

Supplemental information for

**Multivalent Fertilin β Oligopeptides:
the Dependence of Fertilization Inhibition
on Length and Density**

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Fmoc-C_trt-D_tBu-OMe

Pulse Sequence: s2pul

Solvent: CDCl3

Temp. 25.0 C / 298.1 K

File: Fmoc-C_trt-D_tBu-OMe-10-27

INOVA-400 "inv400"

Relax. delay 1.000 sec

Pulse 45.7 degrees

Acq. time 3.744 sec

Width 6000.6 Hz

100 repetitions

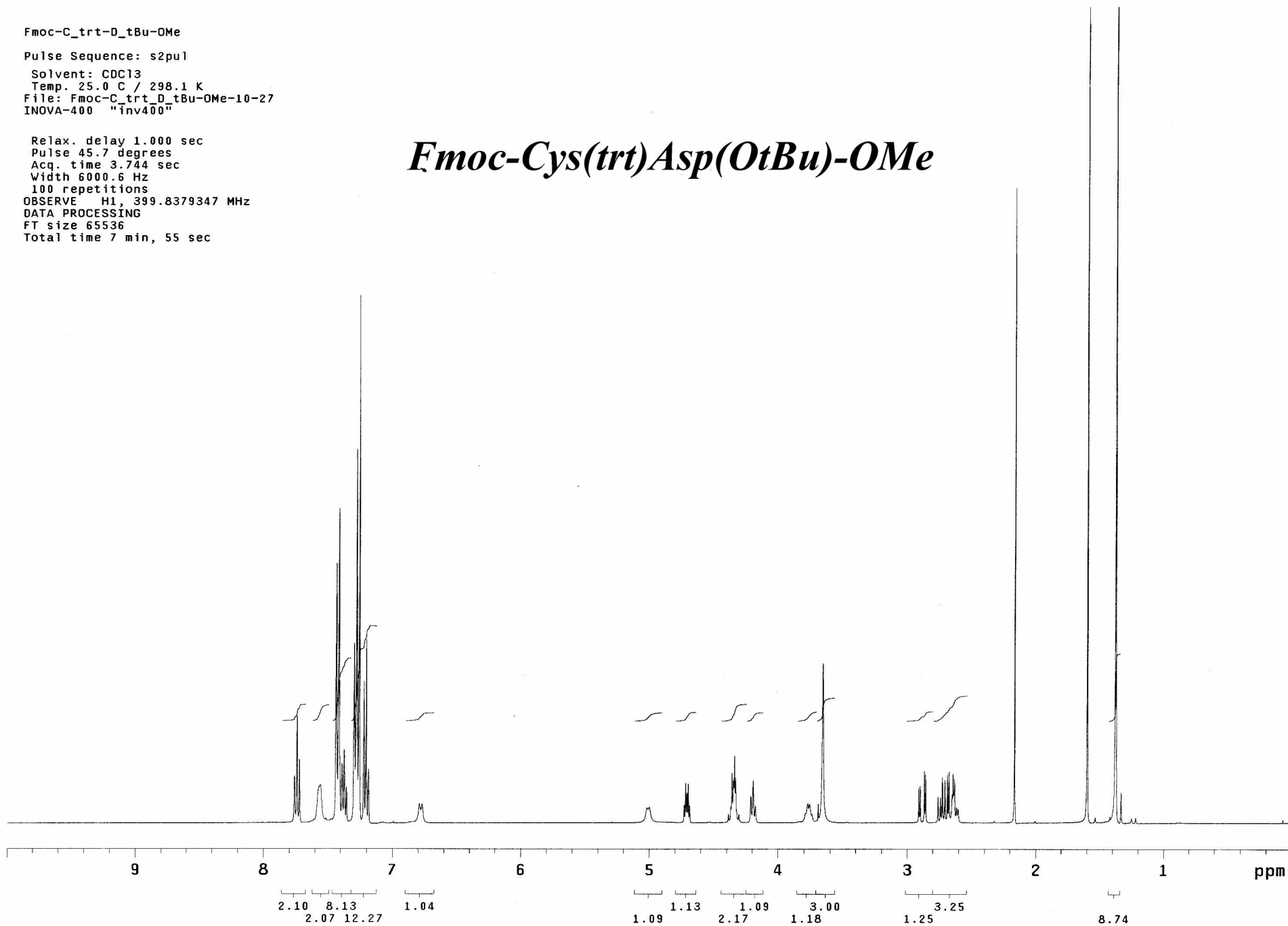
OBSERVE H1, 399.8379347 MHz

DATA PROCESSING

FT size 65536

Total time 7 min, 55 sec

Fmoc-Cys(trt)Asp(OtBu)-OMe



Fmoc-E(tBu)C(trt)D(tBu)-OMe

Pulse Sequence: s2pu1

Solvent: CDCl3

Temp. 25.0 C / 298.1 K

File: Fmoc-ECD-OMe-protected-10-28

INOVA-400 "inv400"

