

Supporting Information

# 4-Arylthieno[2,3-*b*]pyridine-2-carboxamides are a new class of antiplasmodial agents

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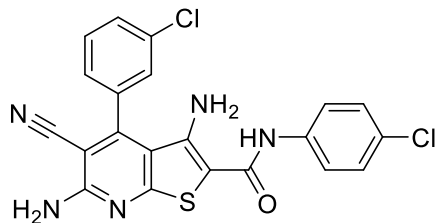
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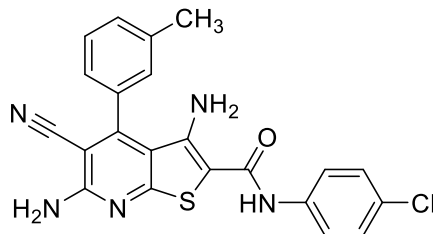
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Figure S1:

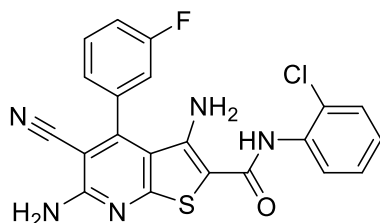
3,6-Diamino-4-(3-chlorophenyl)-*N*-(4-chlorophenyl)-5-cyanothieno[2,3-*b*]pyridine-2-carboxamide **9a** (KuSaSch018)



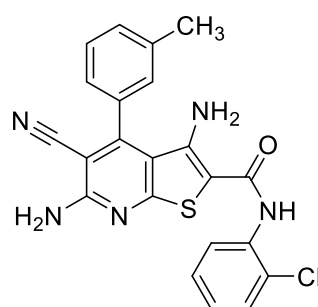
3,6-Diamino-*N*-(4-chlorophenyl)-5-cyano-4-(3-methylphenyl)thieno[2,3-*b*]pyridine-2-carboxamide **9e** (KuSaSch031)



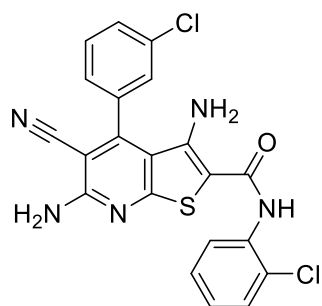
3,6-Diamino-*N*-(2-chlorophenyl)-5-cyano-4-(3-fluorophenyl)thieno[2,3-*b*]pyridine-2-carboxamide **9b** (KuSaSch022)



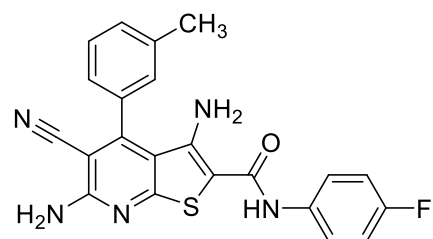
3,6-Diamino-*N*-(2-chlorophenyl)-5-cyano-4-(3-methylphenyl)thieno[2,3-*b*]pyridine-2-carboxamide **9f** (KuSaSch032)



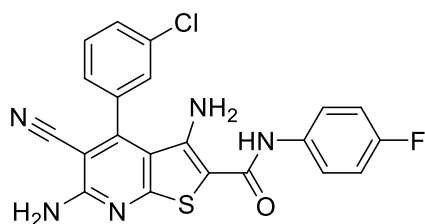
3,6-Diamino-*N*-(2-chlorophenyl)-4-(3-chlorophenyl)-5-cyanothieno[2,3-*b*]pyridine-2-carboxamide **9c** (KuSaSch027)



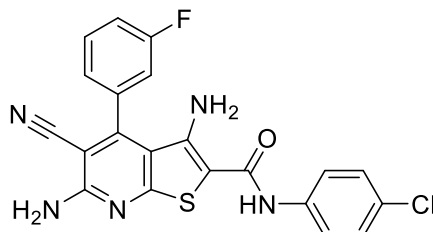
3,6-Diamino-5-cyano-*N*-(4-fluorophenyl)-4-(3-methylphenyl)thieno[2,3-*b*]pyridine-2-carboxamide **9g** (KuSaSch033)



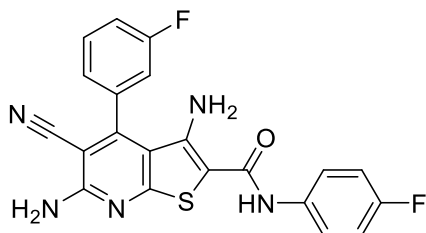
3,6-Diamino-4-(3-chlorophenyl)-5-cyano-*N*-(4-fluorophenyl)thieno[2,3-*b*]pyridine-2-carboxamide **9d** (KuSaSch028)



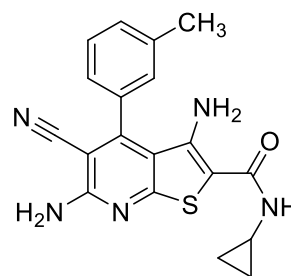
3,6-Diamino-*N*-(4-chlorophenyl)-5-cyano-4-(3-fluorophenyl)thieno[2,3-*b*]pyridine-2-carboxamide **9h** (KuSaSch037)



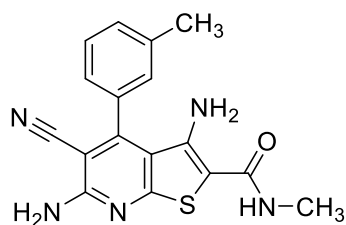
3,6-Diamino-5-cyano-4-(3-fluorophenyl)-*N*-(4-fluorophenyl)thieno[2,3-*b*]pyridine-2-carboxamide **9i** (KuSaSch038)



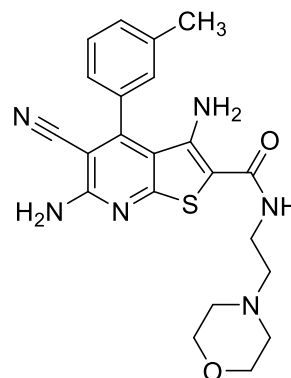
3,6-Diamino-5-cyano-*N*-cyclopropyl-4-(3-methylphenyl)thieno[2,3-*b*]pyridine-2-carboxamide **9m** (KuSaSch134)



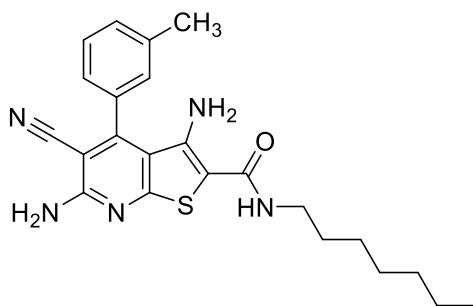
3,6-Diamino-5-cyano-*N*-methyl-4-(3-methylphenyl)thieno[2,3-*b*]pyridine-2-carboxamide **9j** (KuSaSch127)



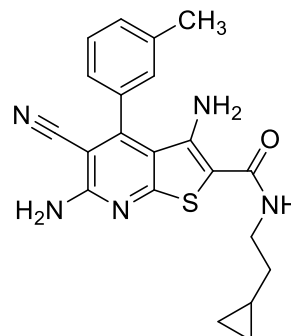
3,6-Diamino-5-cyano-*N*-(2-morpholinoethyl)-4-(3-methylphenyl)thieno[2,3-*b*]pyridine-2-carboxamide **9n** (KuSaSch135)



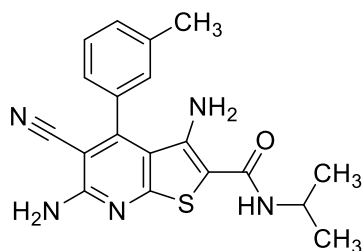
3,6-Diamino-5-cyano-*N*-heptyl-4-(3-methylphenyl)thieno[2,3-*b*]pyridine-2-carboxamide **9k** (KuSaSch129)



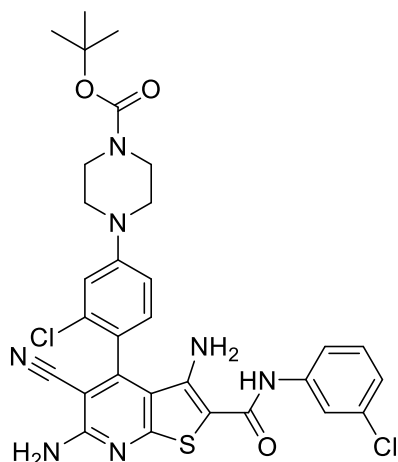
3,6-Diamino-5-cyano-*N*-(2-cyclopropylethyl)-4-(3-methylphenyl)thieno[2,3-*b*]pyridine-2-carboxamide **9o** (KuSaSch137)



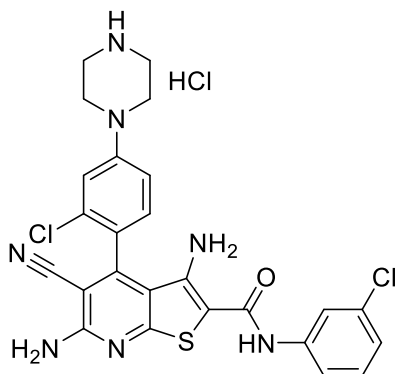
3,6-Diamino-5-cyano-*N*-isopropyl-4-(3-methylphenyl)thieno[2,3-*b*]pyridine-2-carboxamide **9l** (KuSaSch131)



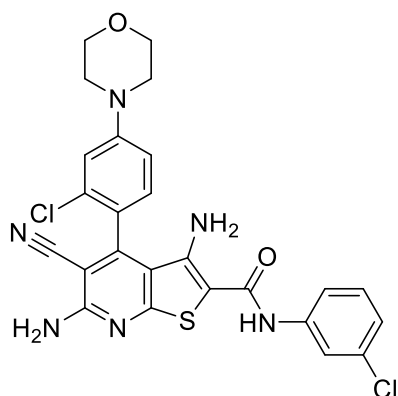
*tert*-Butyl 4-(3-chloro-4-[3,6-diamino-2-[(3-chlorophenyl)carbamoyl]-5-cyanothieno[2,3-*b*]pyridin-4-yl]phenyl)piperazine-1-carboxylate **9p** (KuSaSch041)



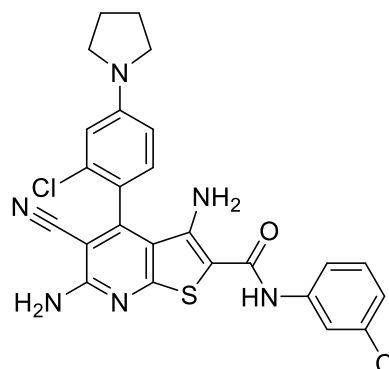
3,6-Diamino-4-[2-chloro-4-(piperazin-1-yl)phenyl]-*N*-(3-chlorophenyl)-5-cyanothieno[2,3-*b*]pyridine-2-carboxamide hydrochloride **9q** (KuSaSch043)



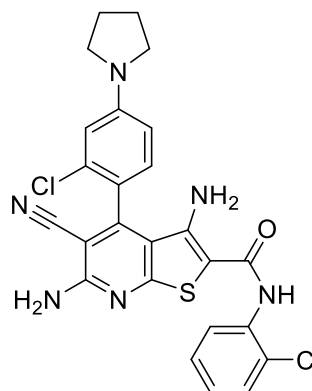
3,6-Diamino-4-(2-chloro-4-morpholinophenyl)-*N*-(3-chlorophenyl)-5-cyanothieno[2,3-*b*]pyridine-2-carboxamide **9r** (KuSaSch050)



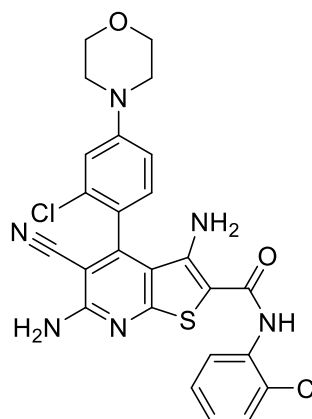
3,6-Diamino-4-[2-chloro-4-(pyrrolidin-1-yl)phenyl]-*N*-(3-chlorophenyl)-5-cyanothieno[2,3-*b*]pyridine-2-carboxamide **9s** (KuSaSch051)



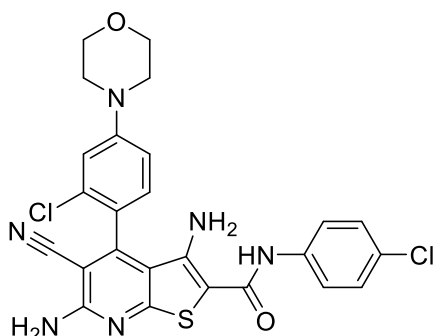
3,6-Diamino-4-[2-chloro-4-(pyrrolidin-1-yl)phenyl]-*N*-(2-chlorophenyl)-5-cyanothieno[2,3-*b*]pyridine-2-carboxamide **9t** (KuSaSch055)



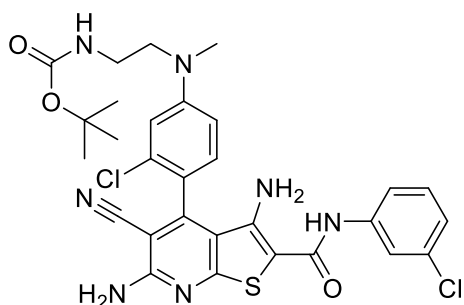
3,6-Diamino-4-(2-chloro-4-morpholinophenyl)-*N*-(2-chlorophenyl)-5-cyanothieno[2,3-*b*]pyridine-2-carboxamide **9u** (KuSaSch056)



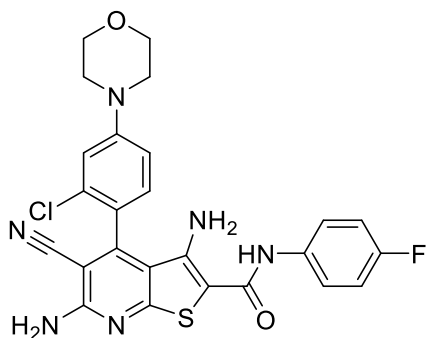
3,6-Diamino-4-(2-chloro-4-morpholinophenyl)-5-cyanothieno[2,3-*b*]pyridine-2-carboxamide **9v**  
(KuSaSch057)



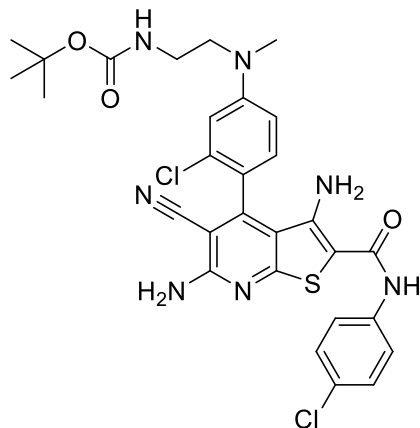
*tert*-Butyl {2-[(3-chloro-4-(3,6-diamino-2-[(3-chlorophenyl)carbamoyl]-5-cyanothieno[2,3-*b*]pyridin-4-yl)phenyl)(methylamino)ethyl]carbamate **9w**  
(KuSaSch058)



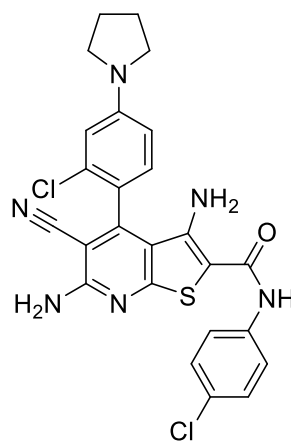
3,6-Diamino-4-(2-chloro-4-morpholinophenyl)-5-cyano-*N*-(4-fluorophenyl)thieno[2,3-*b*]pyridine-2-carboxamide **9x** (KuSaSch059)



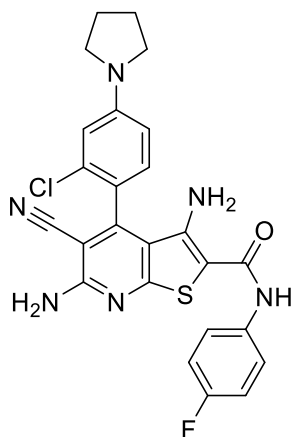
*tert*-Butyl {2-[(3-chloro-4-(3,6-diamino-2-[(4-chlorophenyl)carbamoyl]-5-cyanothieno[2,3-*b*]pyridin-4-yl)phenyl)(methylamino)ethyl]carbamate **9y**  
(KuSaSch060)



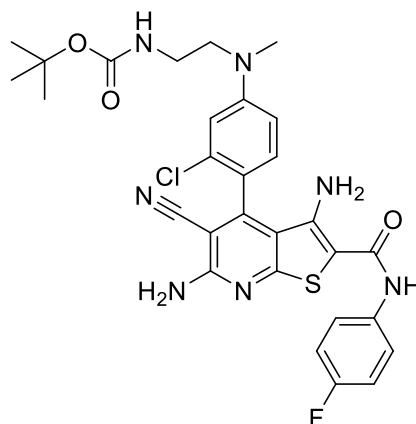
3,6-Diamino-4-[2-chloro-4-(pyrrolidin-1-yl)phenyl]-*N*-(4-chlorophenyl)-5-cyanothieno[2,3-*b*]pyridine-2-carboxamide **9z** (KuSaSch063)



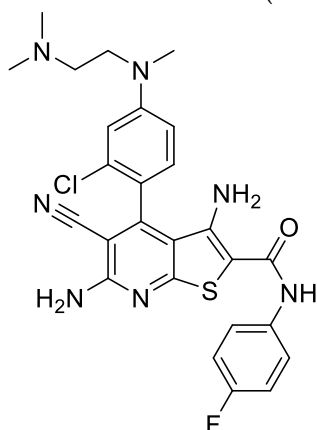
3,6-Diamino-4-[2-chloro-4-(pyrrolidin-1-yl)phenyl]-5-cyano-*N*-(4-fluorophenyl)thieno[2,3-*b*]pyridine-2-carboxamide **9aa** (KuSaSch064)



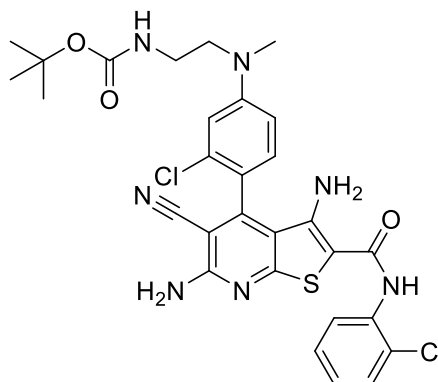
*tert*-Butyl {2-[(3-chloro-4-{3,6-diamino-5-cyano-2-[(4-fluorophenyl)carbamoyl]thieno[2,3-*b*]pyridin-4-yl]phenyl)(methyl)amino]ethyl}carbamate **9ac** (KuSaSch073)



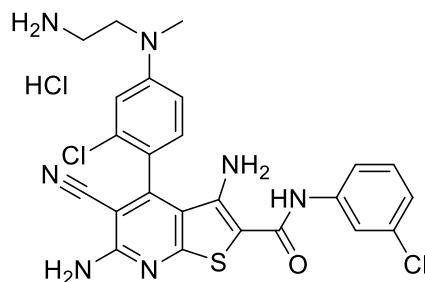
3,6-Diamino-4-(2-chloro-4-[(2-(dimethylamino)ethyl)(methyl)amino]phenyl)-5-cyano-*N*-(4-fluoro-phenyl)thieno[2,3-*b*]pyridine-2-carboxamide **9ab** (KuSaSch067)



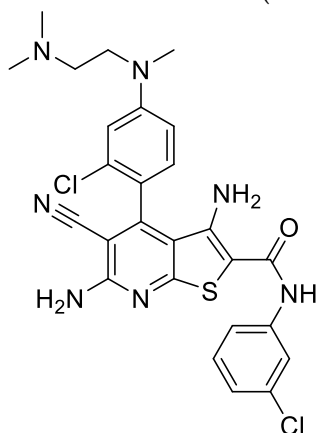
*tert*-Butyl {2-[(3-chloro-4-{3,6-diamino-2-[(2-chlorophenyl)carbamoyl]-5-cyanothieno[2,3-*b*]pyridin-4-yl]phenyl)(methyl)amino]ethyl}carbamate **9ad** (KuSaSch074)



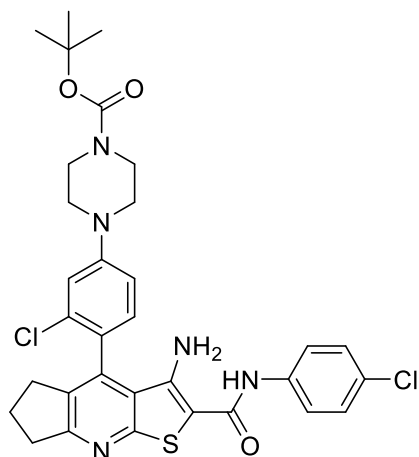
3,6-Diamino-4-[4-[(2-aminoethyl)(methyl)amino]-2-chlorophenyl]-*N*-(3-chlorophenyl)-5-cyano-thieno[2,3-*b*]pyridine-2-carboxamide hydrochloride **9ae** (KuSaSch075)



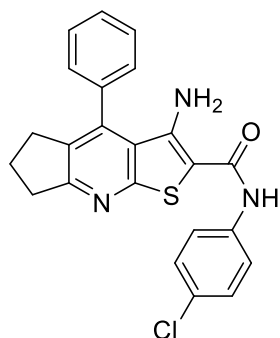
3,6-Diamino-4-(2-chloro-4-[[2-(dimethylamino)ethyl](methyl)amino]phenyl)-N-(3-chlorophenyl)-5-cyanothieno[2,3-*b*]pyridine-2-carboxamide **9af** (KuSaSch090)



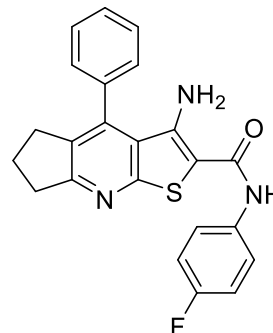
*tert*-Butyl 4-(4-{3-amino-2-[(4-chlorophenyl)carbamoyl]-6,7-dihydro-5*H*-cyclopenta[*b*]thieno[3,2-*e*]pyridin-4-yl]-3-chlorophenyl)piperazine-1-carboxylate **17a** (KuSaSch095)



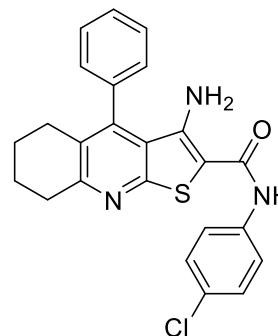
3-Amino-*N*-(4-chlorophenyl)-4-phenyl-6,7-dihydro-5*H*-cyclopenta[*b*]thieno[3,2-*e*]pyridine-2-carboxamide **17b** (KuSaSch100)



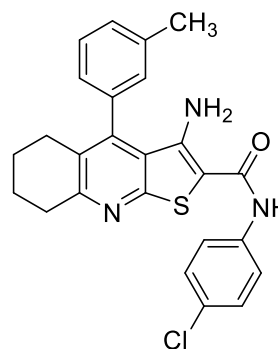
3-Amino-*N*-(4-fluorophenyl)-4-phenyl-6,7-dihydro-5*H*-cyclopenta[*b*]thieno[3,2-*e*]pyridine-2-carboxamide **17c** (KuSaSch101)



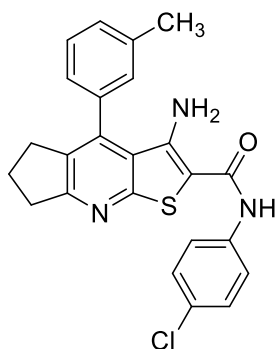
3-Amino-*N*-(4-chlorophenyl)-4-phenyl-5,6,7,8-tetrahydrothieno[2,3-*b*]quinoline-2-carboxamide **17d** (KuSaSch105)



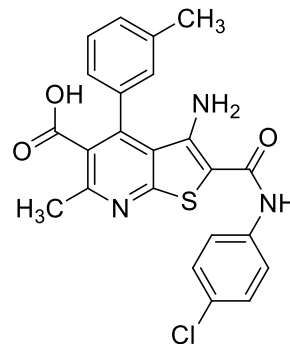
3-Amino-*N*-(4-chlorophenyl)-4-(3-methylphenyl)-5,6,7,8-tetrahydrothieno[2,3-*b*]quinoline-2-carboxamide **17e** (KuSaSch107)



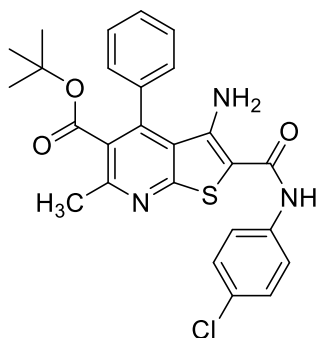
3-Amino-*N*-(4-chlorophenyl)-4-(3-methylphenyl)-6,7-dihydro-5*H*-cyclopenta[*b*]thieno[3,2-*e*]pyridine-2-carboxamide **17f** (KuSaSch110)



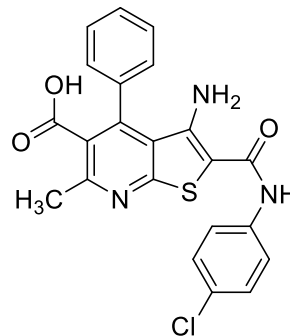
3-Amino-2-[(4-chlorophenyl)carbamoyl]-6-methyl-4-(3-methylphenyl)thieno[2,3-*b*]pyridine-5-carboxylic acid **17i** (KuSaSch114)



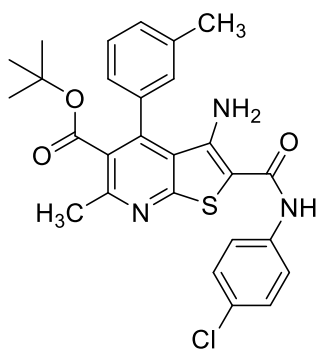
*tert*-Butyl 3-amino-2-[(4-chlorophenyl)carbamoyl]-6-methyl-4-phenylthieno[2,3-*b*]pyridine-5-carboxylate **17g** (KuSaSch111)



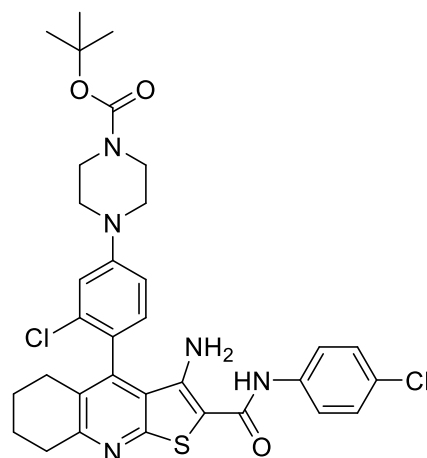
3-Amino-2-[(4-chlorophenyl)carbamoyl]-6-methyl-4-phenylthieno[2,3-*b*]pyridine-5-carboxylic acid **17j** (KuSaSch115)



*tert*-Butyl 3-amino-2-[(4-chlorophenyl)carbamoyl]-6-methyl-4-(3-methylphenyl)thieno[2,3-*b*]pyridine-5-carboxylate **17h** (KuSaSch112)



*tert*-Butyl 4-(4-[3-amino-2-[(4-chlorophenyl)carbamoyl]-5,6,7,8-tetrahydrothieno[2,3-*b*]quinolin-4-yl]-3-chlorophenyl)piperazine-1-carboxylate **17k** (KuSaSch118)





*tert*-Butyl 4-(4-[3-amino-2-[(4-chlorophenyl)carbamoyl]-6-methylthieno[2,3-*b*]pyridin-4-yl]-3-chlorophenyl)piperazine-1-carboxylate **171** (KuSaSch122)

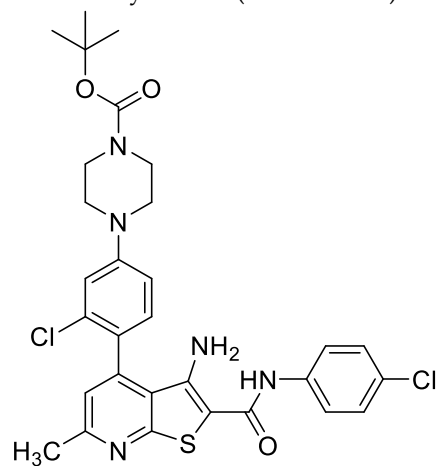


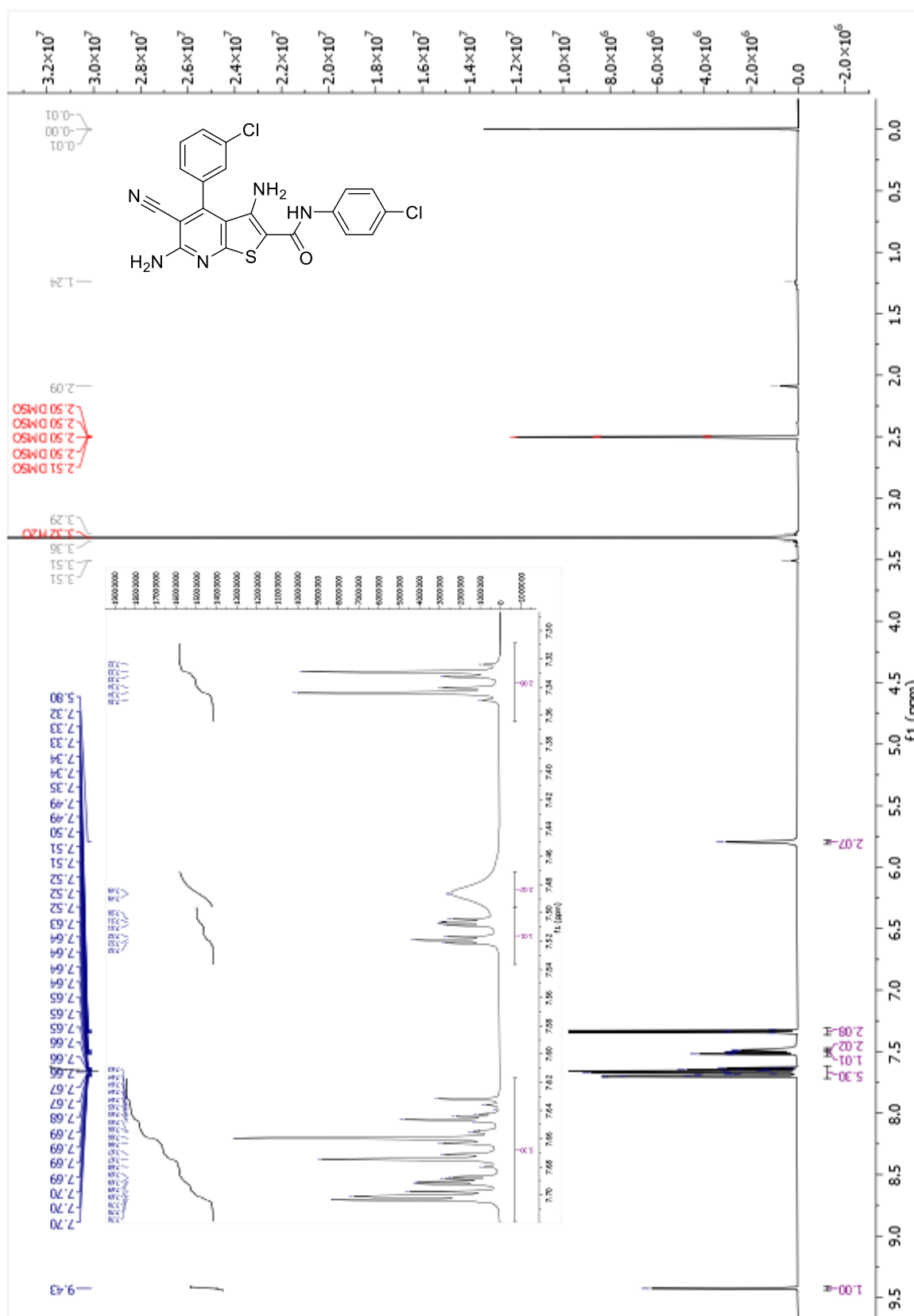
Figure S2:  $^1\text{H-NMR}$  spectrum of **9a** (KuSaSch018).

