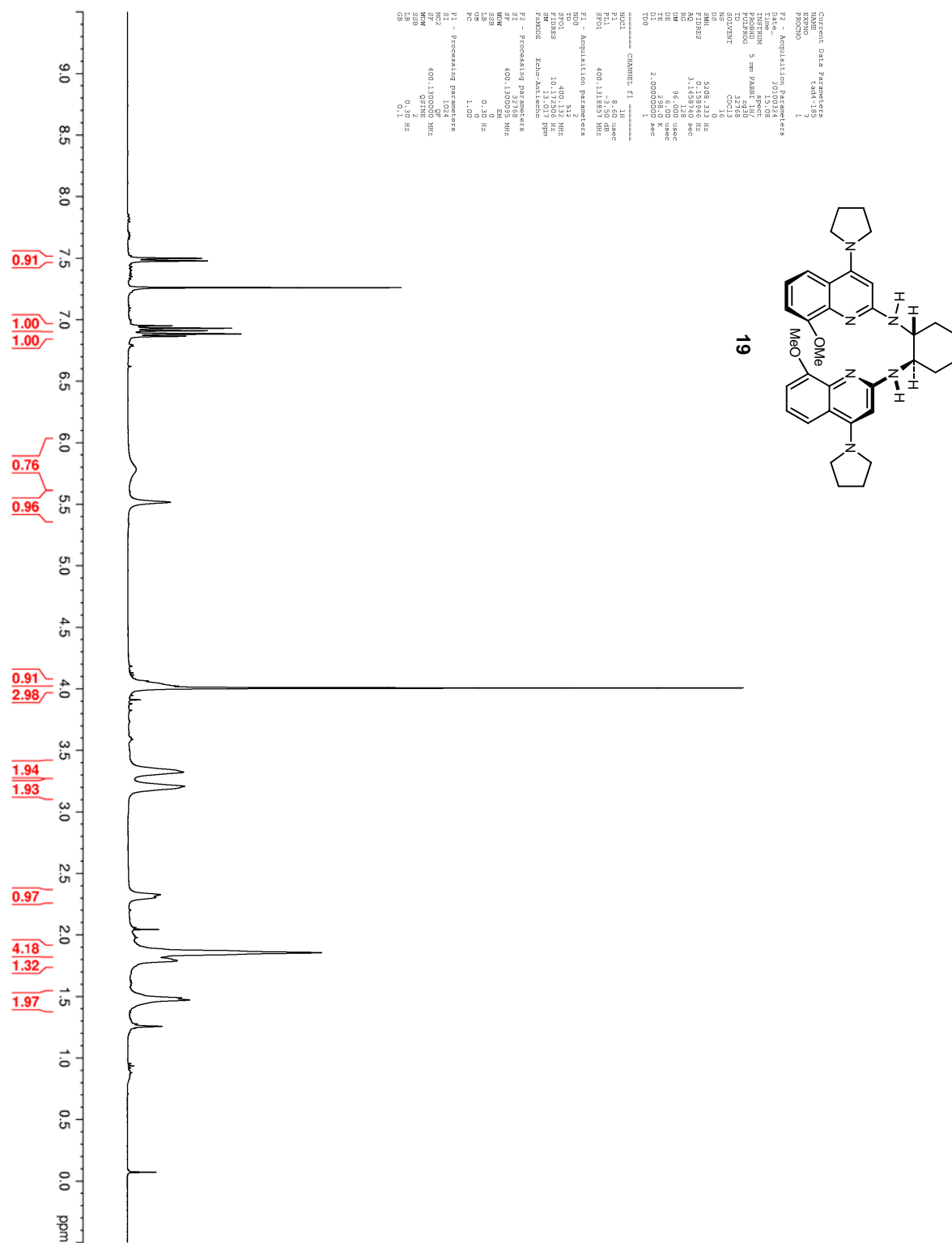
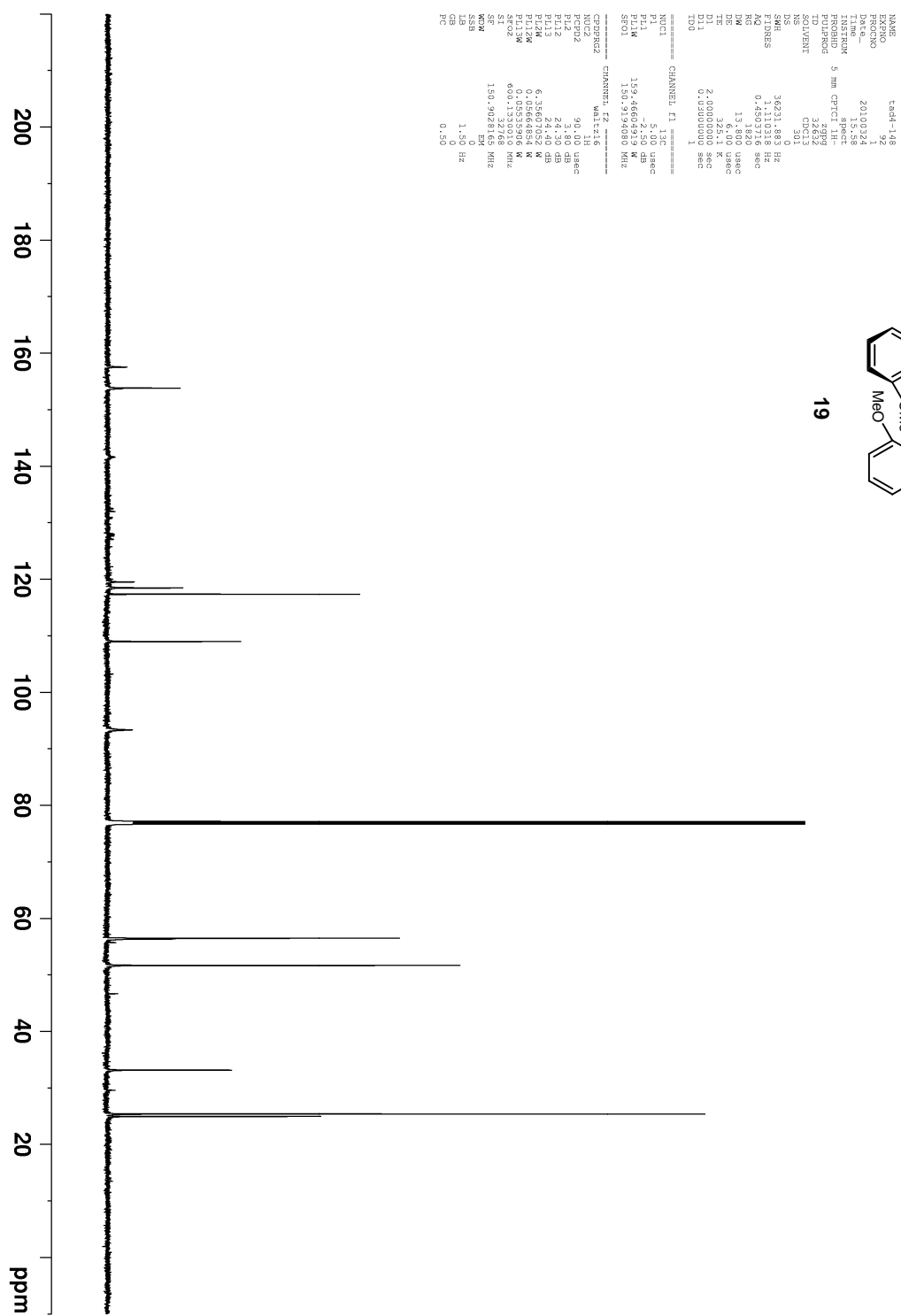