Relax. delay 1.000 sec

Pulse 45.7 degrees

Acq. time 3.744 sec

Width 6000.6 Hz

16 repetitions

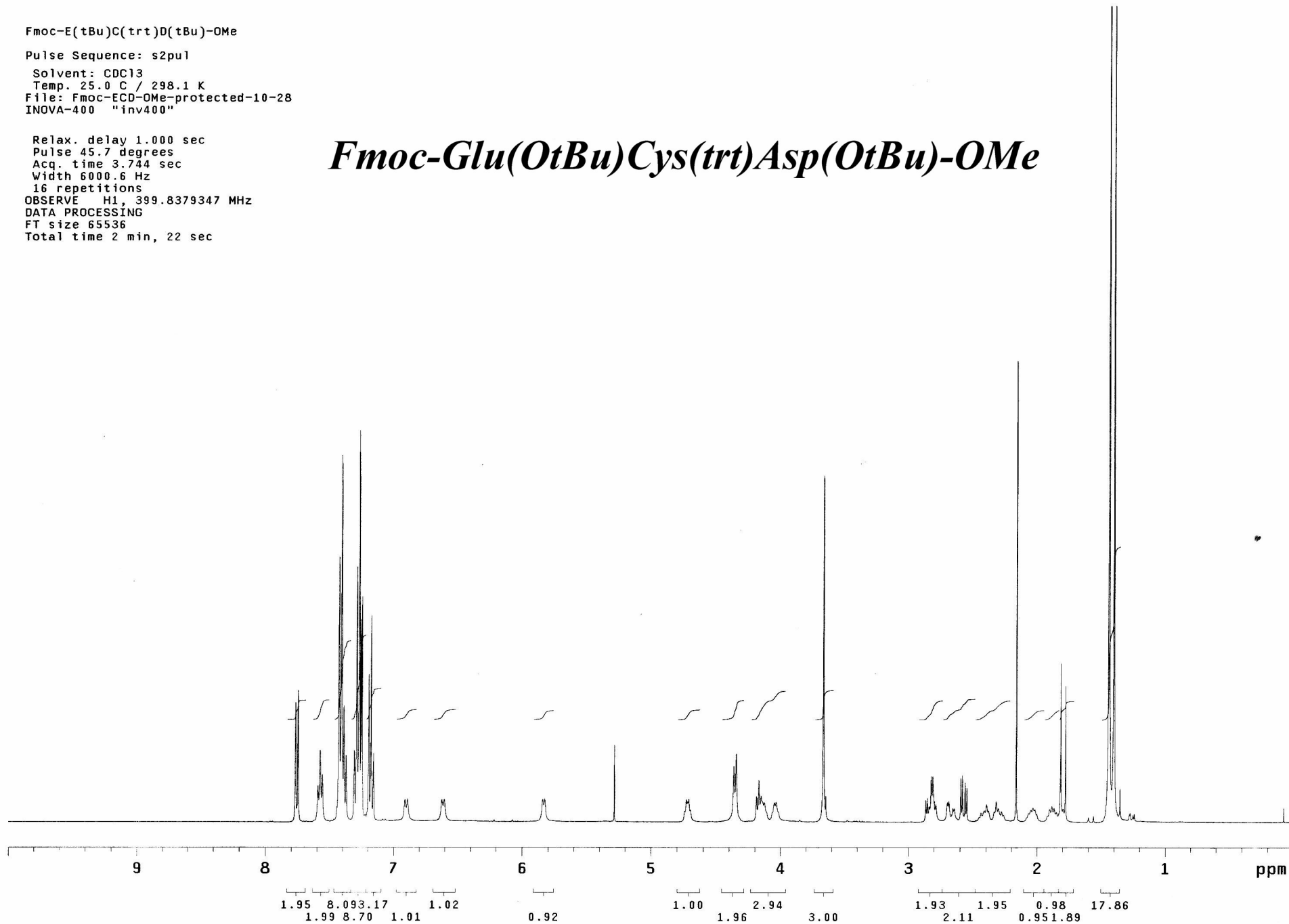
OBSERVE H1, 399.8379347 MHz

DATA PROCESSING

FT size 65536

Total time 2 min, 22 sec

Fmoc-Glu(OtBu)Cys(trt)Asp(OtBu)-OMe



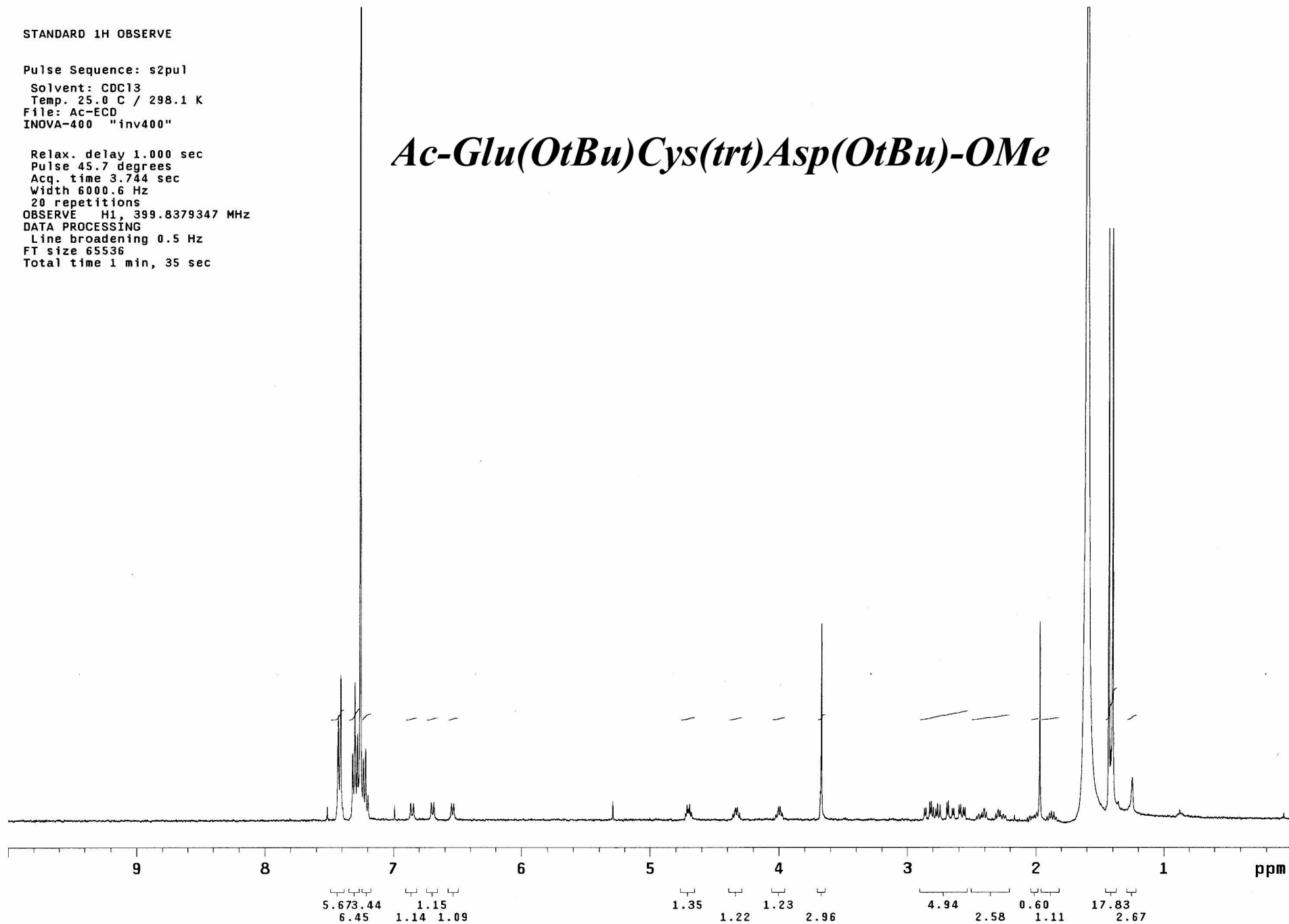
STANDARD 1H OBSERVE

Pulse Sequence: s2pu1

Solvent: CDCl3
Temp. 25.0 C / 298.1 K
File: Ac-ECD
INOVA-400 "inv400"

Relax. delay 1.000 sec
Pulse 45.7 degrees
Acq. time 3.744 sec
Width 6000.6 Hz
20 repetitions
OBSERVE H1, 399.8379347 MHz
DATA PROCESSING
Line broadening 0.5 Hz
FT size 65536
Total time 1 min, 35 sec

Ac-Glu(OtBu)Cys(trt)Asp(OtBu)-OMe



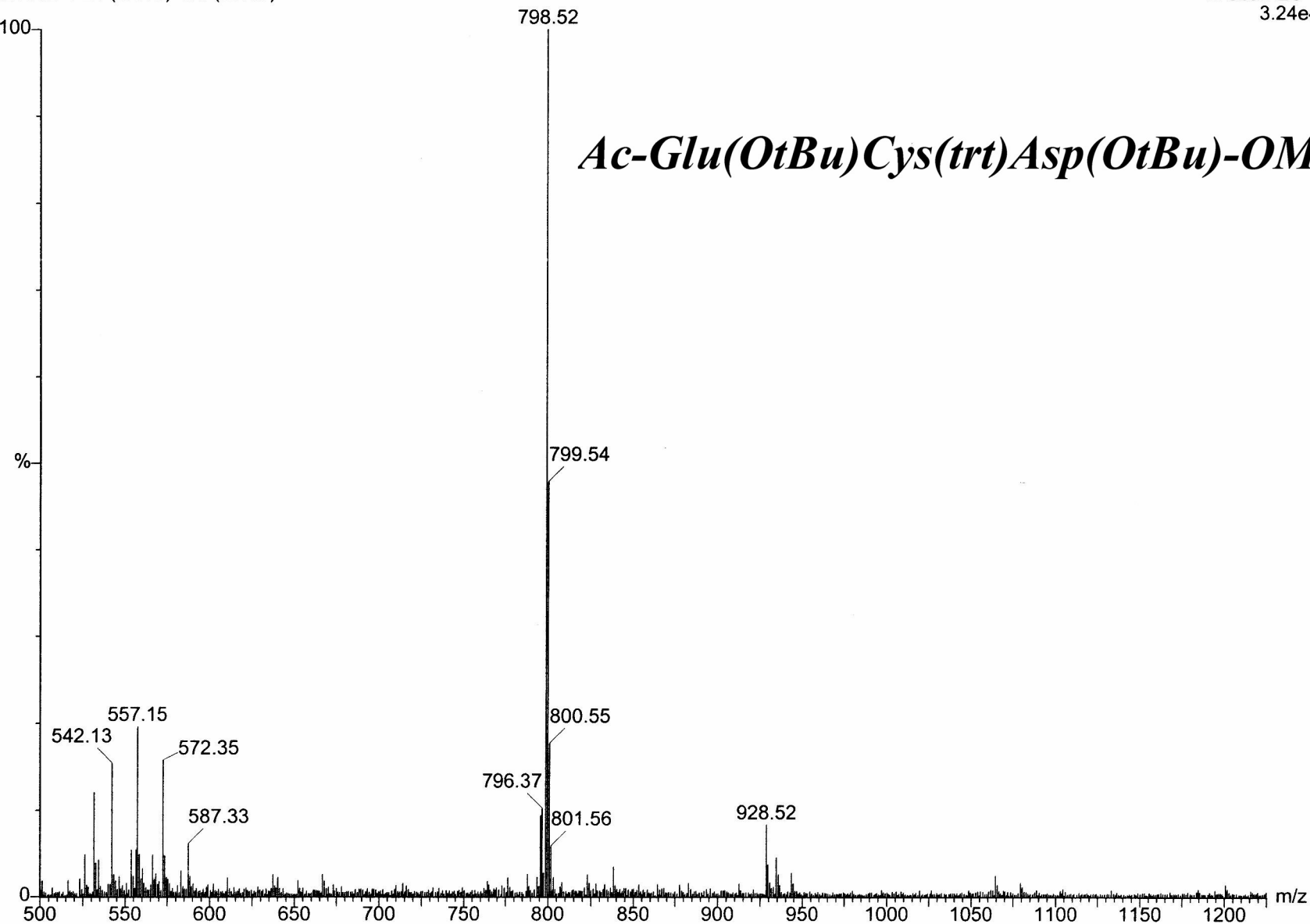
AC-ECD

AL1012-1 21 (1.810) Cm (19:35)

