Supporting Information

Rapid and Efficient Microwave-Assisted Synthesis of Aryl Aminobenzophenones Using Pd-Catalyzed Amination

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General

Chemical shifts for 75.4 MHz ^{13}C - and 300 MHz ^1H -NMR spectra are reported in ppm relative to residual solvent peaks or to the internal standard tetramethylsilane. 70 eV EI+ mass spectra (HRMS) were obtained at a resolution of 10000 FWHM. Melting points are uncorrected. All of the reactions under microwave irradiation were conducted in heavy-walled Pyrex tubes sealed with aluminium crimp caps fitted with a silicon septum. Microwave heating was carried out with a single mode cavity Discover Microwave Synthesizer (CEM Corporation, NC), producing continuous irradiation at 2455 MHz. All commercially available chemicals were used as received.

General Procedure 1: Preparation of [(4-Phenylamino)phenyl](phenyl)methanone (2a)³ Using Different Ligands (Figure 2). 4-Aminobenzophenone (197.2 mg, 1.00 mmol), bromobenzene (0.13 mL, 188.4 mg, 1.20 mmol), $\text{Pd}_2(\text{dba})_3$ (9.2 mg, 0.01 mmol), ligand (0.04 mmol), Cs_2CO_3 (456.2 mg, 1.40 mmol) and 1,4-dioxane (5 mL) were added to a microwave tube containing a small magnetic stir bar. The tube containing the reaction mixture was sealed with an aluminium crimp cap fitted with a silicon septum and then it was exposed to microwave irradiation (150 W) at 100°C for 10 min. After the irradiation, the reaction tube was cooled with high pressure air through an inbuilt system in the instrument until the temperature had fallen below 40°C. The reaction mixture was filtered, concentrated together with silica gel in vacuo and the residue was purified by flash chromatography on silica gel with ethyl acetate/petroleum ether 1:8 as eluent to give **2a** as a yellow solid (the yields are provided in Figure 2): mp 155-157°C (lit.³ mp 152-155°C).

General Procedure 2: Preparation of 2a Using Ligand Sources (Table 1). 4-Aminobenzophenone (197.2 mg, 1.00 mmol), bromobenzene (188.4 mg, 1.20 mmol), Pd₂(dba)₃ (9.2 mg, 0.01 mmol) or Pd(OAc)₂ (4.5 mg 0.02 mmol), ligand **B** (19.1 mg, 0.04 mmol), Cs₂CO₃ (456.2 mg, 1.40 mmol) and 1,4-dioxane (5 mL) were added to a microwave tube containing a small magnetic stir bar. The mixture was exposed to microwave irradiation (150 W) for 20 min or 25 min at 100 °C or 140 °C. The work up was conducted as described in General Procedure 1. The results are provided in Table 1.

General procedure 3: Preparation of 2a Using Various Solvents (Table 2). 4-Aminobenzophenone (197.2 mg, 1.00 mmol), bromobenzene (0.13 mL, 188.4 mg, 1.20 mmol), Pd(OAc)₂ (4.5 mg 0.02 mmol), ligand **B** (19.1 mg, 0.04 mmol), Cs₂CO₃ (456.15 mg, 1.40 mmol) and solvent (5 mL) were treated as described in General Procedure 1. The results are provided in Table 2.

General procedure 4: Preparation of 2a Using Various Bases (Table 3). 4-Aminobenzophenone (197.2 mg, 1.00 mmol), bromobenzene (0.13 mL, 188.4 mg, 1.20 mmol), Pd(OAc)₂ (4.5 mg 0.02 mmol), ligand **B** (19.1 mg, 0.04 mmol), base (1.40 mmol) and *t*-butanol/toluene 1/5 (5 mL) were treated as described in General Procedure 1. The results are provided in Table 3.

