

## **Supporting Information for:**

# **Synthesis of Cyclopentanyl Carbocyclic 5-Fluorocytosine ((-)-5-Fluoro-Carbodine) Using a Facially Selective Hydrogenation Approach**

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**Table 1.** Condition Optimization for the Formation of **18**

Entry	Reaction conditions	4-pentenoyl	Yield
		chloride	(%)
1	Pyridine, rt, 24 h	4.0 equiv	15
2	DMAP, Pyridine, rt, 12 h	3.0 equiv	24
3	Et <sub>3</sub> N, Pyridine, rt, 12 h	3.0 equiv	28
4	Et <sub>3</sub> N, DMAP, CH <sub>2</sub> Cl <sub>2</sub> , rt, 12 h	4.0 equiv	56
5	Et <sub>3</sub> N, CH <sub>2</sub> Cl <sub>2</sub> , 0 °C, 3 h	4.0 equiv	97
6	Et <sub>3</sub> N, CH <sub>2</sub> Cl <sub>2</sub> , 0 °C, 4 h	3.0 equiv	97

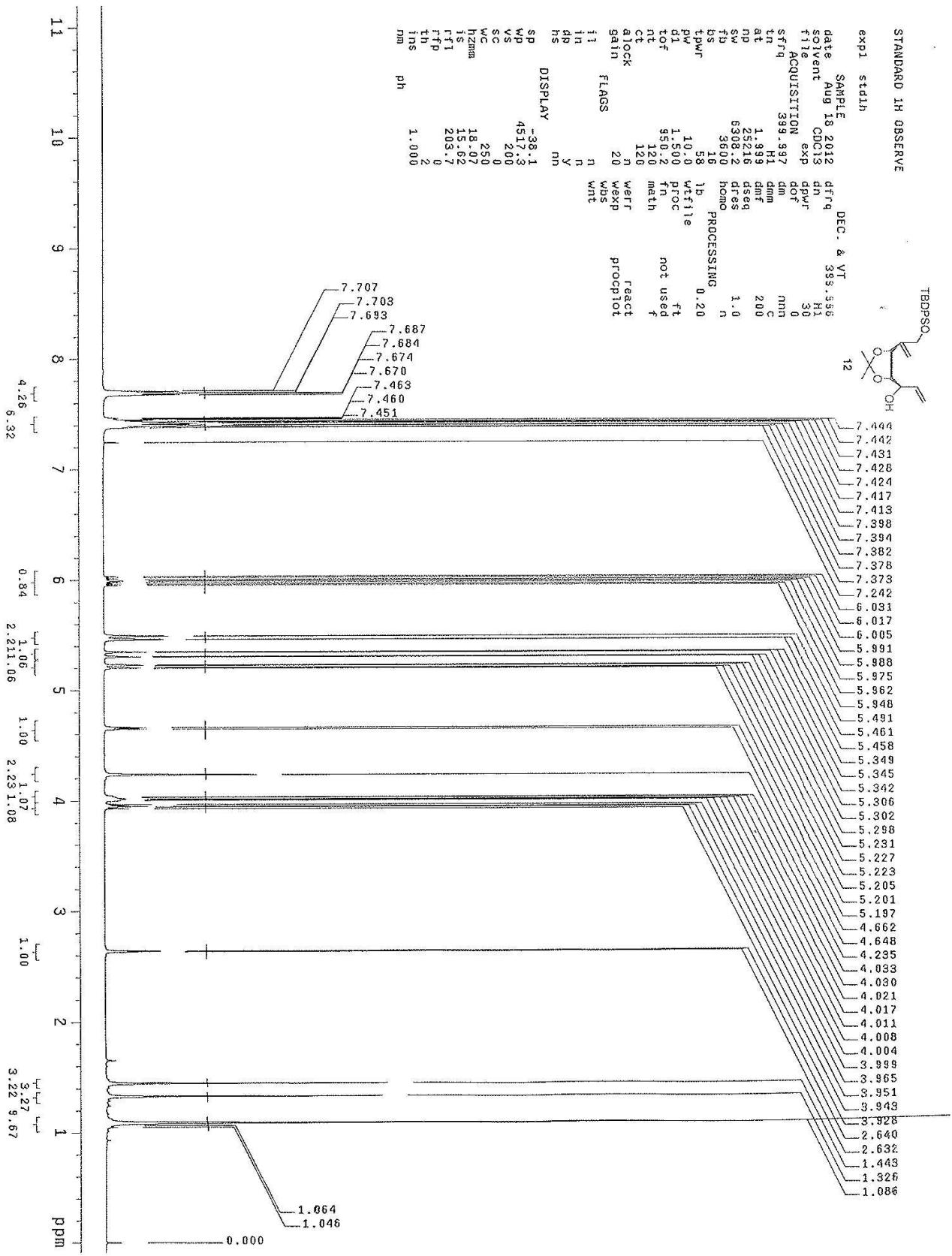
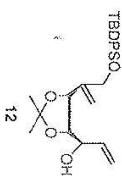
**Table 2.** Condition Optimization for the Formation of Compound **19** from **18** using 2<sup>nd</sup> Generation Grubbs' Catalyst **D**

Entry	Solvent <sup>a</sup>	Reaction conditions	RCM % yield
			(recovered SM %) <sup>b</sup>
1	CH <sub>2</sub> Cl <sub>2</sub>	5.0 mol% <b>D</b> , rt, 48 h	25 (45)
2	CH <sub>2</sub> Cl <sub>2</sub>	1.0 mol% <b>D</b> , rt, 72 h	30 (40)
3	CH <sub>2</sub> Cl <sub>2</sub>	2.5 mol% <b>D</b> , 40 °C, 12 h	43 (32)
4	Cl(CH <sub>2</sub> ) <sub>2</sub> Cl	2.5 mol% <b>D</b> , 40 °C, 24 h	35 (30)
4	Toluene	5.0 mol% <b>D</b> , rt, 24 h	32 (40)
5	Toluene	5.0 mol% <b>D</b> , 40 °C, 6 h	70 (15)
6	Toluene	5.0 mol% <b>D</b> , 80 °C, 0.5 h	87
7	Toluene	2.0 mol% <b>D</b> , 80 °C, 1 h	90
8	Toluene	2.0 mol% <b>D</b> , 80 °C, 6 h	78 (5)

<sup>a</sup>1mM concentration. <sup>b</sup>Yields of isolated compounds **18** and **19** after column chromatography.

STANDARD 1H OBSERVE

exp1	std1bh	SAMPLE	2012	dfrq	DE
date		AUG 18	CDC13	dpwr	
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file	ACQUISITION	399.337	dm		
sfrq			dmf		
at		1.939	dmp		
pp		2.521	dsq		
sw		6.30832	drses		
fb		560.0	hom		
bs		16.0	PR		
pwr		58.0	lb		
pw		10.0	wfilets		
d1		1.560	proc		
dof		95.0	rn		
tof		120.0	math		
nt		120.0			
ct					
ctclock					
gain					
il	FLAGS	20	verr		
in			wexp		
dp			wbs		
hs			wnt		
DISPLAY	mn				
sp		-38.1			
wp		4517.3			
vs		200			
sc		0			
vc		250			
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is		15.62			
rft		203.7			
rfp		0			
th		2			
ins					
ph		1.000			



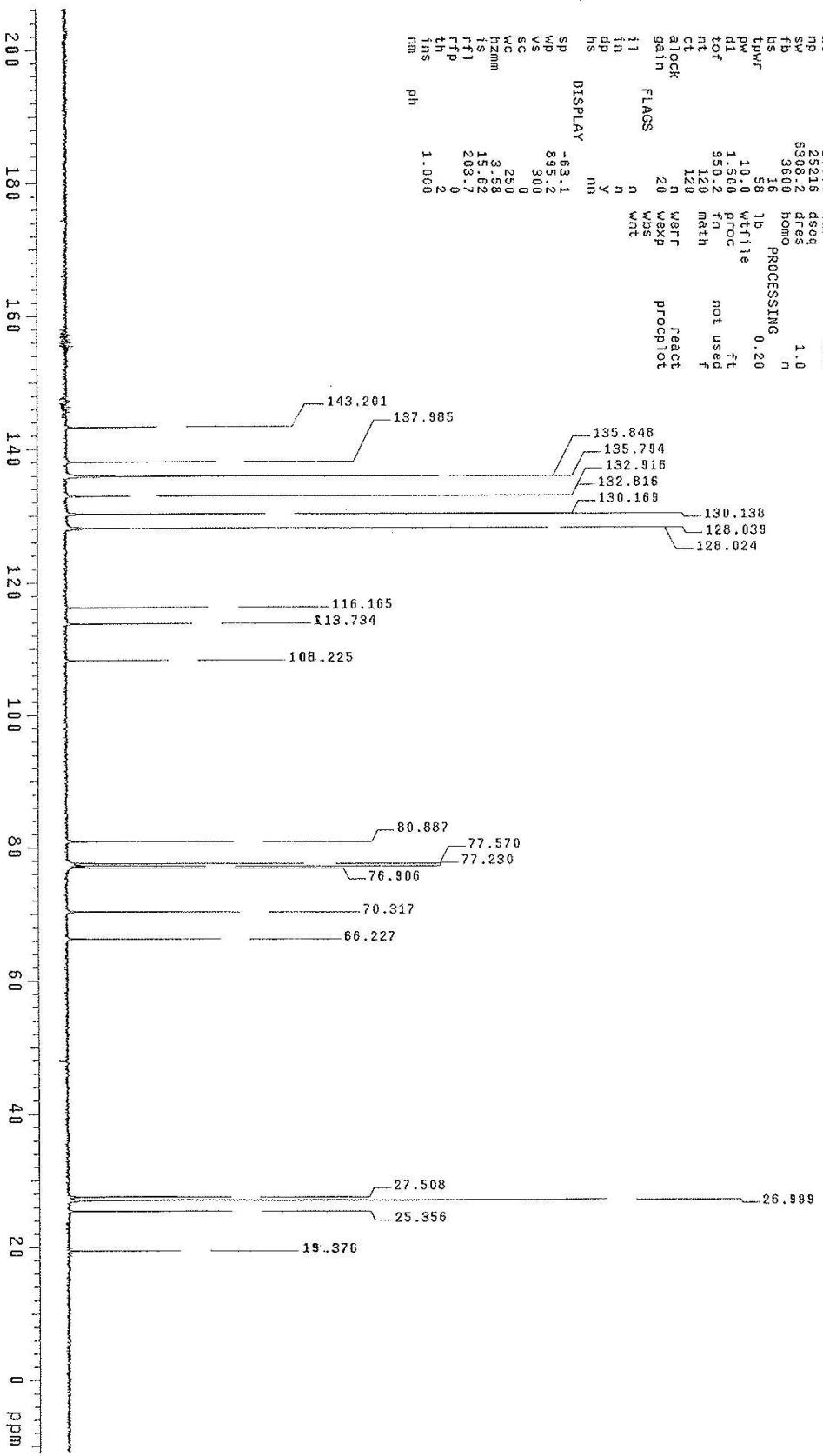
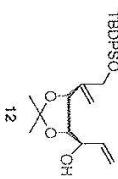
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tn	dmn
at	H1
pp	1.998
sw	25216
fb	638.2
bs	3600
tpwr	16
pw	58
d1	10.0
t0f	1.500
nt	98.0.2
ct	120
clock	n
gain	1b
FLAGS	wtrile
i1	proc
in	not used
dp	ft
hs	f
DISPLAY	math
sp	react
wp	react
vs	procplot
sc	werr
vc	wexp
hzmm	wbs
is	wnt
r1	n
rfp	n
th	n
ins	n
rm	n
ph	1.000

