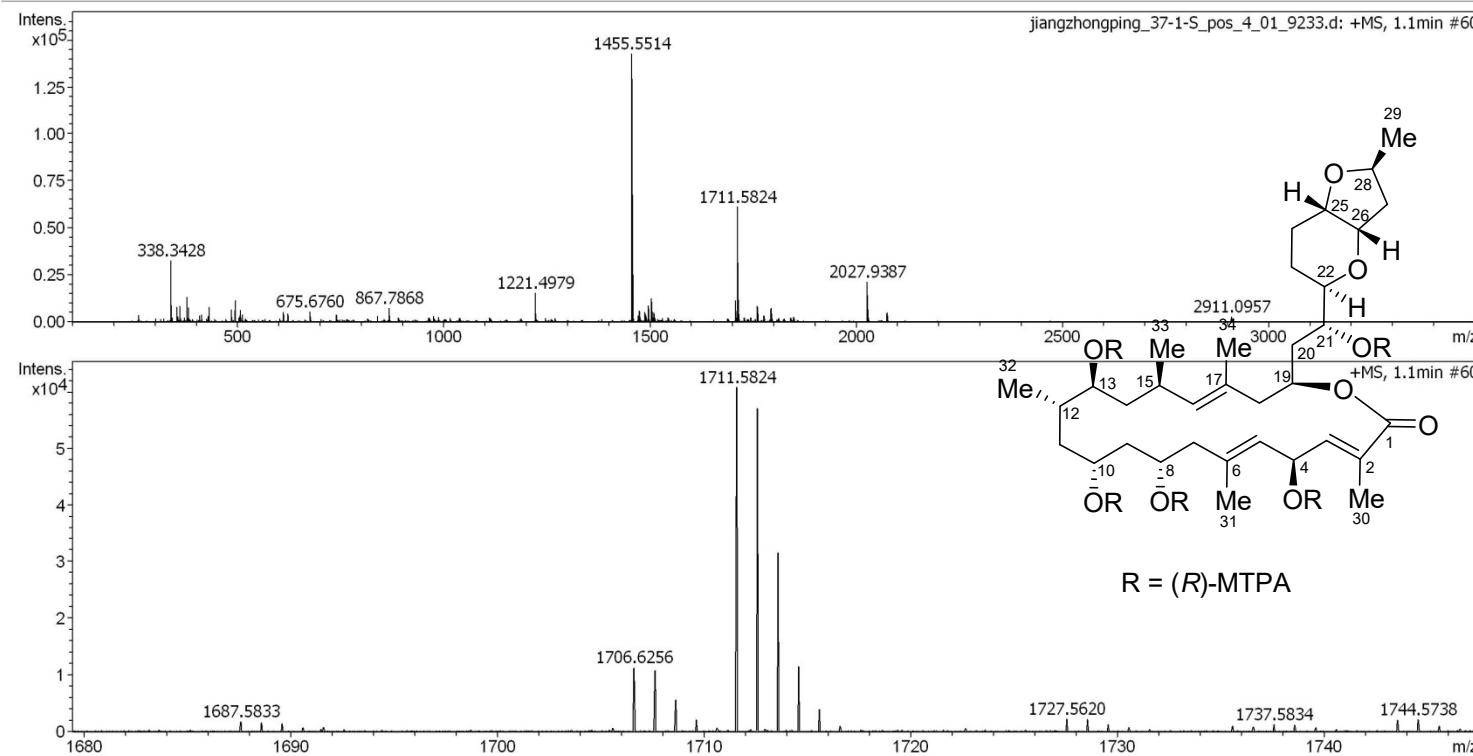
HR-ESIMS for compound 1r

Generic Display Report

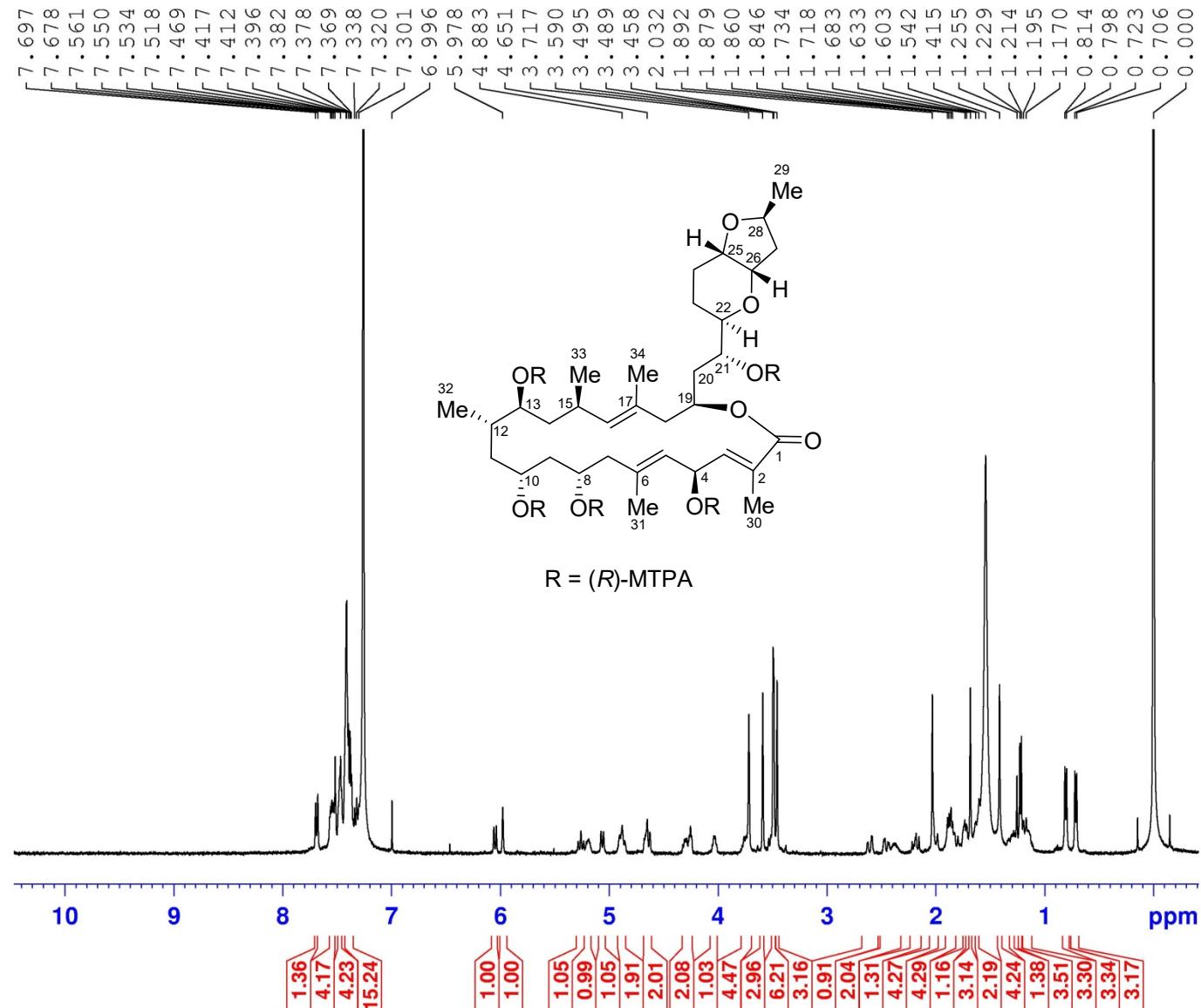
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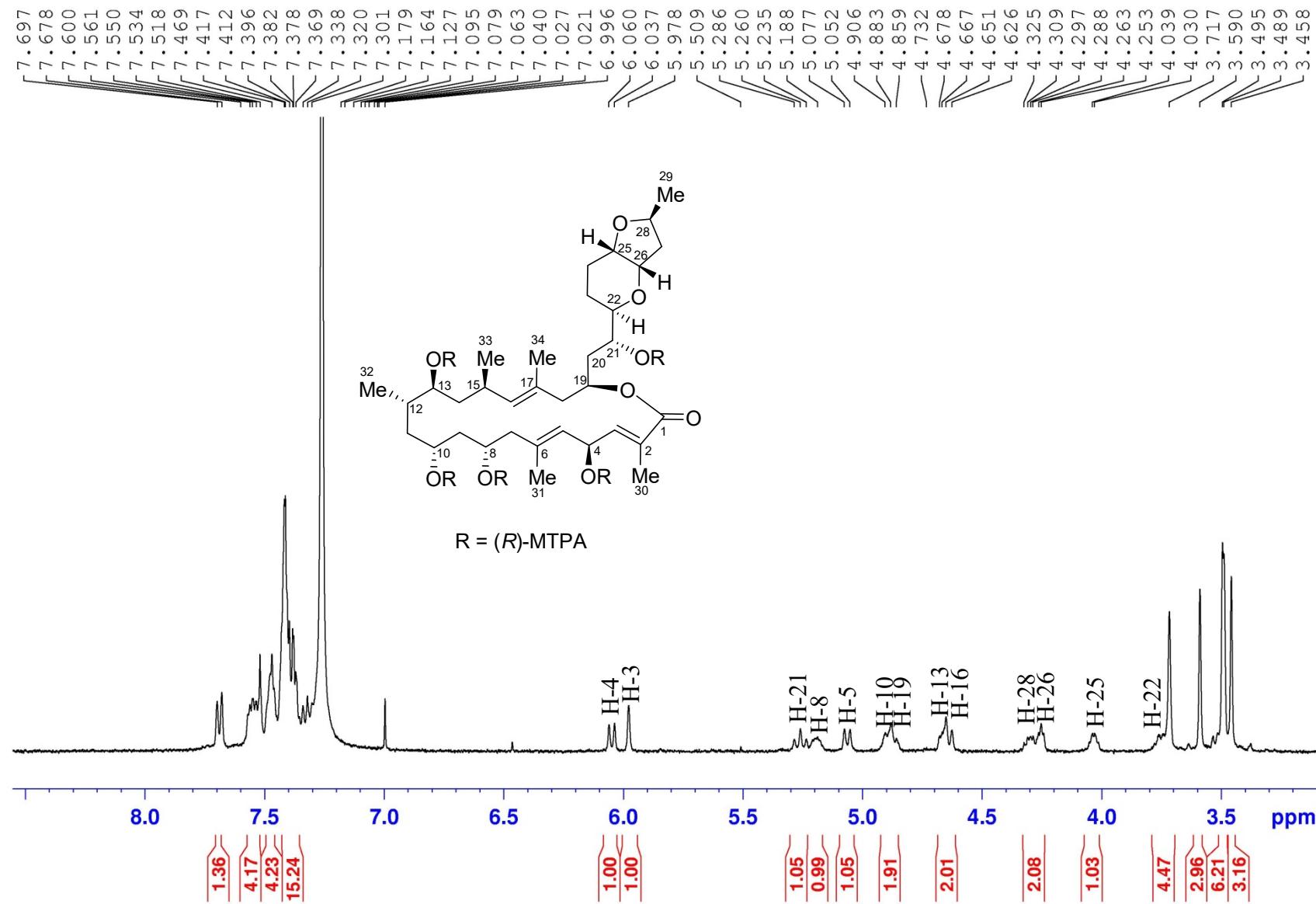
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Operator SCSIO
Instrument maXis



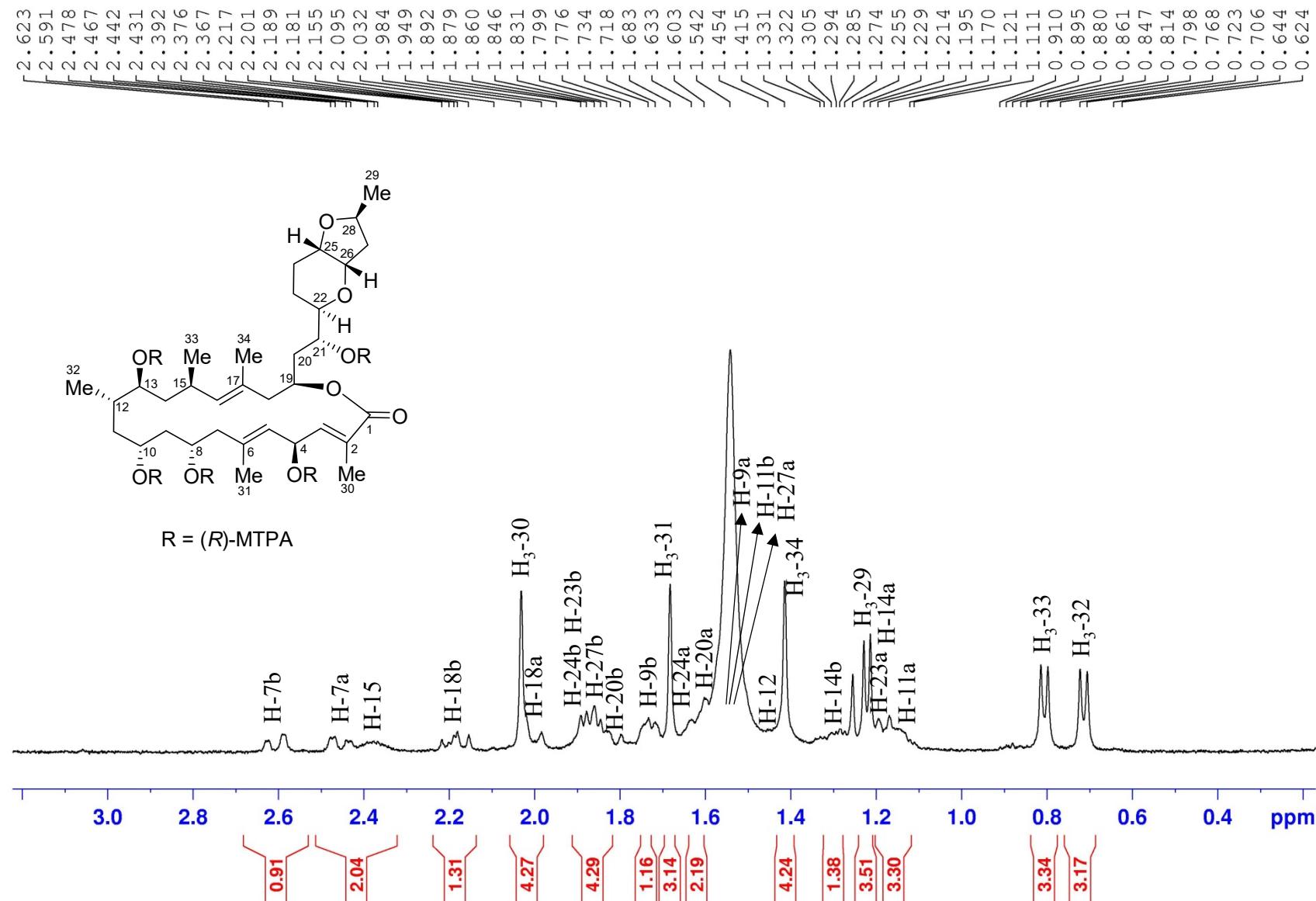
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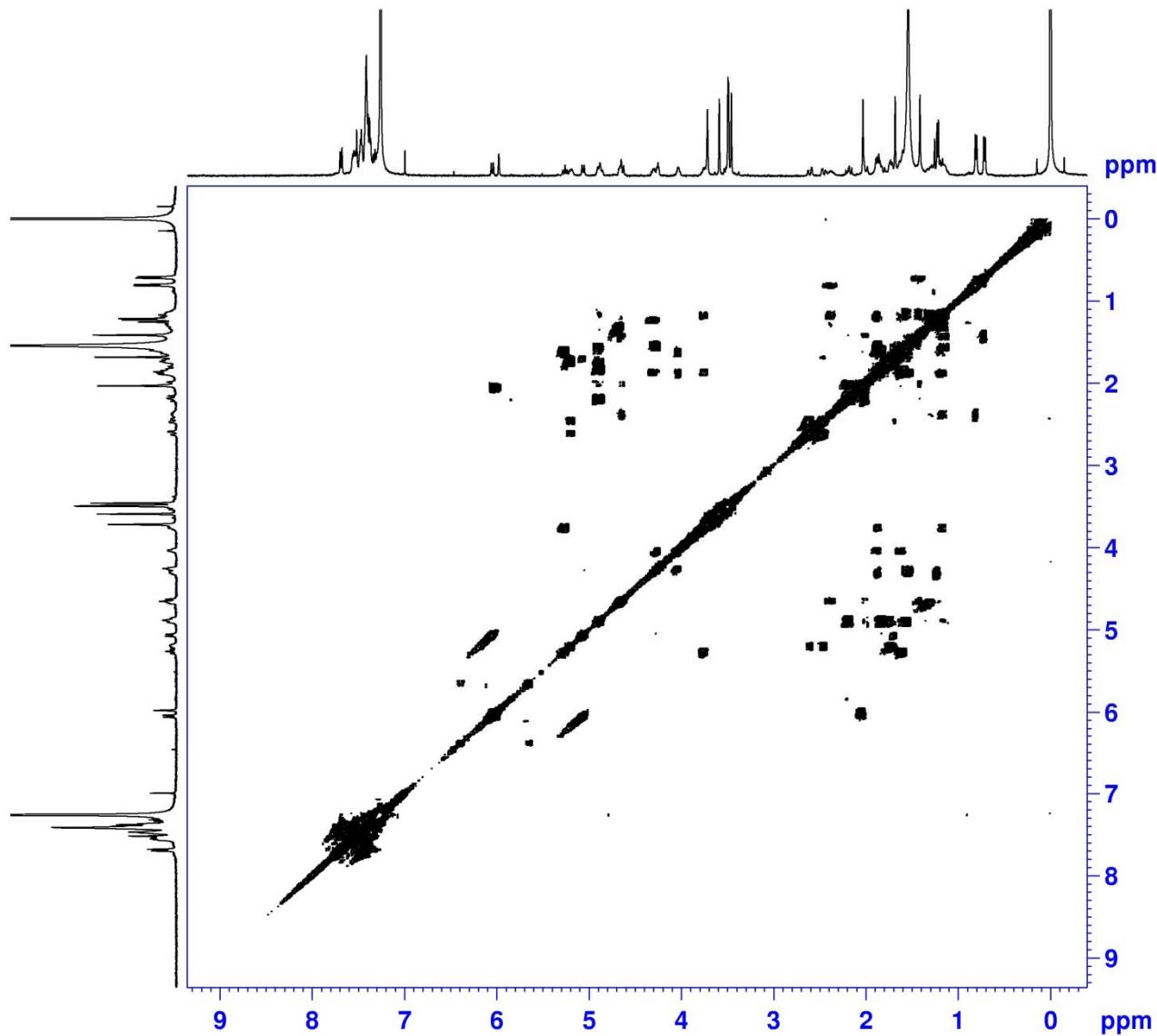
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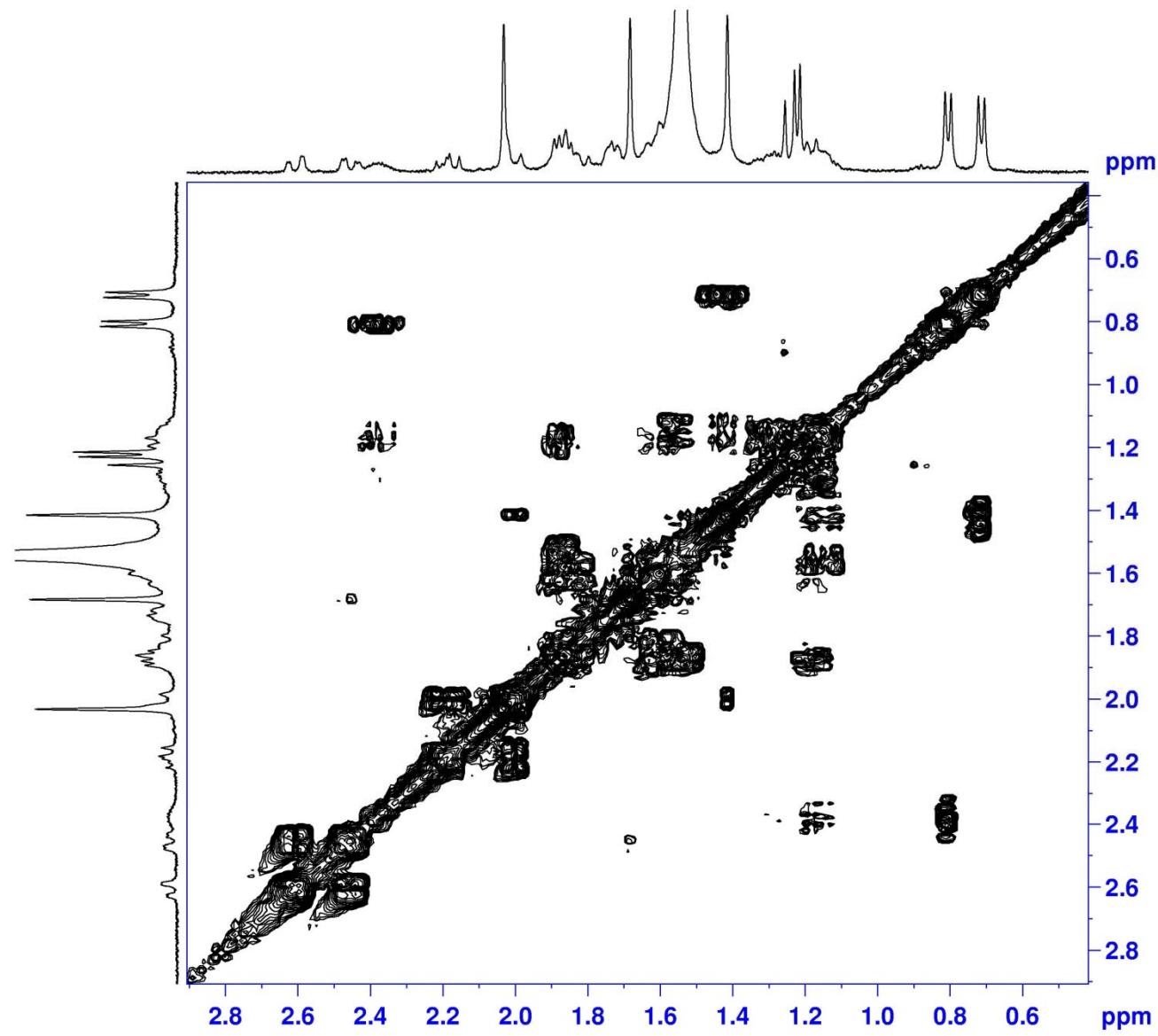
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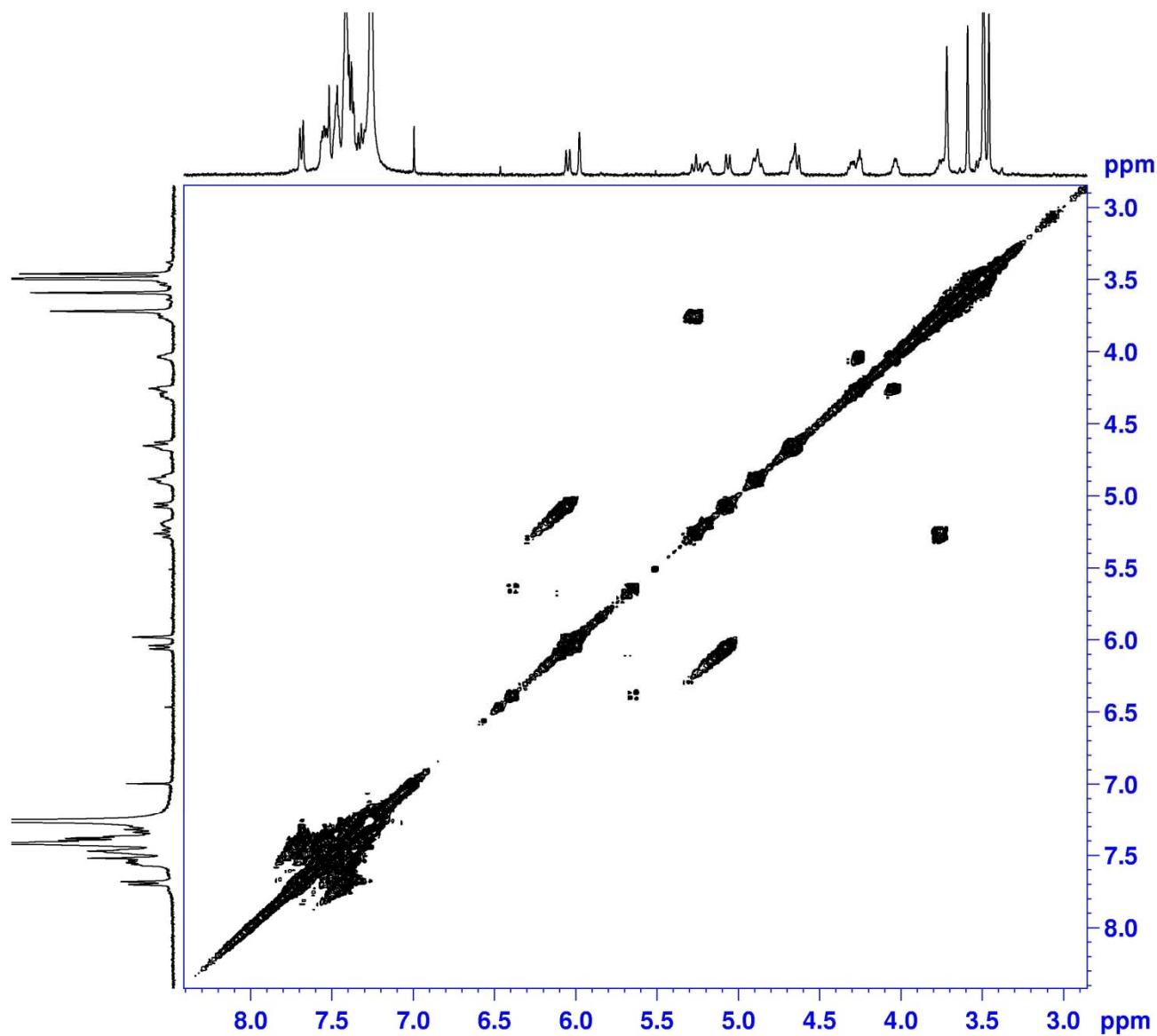
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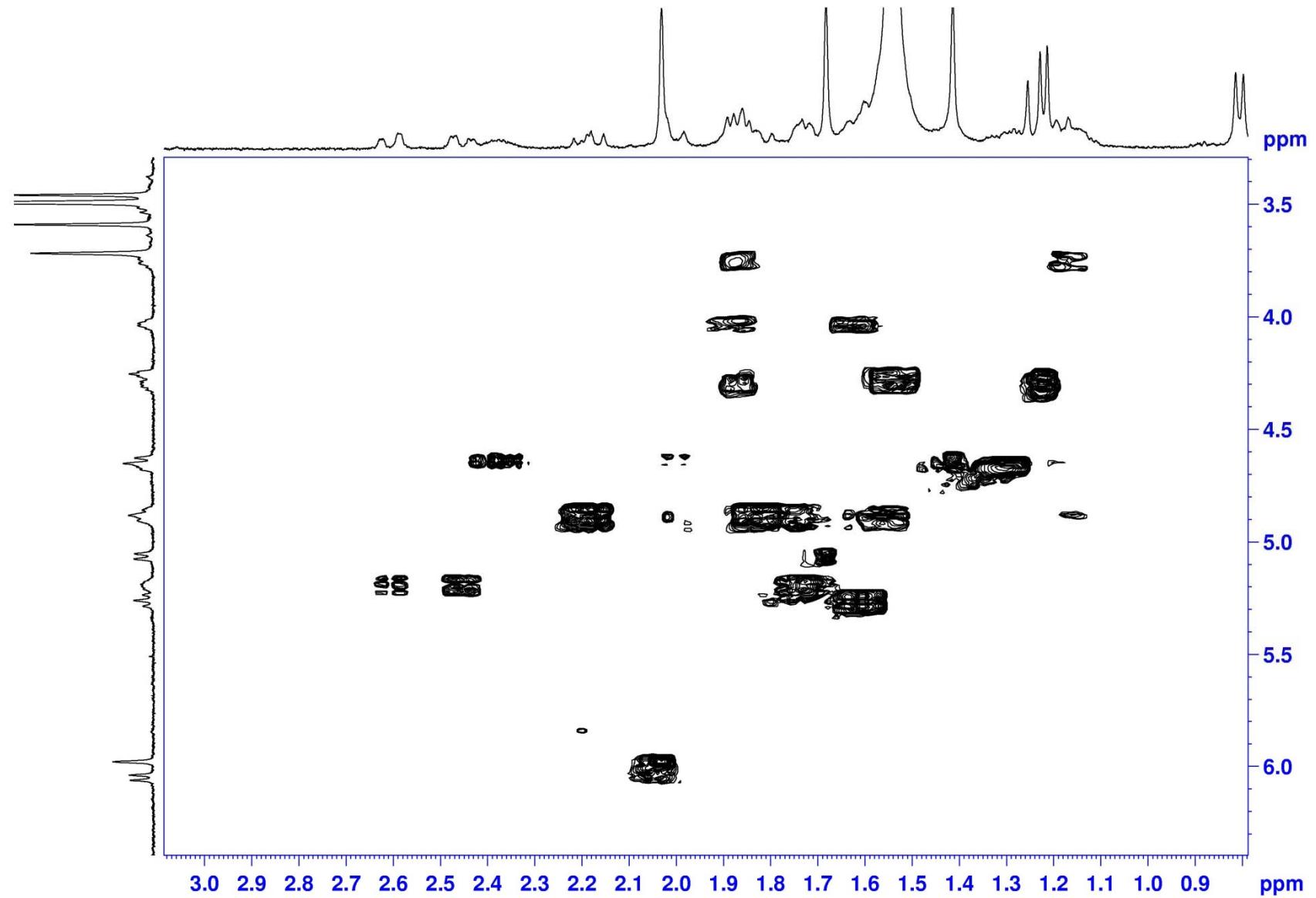
^1H - ^1H COSY (400 MHz) spectrum of compound **1r** in CDCl_3