General Procedure 5: Preparation of 2a and [(4-Diphenylamino)phenyl](phenyl)methanone (3)^{16,17} as a Byproduct at Variety of Temperatures (Table 4). 4-Aminobenzophenone (197.2 mg, 1.00 mmol), bromobenzene (1.00 or 1.20 mmol), Pd(OAc)₂ (4.5 mg, 0.02 mmol), ligand **B** (19.1 mg, 0.04 mmol), NaO*t*-Bu (134.6 mg, 1.40 mmol), and toluene/*t*-BuOH (5 mL/1mL) were added to a microwave tube containing a small magnetic stir bar. The mixture

was exposed to microwave irradiation at the chosen temperature. The work up was conducted as described in General Procedure 1, giving **2a** and **3**. The results are provided in Table 4. **3**: mp 99-101 °C (lit.¹⁶ mp 87 °C; lit.¹⁷ mp 127-128 °C); ¹H NMR (CDCl₃, 300 MHz): δ 7.78-7.74 (dt, *J* = 1.1, 6.9 Hz, 2H), 7.73 -7.69 (dt, *J* = 1.9, 9.2 Hz, 2H), 7.56-7.50 (tt, *J* = 1.5, 7.3 Hz, 1H), 7.49-7.45 (tt, *J* = 1.5, 6.9 Hz, 2H), 7.34-7.29 (m, 4H), 7.19-7.13 (m, 6H), 7.02-6.99 (dt, *J* = 1.9, 6.9 Hz, 2H); ¹³C NMR (CDCl₃, 75.4 MHz): δ 195.2, 151.9, 146.5, 138.5, 132.0, 131.7, 129.6, 129.6, 129.5, 128.1, 126.0, 124.6, 119.5; HRMS calcd for C₂₅H₁₉NO 349.1467, found 349.1472.

General Procedure 6: Preparation of 2a using different ligands (Figure 3). 4-Aminobenzophenone (197.2 mg, 1.00 mmol), bromobenzene (0.11 mL, 157.0 mg, 1.00 mmol), Pd(OAc)₂ (4.5 mg, 0.02 mmol), ligand (0.04 mmol), NaO*t*-Bu (134.6 mg, 1.40 mmol) and toluene/*t*-BuOH 5:1 (6 mL) were added to a microwave tube containing a small magnetic stir bar. The mixture was exposed to microwave irradiation (200 W) for 3 min at 120°C. The work up was conducted as described in General Procedure 1. The results are provided in Figure 3.

General Procedure 7 (Table 6): (4-Amino-2-chlorophenyl)(2-methylphenyl)methanone (245.7 mg, 1.00 mmol), aryl bromide (1.00 or 1.50 mmol), Pd(OAc)₂ (4.5 mg, 0.02 mmol), ligand **B** (19.1 mg, 0.04 mmol), NaO*t*-Bu or Cs₂CO₃ (1.40 mmol) and toluene/*t*-BuOH 5:1 (6 mL) was added to a microwave tube containing a small magnetic stir bar. The mixture was exposed to microwave irradiation (250 W) for the chosen time at a temperature of 150°C. The reaction mixture was filtered, concentrated together with silica gel in vacuo and the residue was purified by flash column chromatography on silica gel.

General procedure 8 (Table 7): **9** (309.6 mg, 1.00 mmol), an aniline (1.00 mmol), Pd(OAc)₂ (4.5 mg, 0.02 mmol), ligand **B** (19.1 mg, 0.04 mmol), NaO*t*-Bu (134.5 mg, 1.40 mmol) or Cs₂CO₃ (456.1 mg, 1.40 mmol), and toluene/*t*-BuOH 5:1 (6 mL) were added to a microwave tube containing a small magnet stirring bar. The mixture was exposed to microwave irradiation (250 W) at 150°C. The reaction mixture was filtered, concentrated together with silica gel in vacuo and the residue was purified by flash column chromatography.

XNK396055 30/700 CDC13 (XL)
Acquired on Monday 2004-01-12 at 08:49:38

7.75340
7.73304
7.72780
7.53693
7.51277
7.47395
7.45408
7.44904
7.36070
7.33597
7.33267
7.30820
7.20578
7.20169
7.17711
7.17371
7.06967
7.02177
6.99226
6.21377