Platform

12-Oct-2004

1: Scan ES+
3.24e4



Ac-Glu(OtBu)Cys(trt)Asp(OtBu)-OMe

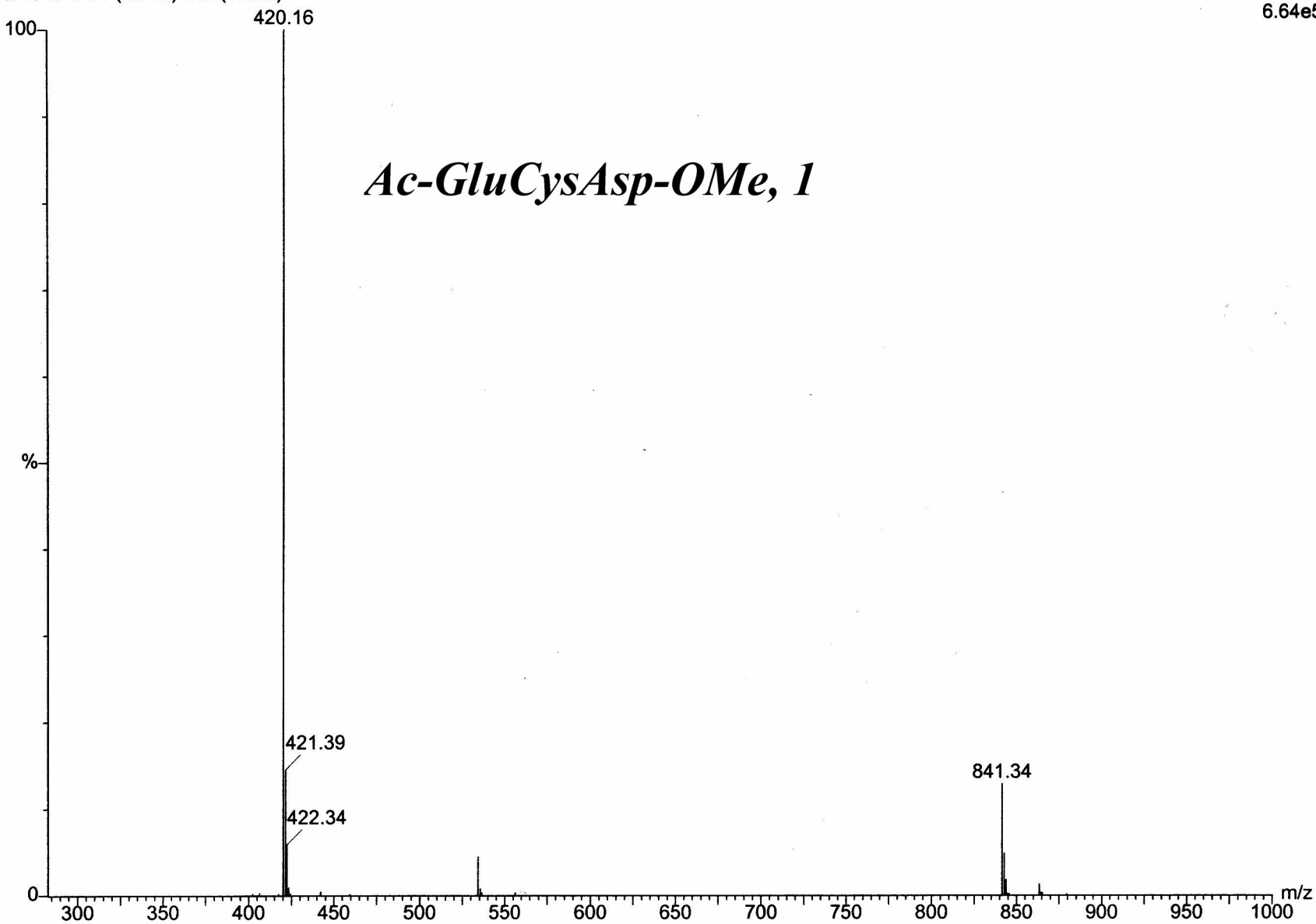
ECD-2

AL1018-6 21 (1.810) Cm (18:28)

Platform

18-Oct-2004

1: Scan ES-
6.64e5



NB-E_tBu-C_trt-O-tBu

Pulse Sequence: s2pul

Solvent: CDCl₃

Temp. 25.0 C / 298.1 K

File: NB-ECD-OMe-protected-C13

INOVA-400 "inv400"

