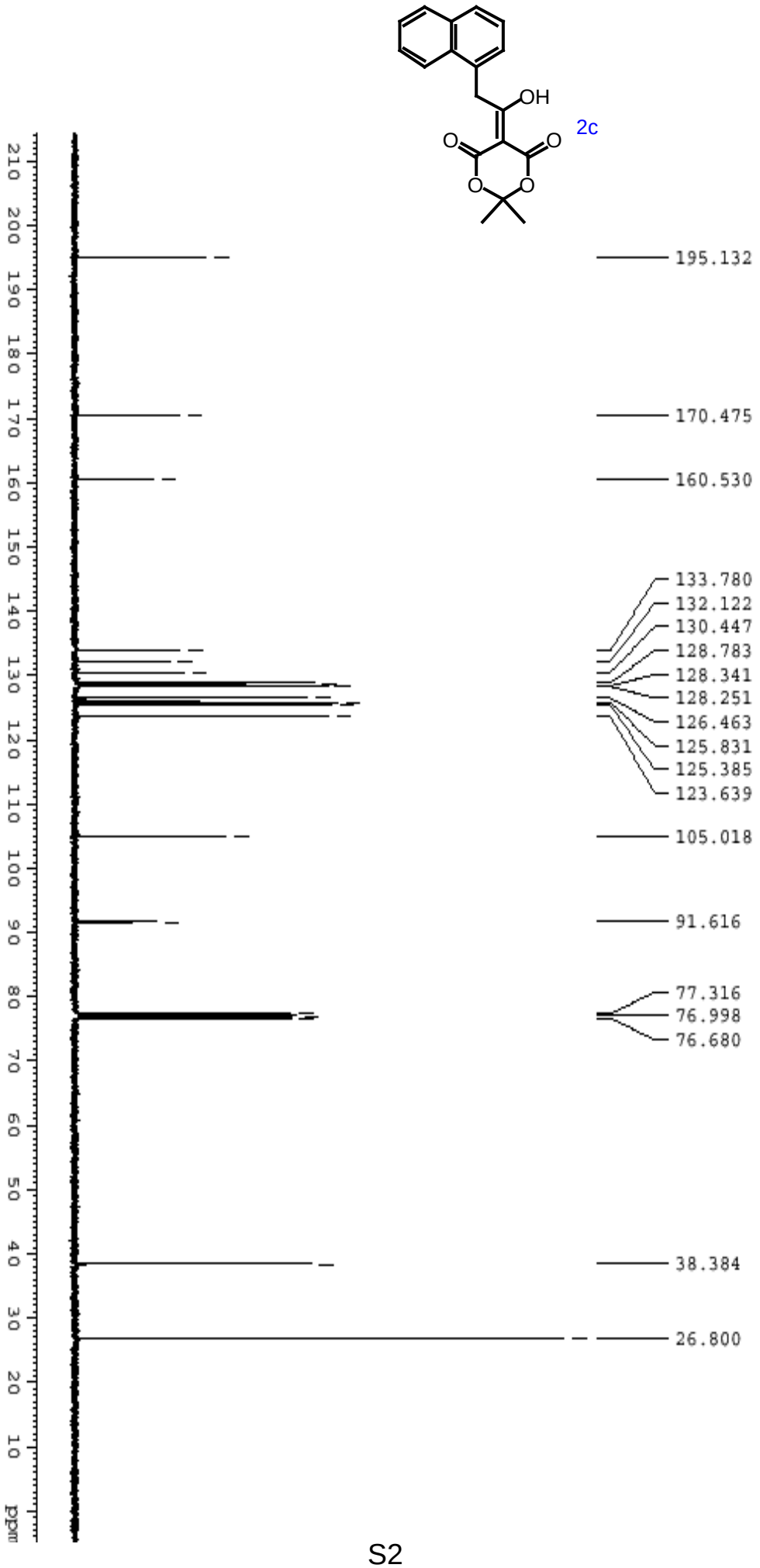
An Enantioselective Ketene-Imine Cycloaddition Method for Synthesis of Substituted Ring Fused 2-Pyridinones

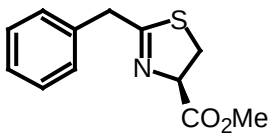
*Hans Emtenäs, Lisa Alderin and Fredrik Almqvist**

Organic Chemistry, Department of Chemistry, Umeå University, SE-901 87 Umeå, Sweden

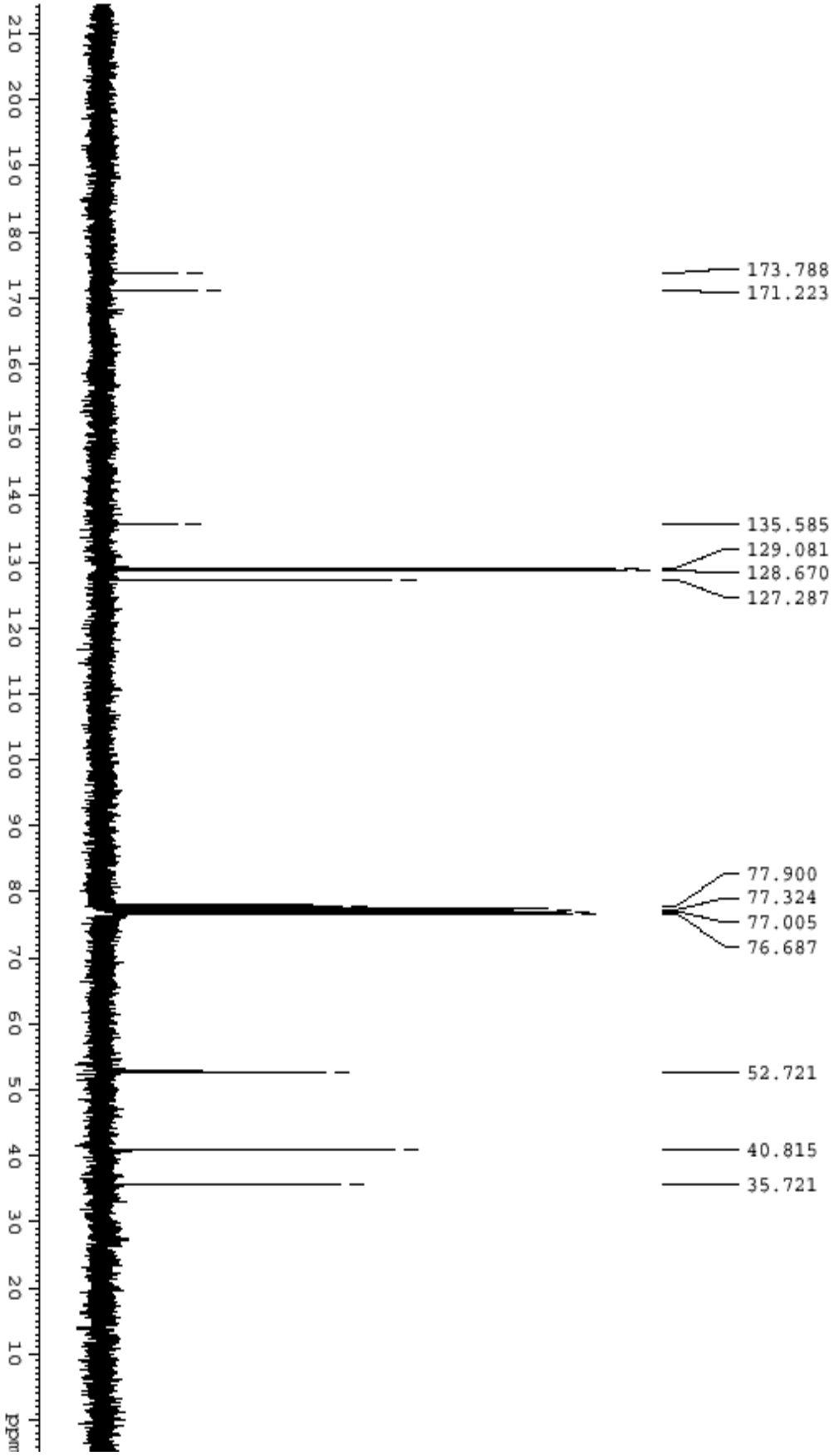
fredrik.almqvist@chem.umu.se

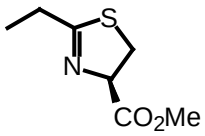
Supporting Information


OH
O
O
O
O
2c
195.132
170.475
160.530
133.780
132.122
130.447
128.783
128.341
128.251
126.463
125.831
125.385
123.639
105.018
91.616
77.316
76.998
76.680
38.384
26.800
ppm