0.01107
0.00000

XNK396055 30/700 CDC13 (XL)
Acquired on Monday 2004-01-12 at 10:22:33

XNK396091A 30/700 CDC13 (XL)
Acquired on Thursday 2003-10-30 at 23:11:01

XNK396091B 29/700 CDC13 (XL)
Acquired on Thursday 2003-10-30 at 10:02:12

XNK396091B 29/700 CDC13 (XL)
 Acquired on Thursday 2003-10-30 at 12:39:07

XNK396091E 29/700 DMSO (XL)
Acquired on Thursday 2003-10-30 at 10:13:06

XNK396091E 29/700 DMSO (XL)

XNK396197C 26/700 DMSO (XL)
Acquired on Tuesday 2004-01-20 at 09:32:38

XNK396197C 26/700 DMSO (XL)
Acquired on Tuesday 2004-01-20 at 12:45:31

193.706

160.130
159.980
157.385
157.219
156.908
156.756
154.096
153.928
149.431
138.358
132.107
131.456
128.927
128.228
126.678
126.143
126.105
126.016
125.977
124.933
124.888
124.773
124.727
113.492
113.120
111.942
111.896
111.650
111.604
105.234
104.910
104.560

40.317
40.039
39.761
39.482
39.204
38.926
38.648

0.000

XNK396107N 10/700 DMSO (XL)
Acquired on Wednesday 2004-01-21 at 09:12:42

8.95906

7.7019
7.6962
7.6843
7.6791
7.6728
7.6618
7.6566
7.6218
7.6024
7.5977
7.5581
7.5374
7.5330
7.5099
7.3508
7.3255
7.2636
7.2376
7.2346
7.1212
7.0919
7.0774
7.0523

5.7264

4.0676
4.0676
4.0475
4.0427
4.0367
4.0302
4.0216
4.0005
3.9952
3.9907
3.9692
3.9605
3.9545
3.9466
3.9441
3.9232
3.9029
3.3104

2.5135
2.5080
2.5020
2.4960
2.4900

1.9884

1.1990
1.1756
1.1517

0.0108
0.0000
0.0105

S17

ppm

XNK396107N 10/700 DMSO (XL)
Acquired on Wednesday 2004-01-21 at 12:19:20

194.529

149.276
142.004
140.360
139.278
133.160
132.388
130.116
129.846
129.171
127.834
121.076
120.668
118.271
114.840
103.432

65.633

41.240
40.961
40.683
40.405
40.127
39.849
39.571

21.595

14.928

0.941

XNK396102K 15/700 CD300, filtr. (XL)
Acquired on Wednesday 2003-10-22 at 14:07:00

4156702K 15.700 CD3OD, fit. op. pr. 2003.10.22

* Current Data Parameters ***

NAME : ddad0665
PNO : 1
OCNO : 1

153.3304
149.5774
140.4766
134.1863
132.6005
132.1071
130.3803
129.2967
126.9004
125.2265
115.3837
115.0685
113.5356

49.8920
49.6101
48.4736
48.1917
41.5666

0.0009

XNK3961076 31/700 DMSO (XL)
Acquired on Thursday 2003-10-30 at 10:24:08

XNK396107G 31/700 DMSO (XL)
Acquired on Thursday 2003-10-30 at 11:24:50

0.000
18.473
38.625
38.903
39.181
39.459
39.737
40.016
40.294
52.327
55.373

112.032
113.342
120.540
122.306
124.323
125.953
128.181
128.856
129.139
131.288
132.007
138.556
149.700
151.943

193.534

XNK396091D 24/700 CDC13 (XL)
Acquired on Thursday 2003-10-30 at 10:05:04

7.958
7.7958
7.7818
7.7776
7.7546
7.7493
7.5590
7.5346
7.4930
7.4796
7.4732
7.4681
7.4571
7.4521
7.4344
7.4295
7.4077
7.4028
7.2535
7.1312
7.1020
6.9654
6.9606
6.3452

3.4893
3.4727

1.6128

0.0112
0.0000
0.0109

XNK396091D 24/700 CDCl3 (XL)
Acquired on Thursday 2003-10-30 at 10:36:05

146.568
138.436
137.897
132.533
131.770
130.131
129.665
128.181
127.534
124.220
123.020
119.139
116.033