^1H - ^1H COSY (400 MHz) spectrum of compound **1r** in CDCl_3



^1H - ^1H COSY (400 MHz) spectrum of compound **1r** in CDCl_3



LR-ESIMS for the fragment 1As

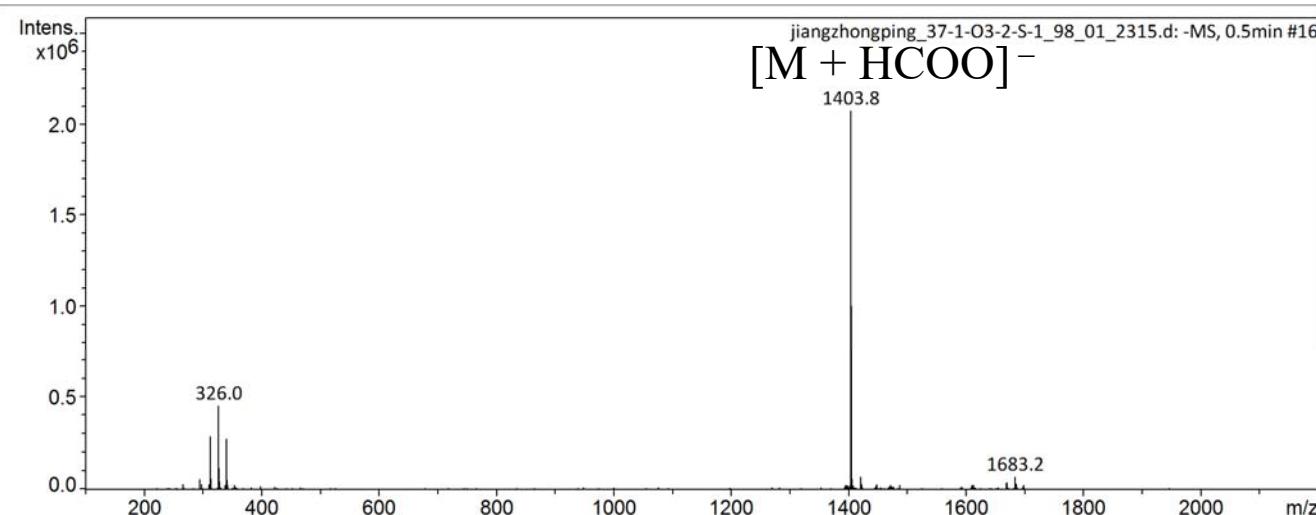
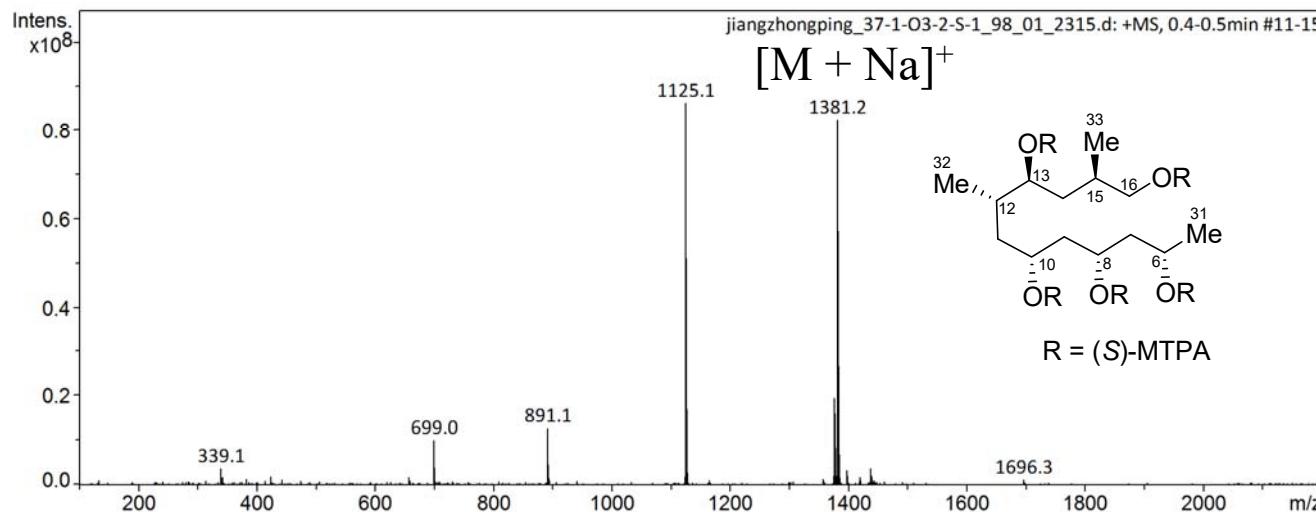
Generic Display Report

Analysis Info

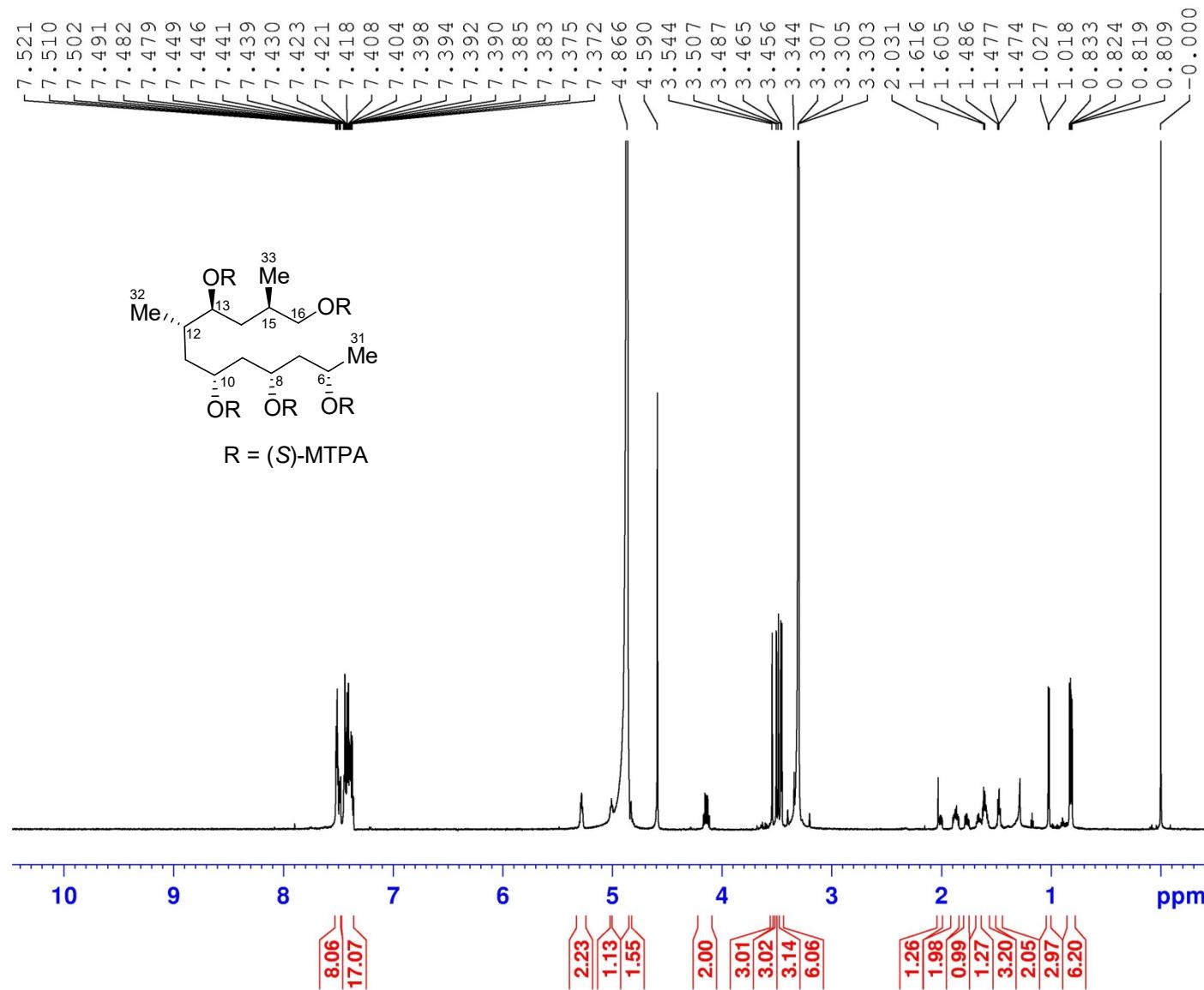
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Sample Name jiangzhongping_37-1-O3-2-S-1
Comment

Acquisition Date 2020-11-09 15:57:29

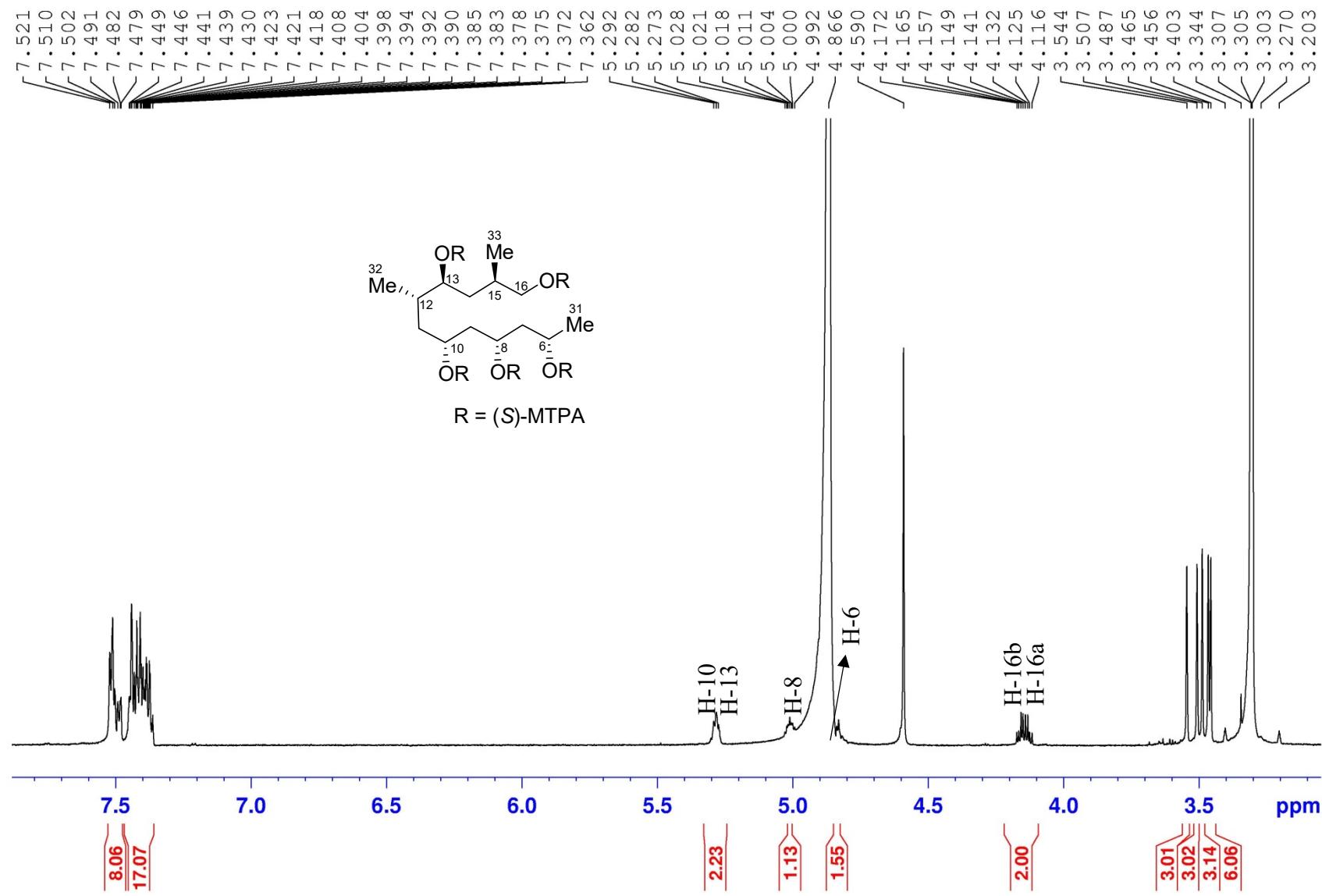
Operator bruker
Instrument amaZon SL



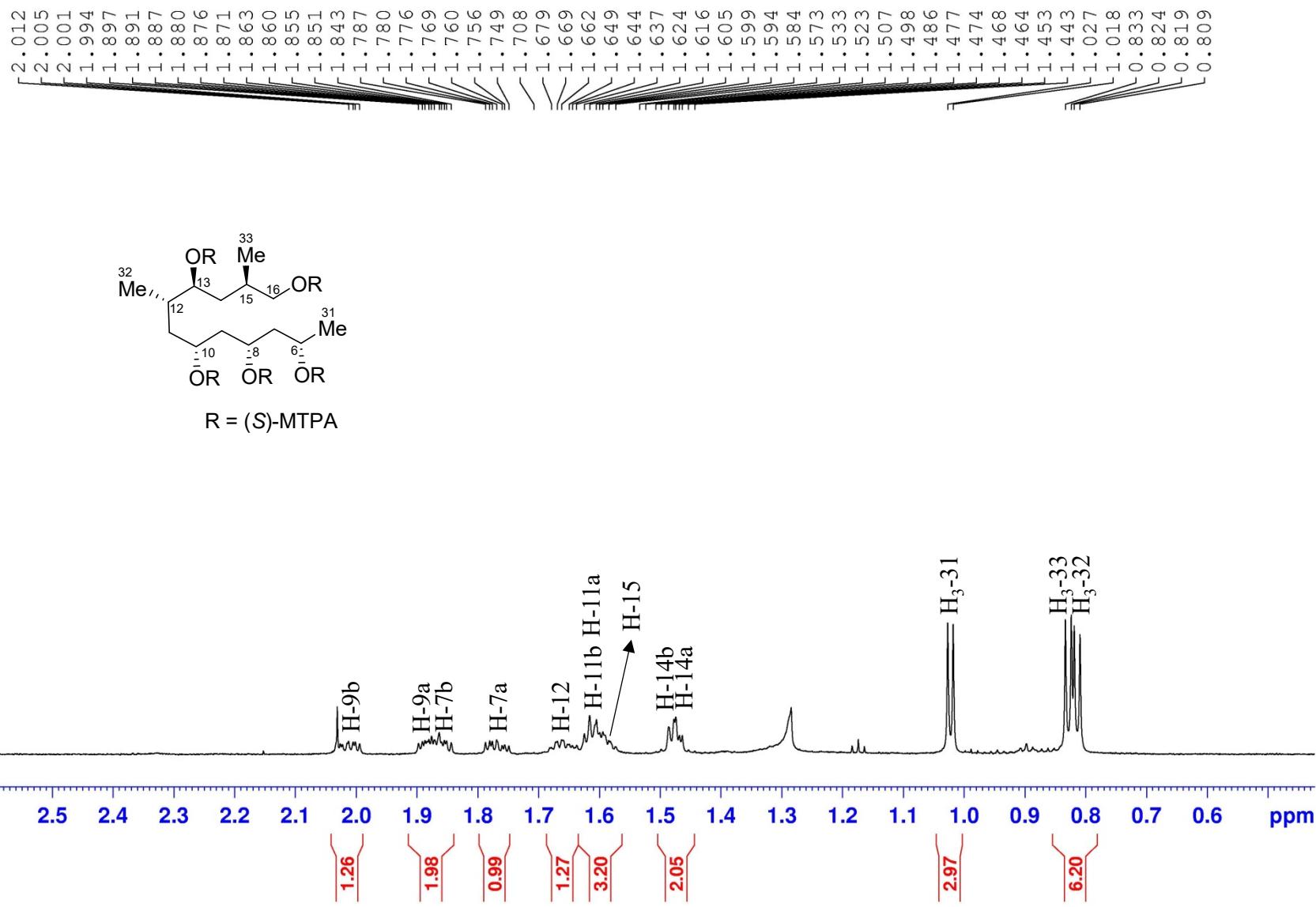
¹H (700 MHz) NMR spectrum of the fragment **1As** in CD₃OD



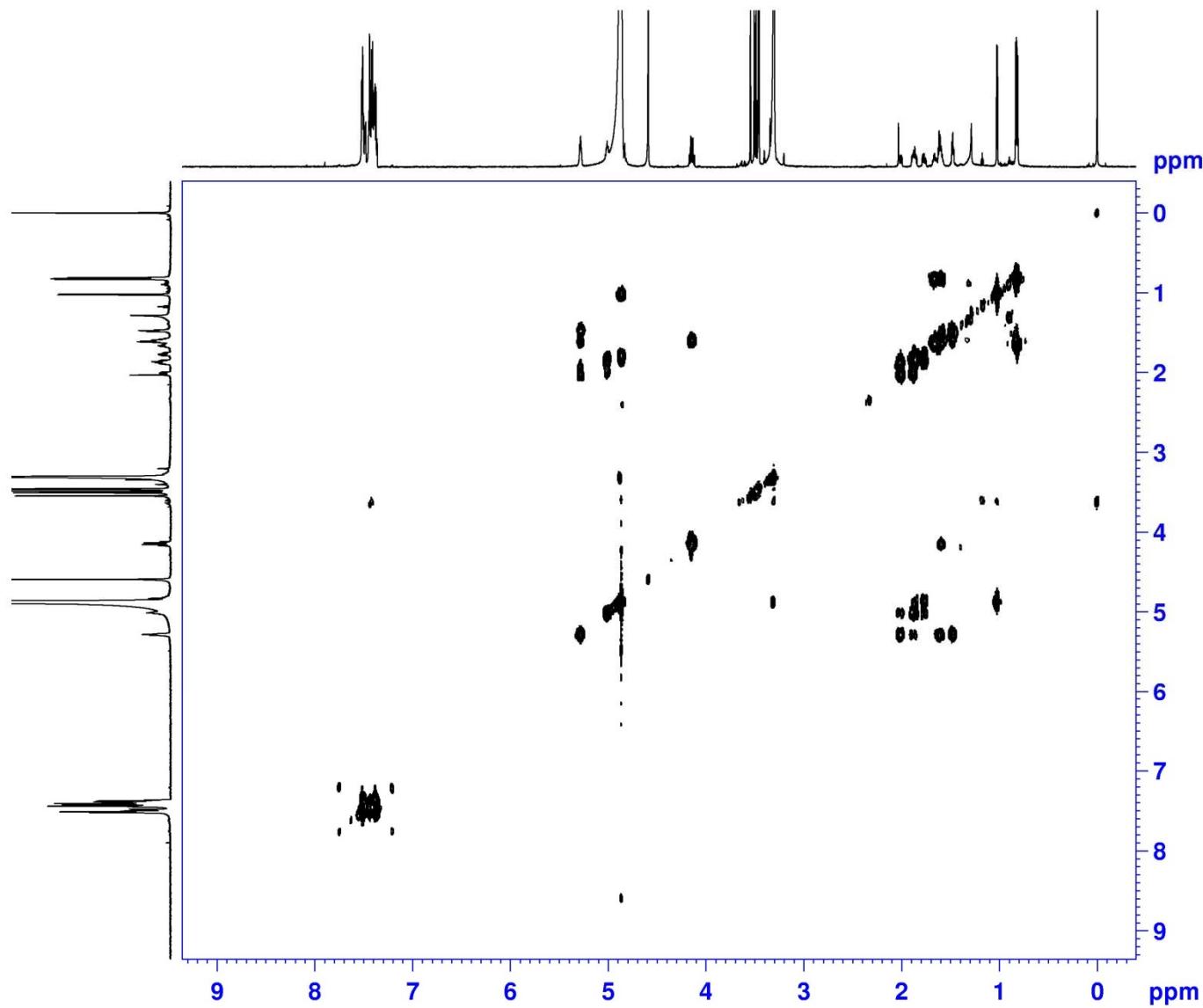
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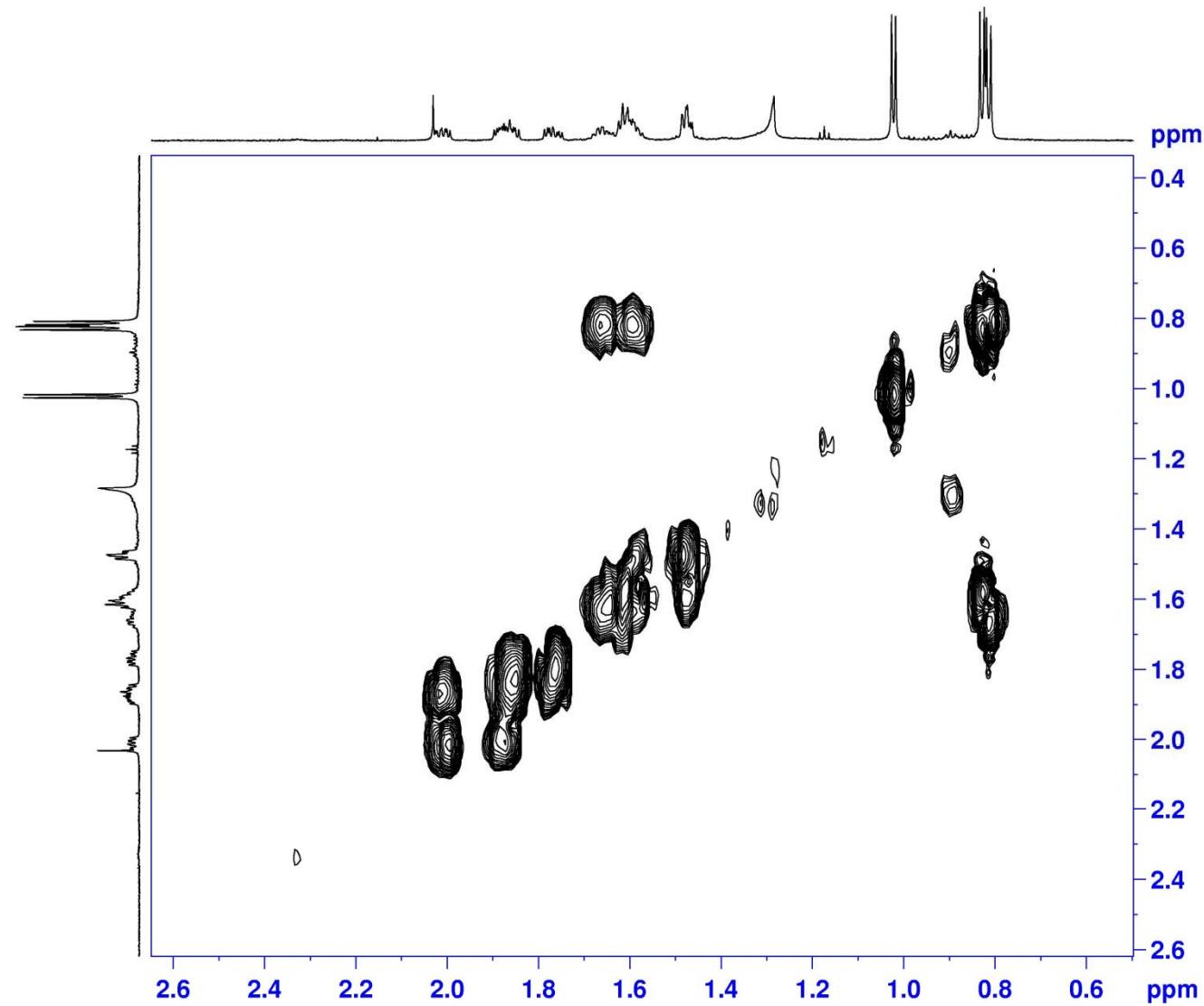
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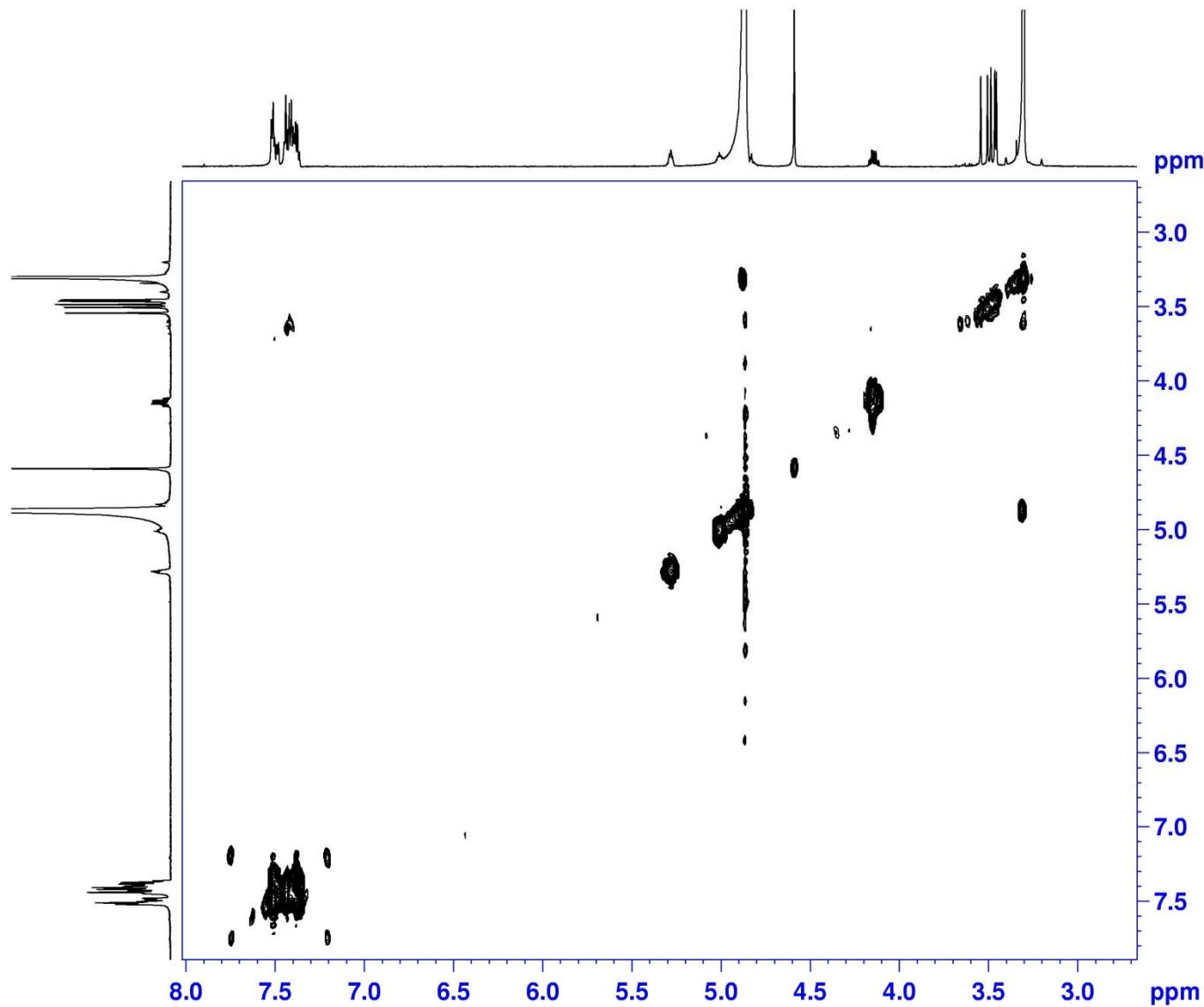
^1H - ^1H COSY (700 MHz) spectrum of the fragment **1As** in CD_3OD