Relax. delay 1.000 sec

Pulse 82.1 degrees

Acq. time 1.199 sec

Width 25000.0 Hz

4664 repetitions

OBSERVE C13, 100.5393046 MHz

DECOUPLE H1, 399.8399342 MHz

Power 45 dB

continuously on

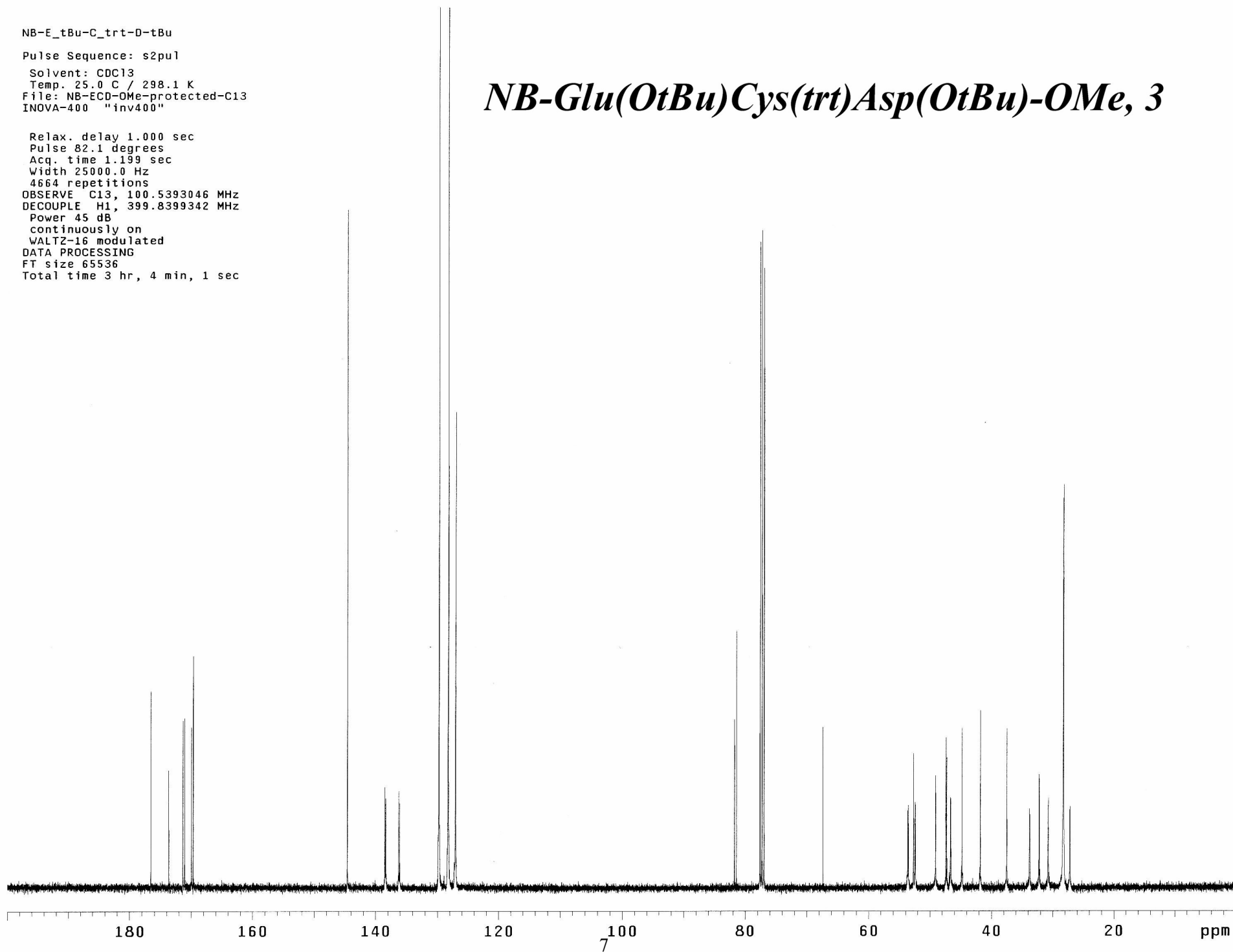
WALTZ-16 modulated

DATA PROCESSING

FT size 65536

Total time 3 hr, 4 min, 1 sec

NB-Glu(OtBu)Cys(trt)Asp(OtBu)-OMe, 3



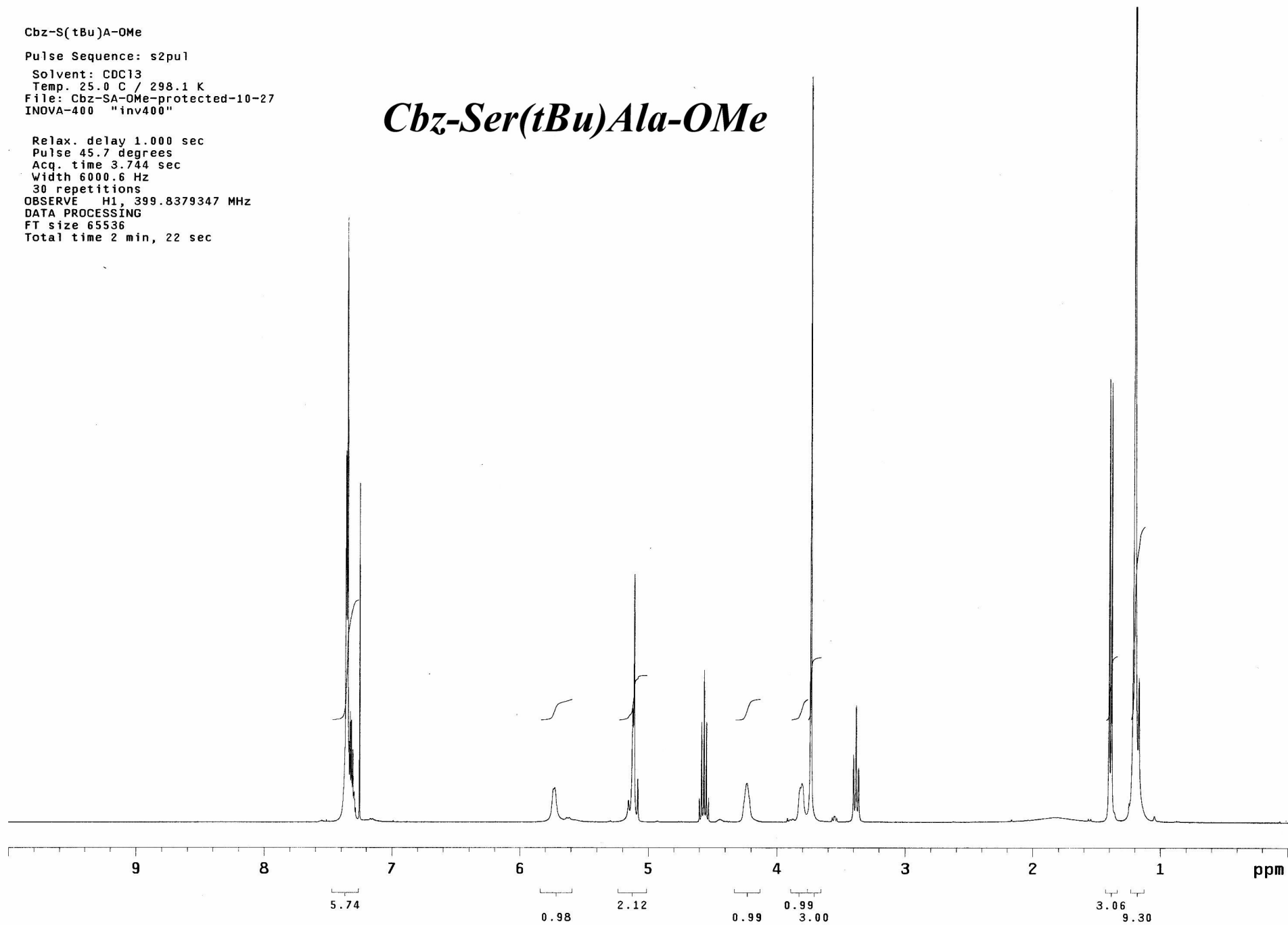
Cbz-S(tBu)A-OMe

Pulse Sequence: s2pu1

Solvent: CDCl3
Temp. 25.0 C / 298.1 K
File: Cbz-SA-OMe-protected-10-27
INOVA-400 "inv400"

Relax. delay 1.000 sec
Pulse 45.7 degrees
Acq. time 3.744 sec
Width 6000.6 Hz
30 repetitions
OBSERVE H1, 399.8379347 MHz
DATA PROCESSING
FT size 65536
Total time 2 min, 22 sec

Cbz-Ser(tBu)Ala-OMe



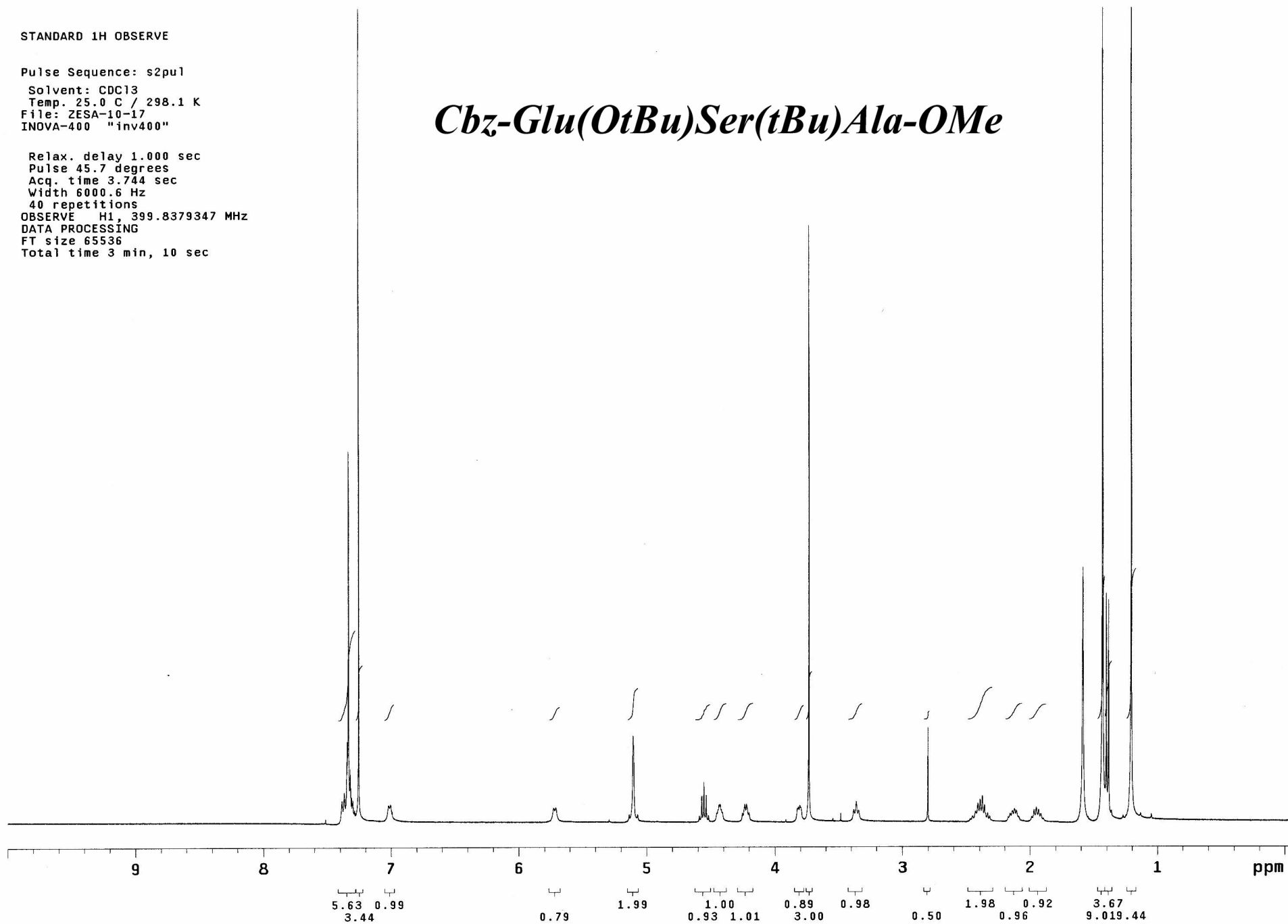
STANDARD 1H OBSERVE

Pulse Sequence: s2pu1

Solvent: CDC13
Temp. 25.0 C / 298.1 K
File: ZESA-10-17
INOVA-400 "inv400"

Relax. delay 1.000 sec
Pulse 45.7 degrees
Acq. time 3.744 sec
Width 6000.6 Hz
40 repetitions
OBSERVE H1, 399.8379347 MHz
DATA PROCESSING
FT size 65536
Total time 3 min, 10 sec

Cbz-Glu(OtBu)Ser(tBu)Ala-OMe



STANDARD 1H OBSERVE

Pulse Sequence: s2pu1

Solvent: CDCl3

Temp. 25.0 C / 298.1 K

File: NB-ESA-10-20

INOVA-400 "inv400"