A Preparation of (-)-Nutlin-3 Using Enantioselective Organocatalysis at Decagram ScaleTyler A. Davis,^a Anna E. Vilgelm,^{b,c} Ann Richmond,^{b,c} and Jeffrey N. Johnston^{a*}

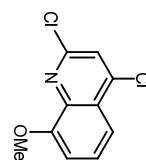
^aDepartment of Chemistry & Vanderbilt Institute of Chemical Biology, Vanderbilt University, Nashville, TN 37235-1822, USA, ^bDepartment of Veterans Affairs, Tennessee Valley Healthcare System, ^cDepartment of Cancer Biology, Vanderbilt School of Medicine, Nashville, TN 37232, USA

	SI-I-X
Figure 1. ¹ H NMR (400 MHz, CDCl ₃) of 19	2
Figure 2. ¹³ C NMR (150 MHz, CDCl ₃) of 19	3
Figure 5. ¹ H NMR (500 MHz, CDCl ₃) of 21	4
Figure 6. ¹³ C NMR (100 MHz, CDCl ₃) of 21	5
Figure 7. ¹ H NMR (400 MHz, CDCl ₃) of 22	6
Figure 8. ¹³ C NMR (150 MHz, CDCl ₃) of 22	7
Figure 3. ¹ H NMR (400 MHz, CDCl ₃) of 23	8
Figure 4. ¹³ C NMR (100 MHz, CDCl ₃) of 23	9
Figure 9. ¹ H NMR (400 MHz, CDCl ₃) of S1	10
Figure 10. ¹³ C NMR (100 MHz, CDCl ₃) of S1	11
Figure 11. ¹ H NMR (400 MHz, CDCl ₃) of S2	12
Figure 12. ¹³ C NMR (100 MHz, CDCl ₃) of S2	13
Figure 13. Representative HPLC traces for 16	14