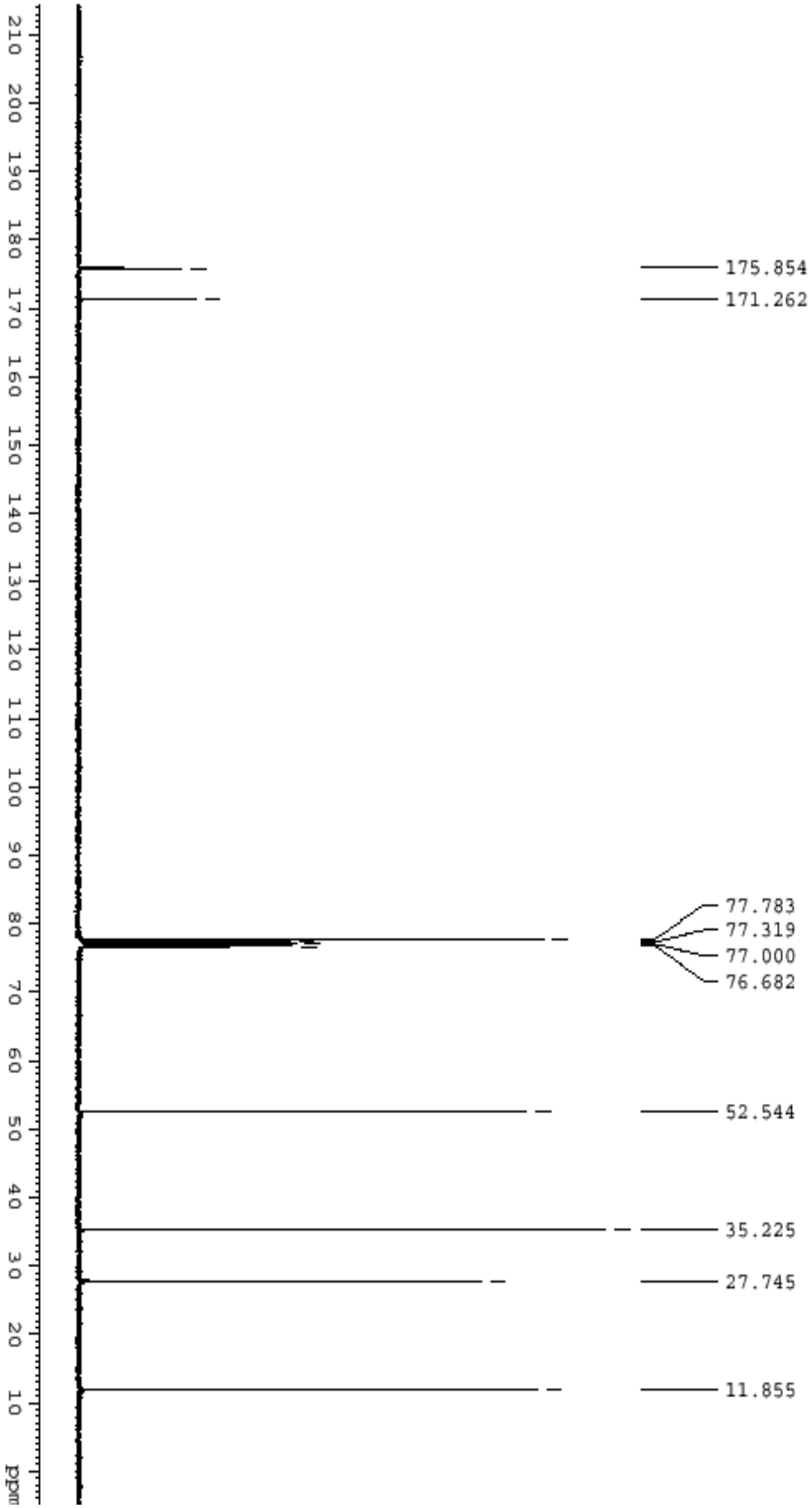

S
N
CO2Me

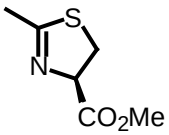
1c


210 200 190 180 170 160 150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 ppm
173.788
171.223
135.585
129.081
128.670
127.287
77.900
77.324
77.005
76.687
52.721
40.815
35.721