DEC. & VT

H1	30
0	0
nm	0
C	0
200	0
1.0	0
n	0
0.20	0
ft	0
f	0
react	0
procplot	0



## STANDARD 1H OBSERVE



expt stdin

SAMPLE

date

Aug 17

2012

dfrq

399.996

H1

solvent

CDCl3

dn

file

exp

dprw

30

Acquisition

399.997

dof

0

sfrq

run

tn

H1

dimm

C

at

1.999

dmf

200

np

25216

dseq

6398.2

dres

36000

homo

bs

16

PROCESSING

1b

tprw

58

wfile

10.0

procile

dl

1.500

not used

tof

550.2

fn

nt

12.0

math

ct

3.2

werr

alock

20

react

gain

wobs

FLAGS

wnt

jl

n

in

n

dp

y

hs

nn

DISPLAY

-151.7

4608.6

343

sc

250

wc

18.43

hzmm

500.00

is

201.4

rf1

201.6

rfp

1.003

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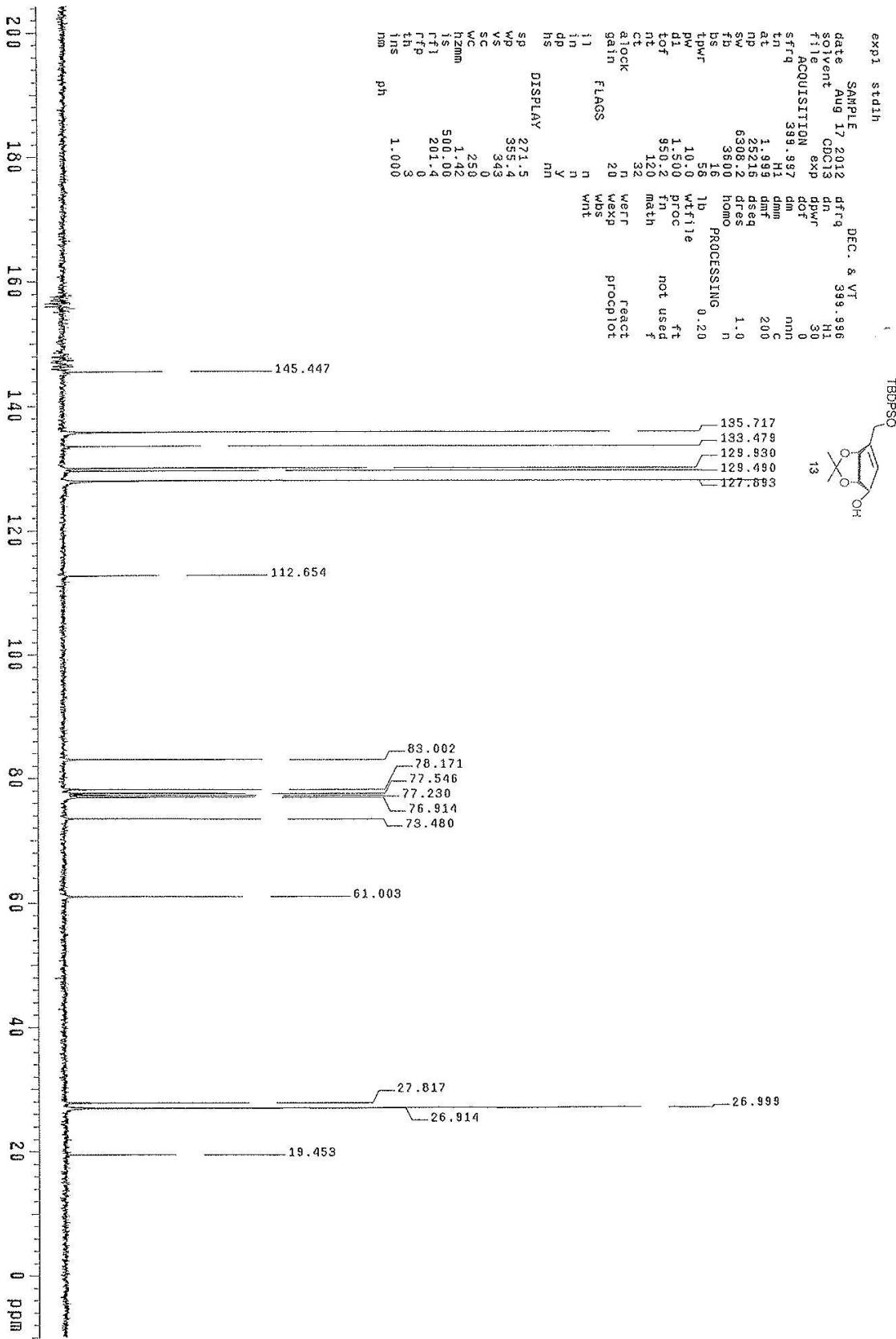
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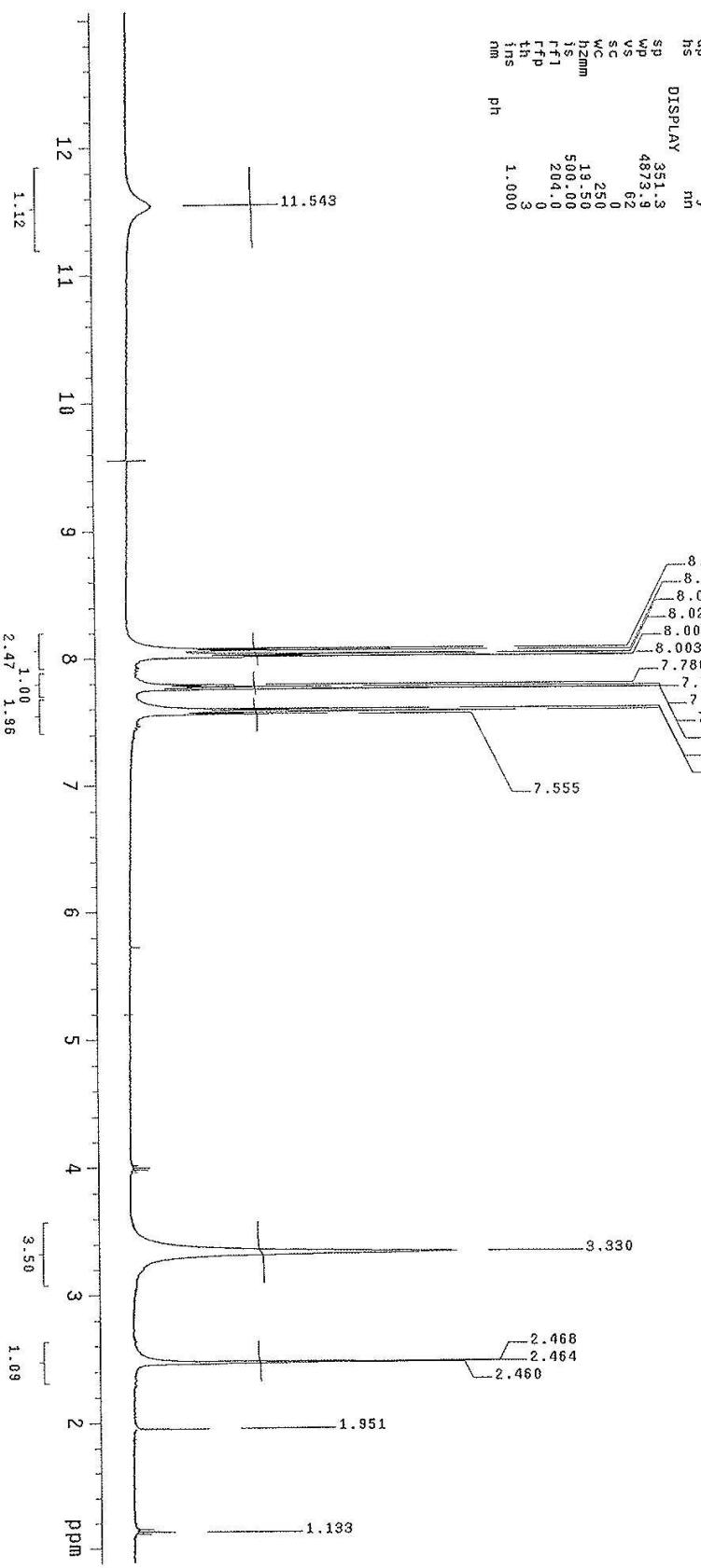
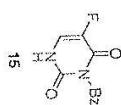
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399.997	dm		
tn	mn		
at	H1		
np	dmm		
252.16	c		
sw	dseq		
638.2	des		
fb	360.0		
16	homo		
bs	1b	PROCESSING	0.20
tpwr	55		
pw	10.0	wrile	
d1	1.500	proc	
tof	950.2	fn	
nt	120.0	ft	
ct	32	math	
a1ock	n	not used	f
FLAGS	2.0	werr	react
i1	wbs	wexp	procplot
in	n	writ	
dp	y		
hs	m		
DISPLAY	271.5		
sp	385.4		
wp	343		
vs	271.5		
sc	343		
wc	250		
h2mn	1.42		
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rfl	201.4		
rfp	0		
th	3		
ins	1.000		
ph			



STANDARD 1H OBSERVE

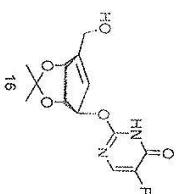
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soilent	Nov - 2	DSDO	dnpw	sfrq
file	ACQUISITION	exp	dof	399.998
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at	1.999	25.16	dmf	2000
np	380.2	dres	1.0	3000
fb	380.0	hono	,	3000
bs	16	PROCESSING	0.24	3000
tprt	58	lb	proc	3000
pw	10.0	wtfie	fb	3000
di	1.500	proc	not used	3000
tof	950.2	fn	,	3000
nt	64	math	,	3000
ct	64	werr	,	3000
clock	20	wexp	,	3000
gain	n	wbs	,	3000
FLAGS	n	wnt	,	3000
in	y	mn	,	3000
dp	n	mn	,	3000
hs	DISPLAY	351.3	Reacton	3000
sp	wp	4873.9	processior	3000
vs	sc	62	ratio	3000
wc	bmm	250	ratio	3000
is	is	19.50	ratio	3000
rfl	rflp	500.0	ratio	3000
th	thrs	204.0	ratio	3000
ins	pH	3	ratio	3000
		1.000	ratio	3000





<sup>13</sup>C OBSERVE

expt sid13c

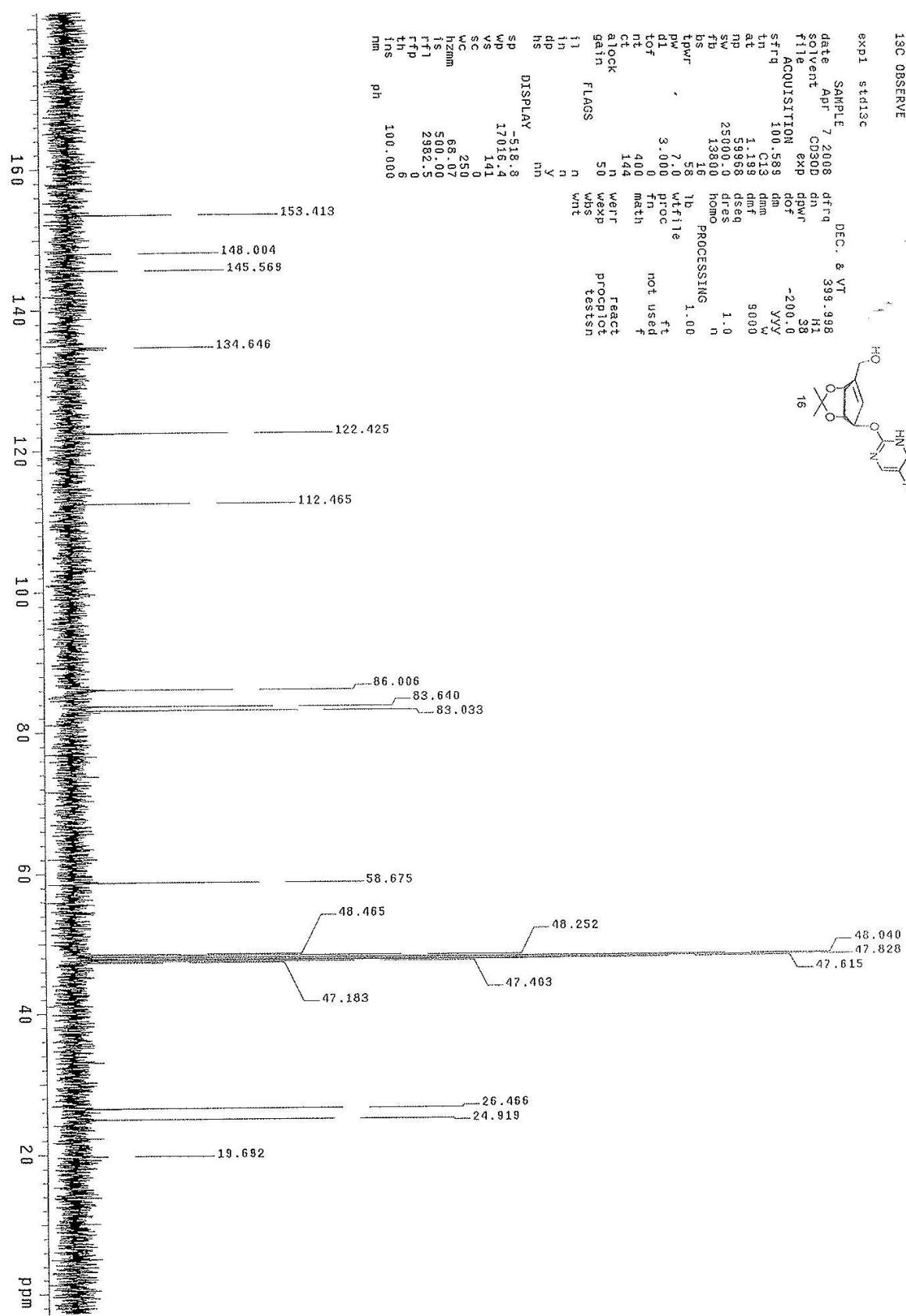


SAMPLE 7 Apr 2008 df<sup>r</sup>q 399.998  
solvent CD3OD d1 H1  
file exp 38  
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sfrq 100.589 dmy yyy  
tn 0.013 dm 9000  
at 1.198 dm<sup>f</sup> 9000  
rp 59968 dreq  
sw 2500.0 dres 1.0  
fb 13800 homo n  
bs 16  
t<sup>p</sup> 58 lb PROCESSING 1.00  
pw 3.7.0 wtfile  
dl 3.000 proc ft  
tof 0 fn not used f  
nt 400 math  
ct 144 react  
clock n proportion  
gain 50 wexp testen  
FLAGS wbs  
i1 n wnt  
in n  
dp n  
hs y nn

DEC. & VT  
16 H1  
dpr 38  
dof -200.0  
dmy yyy  
dm<sup>f</sup>  
dreq  
dres 1.0  
homo n  
PROCESSING 1.00  
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proc ft  
fn not used f  
math  
react  
proportion  
testen  
wbs  
wnt  
nn

DISPLAY

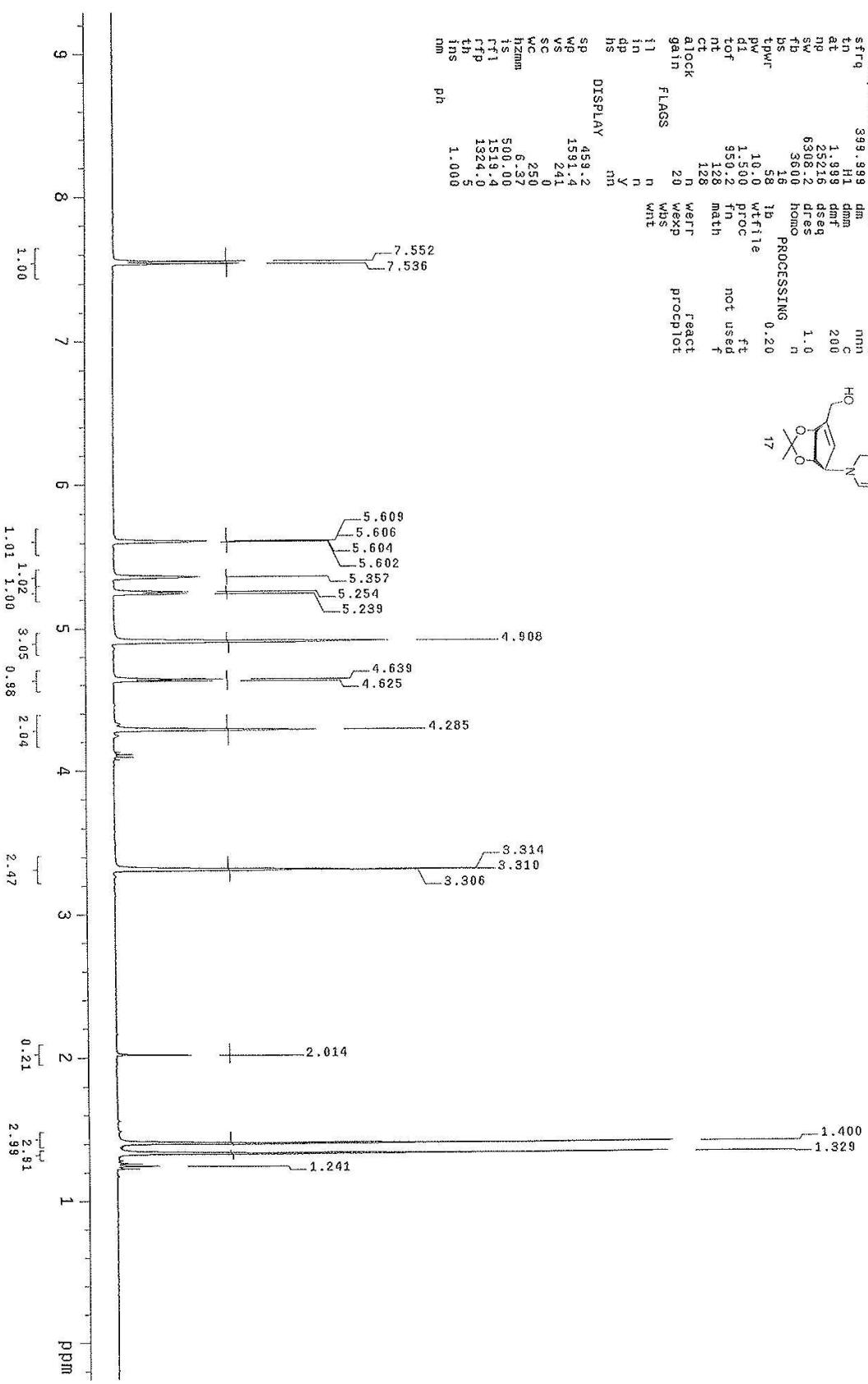
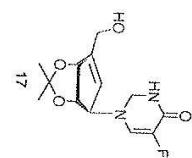
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wc 0.07  
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is 2982.5  
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th 100.000  
ins ppm