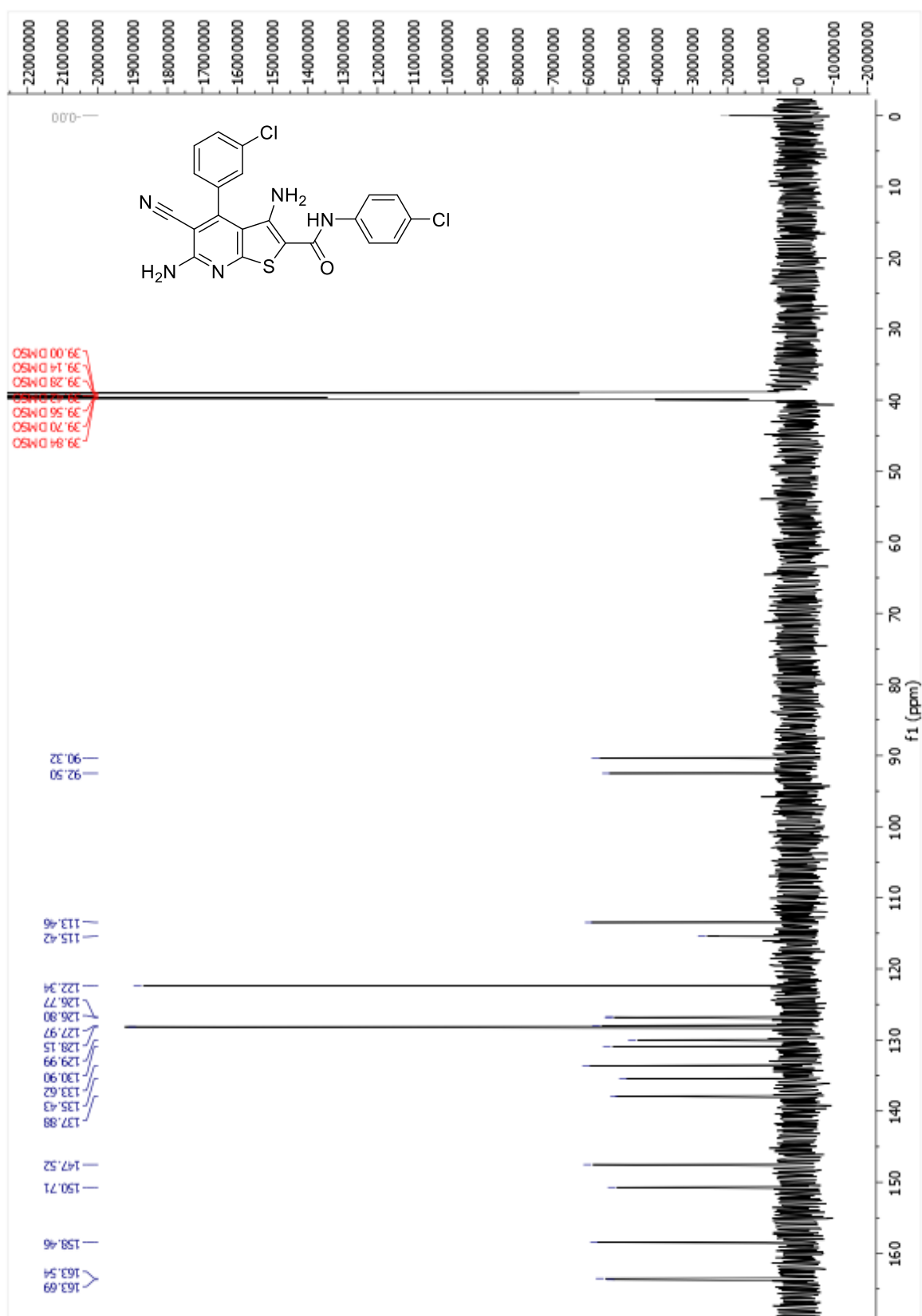
Figure S3:  $^{13}\text{C}$ -NMR spectrum of **9a** (KuSaSch018).

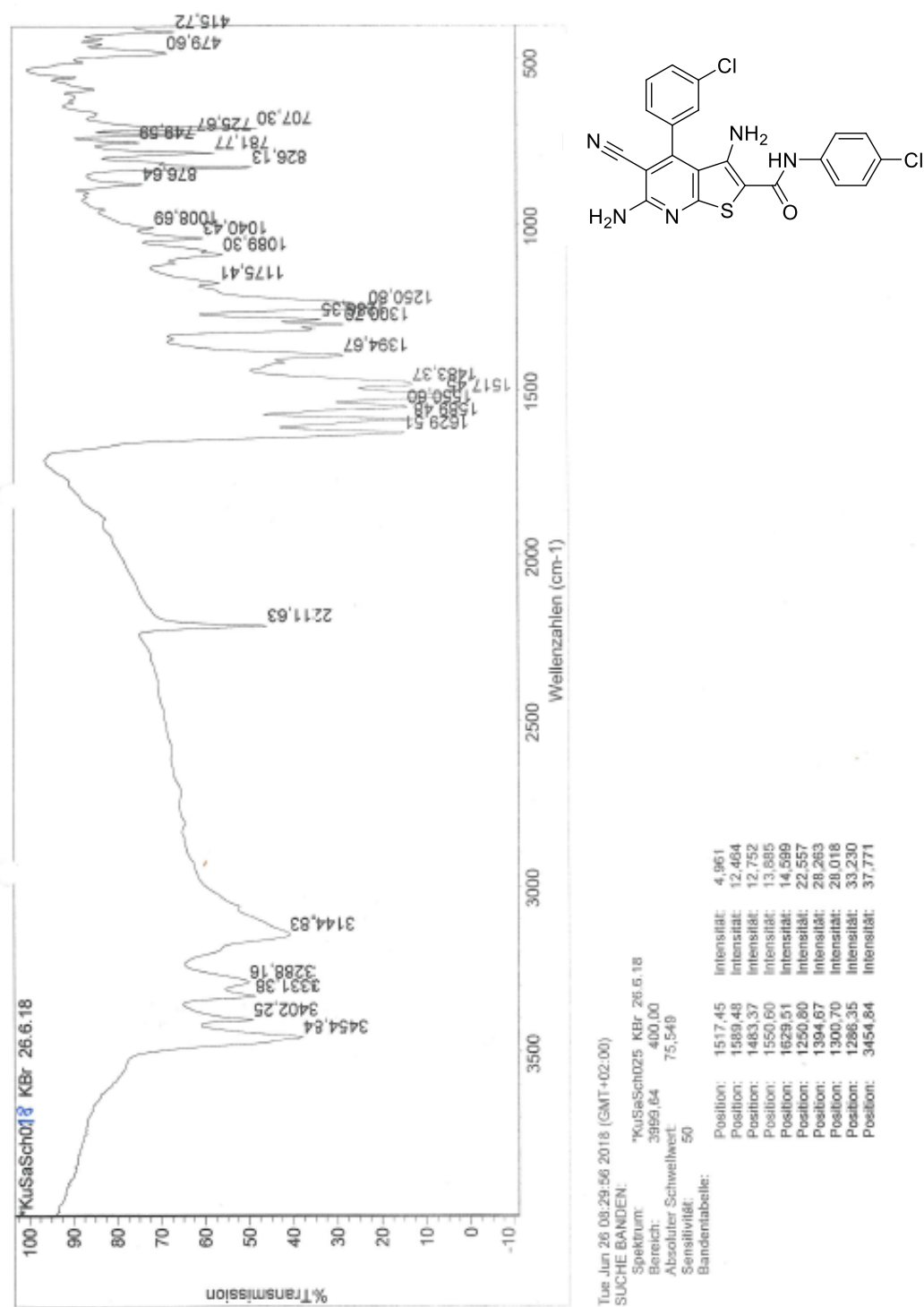
Figure S4: IR spectrum of **9a** (KuSaSch018).

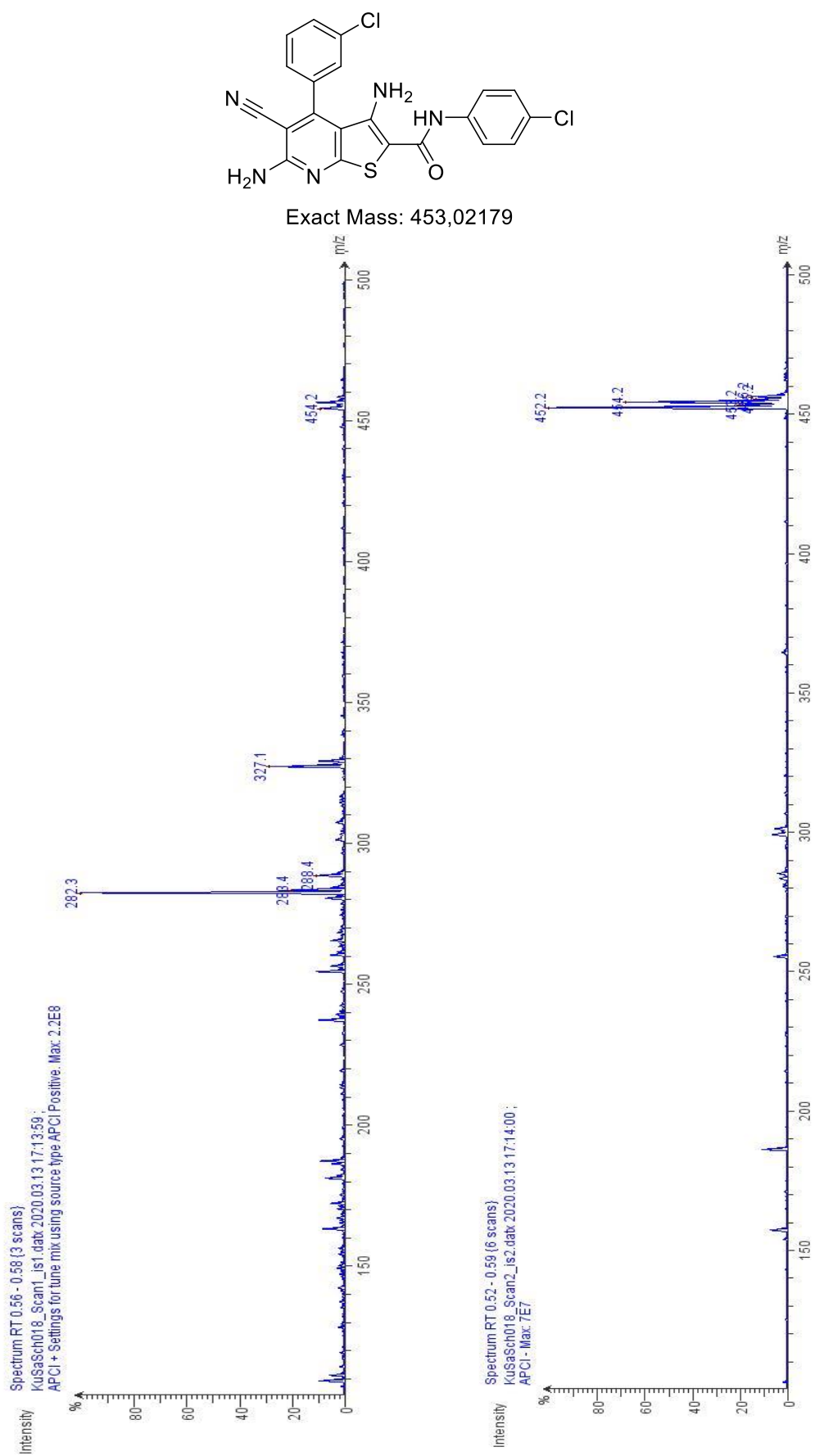
Figure S5: APCI-MS spectrum of **9a** (KuSaSch018).

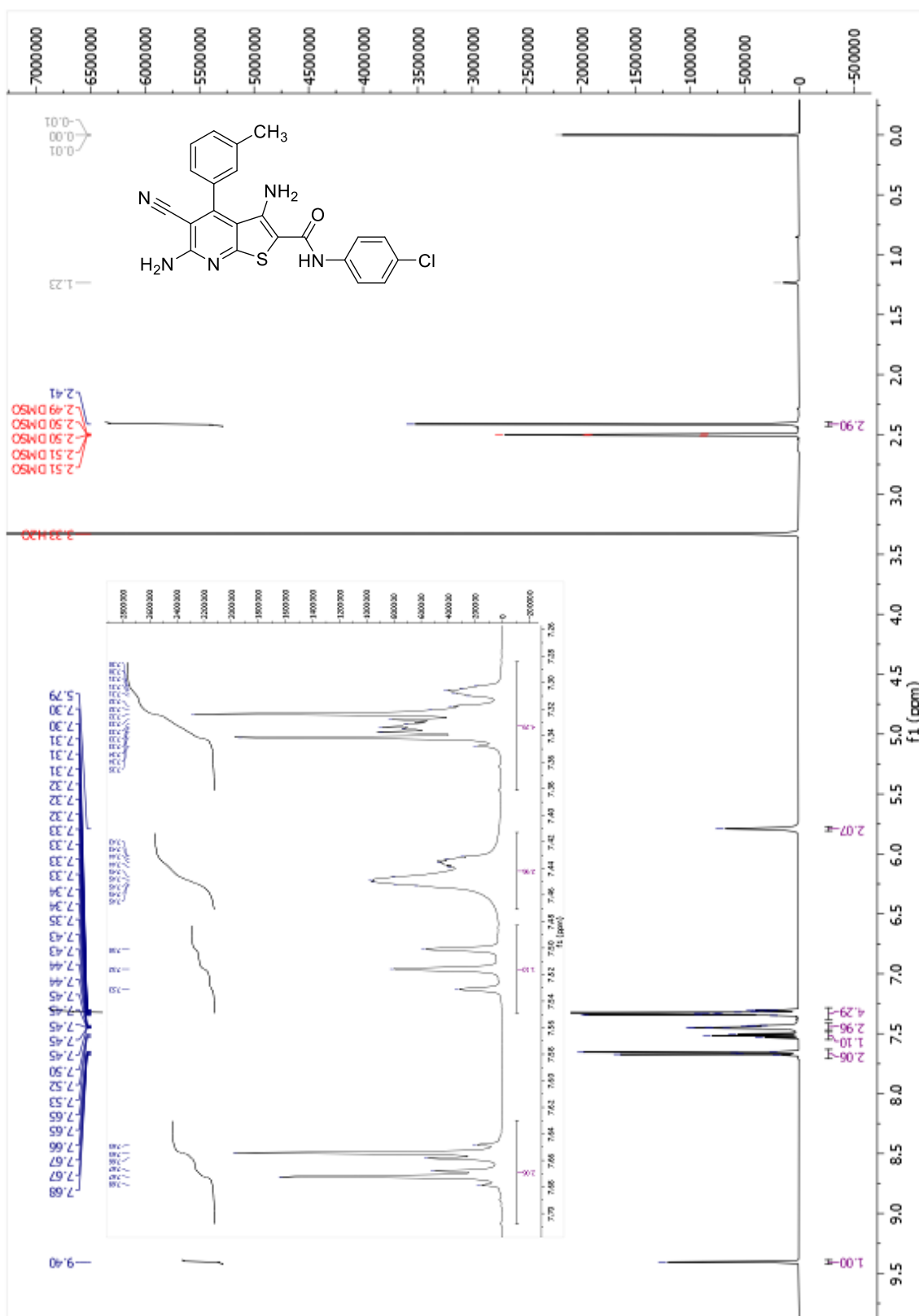
Figure S6:  $^1\text{H-NMR}$  spectrum of **9e** (KuSaSch031).

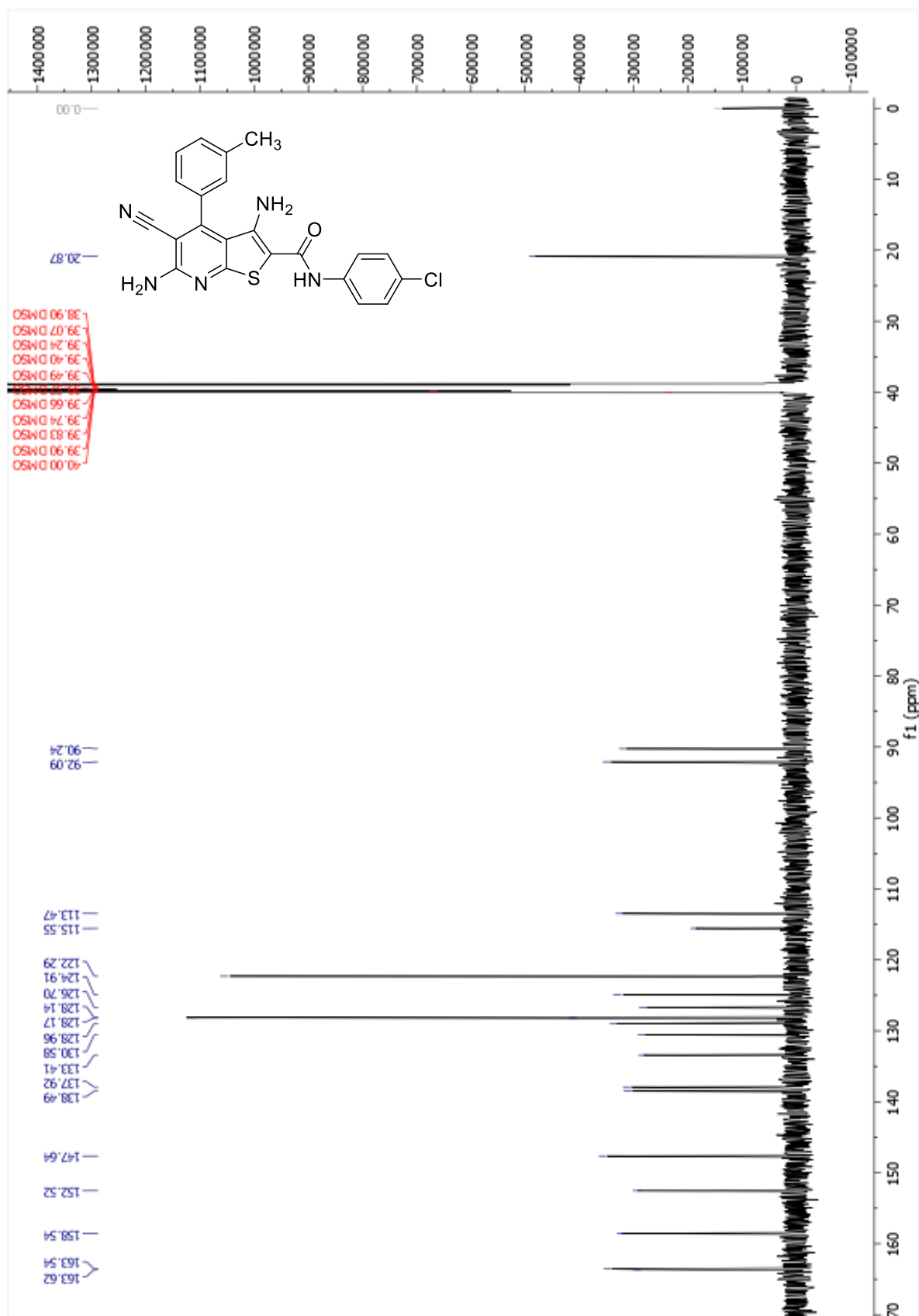
Figure S7:  $^{13}\text{C}$ -NMR spectrum of **9e** (KuSaSch031).

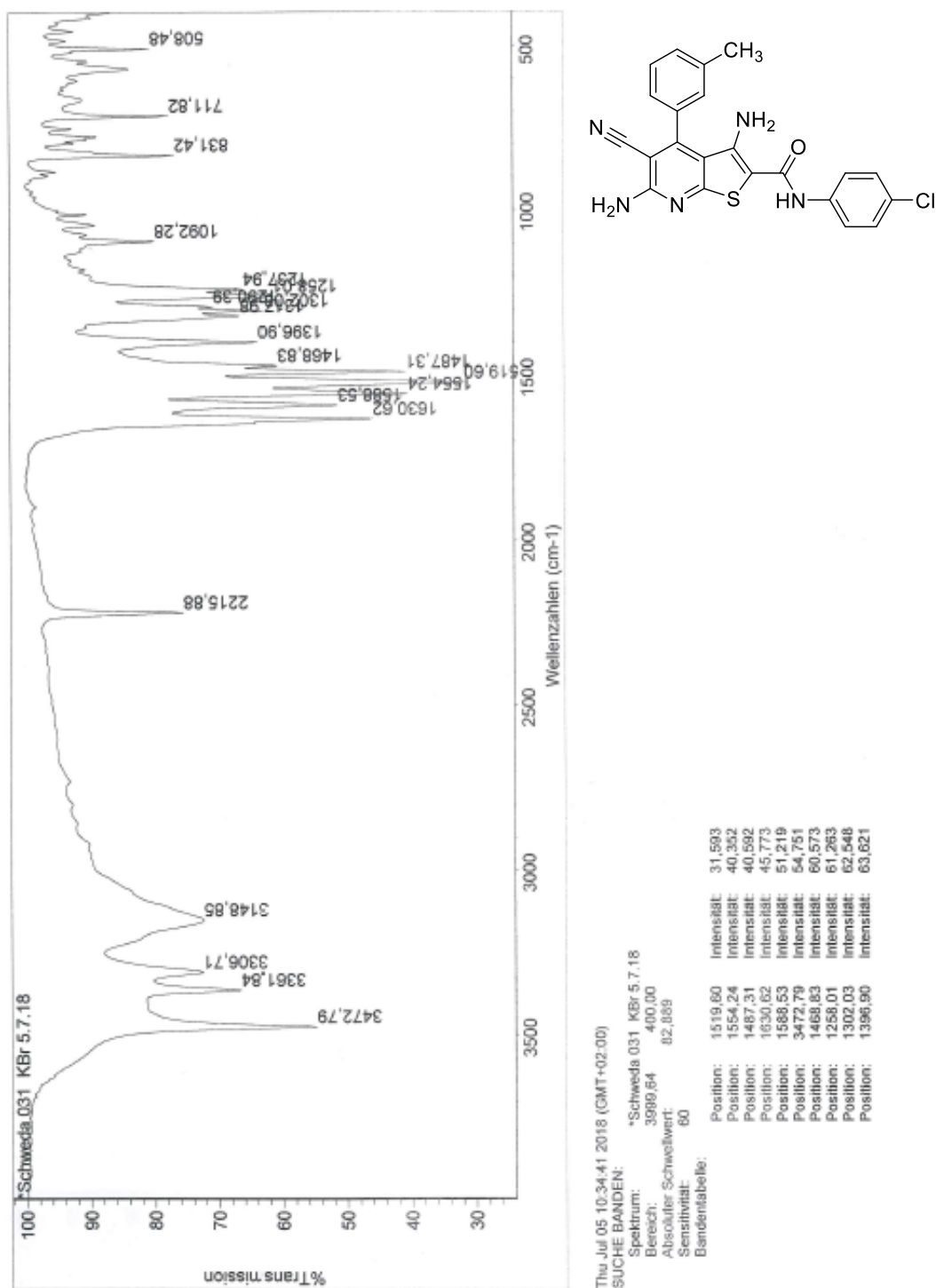
Figure S8: IR spectrum of **9e** (KuSaSch031).



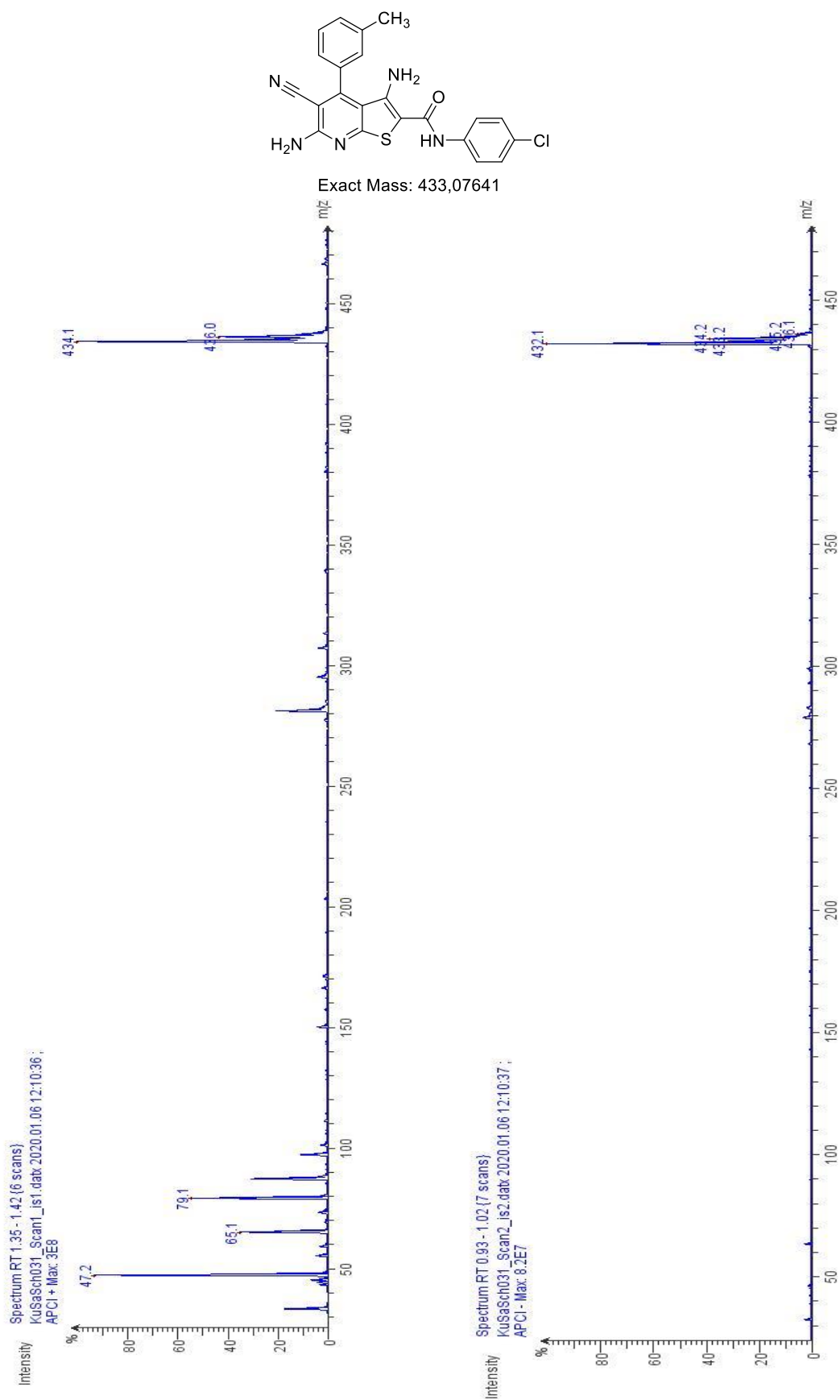
Figure S9: APCI-MS spectrum of **9e** (KuSaSch031).

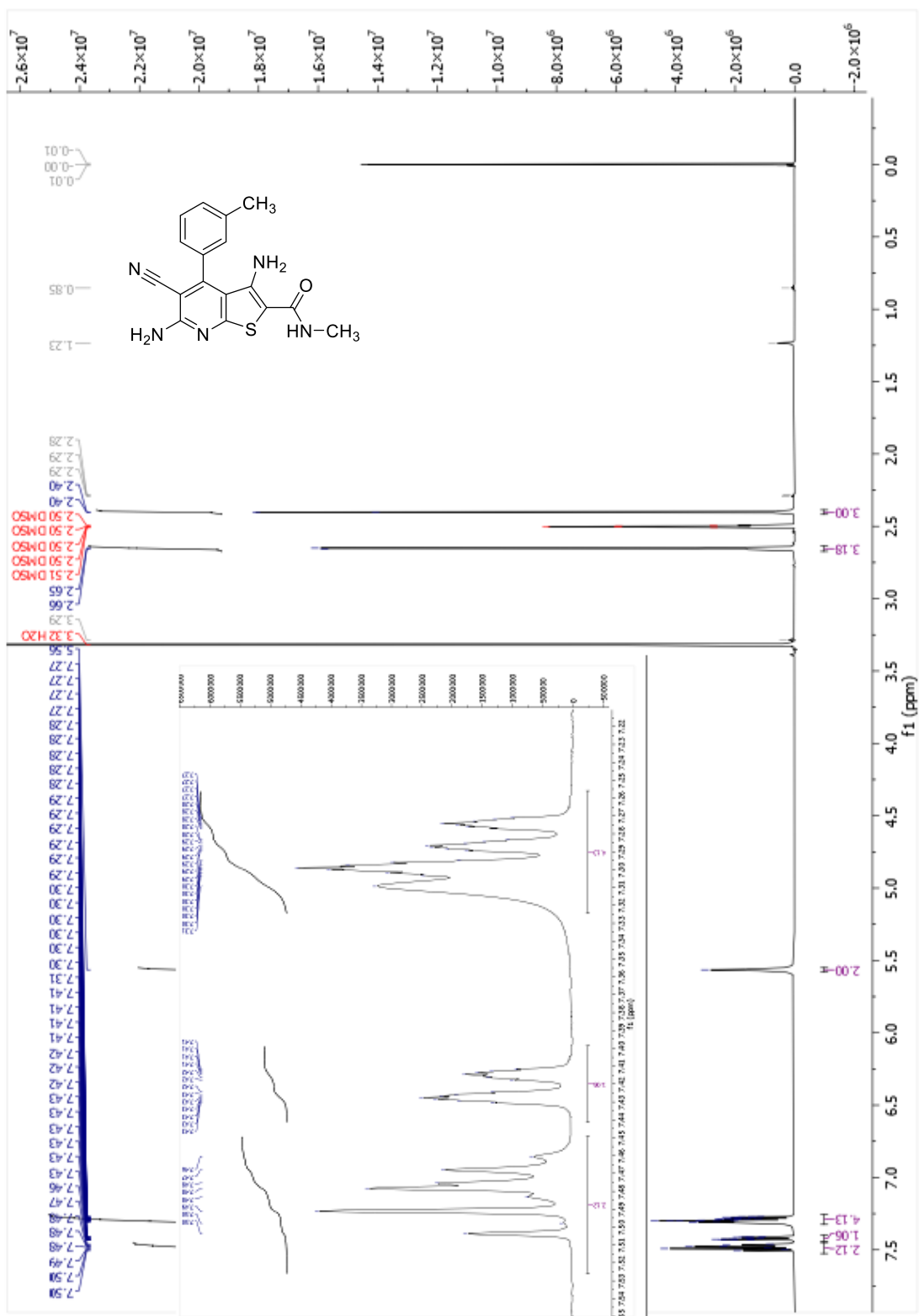
Figure S10:  $^1\text{H-NMR}$  spectrum of **9j** (KuSaSch127).