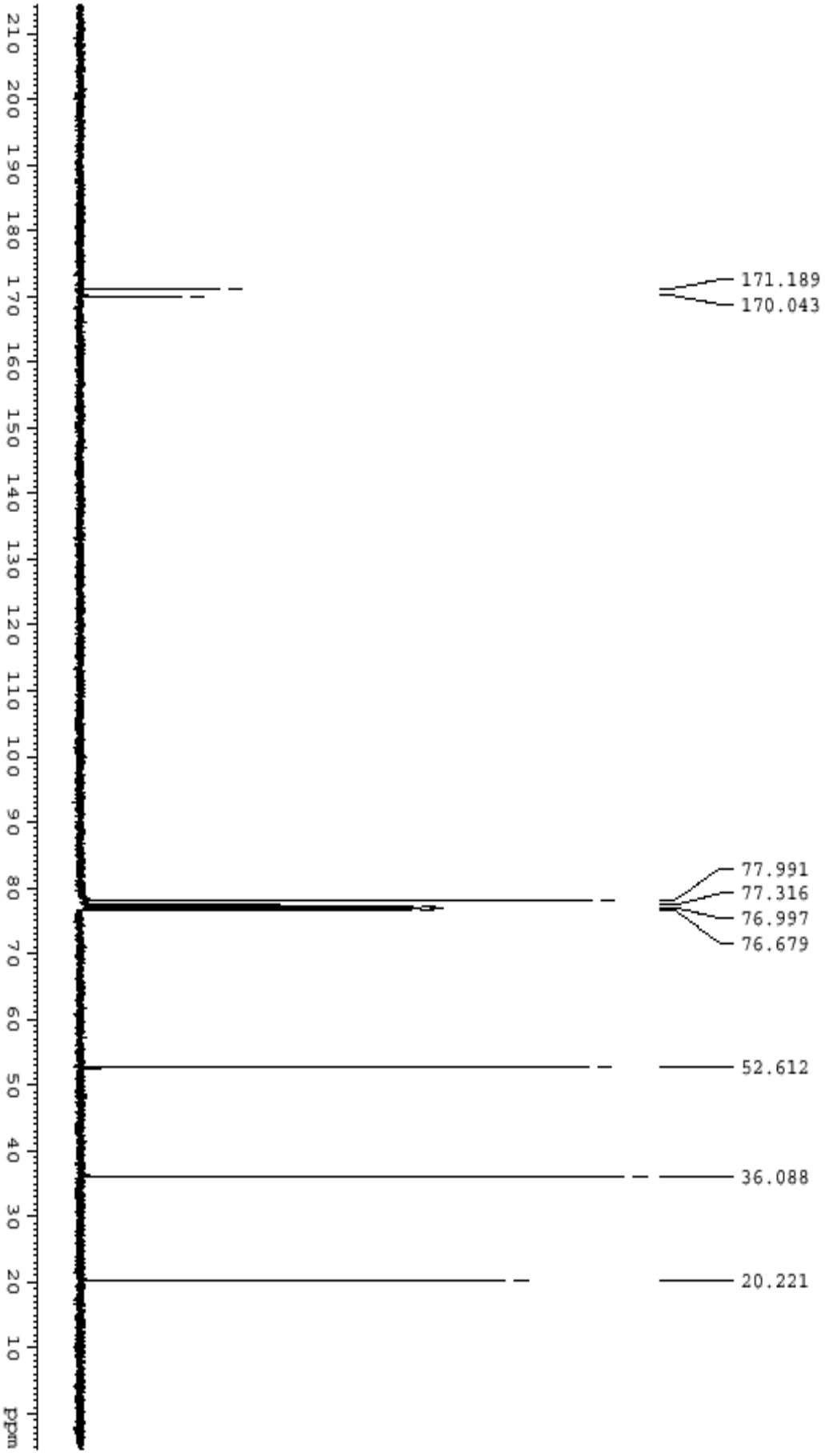

S
N
CO2Me

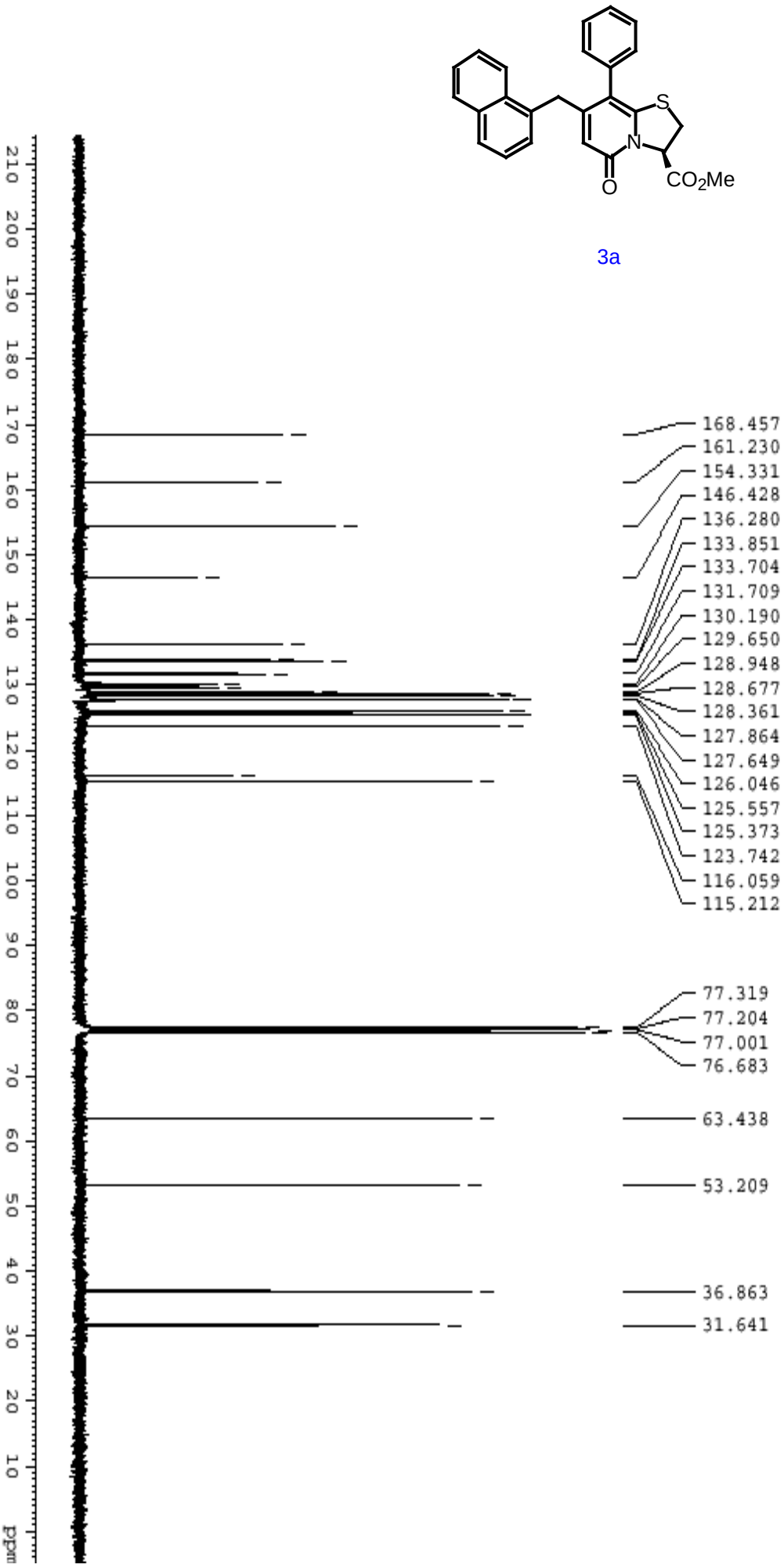
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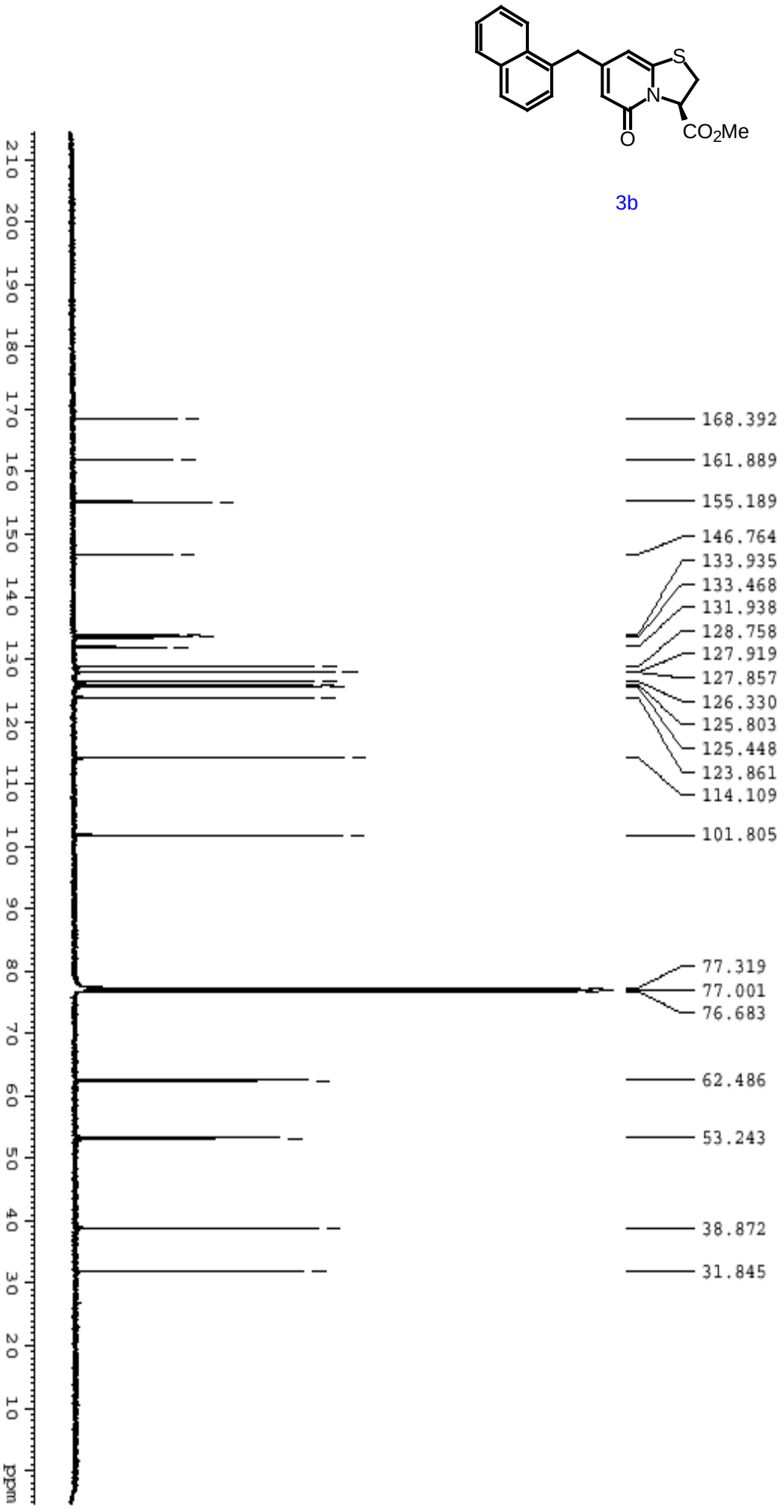