## STANDARD 1H OBSERVE

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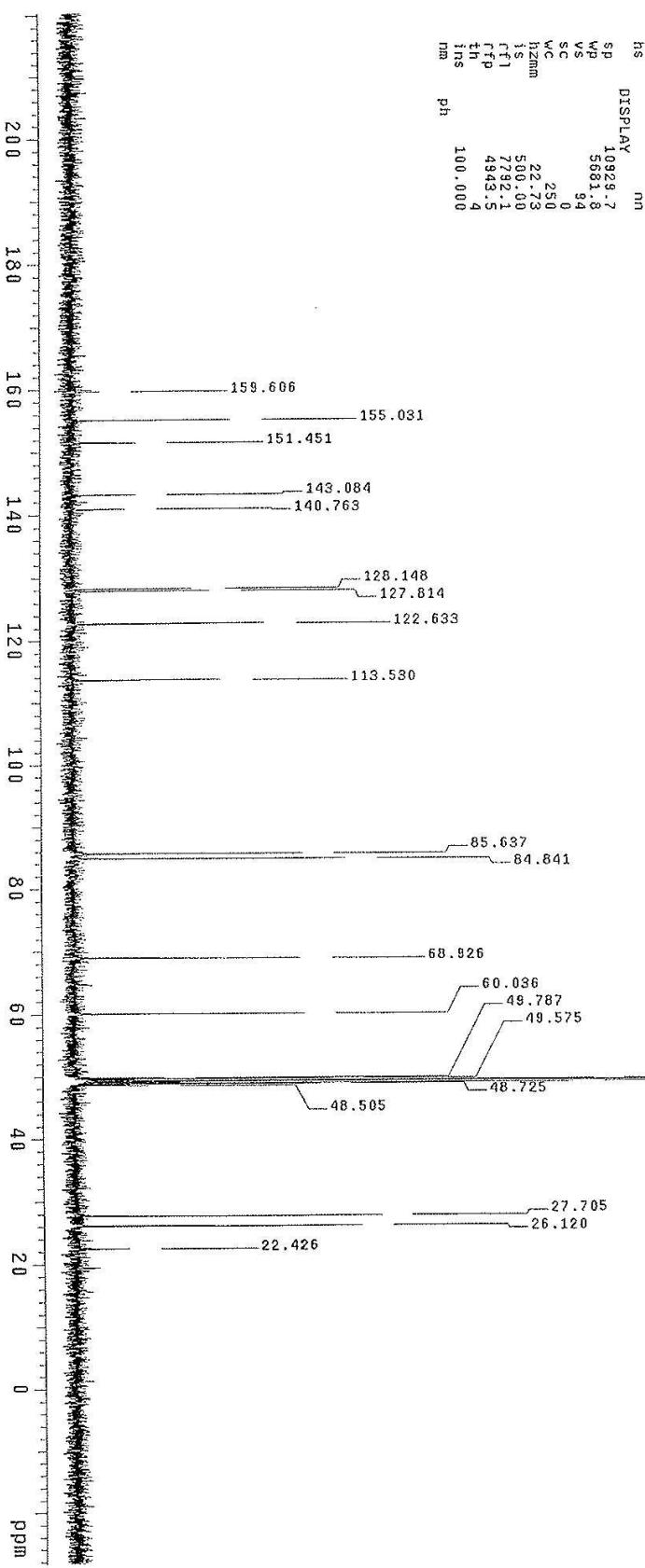
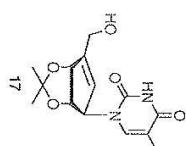
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 file exp dpr  
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 sfrq 393.999 dim  
 tn H1 dmm  
 at 1.939 dmrf  
 np 25256 dsq 200  
 sw 6308.2 dres 1.0  
 fb 3600 homo n  
 bs 16 lb PROCESSING 0.20  
 tpwr 58 1.0.0 wtfile 17  
 pw 10.0 wtfite  
 d1 1.500 proc ft  
 tof 950.2 fn not used f  
 nt 128 math  
 ct 128 werr react  
 alock 20 wexp procplot  
 gain 2.0 wbs  
 FLAGS n wnt  
 i1 n wnt  
 in n v  
 dp n m  
 hs DISPLAY mn  
 sp 459.2 1591.4  
 wp 241.4  
 vs 5.609  
 sc 0 5.606  
 wc 250 5.604  
 hzmn 6.37 5.602  
 i.s 500.00 5.357  
 rfi 1319.4 5.254  
 rfp 1324.0 5.239  
 th 1.000 4.908  
 ins 5.608  
 nm 1.000 4.639  
 ph 1.000 4.625  
 4.285  
 3.306 3.314  
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 2.99



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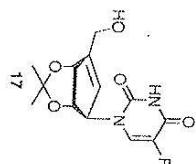
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solvent	CDD	H1
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sfrq	dflq	yyy
tn	100.589	w
at	.C13	9000
pp	1.193	dmf
sw	5.968	dseq
fb	25000	drss
bs	13800	1.0
tppr	58	hom
pw	7.0	PROCESSING
d1	3.000	1.00
tof	0.0	ft
nt	800	not used
ct	576	f
alock	n	fn
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FLAGS	wexp	react
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in	n	prop
dp	y	testsn
hs	nn	wnt

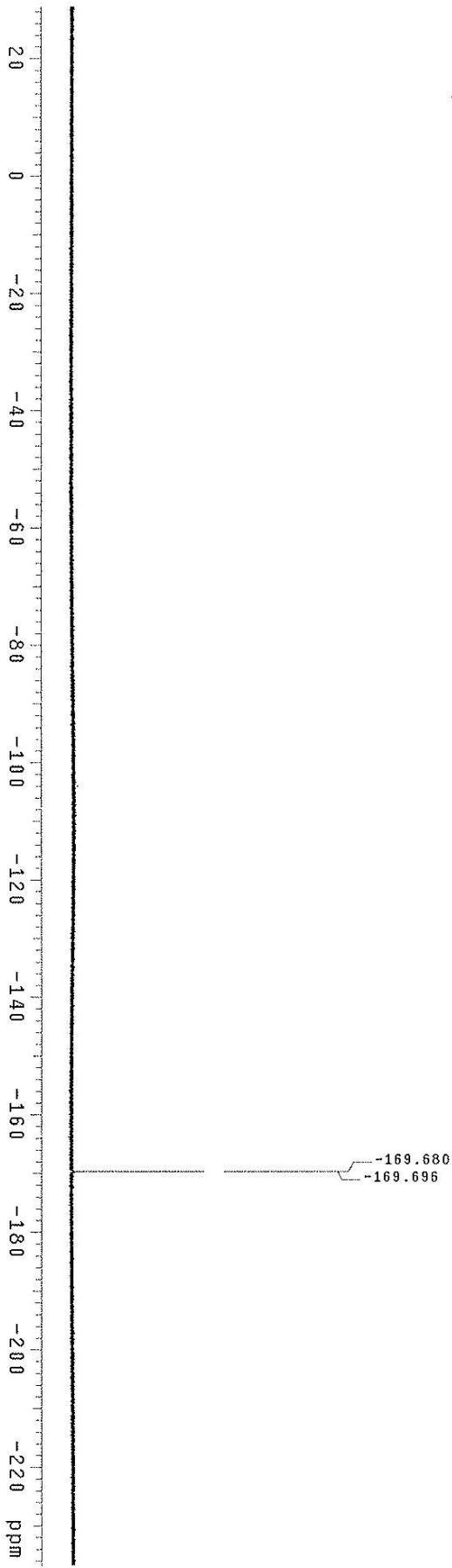


## f19\_STD

exp1 std1h

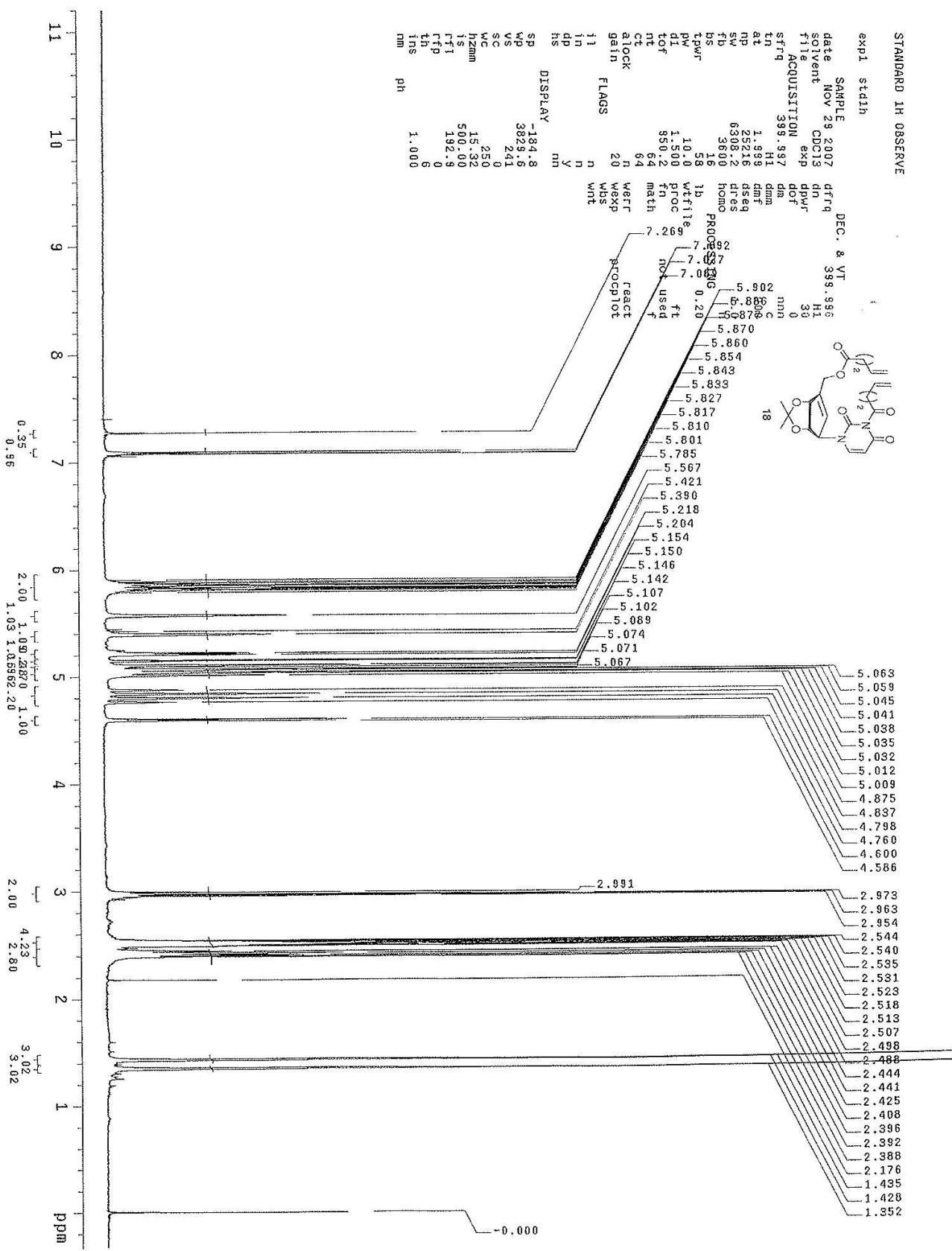


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SOLVENT	CDD0D	din	H1	399.998		
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ACQUISITION	376.333	dot		-208.0		
SF:Q	F19	dm		nnn		
TN	0	dmnm		C		
AT	640	dmf		200		
NP	128.000	dseq				
SW	10000.0	drsq		1.0		
FB	512.00	homo		n		
BS	16	PROCESSING				
TPOWER	58	lb	0.34			
PW	12.0	utfile				
D1	2.000	proc				
TOF	950.2	ft				
NT	120	fm				
CT	32	math				
ALOCK	n	werr	react			
GAIN	2.0	wexp	proplot			
FLAGS	i1	wbs				
IN	n	wnt				
DP	y					
HS	nn					
DISPLAY	-89132.9					
SP	10000.0					
WP	2805					
VS	0					
SC	250					
WC	400.00					
HZMM	500.00					
IS	2527.0					
RT1	-63862.8					
RFP	-63862.8					
TH	100.000					
INS						
PH						
A1						



## STANDARD 1H OBSERVE

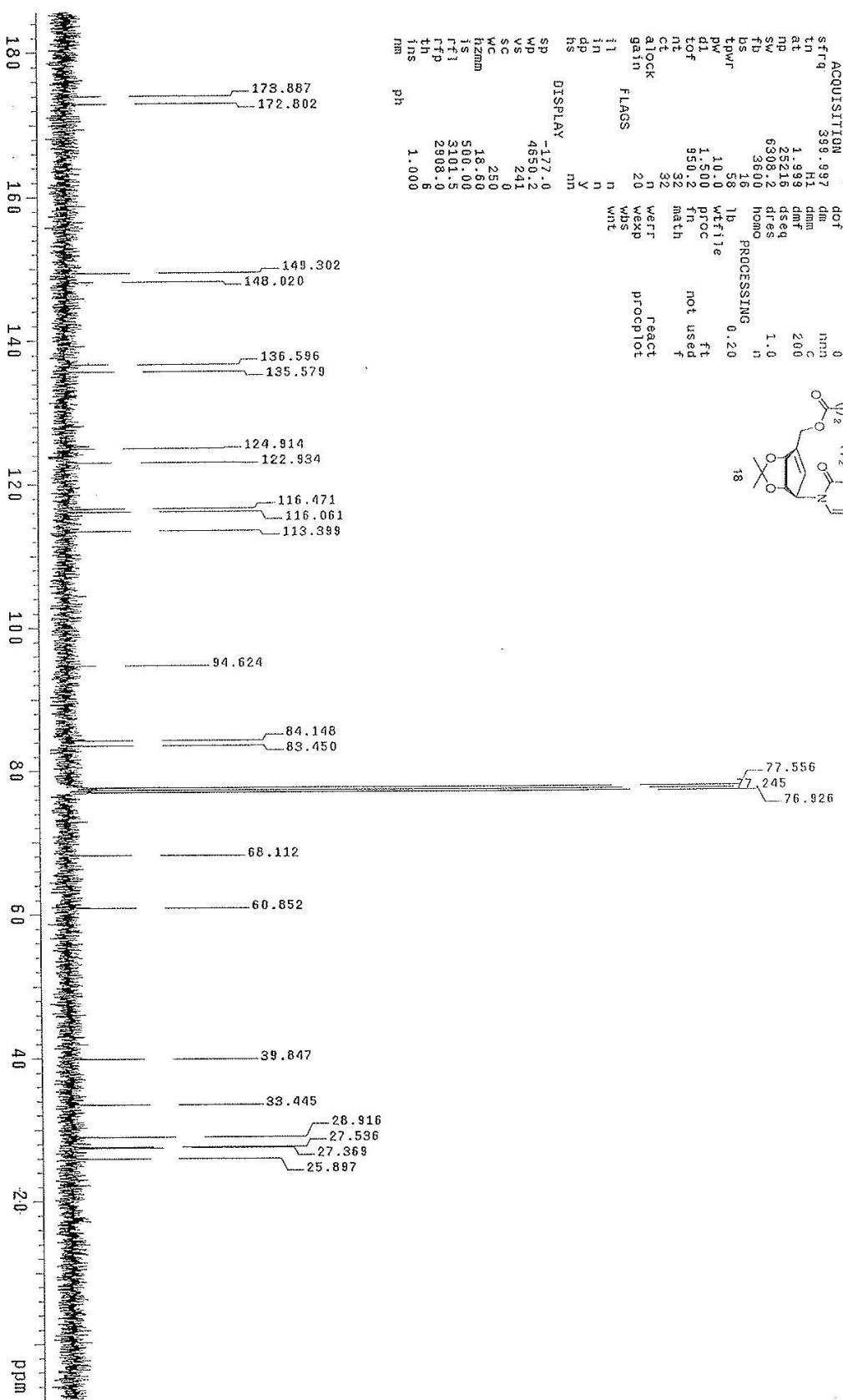
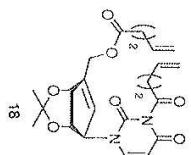
exp1 std1h  
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 solvent CDCl<sub>3</sub> dn  
 file exp dpwr  
 ACQUISITION 399.997 dof  
 srq 399.997 dia  
 tn H1 dmm  
 at 1.999 dmf  
 np 25.116 dsq  
 sw 63.002 tress  
 fb 360.0 tres  
 bs 16 homo  
 tower 5.8 PROC  
 pw 10.0 wtf1le  
 d1 1.500 proc  
 t0f 65.0 2 fn  
 nt 64 math  
 ct 64 werr  
 alock n react  
 gain 20 procplot  
 FLAGS wexp  
 i1 wbs  
 in wnt  
 dp n  
 hs y mn  
 DISPLAY -184.8 mn  
 sp 3829.6 mn  
 wp 24.1 mn  
 vs 3829.6 mn  
 sc 24.0 mn  
 nc 25.0 mn  
 hznm 15.32 mn  
 1s 500.00 mn  
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 rfp 0.0 mn  
 th 1.000 mn  
 ins ph