77.451
77.028
76.605

0.000
-4.500

195.179

XNK396107T 30/700 CD30D (XL)
Acquired on Thursday 2003-10-30 at 09:51:23

XNK396107T 30/700 CD300 (XL)
 Acquired on Thursday 2003-10-30 at 12:02:09

0.000

49.888
 49.603
 49.319
 49.036
 48.753
 48.468
 48.184

149.400
 149.223
 141.937
 140.409
 139.808
 133.834
 133.050
 130.570
 129.980
 129.393
 127.709
 125.618
 115.831

197.304

XNK396107X 30/700 CDCl3 (XL)
Acquired on Thursday 2003-10-30 at 10:07:37

XNK396107X 30/700 CDC13 (XL)
 Acquired on Thursday 2003-10-30 at 12:56:30

XNK396199B 13/700 DMSO (XL)
Acquired on Monday 2004-01-19 at 09:42:27

9.34173

7.9721
7.9654
7.9582
7.7644
7.7354
7.7161
7.6933
7.6881
7.6459
7.6383
7.6321
7.6269
7.6219
7.6102
7.5835
7.5776
7.5567
7.5523
7.5291
7.2597
7.2306

4.0686
4.0450
4.0212
3.9976

3.3226

2.5187
2.5133
2.5072
2.5012
2.4959

1.9911

1.2015
1.1780
1.1541

0.0108
0.0000
-0.0105

625

9

ppm

XNK396199B 13/700 DMSO (XL)
 Acquired on Monday 2004-01-19 at 15:35:23

40.308
 40.028
 39.750
 39.472
 39.194
 38.916
 38.638

149.611
 148.709
 148.932
 138.006
 132.142
 131.722
 130.604
 129.032
 128.500
 128.307
 123.938
 118.417
 118.320
 114.841

133.520

9-43892

wdd

4.0474
4.0238

3.3479

1.9934

1.2033
1.1794
1.1558

0000' 0

XNK396200M 20/700 DMSO, filtr. gn. dicallite (XL)
 Acquired on Tuesday 2004-01-20 at 10:27:15

40.316
 40.037
 39.759
 39.480
 39.202
 38.924
 38.646

153.915
 146.158
 145.752
 137.883
 133.655
 131.953
 131.832
 129.202
 129.094
 128.330
 119.451
 116.884
 116.656
 101.525

XNK396071B 89/1400 CDC13 (XL)
Acquired on Monday 2003-09-29 at 13:07:08

7.7150
7.6856
7.5339
7.4708
7.4503
7.4455
7.3428
7.3181
7.3153
7.2968
7.2905
7.1881
7.1841
7.1771
7.1589
7.1558
7.1480
7.1273
7.0215
6.9921

4.1279
4.1042

2.0370
1.6885
1.2763
1.2526
1.2287

0.0107
0.0000
-0.0110

XNK396071B 89/1400 CDC13 (XL)
Acquired on Monday 2003-09-29 at 19:55:17

199.173

191.909
146.487
138.463
131.957
131.878
129.807
129.832
129.111
129.973
124.630
119.881

77.455
77.032
76.808

XNK396115B 23/700 DMSO, op1. fra 2003.10.31 (XL)
 Acquired on Monday 2003-11-10 at 11:44:06

0.0110
0.0000
0.0113

1.2007
1.1773
1.1532

1.9903

2.3191
2.4946
2.5005
2.5066
2.5127
2.5189

3.3355

3.9974
4.0666
4.0448
4.0212

6.9797
6.9871
7.0081
7.0156
7.0352
7.0426
7.1918
7.1943
7.2194
7.2232
7.2621
7.2757
7.3131
7.3300
7.3356
7.3415
7.3541
7.3569
7.3821
7.4004
7.4144

XNK396115B 23/700 DMSO, opl. fra 2003.10.31 (XL)
Acquired on Monday 2003-11-10 at 12:15:04

XNK396134E 50/700 DMSO (XL)
Acquired on Friday 2003-11-07 at 14:48:18

XNK396123M 66/700 DMSO (XL)
Acquired on Monday 2003-11-10 at 15:57:07

XNK396123M 66/700 DMSO (XL)
 Acquired on Monday 2003-11-10 at 16:28:00

150.234
 139.448
 139.285
 139.081
 138.776
 138.593
 137.128
 130.921
 130.485
 129.532
 128.784
 128.744
 128.521
 129.009
 124.122
 114.540
 111.554