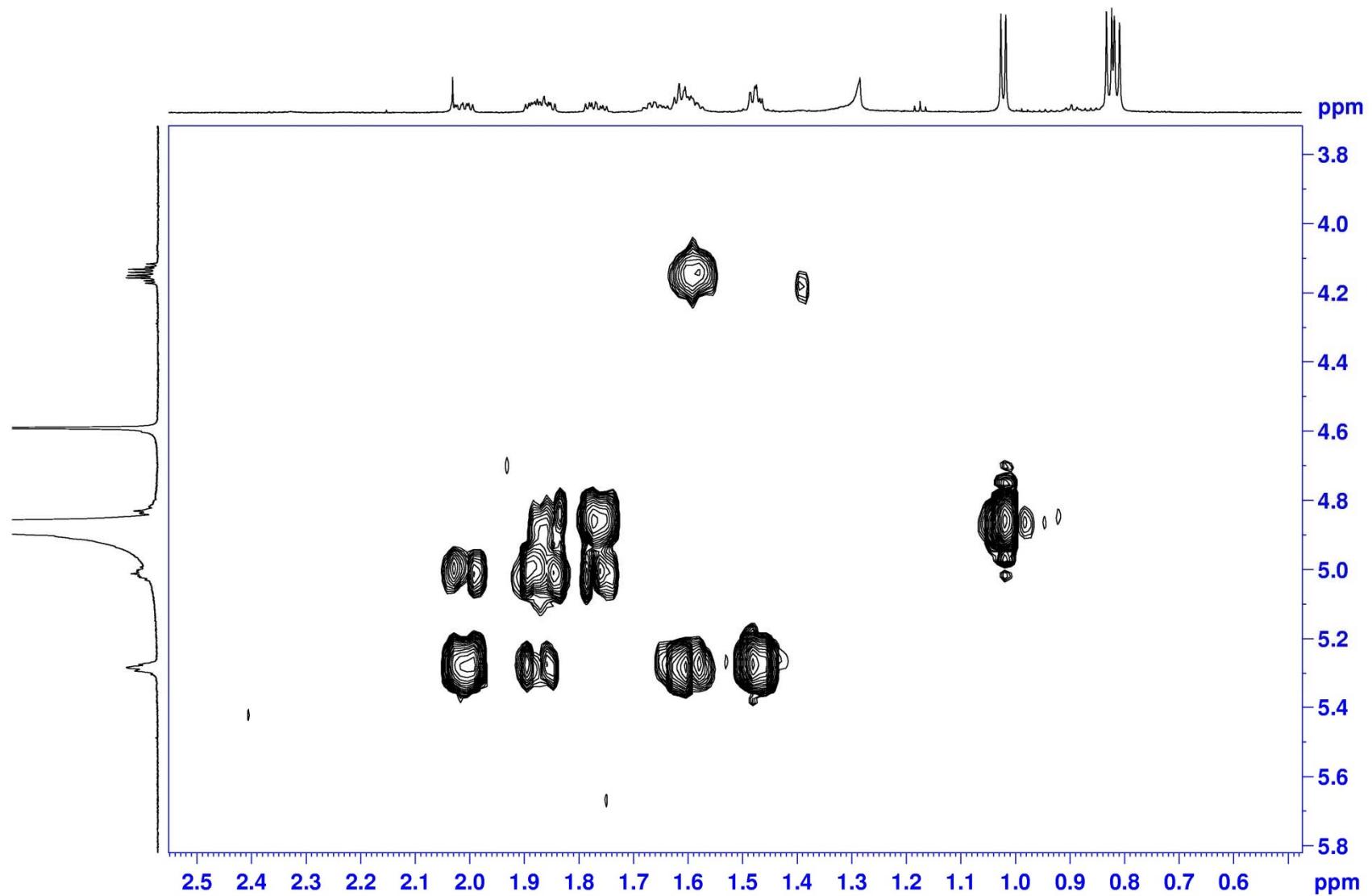
^1H - ^1H COSY (700 MHz) spectrum of the fragment **1As** in CD_3OD



^1H - ^1H COSY (700 MHz) spectrum of the fragment **1As** in CD_3OD



^1H - ^1H COSY (700 MHz) spectrum of the fragment **1As** in CD_3OD



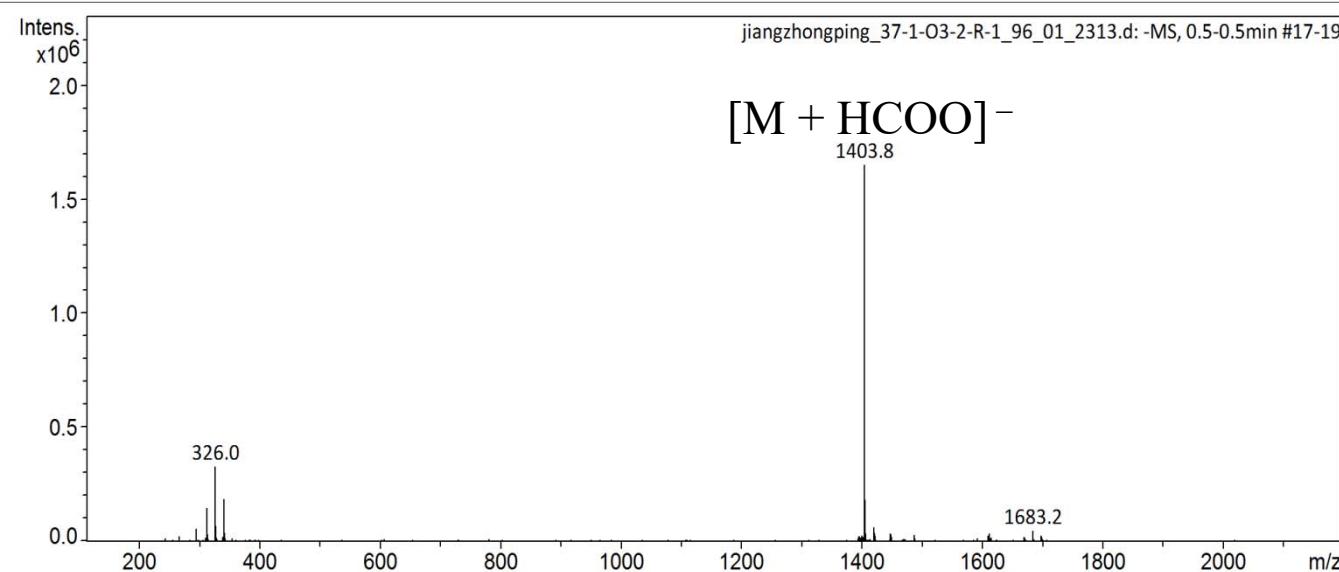
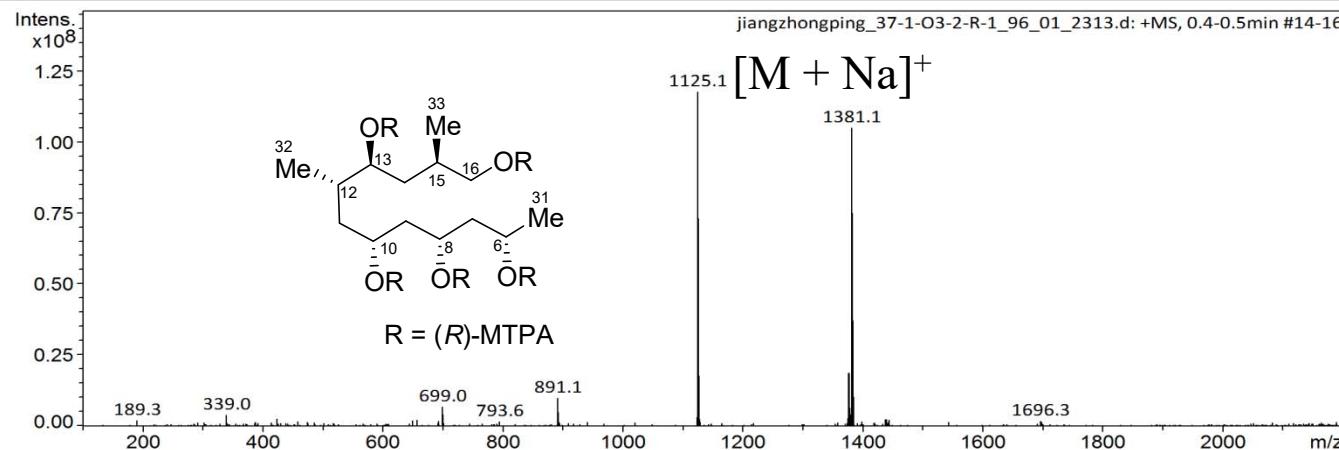
LR-ESIMS for the fragment 1Ar

Generic Display Report

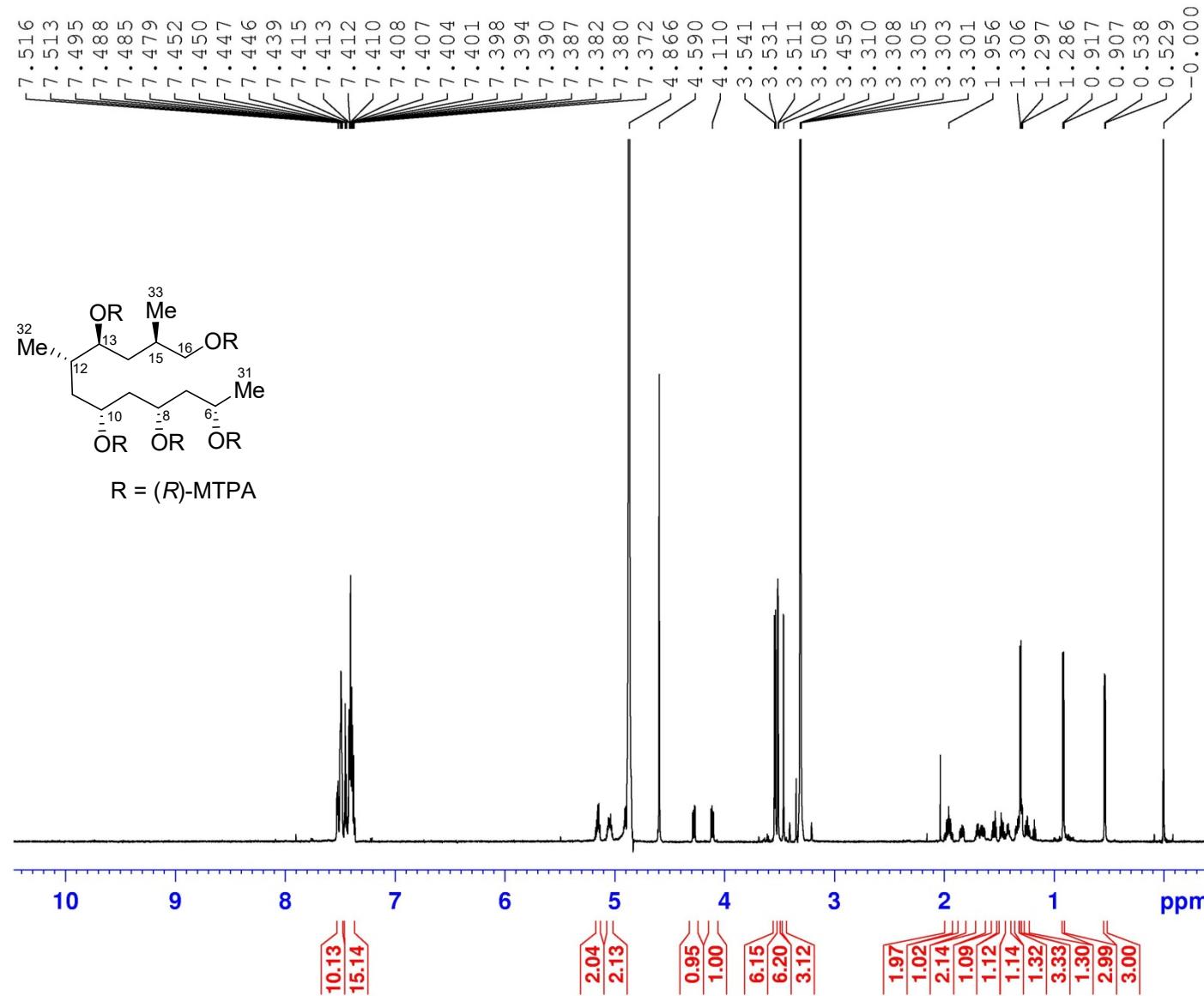
Analysis Info

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Method 2313.m
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Comment

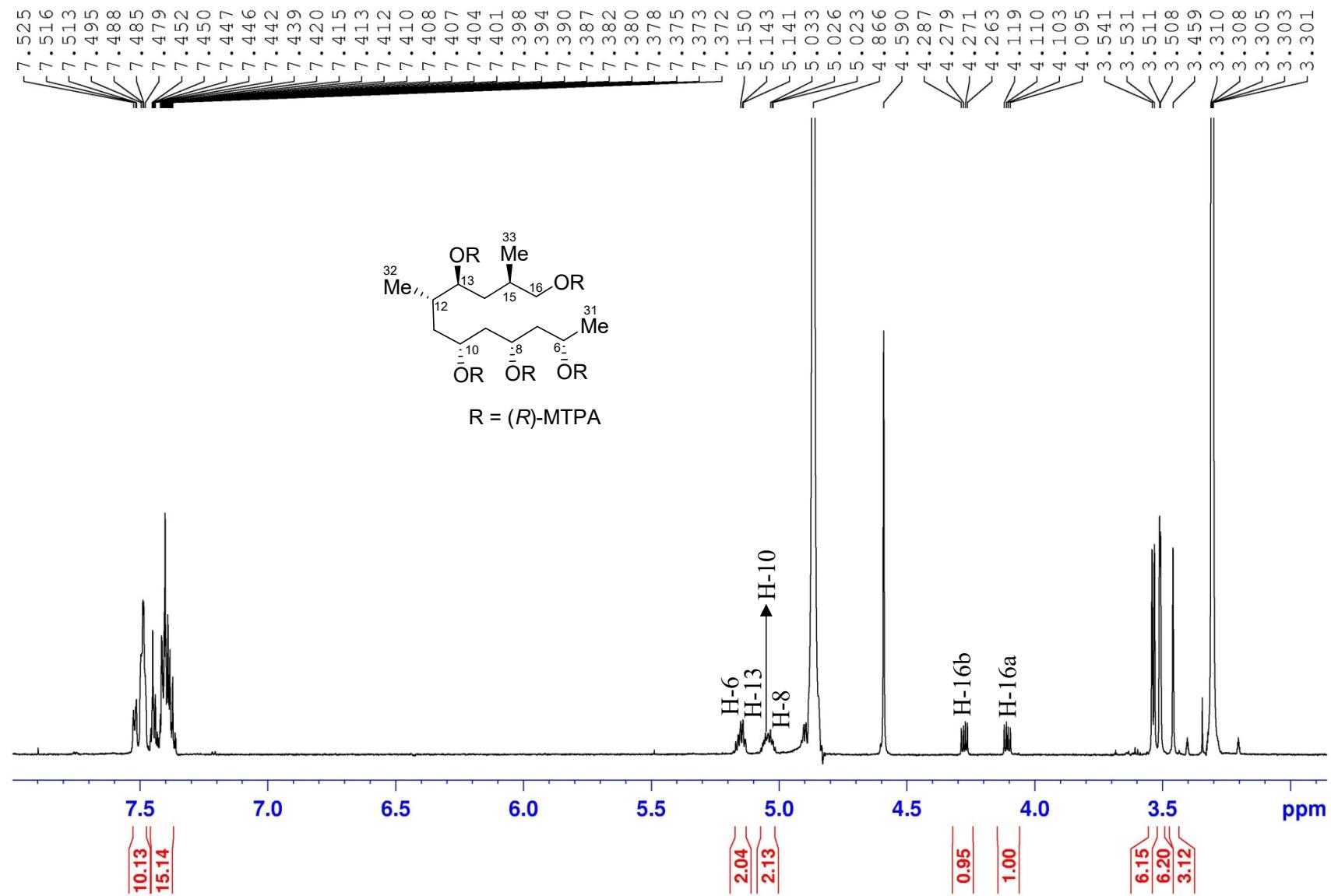
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Operator bruker
Instrument amaZon SL



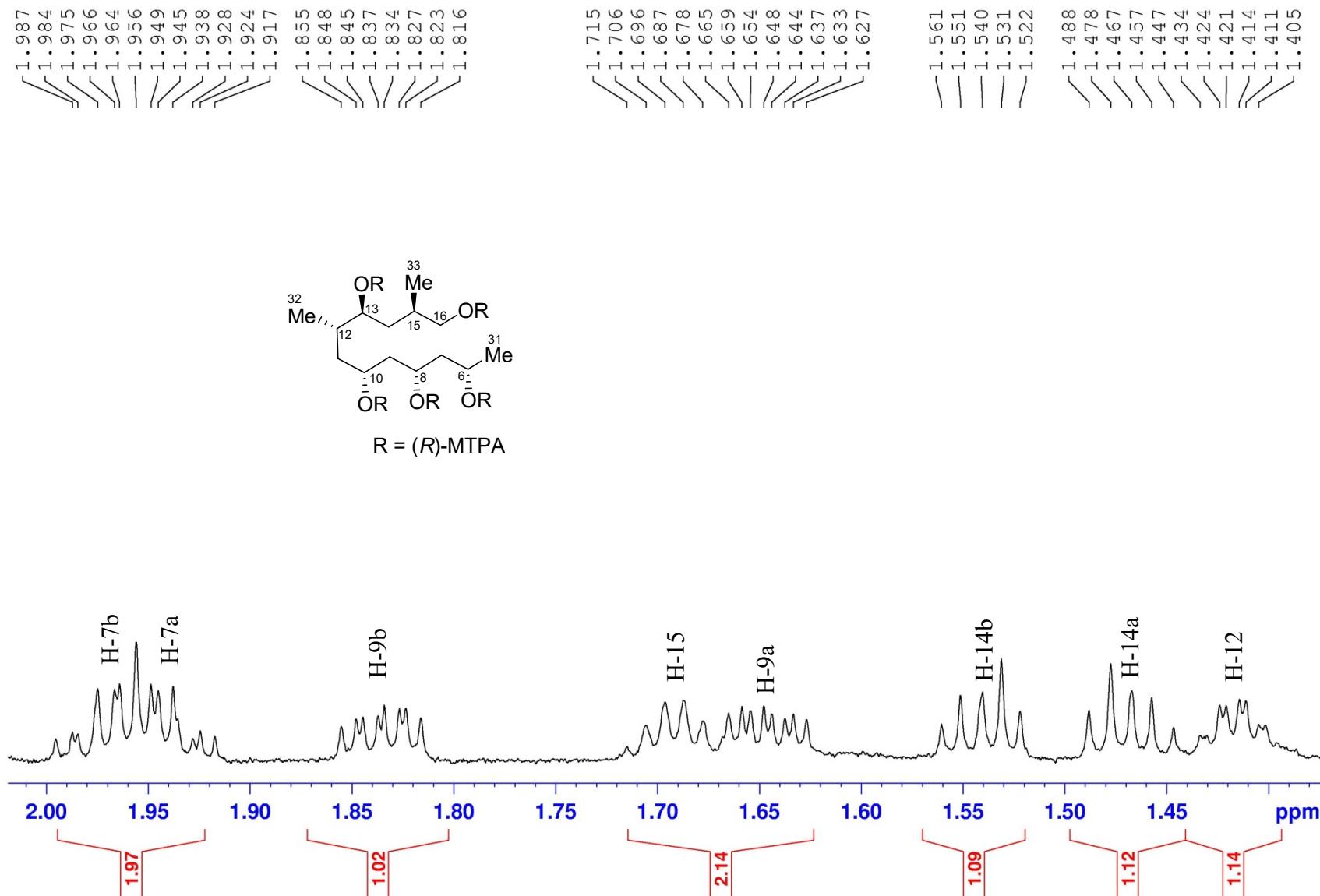
¹H (700 MHz) NMR spectrum of the fragment **1Ar** in CD₃OD



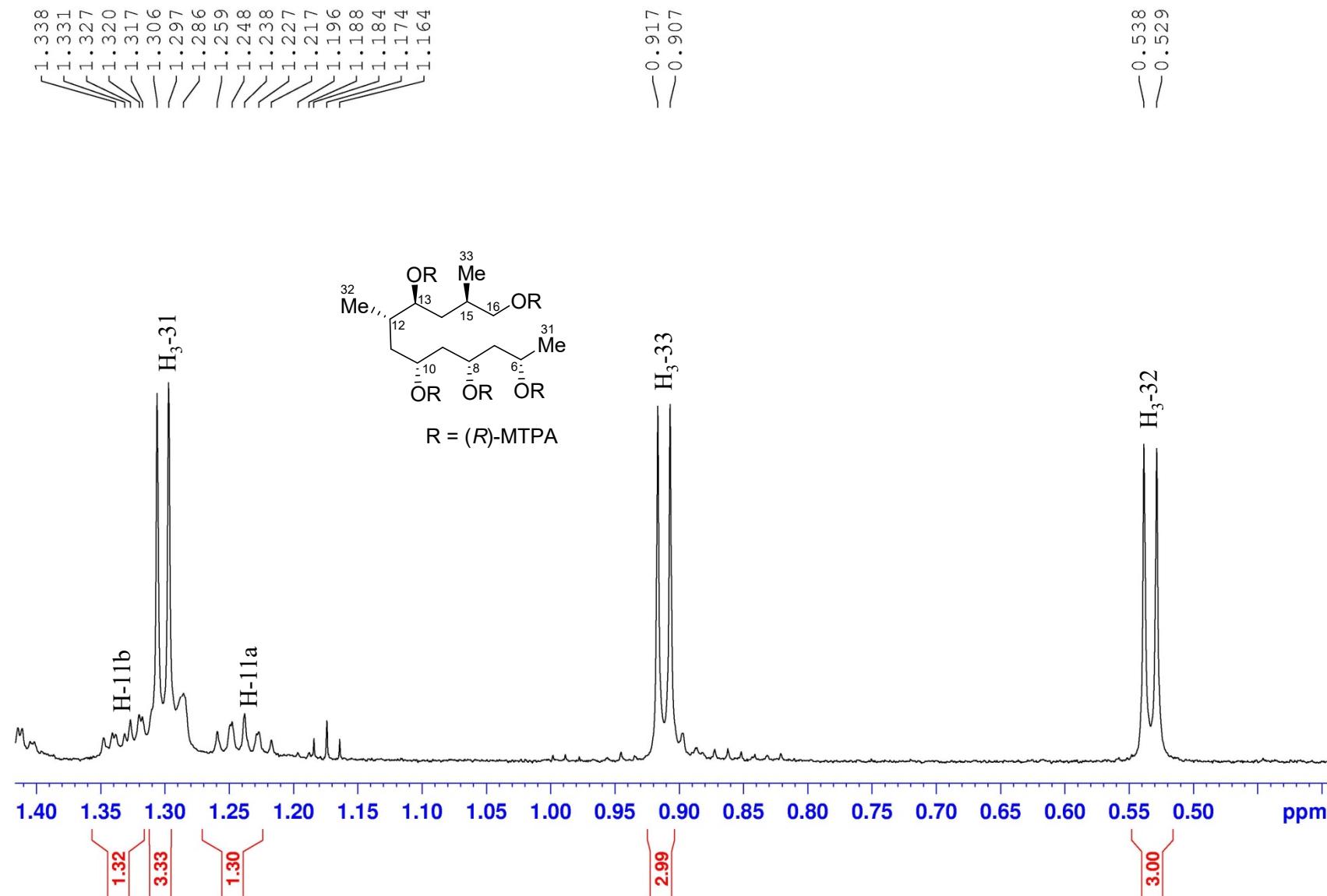
¹H (700 MHz) NMR spectrum of the fragment **1Ar** in CD₃OD



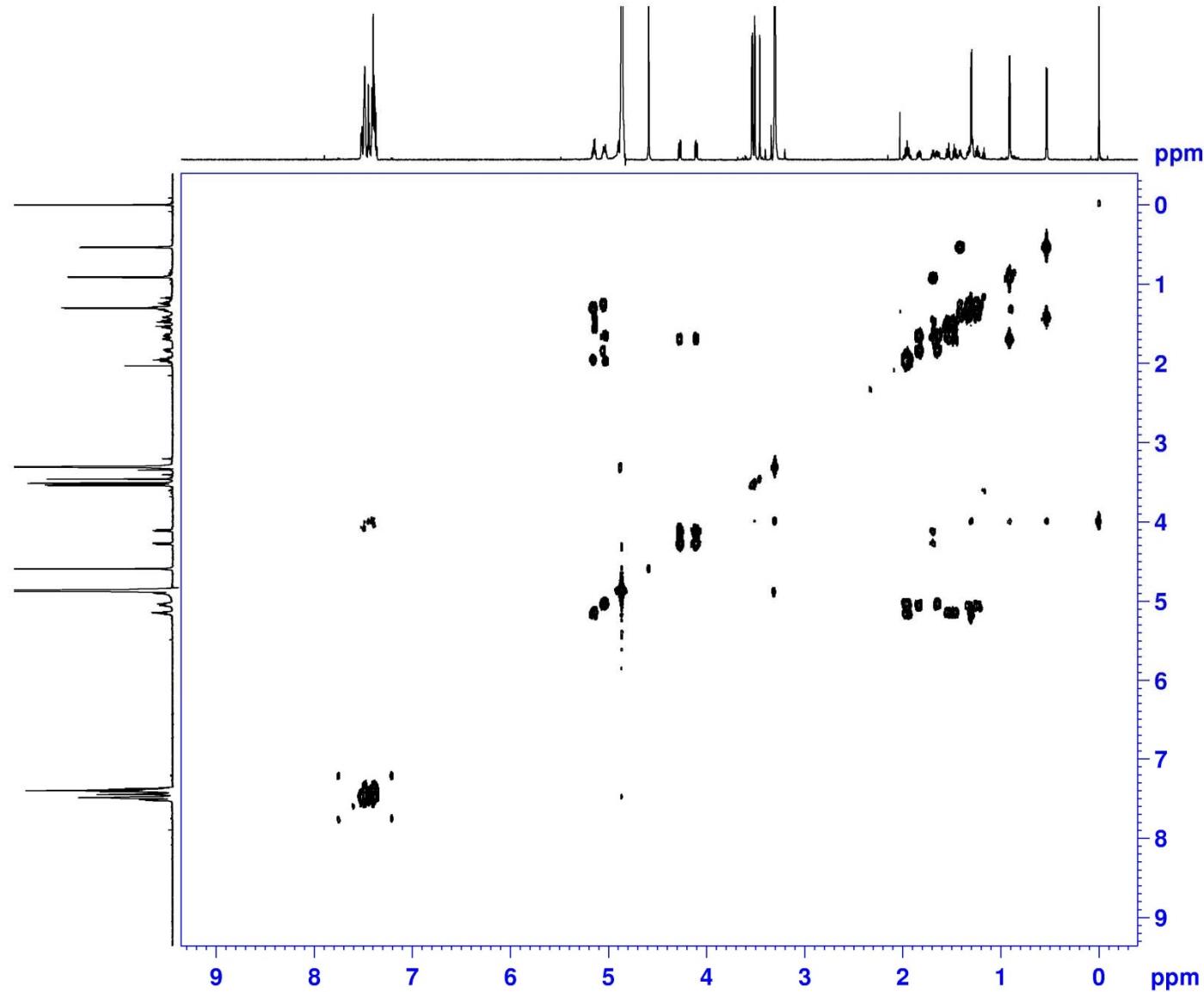
¹H (700 MHz) NMR spectrum of the fragment **1Ar** in CD₃OD