## STANDARD 1H OBSERVE

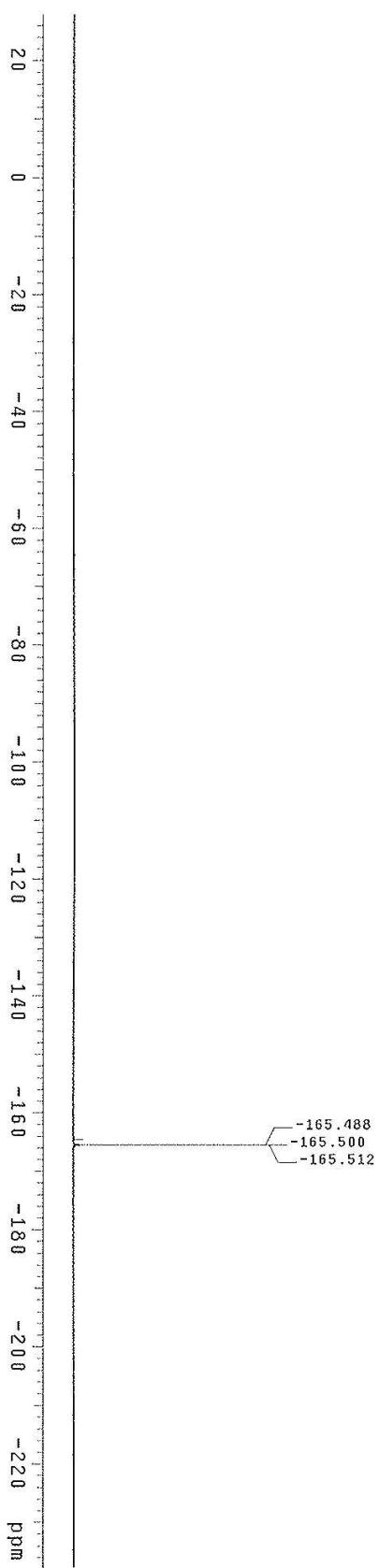
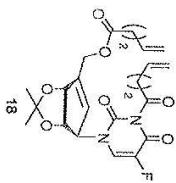
expt std1h

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file	exp	dn	30	
ACQUISITION	dpr	dof	0	
sfrq	399.997	dif	nnn	
tn	H1	dmm	c	
at	1.999	dmf	200	
tp	25.116	dseq	200	
sw	6300.2	drss	1.0	
fb	3800	homo	n	
bs	16	PROCESSING	0.20	
towr	58	lb		
pw	10.0	wtfinc		
dl	1.500	proc		
trf	950.2	fn		
nt	32	math		
ct	n	werr		
a1ock	20	wexp		
gain	FLAGS	wbs		
i1	n	wnt		
in	n			
dp	y			
hs	nm			
DISPLAY	-177.0			
sp	4650.2			
vs	241			
sc	25.0			
vc	18.600			
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is	3101.5			
rfl	2908.0			
rfp				
th	1.000			
ins				
rm				
ph				

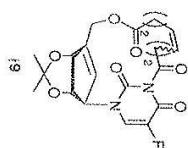


F19\_STD  
expi stdth

	SAMPLE	DEC.	DEC. & VT
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solvent	CDCl <sub>3</sub>	dn	H1
file		exp	30
ACQUISITION		dpr	-208.0
sfrq	376.332	dof	mm
tn	F19	dmn	C
at	0.640	dmt	200
np	1.28000	dseq	
sw	10000.0	dres	1.0
fb	51200	homo	n
bs			
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pw	2.000	wtfile	0.34
di	950.2	proc	
tof	120	fn	ft
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ct	n	werr	f
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gain	wbs	wrt	procplot
FLAGS			
i1	n		
in	n		
dp	y		
hs	nn		
DISPLAY			
sp	-89508.5		
wp	100000.0		
vs	1258		
sc			
wc	250		
h2mn	400.00		
is	500.00		
rfl	27219.0		
rfp	-62289.4		
th	100.000		
ips			
ai			
ph			



STANDARD 1H OBSERVE

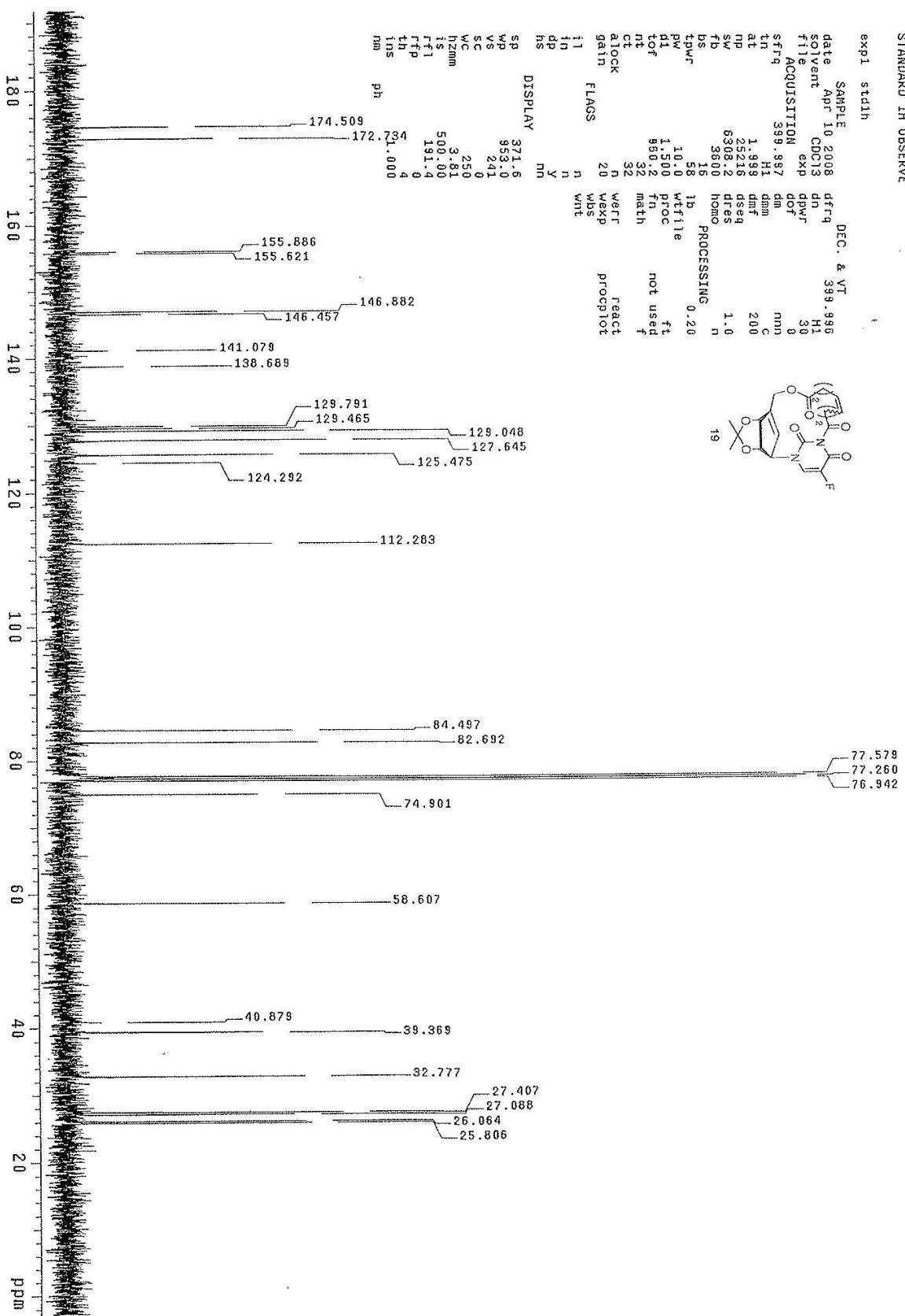
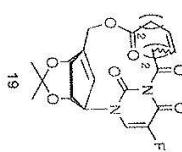


## STANDARD 1H OBSERVE

expt std1h

SAMPLE	df1q	DEC. & VT
date Apr 10 2008	H1	399.936
Solvent CDCl <sub>3</sub>	dn	
file exp	dprw	30
ACQUISITION 399.997	dof	0
sfrq	dof	nnn
tn	H1	c
at	dmm	200
tp	dmf	
25.16	dseq	
np	dres	
sw	3300.2	
fb	3800	
bs	16	
tprt	58	
pw	ib	
p1	10.0	
trf	wffile	0.20
nt	proc	
ct	850.2	
alock	fn	f
gain	32	
FLAGS	math	
i1	n	
in	n	
dp	y	
hs	mn	
DISPLAY	371.6	
sp	953.0	
wp	241	
vs		
sc		
WC		
zoom		
is		
rfl		
rfp		
th		
ins		
nm		
ph		

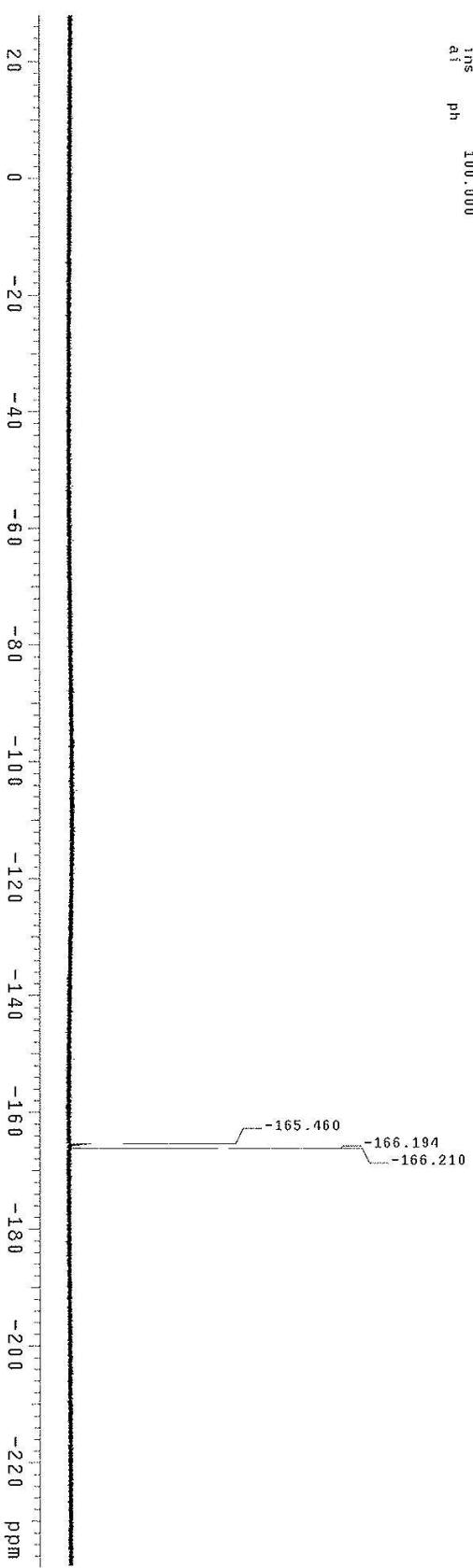
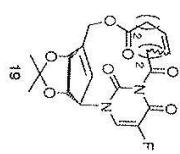
SAMPLE	df1q	DEC. & VT
date Apr 10 2008	H1	399.936
Solvent CDCl <sub>3</sub>	dn	
file exp	dprw	30
ACQUISITION 399.997	dof	0
sfrq	dof	nnn
tn	H1	c
at	dmm	200
tp	dmf	
25.16	dseq	
np	dres	
sw	6300.2	
fb	3800	
bs	16	
tprt	58	
pw	ib	
p1	10.0	
trf	wffile	0.20
nt	proc	
ct	850.2	
alock	fn	f
gain	32	
FLAGS	math	
i1	n	
in	n	
dp	y	
hs	mn	
DISPLAY	371.6	
sp	953.0	
wp	241	
vs		
sc		
WC		
zoom		
is		
rfl		
rfp		
th		
ins		
nm		
ph		