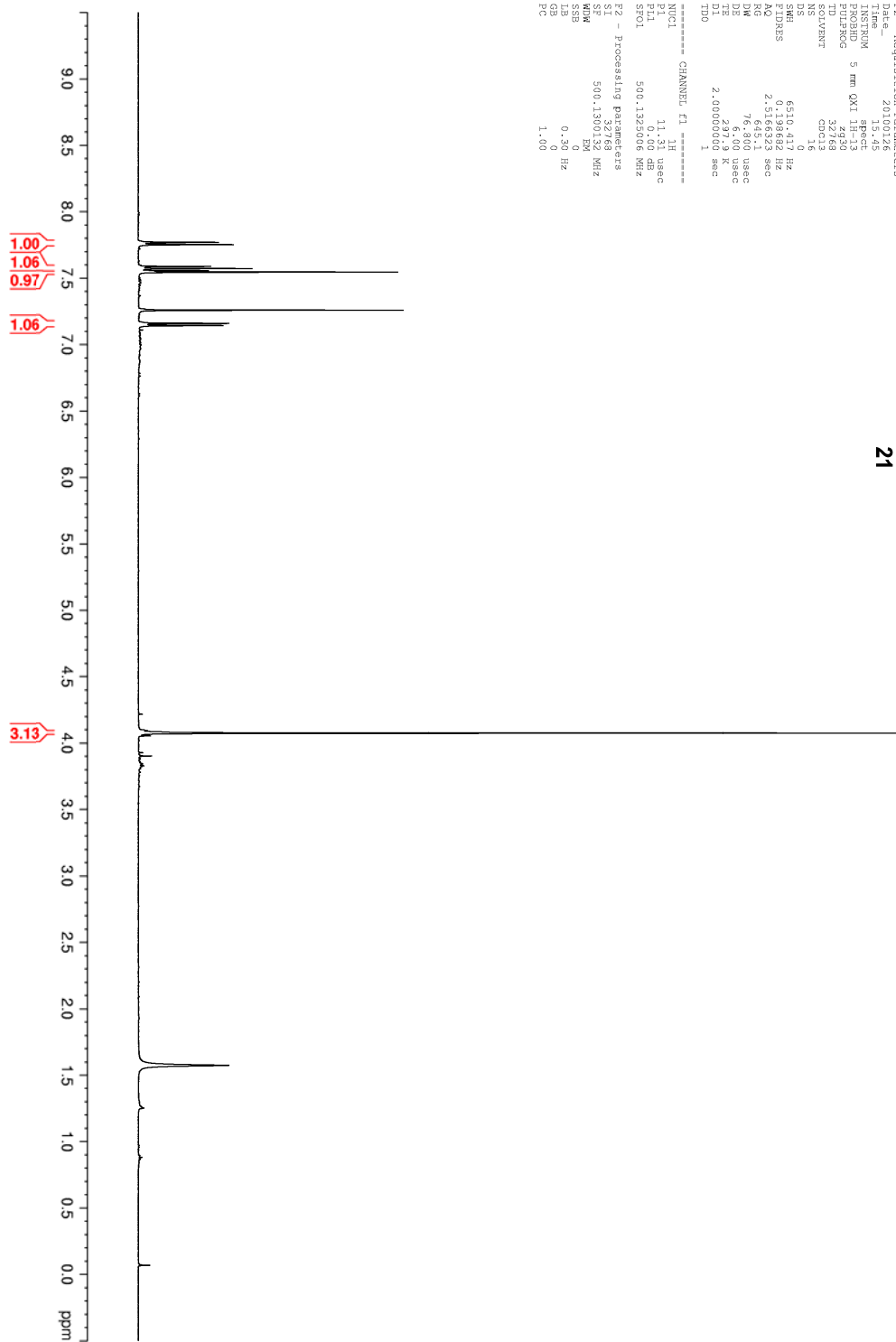


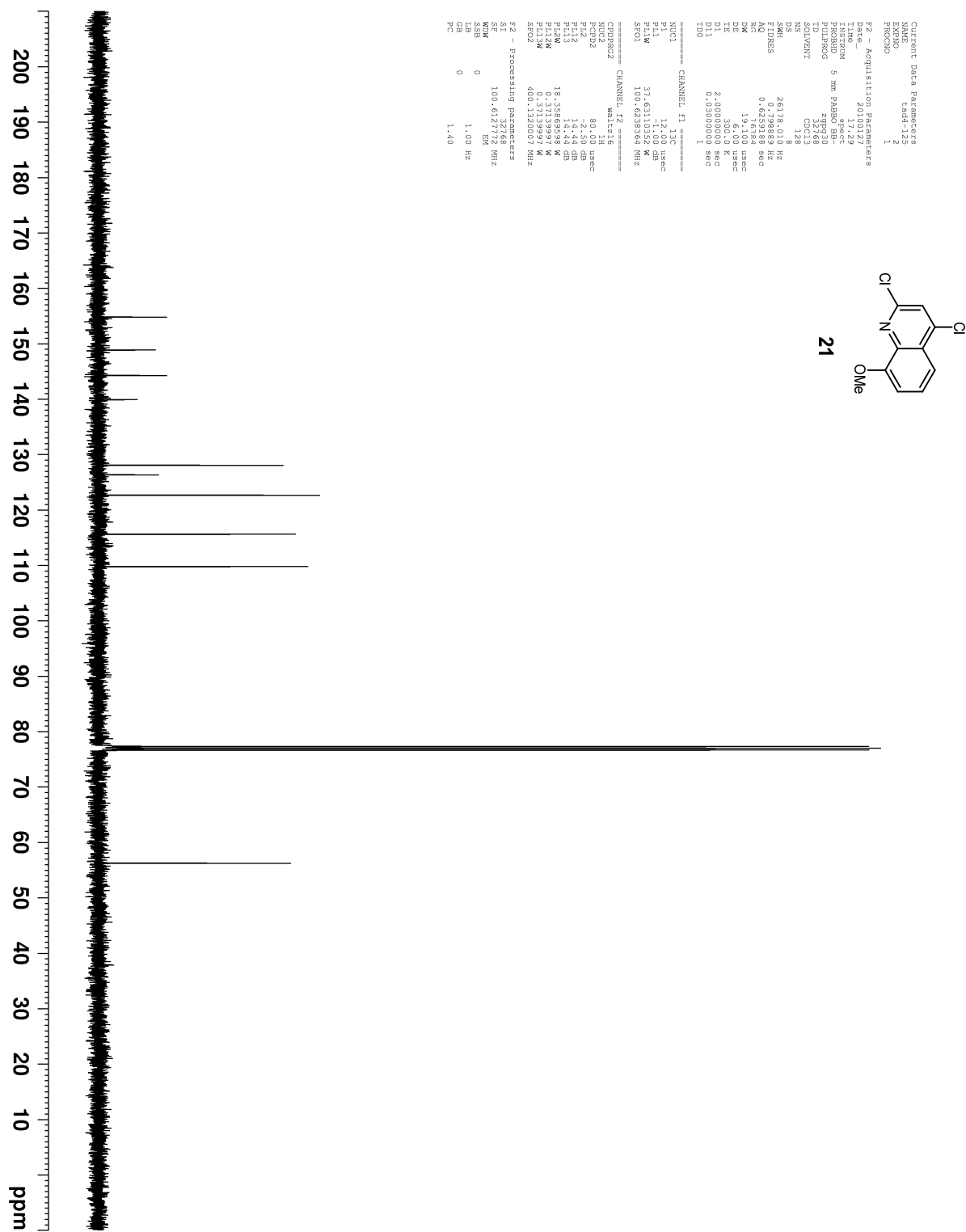
post soxhlet ext, prec'd material

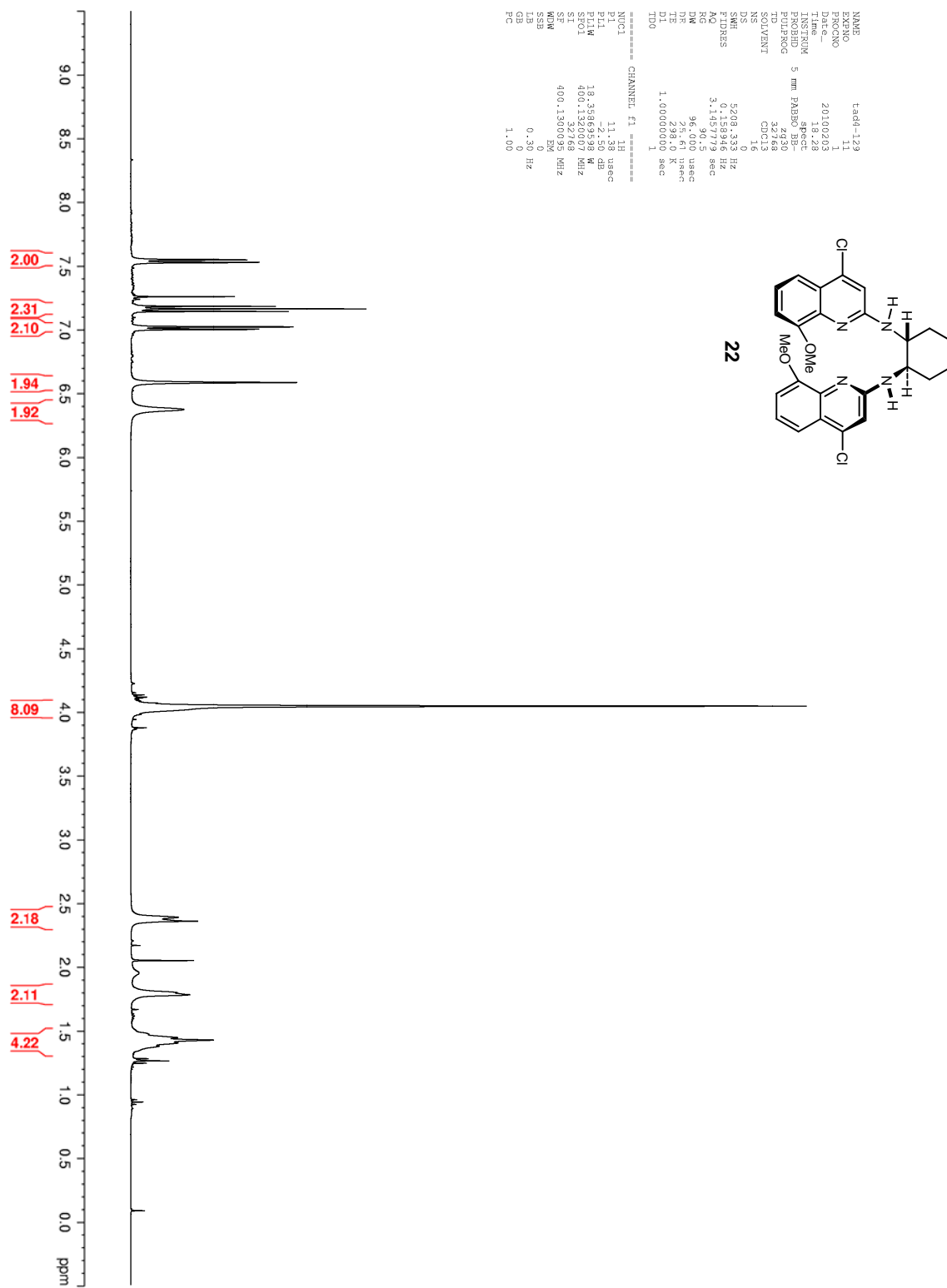


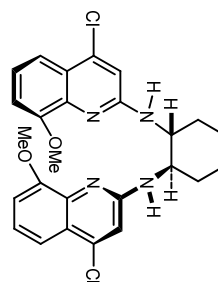
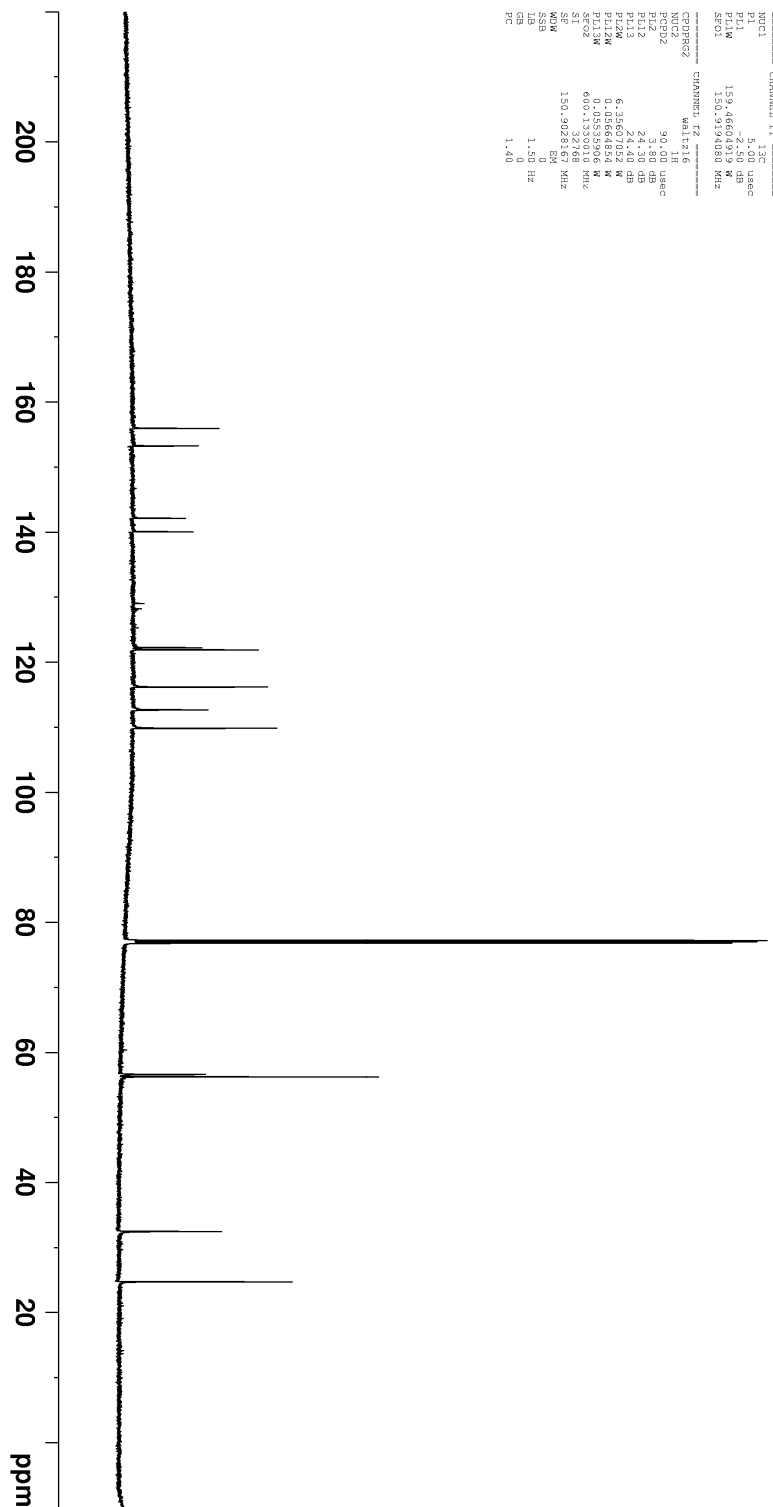
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PROCNO    1
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SOLVENT   cdcl3