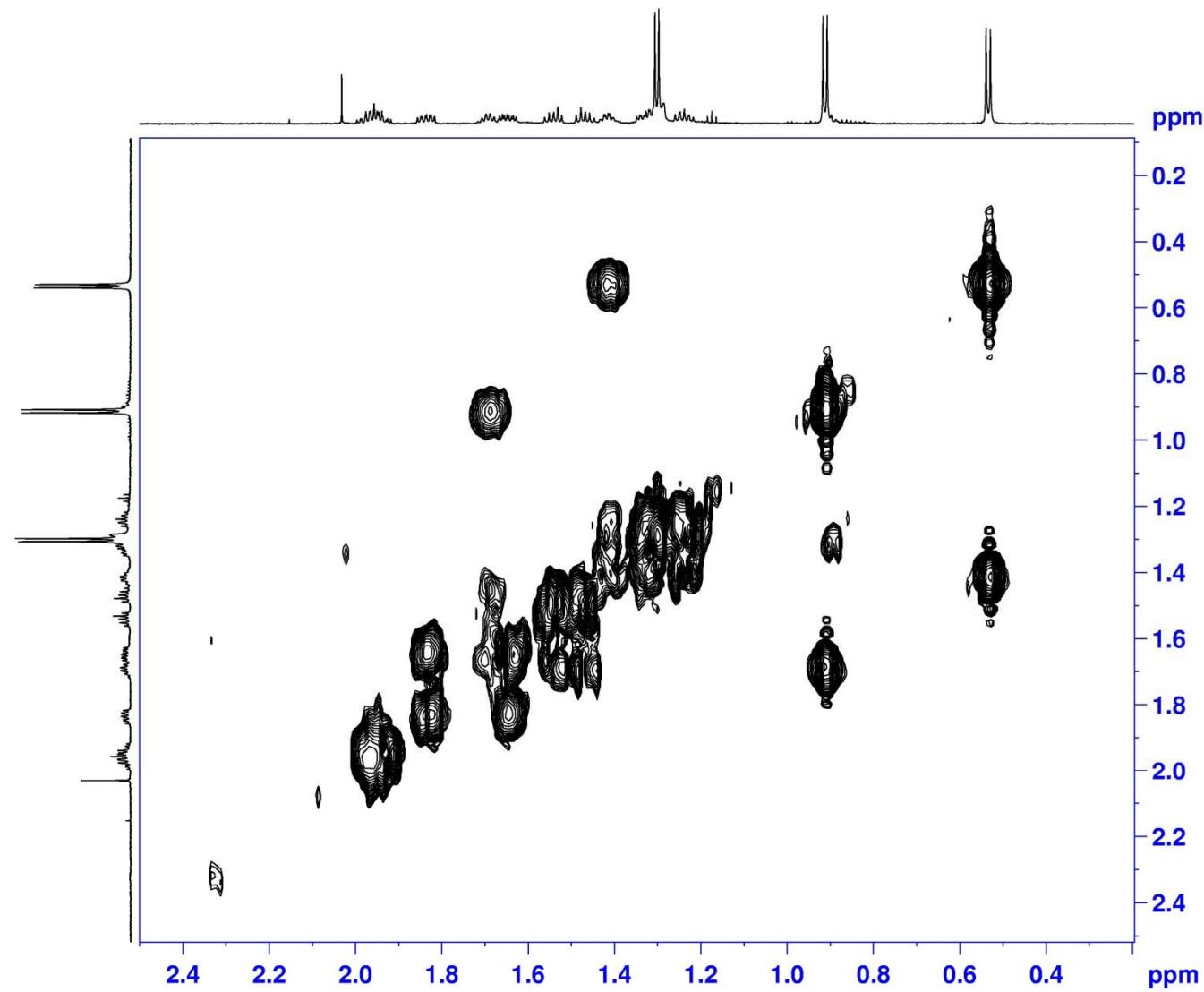
¹H (700 MHz) NMR spectrum of the fragment **1Ar** in CD₃OD



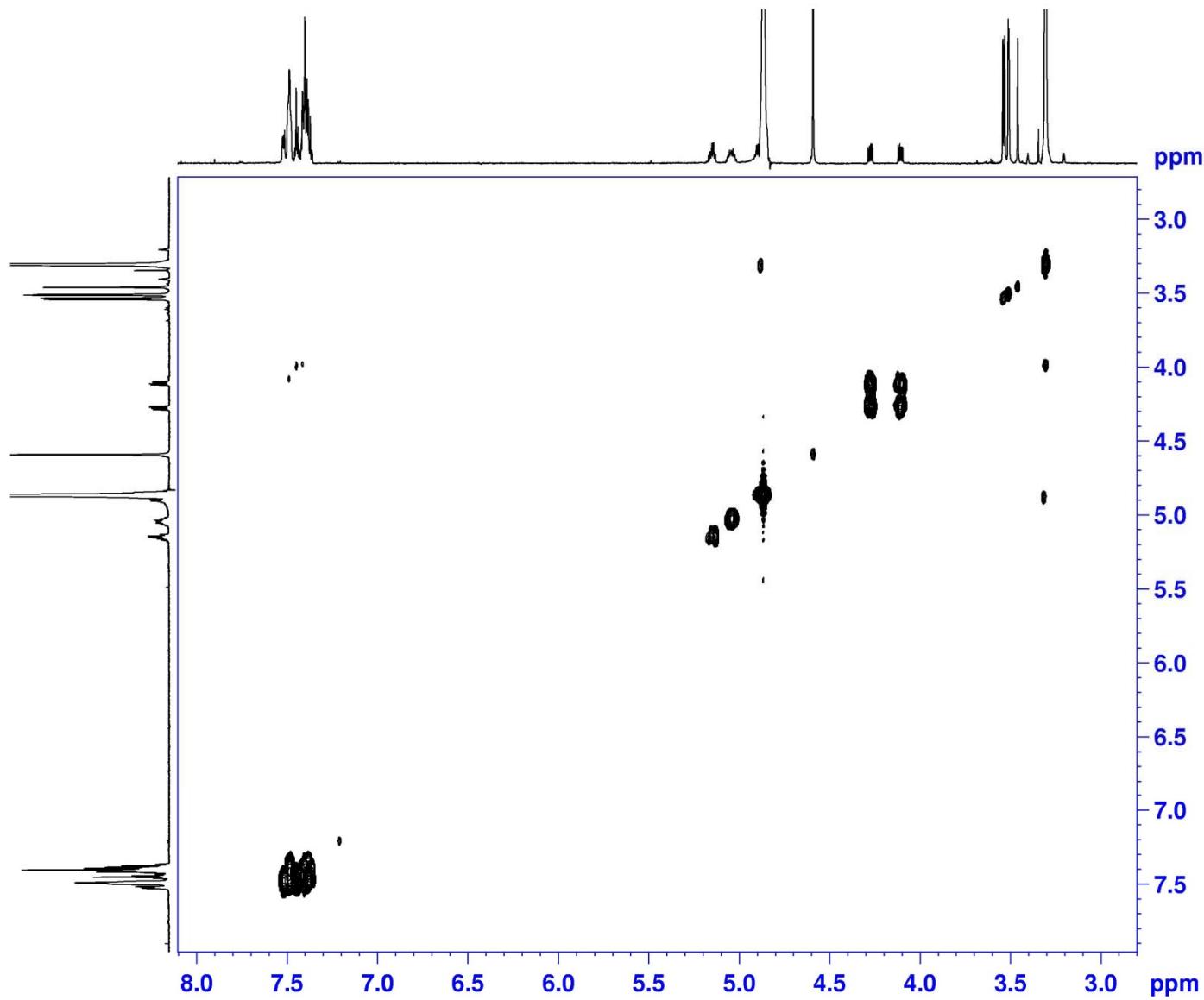
^1H - ^1H COSY (700 MHz) spectrum of the fragment **1Ar** in CD_3OD



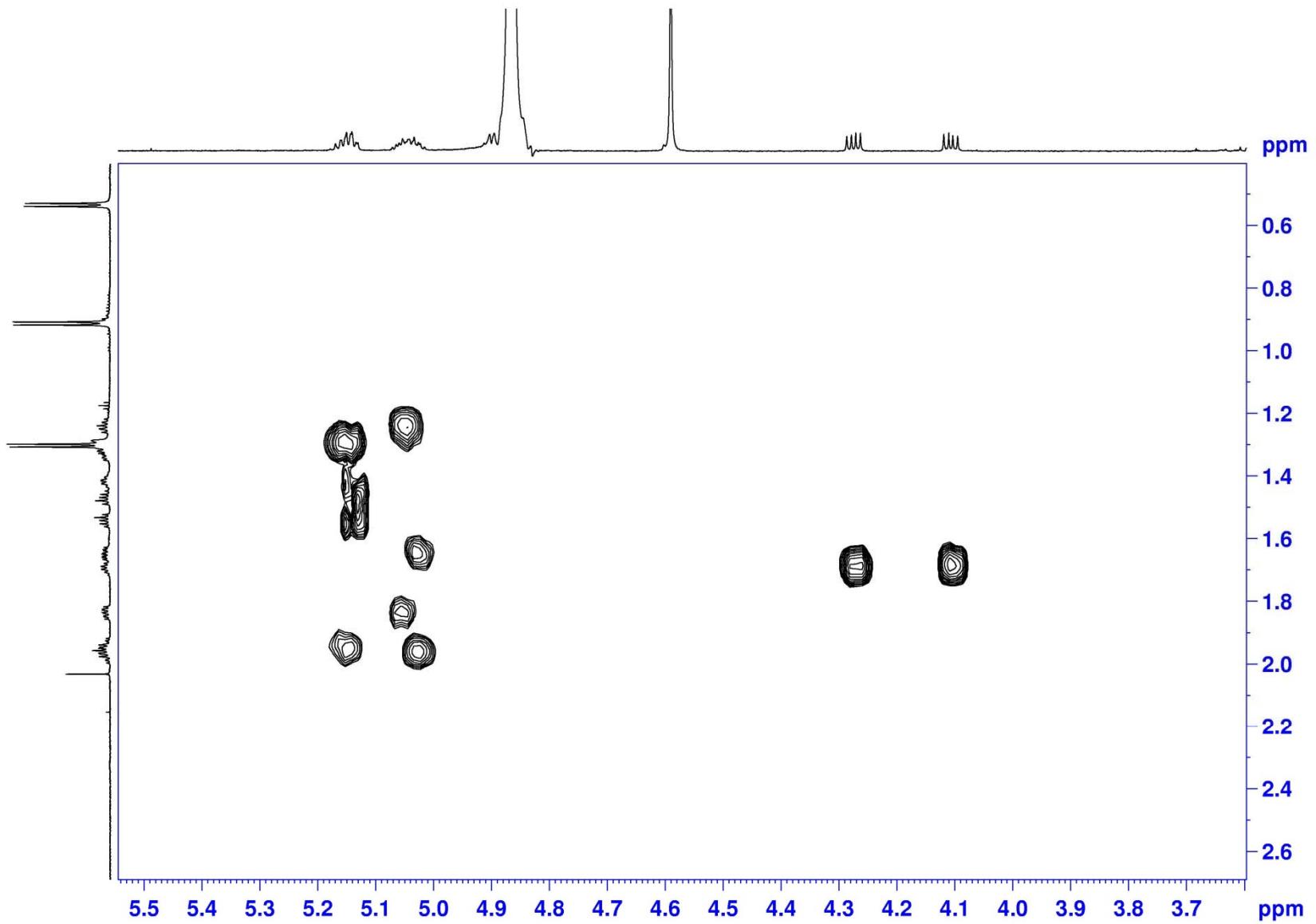
^1H - ^1H COSY (700 MHz) spectrum of the fragment **1Ar** in CD_3OD



^1H - ^1H COSY (700 MHz) spectrum of the fragment **1Ar** in CD_3OD



^1H - ^1H COSY (700 MHz) spectrum of the fragment **1Ar** in CD_3OD

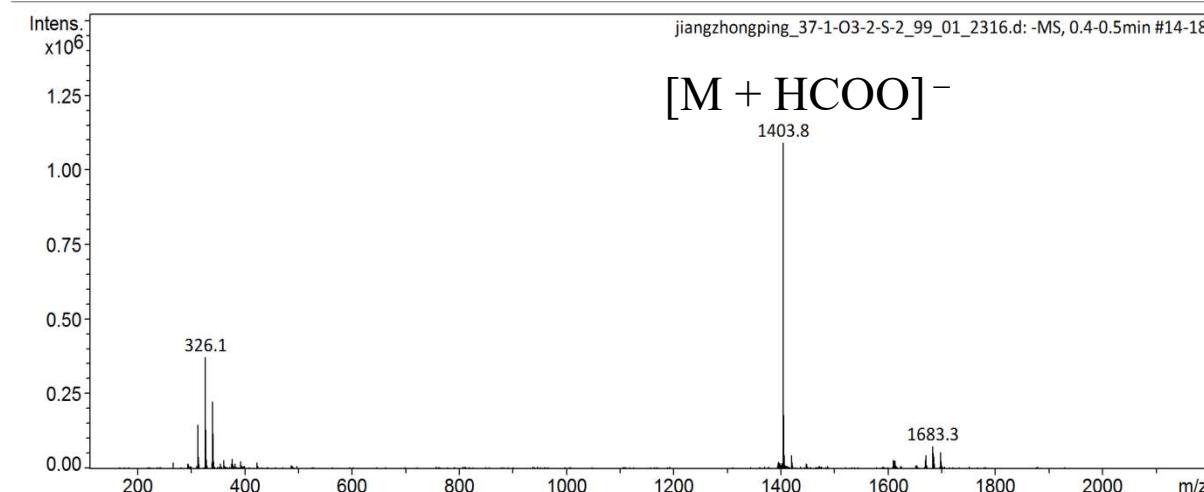
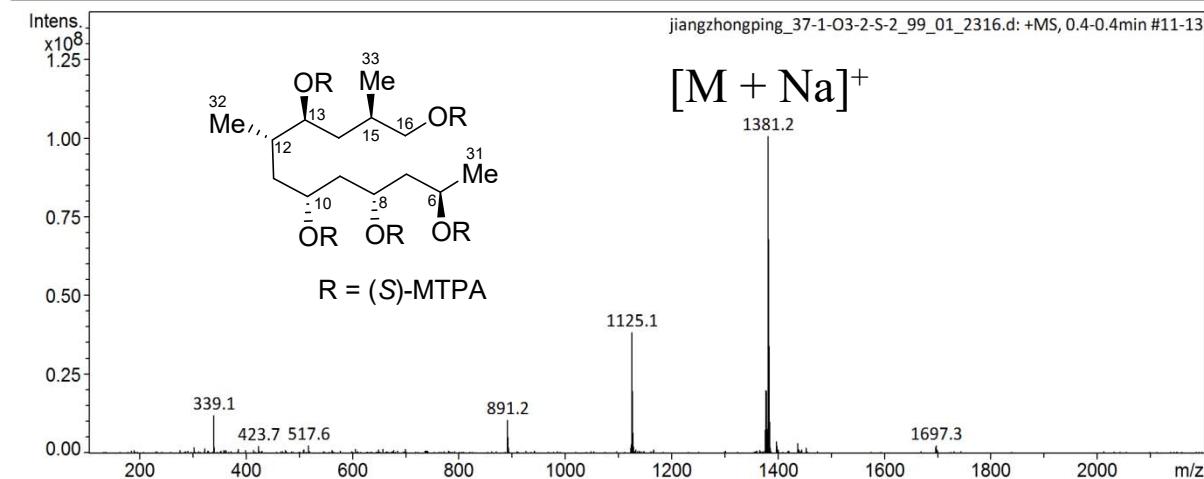


LR-ESIMS for the fragment 1A's

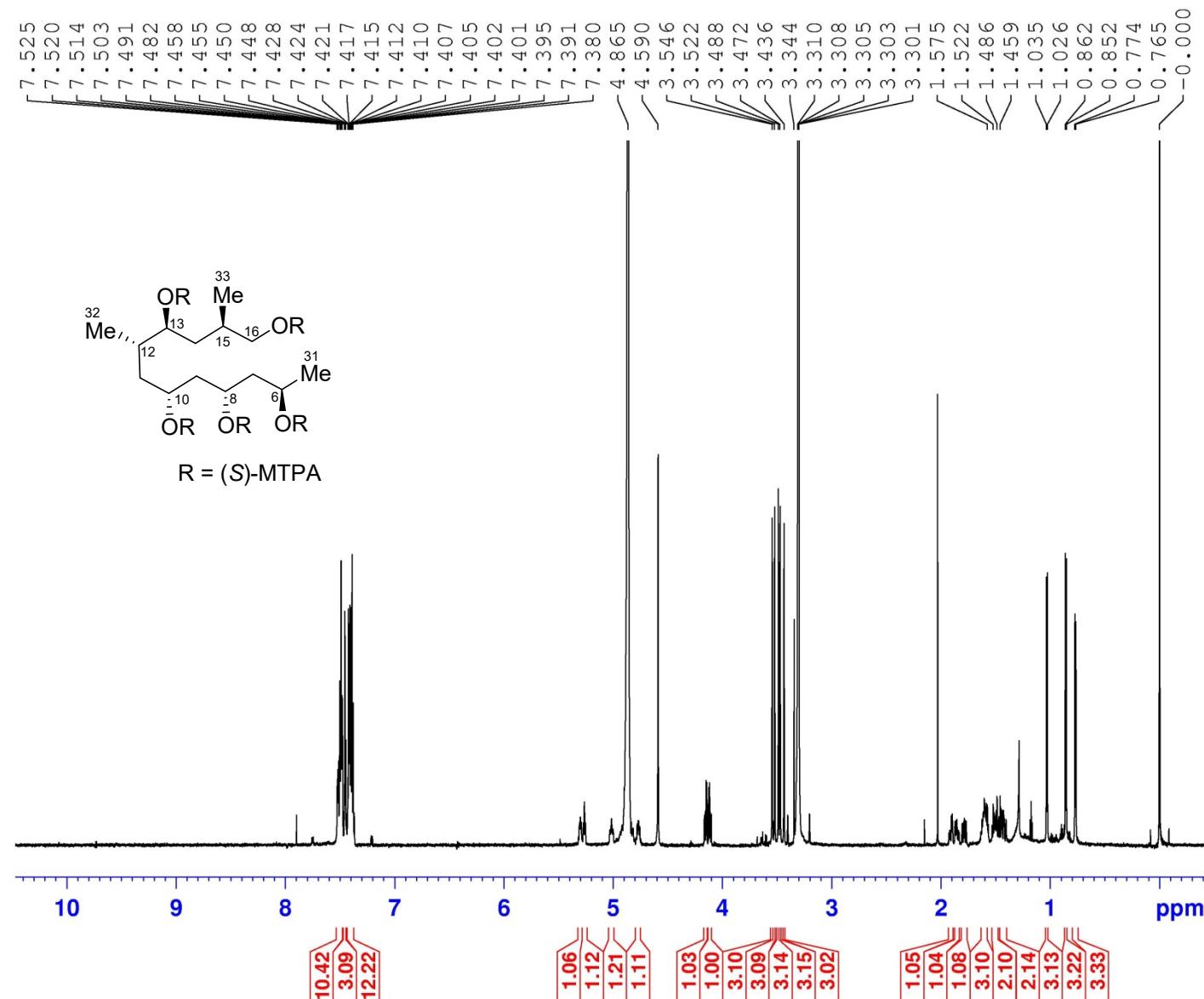
Generic Display Report

Analysis Info

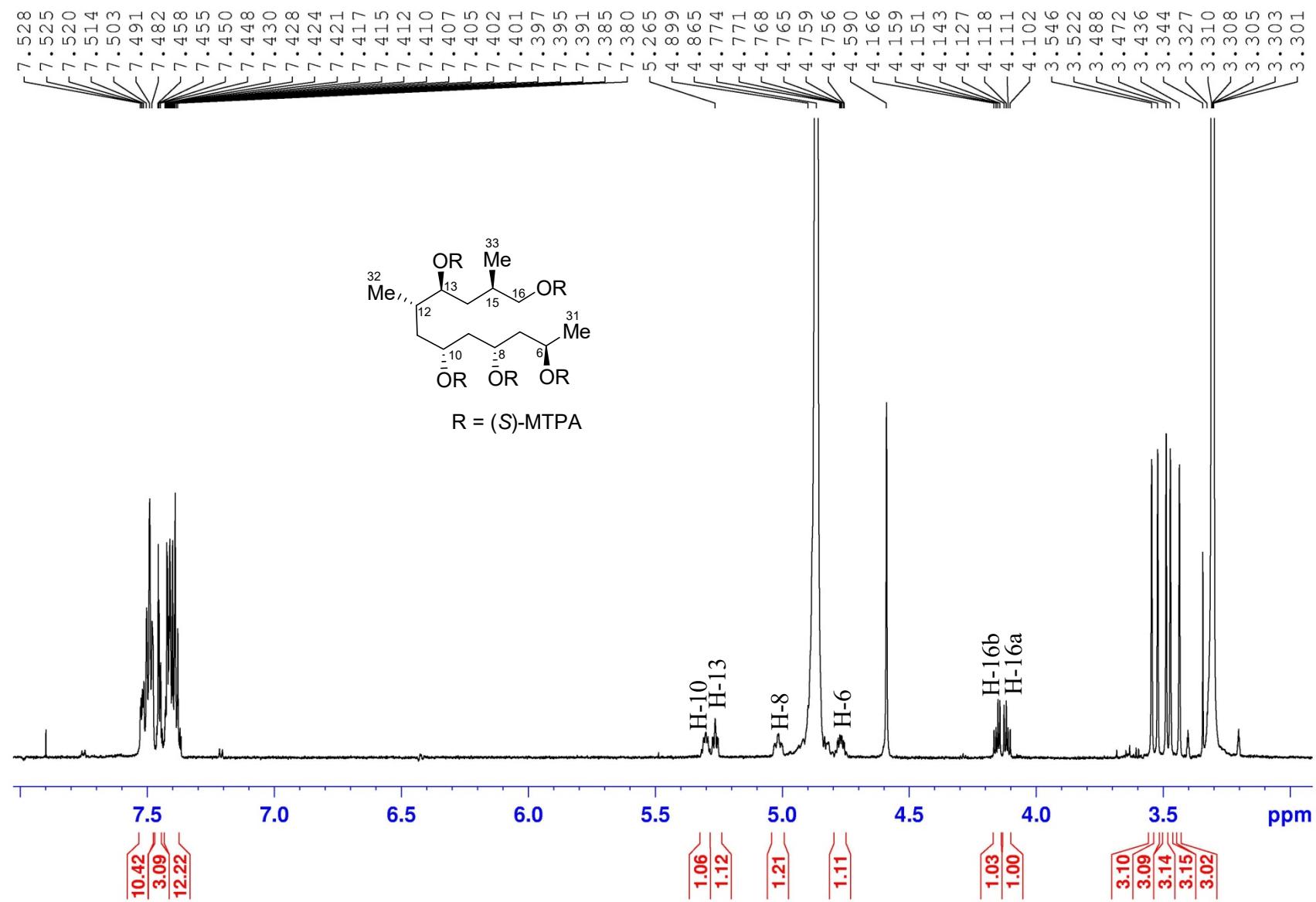
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Method 2316.m Operator bruker
Sample Name jiangzhongping_37-1-O3-2-S-2 Instrument amaZon SL
Comment



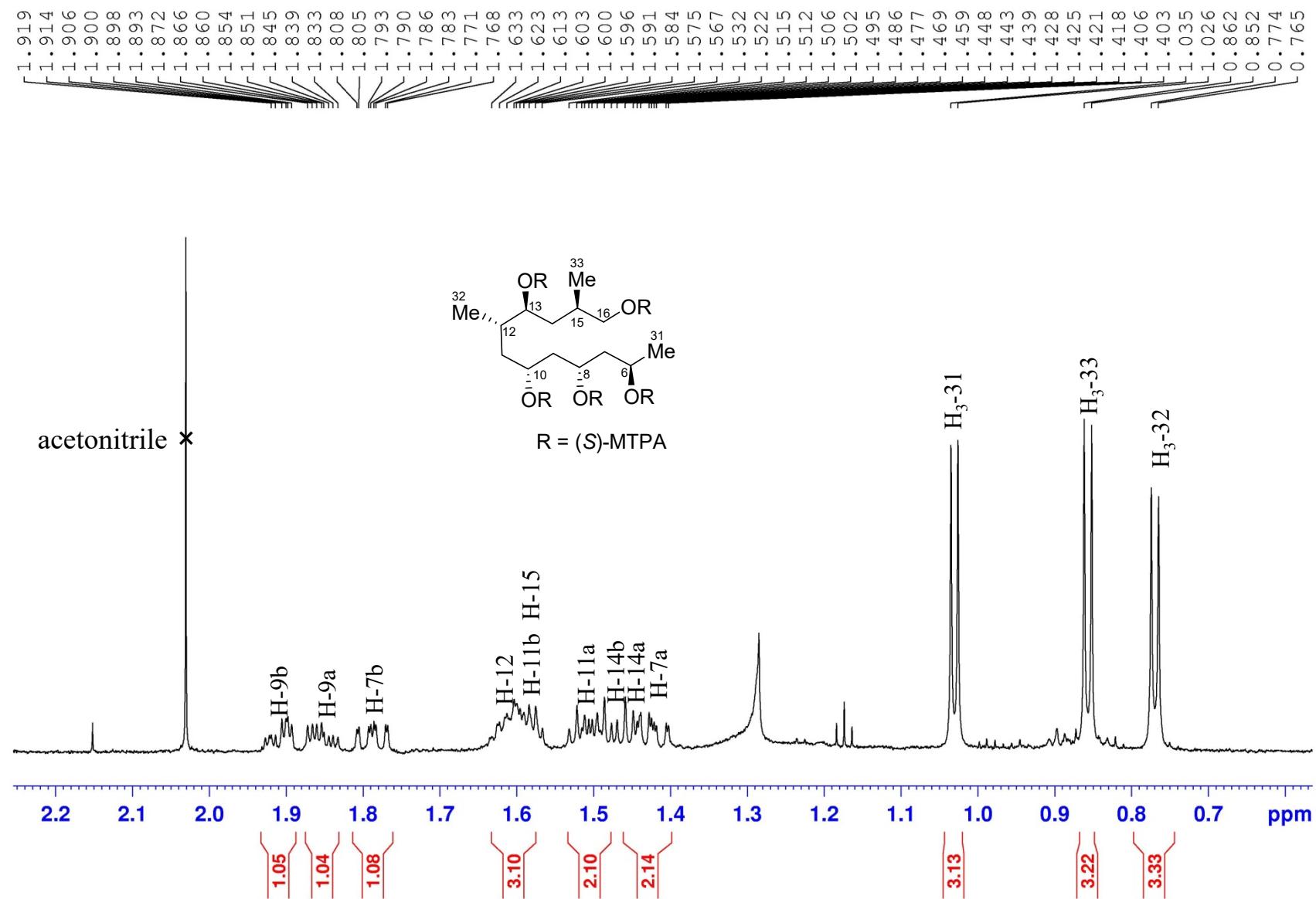
¹H (700 MHz) NMR spectrum of the fragment 1A's in CD₃OD