40.337
 40.059
 39.751
 29.503
 29.225
 28.947
 28.659
 19.672
 17.551

XNK396129B 22/700 DMSO (XL)
Acquired on Friday 2003-11-21 at 09:02:40

8.4002
7.4113
7.4015
7.3942
7.3833
7.3197
7.2935
7.2850
7.2563
7.2520
7.2415
7.2021
7.1924
7.1700
7.1604
7.0936
7.0836
7.0652
7.0553
6.6860
6.6788
6.6321
6.6247
6.6035
6.5961

3.3335

2.5145
2.5085
2.5027
2.2959
2.1966

0.0000
0.0104

XNK396129B 22/700 DMSO (XL)
 Acquired on Saturday 2003-11-22 at 11:48:31

160.989
 157.787
 150.595
 139.398
 136.247
 136.161
 136.050
 134.500
 134.468
 133.811
 133.783
 130.913
 130.476
 128.605
 126.945
 126.829
 125.616
 125.520
 117.544
 117.251
 114.071
 113.574
 113.281
 111.023

195.069

40.300
 40.022
 39.744
 39.466
 39.188
 38.910
 38.632
 19.640
 17.622

4.294
 0.000

XNK396130B 10/700 DMSO (XL)
Acquired on Friday 2003-11-21 at 09:13:37

XNK396130B 10/700 DMSO (XL)
 Acquired on Saturday 2003-11-22 at 21:07:05

40.287
 40.009
 39.731
 39.453
 39.175
 38.897
 38.618
 36.158
 19.926
 0.000

164.835
 164.624
 161.604
 161.392
 146.027
 144.263
 144.085
 143.907
 138.395
 136.945
 132.992
 132.921
 131.456
 131.204
 131.128
 129.350
 129.300
 125.668
 117.442
 114.330
 101.060
 100.936
 100.813
 100.689
 96.821
 96.472
 96.123

195.449

231.894
 ppm

XNK396187G 30/700 DMSO (XL)
Acquired on Tuesday 2004-01-13 at 14:04:17

XNK396187G 30/700 DMSO (XL)
 Acquired on Wednesday 2004-01-14 at 04:56:52

0.000
 19.755
 38.556
 38.934
 39.212
 39.490
 39.768
 40.046
 40.324

104.665
 104.990
 105.340
 111.812
 112.046
 112.092
 114.815
 124.209
 124.256
 124.371
 124.417
 125.583
 126.224
 126.262
 126.353
 126.389
 127.002
 128.906
 130.741
 131.036
 133.346
 133.388
 136.533
 139.041
 149.105
 153.978
 154.146
 157.009
 157.162
 157.268
 157.435
 160.240
 160.392

195.291

XNK396130V 9/700 DMSO (XL)
 Acquired on Friday 2004-01-09 at 15:04:03

ppm

7.37388
 7.31180
 7.28576
 7.26397
 7.25582
 7.23507
 7.06736
 7.03774
 6.77931
 6.77190
 6.74279
 6.71574
 6.70831

2.88097
 2.51335
 2.50742
 2.50142
 2.49547
 2.48981
 2.27593

3.31066

0.00000

XNK396130V 9/700 DMSO (XL)
 Acquired on Sunday 2004-01-11 at 15:05:43

150.738
 147.621
 139.694
 136.010
 133.956
 130.813
 130.278
 128.886
 128.384
 125.488
 124.775
 123.902
 113.614
 113.234
 110.758

40.302
 40.008
 39.730
 39.452
 39.174
 38.896
 38.618
 19.556
 0.000

XNK396131R 1B/700 DMSO (XL)
 Acquired on Saturday 2003-11-22 at 01:36:17

8.4410
 7.4499
 7.4378
 7.4345
 7.4239
 7.4221
 7.4111
 7.3955
 7.3799
 7.3508
 7.3291
 7.3145
 7.2858
 7.2656
 7.2534
 7.2228
 7.1938
 6.8334
 6.8253
 6.7700
 6.7627
 6.7414
 6.7340