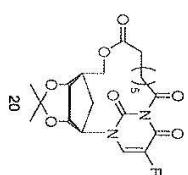
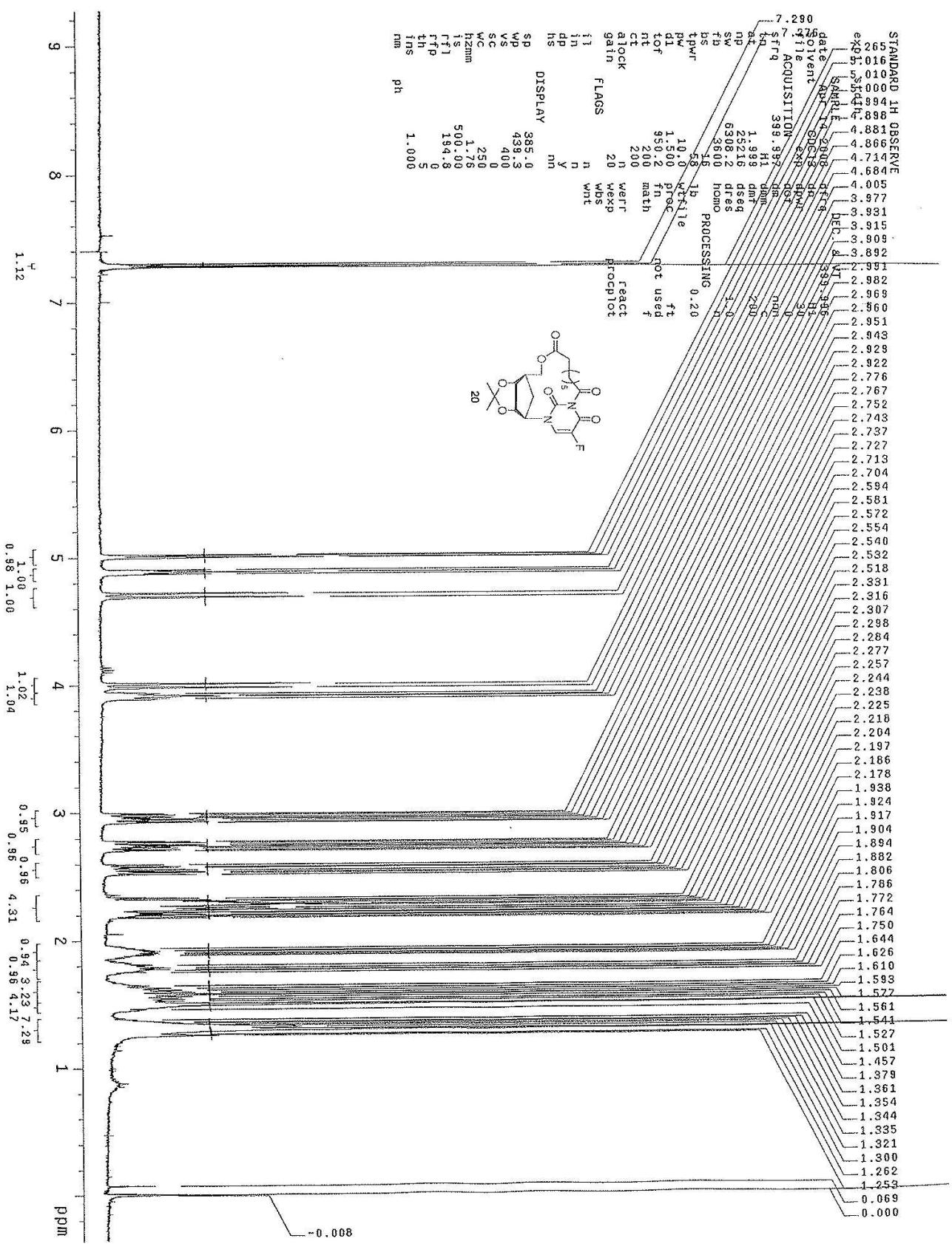


## F19-STD

exp1 stdin

SAMPLE	5	2012	dfrq	DEC.	& VT
SOLVENT		CDC13	dn	399.996	H1
FILE			dprw	30	
ACQUISITION			dof	-208.0	
SFRQ	376.332		nnn		
TIN	.F19	dmn	c		
AT	0.640	dmf	200		
NP	128000	dseq			
SW	100000.0	dres	1.0		
FB	51200	homo	n		
BS	16	PROCESSING	0.34		
T_PWR	58	lb			
PW	12.0	wfile			
D1	2.000	proc	ft		
TOF	950.2	fn	not used		
NT	240	math	f		
CT	32	werr	react		
ALOCK	n	wexp	procplot		
GAIN	20	wbs			
FLAGS		wnr			
I1	n				
IN	n				
DP	y				
HS	nn				
SP	DISPLAY				
WP	-89504.1				
	100000.0				
VS	3553				
SC					
WC	250				
HZMM	400.00				
IS	500.00				
RFL	28947.4				
RFP	-62556.6				
TH	100.000				
AI					
PH					





## STANDARD 1H OBSERVE

expt studh

date Apr 15 2008

SAMPLE CDCl<sub>3</sub>

solvent dmr

file exp

ACQUISITION dpr

sfrq 389.997

tn H1 dmm

at 1.999 dmf

np 25216 dseq

sw 6308.2 dres

fb 3800 homo

bs 16 PROCESSING

tpr 53 0.20

pw 10.0 wtfille

d1 1.500 proc

t0r 950.2 fn

nt 312 math

ct 32 weff

alock 20 react

gain wbs

FLAGS n

i1 n wrt

in n v

dp n

hs n

DISPLAY -77.8

sp 3779.6

wp 2411

sc 25.0

wc 15.12

hzum 500.00

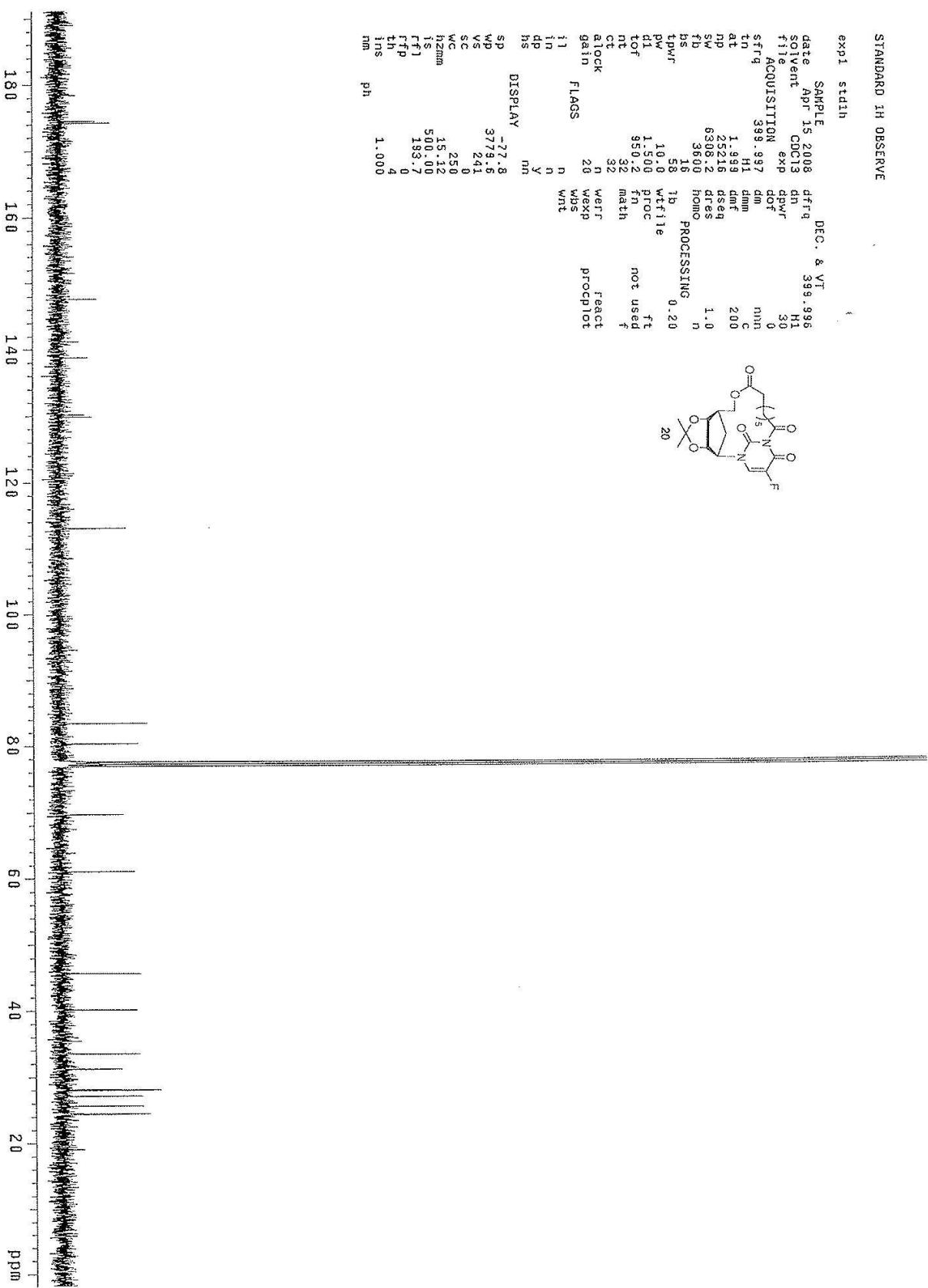
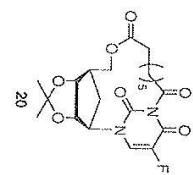
is 183.7

rf1

rfp 1.004

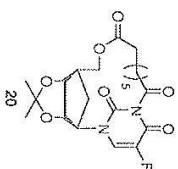
th ins

nm ph

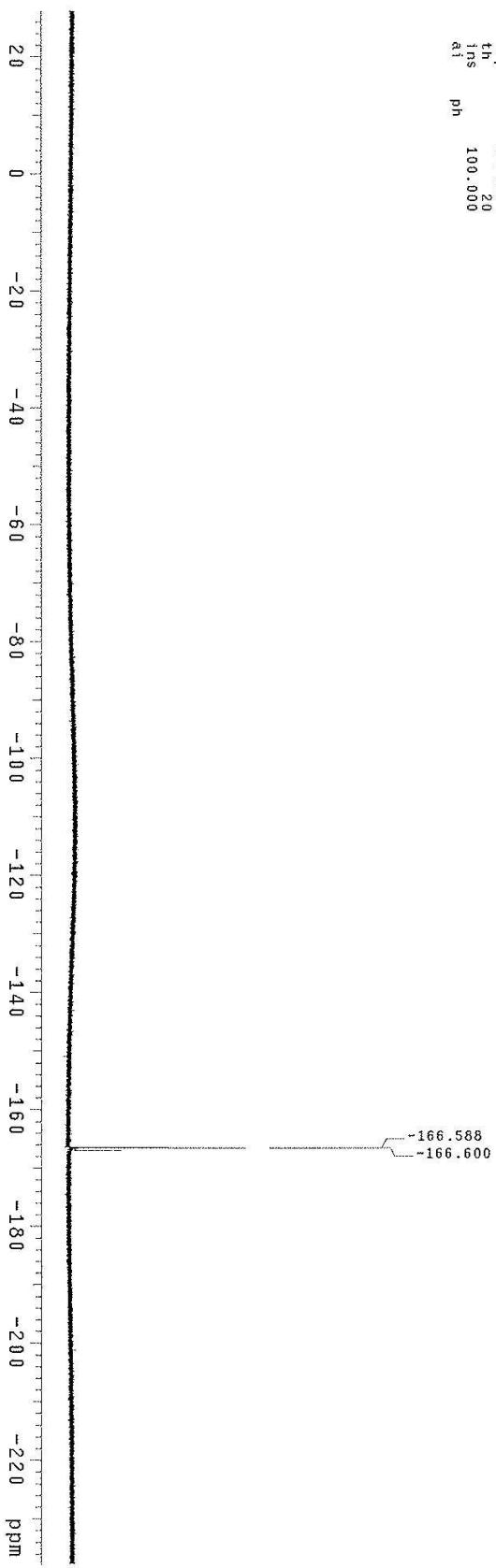


## F19\_STD

exp1 stdh

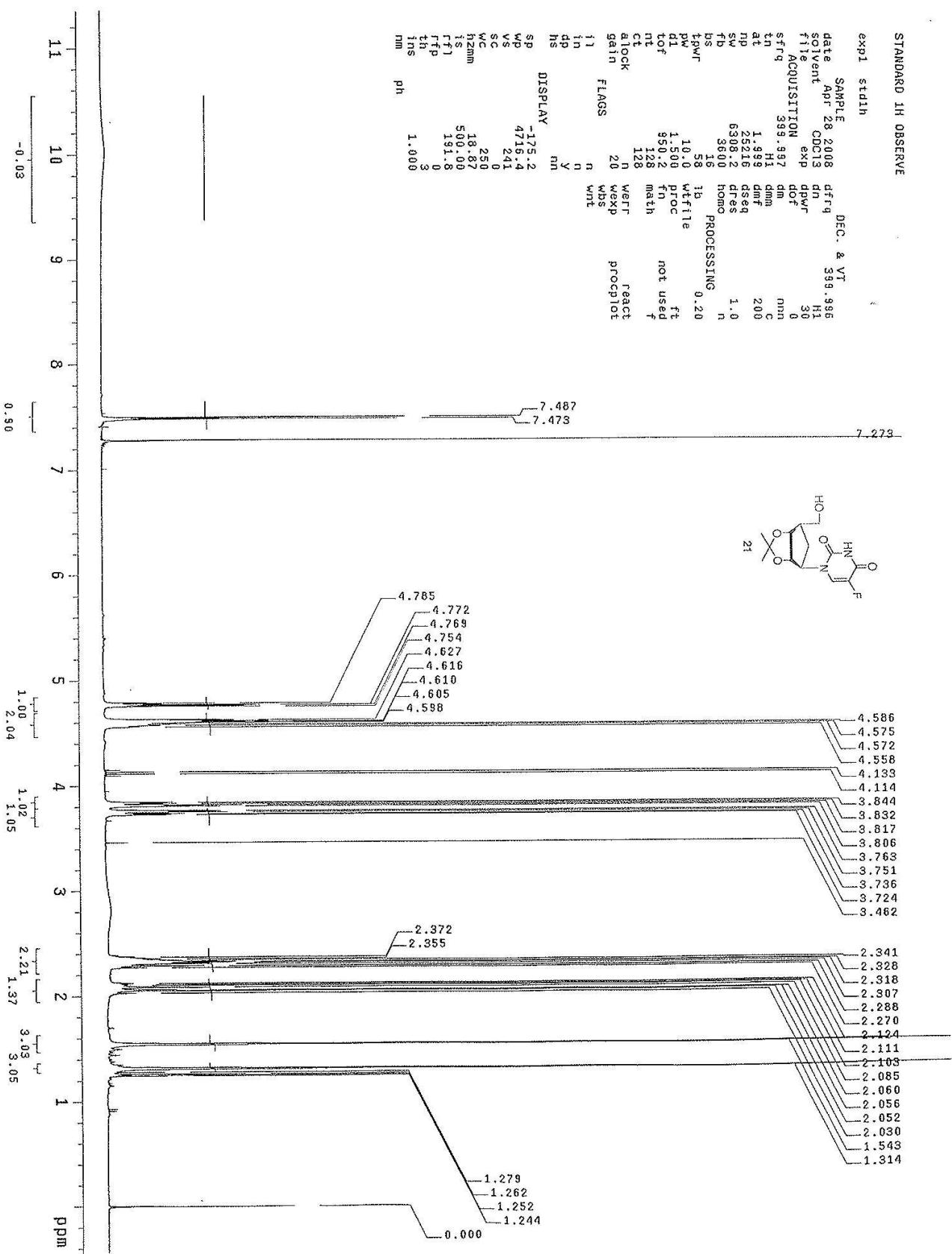


	SAMPLE	DEC. & VT
date&	Nov 5 2012	dfrq 399.996
solvent	CDCl <sub>3</sub>	dn H1
file		dppr 30
ACQUISITION	exp	dof -200.0
sfrq	376.332	dmn nn
tn	F19	dimn
at	0.640	cmtf 200
np	128.000	dseq
sw	100.000	drss 1.0
fb	512.00	homo n
bs		PROCESSING 0.34
t_pwr		lb
pw	12.00	wrtfile
d1	2.000	proc ft
tof	950.2	not used f
nt	360	math
ct	112	werr react
clock	n	wexp procplot
gain	20	
FLAGS		wss
i1	n	writ
in	n	
dp	y	
hs	nn	
sp	DISPLAY	
wp	-8.9505.9	
sc	10000.0	
vs	70.62	
sc	0	
wc	2.50	
h2mm	400.00	
i_s	500.00	
r_f1	26802.-5	
r_fp	-62203.4	
th	100.20	
ins		
ai		
ph	100.000	