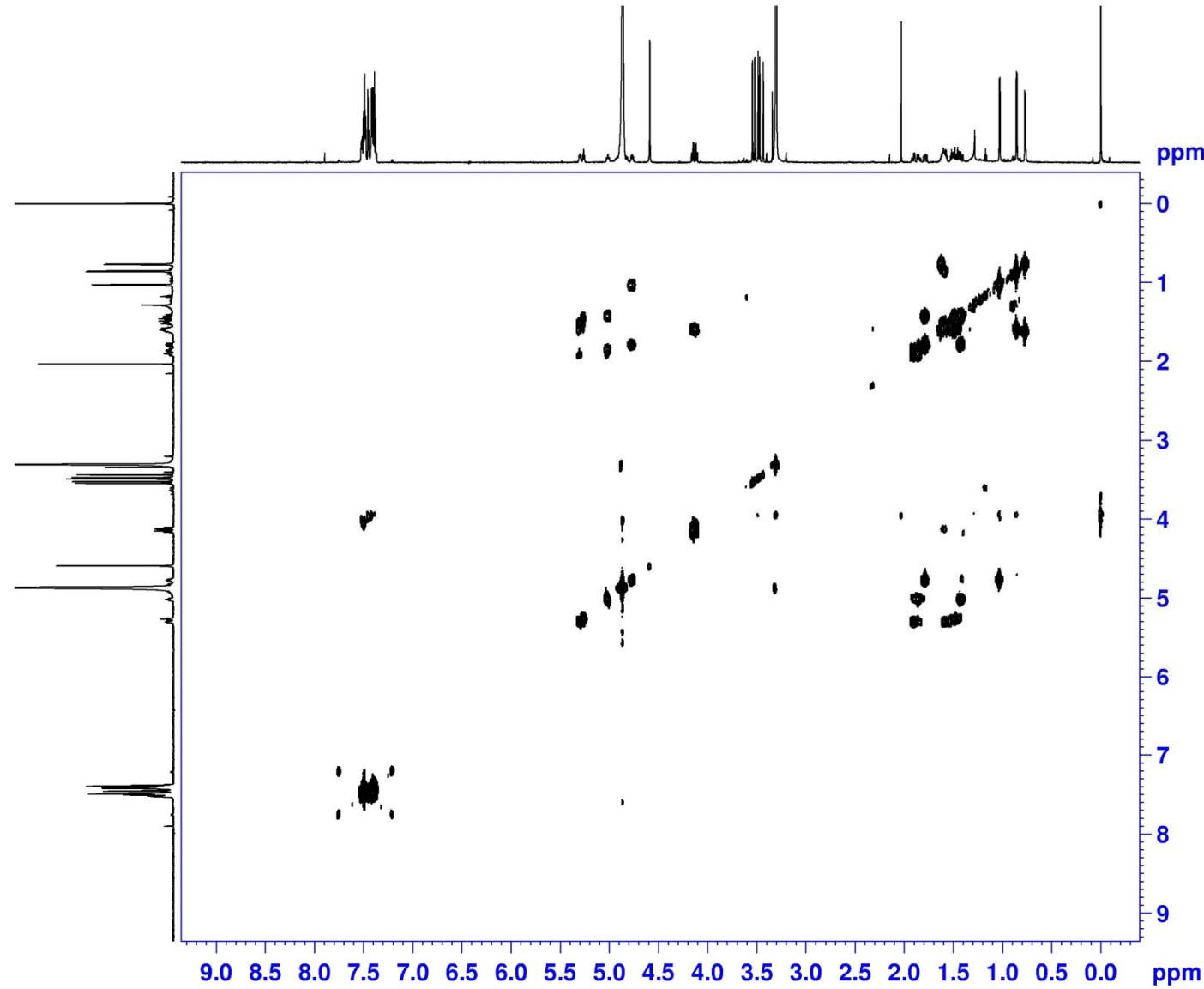
¹H (700 MHz) NMR spectrum of the fragment 1A's in CD₃OD



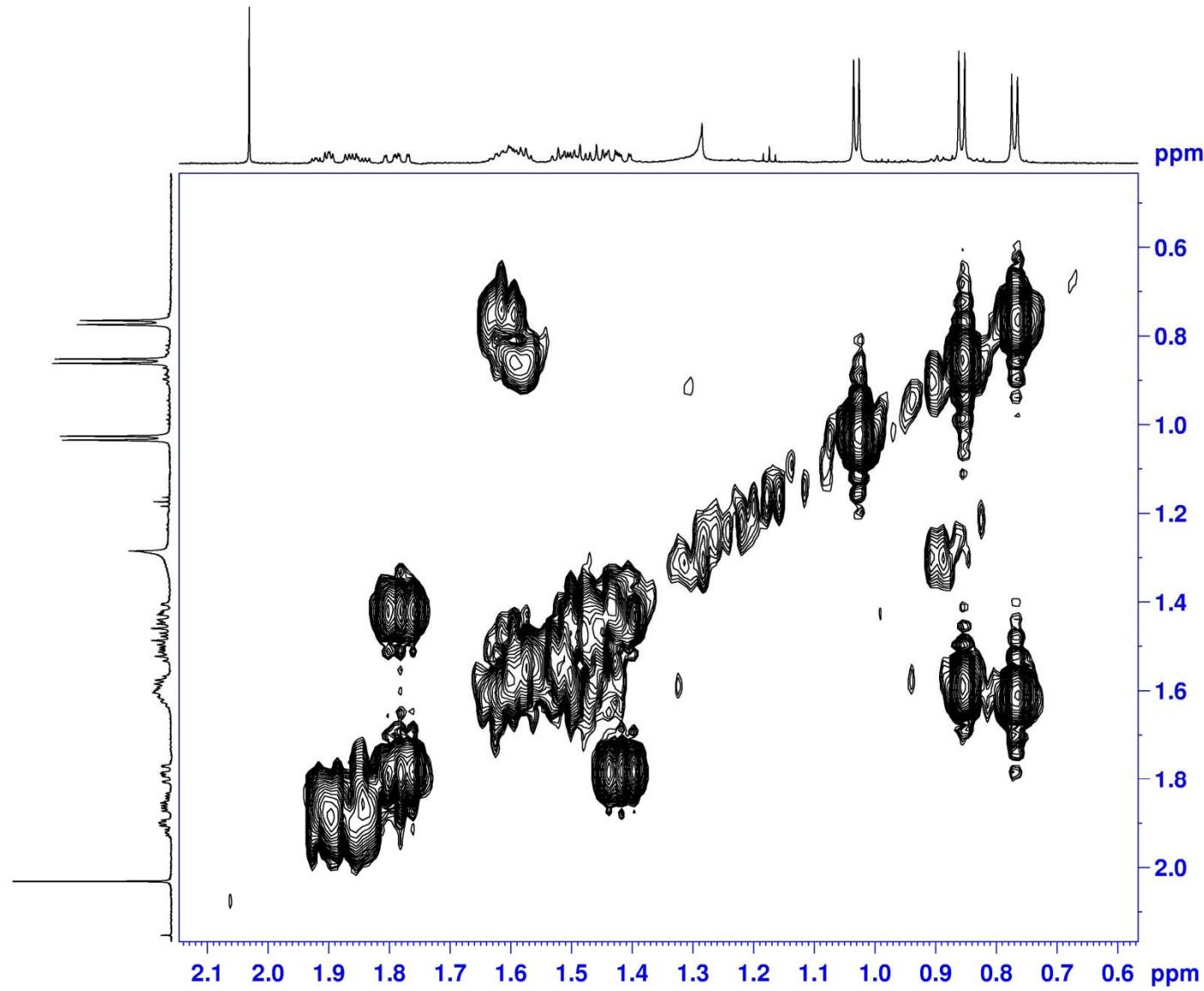
¹H (700 MHz) NMR spectrum of the fragment 1A's in CD₃OD



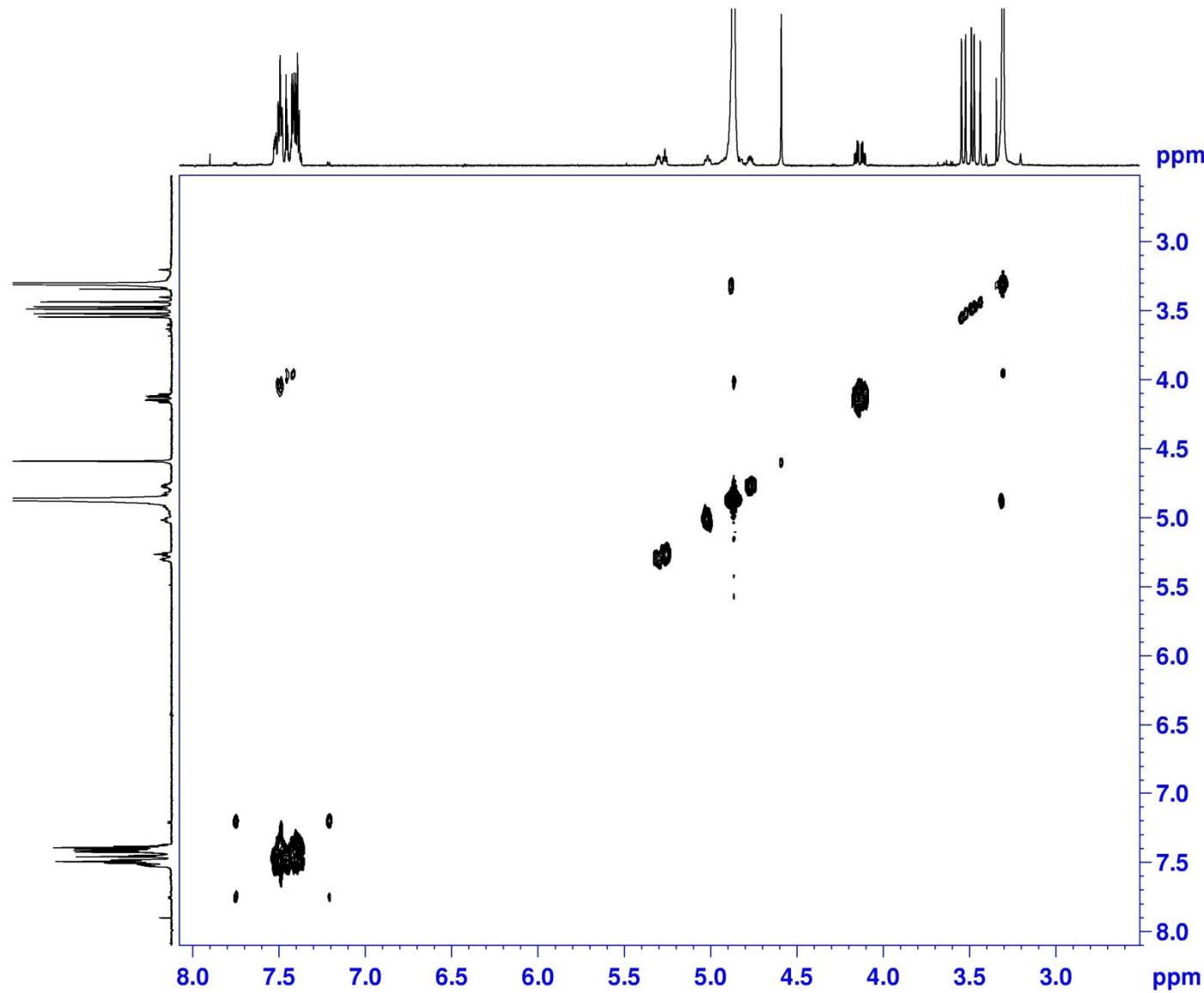
^1H - ^1H COSY (700 MHz) spectrum of the fragment **1A**'s in CD_3OD



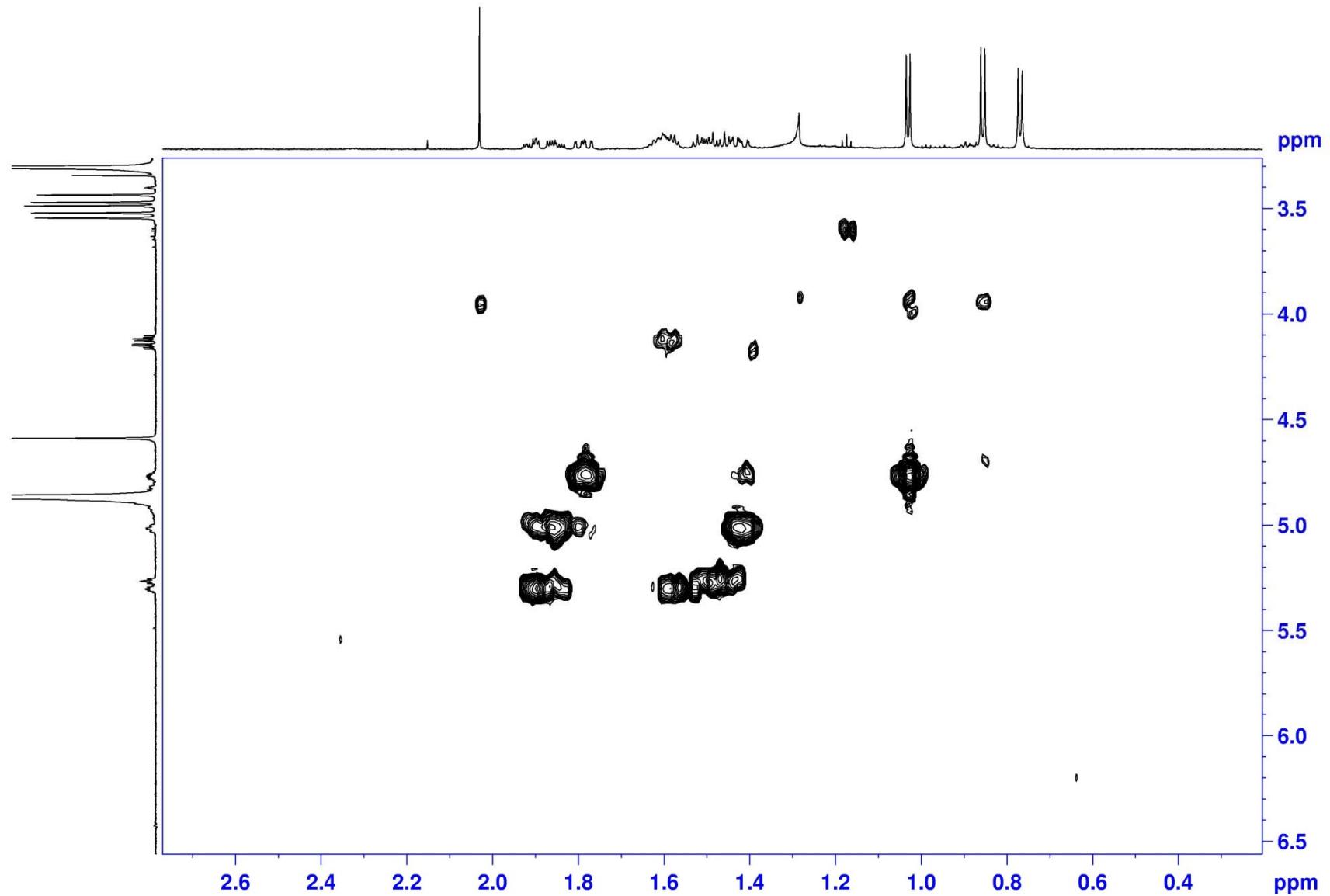
^1H - ^1H COSY (700 MHz) spectrum of the fragment **1A**'s in CD_3OD



^1H - ^1H COSY (700 MHz) spectrum of the fragment **1A**'s in CD_3OD



^1H - ^1H COSY (700 MHz) spectrum of the fragment **1A**'s in CD_3OD



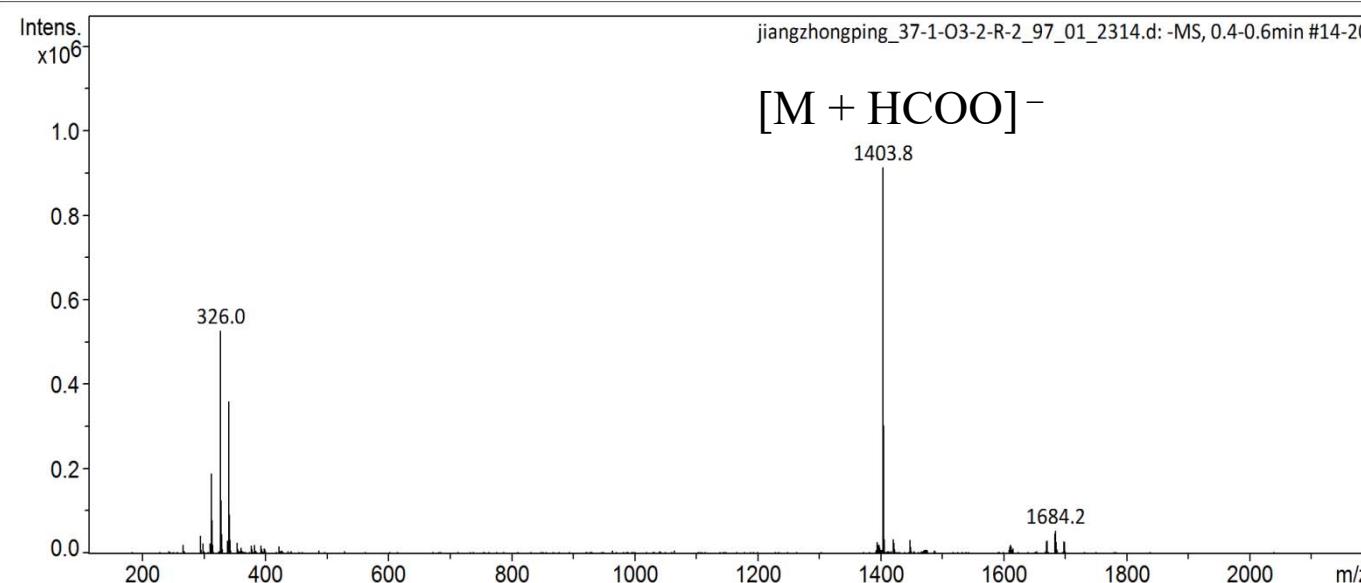
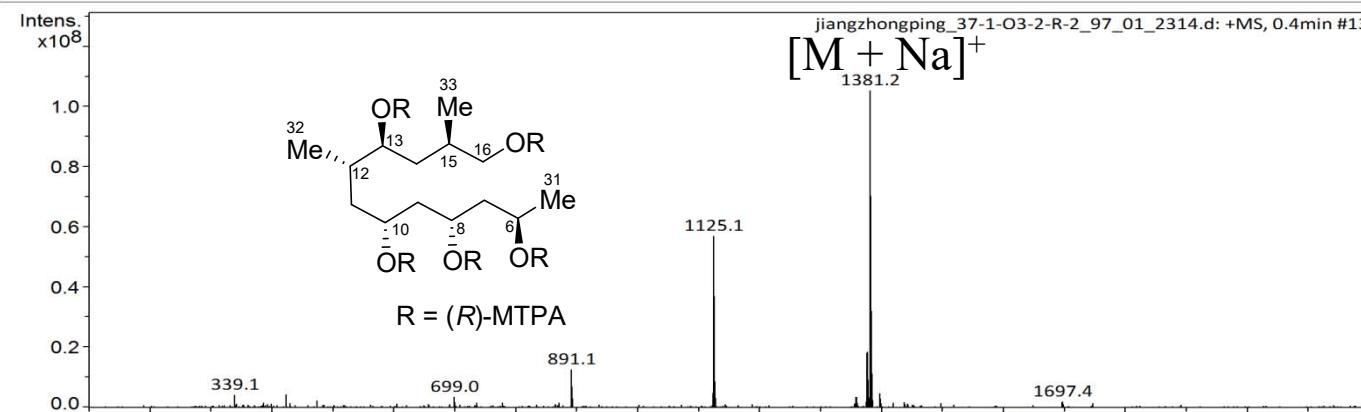
LR-ESIMS for the fragment 1A'r

Generic Display Report

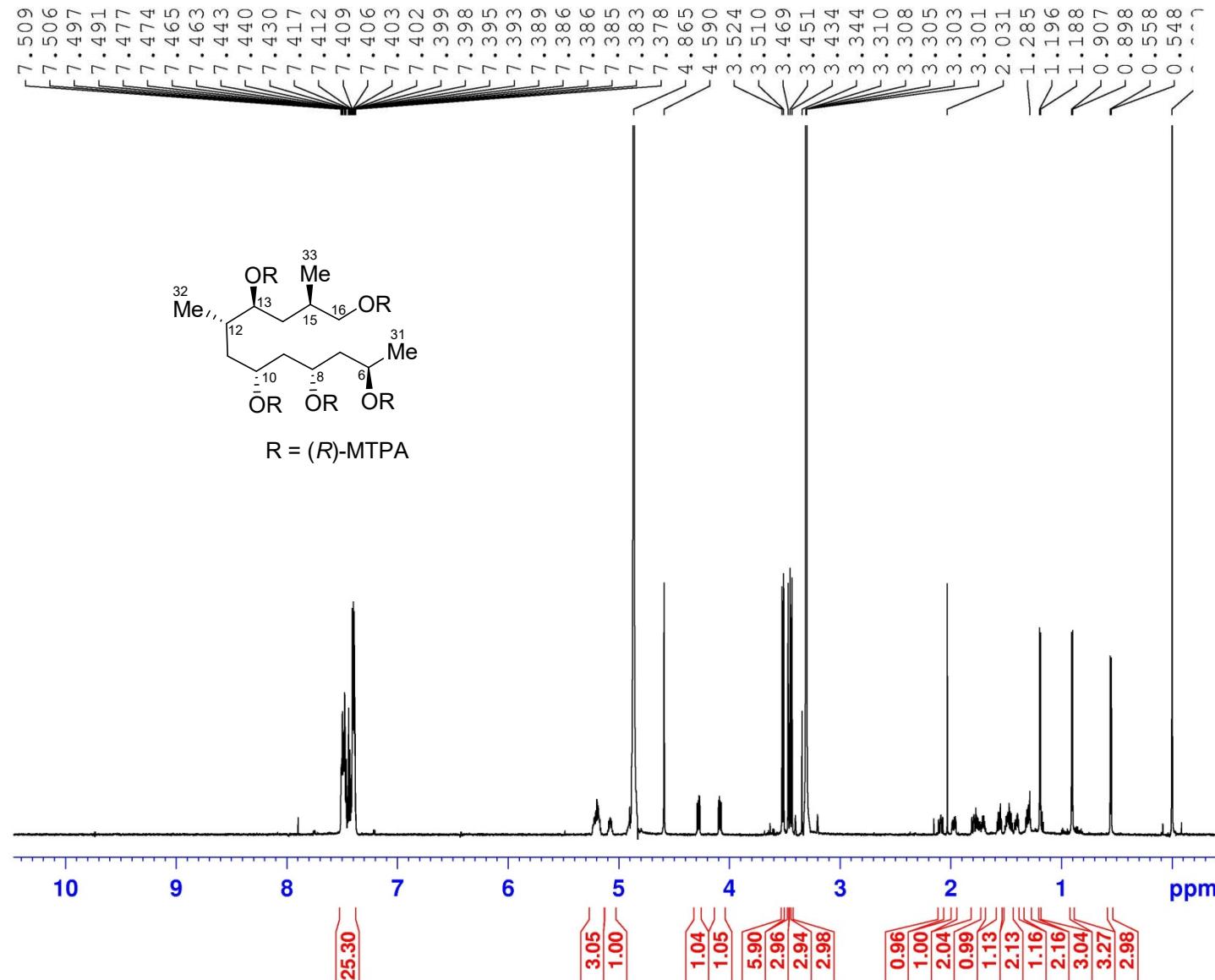
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Comment

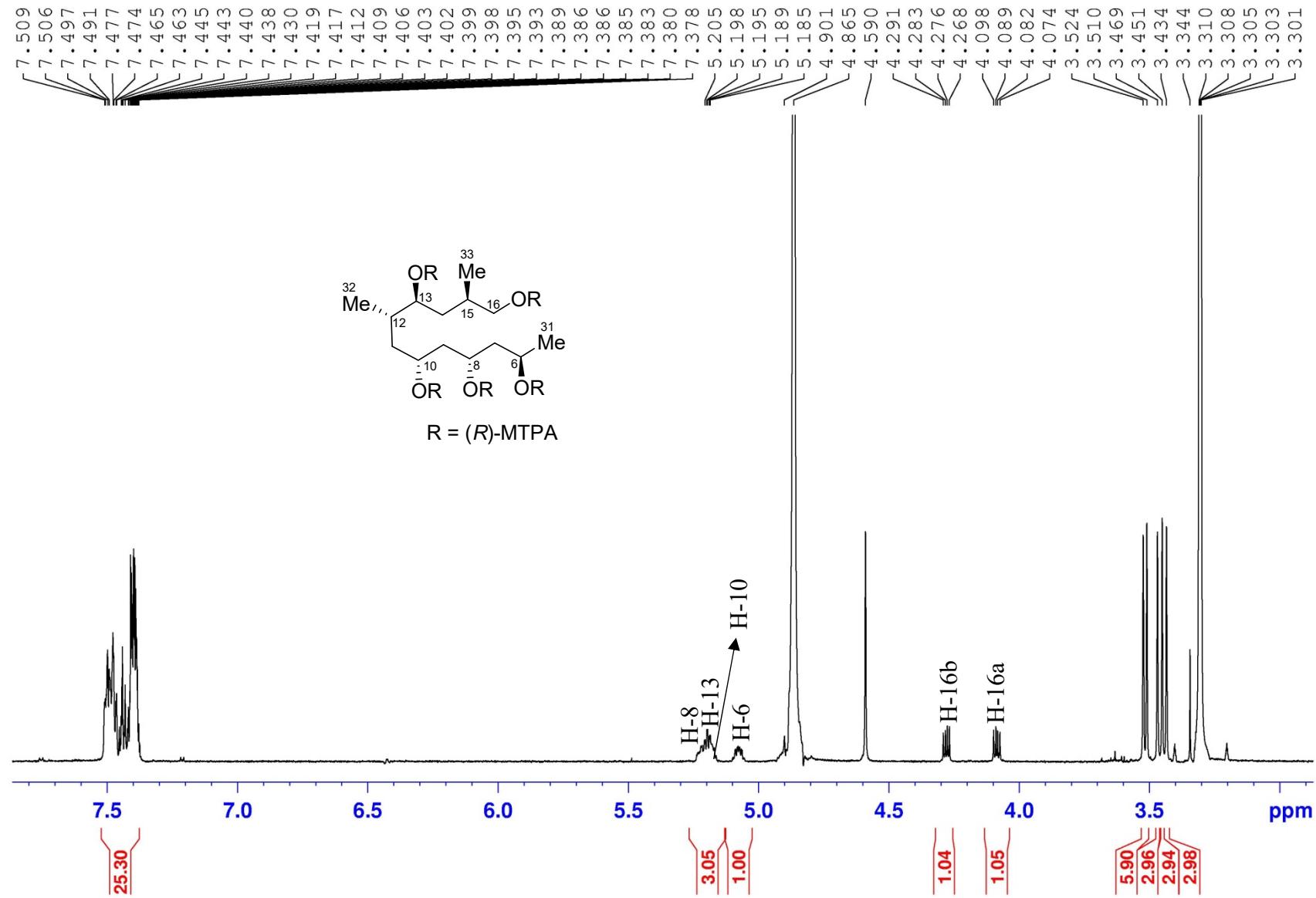
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Operator bruker
Instrument amaZon SL



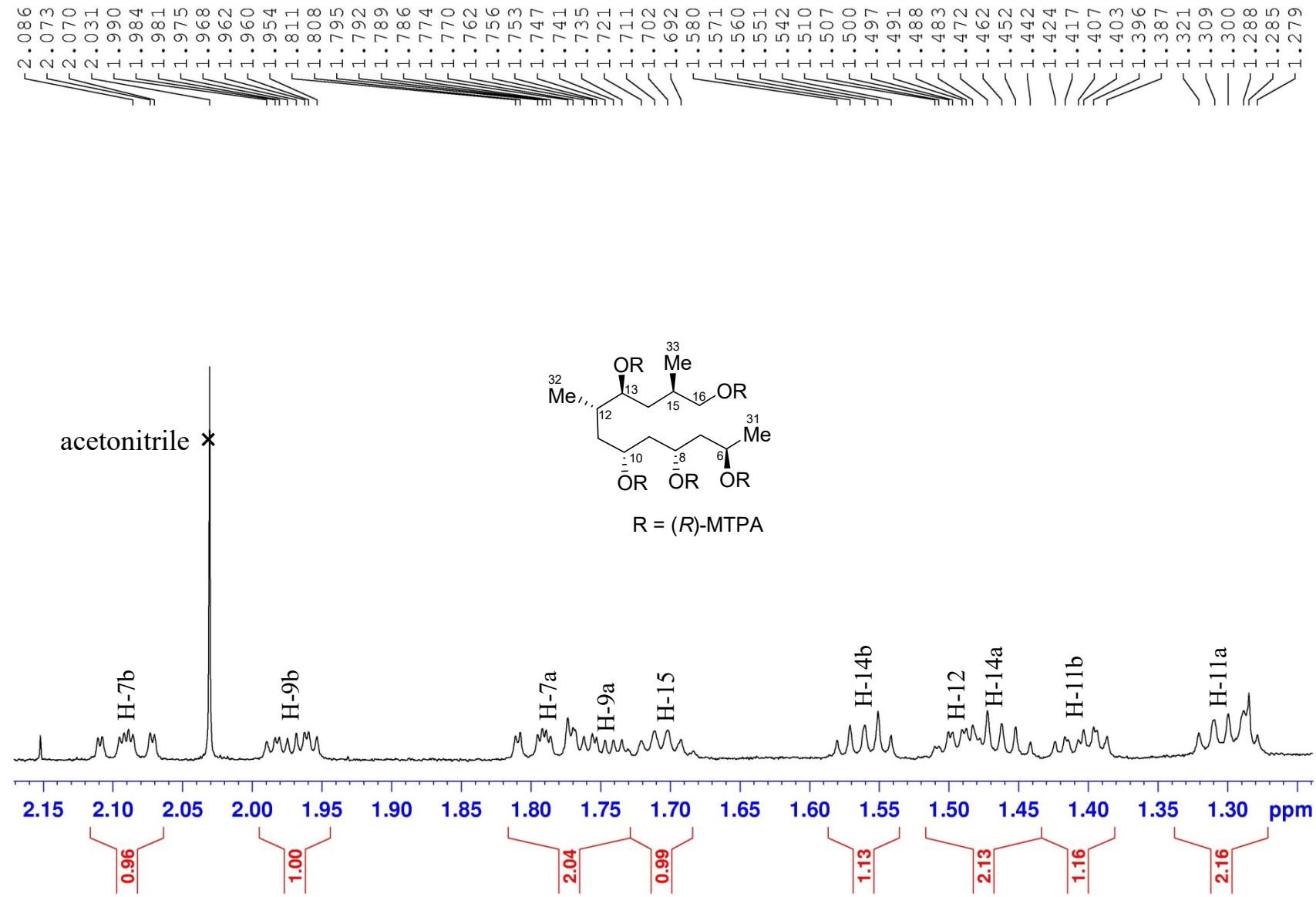
¹H (700 MHz) NMR spectrum of the fragment 1A'r in CD₃OD