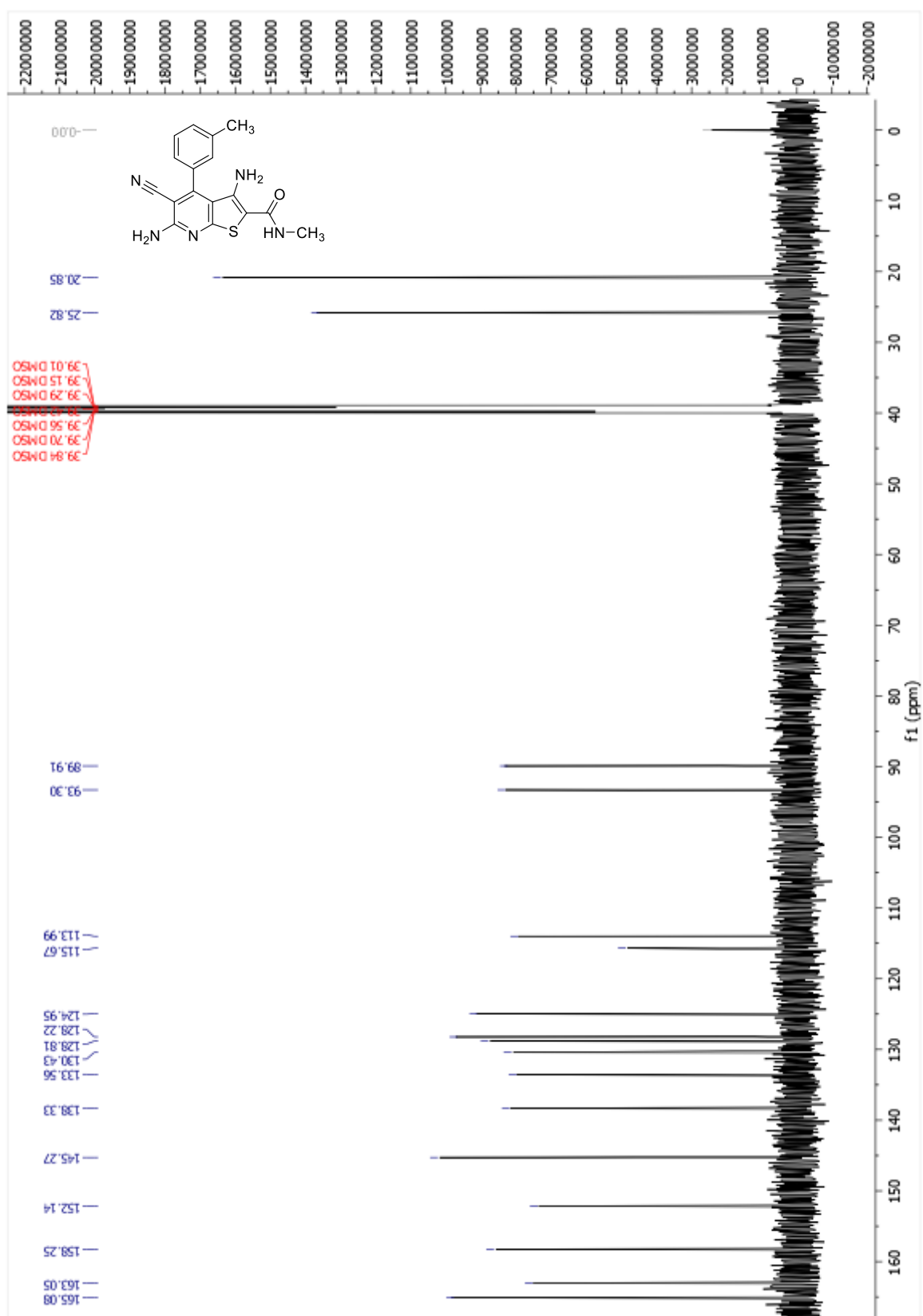
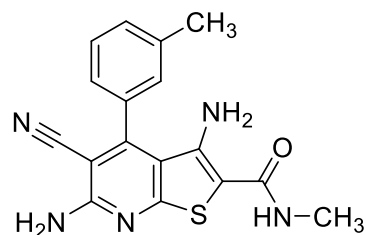
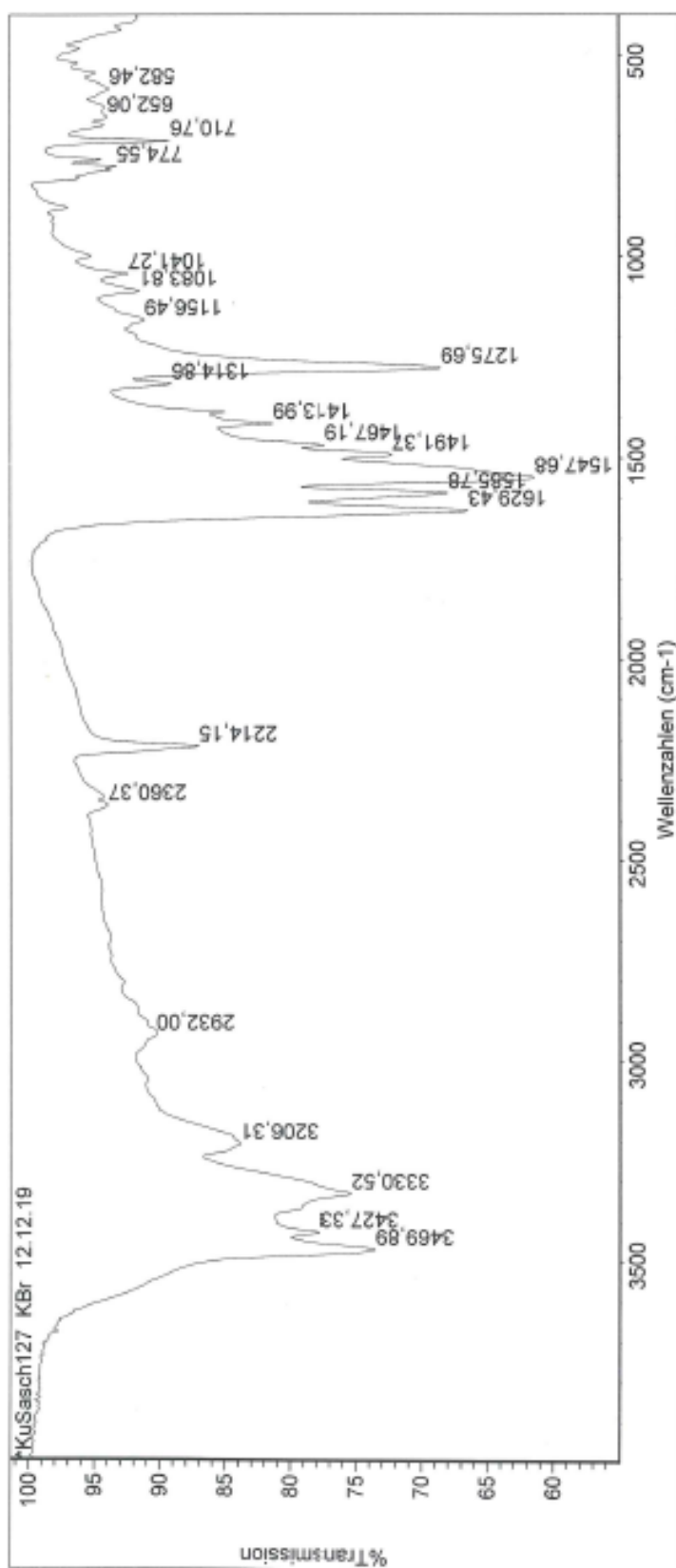
Figure S11:  $^{13}\text{C}$ -NMR spectrum of **9j** (KuSaSch127).

Figure S12: IR spectrum of 9j (KuSaSch127).



Thu Dez 12 11:18:13 2019 (GMT+01:00)

SUCHE BANDEN:

Spektrum: \*KuSaSch127 KBr 12.12.19

Bereich: 3999,64 400,00

Absoluter Schwellwert: 94,207

Sensitivität: 50

Bandentabelle:

Position:	Intensität:
1547,68	61,382
1629,43	66,423
1585,78	67,954
1275,69	68,481
1491,37	72,201
3469,89	73,509
3330,52	75,346

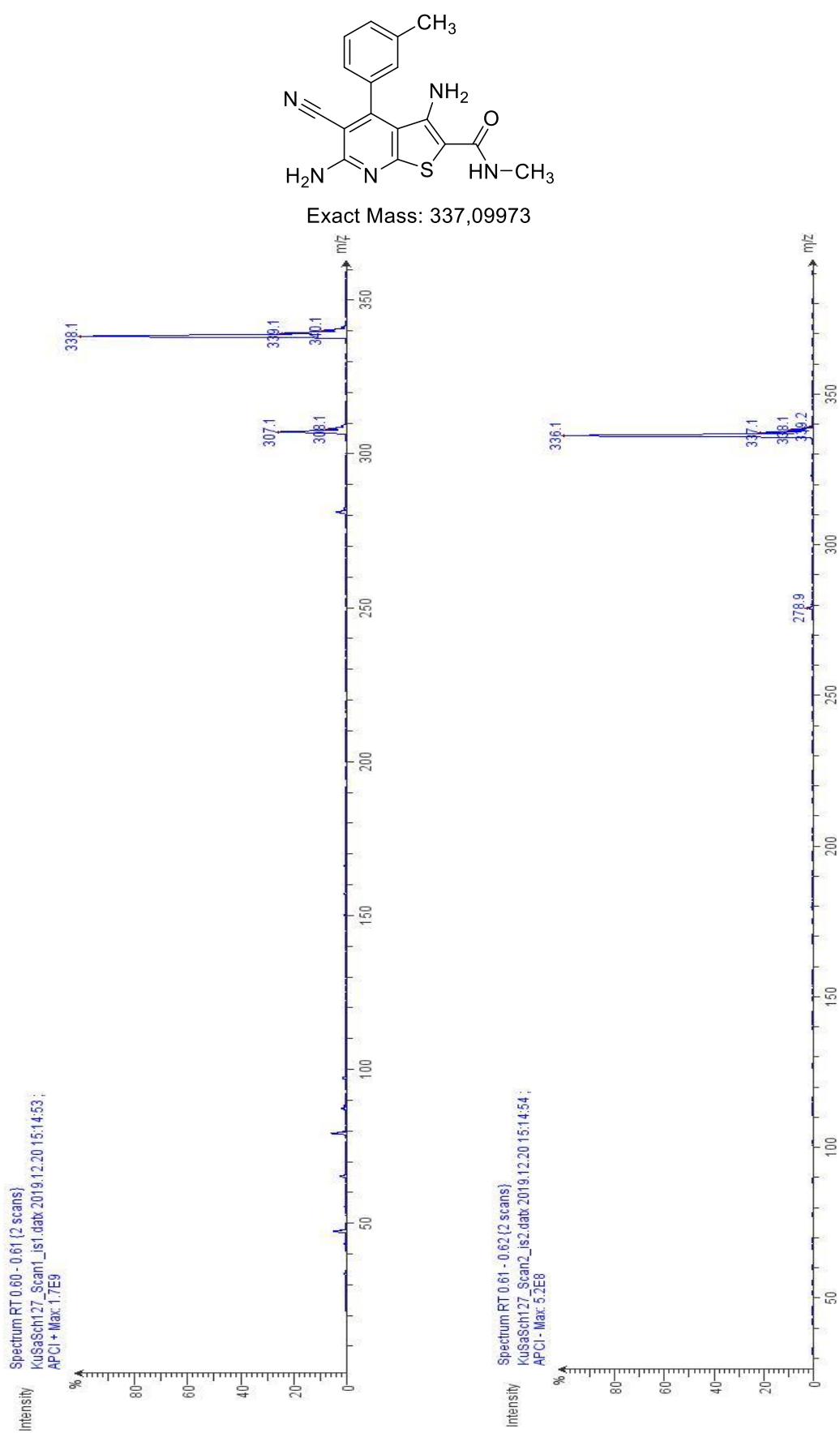
Figure S13: APCI-MS spectrum of **9j** (KuSaSch127).

Figure S14: <sup>1</sup>H-NMR spectrum of **9m** (KuSaSch134).

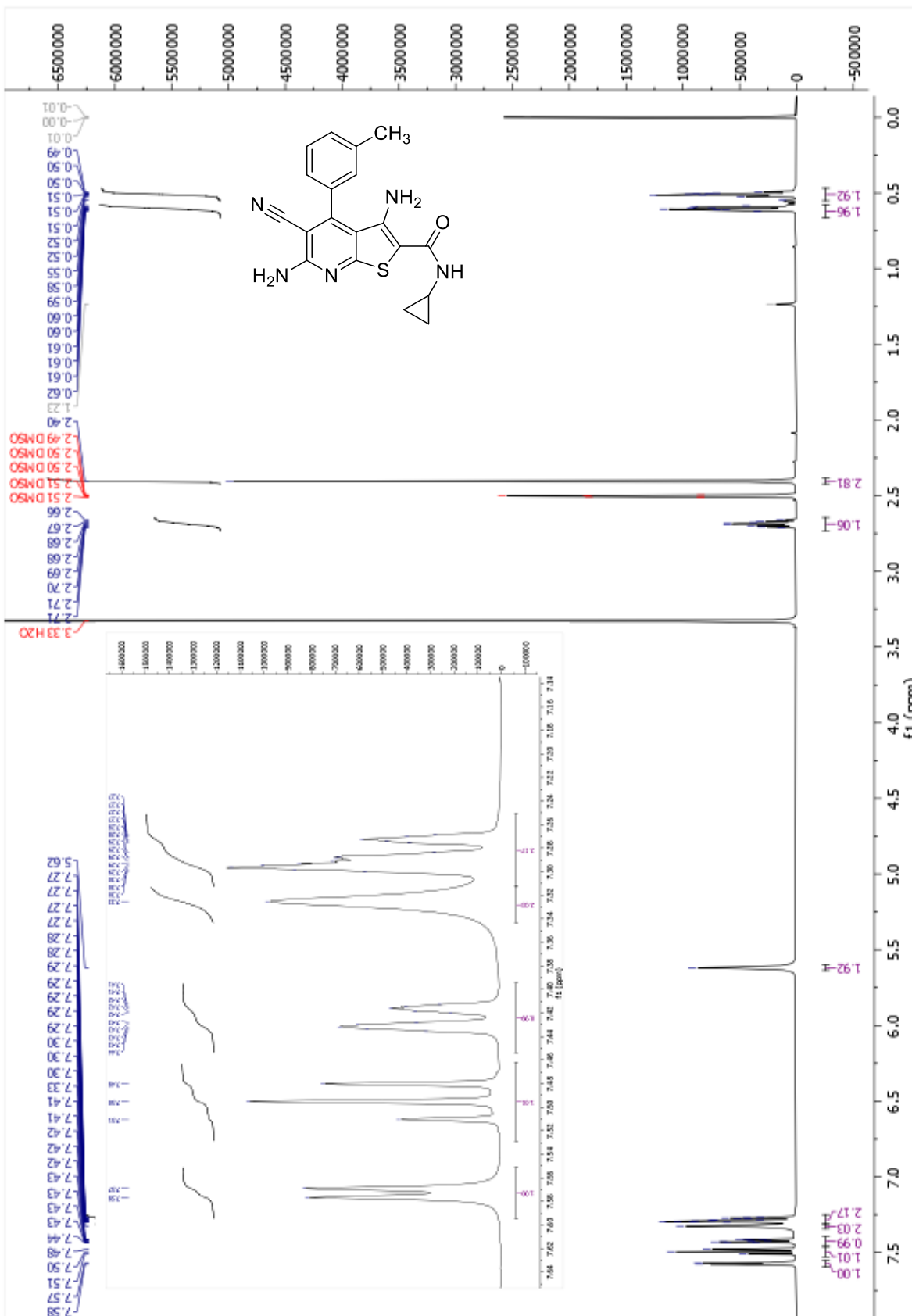


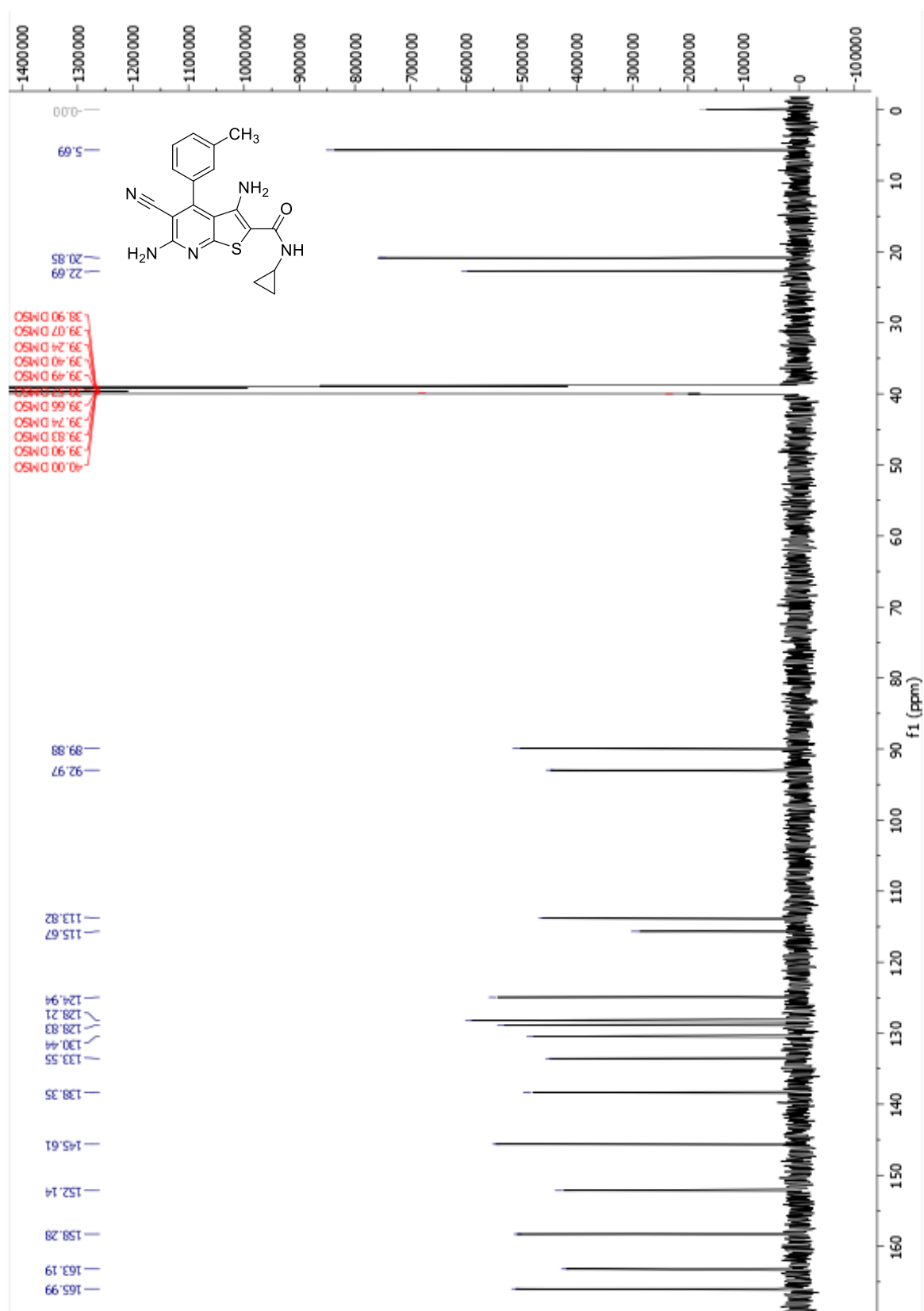
Figure S15:  $^{13}\text{C}$ -NMR spectrum of **9m** (KuSaSch134).

Figure S16: HSQC-NMR spectrum of **9m** (KuSaSch134). The black circle confirms two protons under one carbon signal.

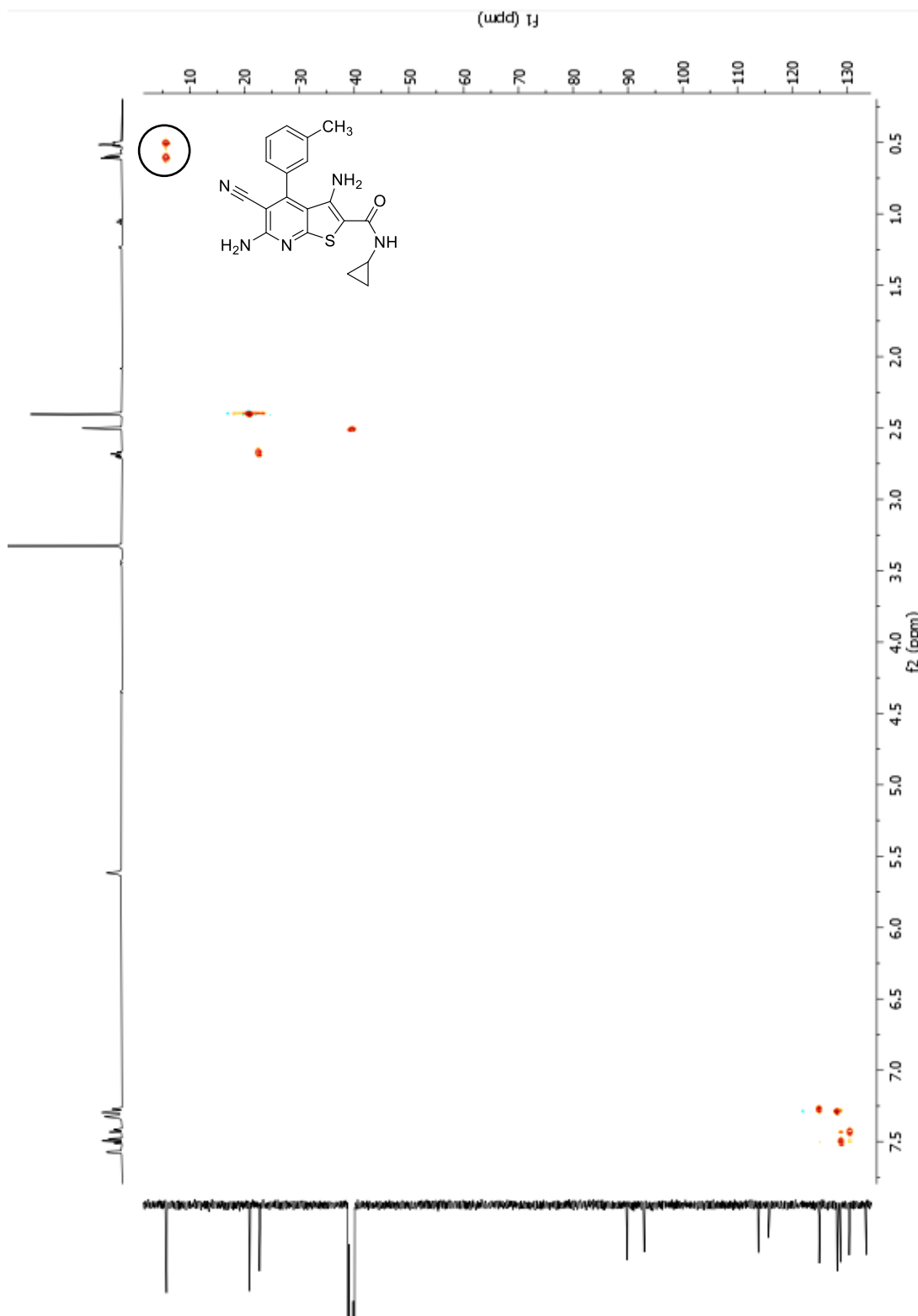
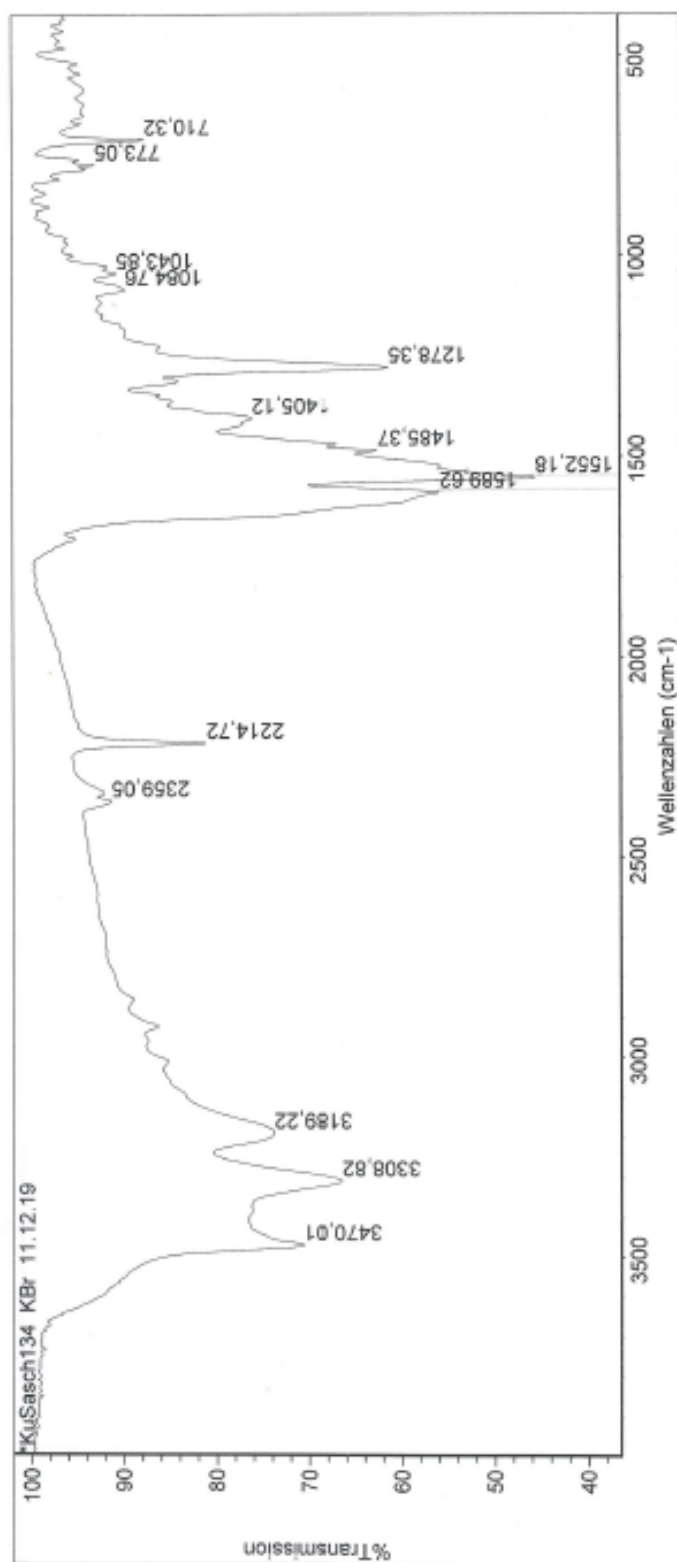




Figure S17: IR spectrum of **9m** (KuSaSch134).