## STANDARD 1H OBSERVE

exp1	std1h	SAMPLE	DEC -	& VT
date		Apr 28 2008	dfrq	399.996
solvent		CDCl3	an	H1
file			exp	30
ACQUISITION			dprw	0
srcq		399.997	dof	nnn
tn		H1	dmm	C
at		1.999	dmf	200
np		25316	dseq	
sw		6308.12	drres	1.0
fb		3660	homo	n
bs		16	PROCESSING	0.20
tpwr		58	ib	
pw		10.0	wtfile	
d1		1.000	proc	
tof		950.2	fn	not used
dp		128	math	f
nt		128	werr	
ct		0	react	
a1ock		20	wexp	
gain		20	wbs	
FLAGS		1	wnt	
i1		0		
in		0		
dp		0		
hs		0		
DISPLAY		-175.2		
sp		4716.4		
wp		241		
vs				
sc		0		
hc		250		
h2nm		18.87		
is		500.00		
rfl		191.8		
rrfp		0		
th		3		
ins		1.000		
nm				
ph				



## 13C OBSERVE

expt std13c

SAMPLE

date Apr 28 2008

solvent CDCl<sub>3</sub>

file exp

ACQUISITION

sfrq 100.588

tn C13

at 1.199

pp dmf

sw 59.68

fb dseq

bs 2500.0

tswr dres

pw 1.6

tswr

di 5.8

pw 7.0

tswr

tof 3.000

nt 0

ct 8.00

alock 7.20

gain 5.0

FLAGS

in n

dp n

hs y

DISPLAY

sp 2040.9

wp 2923.7

vs 8.8

sc 0

wc 25.0

hzum 11.69

is 500.00

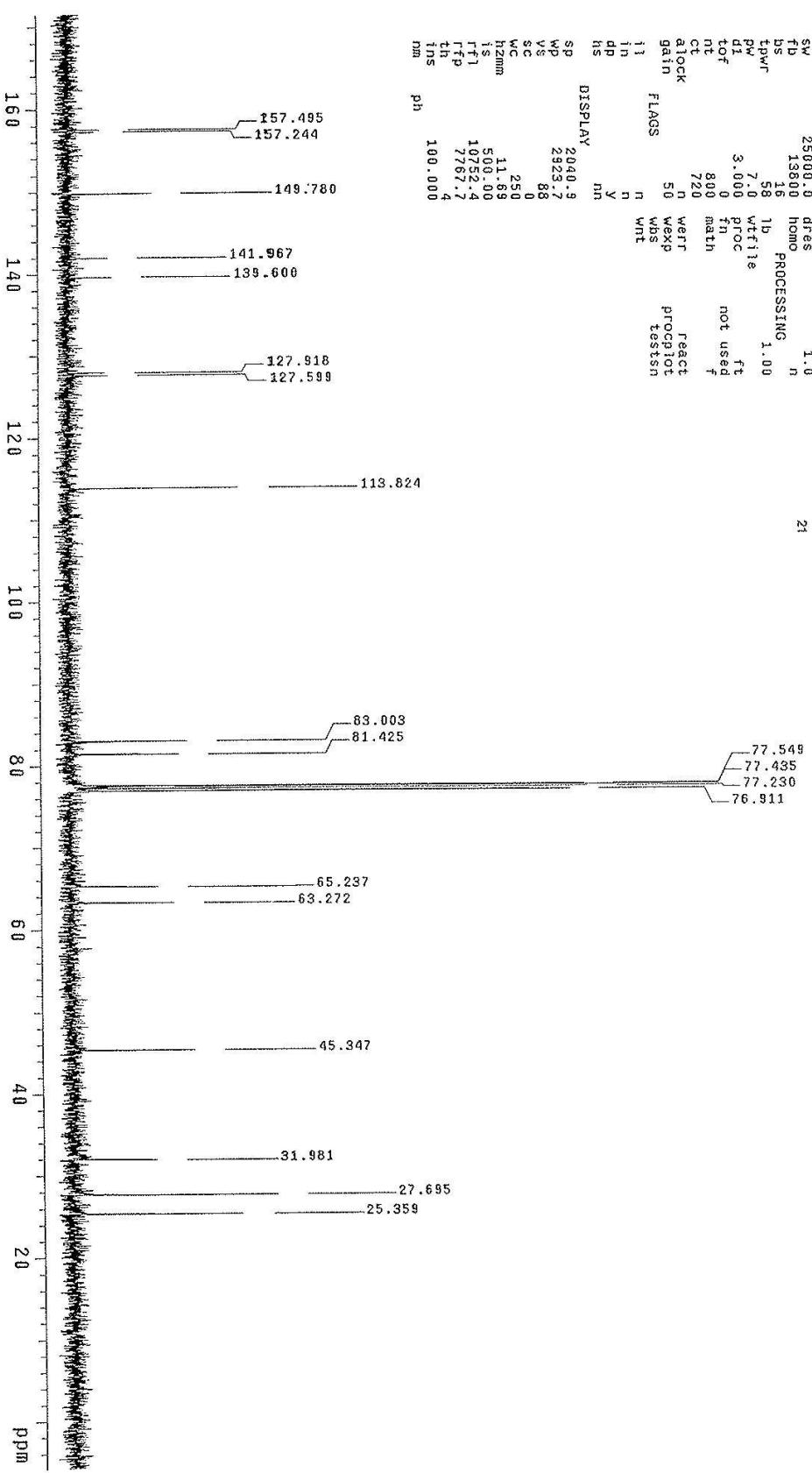
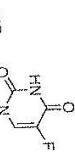
rf1 10752.4

rfp 7767.7

th 100.004

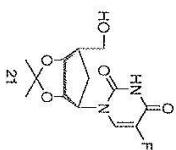
ins nm

ph

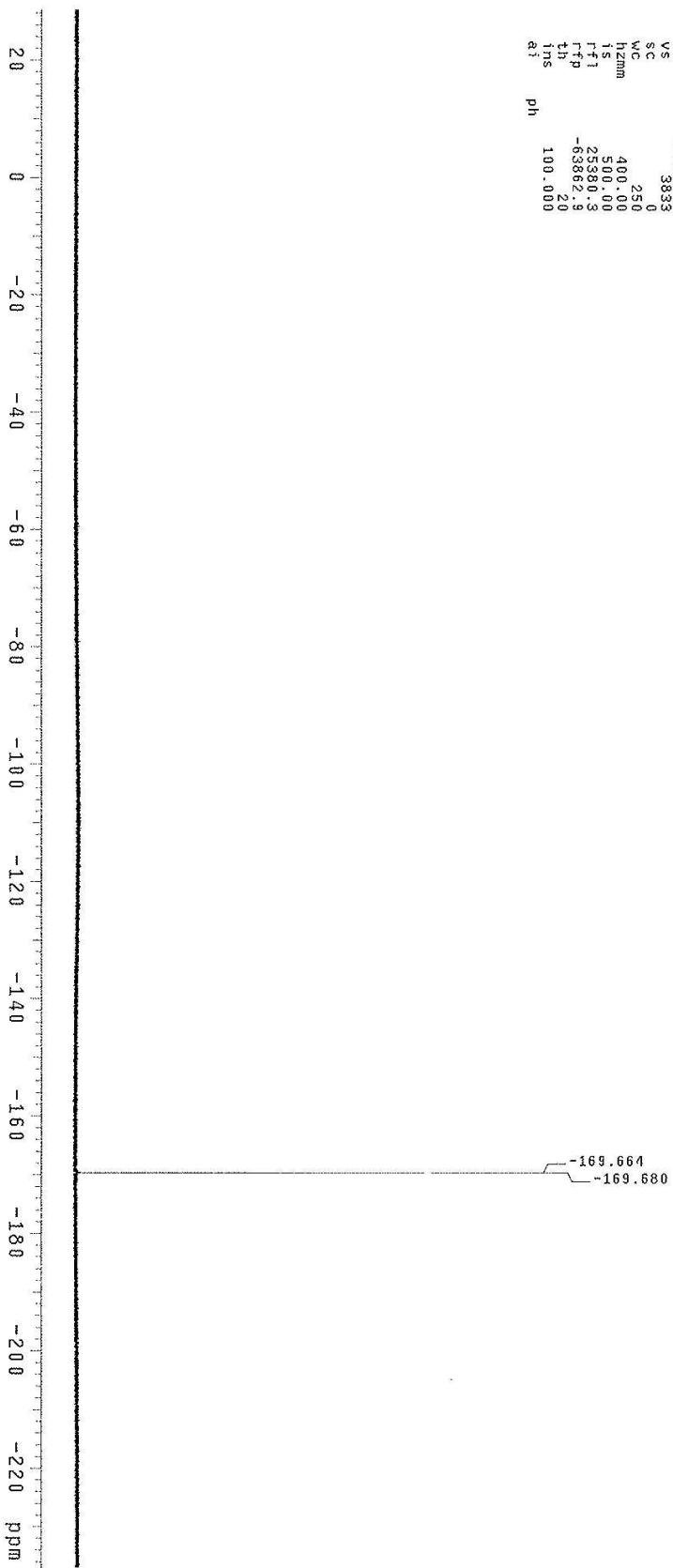


## F19-STD

exp1 stdh



	SAMPLE	DEC.	& VT
date	Nov 5 2012	dfrq	399.998
solvent	CD3OD	dn	H1
file	exp	dpr	30
ACQUISITION		dof	-208.0
sfrq	376.333	dm	mn
tn	F19	dum	c
rt	0.640	dmt	200
tp	128000	dseq	1.0
sw	100000.0	dtres	n
fb	51200	homo	
bs	58	PROCESSING	0.34
tpwr		lb	
pw	12.0	utfile	
d1	2.000	proc	ft
t0f	650.2	fn	not used
nt	48	math	f
ct	n	werr	react
alock	20	wexp	procplot
gain		wbs	
FLAGS		wnt	
i1	n	wnr	
in	n	wnr	
dp	y	nn	
hs	DISPLAY		
sp	-89243.2		
wp	10000.0		
vs	38.33		
sc			
wc	2.50		
hzmn	400.00		
i5	500.00		
rfl	2580.3		
rfp	-63862.9		
th	20		
ins	100.000		
ai			
ph			



## STANDARD 1H OBSERVE

expt std1h

SAMPLE Apr 30 2008

date Apr 30 2008

solvent CDCl3

file exp

ACQUISITION 399.997

sfrq 399.997

tn 58 H1 dim

at 1.999 dmf

tp 2516 dseq

sw 6300.2 dres

fb 3800 homo

bs 16

towr 58

pw 10.0 wtfile

d1 1.500 proc

tr 950.2 fn

nt 1.6 math

ct 1.6 werr

a1ock 2.0 wepx

gain 2.0 wbs

FLAGS n

i1 n

in n

dp y

hs mn

DISPLAY -181.7

sp 4716.4 500.0

wp 18.87

vs 198.3

sc 25.0

hc 18.87

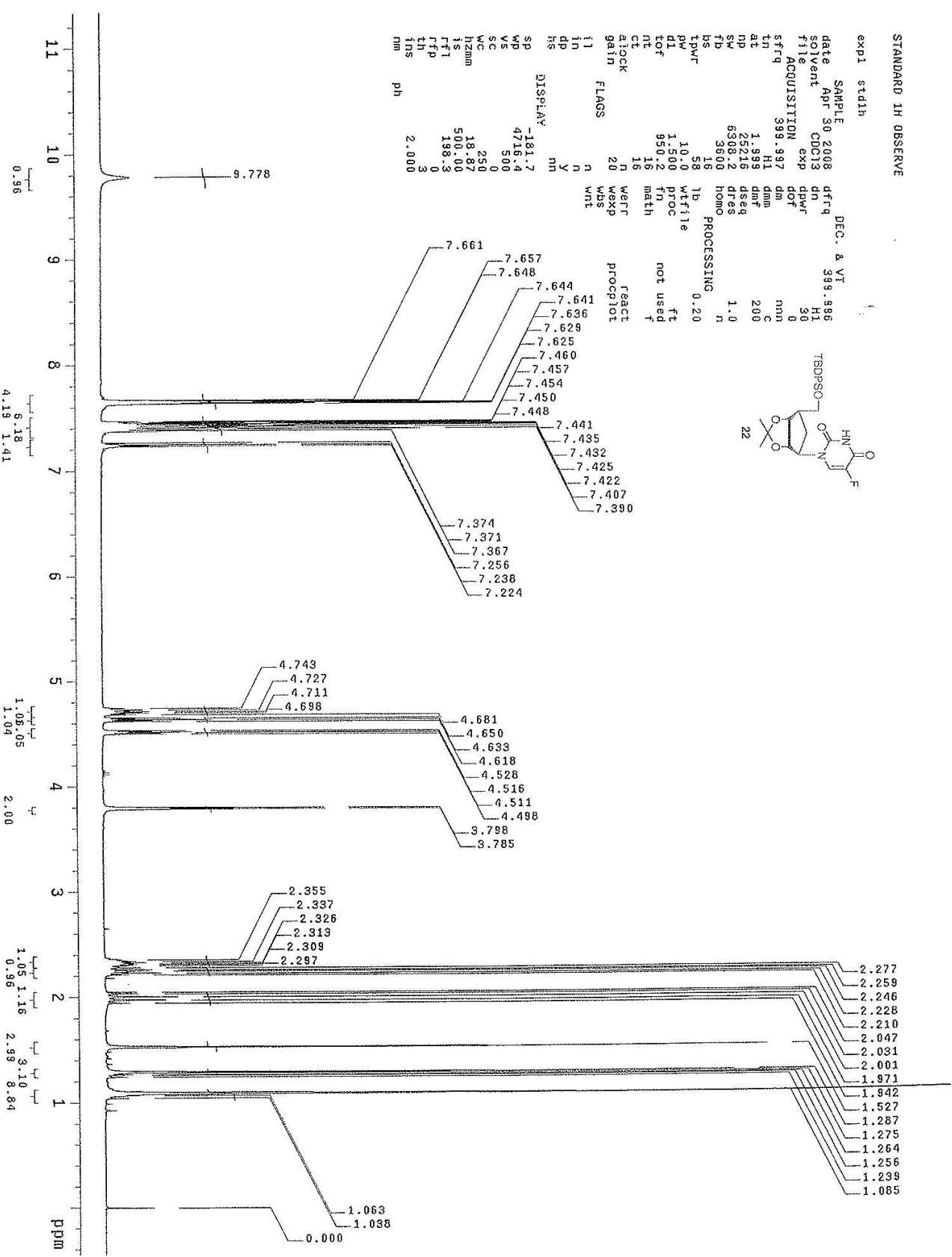
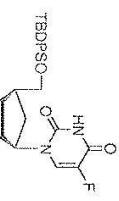
is 500.0