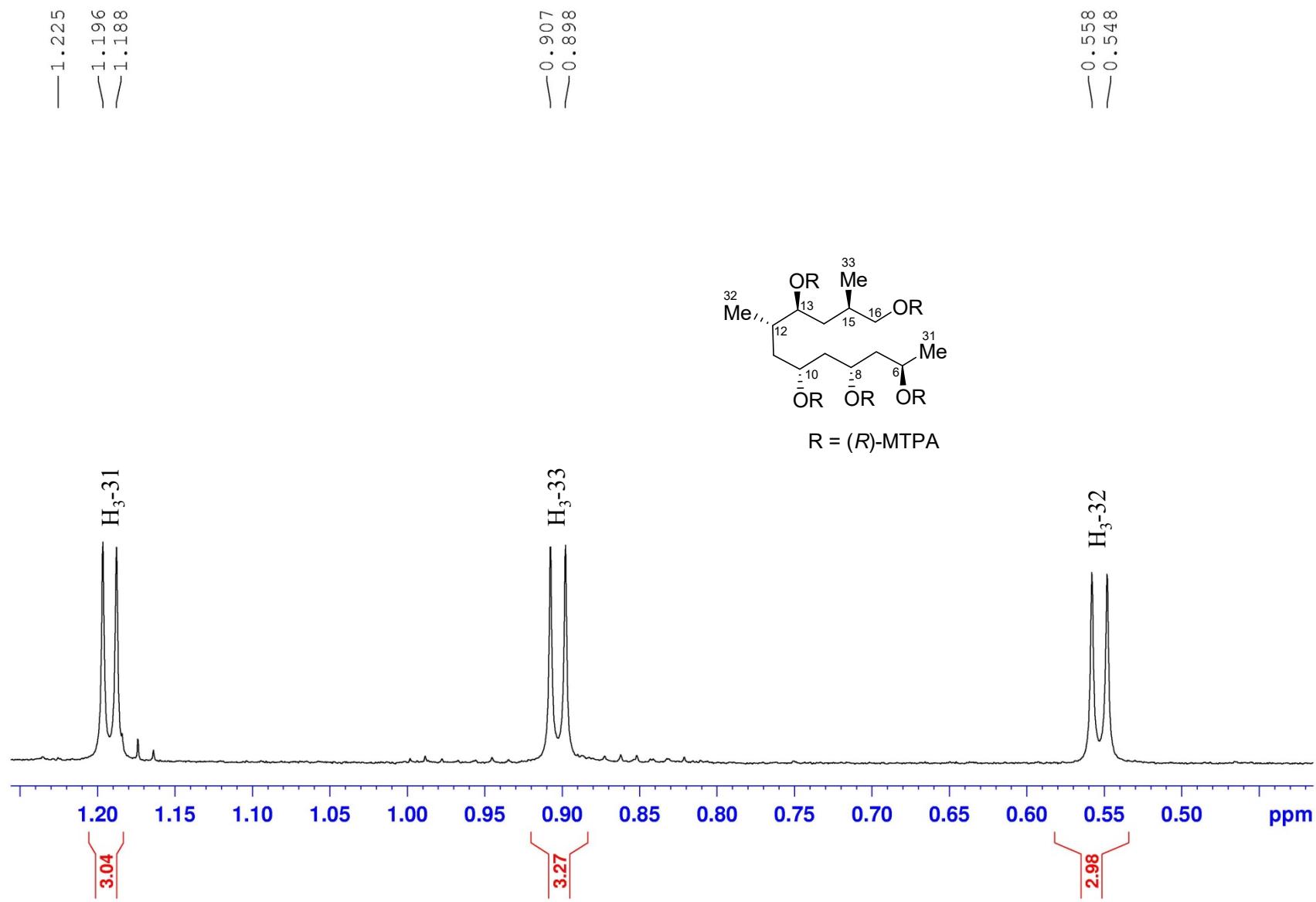
¹H (700 MHz) NMR spectrum of the fragment 1A'r in CD₃OD



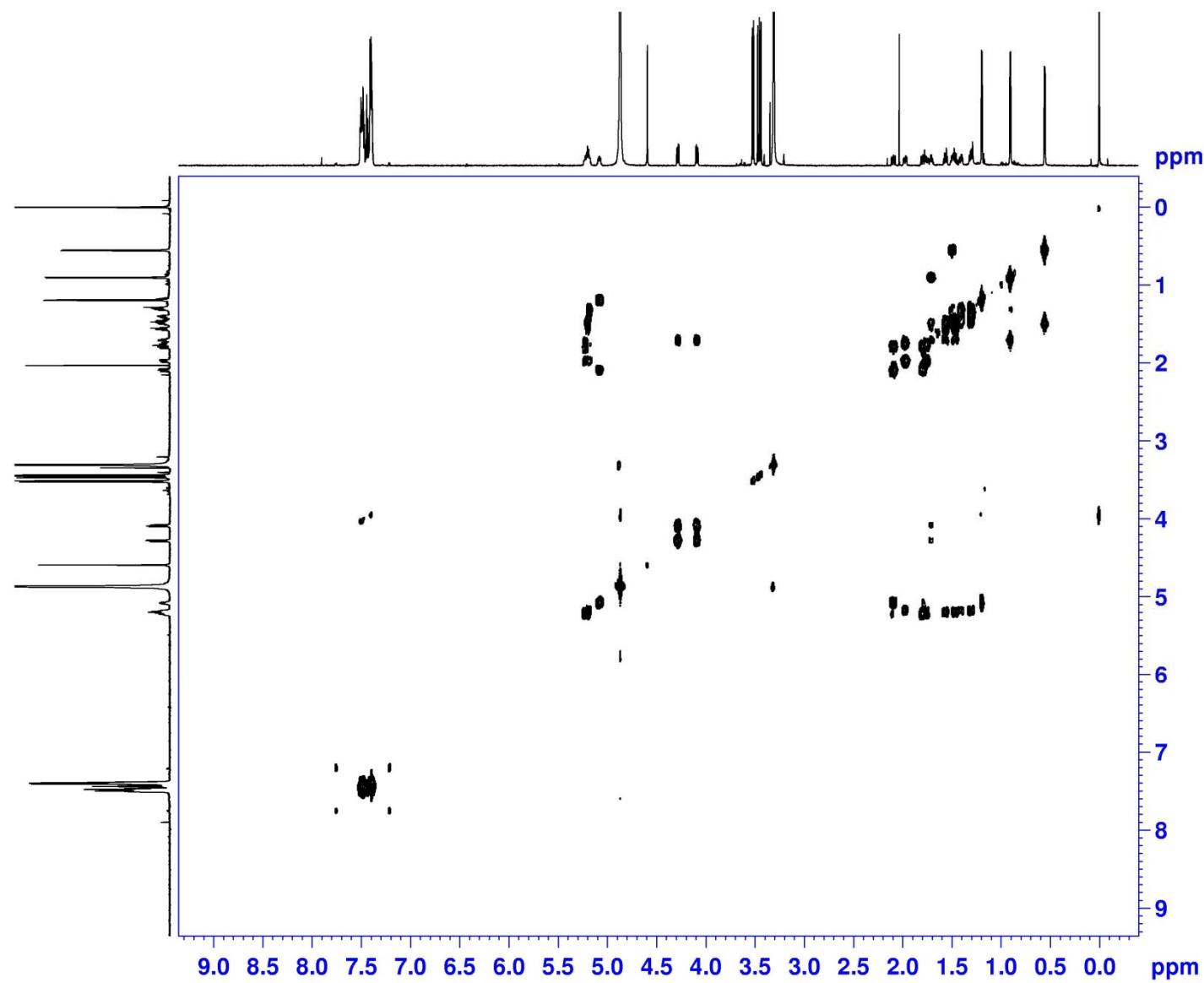
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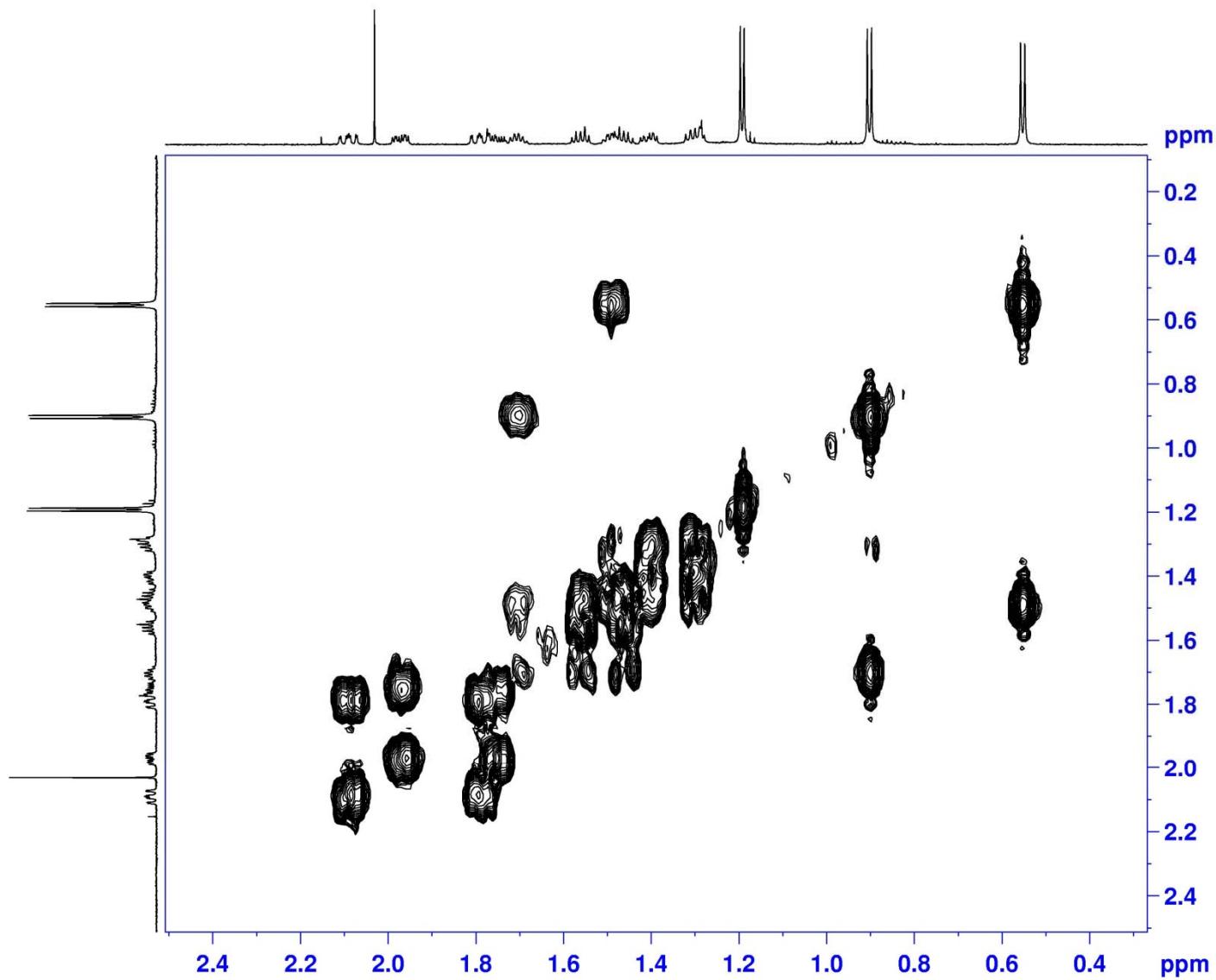
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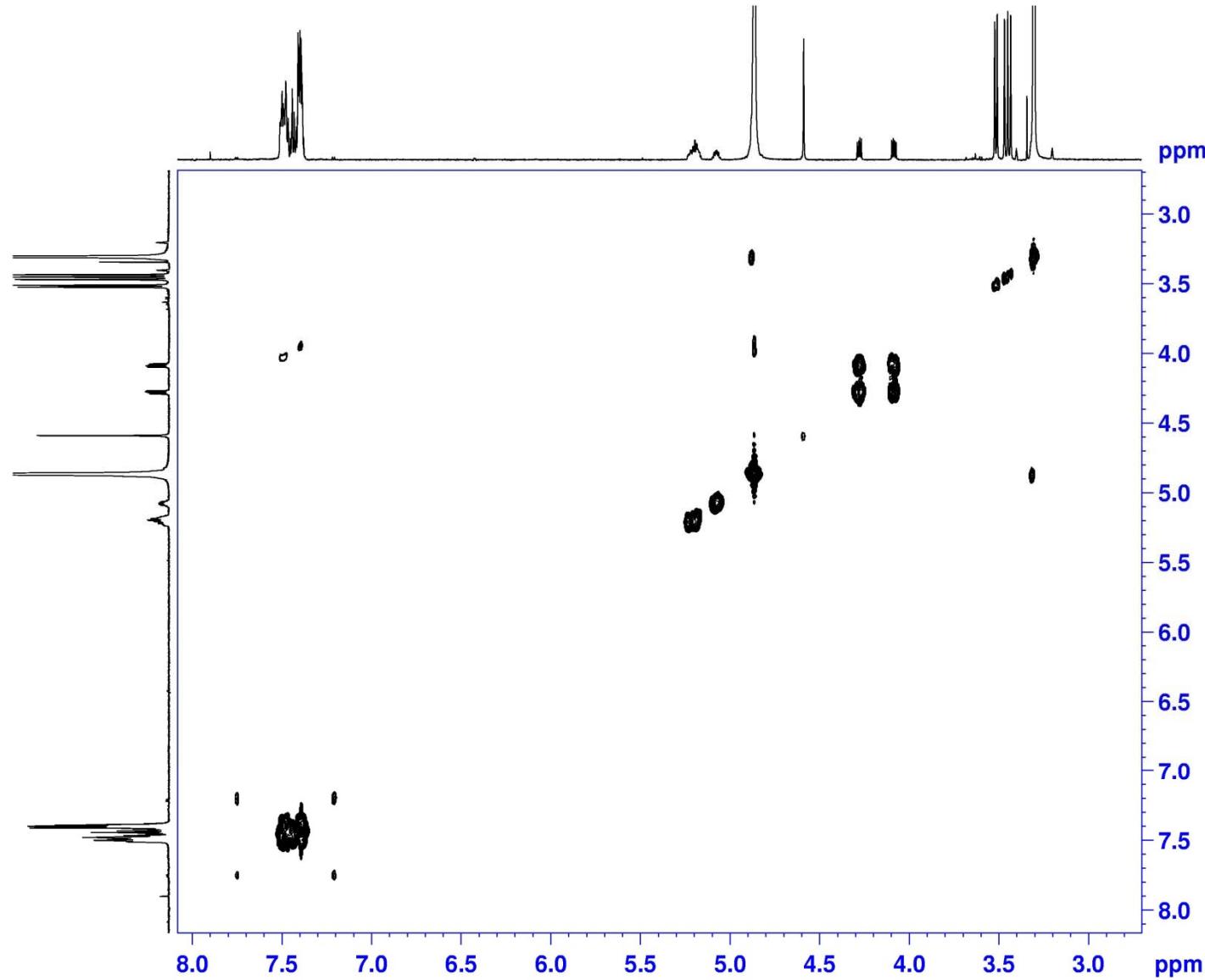
^1H - ^1H COSY (700 MHz) spectrum of the fragment **1A'r** in CD_3OD



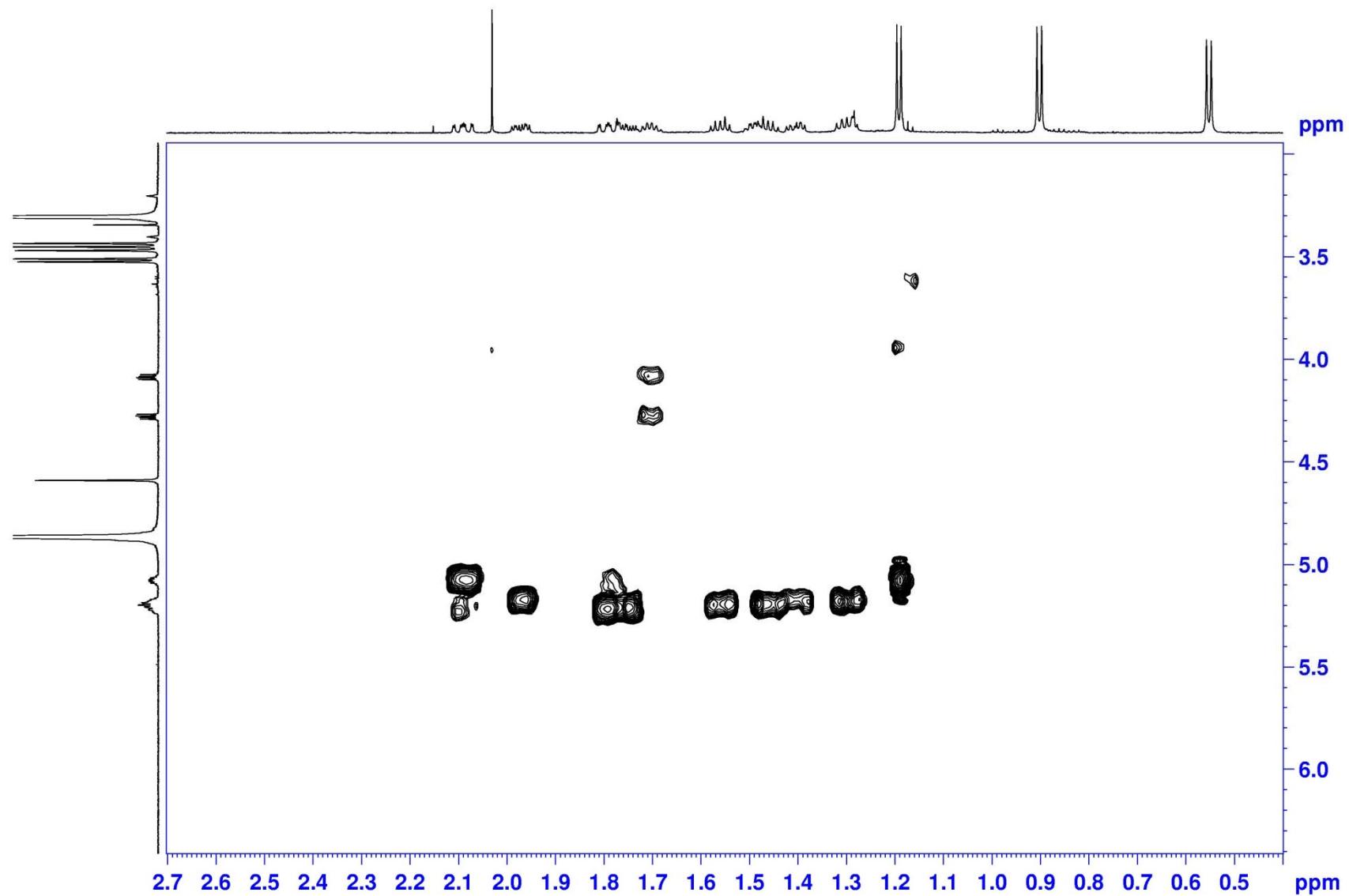
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^1H - ^1H COSY (700 MHz) spectrum of the fragment **1A'r** in CD_3OD



^1H - ^1H COSY (700 MHz) spectrum of the fragment **1A'r** in CD_3OD



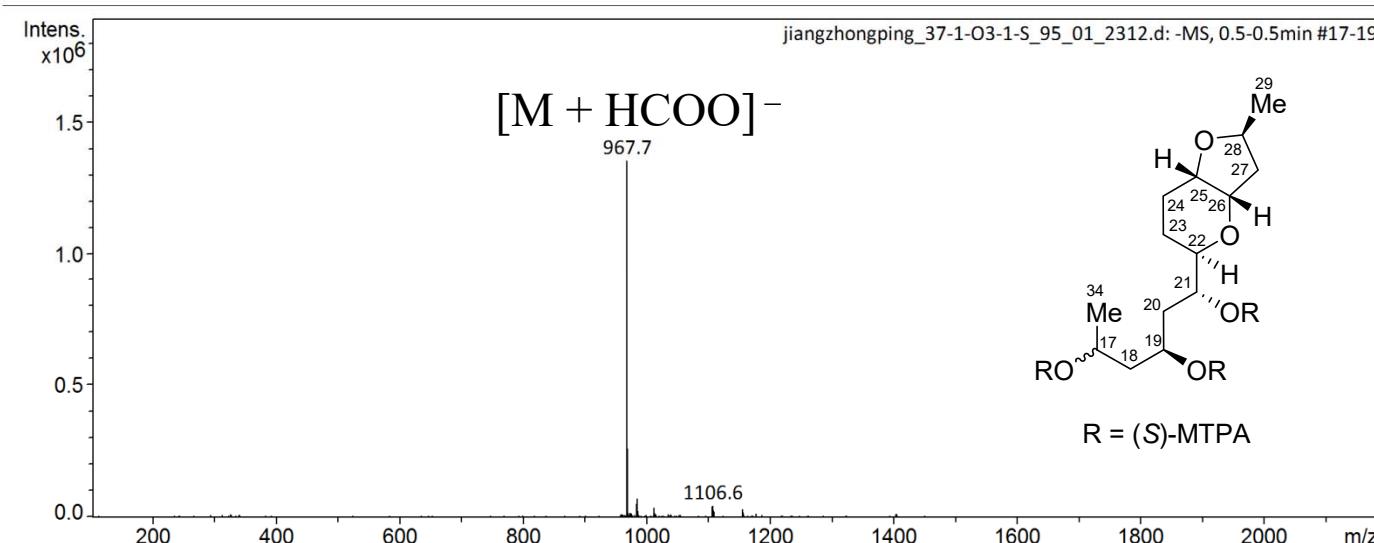
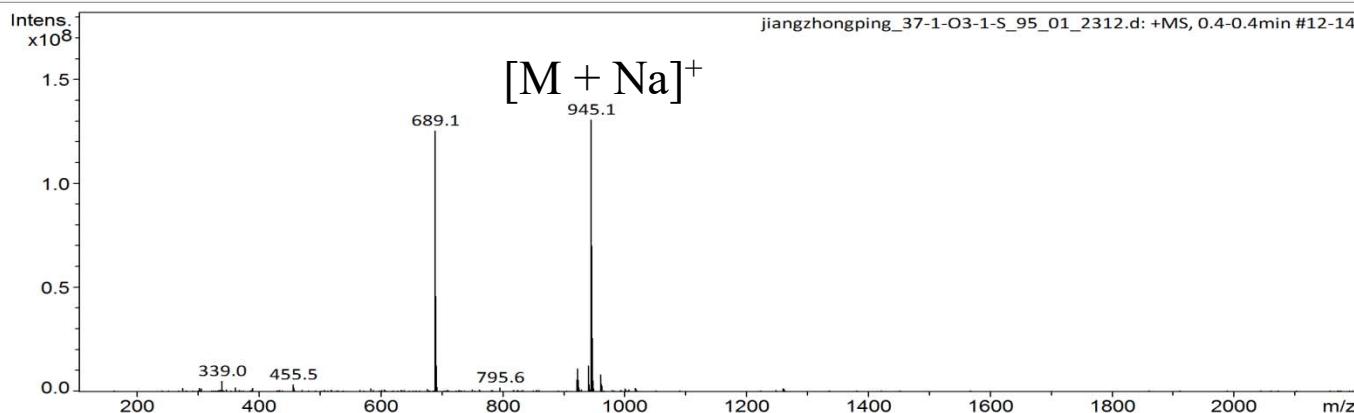
LR-ESIMS for fragments **1Bs**

Generic Display Report

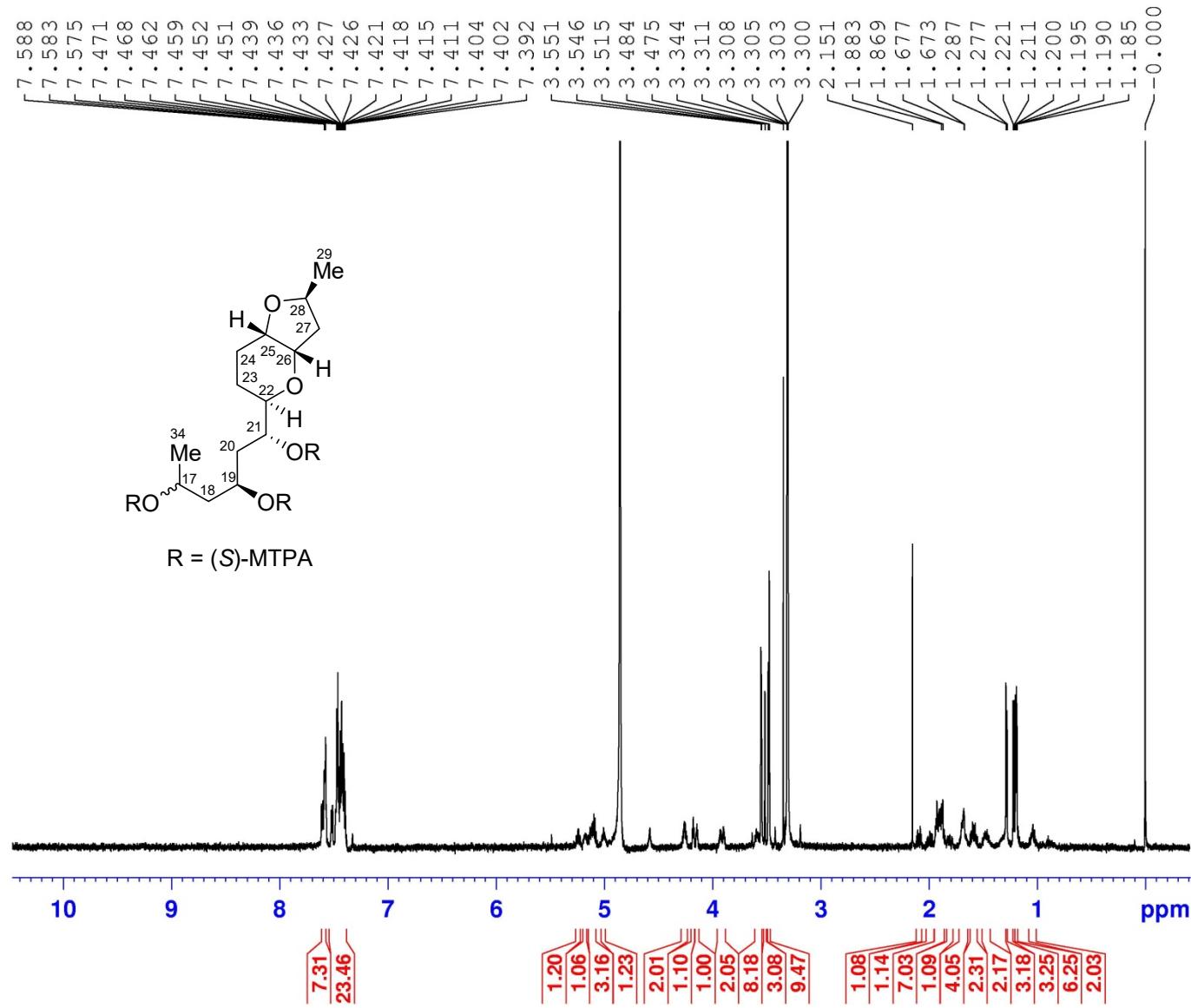
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Comment