Relax. delay 1.000 sec

Pulse 45.7 degrees

Acq. time 3.744 sec

Width 6000.6 Hz

50 repetitions

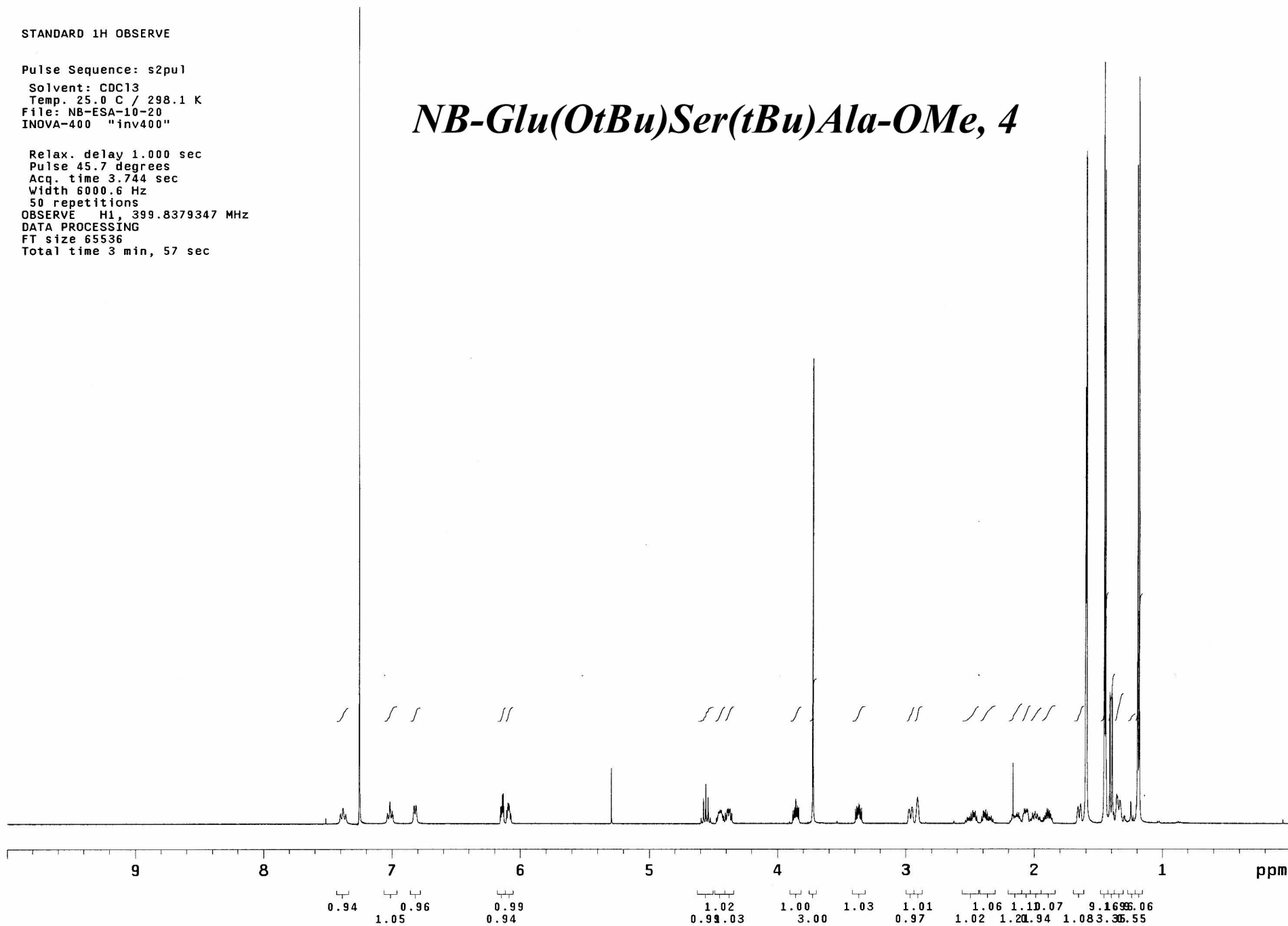
OBSERVE H1, 399.8379347 MHz

DATA PROCESSING

FT size 65536

Total time 3 min, 57 sec

NB-Glu(OtBu)Ser(tBu)Ala-OMe, 4



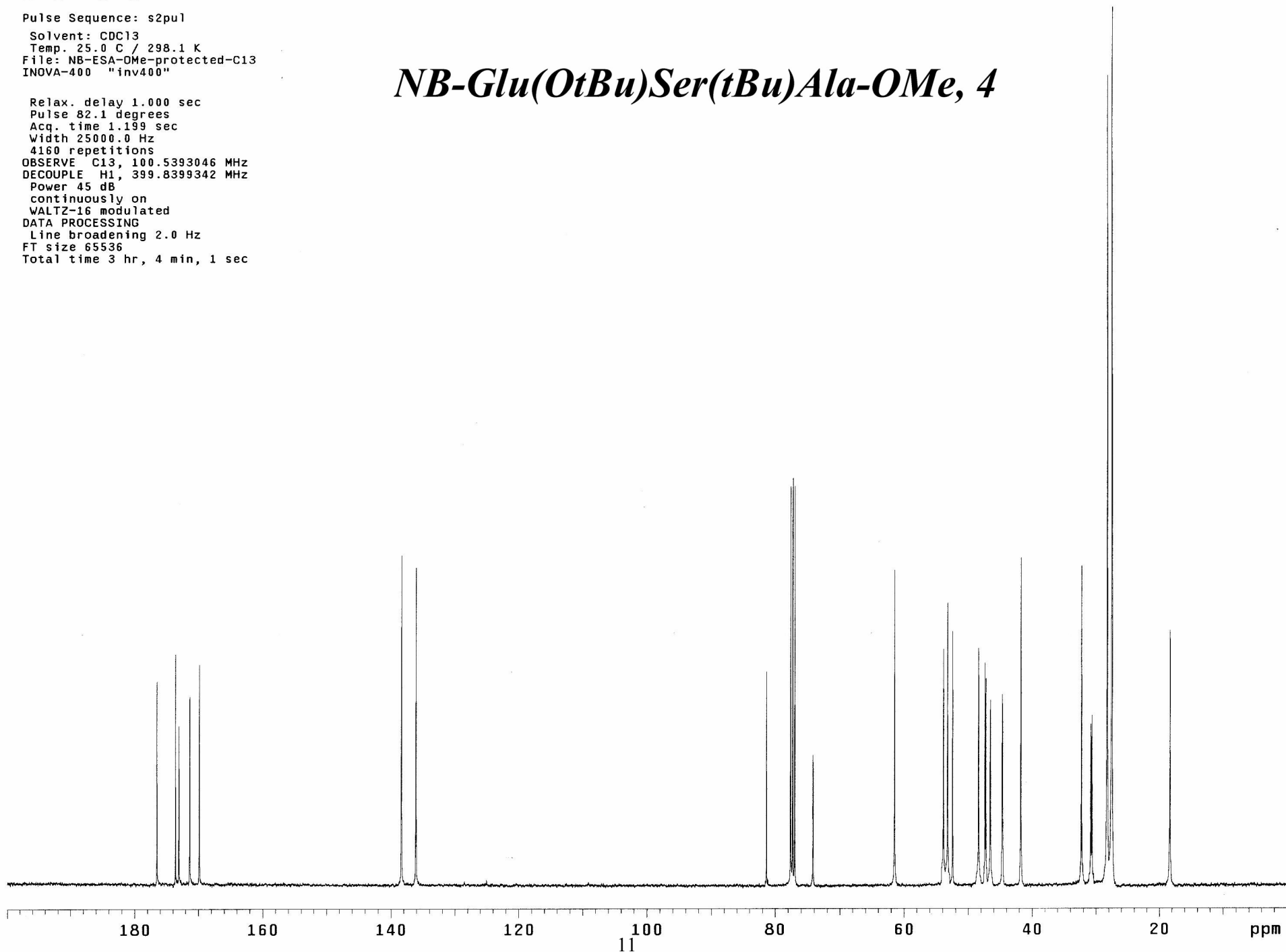
NB-E_tBu-S_tBu_A-OMe

Pulse Sequence: s2pu1

Solvent: CDCl3
Temp. 25.0 C / 298.1 K
File: NB-ESA-OMe-protected-C13
INOVA-400 "inv400"

NB-Glu(OtBu)Ser(tBu)Ala-OMe, 4

Relax. delay 1.000 sec
Pulse 82.1 degrees
Acq. time 1.199 sec
Width 25000.0 Hz
4160 repetitions
OBSERVE C13, 100.5393046 MHz
DECOUPLE H1, 399.8399342 MHz
Power 45 dB
continuously on
WALTZ-16 modulated
DATA PROCESSING
Line broadening 2.0 Hz
FT size 65536
Total time 3 hr, 4 min, 1 sec