2.5193
 2.5134
 2.5075
 2.5014
 2.4955
 2.3766
 2.3128
 2.2455
 2.2273

3.3273

XNK396131R 18/700 DMSO (XL)
 Acquired on Saturday 2003-11-22 at 06:39:23

149.529
 144.612
 139.172
 137.799
 136.432
 134.604
 133.609
 133.565
 130.999
 130.651
 130.347
 128.798
 126.537
 125.568
 125.159
 124.600
 123.460
 121.769
 119.299
 118.379
 114.985
 111.845

209.423
 195.190

40.312
 40.034
 39.756
 39.478
 39.199
 38.922
 38.644
 19.719
 17.645
 0.000

XNK396132A 30/700 DMSO (XL)
Acquired on Friday 2003-11-21 at 14:07:53

8.32766
7.39947
7.39020
7.37098
7.30928
7.28330
7.26195
7.25204
7.24959
7.23982
7.23286
7.14259
7.11391
6.91002
6.90060
6.83120
6.82142
6.80255
6.59190
6.58476
6.55865
6.55124
6.53018
6.52273

XNK396132A 30/700 DMSO (XL)
 Acquired on Friday 2003-11-21 at 15:09:09

194.940
 157.046
 151.495
 139.645
 136.080
 135.492
 133.970
 130.836
 130.717
 130.308
 128.434
 127.198
 125.485
 124.777
 116.104
 113.500
 112.143
 110.581

55.078
 41.101
 40.300
 40.022
 39.744
 39.466
 39.188
 38.910
 38.632
 19.576
 17.751
 0.000

PN5d
 XNK396191C 49/700 GDC13 (XL)
 Acquired on Tuesday 2004-01-13 at 15:08:49

XNK396135B 18/700 DMSO (XL)
Acquired on Friday 2003-11-21 at 22:24:21

XNK396135B 18/700 DMSO (XL)
 Acquired on Saturday 2003-11-22 at 00:26:08

148.996
 139.299
 137.684
 136.300
 133.697
 133.634
 132.053
 130.938
 130.549
 129.820
 128.680
 126.196
 125.548
 120.709
 114.787
 111.737

40.290
 40.012
 39.734
 39.456
 39.178
 38.900
 38.622
 20.329
 19.671

0.000

XNK396131A 25/700 DMSO (XL)
 Acquired on Friday 2003-11-21 at 08:05:23

ppm
 8.5309
 7.6965
 7.6923
 7.6094
 7.5815
 7.5754
 7.4541
 7.4524
 7.4311
 7.4031
 7.3904
 7.3617
 7.3314
 7.2965
 7.2864
 7.2786
 7.1540
 7.1470
 7.0915
 7.0844
 7.0631
 7.0559

3.3406
 2.5224
 2.5167
 2.5108
 2.5050
 2.4990
 2.3924
 2.3626
 2.2840
 1.9929
 1.2035
 1.1796
 1.1560
 0.0000

XNK396131A 25/700 DMSO (XL)
 Acquired on Friday 2003-11-21 at 08:36:21

196.342

147.750
 145.004
 139.364
 137.830
 135.501
 133.786
 133.752
 133.098
 131.994
 131.851
 130.893
 130.225
 130.064
 126.562
 120.091
 119.903
 118.950
 115.642
 104.794

41.204
 40.925
 40.646
 40.369
 40.091
 39.813
 39.535

23.134
 20.828
 18.390

XNK1013022A 18/700 DMSO (XL)
Acquired on Monday 2004-01-26 at 10:08:21

XNK1013022A 18/700 DMSO (XL)
 Acquired on Monday 2004-01-26 at 10:39:21

19.910
 38.542
 38.920
 39.198
 39.476
 39.754
 40.032
 40.308

112.253
 113.886
 115.805
 116.980
 124.257
 125.670
 129.142
 129.308
 130.794
 131.094
 131.198
 133.091
 136.942
 138.472
 142.473
 146.371
 148.019

155.409

XNK396117B 15/700 CDC13, filtr. gn. dicarbonate (XL)
Acquired on Monday 2004-01-26 at 10:02:47