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FIDRES    0.1198882 Hz
AQ         0.64571 sec
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DE         76.800 usec
TE         300.2 K
D1         2.0000000 sec
TDO       1
----- CHANNEL f1 -----
NUC1       1H
P1         11.31 usec
PL1        0.00 dB
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F2 - Processing parameters
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WDW        EM
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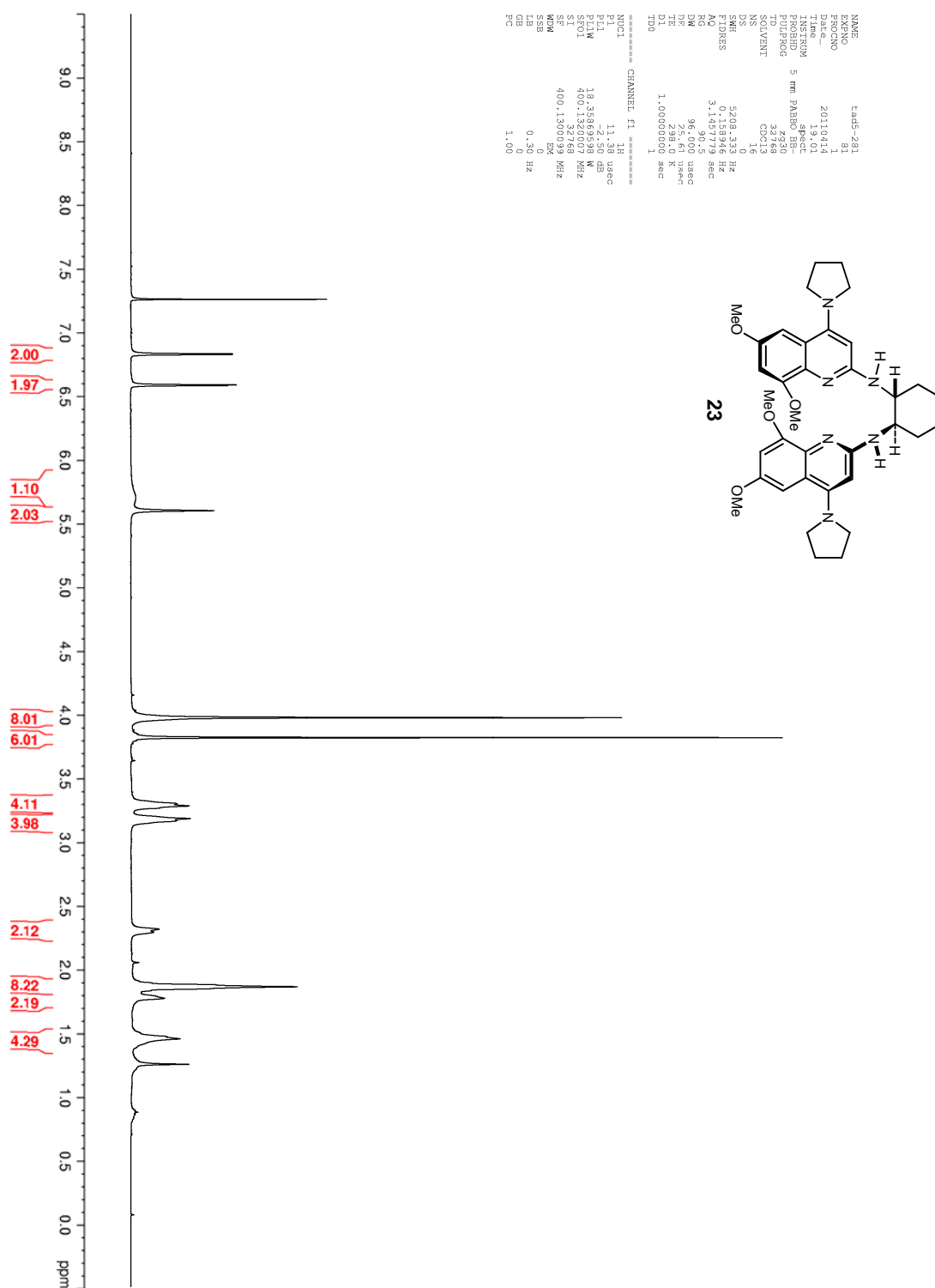
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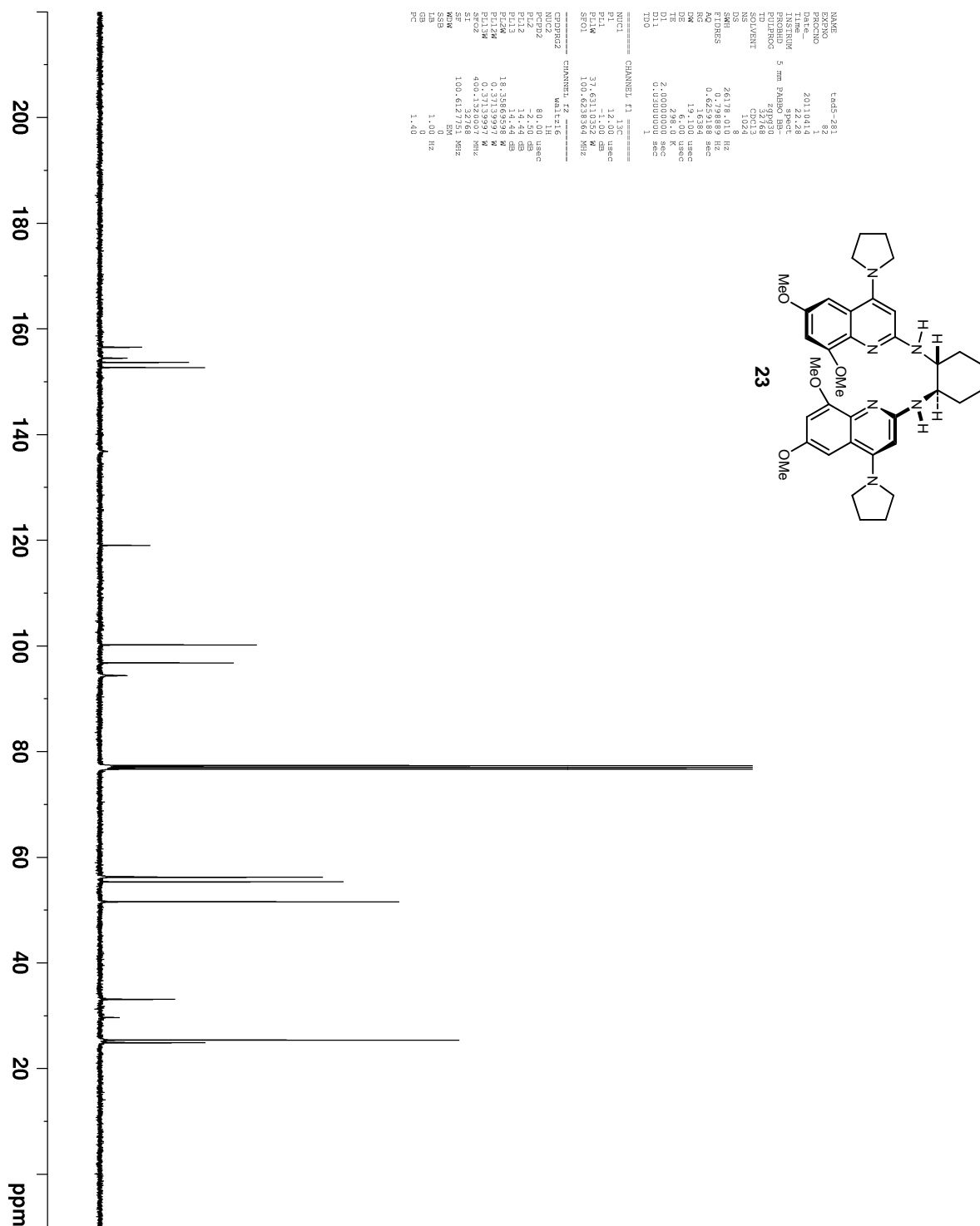
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PULPROG   zgpg