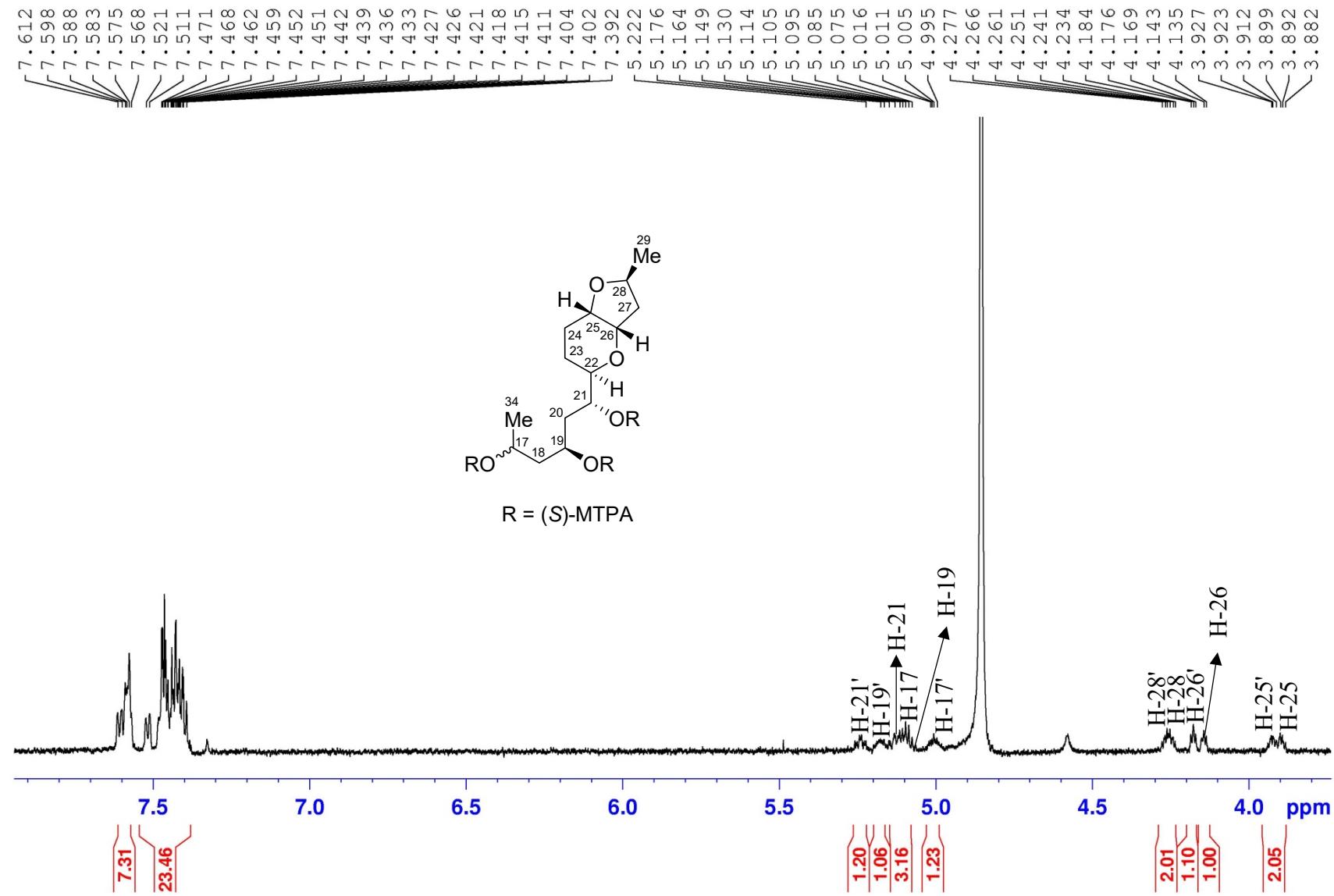
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Operator bruker
Instrument amaZon SL



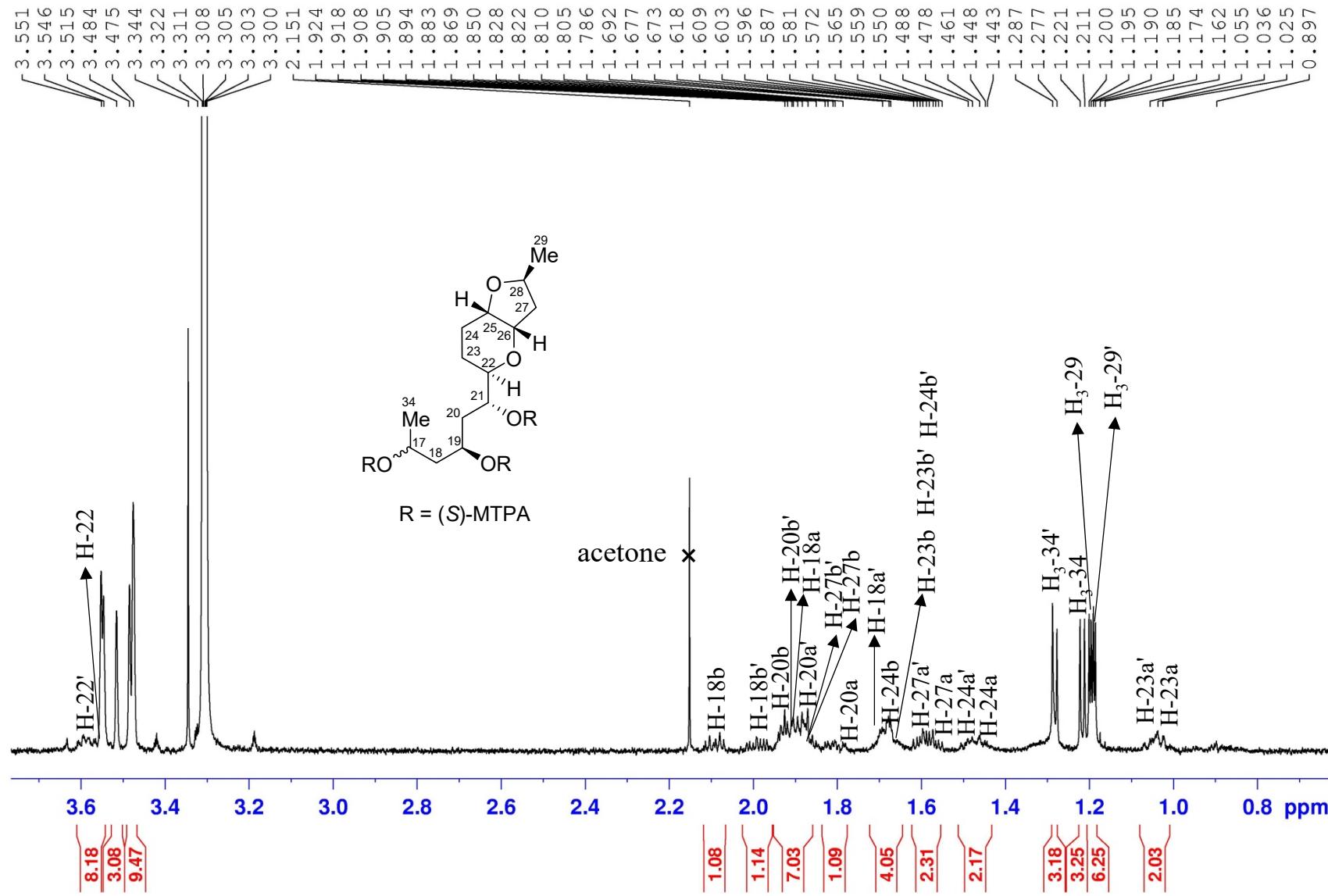
¹H (600 MHz) NMR spectrum of fragments **1Bs** in CD₃OD



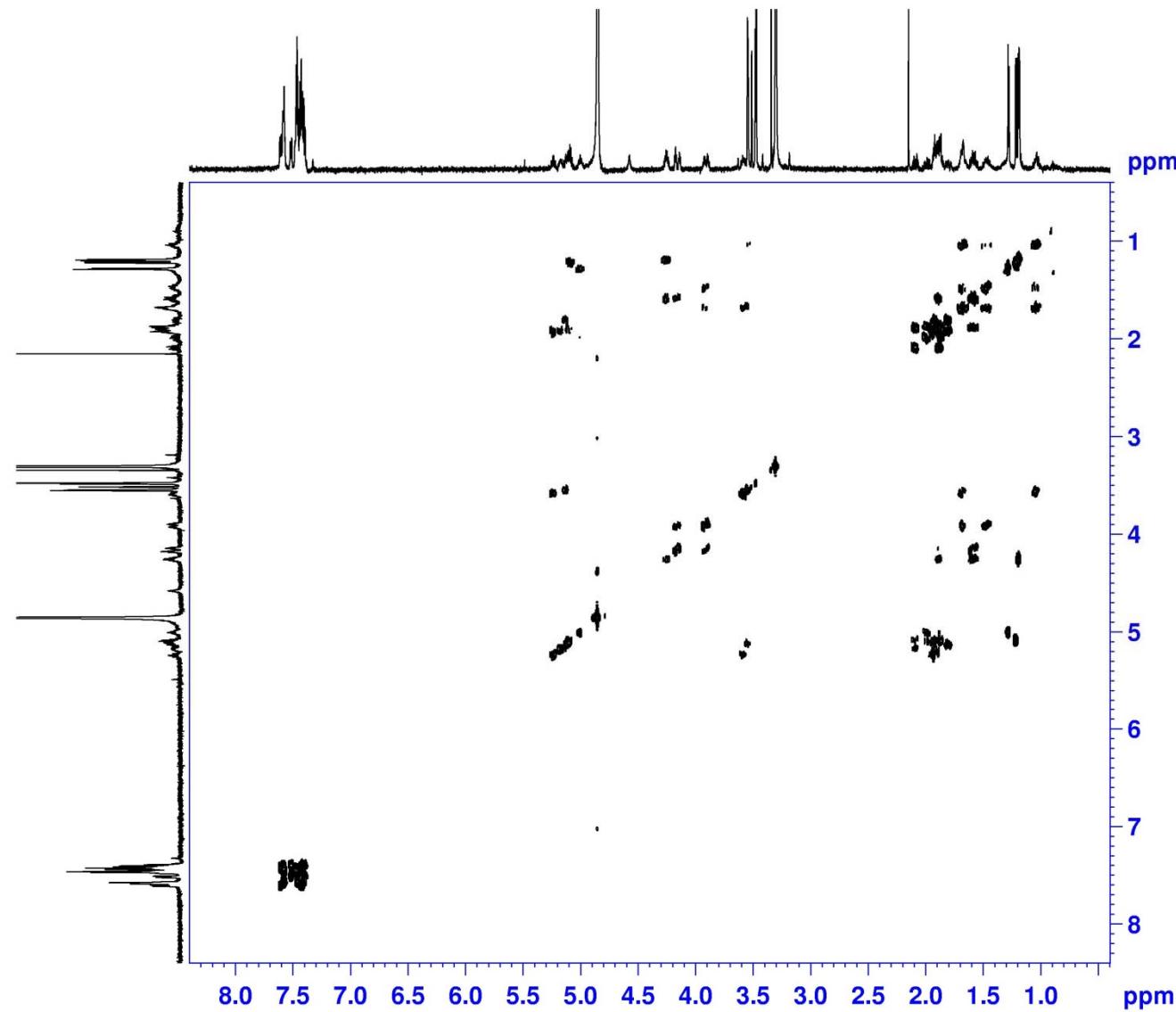
¹H (600 MHz) NMR spectrum of fragments **1Bs** in CD₃OD



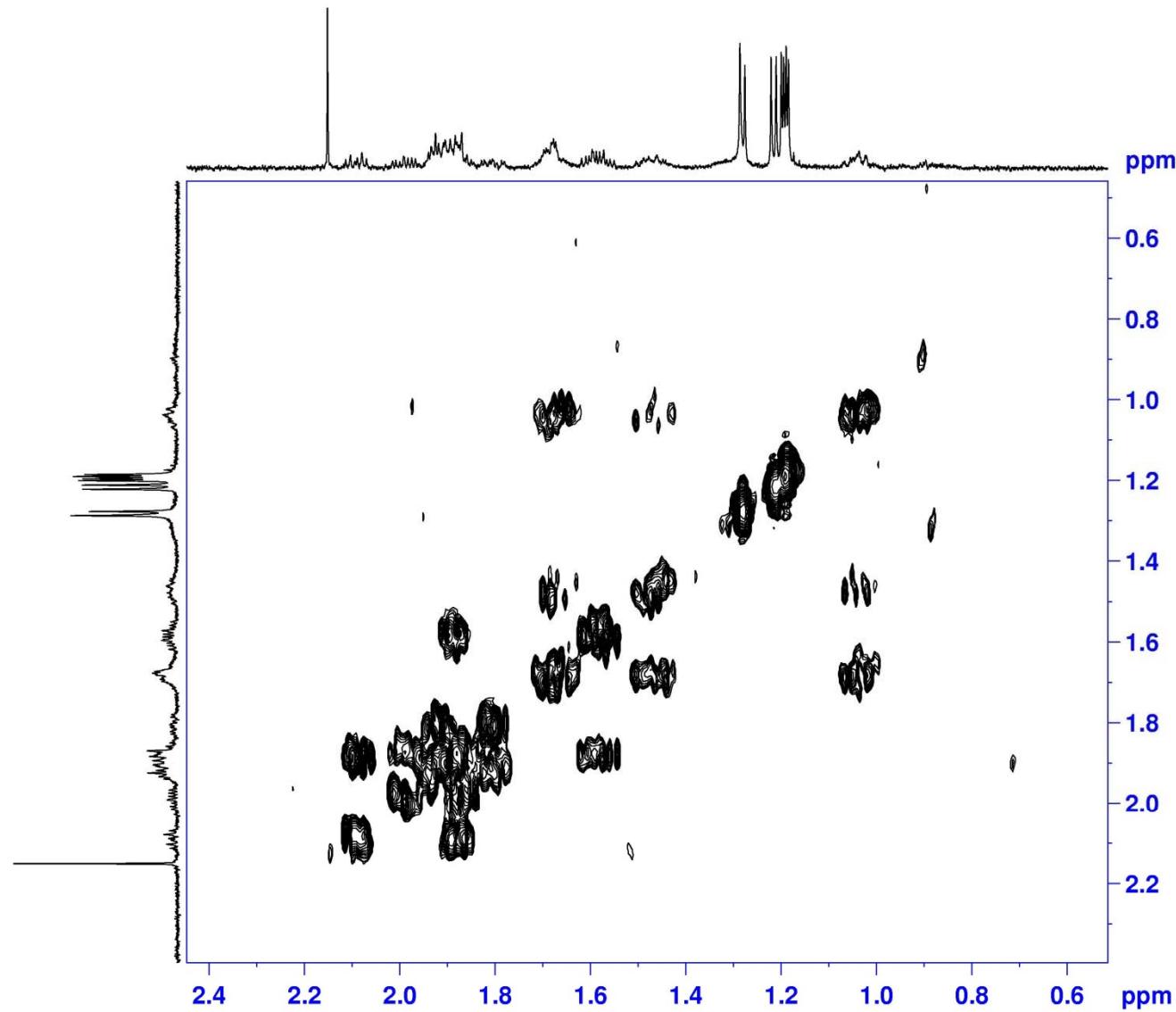
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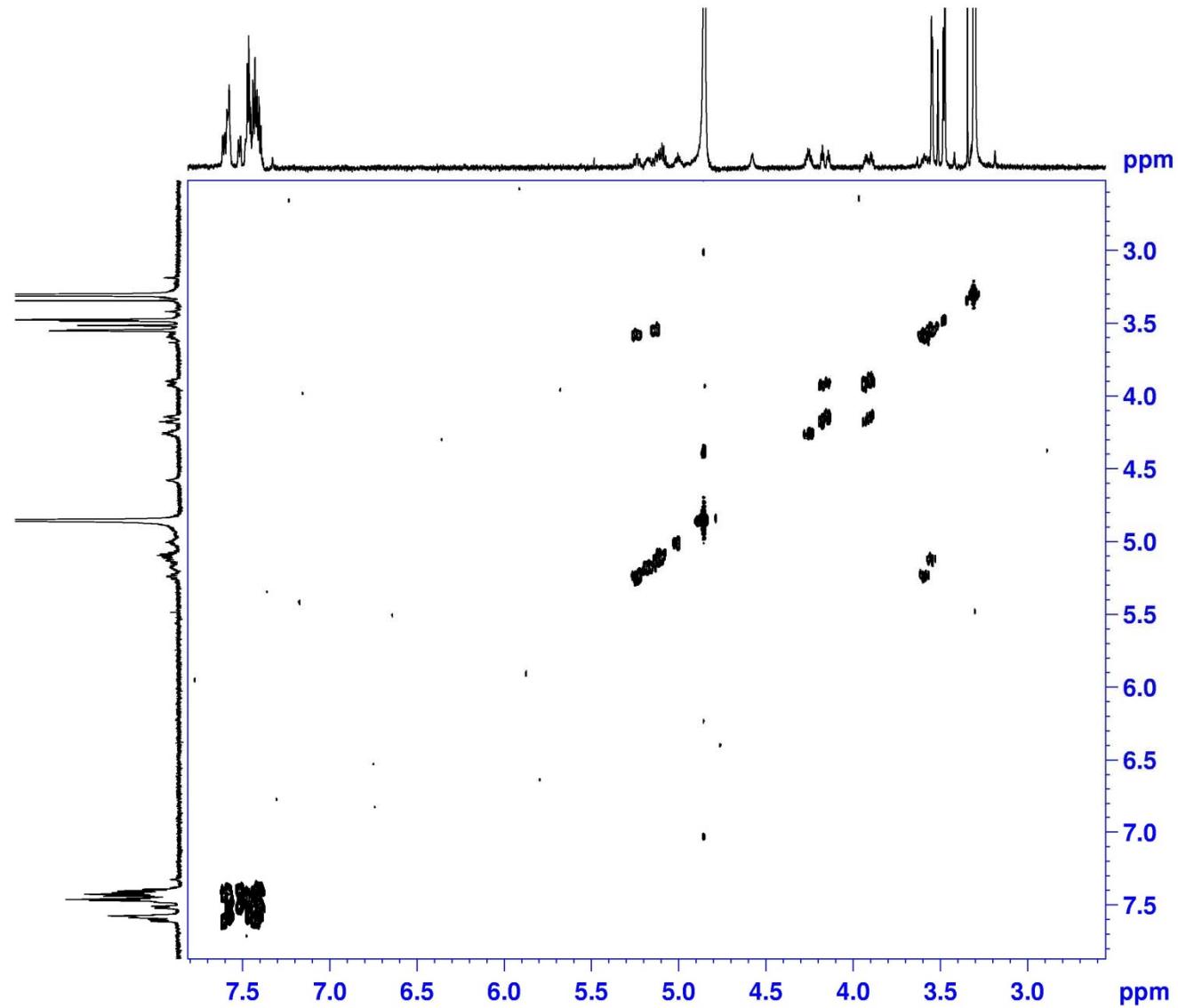
^1H - ^1H COSY (600 MHz) spectrum of fragments **1Bs** in CD_3OD



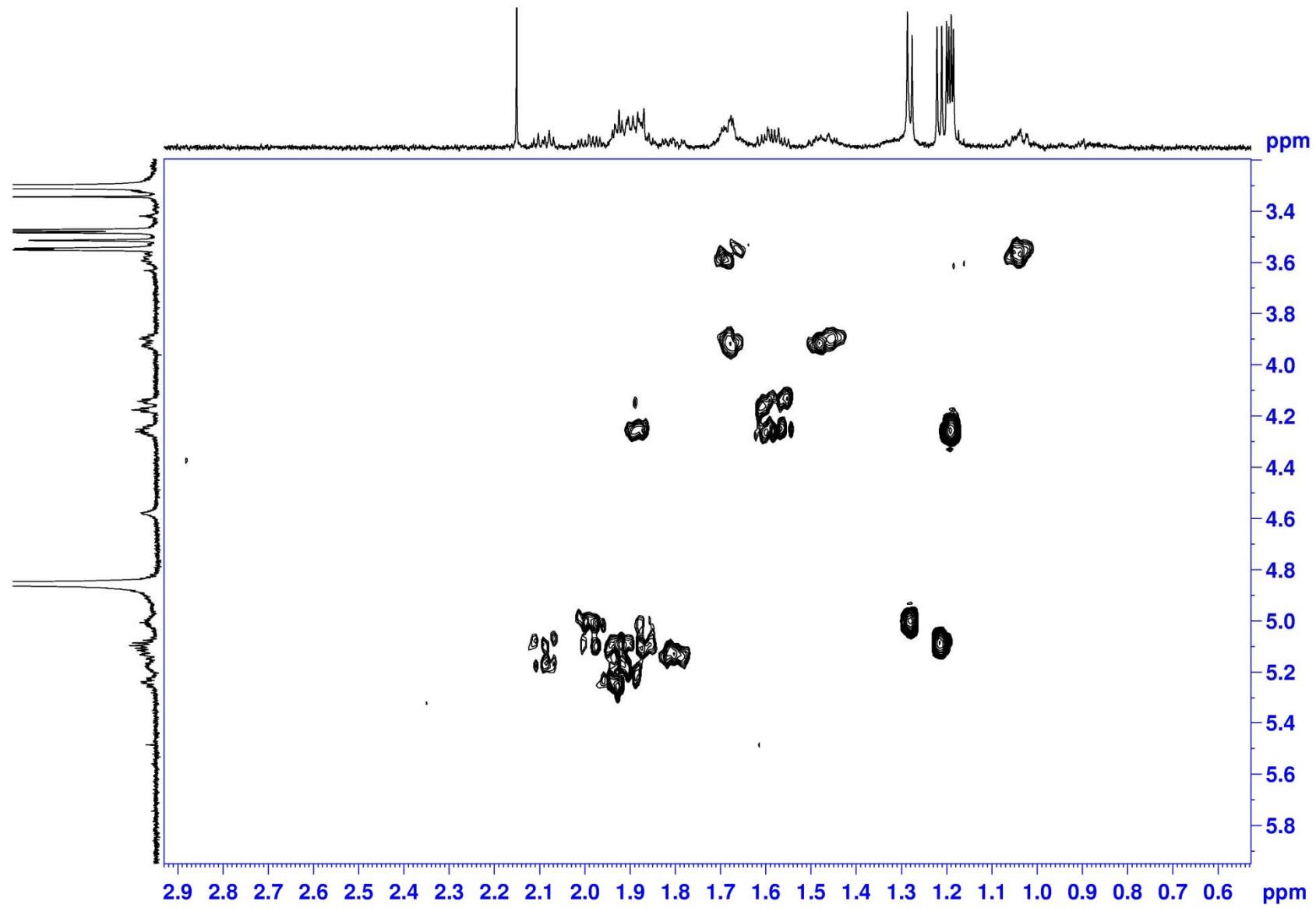
^1H - ^1H COSY (600 MHz) spectrum of fragments **1Bs** in CD_3OD



^1H - ^1H COSY (600 MHz) spectrum of fragments **1Bs** in CD_3OD



^1H - ^1H COSY (600 MHz) spectrum of fragments **1Bs** in CD_3OD



LR-ESIMS for fragments **1Br**

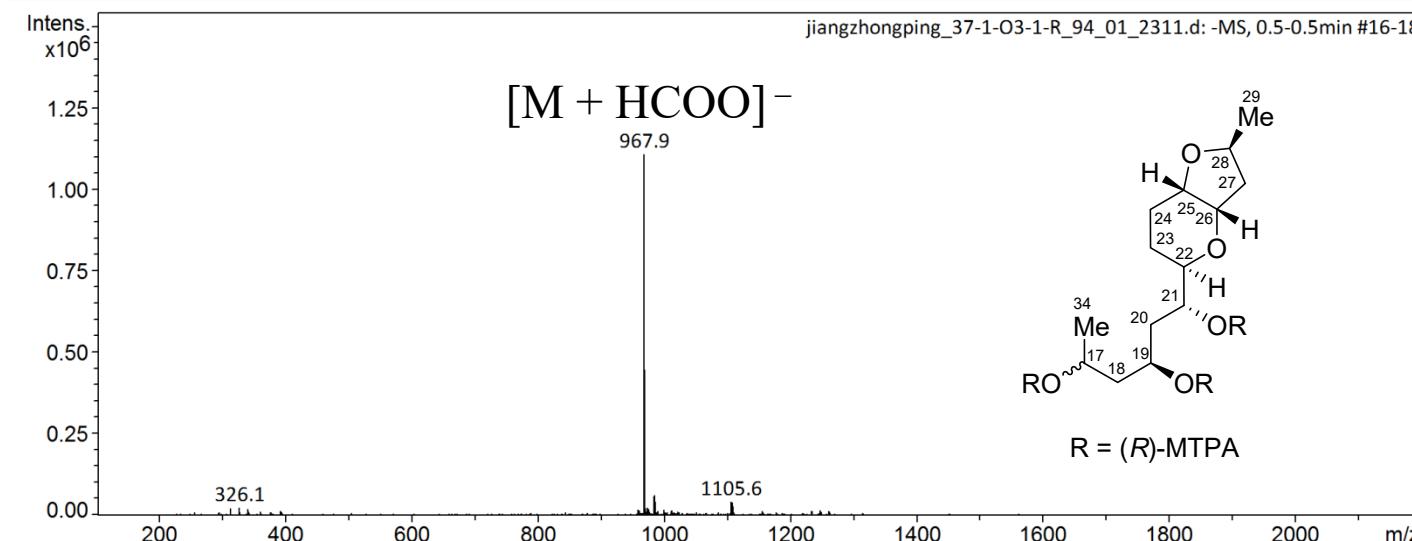
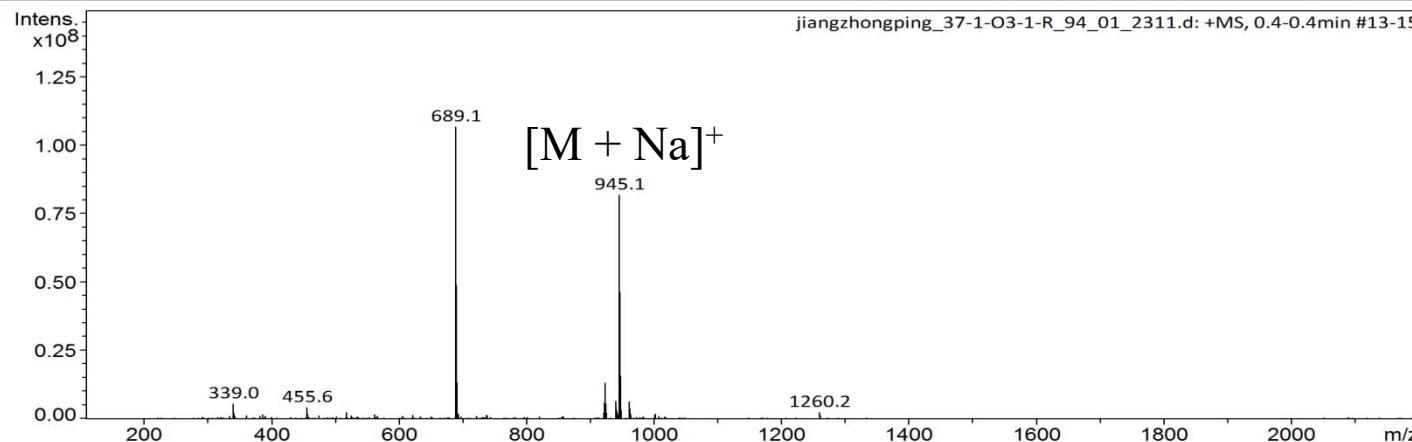
Generic Display Report