175.854
171.262
77.783
77.319
77.000
76.682
52.544
35.225
27.745
11.855
ppm


S
N
CO2Me

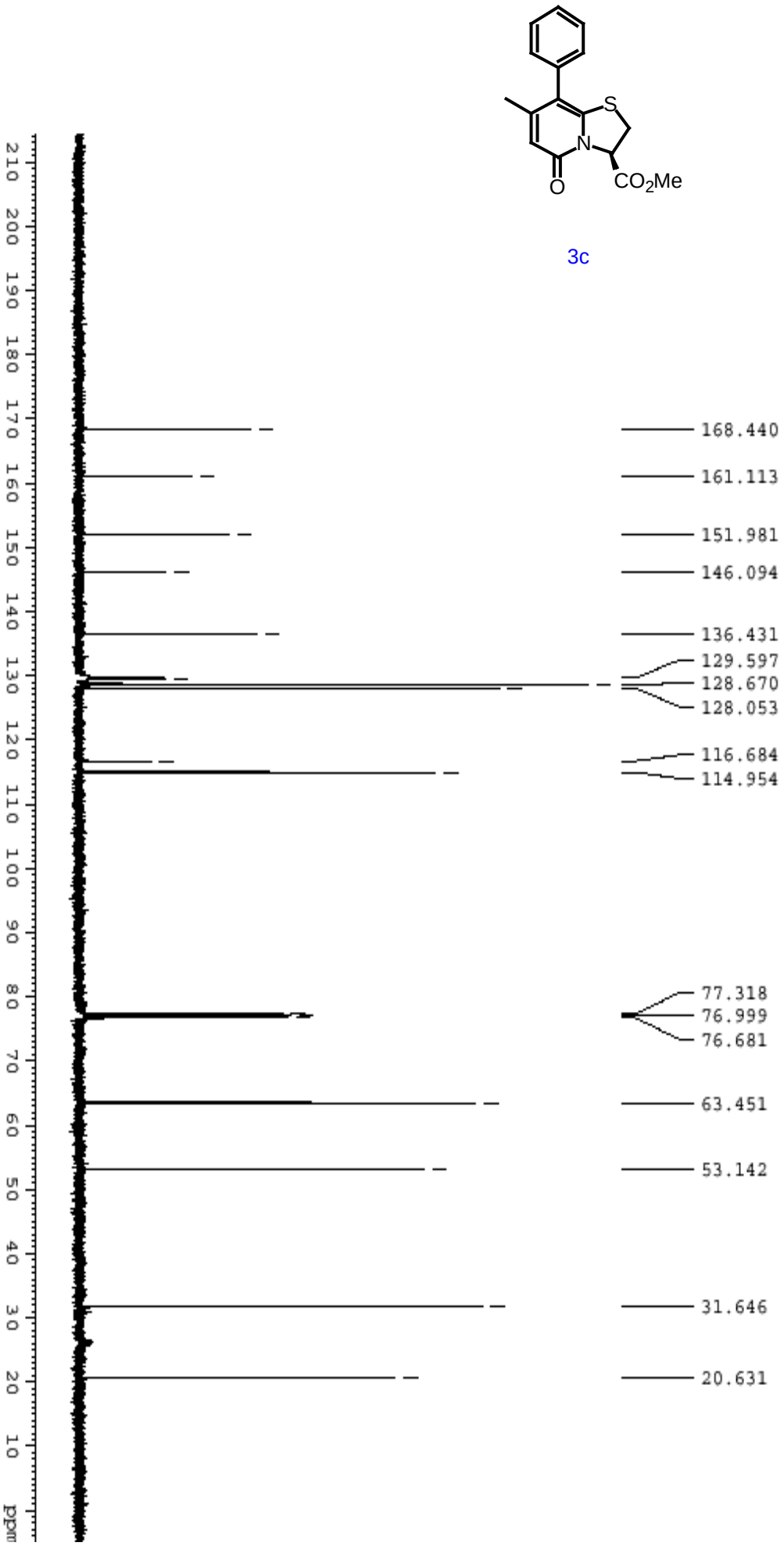
1a

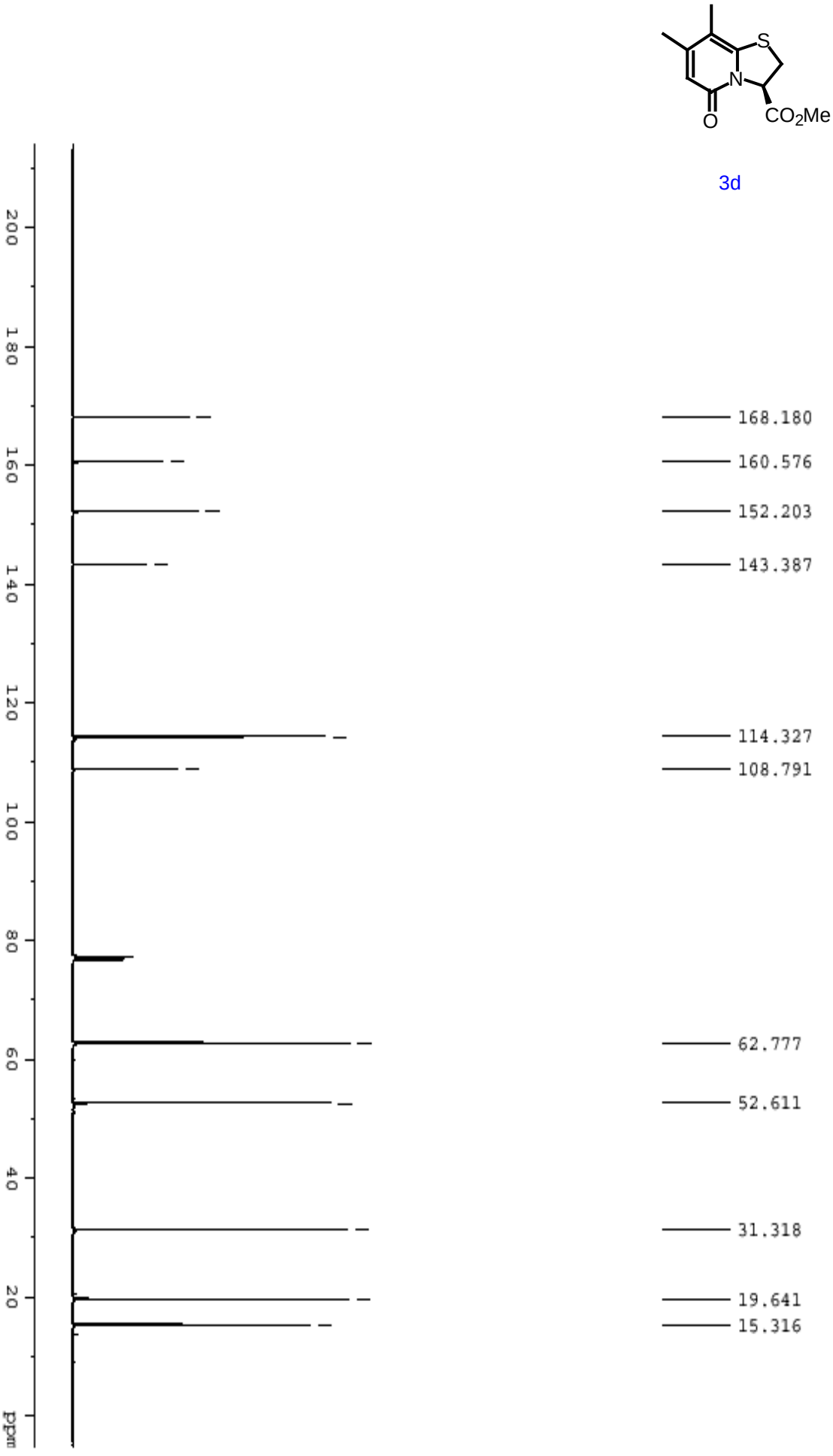

171.189
170.043
77.991
77.316
76.997
76.679
52.612
36.088
20.221
ppm

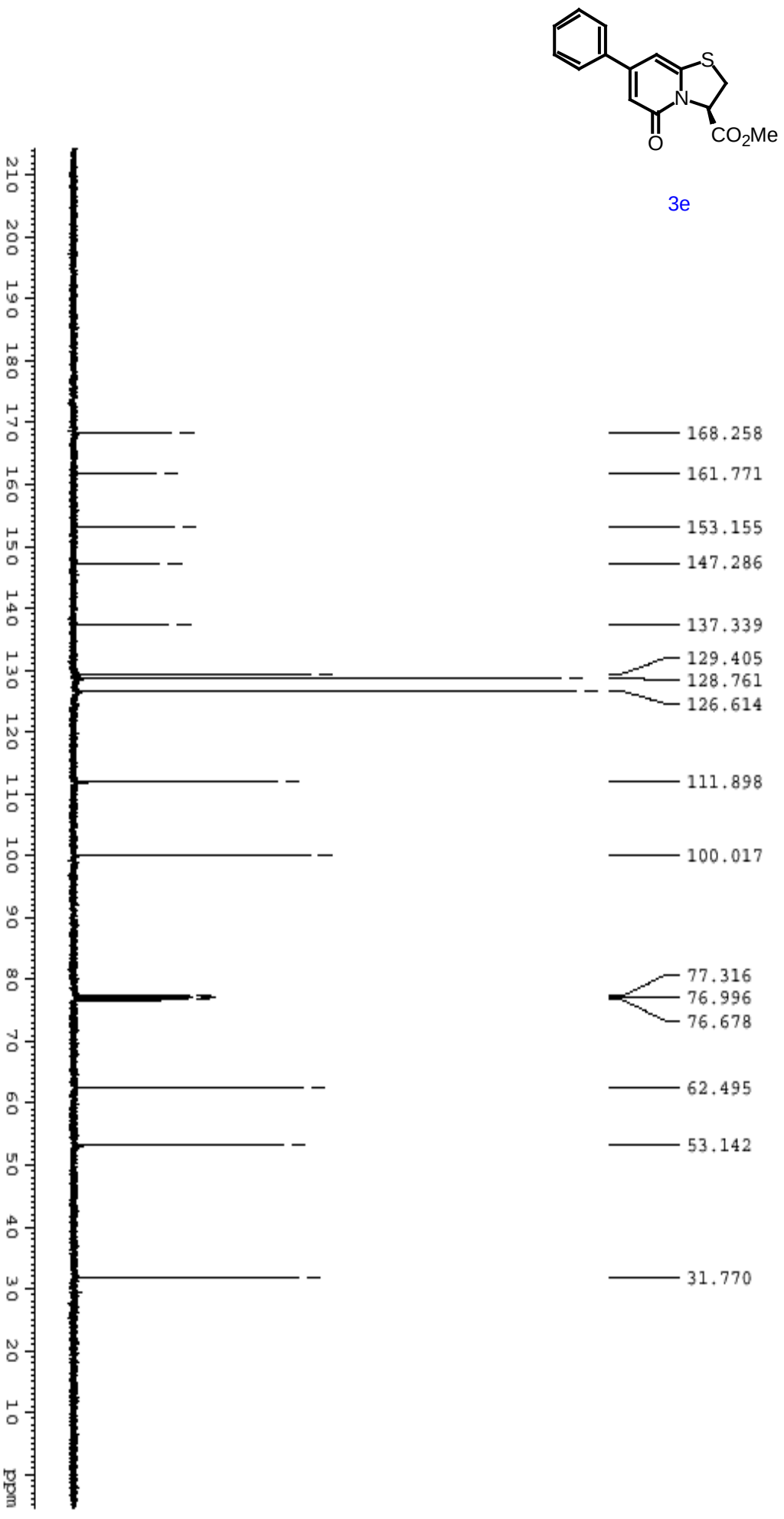

S
N
O
CO2Me
3a
168.457
161.230
154.331
146.428
136.280
133.851
133.704
131.709
130.190
129.650
128.948
128.677
128.361
127.864
127.649
126.046
125.557
125.373
123.742
116.059
115.212
77.319
77.204
77.001
76.683
63.438
53.209
36.863
31.641
ppm


S
N
O
CO2Me
168.392
161.889
155.189
146.764
133.935
133.468
131.938
128.758
127.919
127.857
126.330
125.803