SOVLENT   CDCl3
NS        74
SFO1      36231.883 Hz
P1PERS    1.105109 Hz
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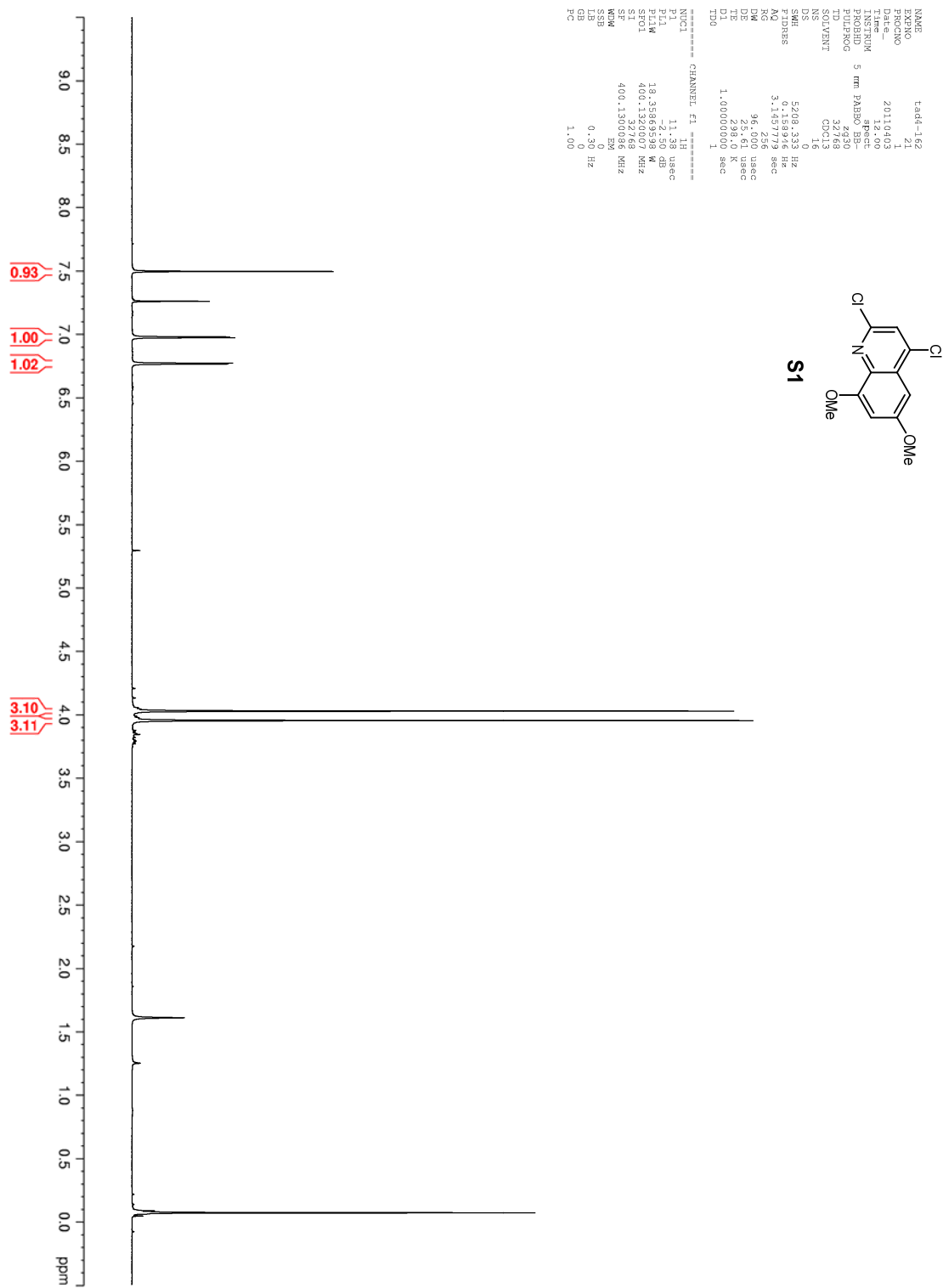
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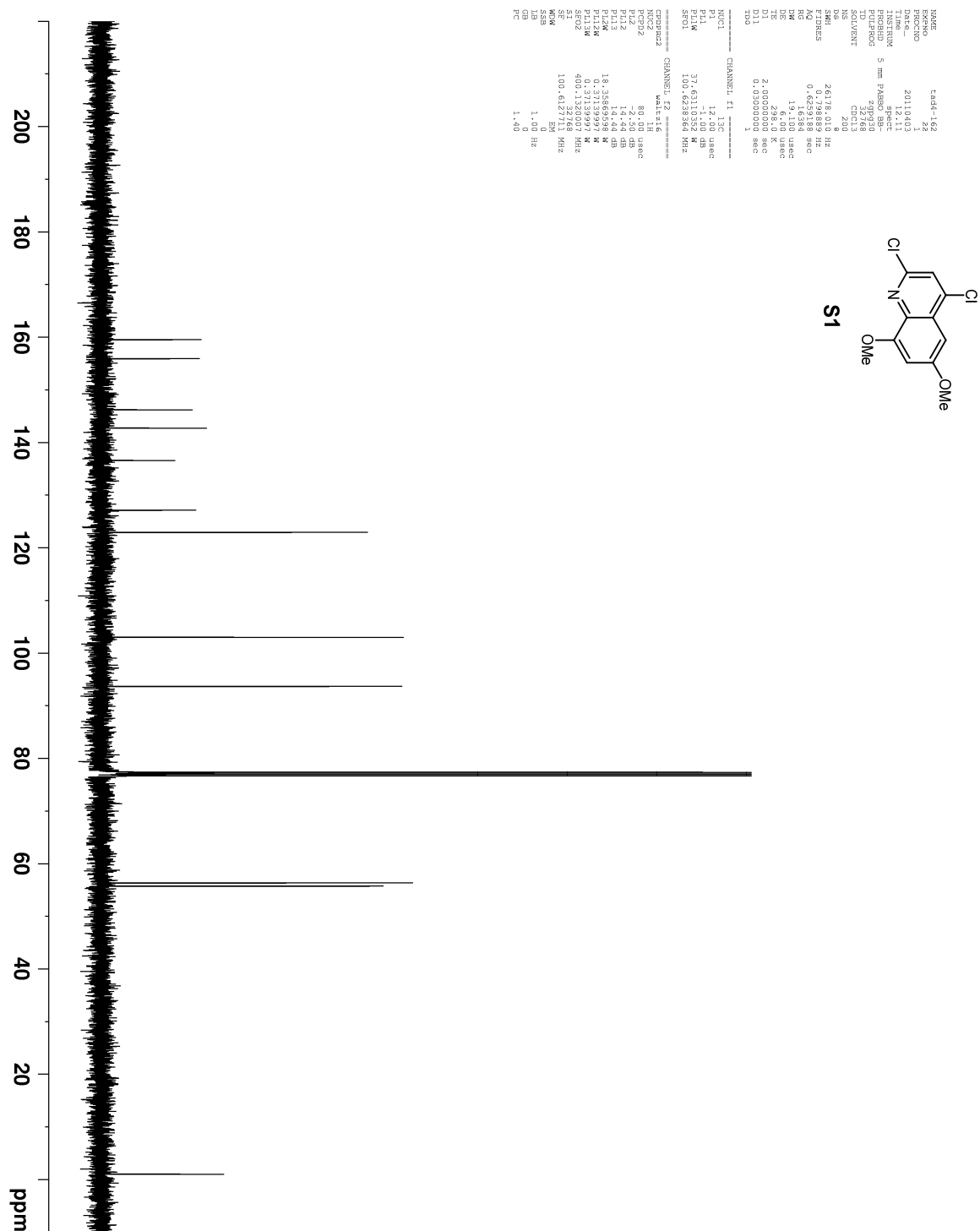
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PL14     159.466425 dB
SFO1      150.999400 MHz