Wed Dez 11 11:23:20 2019 (GMT+01:00)

SUCHE BANDEN:

Spektrum: \*KuSaSch134 KBr 11.12.19

Bereich: 3999,64 400,00

Absoluter Schwellwert: 93,920

Sensitivität: 50

Bandentabelle:

Position:	1552,18	Intensität:	45,562
Position:	1589,62	Intensität:	55,857
Position:	1278,35	Intensität:	61,297
Position:	1485,37	Intensität:	62,488
Position:	3308,82	Intensität:	66,459
Position:	3470,01	Intensität:	70,606
Position:	3189,22	Intensität:	73,792

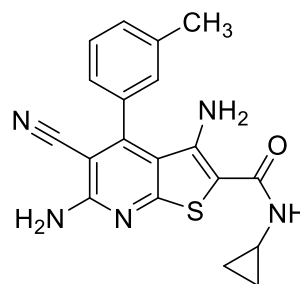


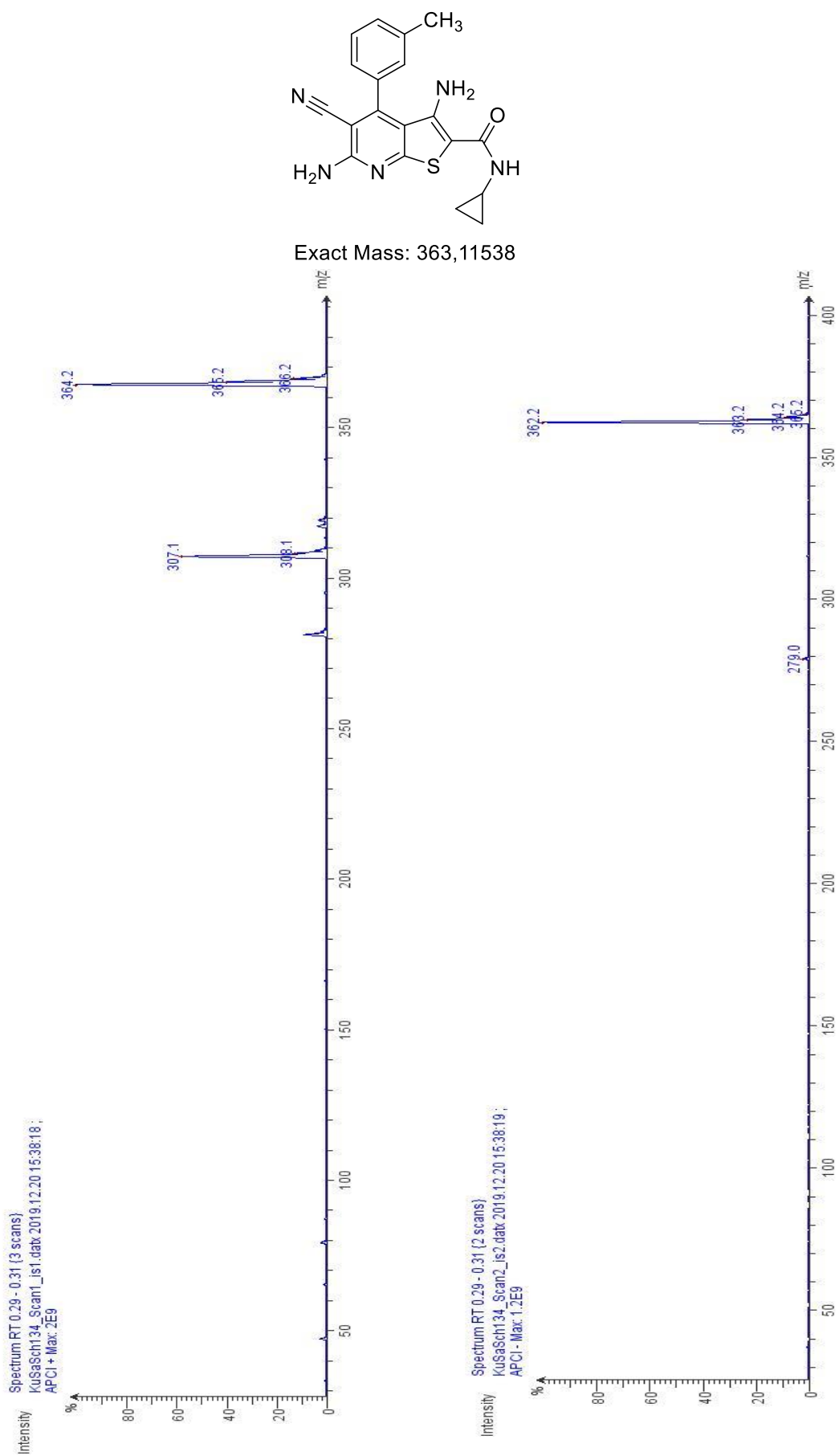
Figure S18: APCI-MS spectrum of **9m** (KuSaSch134).

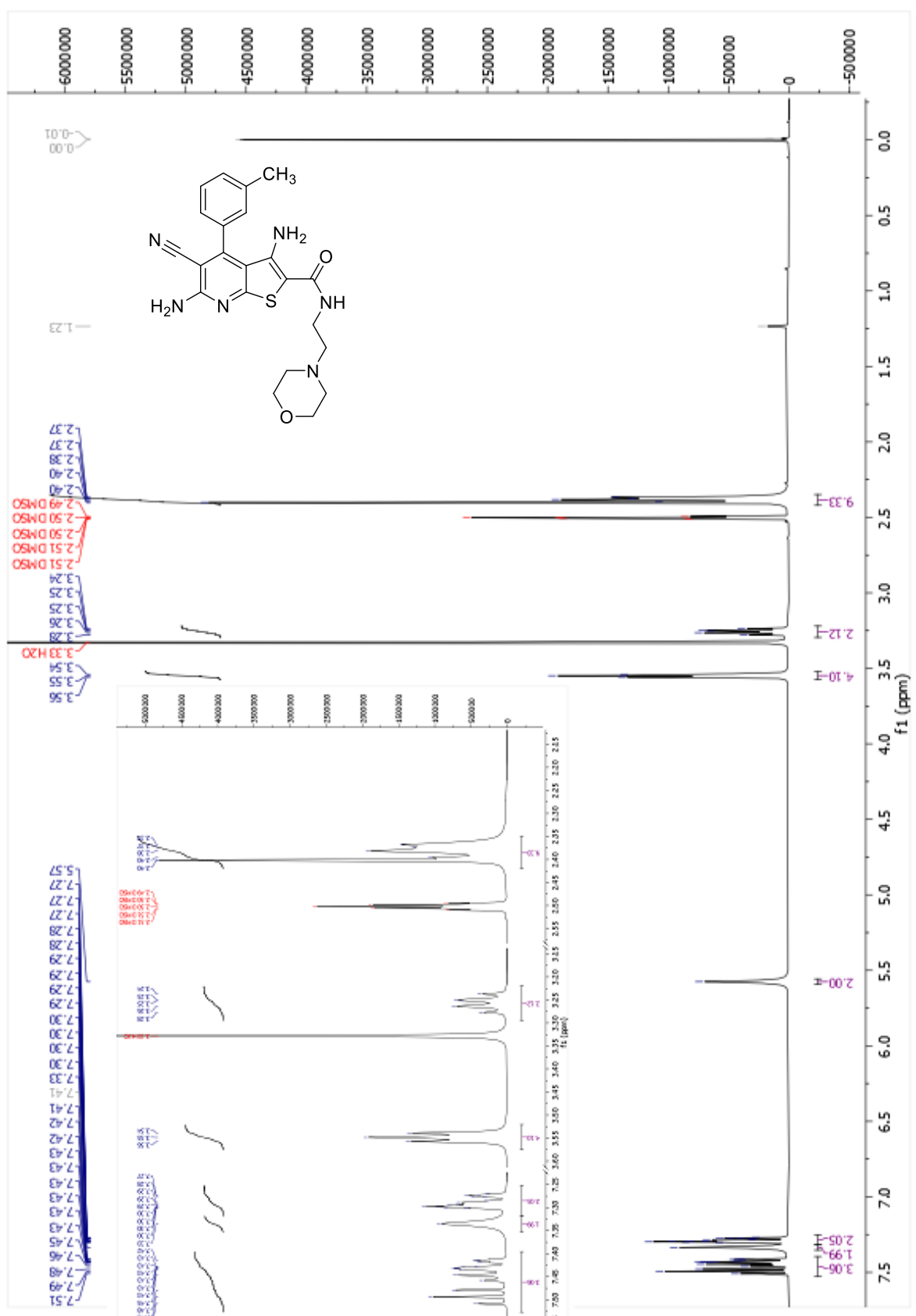
Figure S19: <sup>1</sup>H-NMR spectrum of **9n** (KuSaSch135).

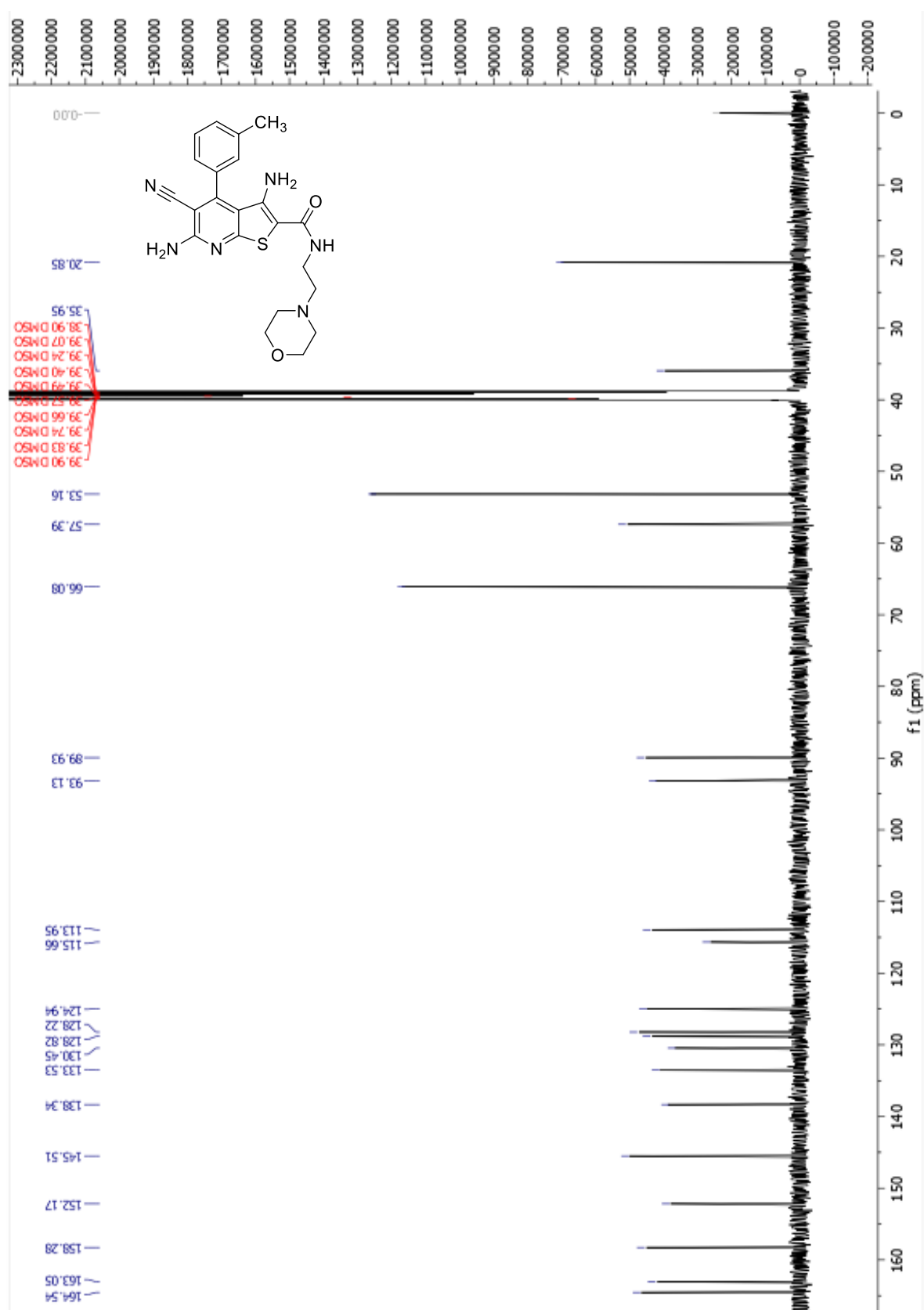
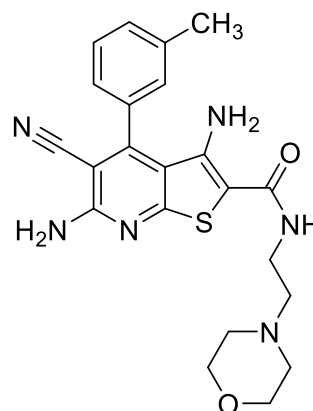
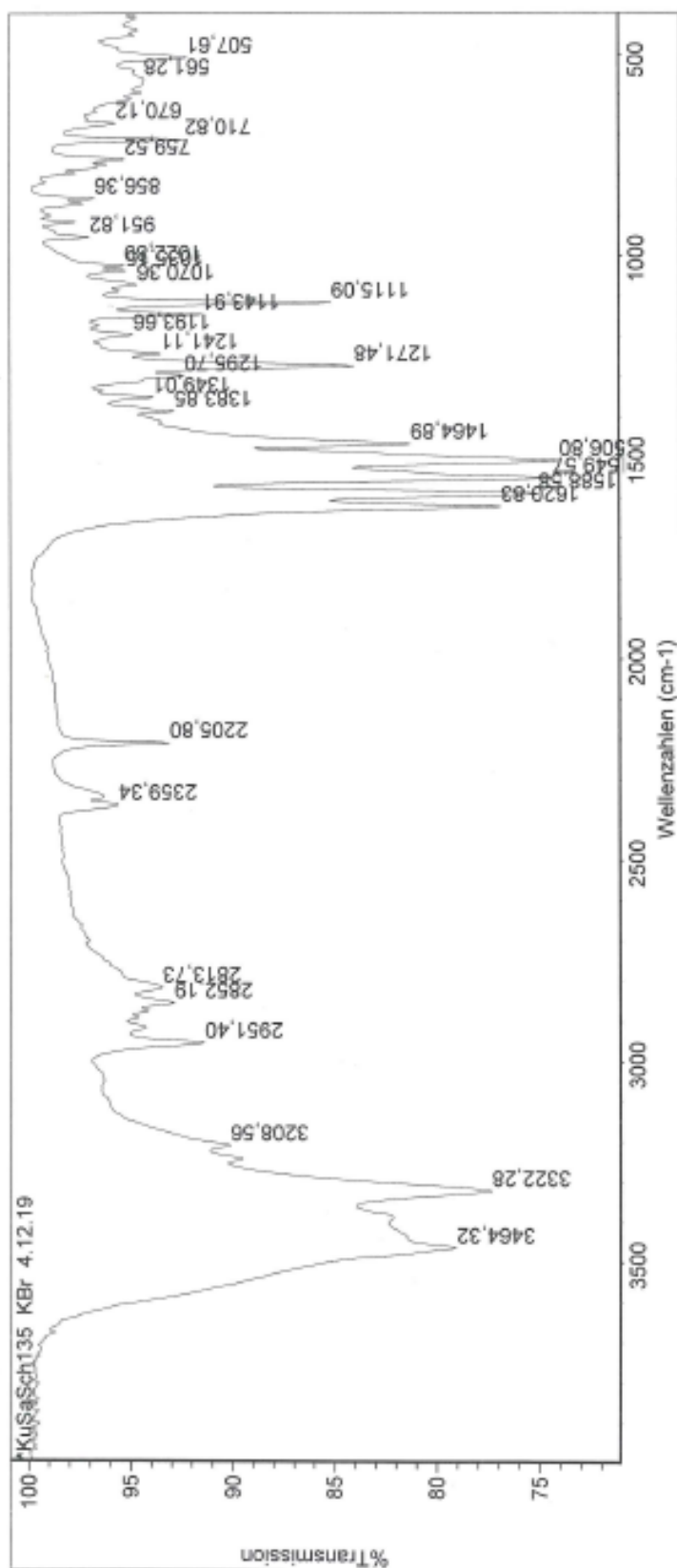
Figure S20:  $^{13}\text{C}$ -NMR spectrum of **9n** (KuSaSch135).

Figure S21: IR spectrum of **9n** (KuSaSch135).

Wed Dez 04 09:19:29 2019 (GMT+01:00)

SUCHE BANDEN:

Spektrum: \*KuSaSch135 KBr 4.12.19

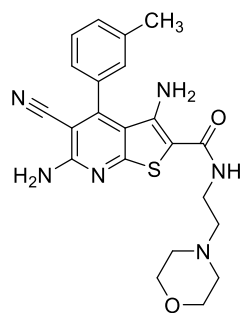
Bereich: 3999,64 400,00

Absoluter Schwellwert: 97,563

Sensitivität: 50

Bandentabelle:

Position:	1506,80	Intensität:	73,996
Position:	1549,57	Intensität:	74,303
Position:	1588,58	Intensität:	75,008
Position:	1620,83	Intensität:	76,825
Position:	3322,28	Intensität:	77,341
Position:	3464,32	Intensität:	79,061
Position:	1464,89	Intensität:	81,240

Figure S22: APCI-MS spectrum of **9n** (KuSaSch135).

Exact Mass: 436,16814

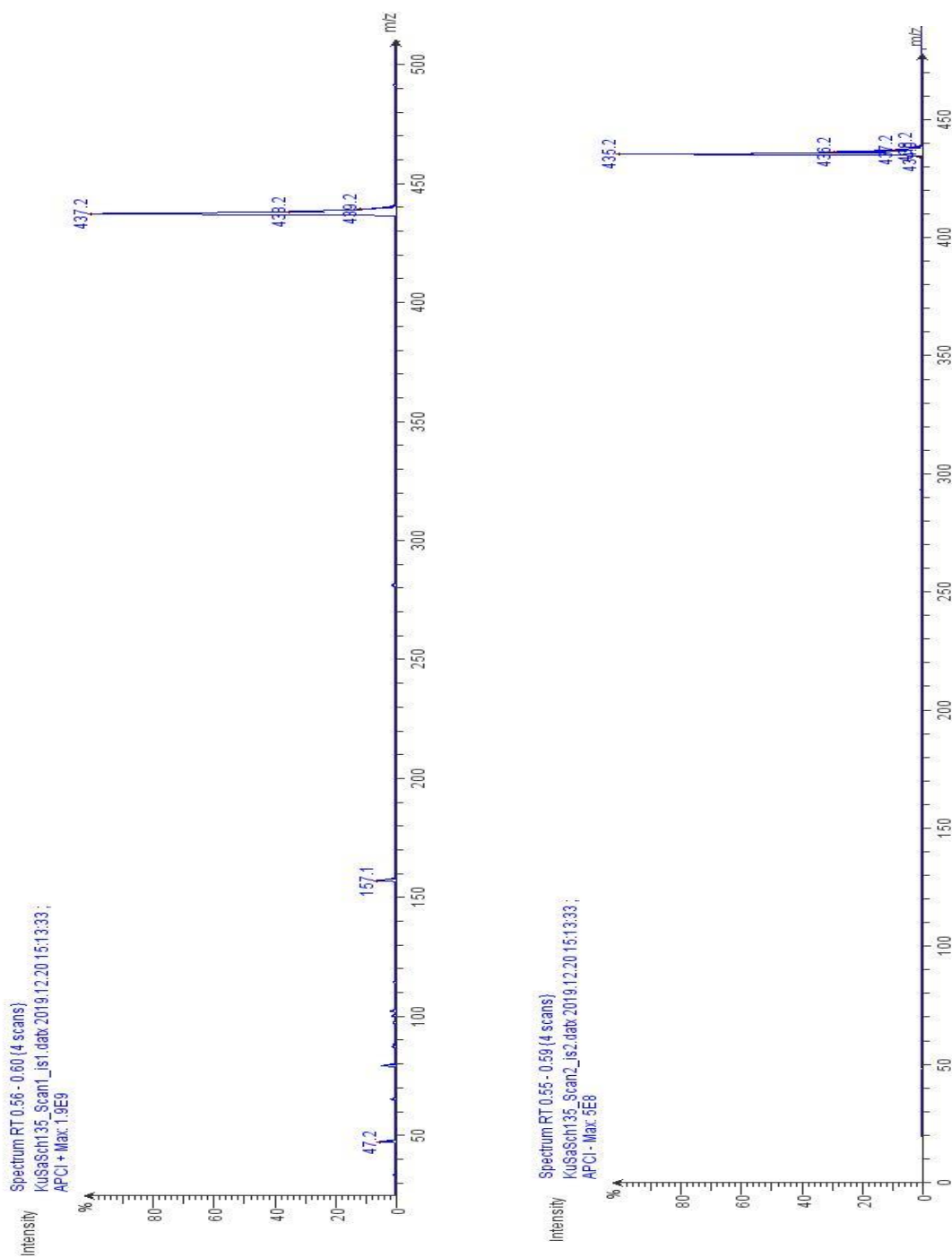


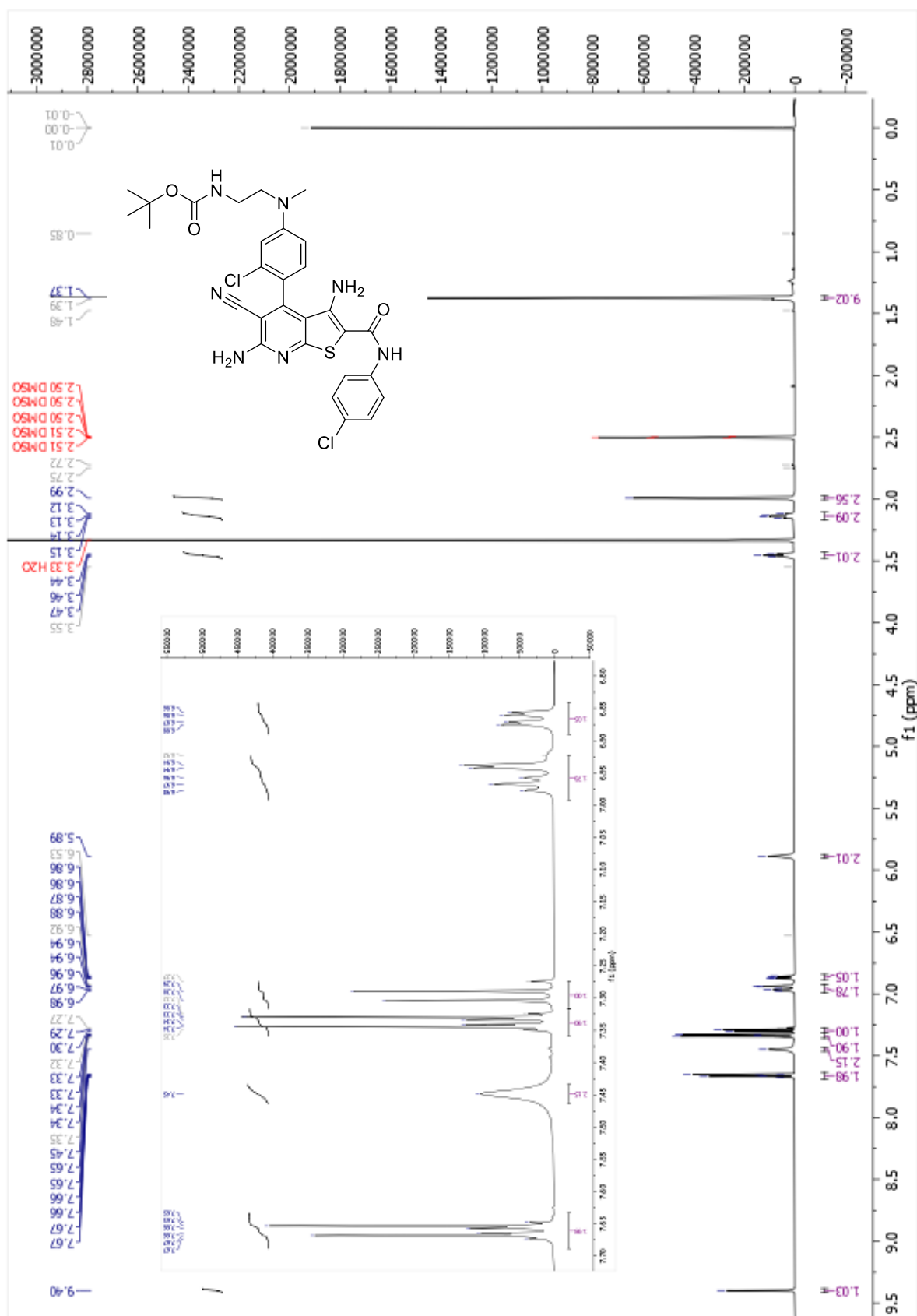
Figure S23:  $^1\text{H-NMR}$  spectrum of **9y** (KuSaSch060).

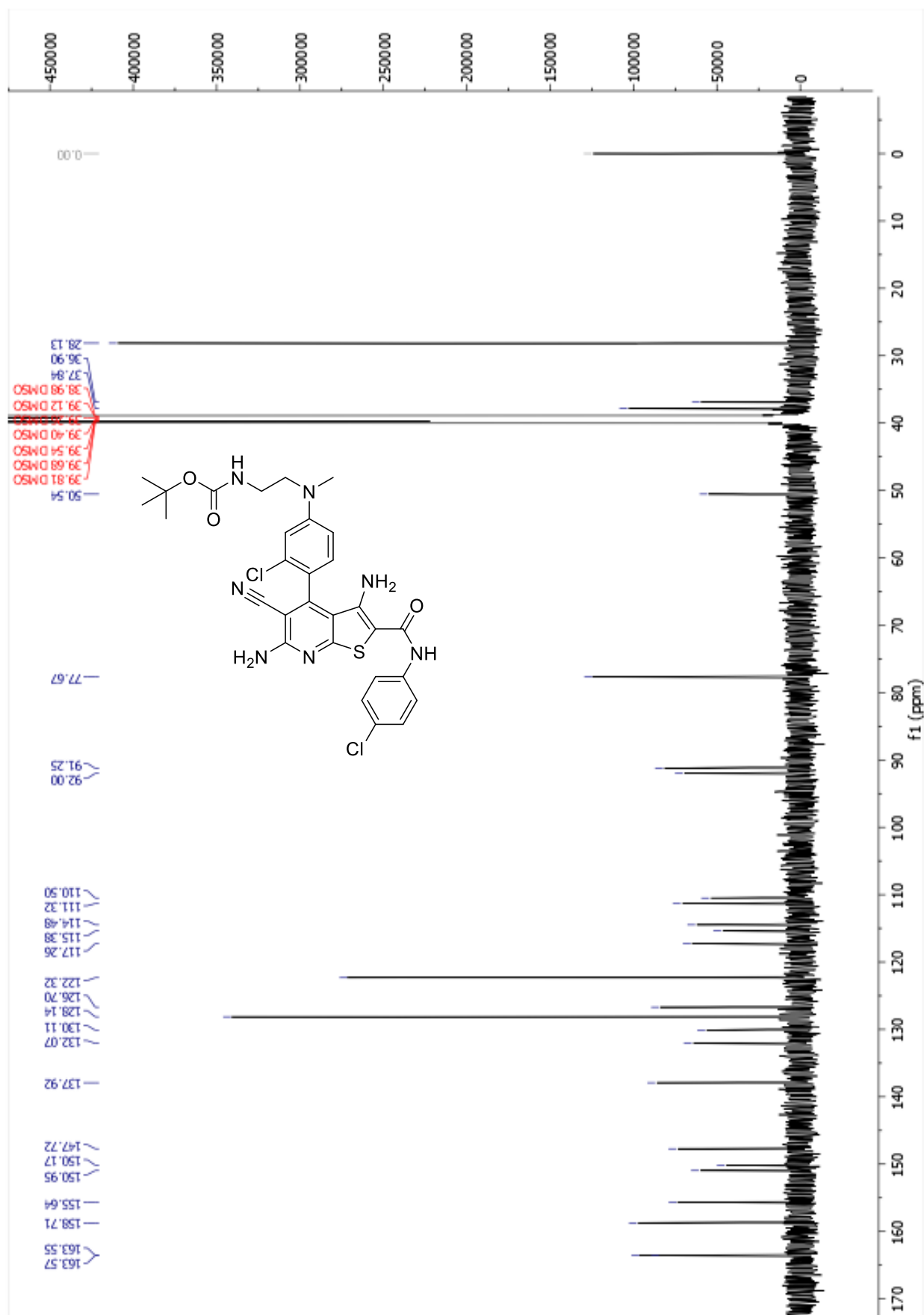
Figure S24:  $^{13}\text{C}$ -NMR spectrum of **9y** (KuSaSch060).



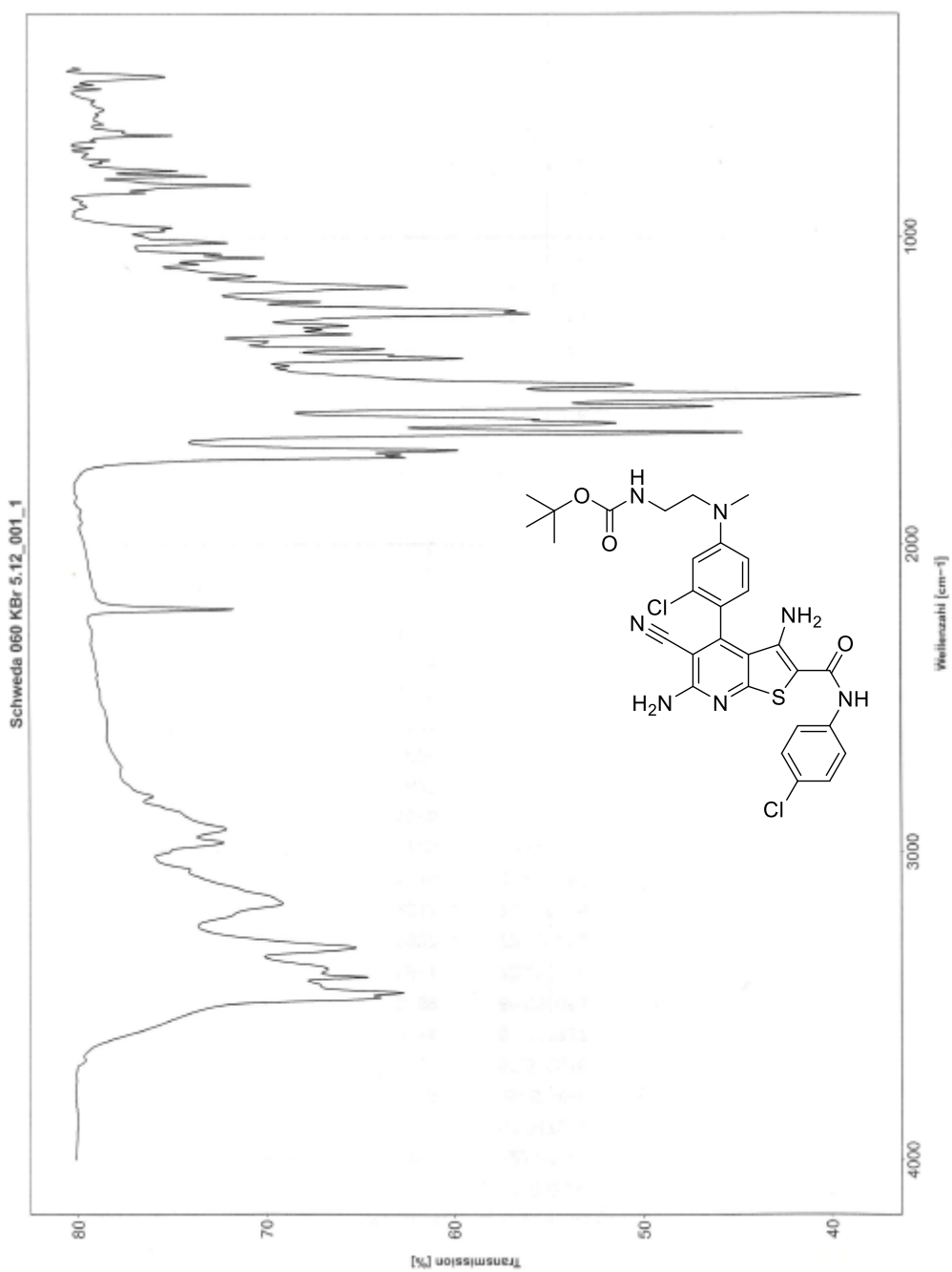
Figure S25: IR spectrum of **9y** (KuSaSch060).