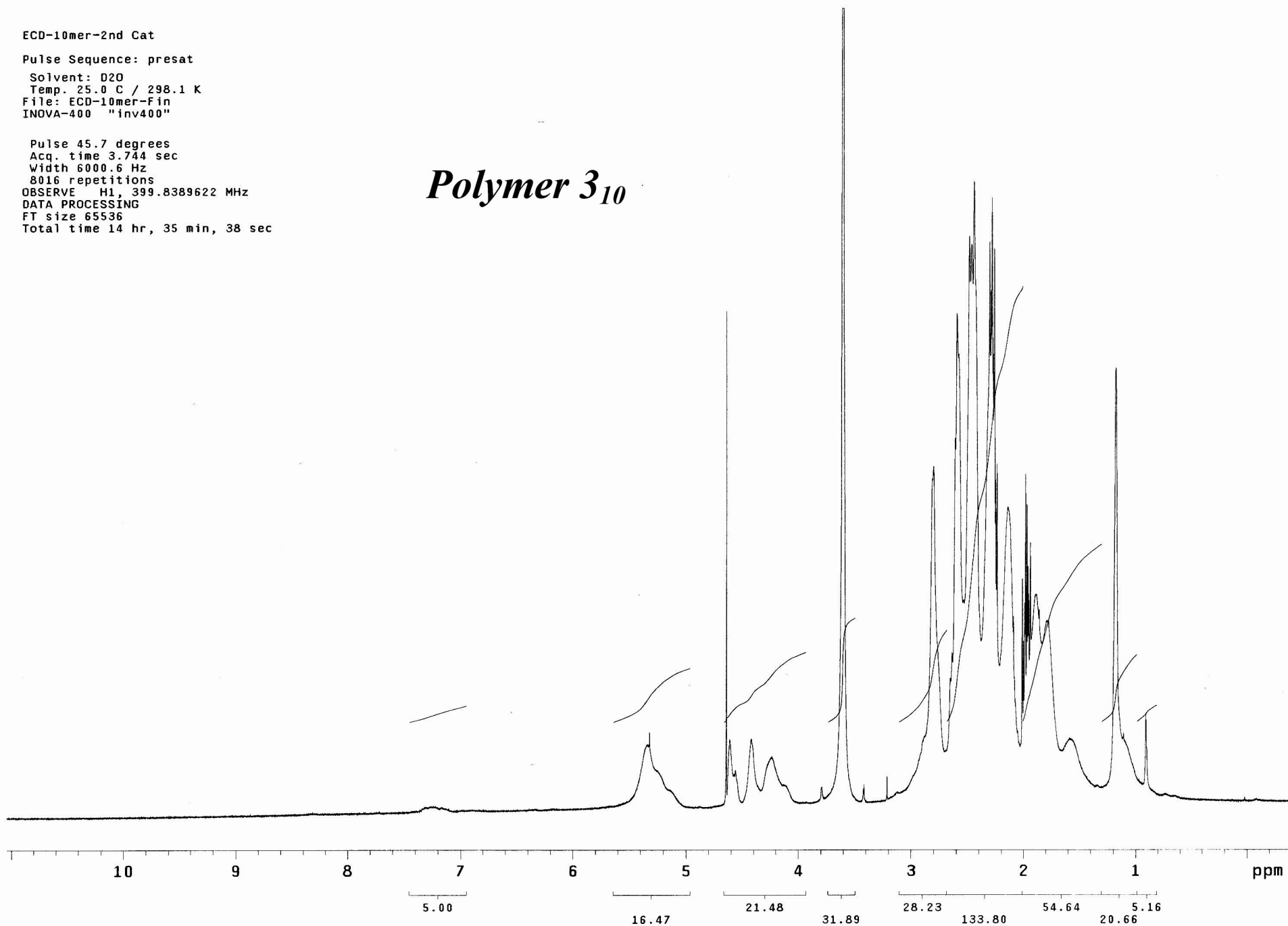
ECD-10mer-2nd Cat

Pulse Sequence: presat

Solvent: D2O
Temp. 25.0 C / 298.1 K
File: ECD-10mer-Fin
INOVA-400 "inv400"

Pulse 45.7 degrees
Acq. time 3.744 sec
Width 6000.6 Hz
8016 repetitions
OBSERVE H1, 399.8389622 MHz
DATA PROCESSING
FT size 65536
Total time 14 hr, 35 min, 38 sec

Polymer 3₁₀



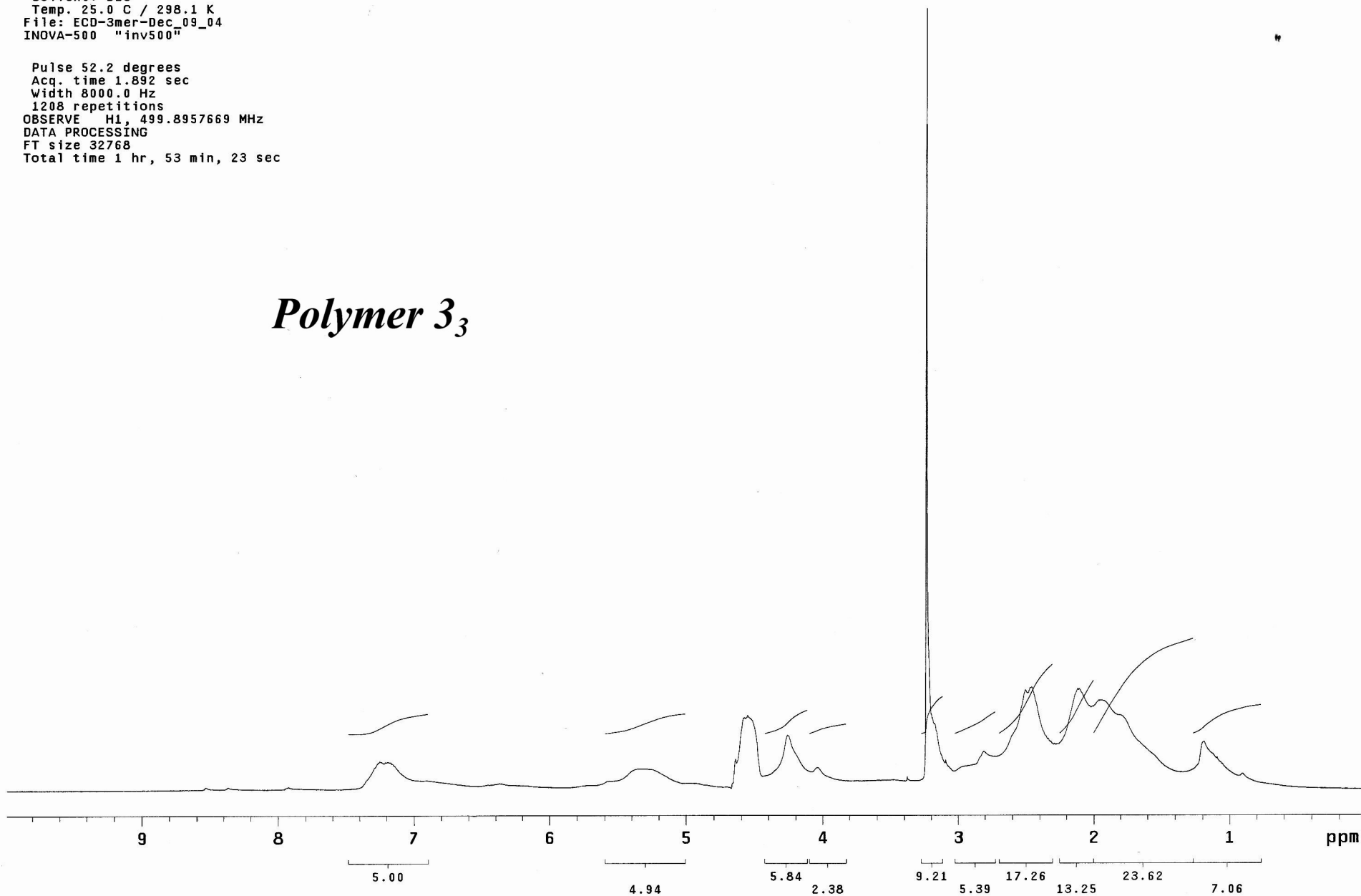
ECD-3mer

Pulse Sequence: presat

Solvent: D2O
Temp. 25.0 C / 298.1 K
File: ECD-3mer-Dec_09_04
INNOVA-500 "inv500"

Pulse 52.2 degrees
Acq. time 1.892 sec
Width 8000.0 Hz
1208 repetitions
OBSERVE H1, 499.8957669 MHz
DATA PROCESSING
FT size 32768
Total time 1 hr, 53 min, 23 sec

Polymer 3₃



ECD-6mer

Pulse Sequence: presat

Solvent: D2O

Temp. 25.0 C / 298.1 K

File: ECD-6mer-Dec_09_04-A

INOVA-500 "inv500"