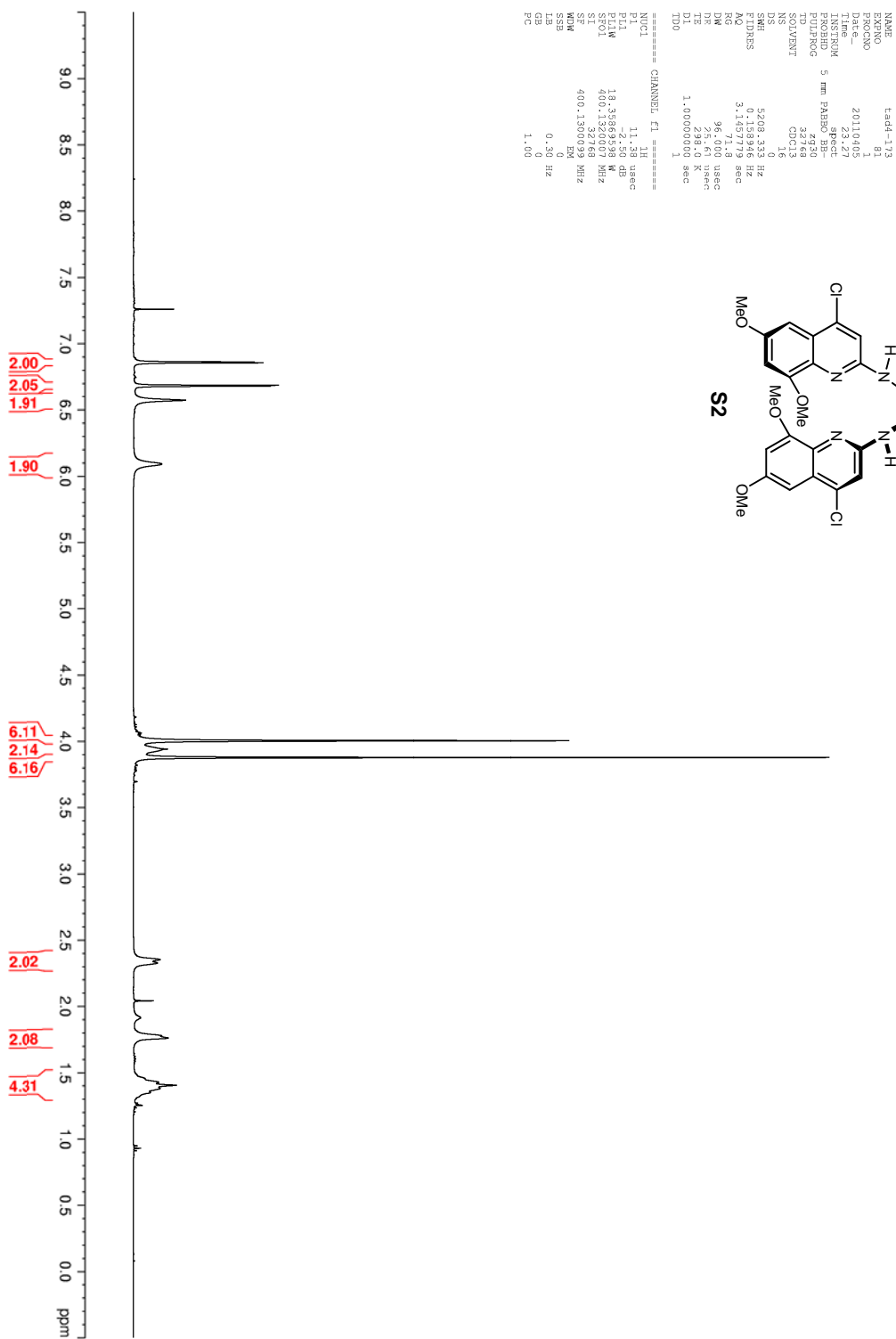
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SFO1      36231.883 Hz
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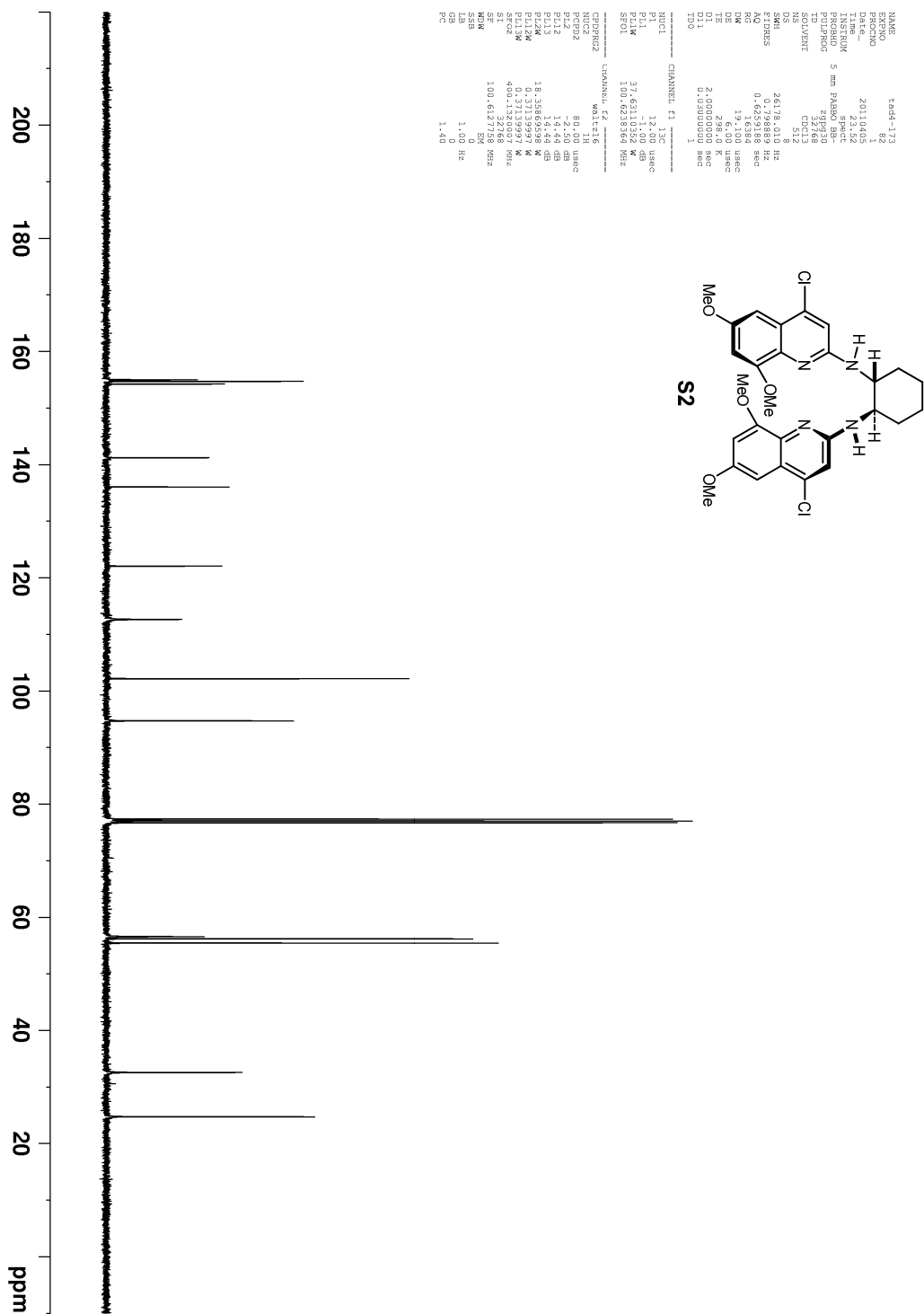
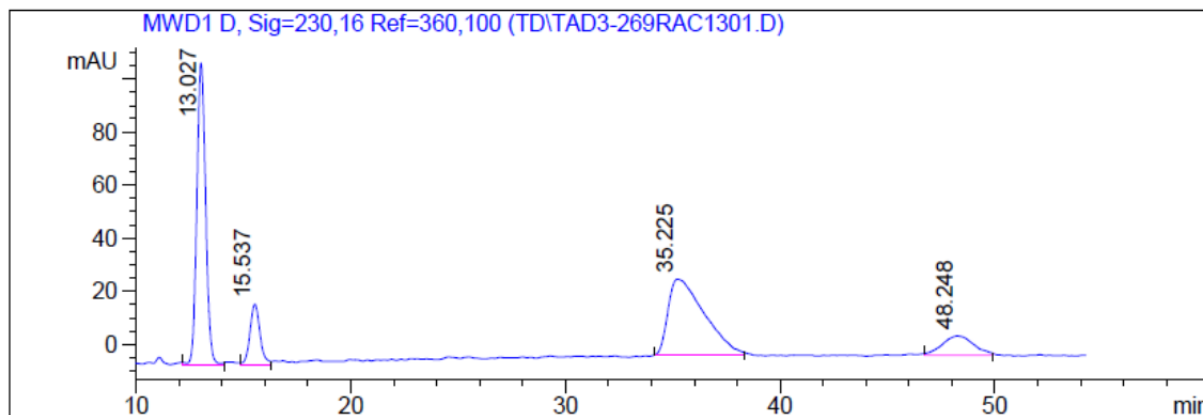