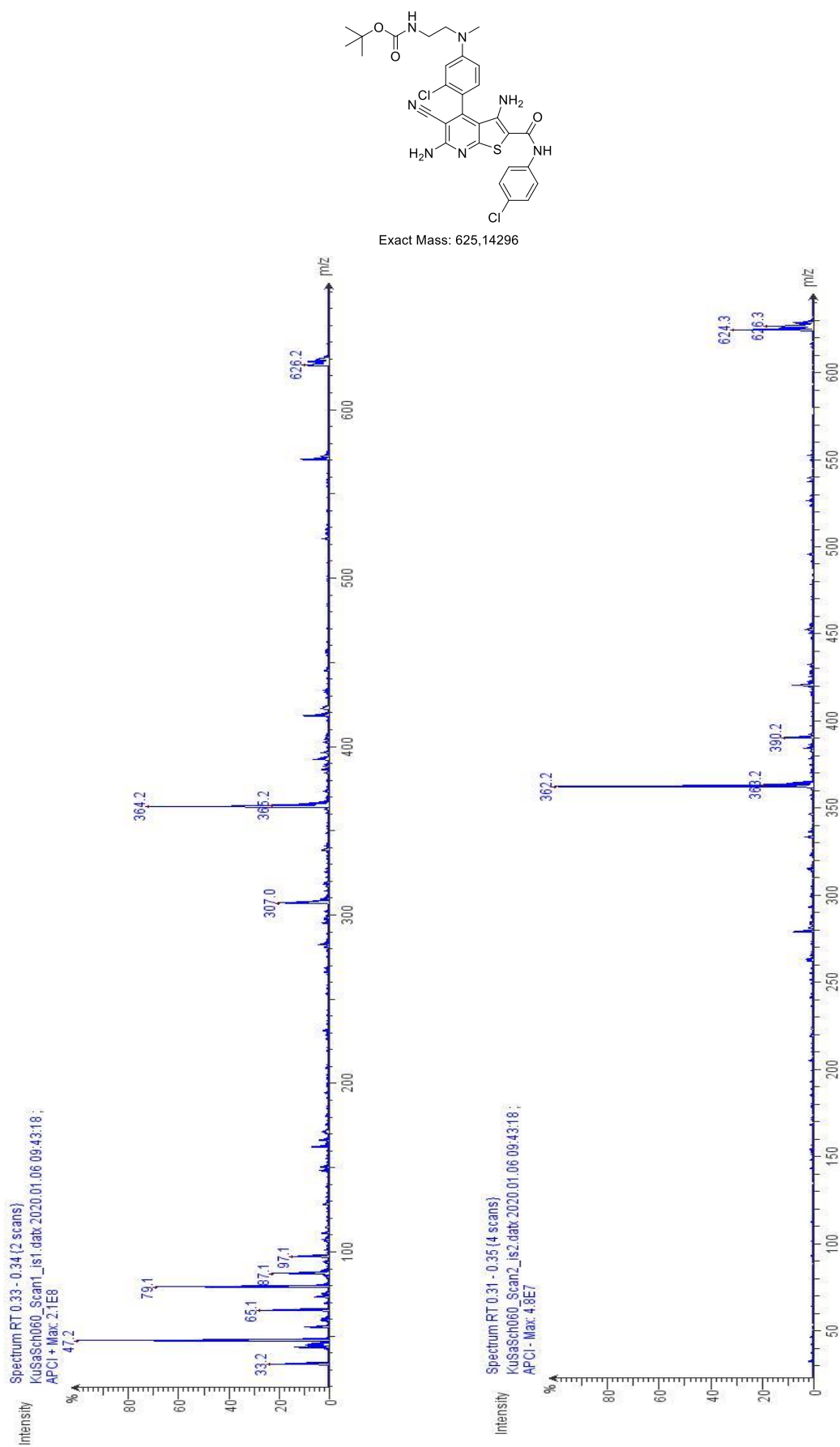
Figure S26: APCI-MS spectrum of **9y** (KuSaSch060).

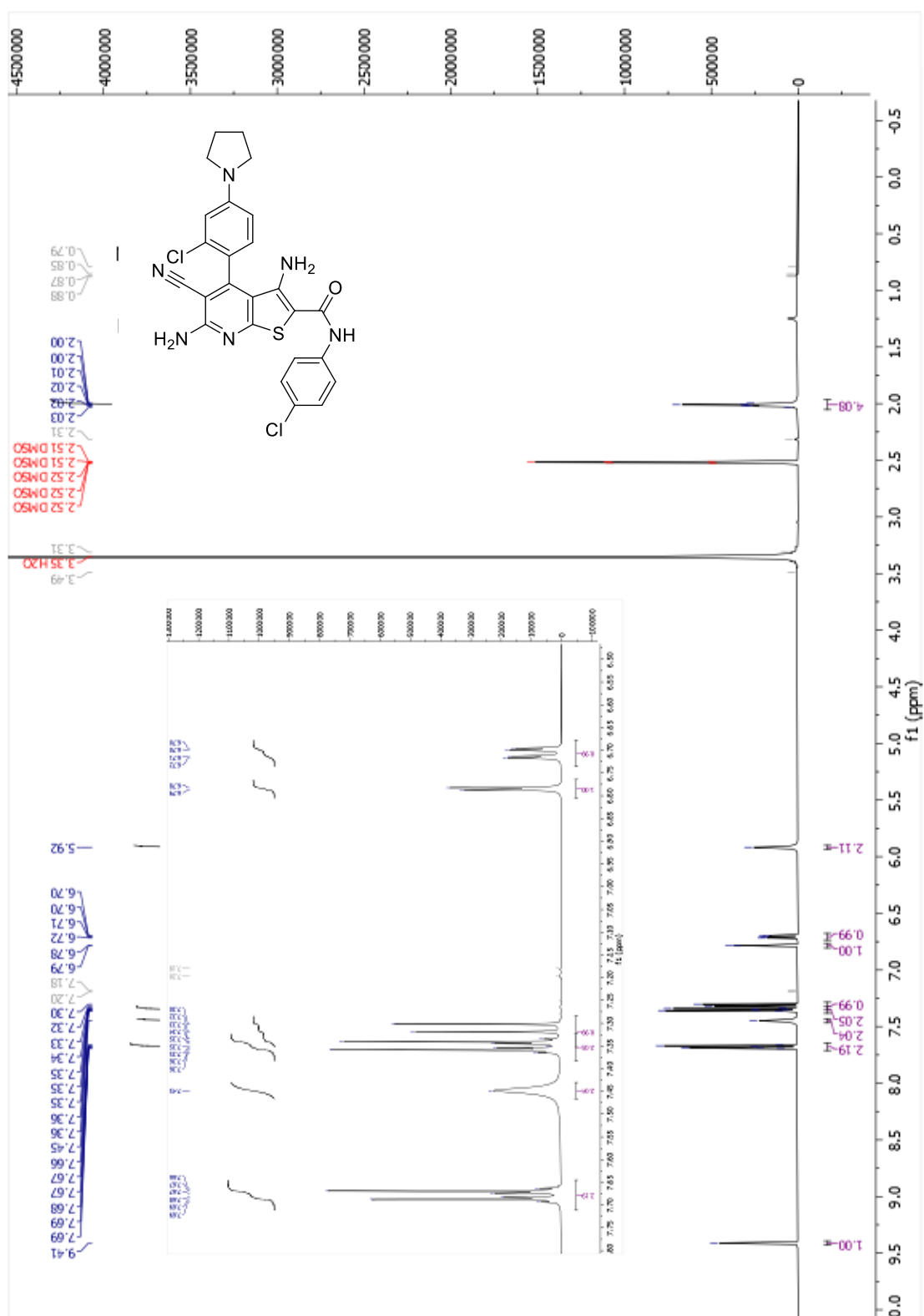
Figure S27:  $^1\text{H-NMR}$  spectrum of **9z** (KuSaSch063).

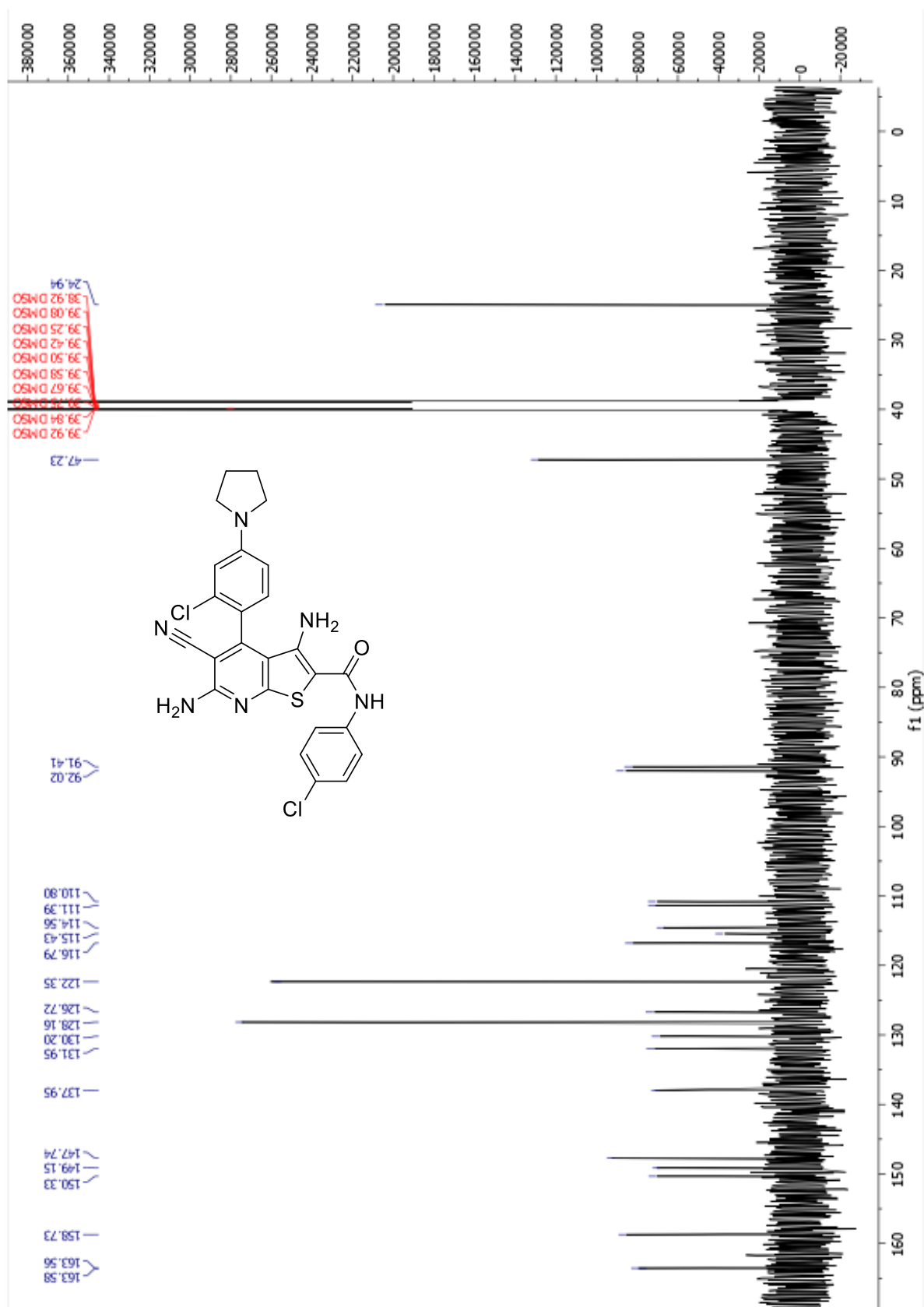
Figure S28:  $^{13}\text{C}$ -NMR spectrum of **9z** (KuSaSch063).

Figure S29: HSCQ-NMR spectrum of **9z** (KuSaSch063). The black circle confirms protons under the HDO signal.

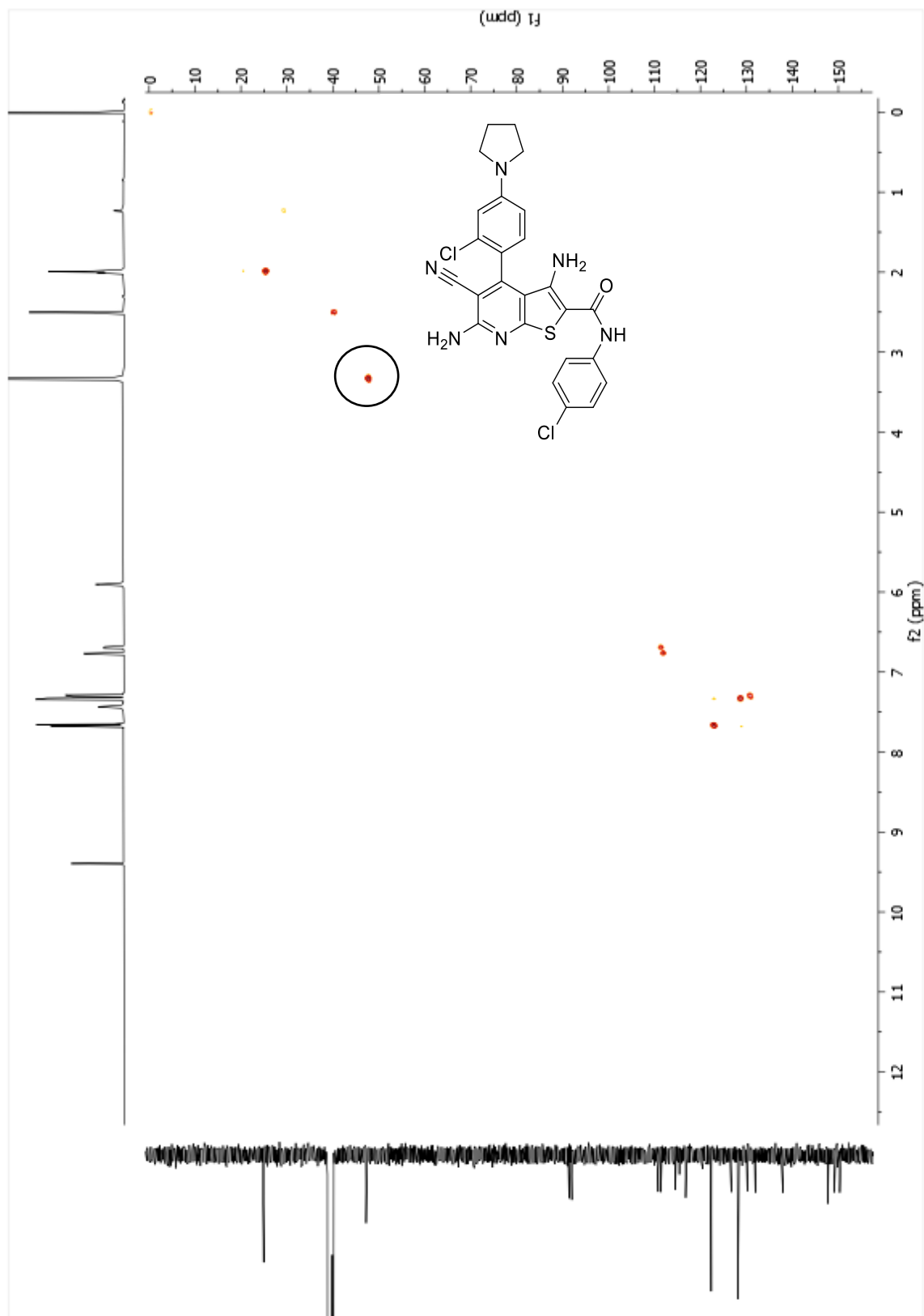


Figure S30: IR spectrum of **9z** (KuSaSch063).

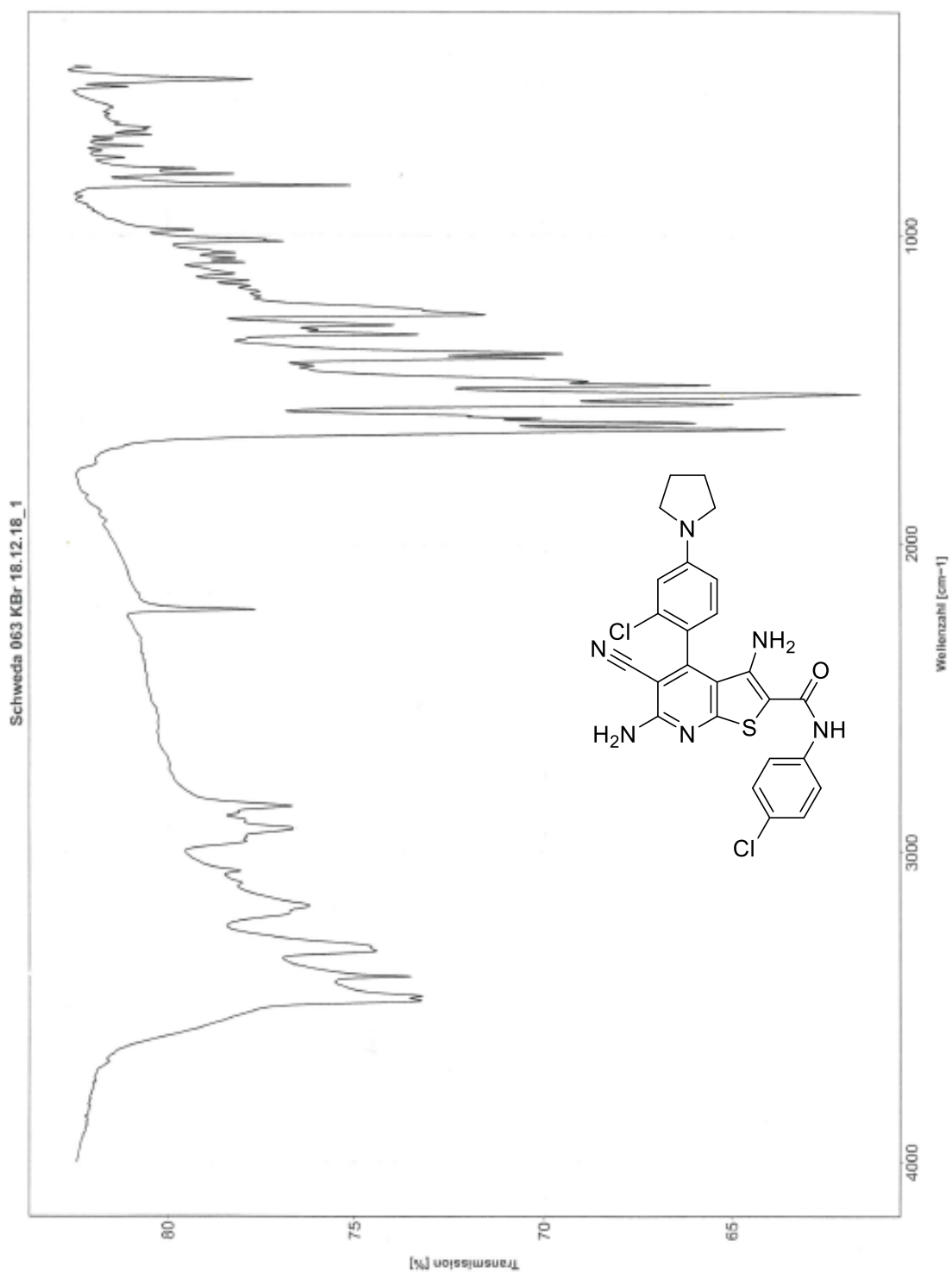


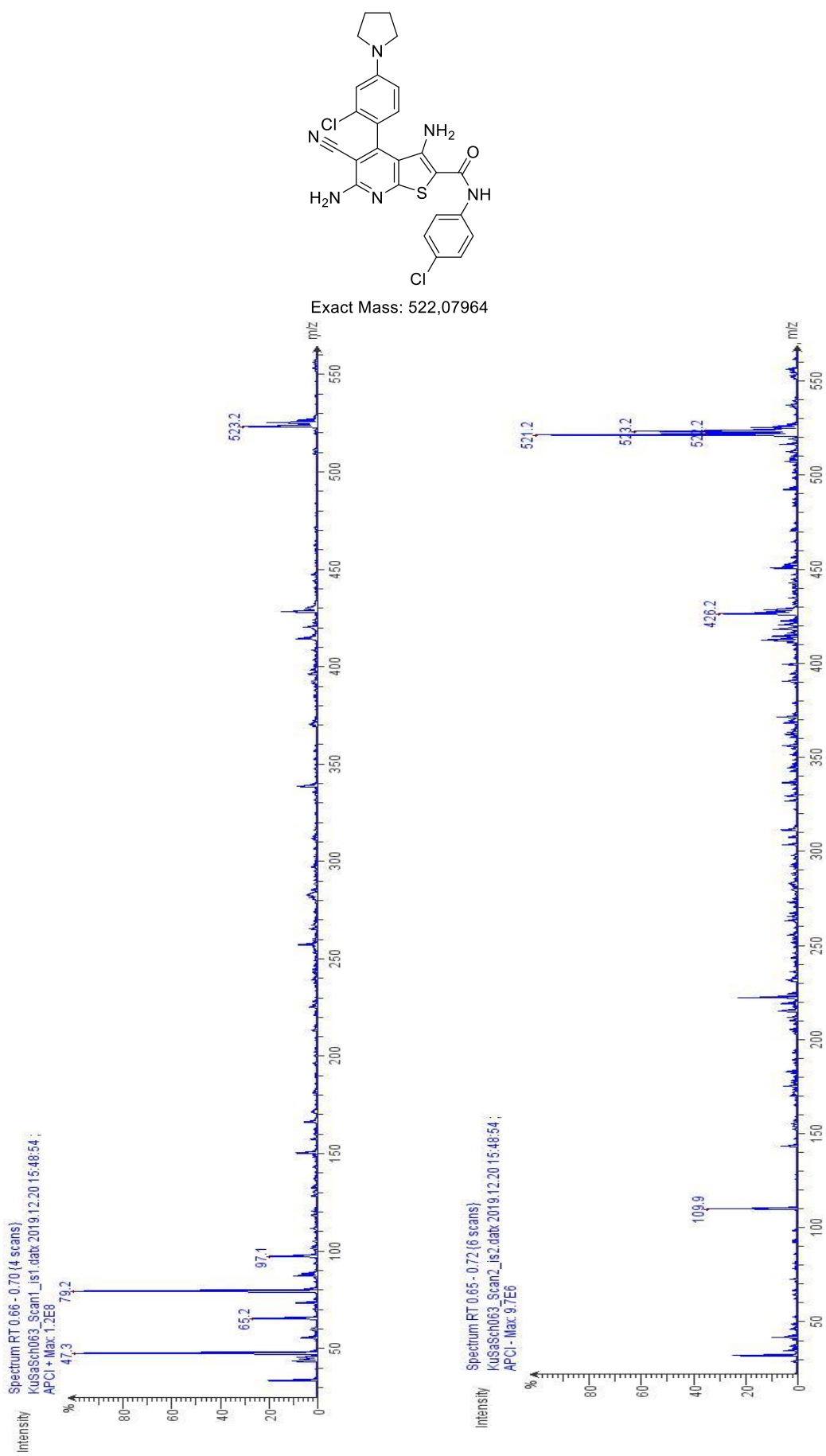
Figure S31: APCI-MS of **9z** (KuSaSch063).

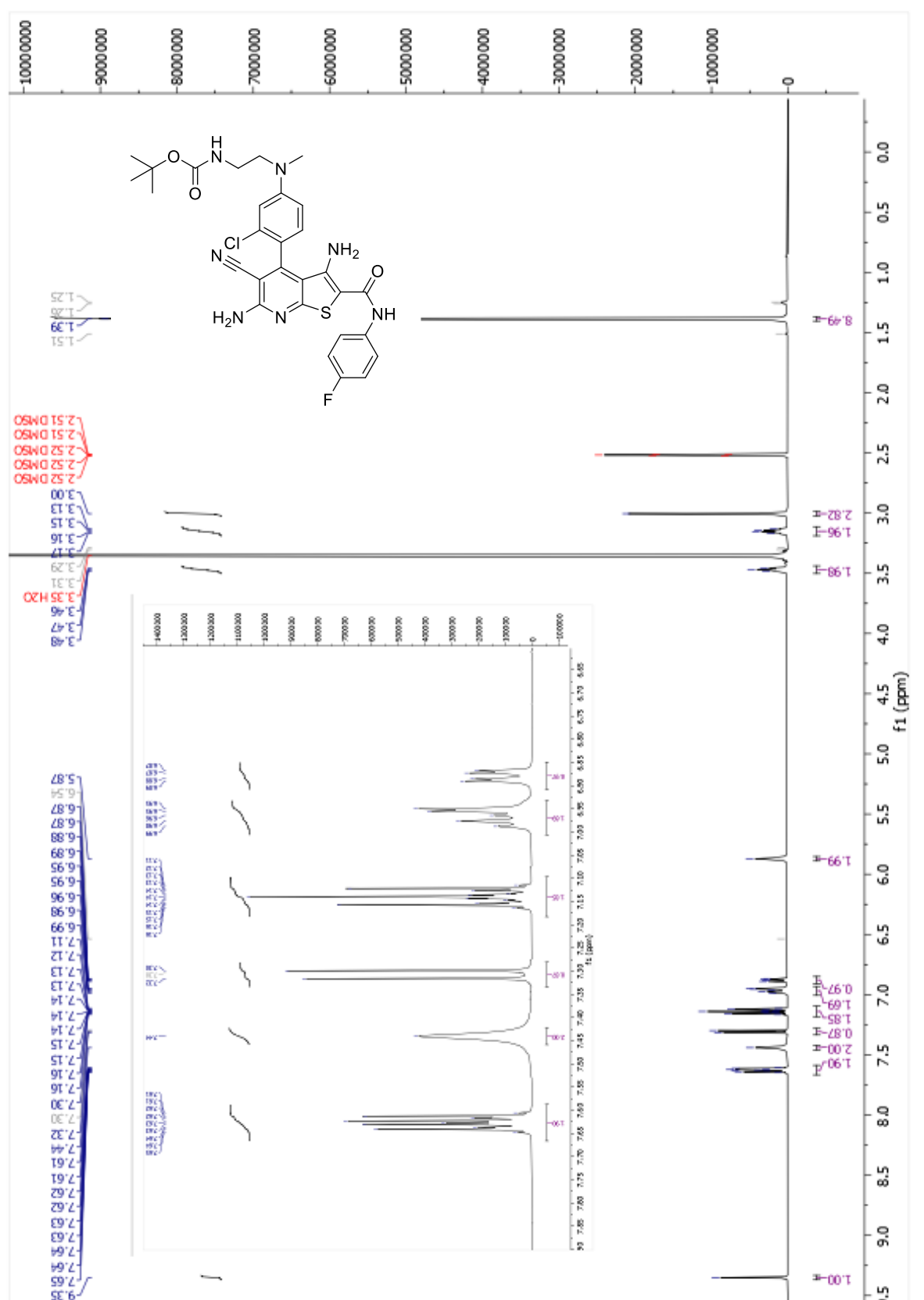
Figure S32:  $^1\text{H-NMR}$  spectrum of **9ac** (KuSaSch073).



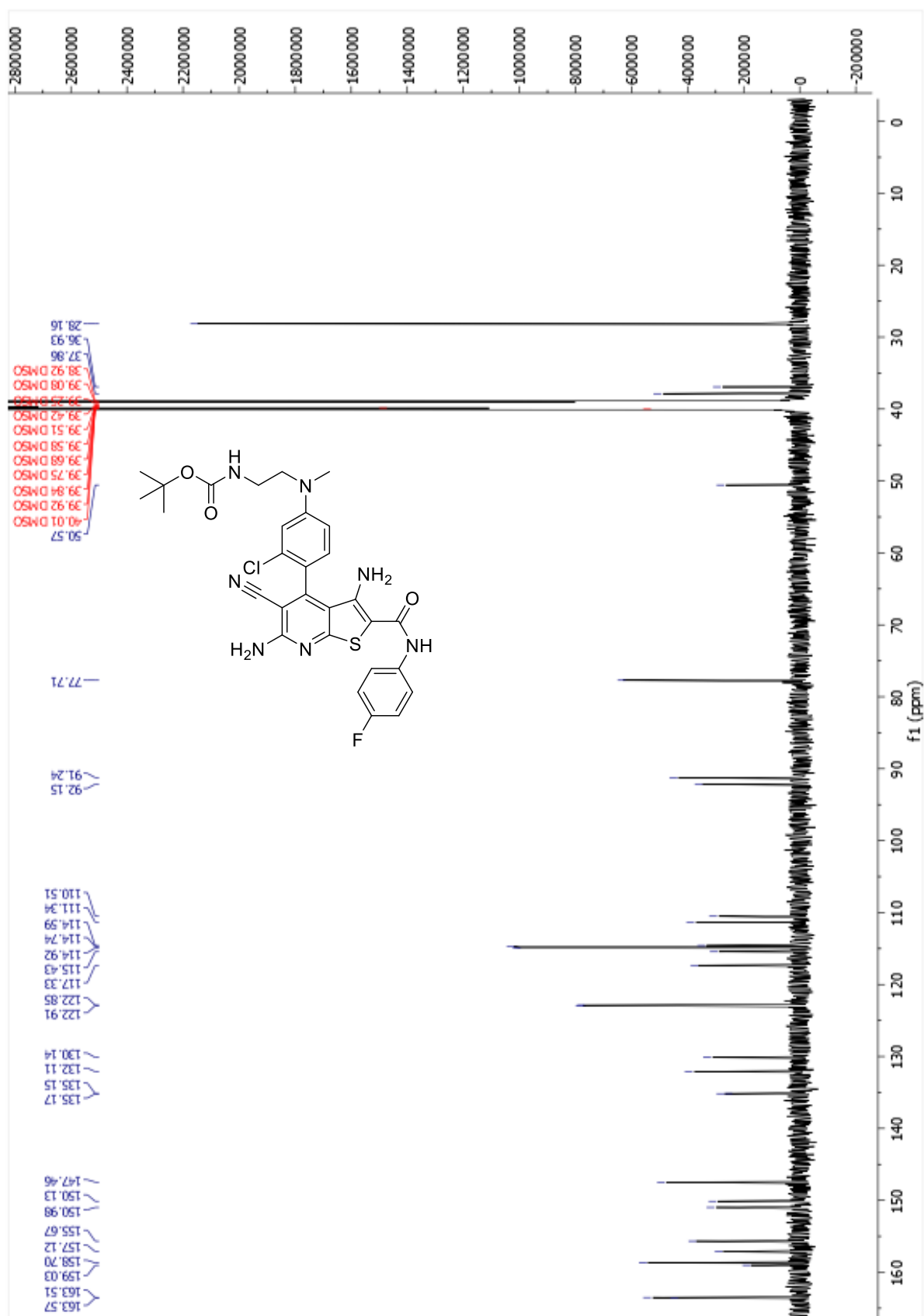
Figure S33:  $^{13}\text{C}$ -NMR spectrum of **9ac** (KuSaSch073).

