A Formal Total Synthesis of the Salicylihalamides

*Christian Herb and Martin E. Maier**

Institut für Organische Chemie, Universität Tübingen, Auf der Morgenstelle 18, D-72076 Tübingen,
Germany

martin.e.maier@uni-tuebingen.de

Supporting Information

<i>Table of contents</i>	<i>page</i>
¹ H nmr spectrum of benzoate 3	S3
¹³ C nmr spectrum of benzoate 3	S4
¹ H nmr spectrum of aldehyde 4	S5
¹³ C nmr spectrum of aldehyde 4	S6
¹ H nmr spectrum of vinyl iodide 5	S7
¹³ C nmr spectrum of vinyl iodide 5	S8
¹ H nmr spectrum of aldehyde 7	S9
¹³ C nmr spectrum of aldehyde 7	S10
¹ H nmr spectrum of keto ester 8	S11
¹³ C nmr spectrum of keto ester 8	S12
¹ H nmr spectrum of hydroxy ester 9	S13
¹³ C nmr spectrum of hydroxy ester 9	S14
¹ H nmr spectrum of ester 10	S15
¹³ C nmr spectrum of ester 10	S16
¹ H nmr spectrum of aldehyde 11	S17
¹³ C nmr spectrum of aldehyde 11	S18
¹ H nmr spectrum of aldol product 13	S19
¹³ C nmr spectrum of aldol product 13	S20
¹ H nmr spectrum of MOM ether 14	S21

¹³ C nmr spectrum of MOM ether 14	S22
¹ H nmr spectrum of alcohol 15	S23
¹³ C nmr spectrum of alcohol 15	S24
¹ H nmr spectrum of tosylate 16	S25
¹³ C nmr spectrum of tosylate 16	S26
¹ H nmr spectrum of alkene 17	S27
¹³ C nmr spectrum of alkene 17	S28
¹ H nmr spectrum of coupling product 18	S29
¹³ C nmr spectrum of coupling product 18	S30
¹ H nmr spectrum of iodide 19	S31
¹³ C nmr spectrum of iodide 19	S32
¹ H nmr spectrum of hydroxy ester 20	S33
¹³ C nmr spectrum of hydroxy ester 20	S34
¹ H nmr spectrum of hydroxy acid 21	S35
¹³ C nmr spectrum of hydroxy acid 21	S36
¹ H nmr spectrum of macrolactone 23	S37
¹³ C nmr spectrum of macrolactone 23	S38

Chloroform-d

7.29
7.27
7.25

6.83
6.81
6.79
6.77

5.94
5.92
5.90
5.88
5.86
5.84

5.07
5.05
5.03

3.87
3.80

3.35
3.33

9.64

Chloroform-d
7.35
7.33
7.31

6.89
6.87
6.81
6.79

3.85
3.81

3.61

Chloroform-d

7.30
7.28
7.26

6.81
6.79
6.79
6.77
6.61
6.59
6.58
6.56
6.54

6.10
6.06

3.88
3.80

3.33
3.31

5

Chloroform-d
7.25
7.23
6.87
6.85

4.44
4.41
4.40
4.37
4.28
4.10
4.09
3.79
3.52
3.50
3.49

2.46
2.44

1.83
1.82
1.80
1.79

1.25
1.24
1.22

0.85

0.04
0.03

9.78
9.78

7.24
7.22
6.88
6.85

4.41
4.38
4.36

3.79
3.52
3.50
3.49

2.53

1.83

0.86

0.06
0.05

Chloroform-d

Chloroform-d

7.32
7.30
7.25
7.23
7.20
7.18
6.87
6.85

4.65
4.64
4.43
4.41
4.39
4.36
4.16
4.15
4.08
4.06
3.78
3.73
3.50
3.50
3.26
3.23
2.79
2.76
2.75
2.73

1.84
1.82
1.81
1.69
1.60

1.25
1.23

0.86

0.07
0.06

Chloroform-d

7.32
7.30
7.28
7.25
7.23
7.21
7.19
6.86
6.83

4.60
4.59
4.55
4.54
4.43
4.39
4.36
4.14
4.13
3.96
3.84
3.78
3.54
3.53
3.51
3.27

2.79
2.76
2.76
2.73

1.91
1.79
1.75
1.70
1.66
1.21
1.19

0.87

0.06
0.03

Chloroform-d

7.24
7.22
6.87
6.84

4.63
4.62
4.60
4.58
4.43
4.40
4.39
4.36
3.92
3.79
3.59
3.52
3.51
3.49
3.35

2.70
2.69
2.69
2.67

1.93
1.82
1.70
1.64

0.87
0.80
0.78

0.05
0.04

$$\begin{array}{l} \int 7.78 \\ - 7.76 \\ \hline \end{array} \quad \begin{array}{l} \int 7.32 \\ \int 7.30 \\ \hline \end{array} \quad \begin{array}{l} \int 7.23 \\ \int 7.21 \\ \hline \end{array} \quad \begin{array}{l} \int 6.86 \\ \int 6.84 \\ \hline \end{array}$$

4.50
4.49
4.47
4.45
4.39
4.37
4.06
4.05
3.89
3.87
3.85
3.78
3.49
3.47
3.46
3.23

—2.42
 $\int$ 2.05
 $\int$ 2.04
 $\int$ 1.75
 $\int$ 1.69
 $\int$ 1.60
 $\int$ 1.59

0.84
0.83
0.80

$$\begin{array}{l} \text{---} 0.02 \\ \diagdown \\ \text{---} 0.01 \end{array}$$

Chloroform-d

7.25
7.23

6.87
6.85

4.91
4.58
4.57
4.45
4.43
4.41
4.40
4.37
4.13
4.12
4.11
4.10
3.96
3.79
3.55
3.53
3.51
3.32

1.89
1.77
1.66
1.63

0.05
0.04

Chloroform-d

7.23
7.22
7.21
7.20
6.84
6.82
6.79
6.78
6.74
6.71

5.46
5.40

4.59
4.57
4.56
4.54
4.53
4.40
4.37
4.36

3.85
3.77
3.75
3.50
3.49
3.47
3.30
3.29
3.26
3.25

2.00
1.77
1.62
1.60
1.50
1.47

0.85
0.82

0.03
0.01

7.25
7.23

6.87
6.85

—4.60
—4.41
—4.39
—3.93
—3.80
—3.52
—3.50
—3.49
—3.40
—3.39
—3.38
—3.35
—3.33
—3.31
—3.03
—3.00
—2.98

—2.03
 1.79
 1.72
 1.61

0.99
0.98
0.87

Chloroform-d

7.25
7.24
6.86
6.84
6.79
6.77

5.49
5.47
5.43
5.42

4.77
4.76
4.62
4.60
4.45

3.91
3.82
3.77
3.59
3.58
3.49
3.47
3.41
3.38

1.91
1.90
1.74
1.72
1.57
1.52

0.83
0.82

Chloroform-d

7.27
7.25
7.23
7.21
7.19
6.86
6.84
6.78
6.76
6.73

5.47
5.36
5.34

4.88
4.86
4.79
4.77

4.46

4.16
4.15
4.13
4.12

3.78
3.69
3.66
3.64
3.63
3.42
3.33
3.29

2.31
2.28
2.12
2.01
1.91
1.90
1.77
1.75
1.74
1.71
1.68
1.47
1.45
1.44
1.41

0.86
0.84