125.448
123.861
114.109
101.805
77.319
77.001
76.683
62.486
53.243
38.872
31.845
ppm

3b


S
N
O
CO2Me
3c
168.440
161.113
151.981
146.094
136.431
129.597
128.670
128.053
116.684
114.954
77.318
76.999
76.681
63.451
53.142
31.646
20.631
ppm


S
N
O
CO2Me
3d
200
180
160
140
120
100
80
60
40
20
ppm
168.180
160.576
152.203
143.387
114.327
108.791
62.777
52.611
31.318
19.641
15.316

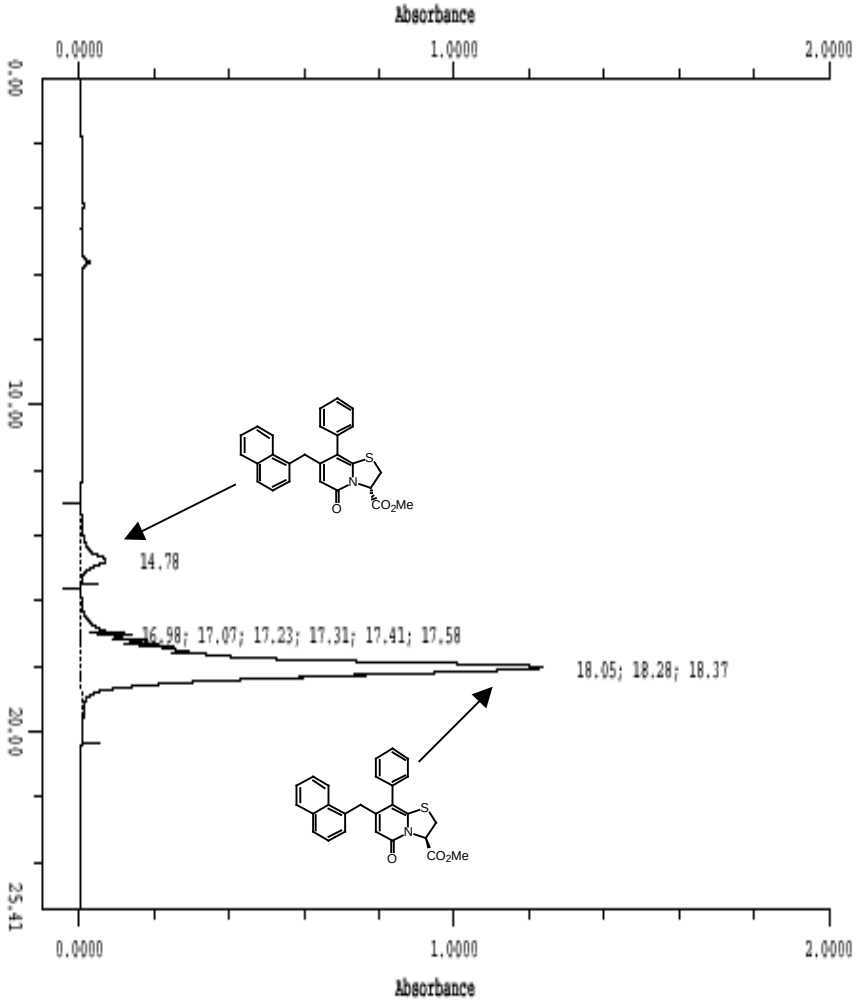

S
N
O
CO2Me
3e
210
200
190
180
170
160
150
140
130
120
110
100
90
80
70
60
50
40
30
20
10
ppm
168.258
161.771
153.155
147.286
137.339
129.405
128.761
126.614
111.898
100.017
77.316
76.996
76.678
62.495
53.142
31.770