rf1 198.3

rfp 6.3

th 2.000

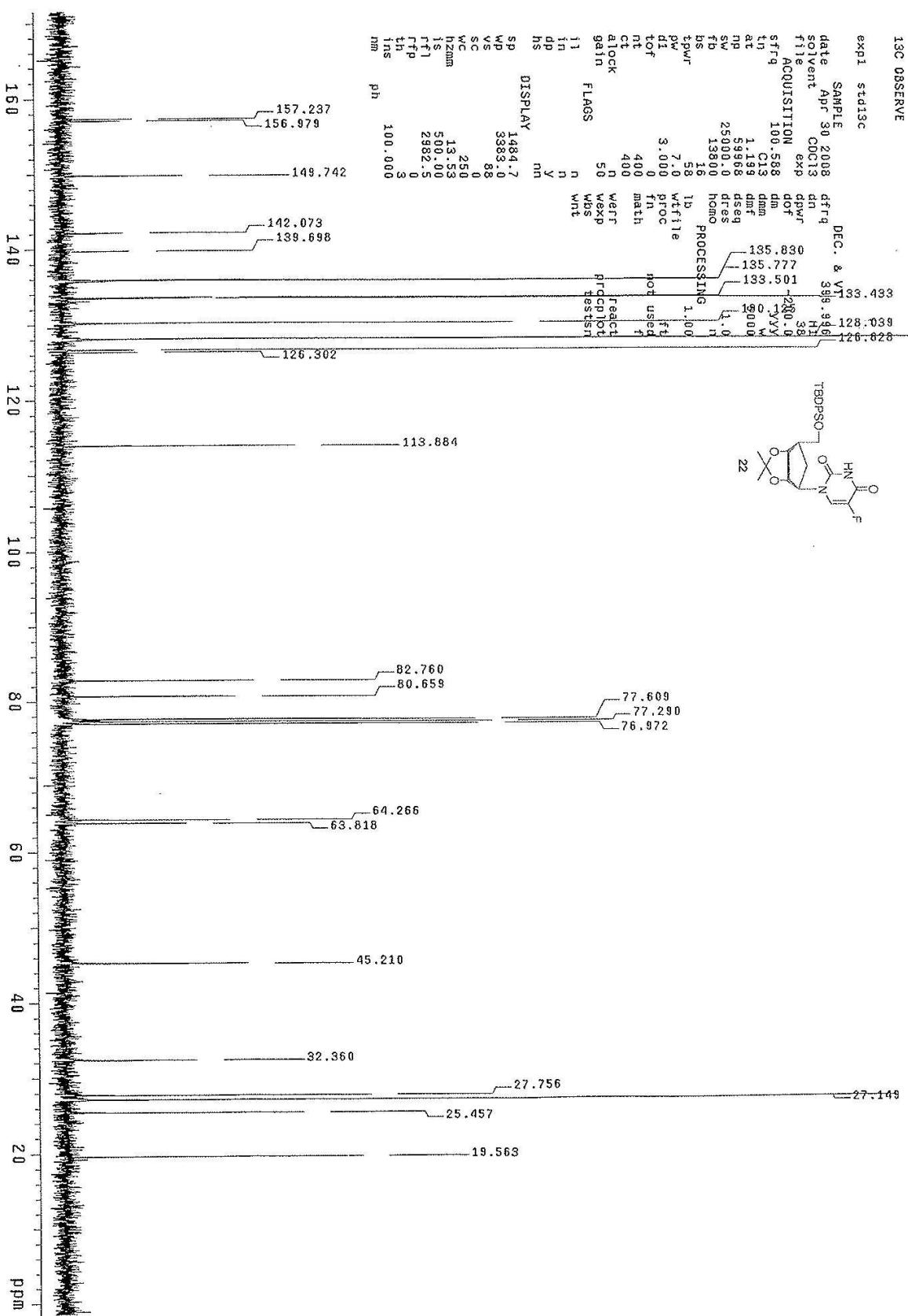
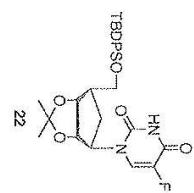
nm ph

DEC. & VI 399.996  
H1 30  
dof 0  
dim nnn  
c 200  
dmf 22dres n  
homo n  
PROCCESSING 0.20lb 1b  
wtfile f  
proc ft  
not used f  
math react  
werr plot  
wepxwbs prplot  
wntfn react  
math plot  
werr prplot  
wepxproc react  
plot prplot  
werrwbs prplot  
wntfn react  
math plot  
werr prplot  
wepxproc react  
plot prplot  
werrwbs prplot  
wntfn react  
math plot  
werr prplot  
wepxproc react  
plot prplot  
werrwbs prplot  
wntfn react  
math plot  
werr prplot  
wepxproc react  
plot prplot  
werrwbs prplot  
wntfn react  
math plot  
werr prplot  
wepxproc react  
plot prplot  
werrwbs prplot  
wntfn react  
math plot  
werr prplot  
wepxproc react  
plot prplot  
werrwbs prplot  
wntfn react  
math plot  
werr prplot  
wepxproc react  
plot prplot  
werrwbs prplot  
wntfn react  
math plot  
werr prplot  
wepxproc react  
plot prplot  
werrwbs prplot  
wntfn react  
math plot  
werr prplot  
wepxproc react  
plot prplot  
werrwbs prplot  
wntfn react  
math plot  
werr prplot  
wepxproc react  
plot prplot  
werrwbs prplot  
wntfn react  
math plot  
werr prplot  
wepxproc react  
plot prplot  
werrwbs prplot  
wntfn react  
math plot  
werr prplot  
wepxproc react  
plot prplot  
werrwbs prplot  
wntfn react  
math plot  
werr prplot  
wepxproc react  
plot prplot  
werrwbs prplot  
wntfn react  
math plot  
werr prplot  
wepxproc react  
plot prplot  
werrwbs prplot  
wntfn react  
math plot  
werr prplot  
wepxproc react  
plot prplot  
werrwbs prplot  
wnt

## 13C OBSERVE

expt st613c

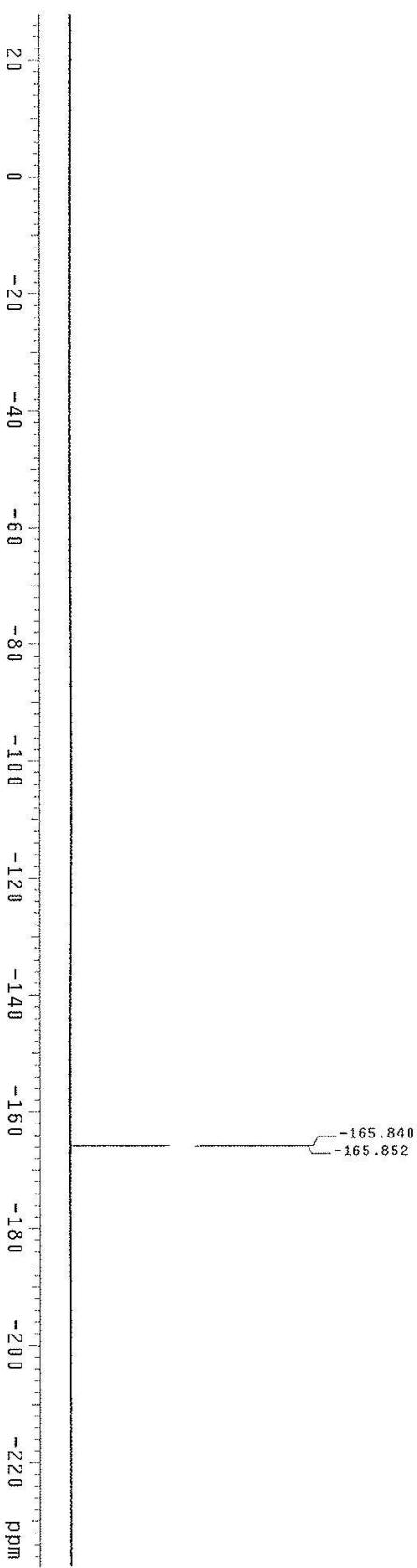
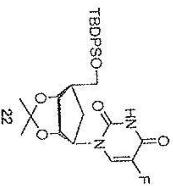
	SAMPLE	DEC.	& v
date	Apr 30 2008	dfrq	339.946
solvent	CDC13	dtn	H2
file		dexp	38
ACQUISITION		dof	-280.0
sfreq	100.588	din	135.830
th	.C13	dinf	135.777
at	1.199	dmm	133.501
tp	5.968	dseq	190.0
sw	25000.0	dtres	1.0
fb	13800	dhomo	n
bs	16	PROCESSING	1.00
power	58	lb	1.00
pw	7.0	wffile	
d1	3.000	proc	ff
tof	0.0	fn	not used
nt	400	math	r
ct	400	wtorr	react
alock	0	wexp	Arclot
gain	50	wbs	testsn
FLAGS		wnt	
i1	0		
in	n		
dp	y		
hs	m		
DISPLAY	1484.7		
sp	3383.0		
wp	8.0		
vs	8.0		
sc	25.0		
vc	13.53		
hzam	500.10		
is	2982.5		
rfl			
rfp			
th	100.000		
ins			
nm			
ph			



## F19\_SRD

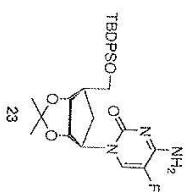
exp1 std1h

	SAMPLE	DEC.	& VT
date	Nov 5 2012	dfrq	399.996
solvent	ODC13	din	H1
file		dpr	30
ACQUISITION	exp	dof	-206.0
sfrq	376.332	dmm	nnn
tn	f13	dmm	c
at	0.640	dmf	200
np	128.000	dseq	
sw	1000.00	dres	1.0
fb	512.00	homo	n
bs	16	PROCESSING	0.34
t_pwr	5.6	lb	
pw	12.00	wtfile	
dl	2.000	proc	
tof	950.2	ft	
nt	120.0	fn	
ct	48	math	
alock	n	werr	react
gain	20	wexp	procplot
		wds	
FLAGS		wnt	
i1	n	n	
in	n	n	
dp	y	n	
hs	nn		
sp	DISPLAY		
wp	-8.512.8		
	10000.0		
vs	169.1		
sc			
wc	250		
hzmm	400.00		
is	500.00		
rfl	27.095.4		
rfp	-62.417.4		
th	100.000		
ins			
ai			
ph			