XNK396117B 15/700 CDC13, filtr. gn. dicalite (XL)
 Acquired on Monday 2004-01-26 at 11:34:23

XNK396134C 52/700 DMSO (XL)
Acquired on Friday 2003-11-07 at 15:32:05

XNK396134C 52/700 DMSO (XL)
 Acquired on Saturday 2003-11-08 at 01:03:43

XNK396133B 13/700 DMSO (XL)
Acquired on Tuesday 2004-01-20 at 09:27:06

VNK396182B 13.700 DMSO (M)
 *** Curved Data Parameters ***
 NAME : ddr43176
 EXPNO : 1
 PROCNO : 1

151.3147
 142.5487
 138.5930
 136.8046
 134.9986
 132.8665
 132.7608
 131.1310
 130.9636
 130.4879
 129.1487
 127.9506
 126.3119
 125.6071
 118.0217
 115.3787

-40.2999
 -40.0180
 -39.7449
 -39.4630
 -39.1899
 -38.9079
 -38.6348
 -20.4246
 -19.8519

0.0030

XNK396115C 26/700 CDC13, opl. fra 2003.10.31 (XL)
 Acquired on Tuesday 2003-11-11 at 05:05:17

197.680
 195.610

150.401
 146.994
 144.380
 140.252
 137.890
 137.354
 136.959
 134.275
 132.534
 132.257
 131.466
 131.375
 131.313
 130.329
 129.749
 129.243
 129.027
 126.842
 125.726
 125.349
 122.813
 120.675
 120.577
 118.361
 112.703
 106.898
 97.984

59.656

40.288
 40.010
 39.732
 39.454
 39.176
 38.898
 38.619

20.656
 20.116
 19.039
 13.992

0.000

XNK396134D 15/700 DMSO (XL)
Acquired on Friday 2003-11-07 at 15:26:30

XNK396135C 20/700 DMSO (XL)
 Acquired on Monday 2004-01-12 at 11:41:08

XNK396135C 20/700 DMSO (XL)
 Acquired on Monday 2004-01-12 at 20:18:45

0.000
 14.003
 19.037
 20.097
 20.362
 38.655
 38.933
 39.211
 39.489
 39.767
 40.045
 40.323
 59.663

97.573
 106.611
 112.368
 113.252
 118.272
 120.423
 120.558
 121.100
 125.339
 125.717
 126.828
 128.977
 129.212
 129.697
 130.318
 131.230
 131.365
 131.437
 131.992
 132.165
 132.297
 132.608
 134.259
 136.976
 137.325
 137.548
 137.980
 140.332
 144.457
 147.023
 150.920

195.605
 197.584

	XNK396135D	10/700	DMSO	(XL)
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100				

Acquired on Monday 2004-01-12 at 11:45:40

S73

XNK396135D 10/700 DMSO (XL)
 Acquired on Monday 2004-01-12 at 23:25:52

0.000
 19.051
 19.116
 20.058
 20.305
 38.635
 38.913
 39.191
 39.469
 39.747
 40.025
 40.303

99.271
 103.790
 106.977
 113.326
 115.864
 117.238
 120.745
 120.896
 125.303
 125.413
 125.669
 127.129
 129.616
 129.724
 130.488
 131.327
 131.414
 132.002
 132.230
 132.716
 134.371
 134.615
 137.322
 137.485
 137.862
 139.804
 140.201
 144.411
 146.206
 146.246
 147.269
 150.553

195.523
 197.504
 198.390

XNK396161D 38/700 CDC13 (XL)
Acquired on Monday 2003-12-08 at 11:59:23

XNK396161D 38/700 CDC13 (XL)
Acquired on Monday 2003-12-08 at 11:59:23

XNK396161D 38/700 CDC13 (XL)
Acquired on Monday 2003-12-08 at 14:18:58

19.049

77.444
77.822
77.820
76.897
69.507

139.528
139.422
139.948
139.946
132.088
130.636
130.192
129.790
128.040
126.276
126.222
121.689

XNK396163 25/700 CDCl3 (XL)
Acquired on Monday 2003-12-08 at 11:36:12

XNK396163 25/700 CDCl3 (XL)
Acquired on Monday 2003-12-08 at 12:07:15