Pulse 52.2 degrees

Acq. time 1.892 sec

Width 8000.0 Hz

1576 repetitions

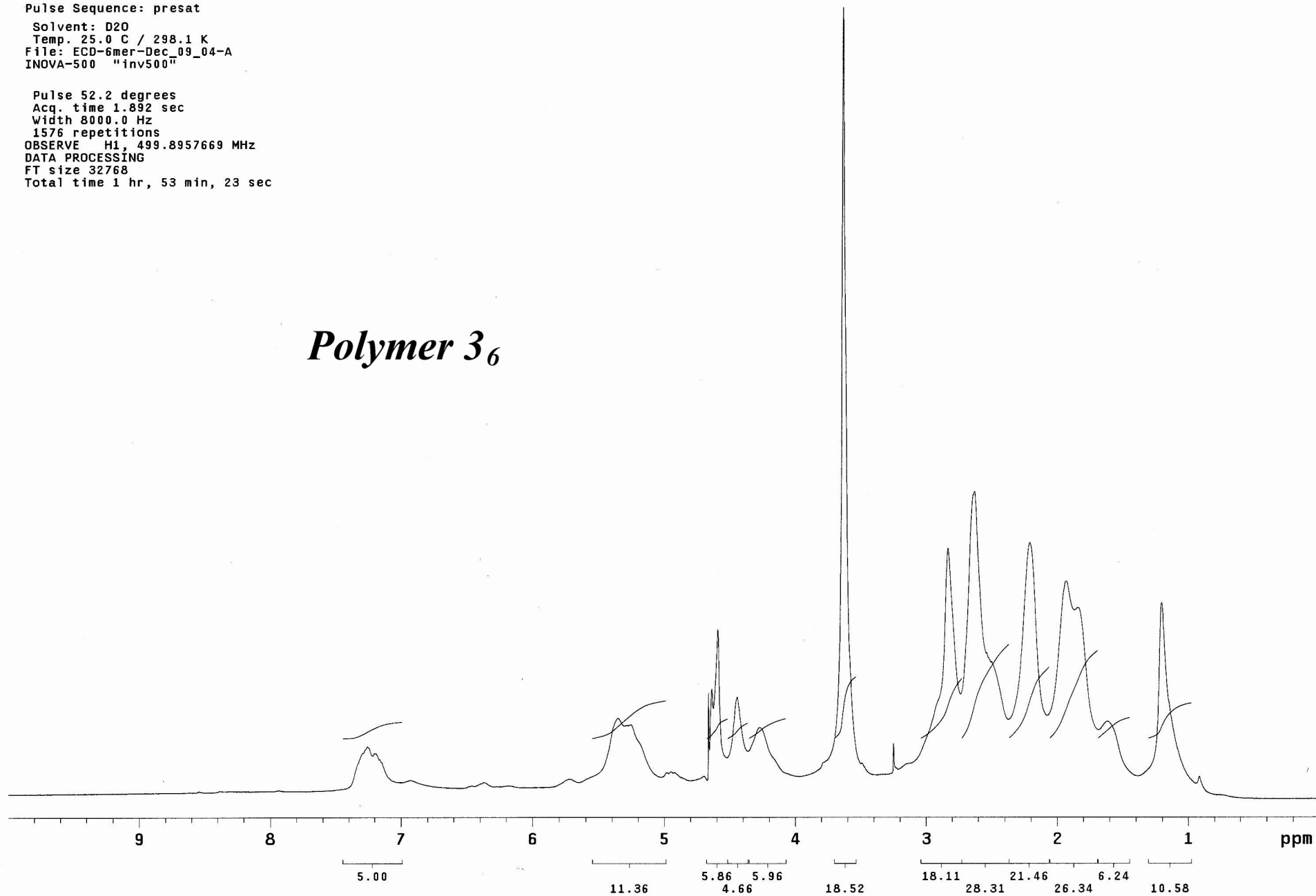
OBSERVE H1, 499.8957669 MHz

DATA PROCESSING

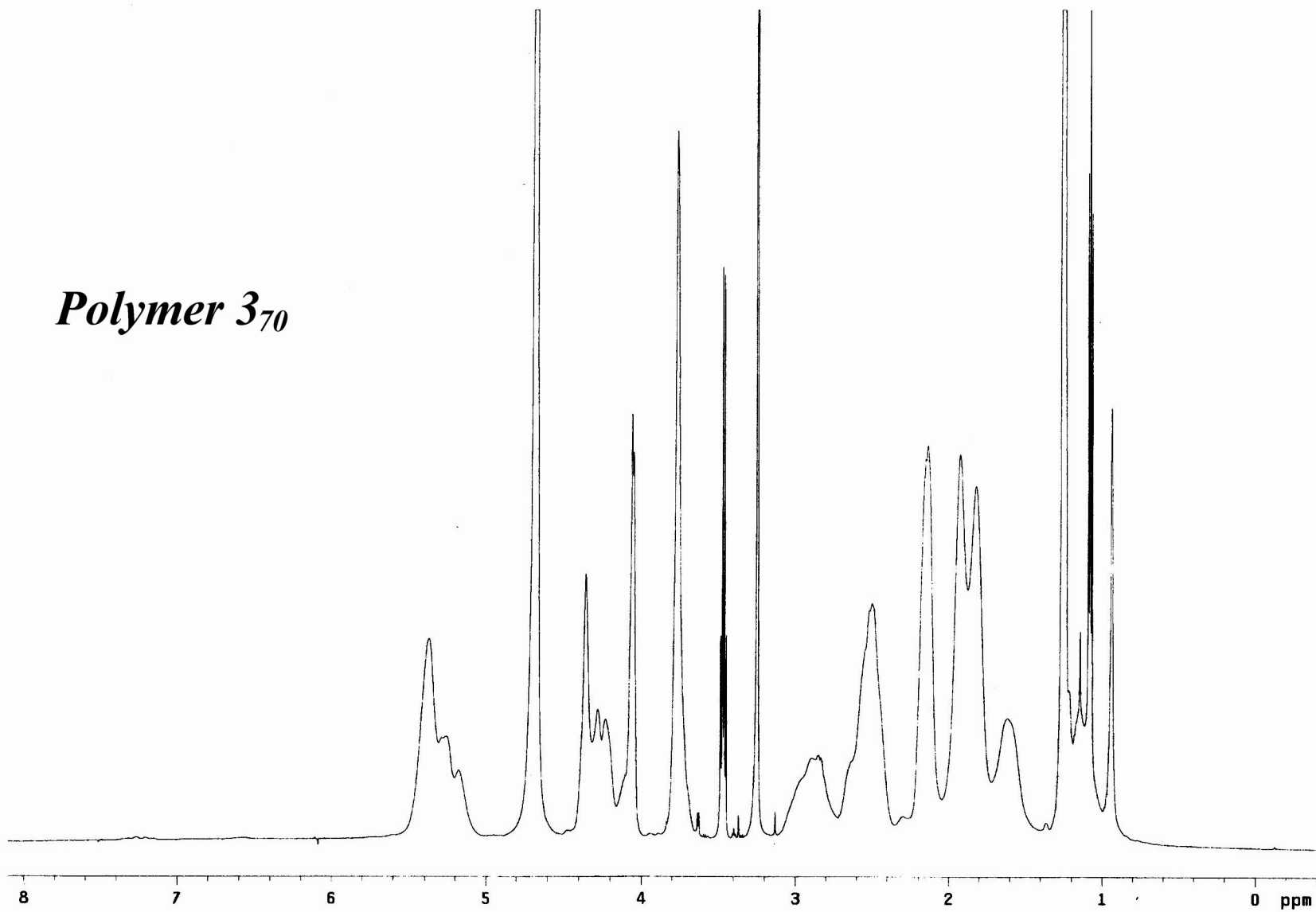
FT size 32768

Total time 1 hr, 53 min, 23 sec

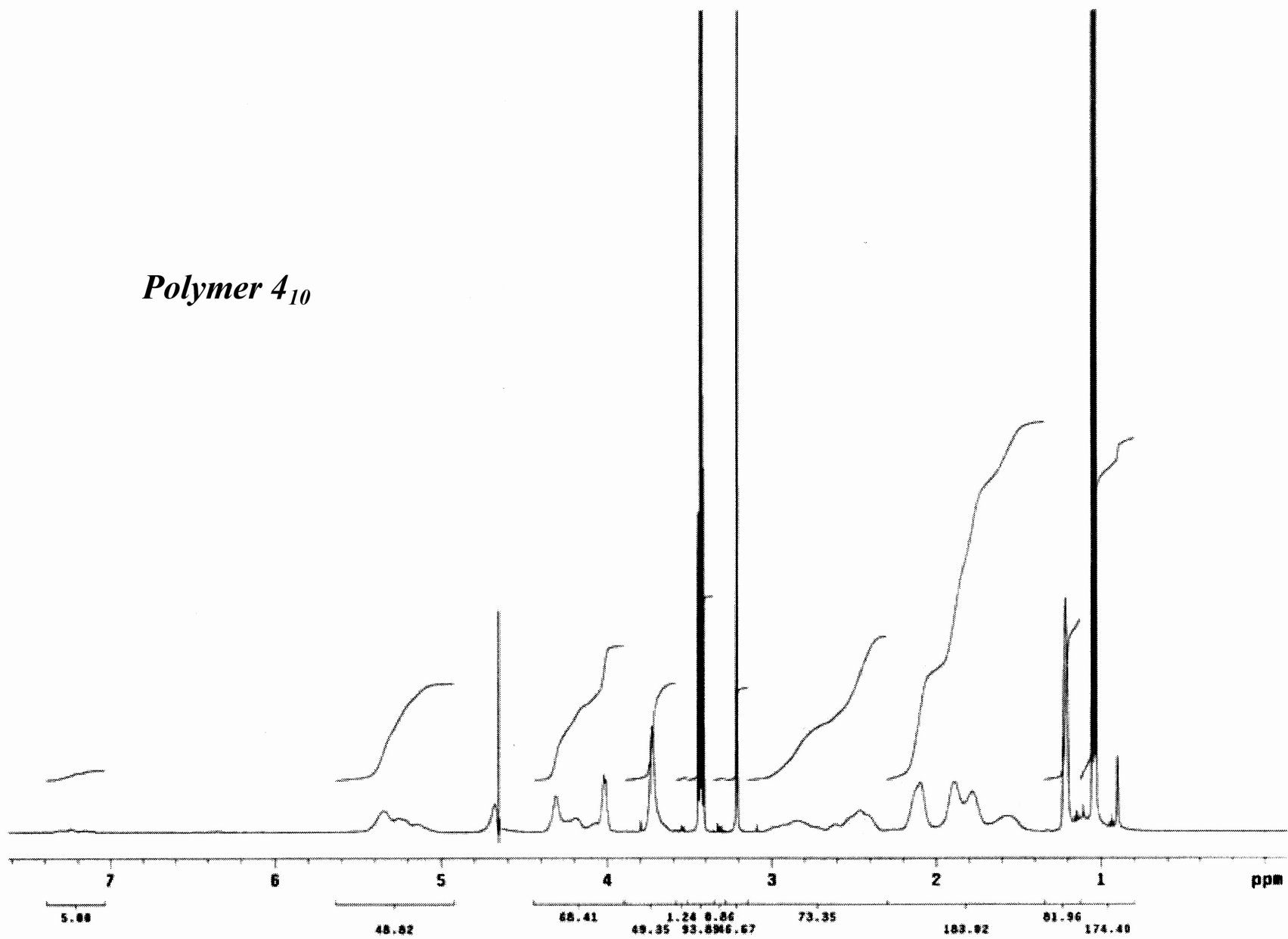
Polymer 3₆



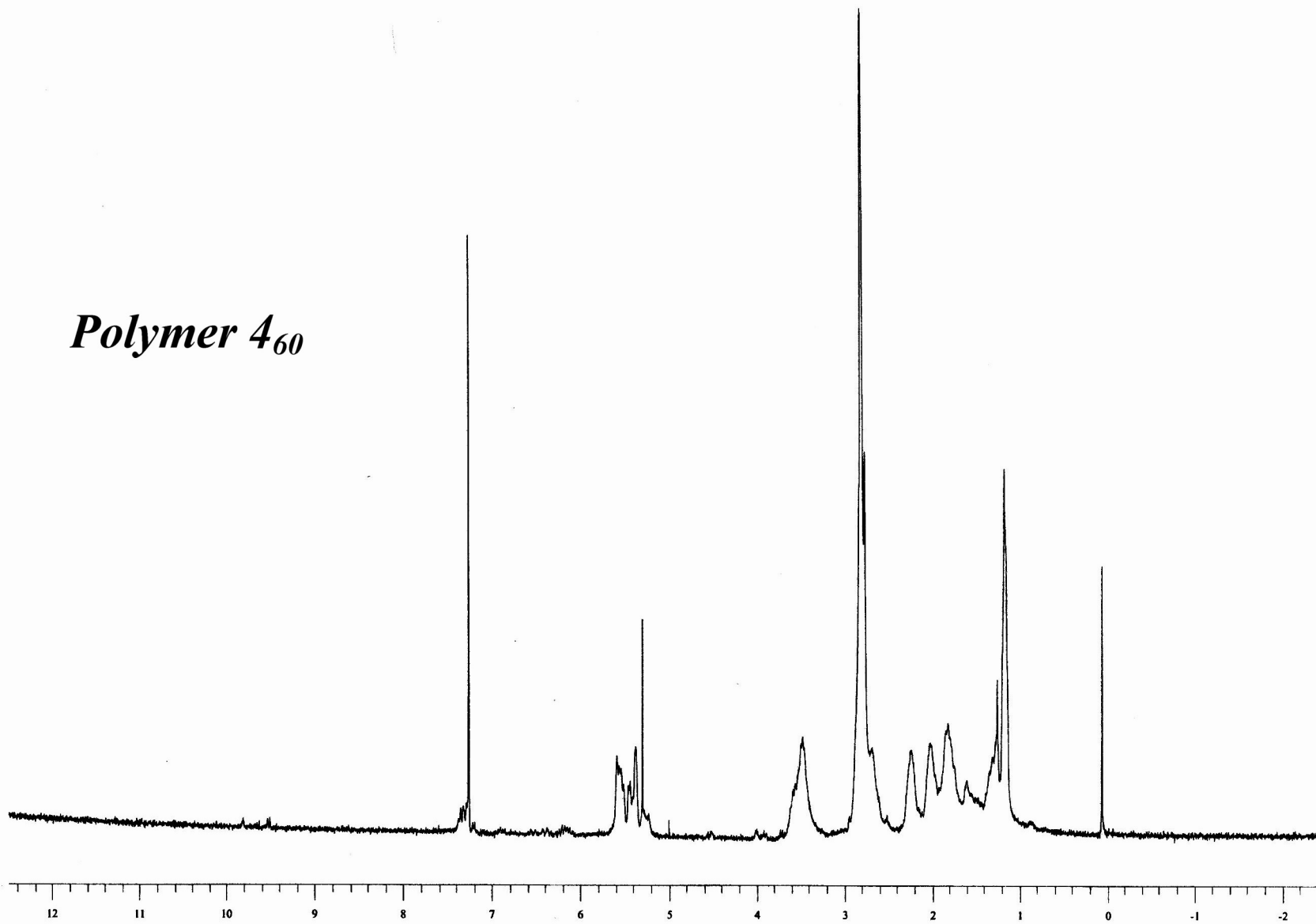
Polymer 370



Polymer 4₁₀



Polymer 4₆₀



STANDARD PROTON PARAMETERS

Pulse Sequence: s2pu1

Solvent: D2O

Temp. 25.0 C / 298.1 K

File: ESA9-ECD1-82mer-Nov0504

INOVA-600 "inv601"

Relax. delay 1.000 sec