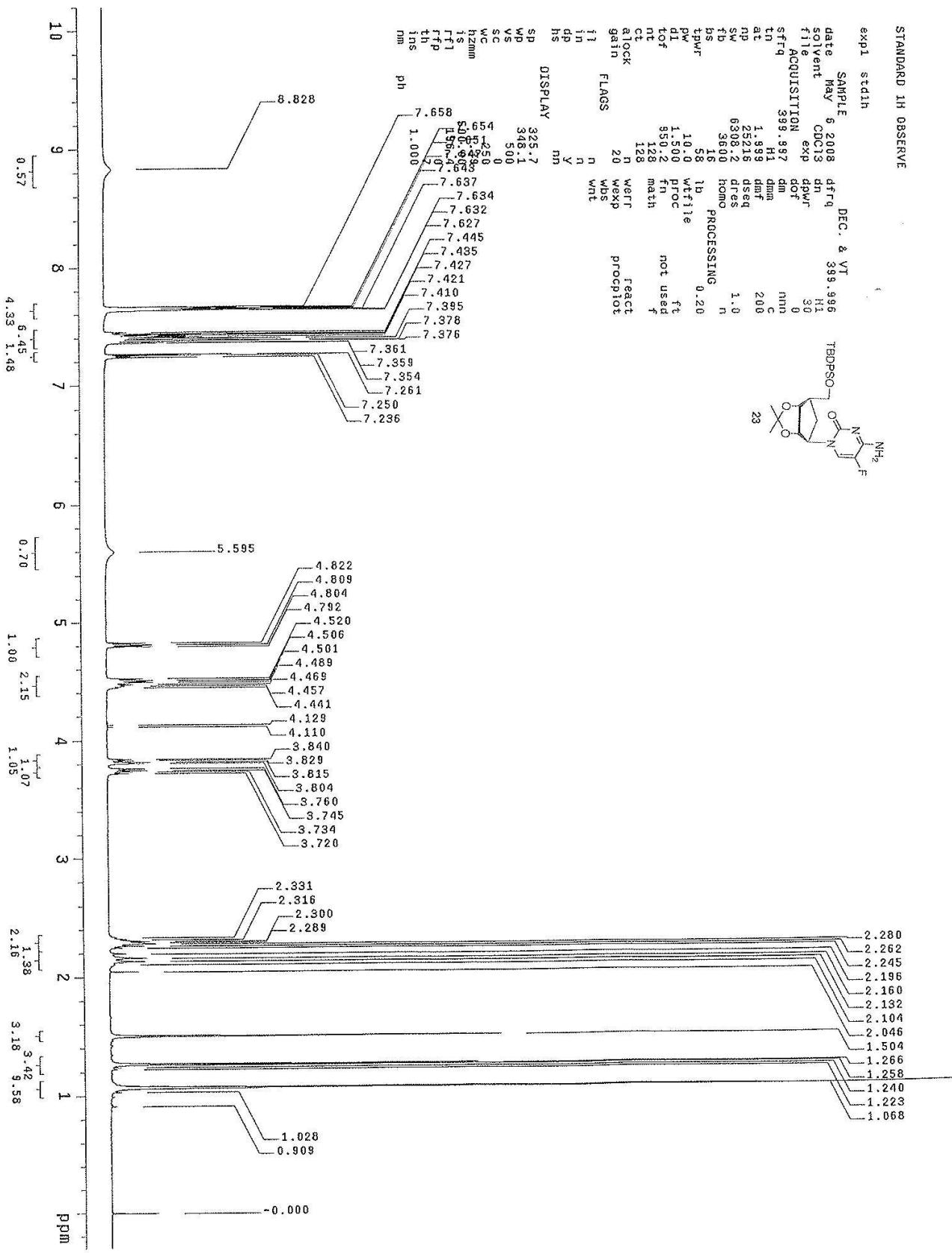


**STANDARD 1H OBSERVE**

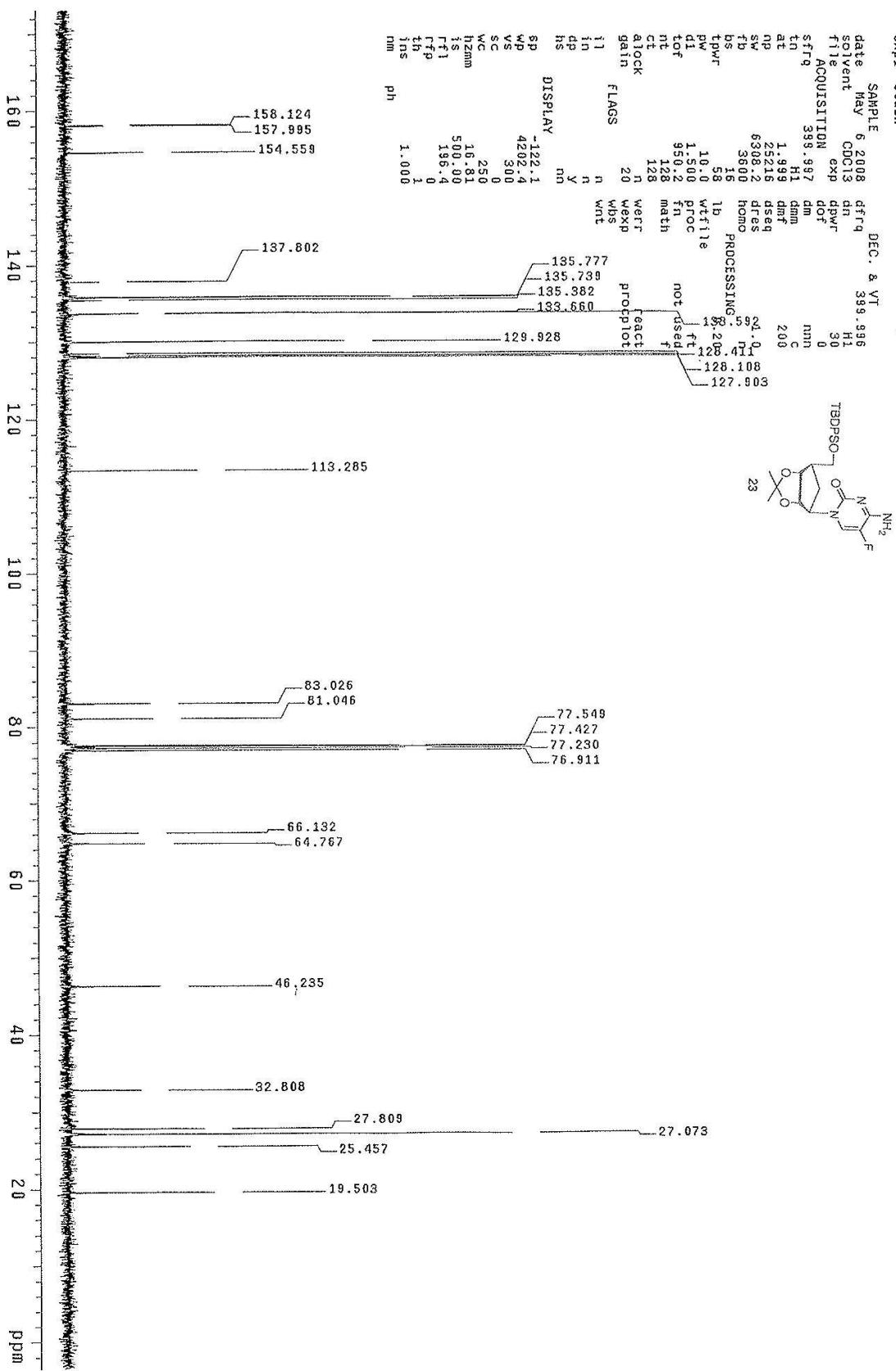
SAMPLE		DEC.	&	VT
date	May 6 2008	dfrq		399
solvent	CDCl <sub>3</sub>	dn		
file	env	dwur		



ACQUISITION		PROCESSING	
sfreq	399.997	tn	1.000
at	1.999	dmf	200
ap	25.16	dseq	1.000
sw	6300.2	drss	
fb	3600	homo	
bs	16		
twr	58		
pw	1.0	lb	
dl	1.00	wtfile	
tor	950.2	proc	
nt	128	fn	not used
ct	128	math	
clock	128		
gain	20	werr	reaction
range	20	wexp	procblock



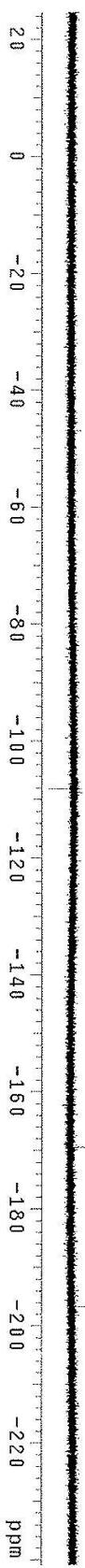
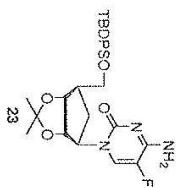
## STANDARD 1H OBSERVE



## F19\_STD

expt stdh

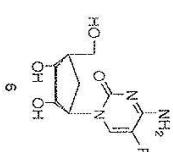
	SAMPLE	DEC.	DEC. & VT
date	Nov 5 2012	dfrq	399.996
solvent	cdcl3	dn	H1
file	exp	dpr	30
ACQUISITION	376.332	dof	-208.0
sfrq		dm	mm
tn	F19	dmm	cc
at	0.640	dmt	200
np	128000	dseq	
sw	10000.0	dres	1.0
fb	51200	homo	n
bs	16	PROCESSING	0.34
tppw	58	lb	
pw	12.0	wtfite	
di	2.000	proc	ft
tof	950.2	fn	not used
nt	120	math	f
ct	120	werr	react
aclock	n	wexp	procplot
gain	2	wbs	
FLAGS		wmt	
i1	n	n	
in	n	y	
dp	nn	nn	
hs			
DISPLAY			
sp	-90726.6		
wp	10000.0		
vs	36061		
sc	36060		
wc	250		
h2mm	400.30		
is	500.00		
rfl	26935.2		
rfp	-63791.3		
th	20		
ins	100.000		
ai			
ph			



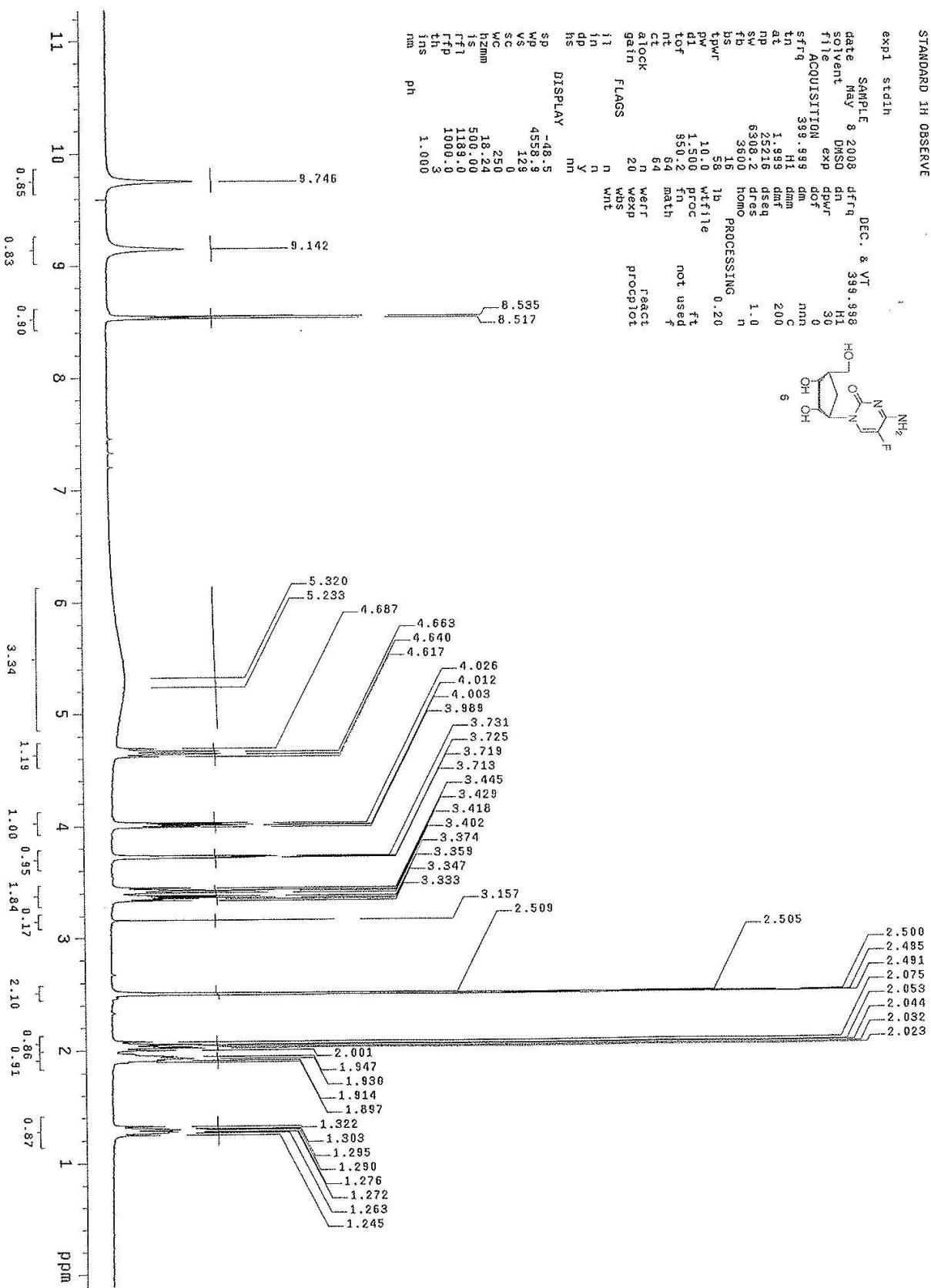
STANDARD IN OBSERVE

expl std1h

SAMPLE DATE MAY 8 2008  
SOLVENT DMSO  
FILE EXP  
ACQUISITION SFRQ 399.999  
TN HI  
AT 1.999



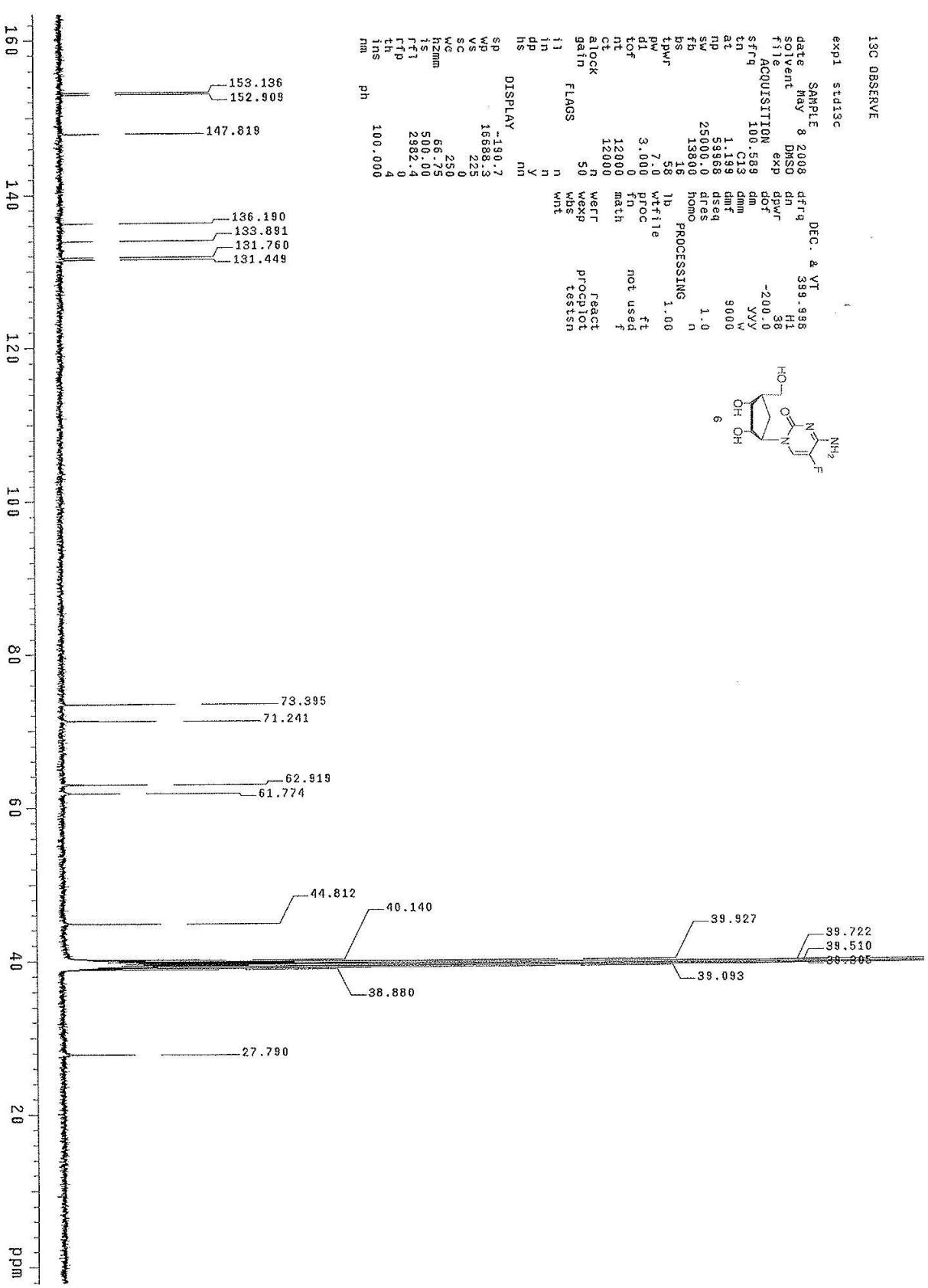
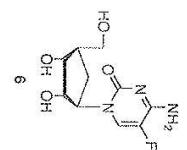
np	25216	des
sw	63882	des
fb	3600	des
bs	16	PROCESSING
tpwr	58	0.20
pw	10.0	wfile
d1	1.500	proc
t0f	950.2	ft
nt	64	math
ct	64	not used
atck	n	err
gain	20	wexp
in	n	wbs
dp	y	wnt
hs	nn	
DISPLAY	-48.5	react
sp	4558.9	procplot
kp	129	
vs	30	
sc	250	
wc	18.24	
b2mm	500.00	
is	188.0	
rfl	1000.0	
rfp	1.000	
th	3	
ins		
na		
ph		
8.535		
8.517		



## 13C OBSERVE

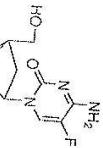
exp1 std13c

SAMPLE 8 2008 DEC. & VT  
 Solvent DMSO dflq H1  
 file exp dn 38 38  
 ACQUISITION exp dof -200.0  
 sfrq 100.589 vvv  
 tn 0.013 dm  
 at 1.199 dmf  
 np 5.968 dsq 9.008  
 sw 25000.0 dres 1.0  
 fb 13800 homo n  
 bs 16 PROCESSED  
 tpow 58 lb 1.00  
 pw 3.000 wtfile  
 d1 7.0 proc ft  
 tef 0.0 fn not used  
 nt 12000 math f  
 ct 12000 werr react  
 alock 50 wexp propior  
 gain wbs testin



F19\_STD

exp1 s1d1h



	SAMPLE	DEC. & VT			
date	5 Nov 2012	399.998			
solvent	CD3OD	H1			
file	exp	30			
ACQUISITION	exp	-208.0			
sfrq	376.333	mm			
tn	F19	mm			
tt	0.640	C			
at	120.000	dmf	200		
np	10000.0	deeq	1.0		
sw	51200	dtres	n		
fb	16	homo	PROCESSING	0.34	
bs	51200	lb	proc	ft	
tpwr	58	wifile	not used	f	
pw	12.0	d1	930.2	fm	
d1	2.000	tof	48	math	
tof	530.2	nt	48	ct	
nt	530.2	alock	gain	warr	react
ct	48	20	wexp	procplot	
alock		FLAGS	wss		
gain		i1	wrt		
		in	n		
		dp	y		
		hs	nn		
DISPLAY	-89246.4				
sp	10000.0				
wp					
vs					
sc					
wc	250				
h2mm	400.00				
is	500.00				
rfl	2480.0				
rfp	-2480.0				
th	-64355.9				
ins	100.020				
ai	ph				