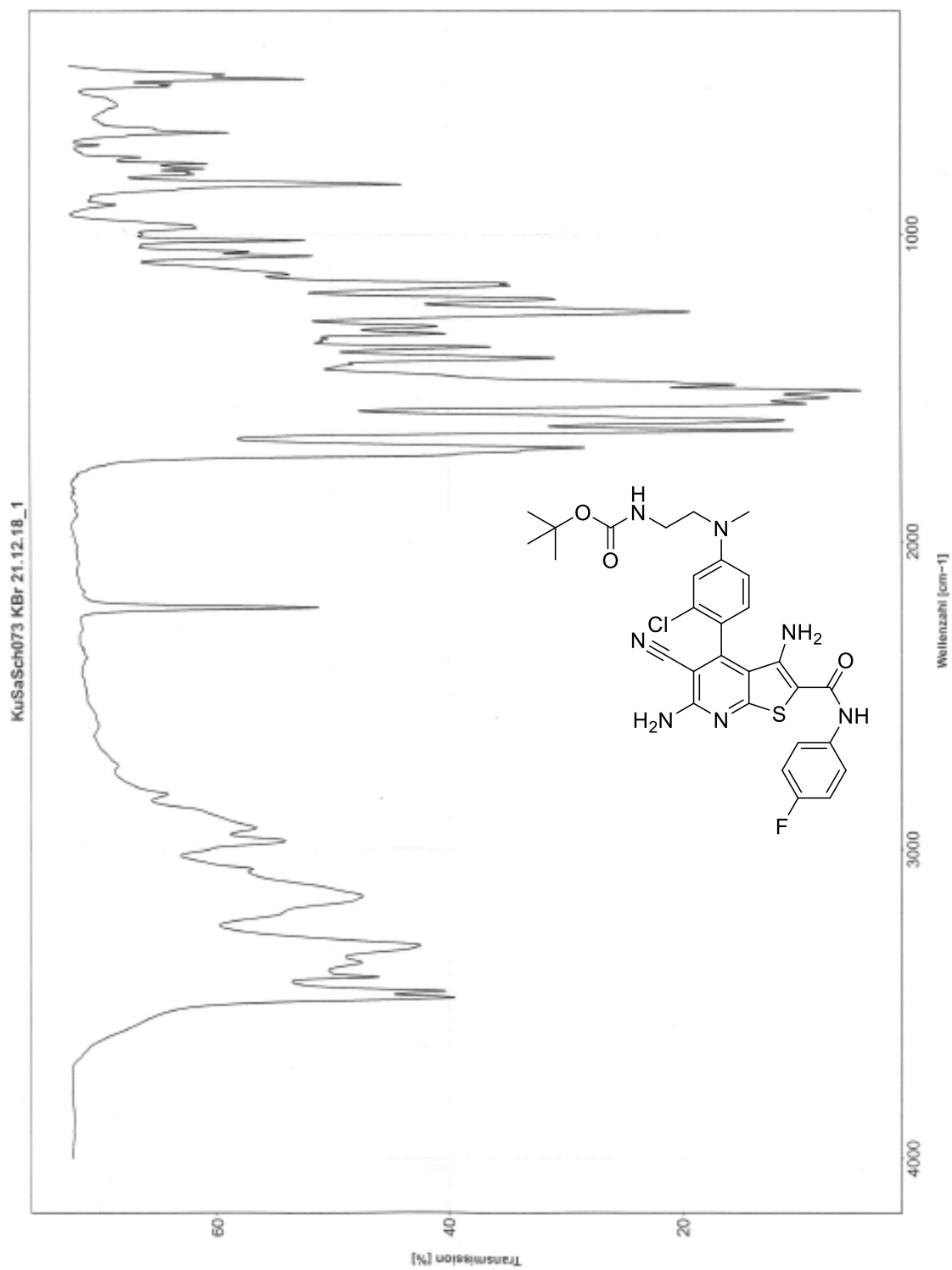
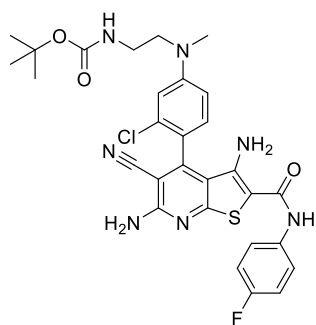
Figure S34: IR spectrum of **9ac** (KuSaSch073).

Figure S35: APCI-MS spectrum of **9ac** (KuSaSch073).

Exact Mass: 609,17251

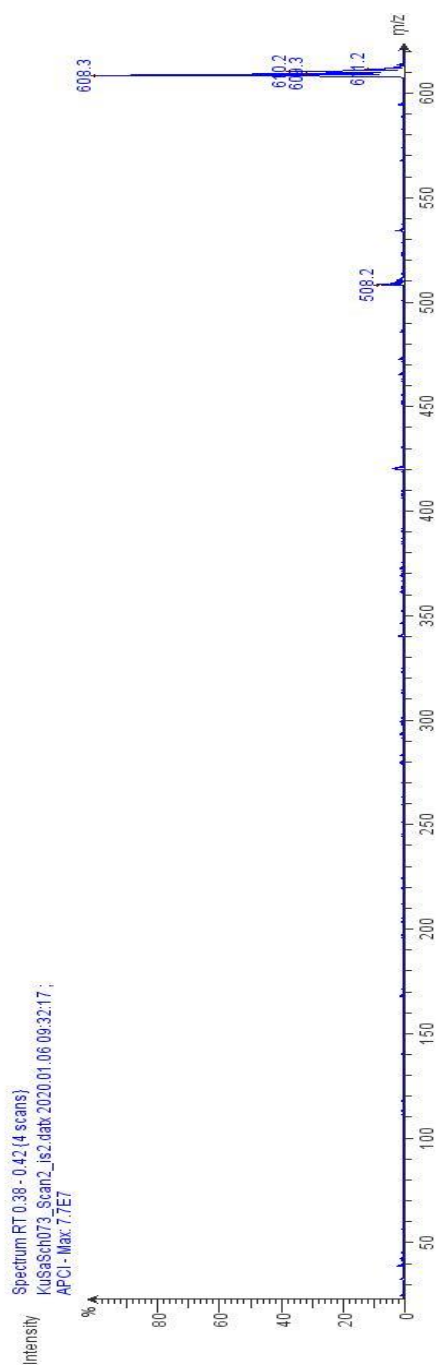
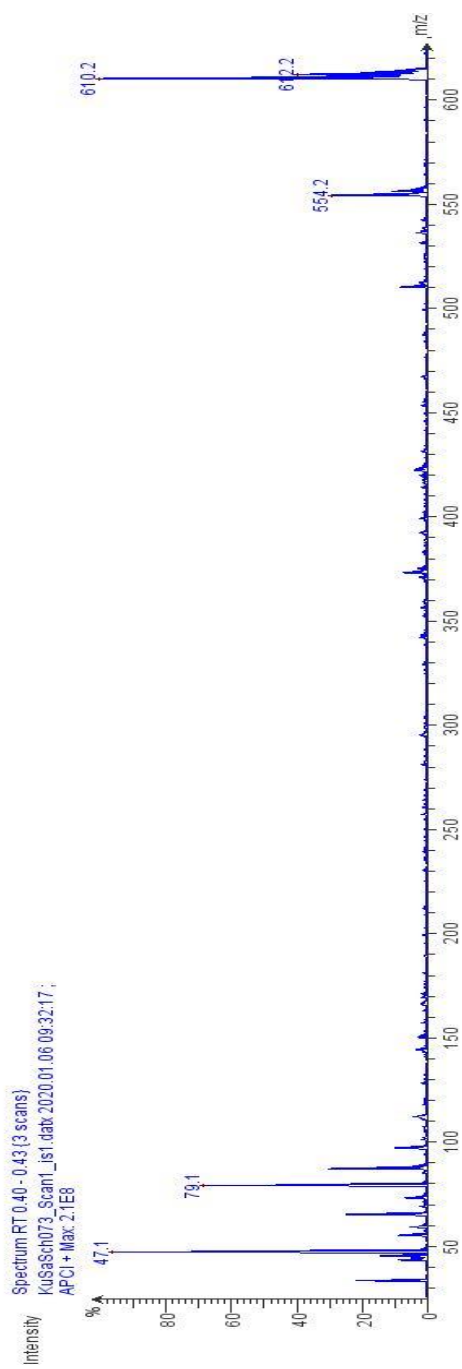


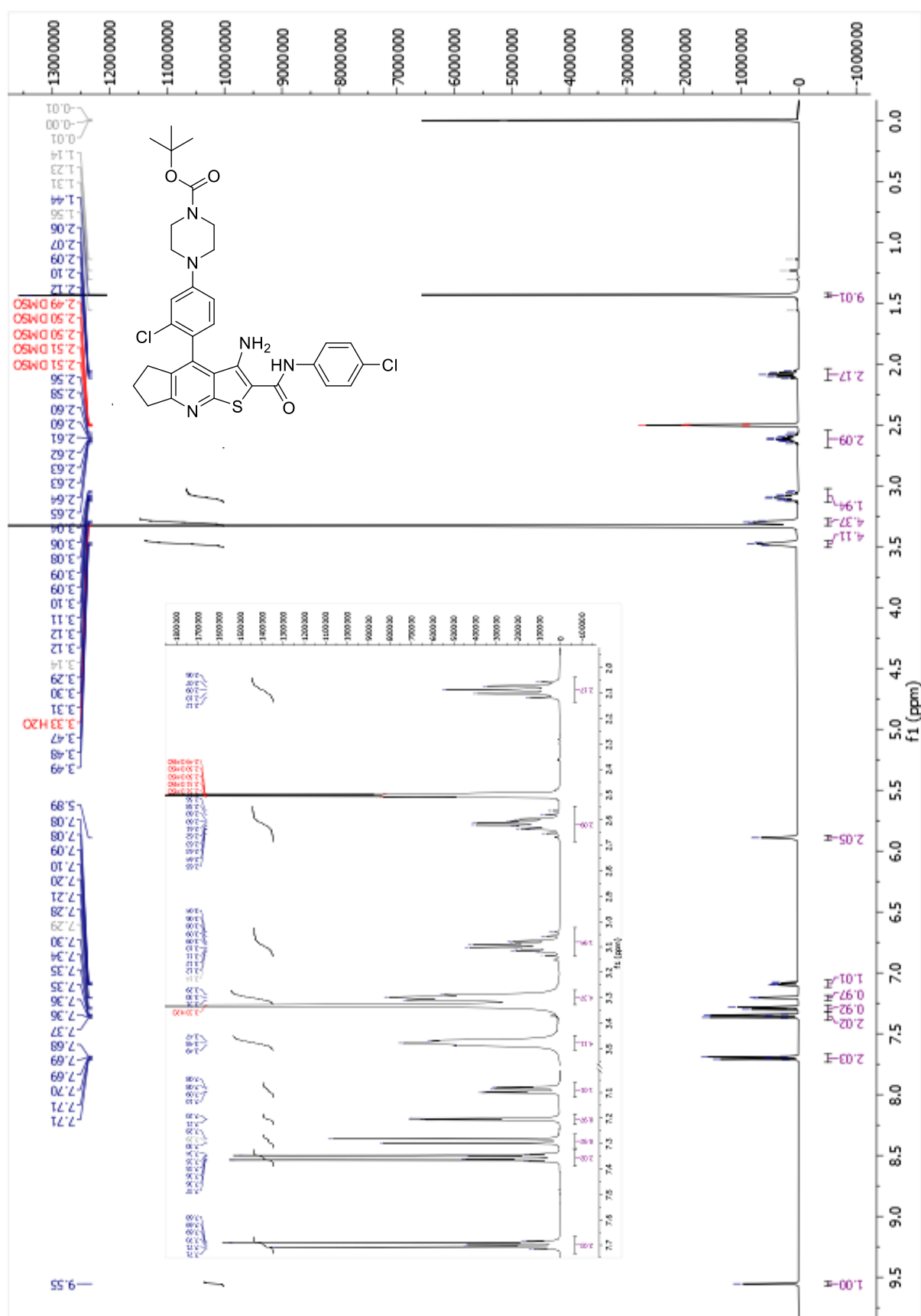
Figure S36:  $^1\text{H-NMR}$  spectrum of **17a** (KuSaSch095).

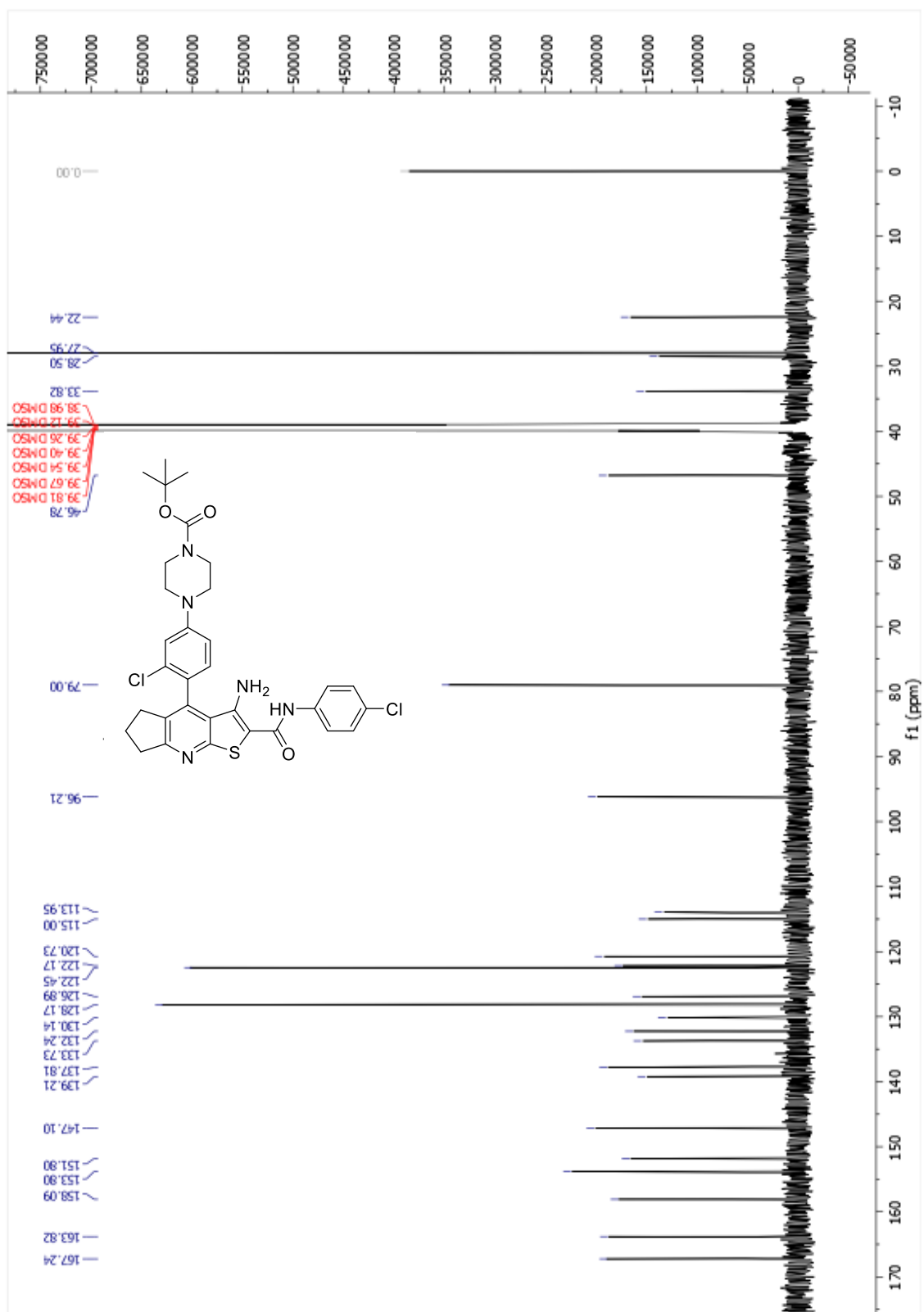
Figure S37:  $^{13}\text{C}$ -NMR spectrum of **17a** (KuSaSch095).

Figure S38: HSCQ-NMR spectrum of **17a** (KuSaSch095). The black circle confirms 4 protons under a missing signal for two carbons.

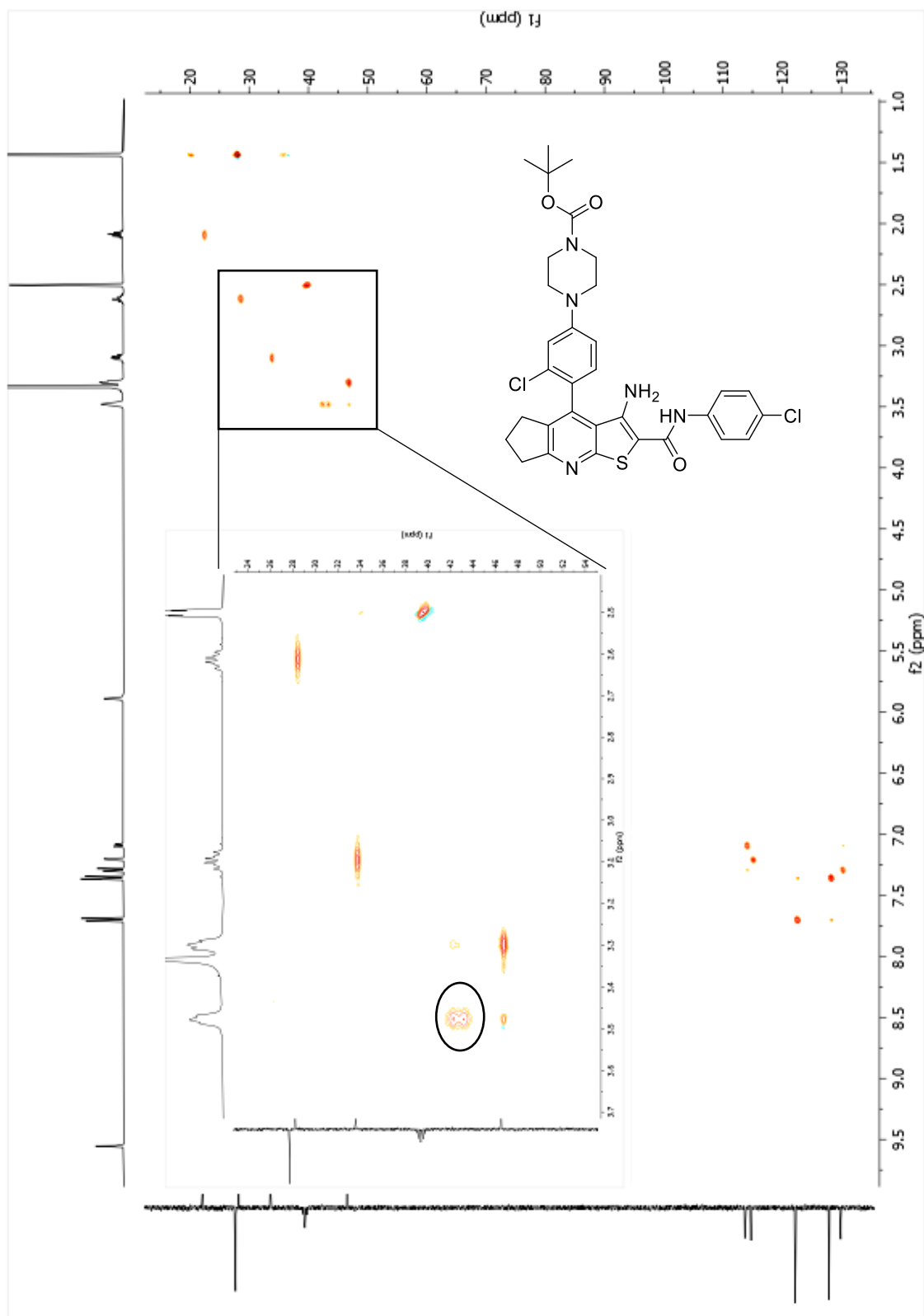
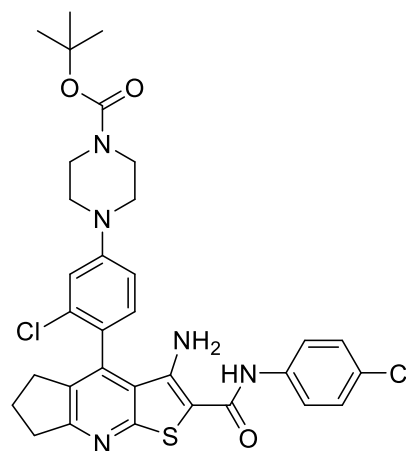
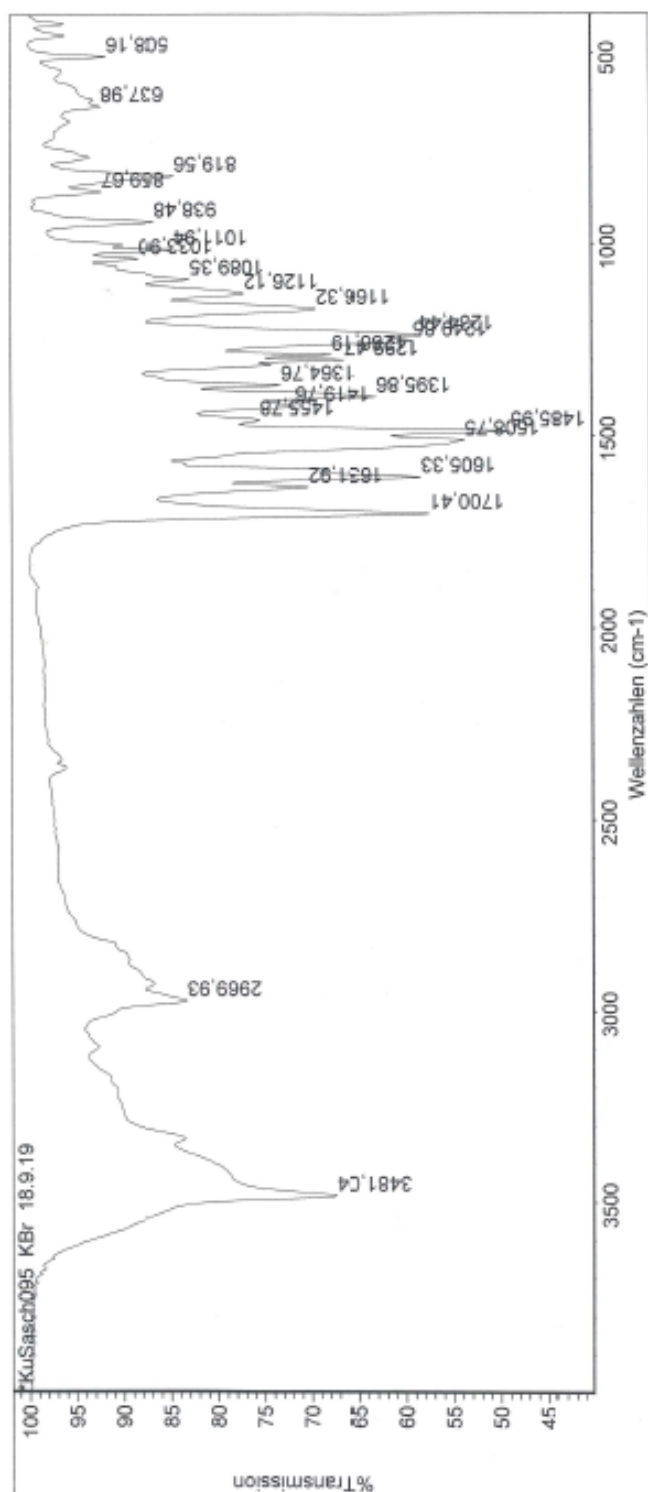


Figure S39: IR spectrum of **17a** (KuSaSch095).

Wed Sep 18 11:41:24 2019 (GMT+02:00)

SUCHE BANDEN:

Spektrum: \*KuSaSch095 KBr 18.9.19

Bereich: 3998,04 400,00

Absoluter Schwellwert: 92,448

Sensitivität: 50

Bandentabelle:

Position:	1485,95	Intensität:	48,784
Position:	1508,75	Intensität:	53,652
Position:	1700,41	Intensität:	57,404
Position:	1234,44	Intensität:	58,445
Position:	1605,33	Intensität:	58,309
Position:	1249,85	Intensität:	59,121
Position:	1395,86	Intensität:	63,019

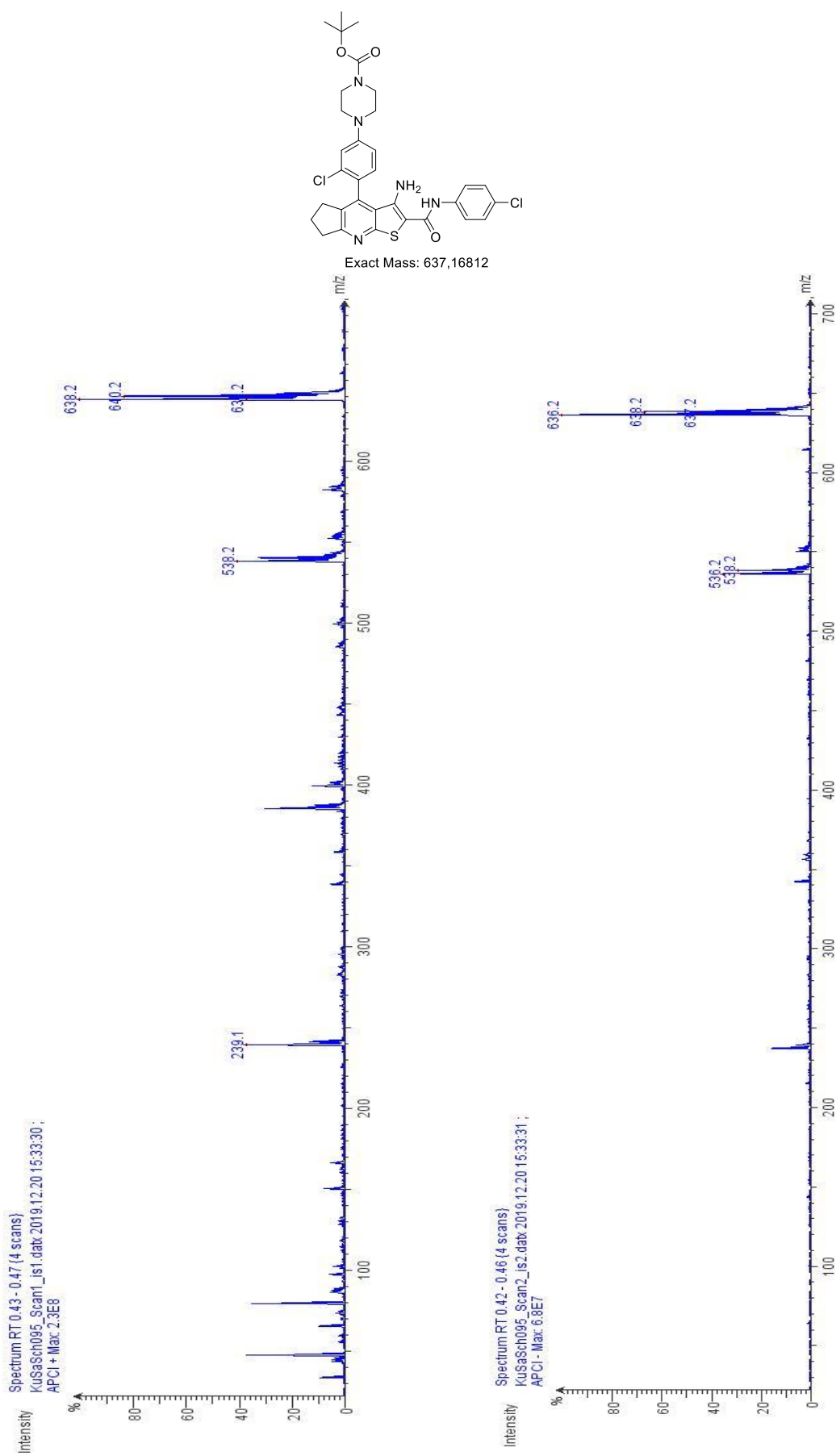
Figure S40: APCI-MS spectrum of **17a** (KuSaSch095).