Pulse 81.7 degrees

Acq. time 1.892 sec

Width 8000.0 Hz

19832 repetitions

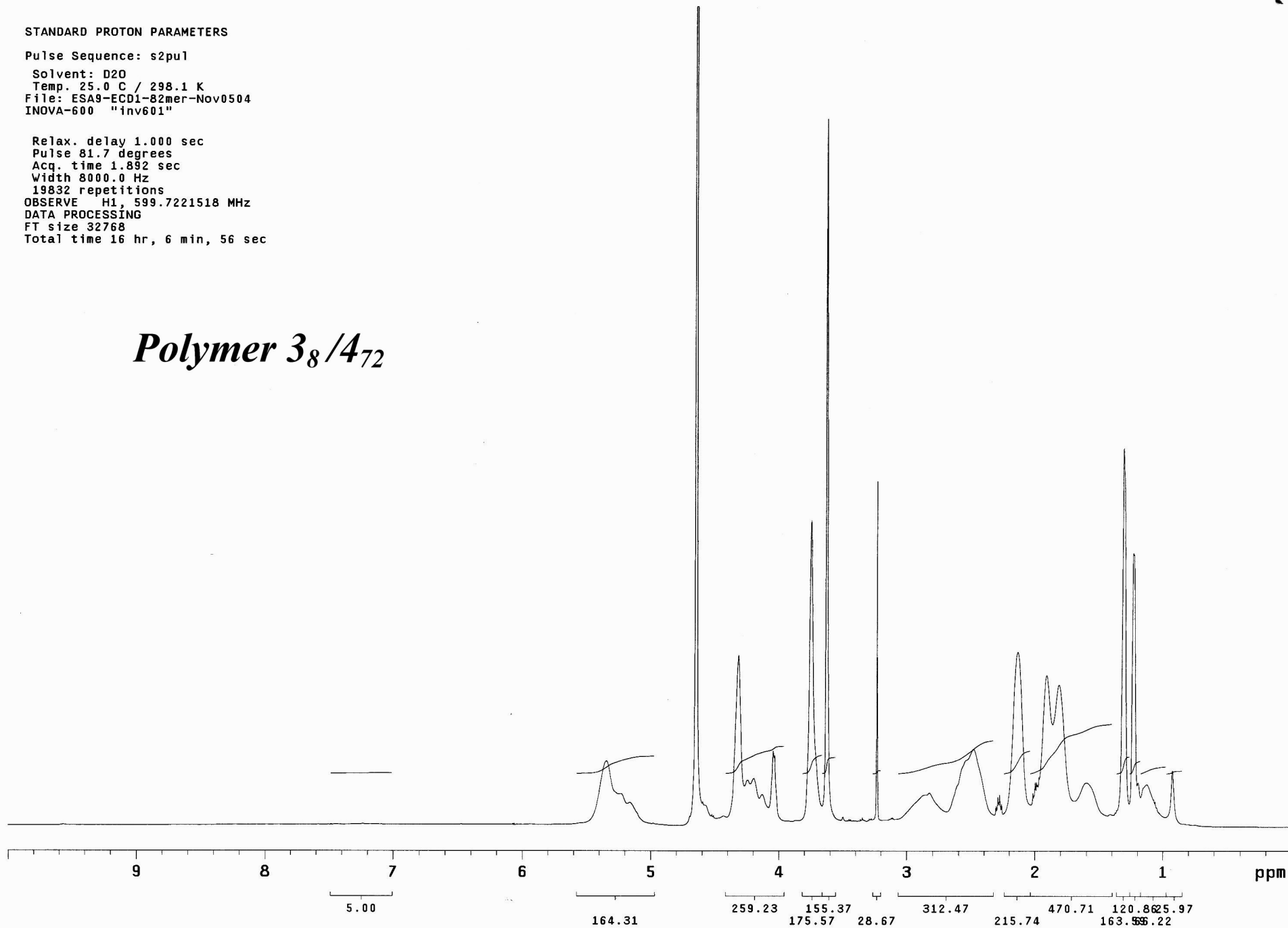
OBSERVE H1, 599.7221518 MHz

DATA PROCESSING

FT size 32768

Total time 16 hr, 6 min, 56 sec

Polymer 3₈/4₇₂



ECD2-ESA7-ECD2-II-3rd Cat

Pulse Sequence: presat

Solvent: D2O

Temp. 25.0 C / 298.1 K

File: ECD2-ESA7-ECD2-II-Final

INOVA-500 "inv500"

Pulse 80.8 degrees

Acq. time 1.892 sec

Width 8000.0 Hz

500 repetitions

OBSERVE H1, 499.8957669 MHz

DATA PROCESSING

FT size 32768

Total time 28 min, 20 sec

Polymer 3₂-4₇-3₂