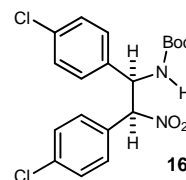
Figure 13. Representative HPLC traces for **16**

Racemate:

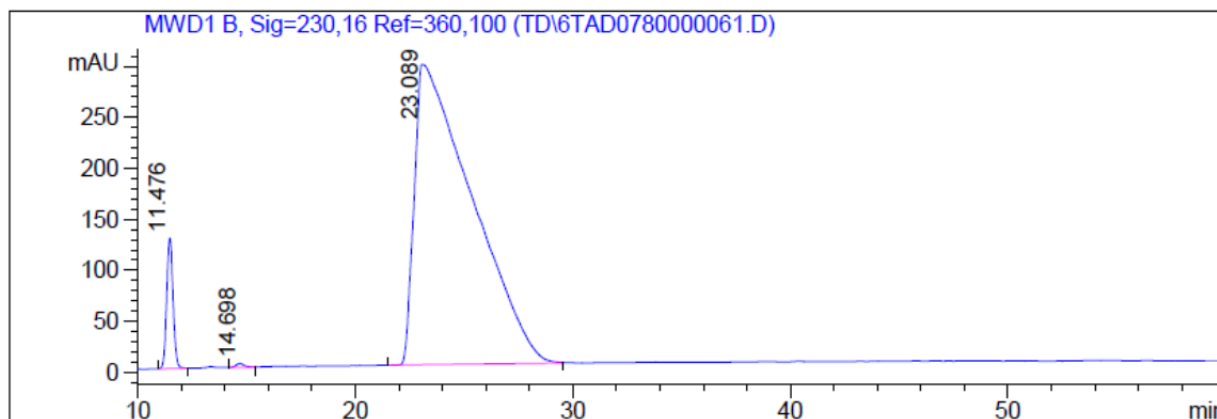


Signal 1: MWD1 D, Sig=230,16 Ref=360,100

Peak #	RT [min]	Width [min]	Area	Area %
1	13.027	0.474	3225.581	40.13
2	15.537	0.535	725.792	9.03
3	35.225	1.952	3345.620	41.63
4	48.248	1.698	739.845	9.21



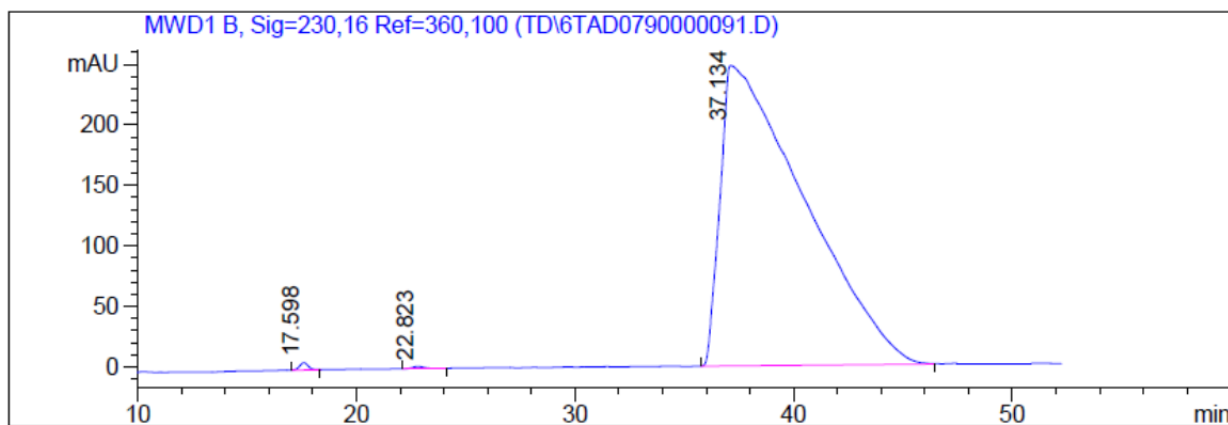
Enantioselective:



Signal 1: MWD1 B, Sig=230,16 Ref=360,100

Peak #	RT [min]	Width [min]	Area	Area %
1	11.476	0.314	2590.033	4.55
2	14.698	0.406	103.082	0.18
3	23.089	2.342	54242.629	95.27

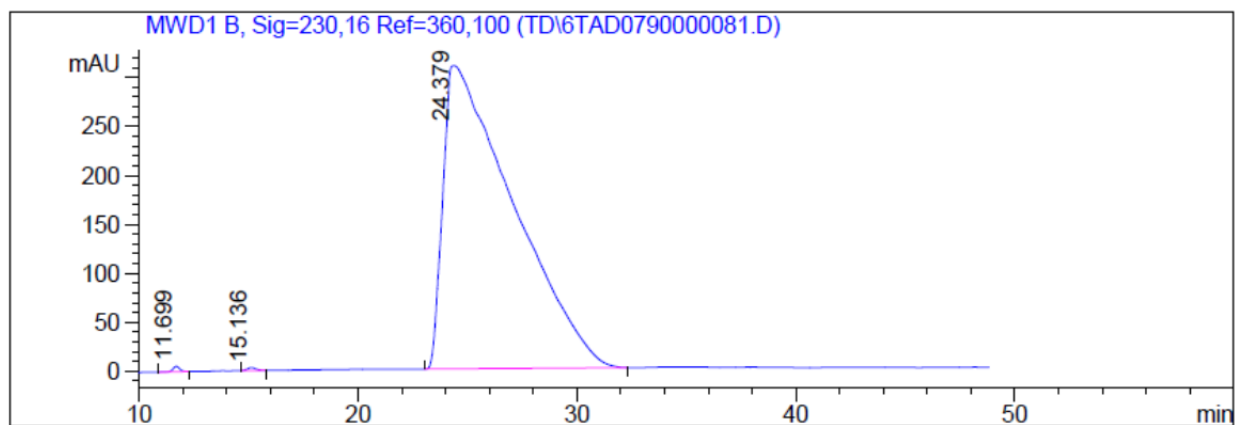
Recrystallized: Batch 1



Signal 1: MWD1 B, Sig=230,16 Ref=360,100

Peak #	RT [min]	Width [min]	Area	Area %
1	17.598	0.431	170.323	0.26
2	22.823	0.518	60.978	0.09
3	37.134	3.289	66417.211	99.65

Recrystallized: Batch 2



Signal 1: MWD1 B, Sig=230,16 Ref=360,100

Peak #	RT [min]	Width [min]	Area	Area %
1	11.699	0.323	115.710	0.17
2	15.136	0.417	88.944	0.13
3	24.379	2.782	69196.984	99.71