Analysis Info

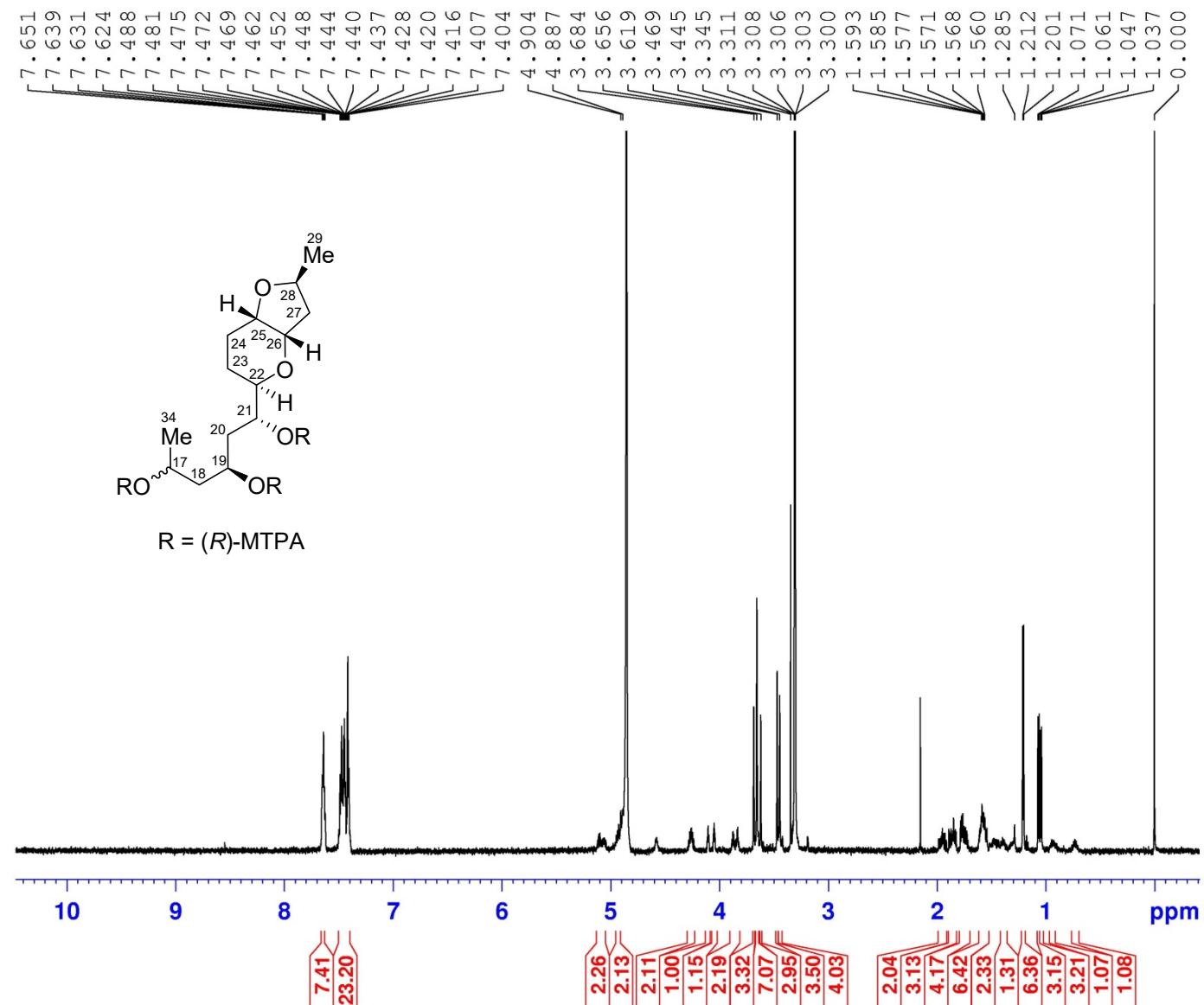
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Method 2311.m
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Comment

Acquisition Date 2020-11-09 15:47:49

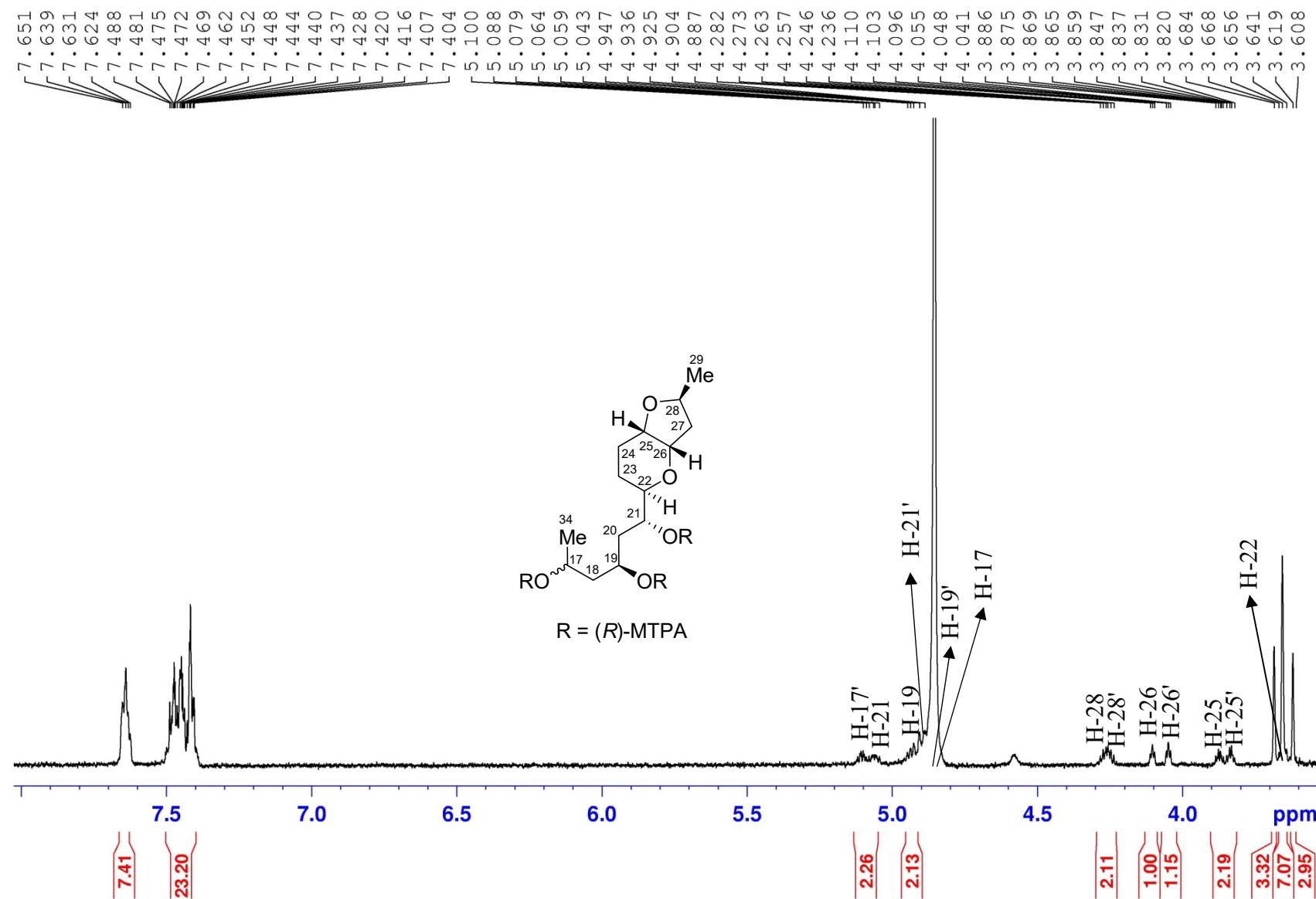
Operator bruker
Instrument amaZon SL



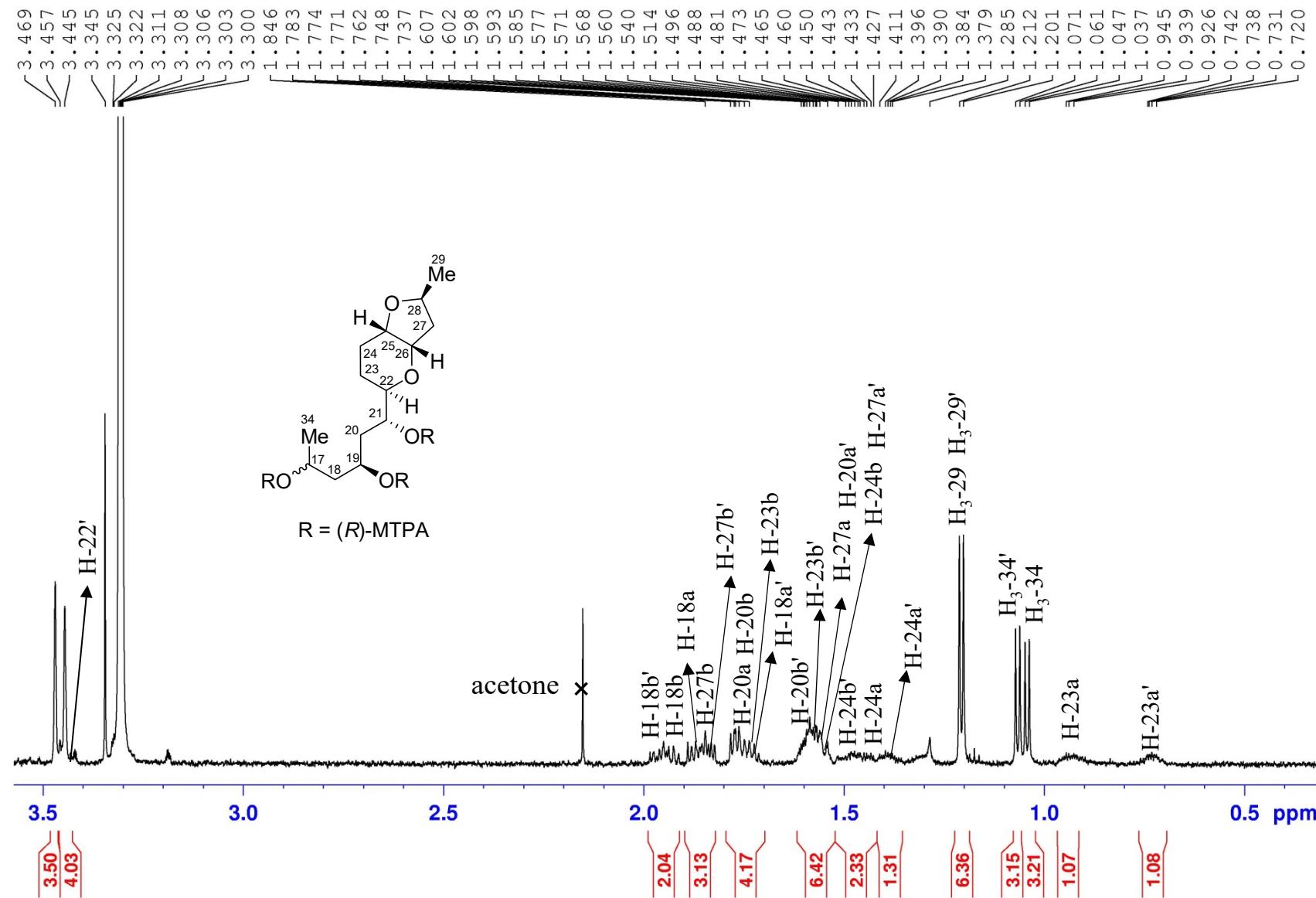
¹H (600 MHz) NMR spectrum of fragments **1Br** in CD₃OD



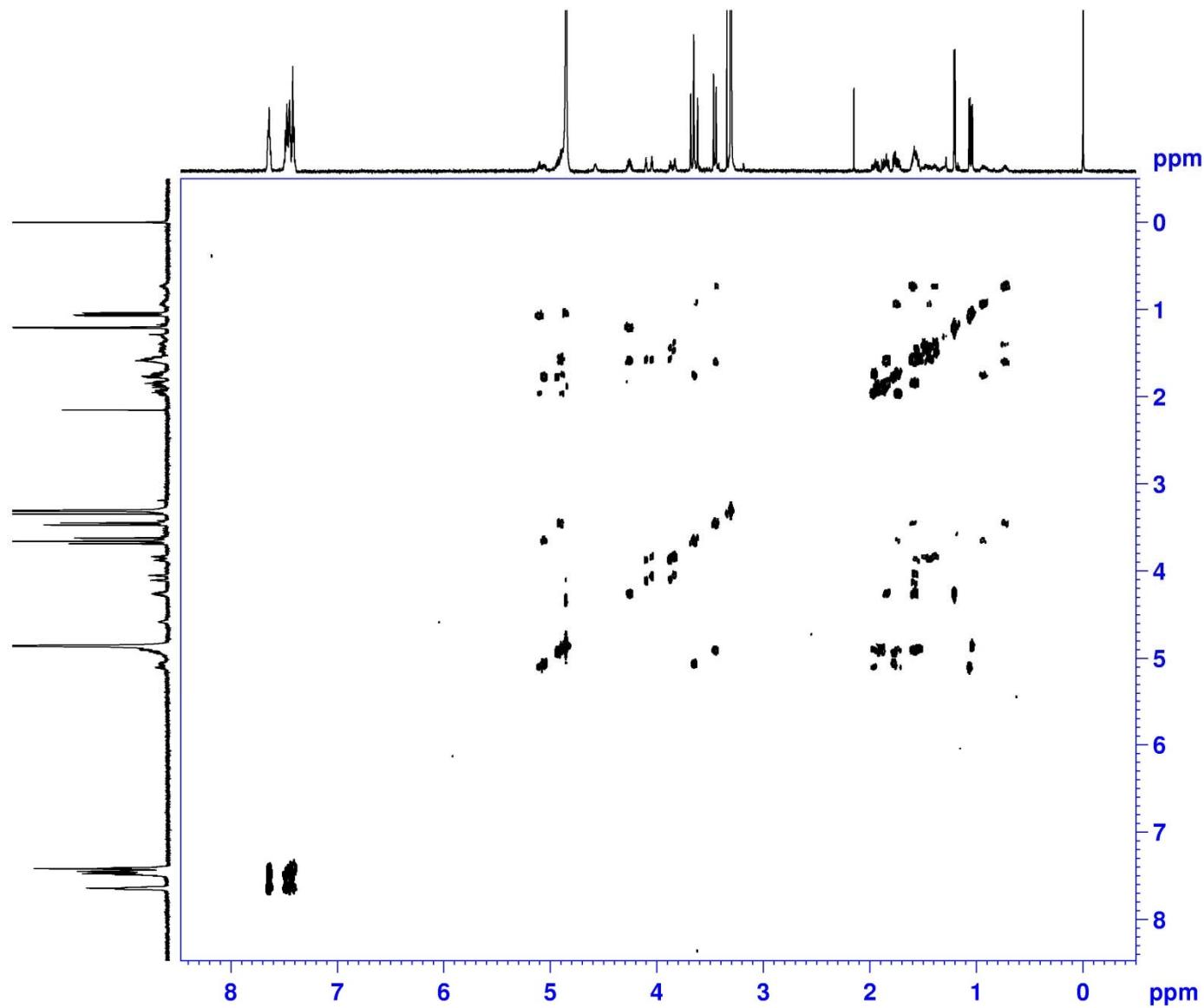
¹H (600 MHz) NMR spectrum of fragments **1Br** in CD₃OD



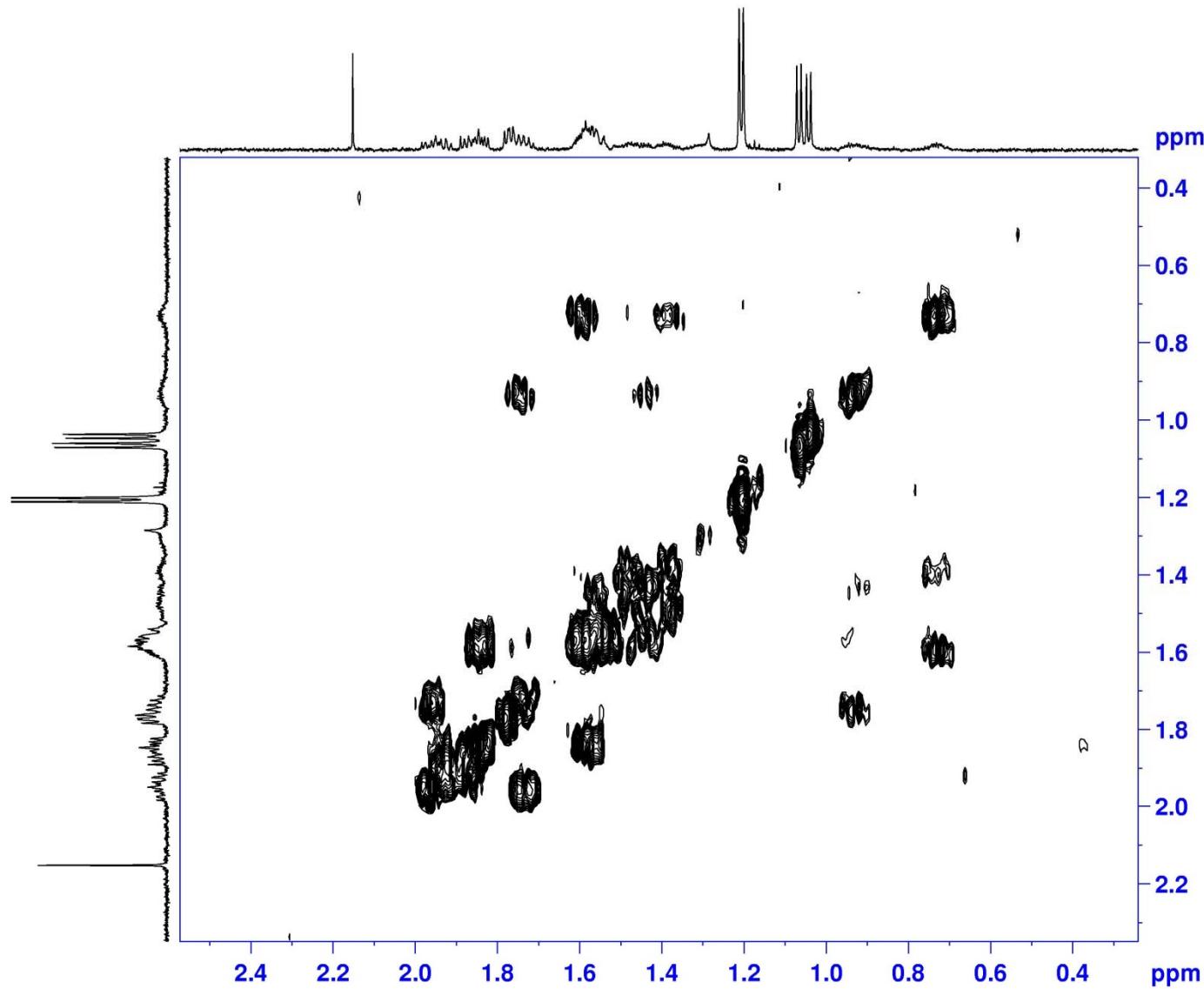
¹H (600 MHz) NMR spectrum of fragments **1Br** in CD₃OD



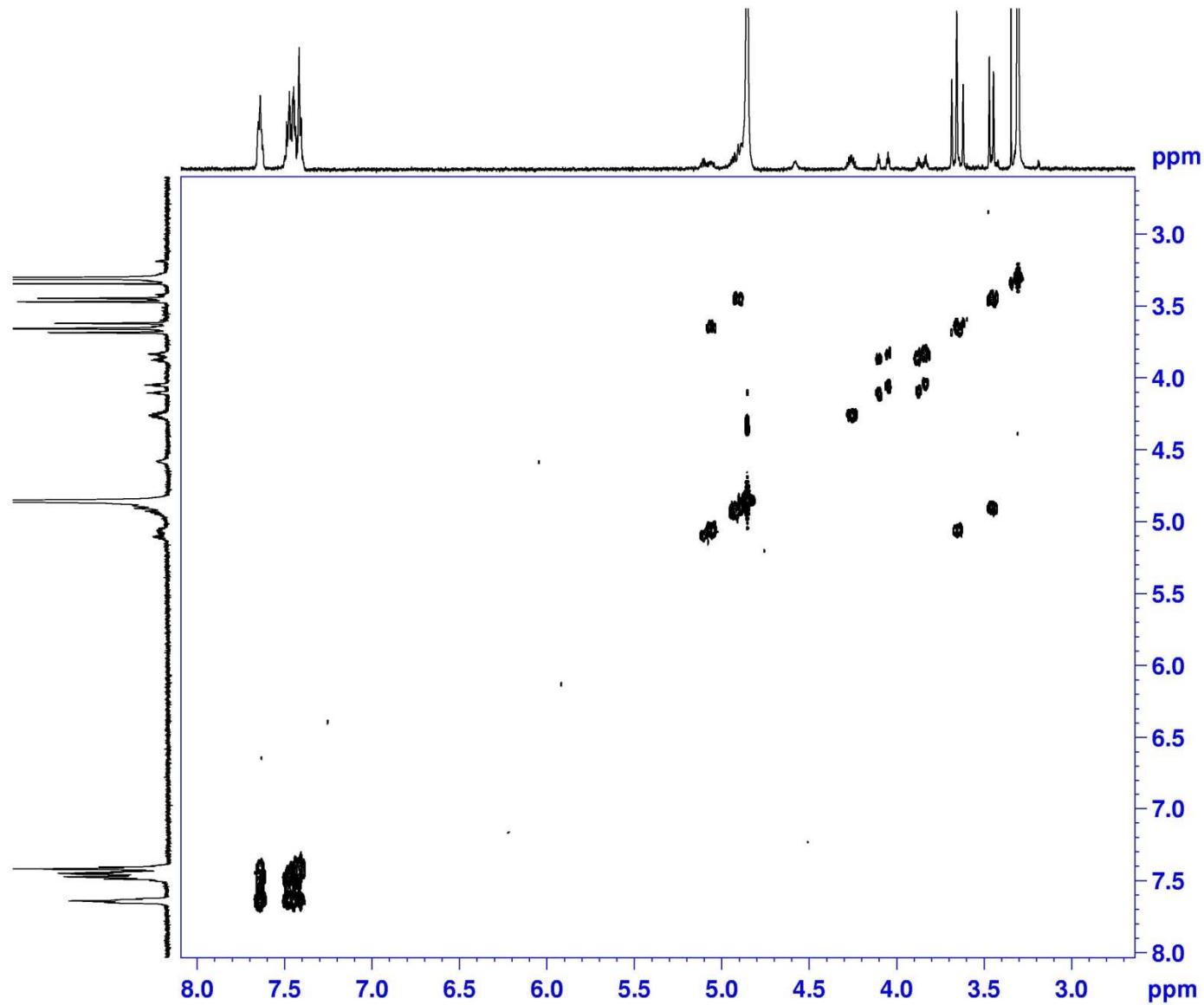
^1H - ^1H COSY (600 MHz) spectrum of fragments **1Br** in CD_3OD



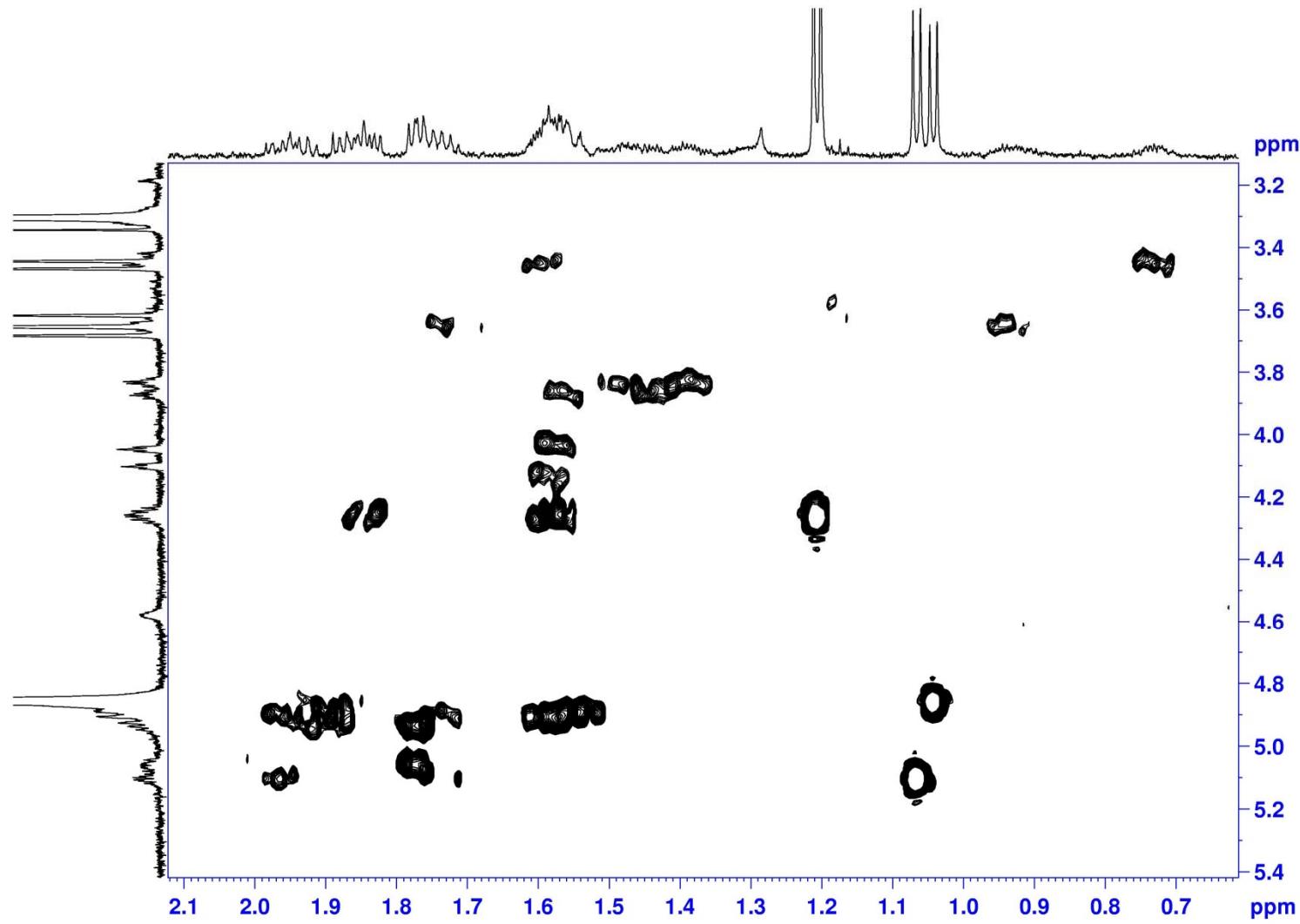
^1H - ^1H COSY (600 MHz) spectrum of fragments **1Br** in CD_3OD



^1H - ^1H COSY (600 MHz) spectrum of fragments **1Br** in CD_3OD



^1H - ^1H COSY (600 MHz) spectrum of fragments **1Br** in CD_3OD



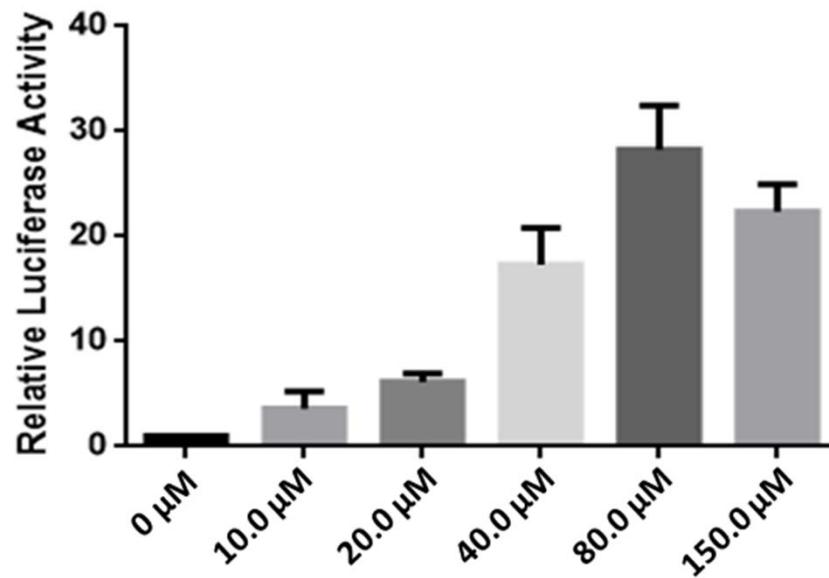


Figure S1. Agonistic effects of chenodeoxycholic acid (the positive control) on hFXR in HepG2 cells