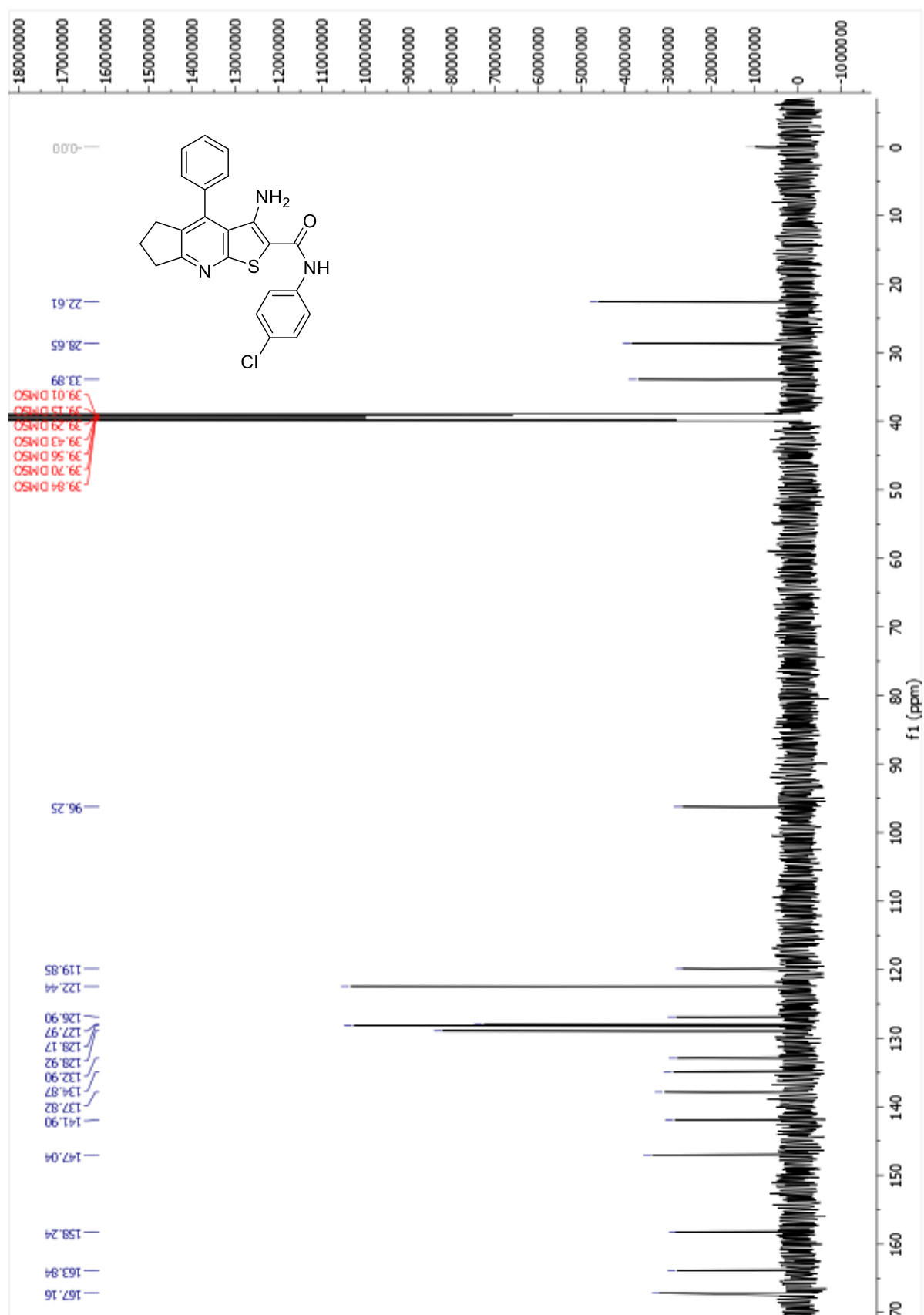
Figure S42:  $^{13}\text{C}$ -NMR spectrum of **17b** (KuSaSch100).

Figure S43: HSQC-NMR spectrum of **17b** (KuSaSch100). The black circle confirms 3 protons under one carbon signal.

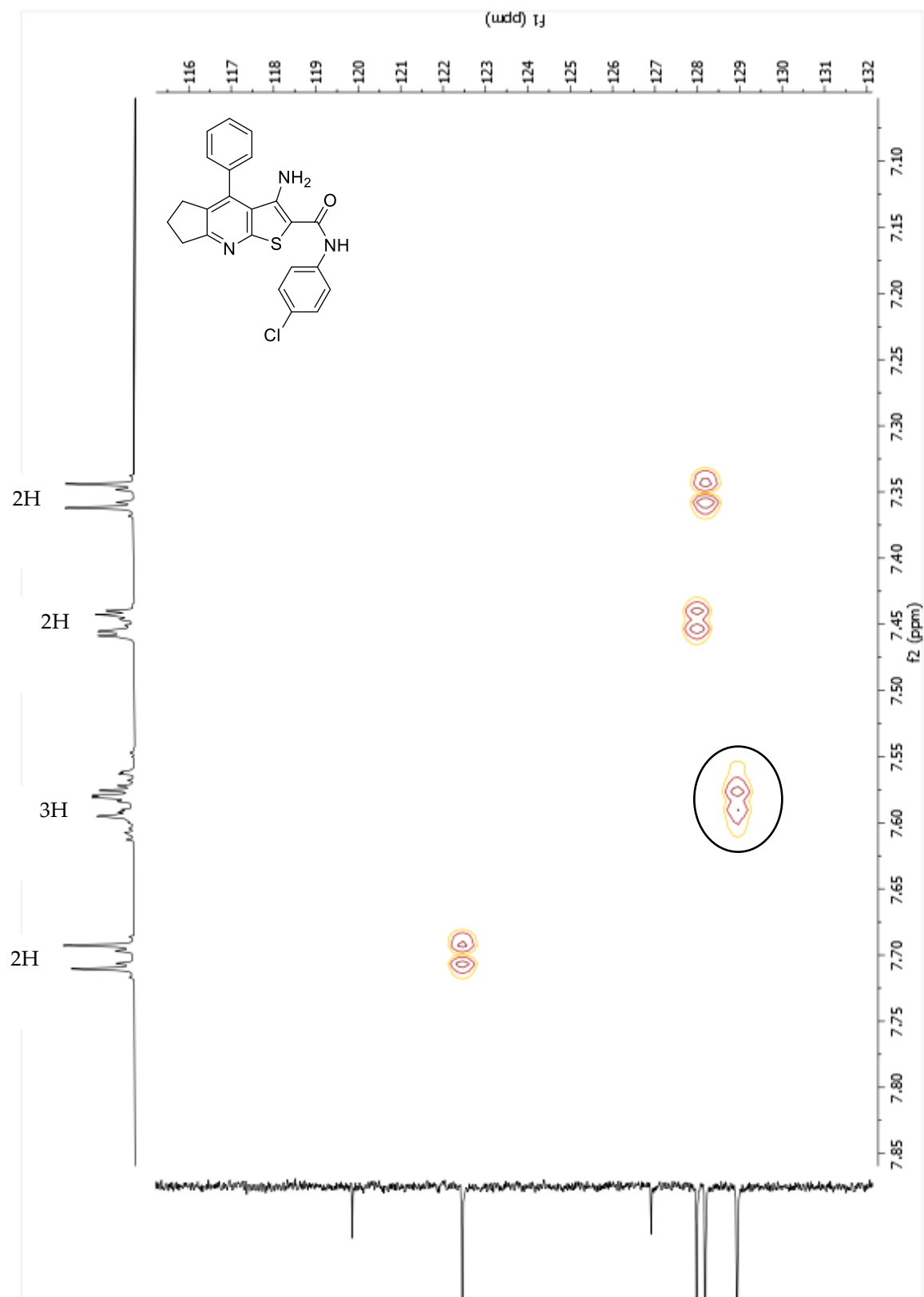
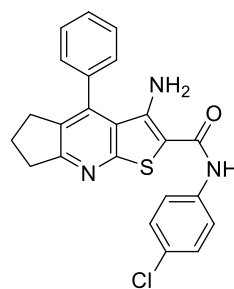
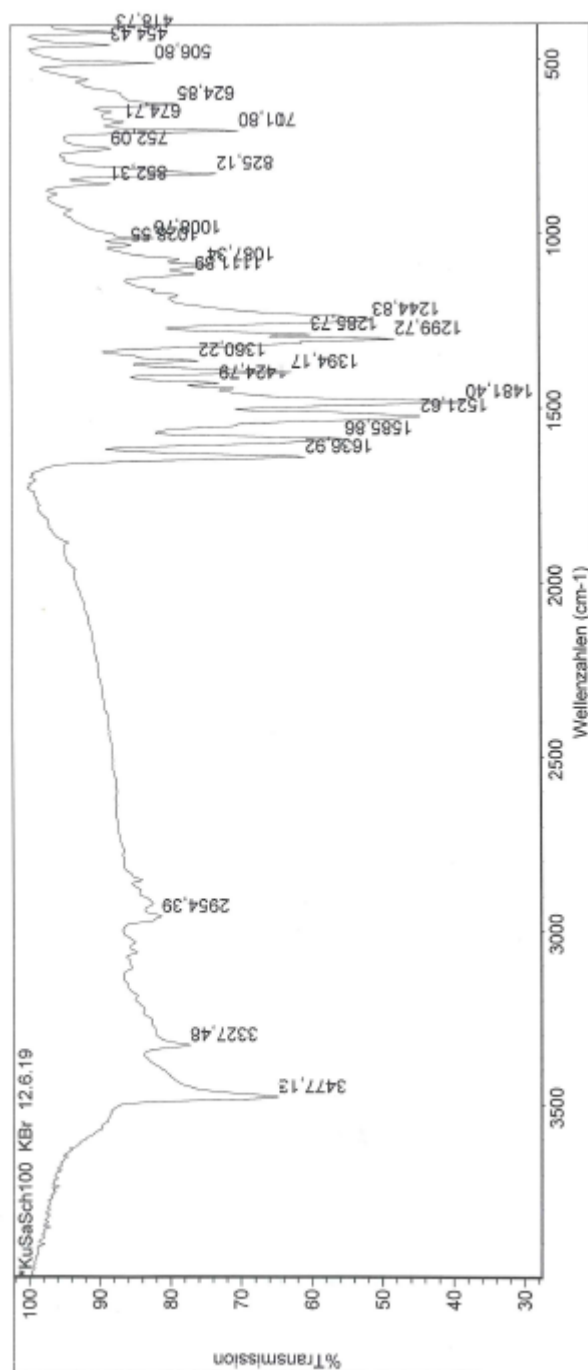


Figure S44: IR spectrum of **17b** (KuSaSch100).

Wed Jun 12 14:06:44 2019 (GMT+02:00)

SUCHE BANDEN:

Spektrum: \*KuSaSch100 KBr 12.6.19

Bereich: 3999,64 400,00

Absoluter Schwellwert: 86,637

Sensitivität: 50

Bandentabelle:

Position:	Intensität:
1481,40	37,978
1521,62	44,386
1299,72	48,001
1244,83	51,089
1585,86	55,020
1285,73	59,849
1636,92	60,641

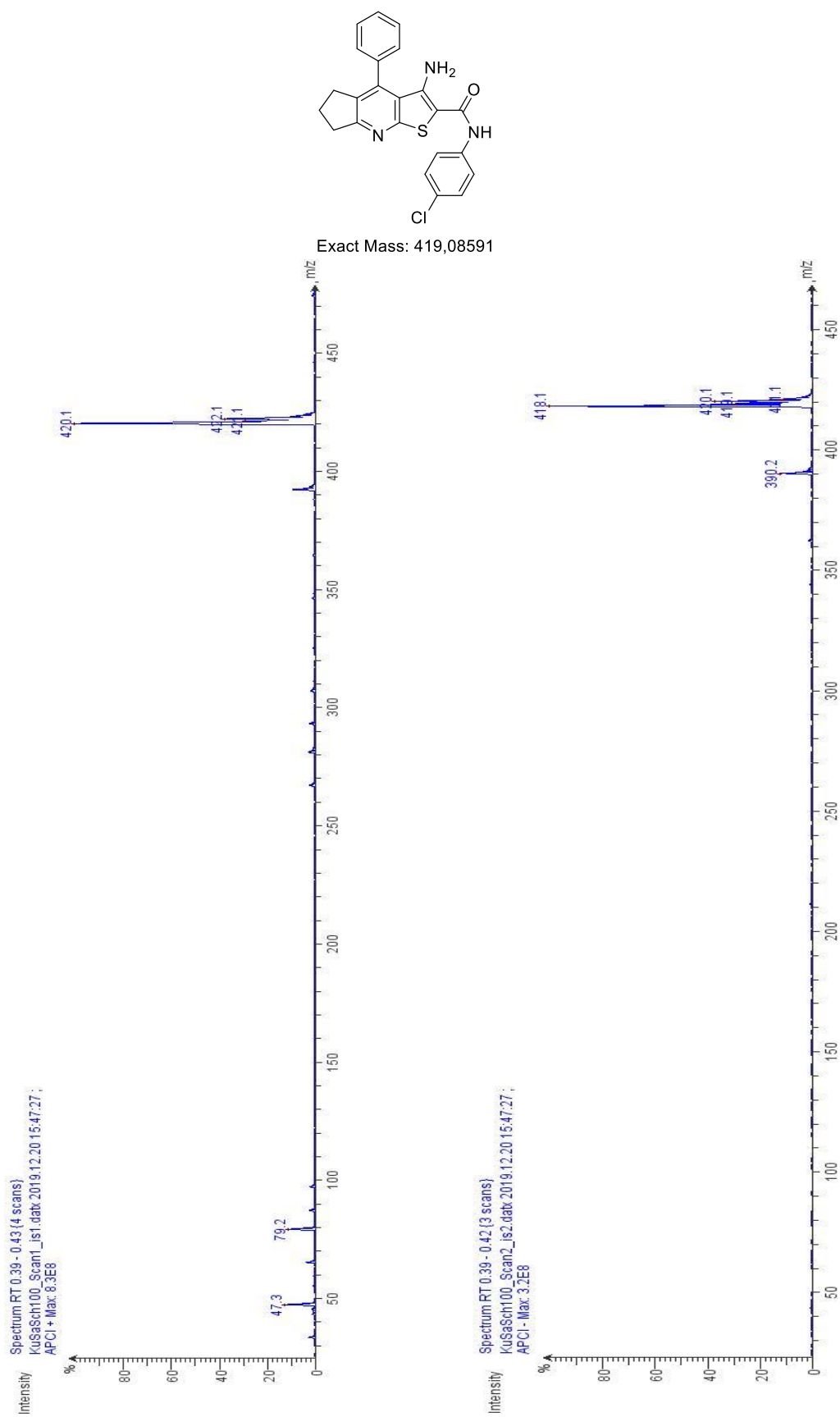
Figure S45: APCI-MS spectrum of **17b** (KuSaSch100).

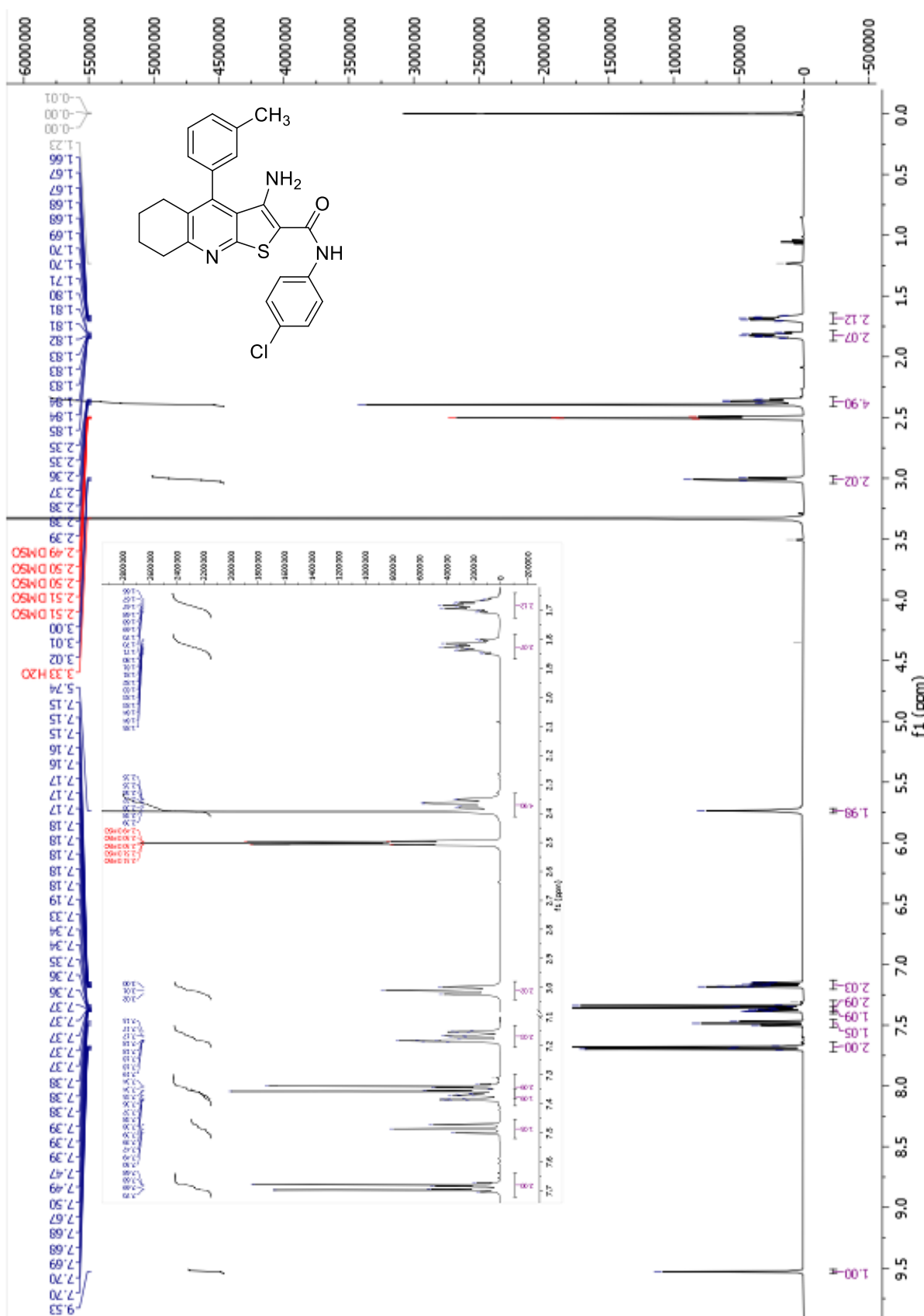
Figure S46: <sup>1</sup>H-NMR spectrum of **17e** (KuSaSch107).

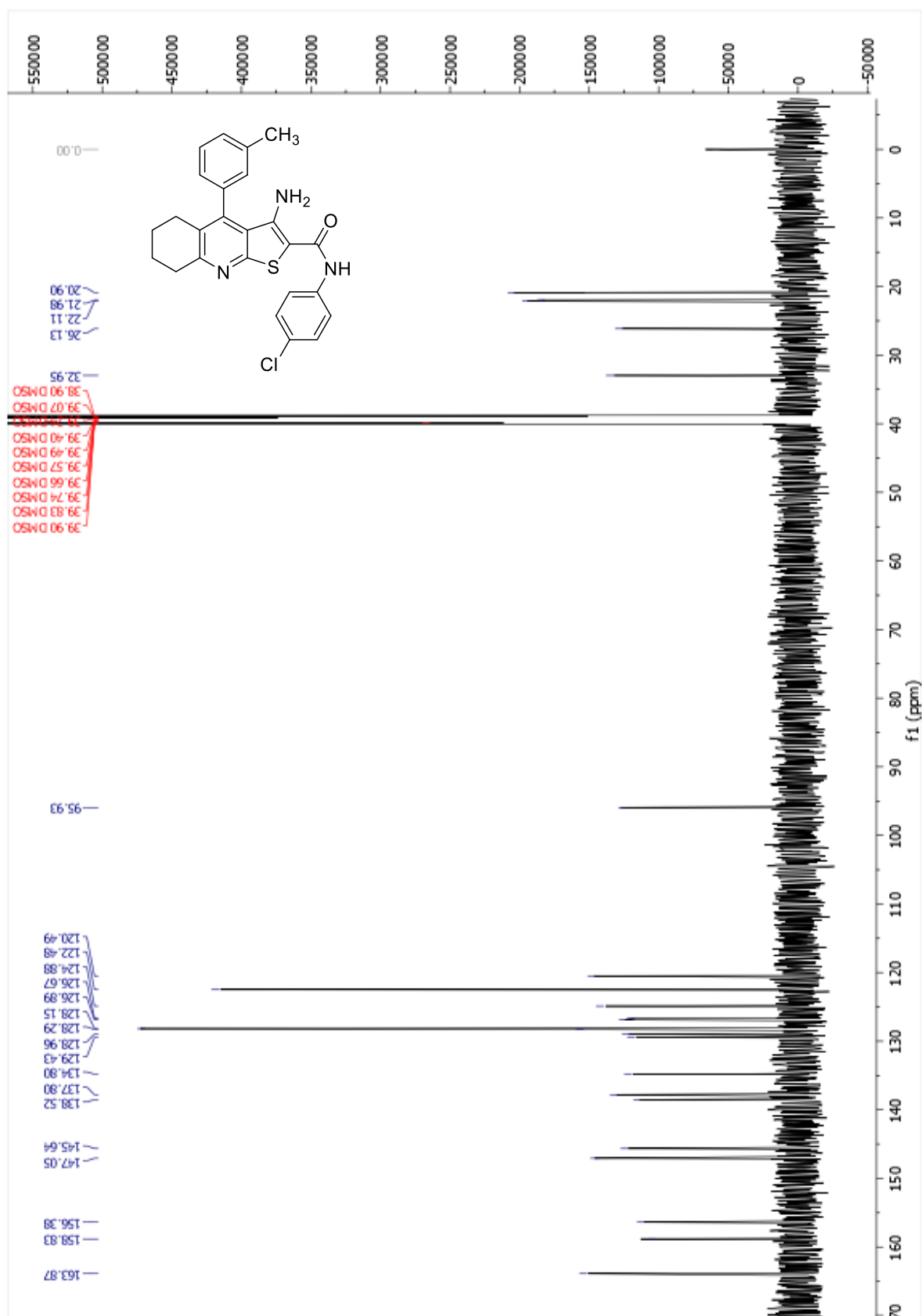
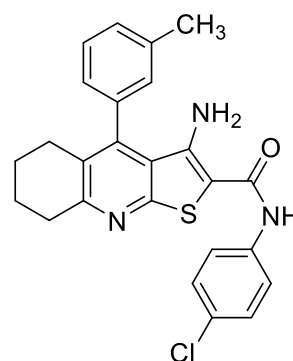
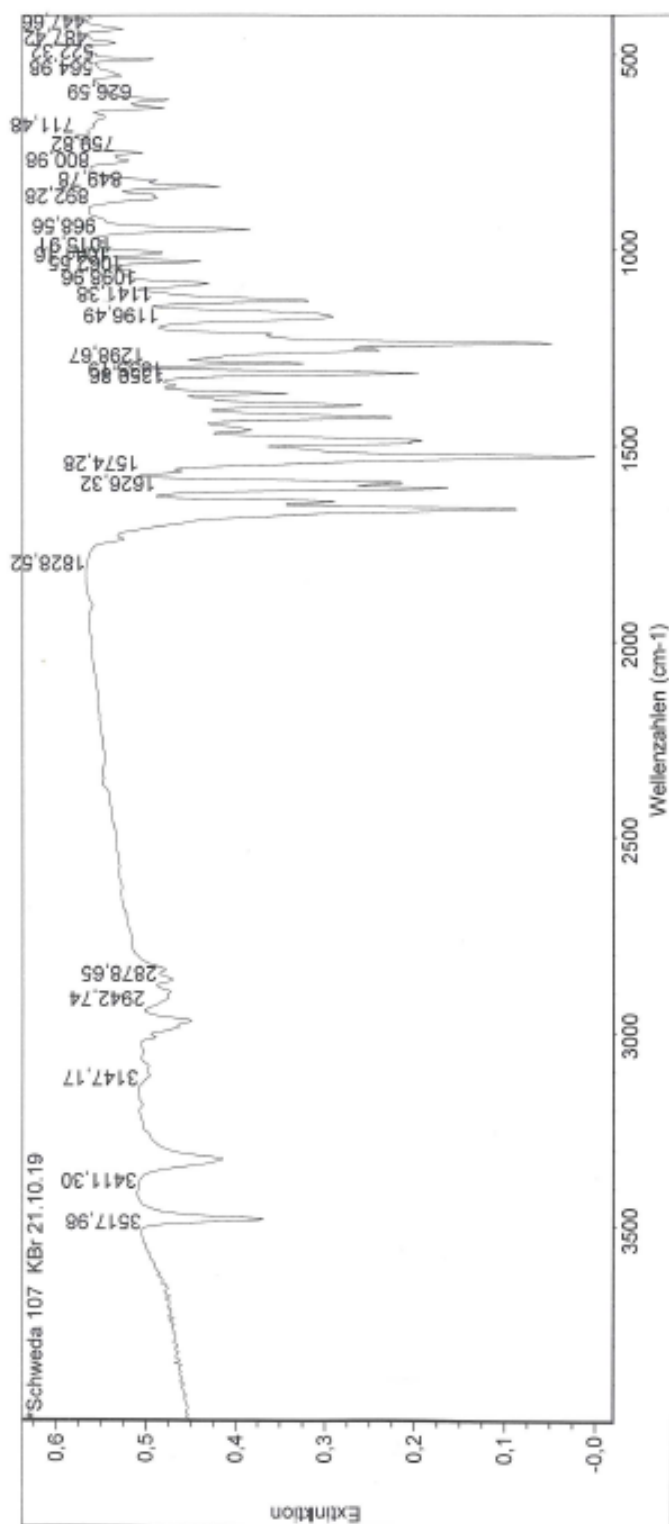
Figure S47:  $^{13}\text{C}$ -NMR spectrum of **17e** (KuSaSch107).

Figure S48: IR spectrum of **17e** (KuSaSch107).

Mon Okt 21 13:06:42 2019 (GMT+02:00)

SUCHE BANDEN:

Spektrum: \*Schweda 107 KBr 21.10.19

Bereich: 3999,64 400,00

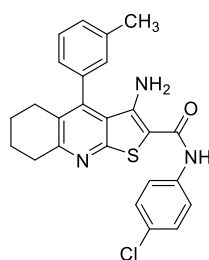
Absoluter Schwellwert: 0,467

Sensitivität: 60

Bandentabelle:

Position:	711,48	Intensität:	0,580
Position:	447,66	Intensität:	0,568
Position:	1828,52	Intensität:	0,567
Position:	487,42	Intensität:	0,565
Position:	892,28	Intensität:	0,563
Position:	800,98	Intensität:	0,563
Position:	564,98	Intensität:	0,558



Figure S49: APCI-MS spectrum of **17e** (KuSaSch107).

Exact Mass: 447,11721

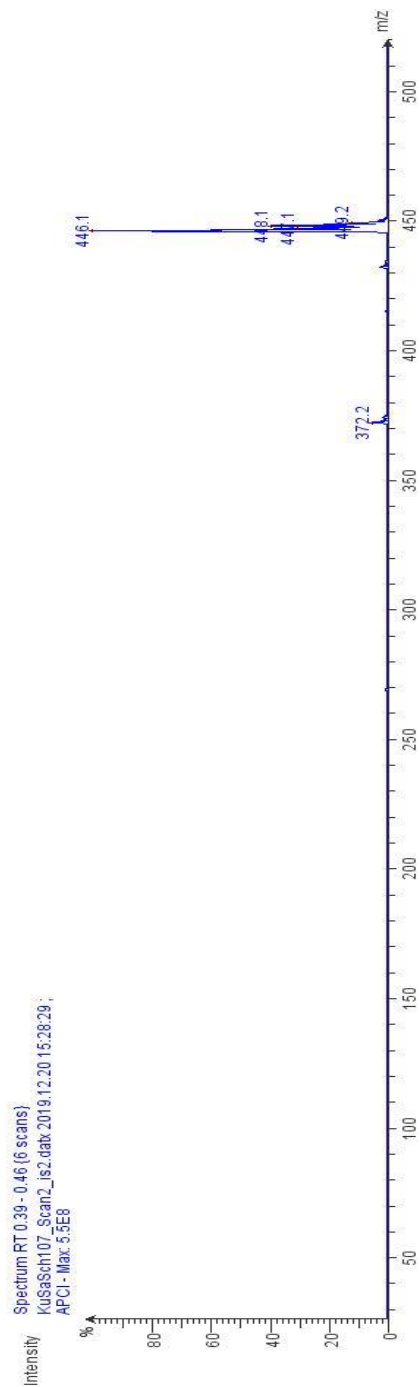
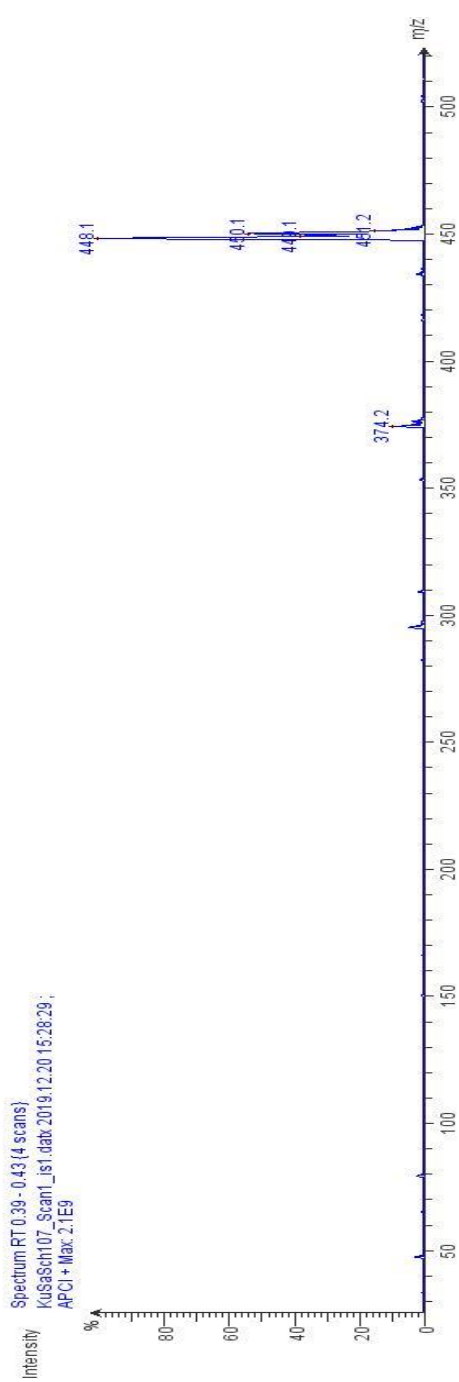