Column: (S,S) Whelk-O 1
Mobile Phase: H:DCM:IPA 48:48:4

% ee: 92

	NAME	CHAN	LEV	REP	TYPE	DIRECTORY		TIME	DATE
COLLECTION DATA	23135400	A	1	1	Orig	C:\GOLD\SYS1DATA\HANS\	INJECTION	13:54:00	23 FEB 1981
METHOD	ISOKRAT					C:\GOLD\SYS1METH\HANS\	ANALYSIS	14:19:31	23 FEB 1981
							REPORT	19:16:36	11 MAR 1981

SAMPLE TABLE none
SYSTEM 1: SYSTEM1
Chart Speed 0.50 cm/min

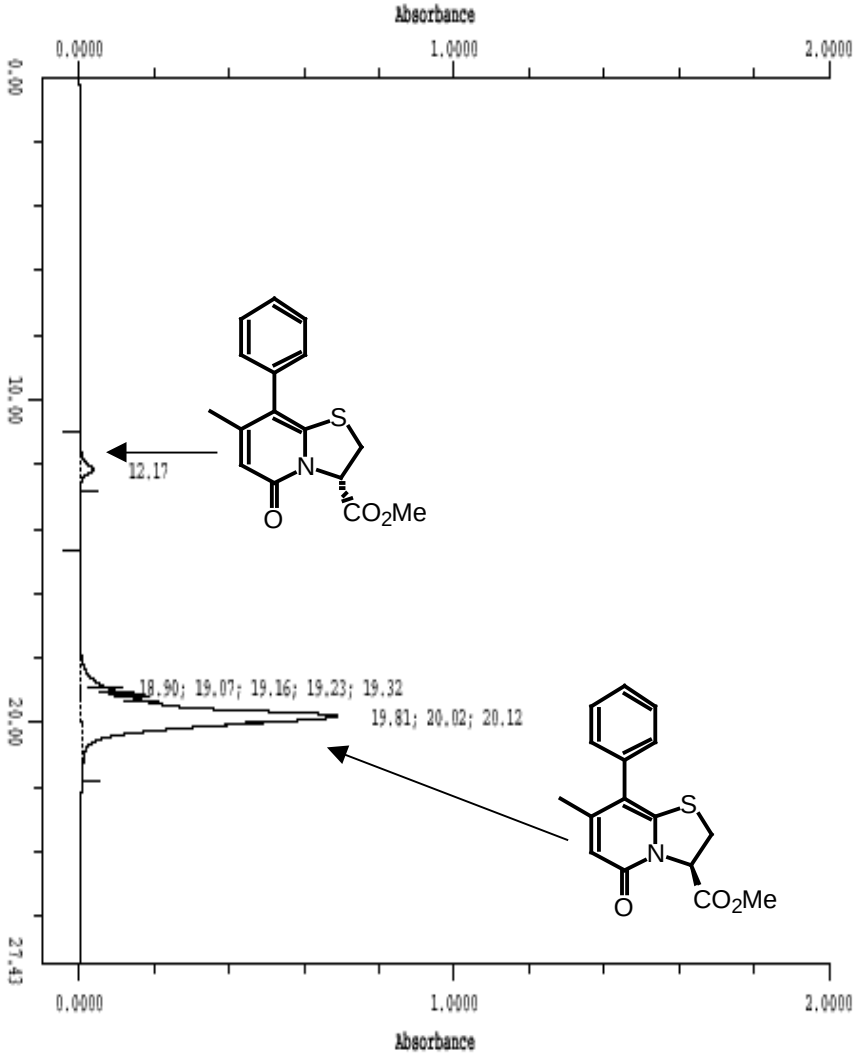


Column: (S,S) Whelk-O 1
Mobile Phase: H:DCM:IPA 48:48:4

% ee: 92

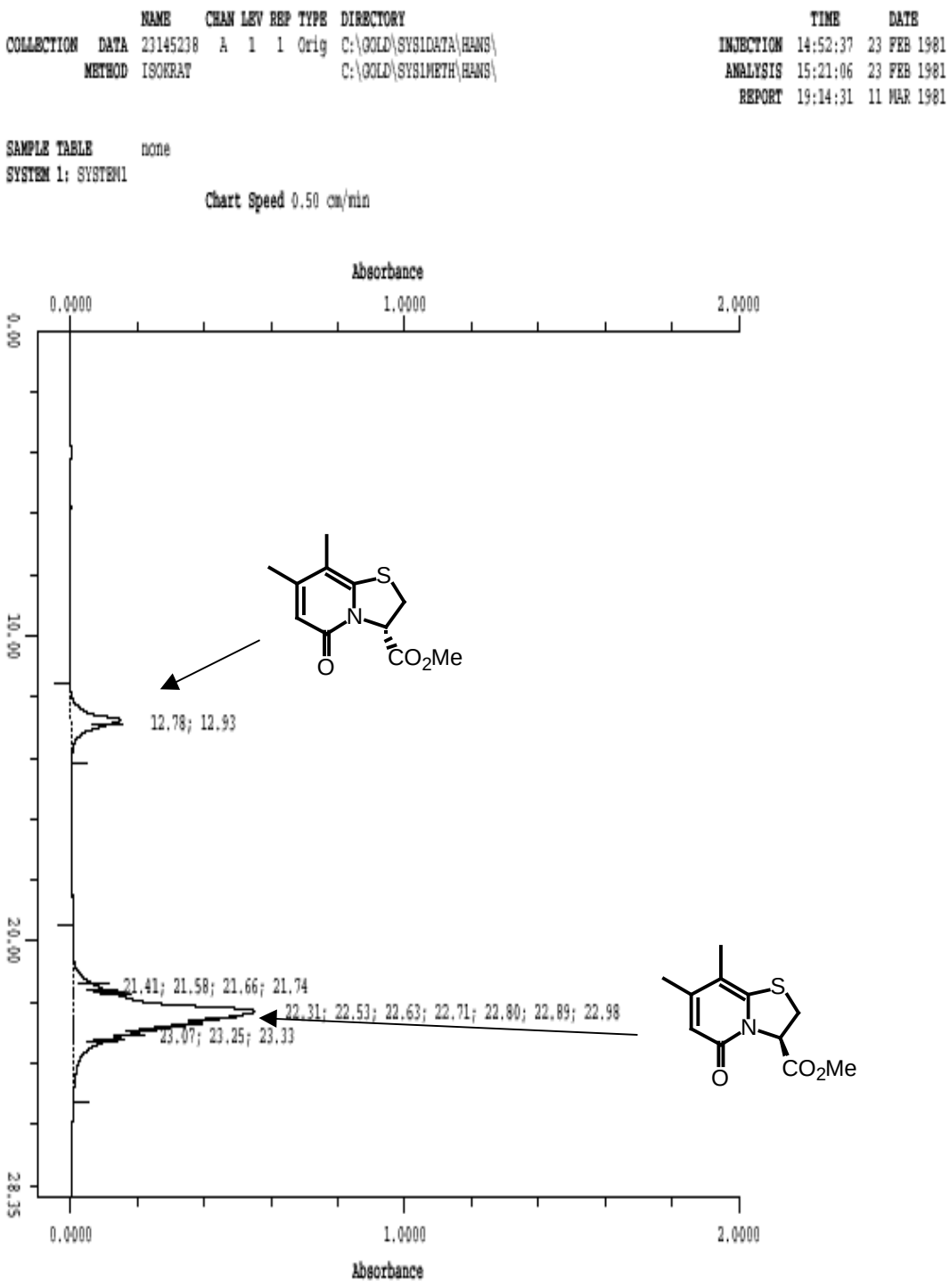
		NAME	CHAN	LEV	REP	TYPE	DIRECTORY		TIME	DATE
COLLECTION	DATA	23142202	A	1	1	Orig	C:\GOLD\SYS1DATA\HANS\	INJECTION	14:22:02	23 FEB 1981
	METHOD	ISOKRAT					C:\GOLD\SYS1METH\HANS\	ANALYSIS	14:49:35	23 FEB 1981
								REPORT	19:15:38	11 MAR 1981

SAMPLE TABLE none
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Chart Speed 0.50 cm/min



Column: (S,S) Whelk-O 1
Mobile Phase: H:DCM:IPA 48:48:4

% ee: 73

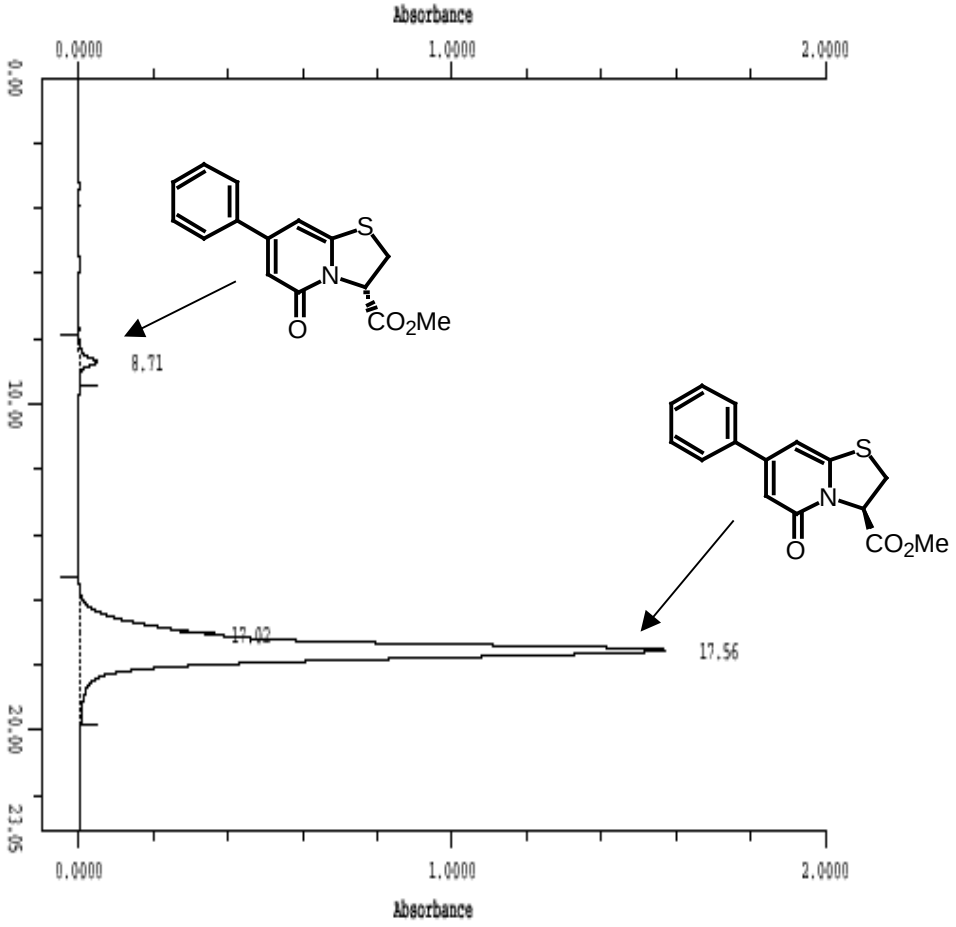


Column: (S,S) Whelk-O 1
Mobile Phase: H:DCM:IPA 48:48:4

% ee: 97

		NAME	CHAN	LEV	REP	TYPE	DIRECTORY		TIME	DATE
COLLECTION	DATA	13170233	A	1	1	Orig	C:\GOLD\SYS1DATA\HANS\	INJECTION	17:02:33	13 MAR 1981
	METHOD	ISOKRAT					C:\GOLD\SYS1METH\HANS\	ANALYSIS	17:25:46	13 MAR 1981
								REPORT	17:29:16	13 MAR 1981

SAMPLE TABLE none
SYSTEM 1: SYSTEM1
Chart Speed 0.50 cm/min



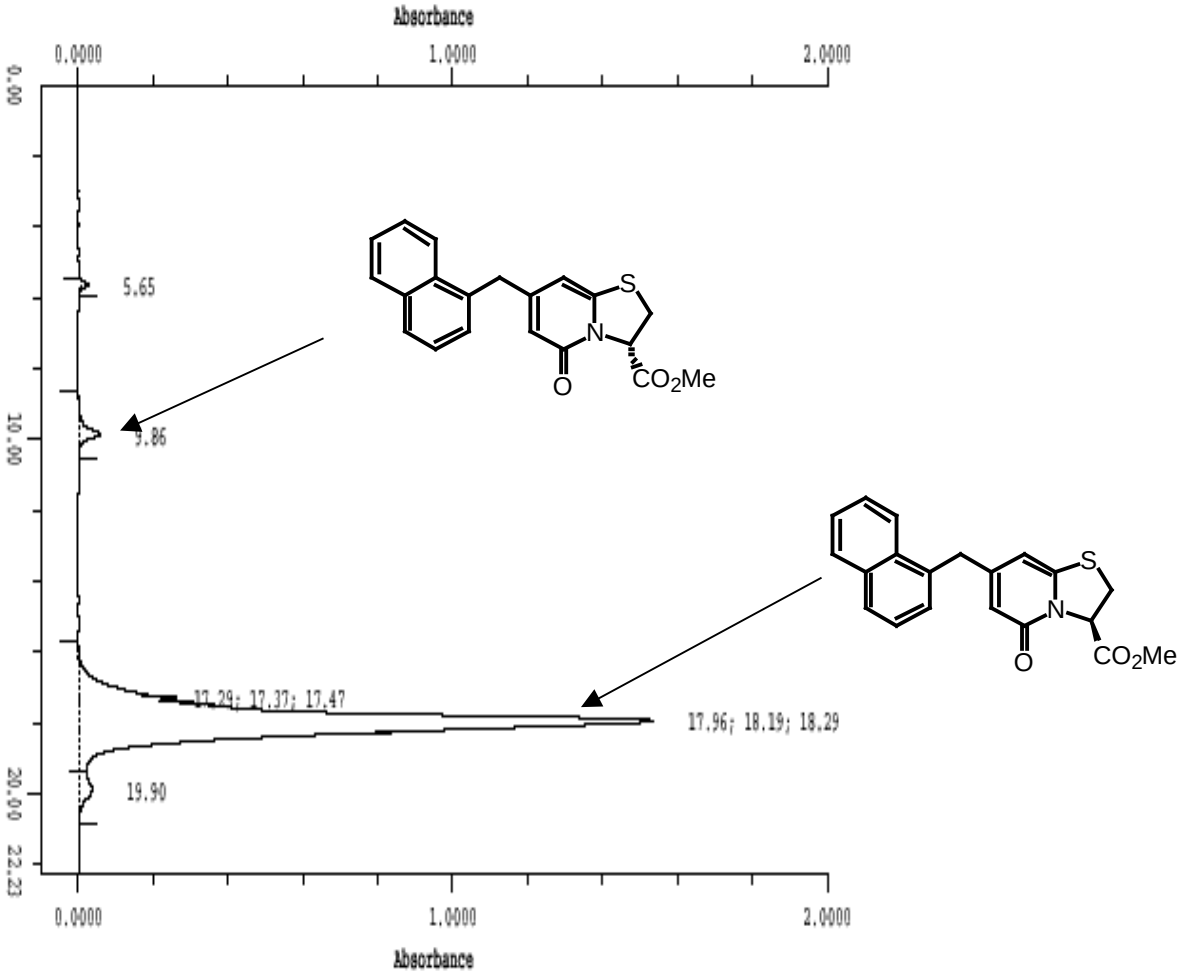
Column: (S,S) Whelk-O 1
Mobile Phase: H:DCM:IPA 48:48:4

% ee: 97

		NAME	CHAN	LEV	REP	TYPE	DIRECTORY		TIME	DATE
COLLECTION	DATA	05122347	A	1	1	Orig	C:\GOLD\SYS1DATA\SLASK\	INJECTION	12:23:46	5 APR 1981
	METHOD	ISOKRAT					C:\GOLD\SYS1METH\HANS\	ANALYSIS	12:46:16	5 APR 1981
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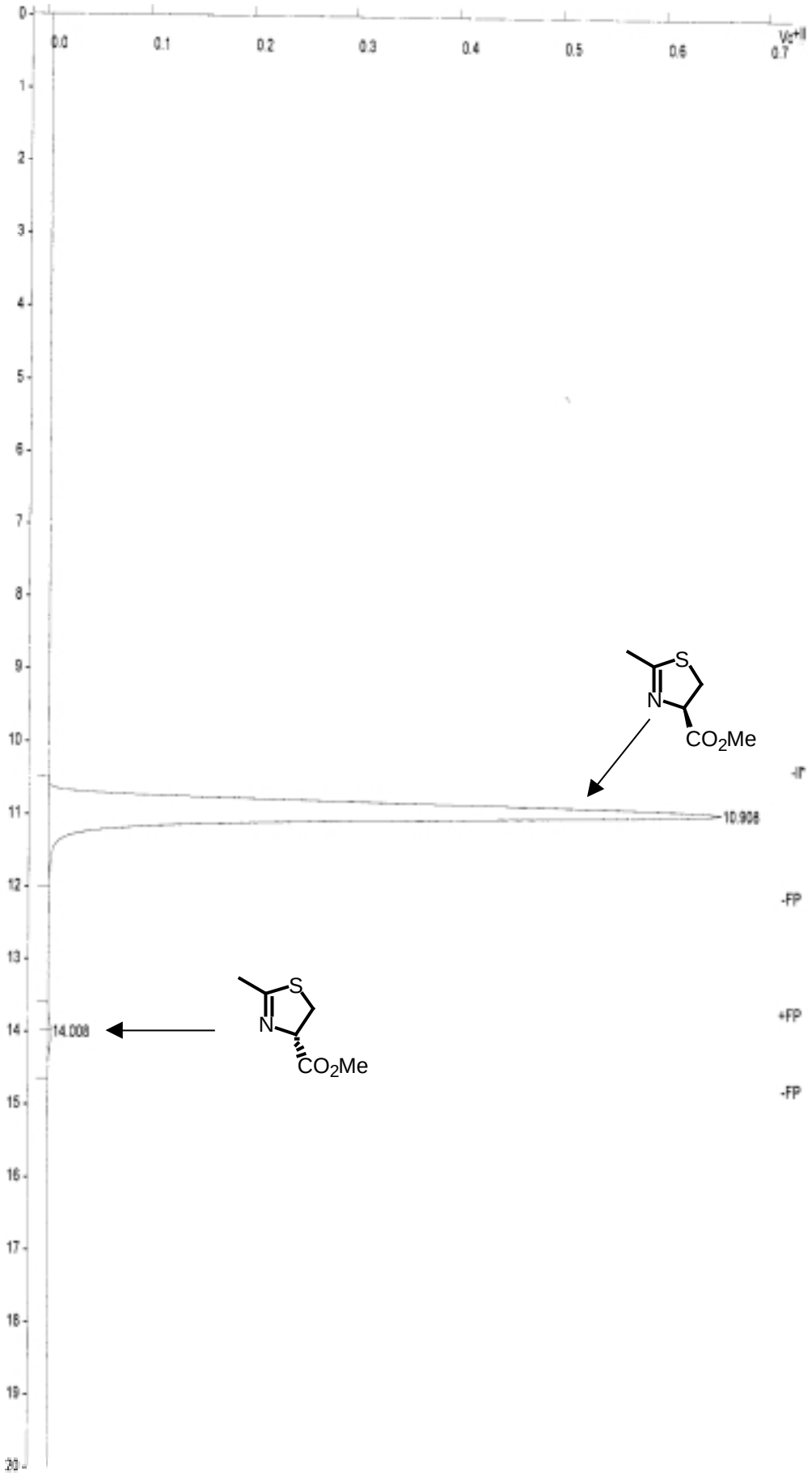
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SYSTEM 1: SYSTEM1

Chart Speed 0.50 cm/min



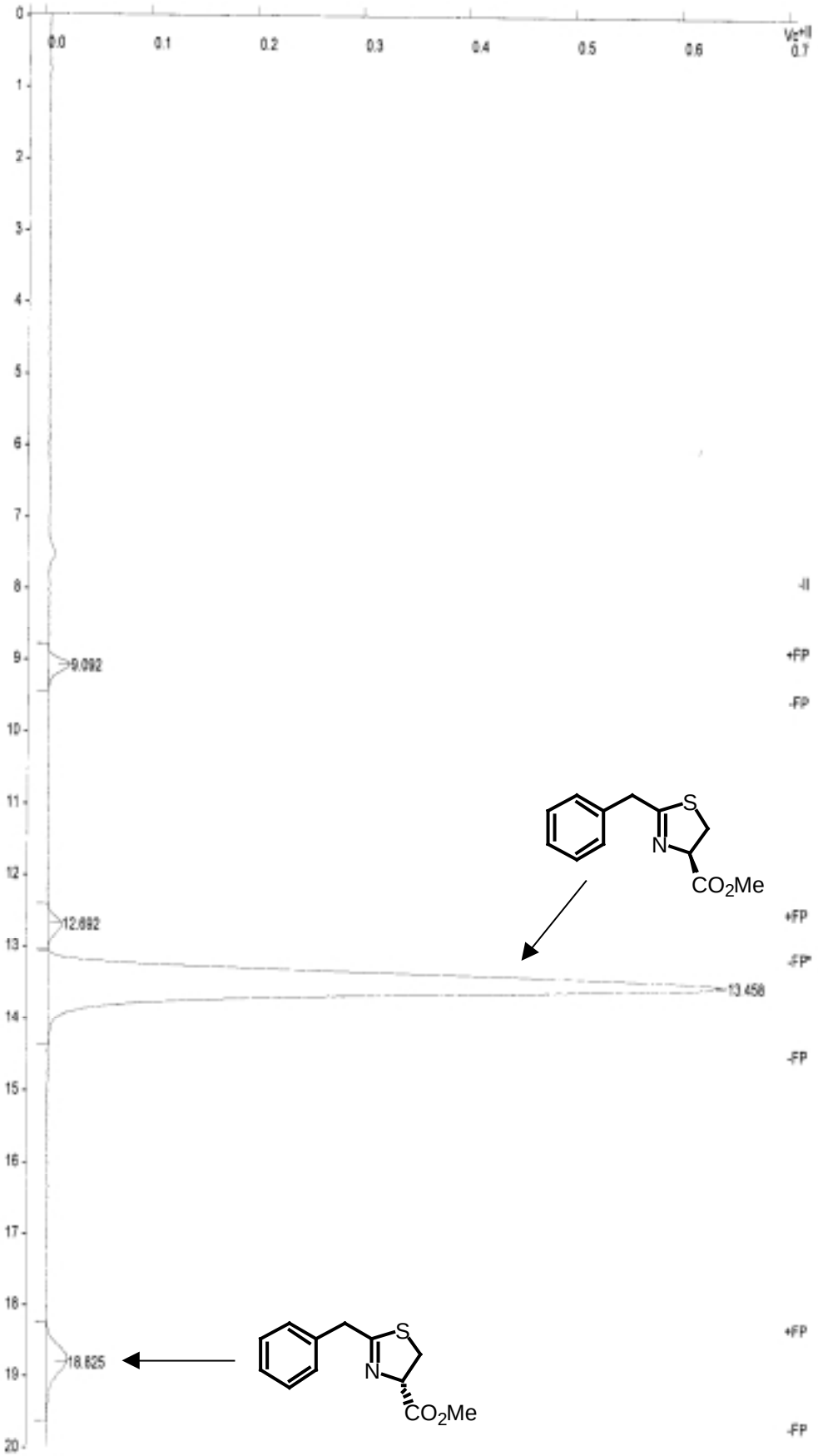
Column: OD-H
Mobile Phase: H:IPA 70:30

% ee: 100



Column: OD-H
Mobile Phase: H:IPA 70:30

% ee: 92



Column: OD-H
Mobile Phase: H:IPA 70:30

% ee: 74