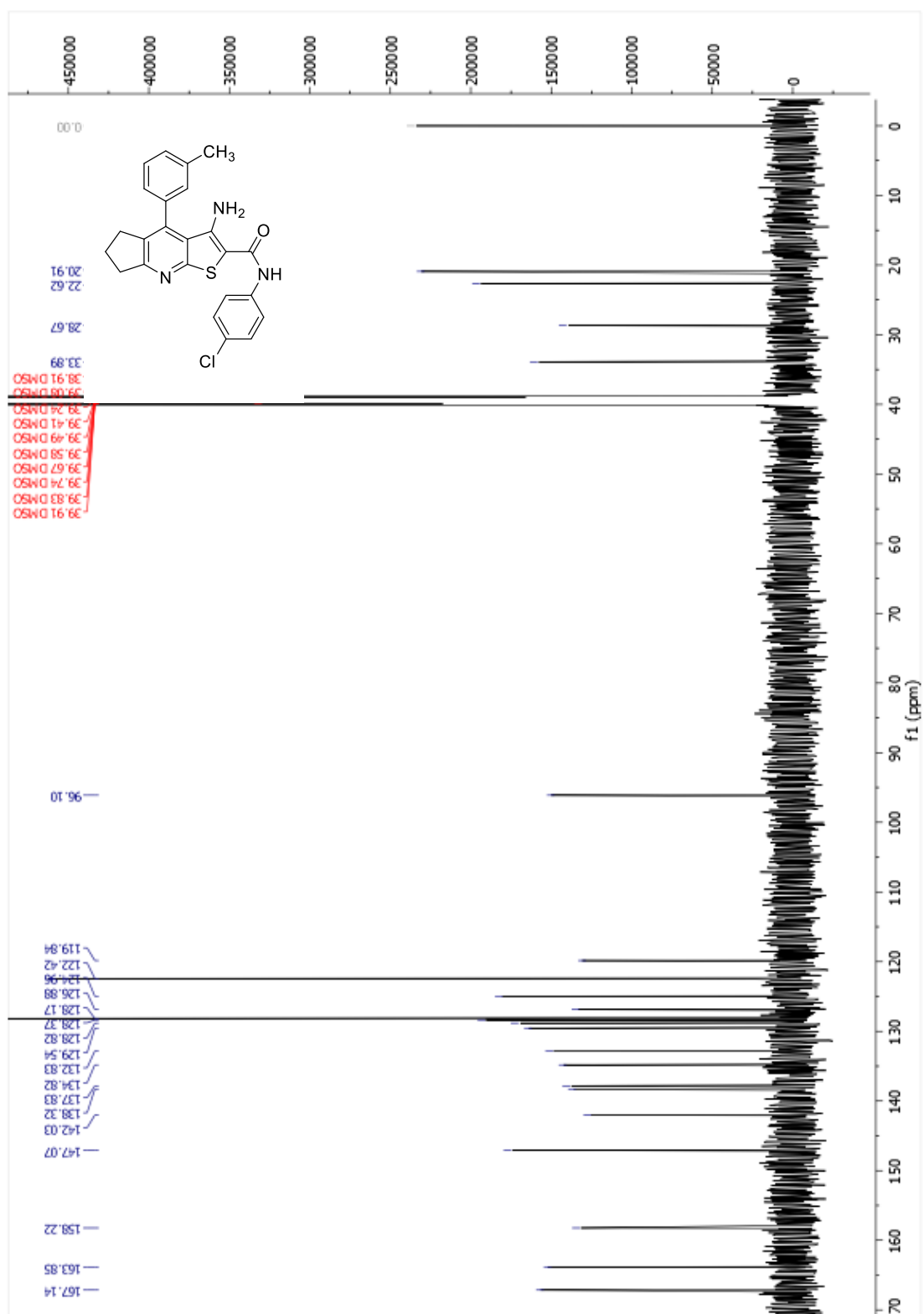
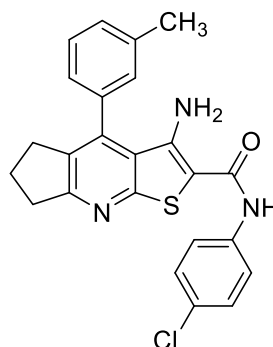
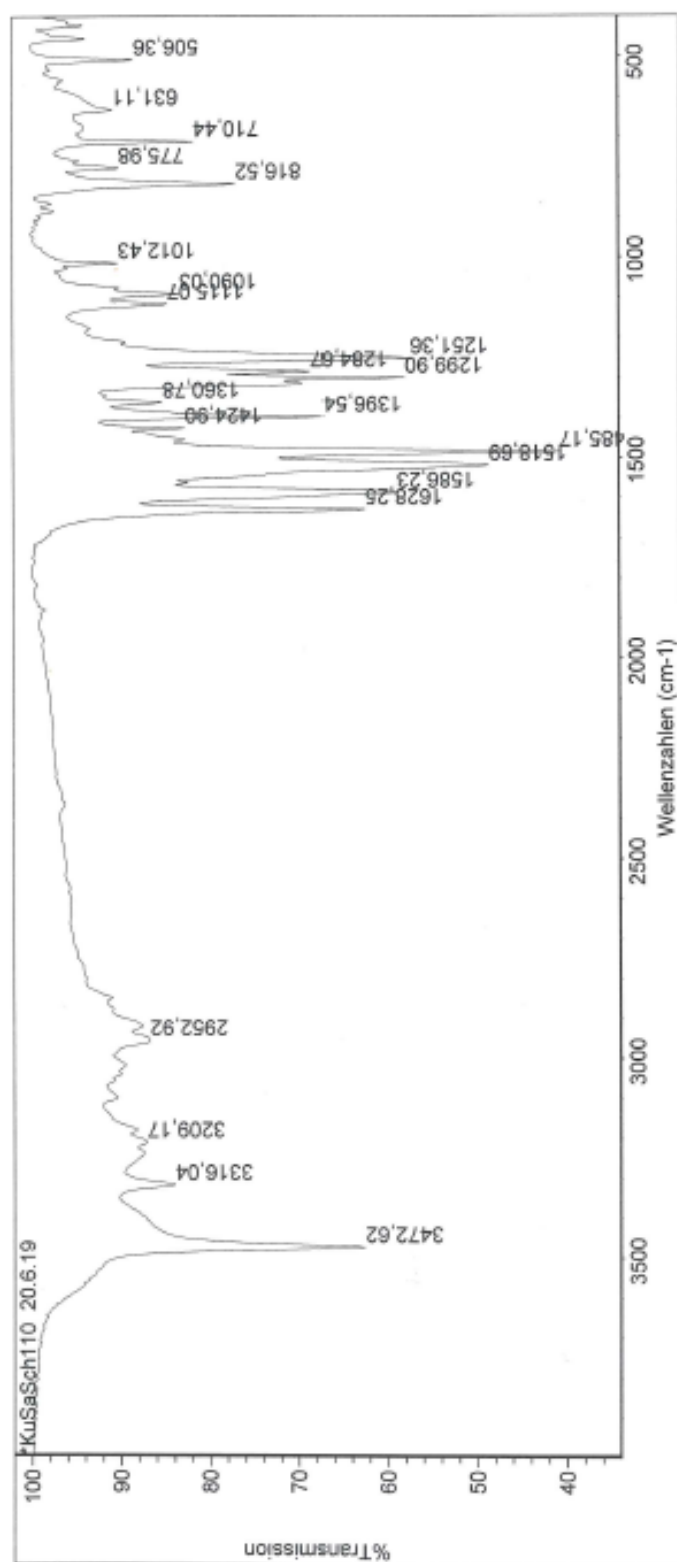
Figure S51:  $^{13}\text{C}$ -NMR spectrum of **17f** (KuSaSch110).

Figure S52: IR spectrum of **17f** (KuSaSch110).

Thu Jun 20 11:21:46 2019 (GMT+02:00)

SUCHE BANDEN:

Spektrum: \*KuSaSch110 20.6.19

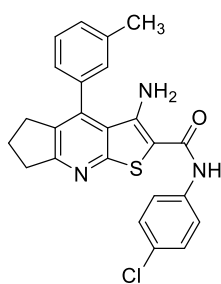
Bereich: 3999,64 400,00

Absoluter Schwellwert: 91,017

Sensitivität: 50

Bandentabelle:

Position:	1485,17	Intensität:	40,677
Position:	1518,69	Intensität:	48,530
Position:	1251,36	Intensität:	57,328
Position:	1299,90	Intensität:	57,912
Position:	1586,23	Intensität:	58,842
Position:	1628,25	Intensität:	62,427
Position:	3472,62	Intensität:	62,577

Figure S53: APCI-MS spectrum of **17f** (KuSaSch110).

Exact Mass: 433,10156

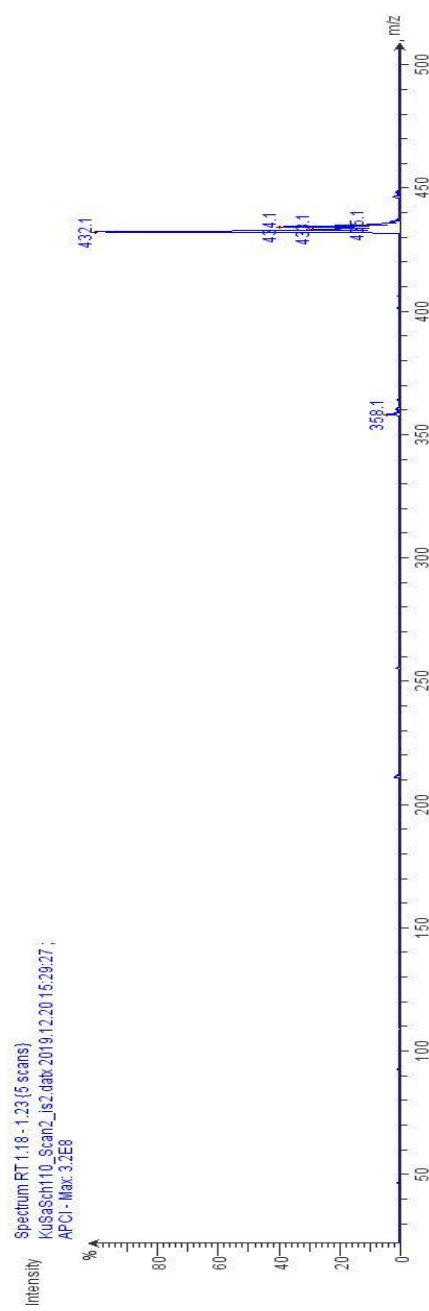
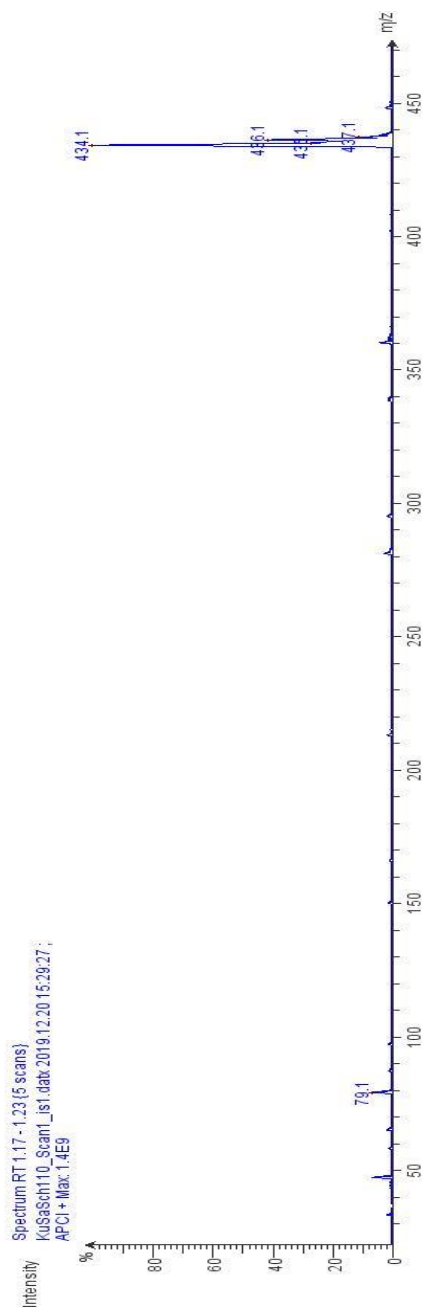


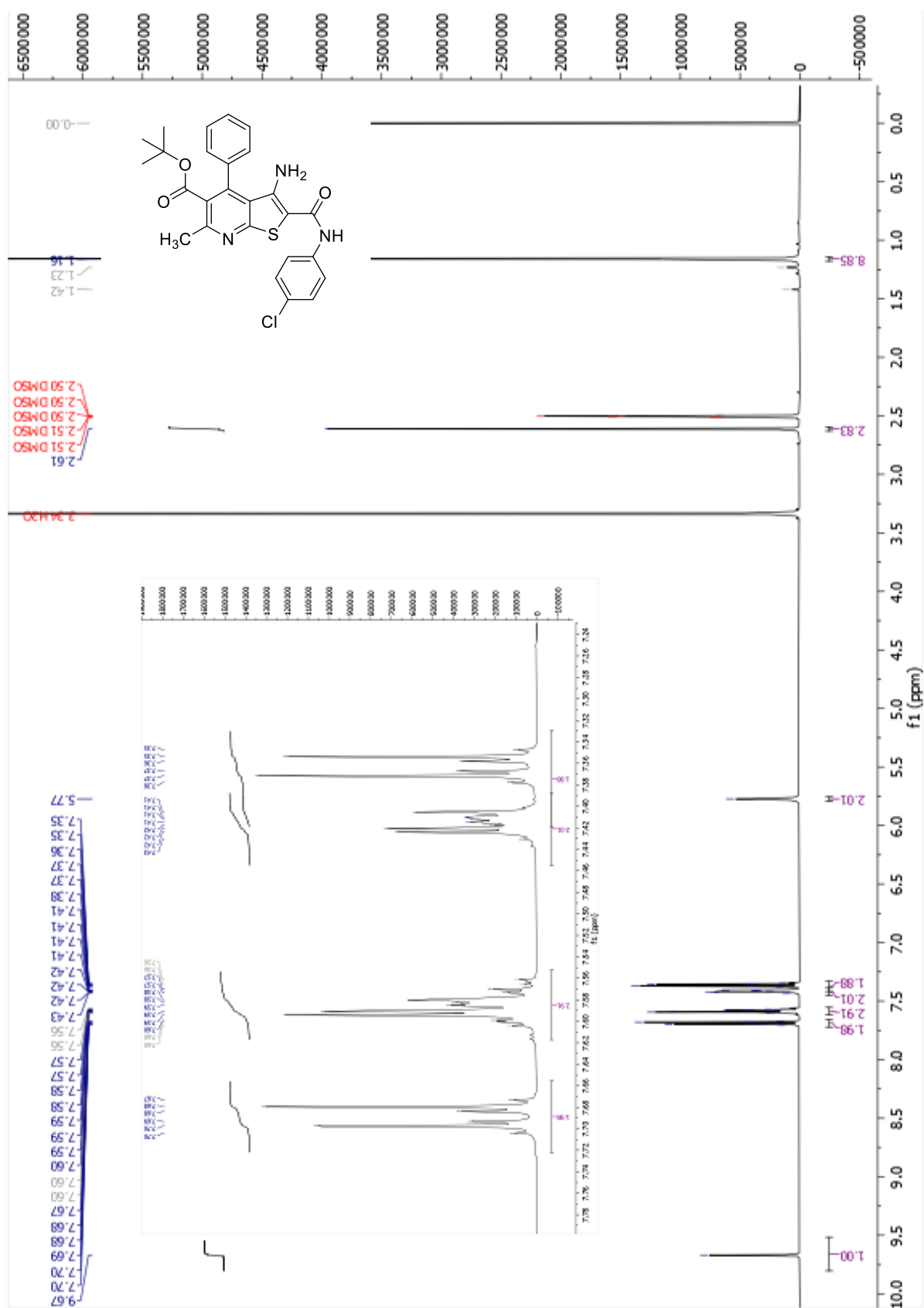
Figure S54:  $^1\text{H-NMR}$  spectrum of **17g** (KuSaSch111).

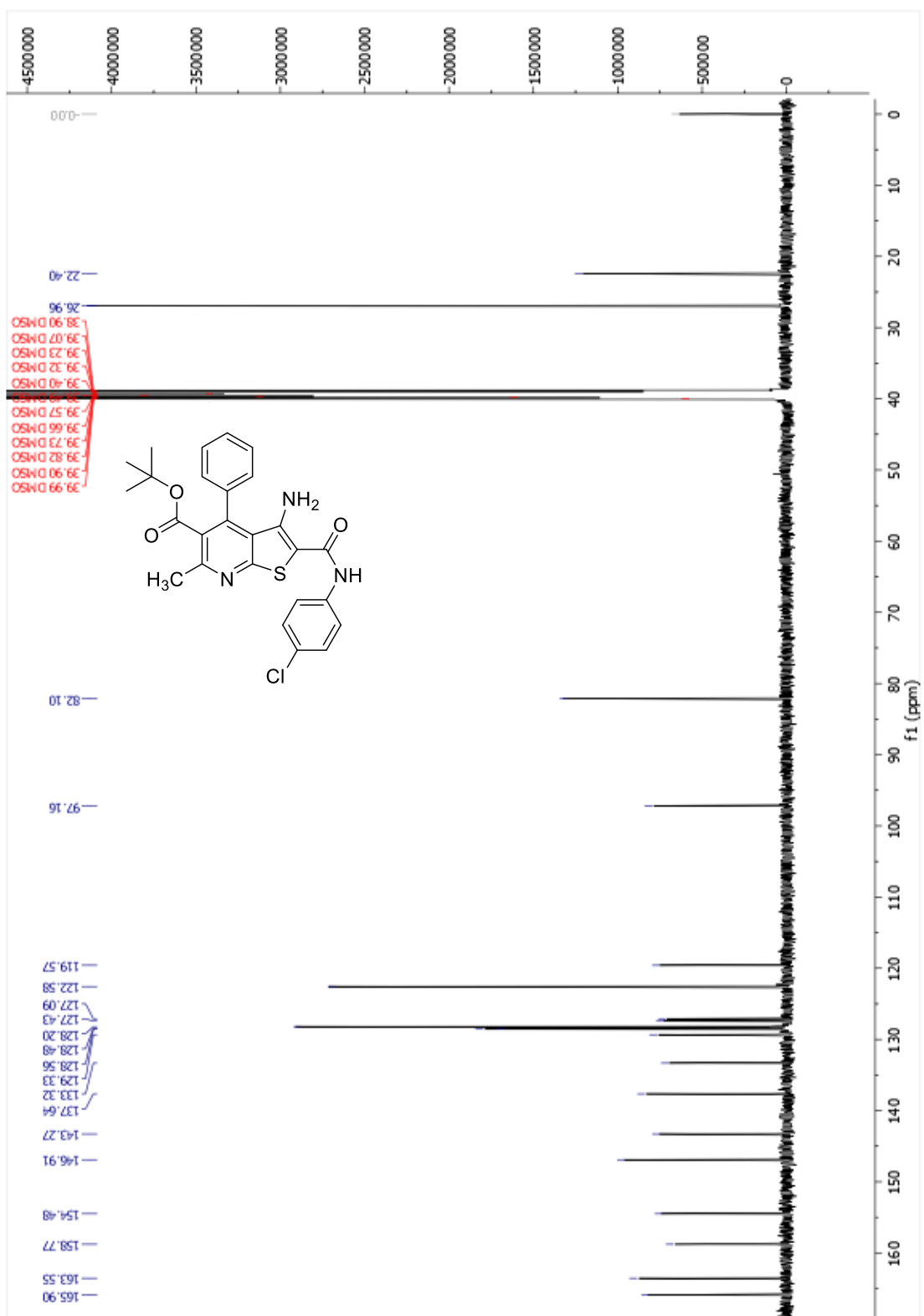
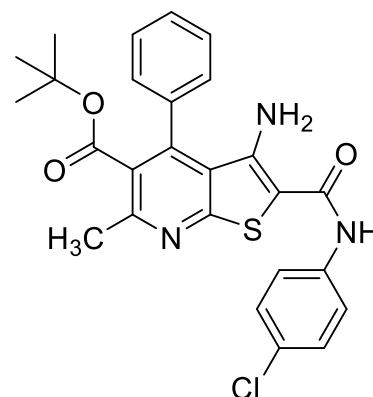
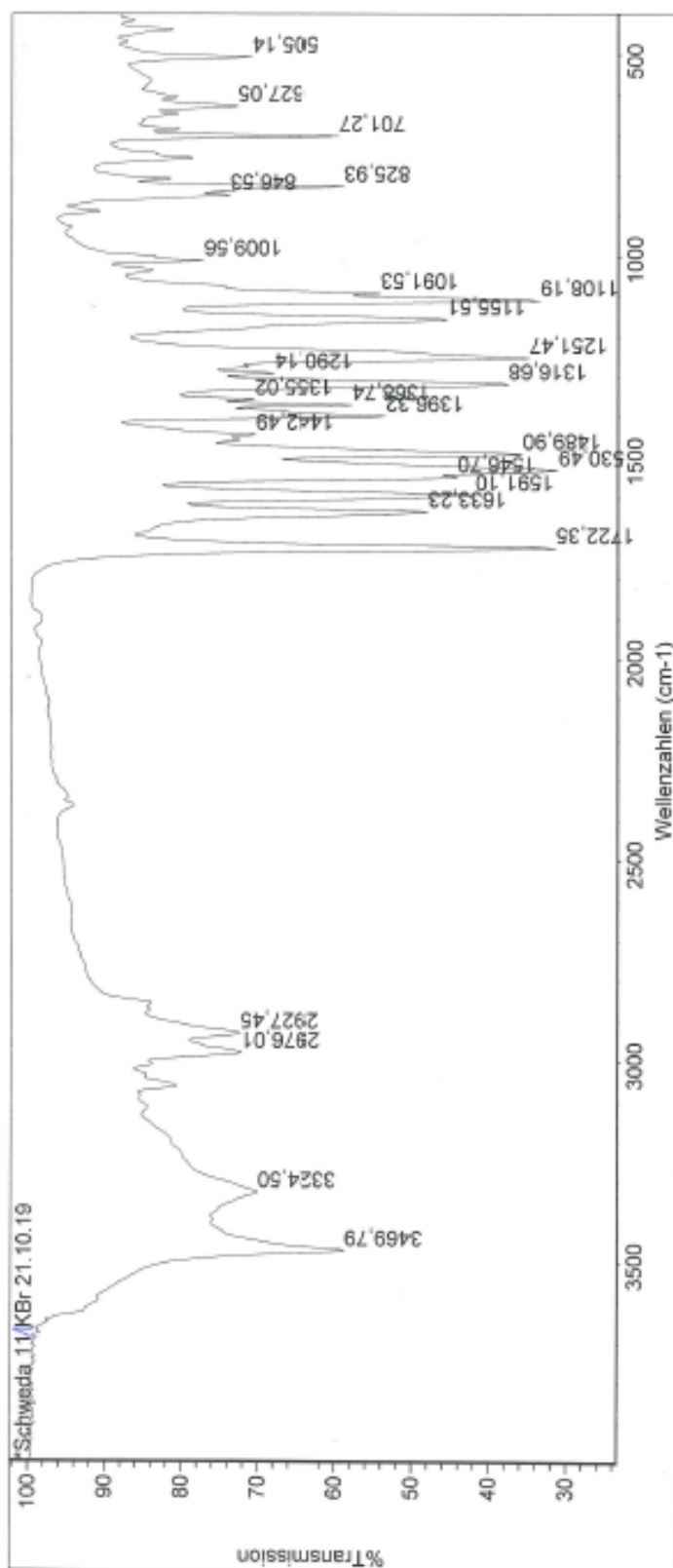
Figure S55:  $^{13}\text{C}$ -NMR spectrum of **17f** (KuSaSch111).

Figure S56: IR spectrum of **17f** (KuSaSch111).

Mon Okt 21 10:47:18 2019 (GMT+02:00)

SUCHE BANDEN:

Spektrum: \*Schweda 11/KBr 21.10.19

Bereich: 3999,64 400,00

Absoluter Schwellwert: 78,073

Sensitivität: 60

Bandentabelle:

Position:	1530,49	Intensität:	31,150
Position:	1722,35	Intensität:	31,451
Position:	1108,19	Intensität:	33,485
Position:	1251,47	Intensität:	34,966
Position:	1489,90	Intensität:	35,764
Position:	1316,68	Intensität:	37,631
Position:	1591,10	Intensität:	41,909



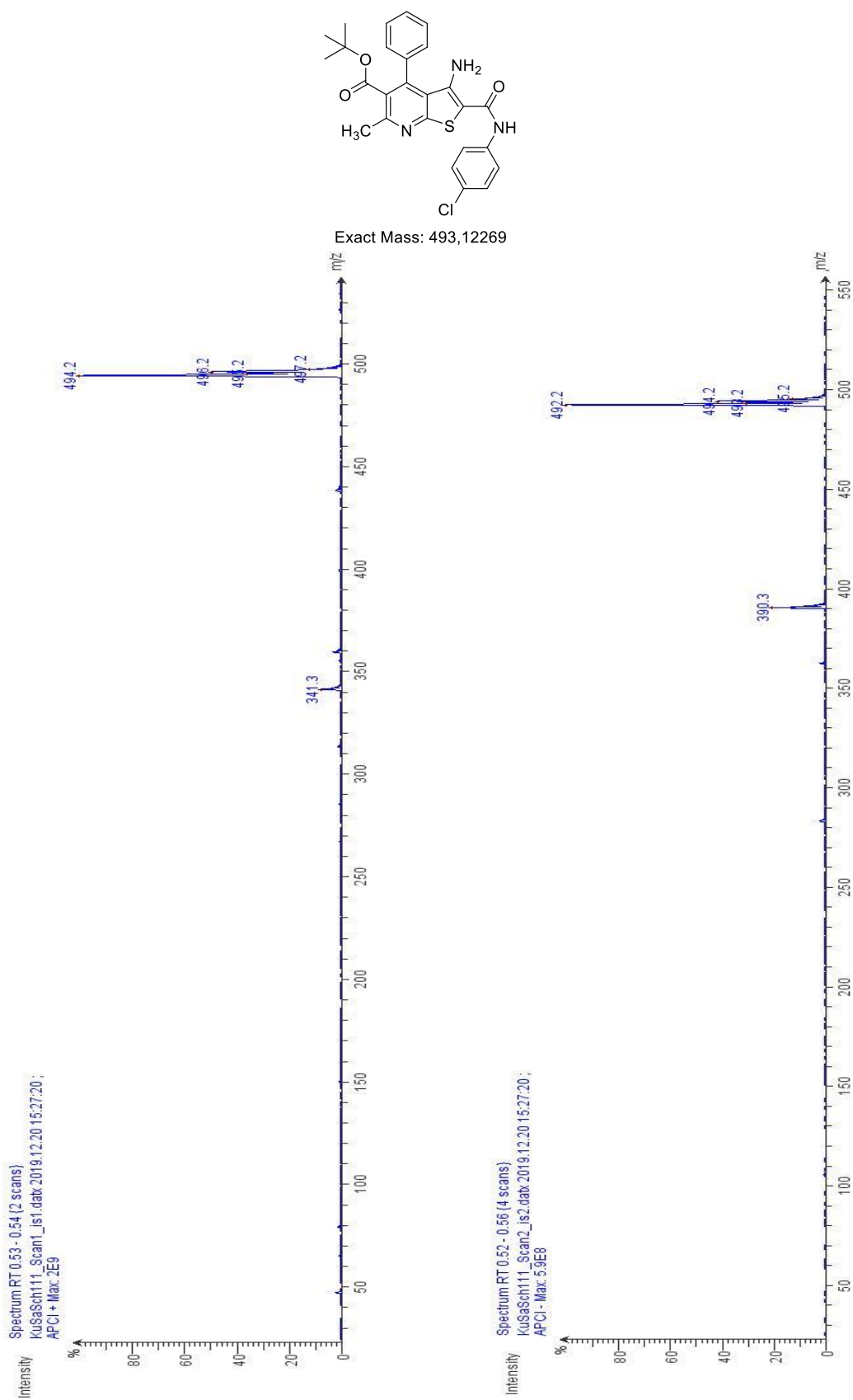
Figure S57: APCI-MS spectrum of **17f** (KuSaSch111).

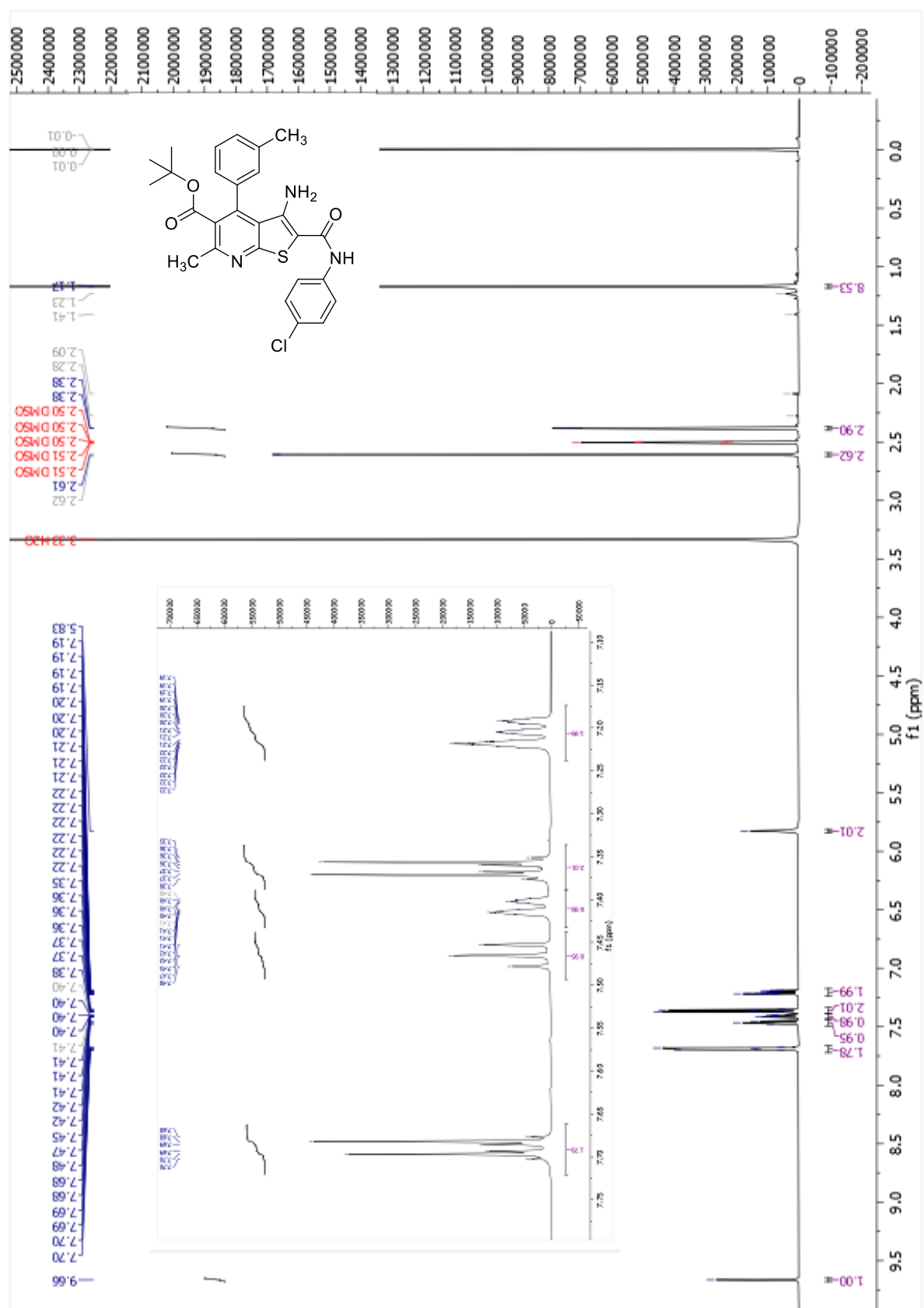
Figure S58:  $^1\text{H-NMR}$  spectrum of **17h** (KuSaSch112).

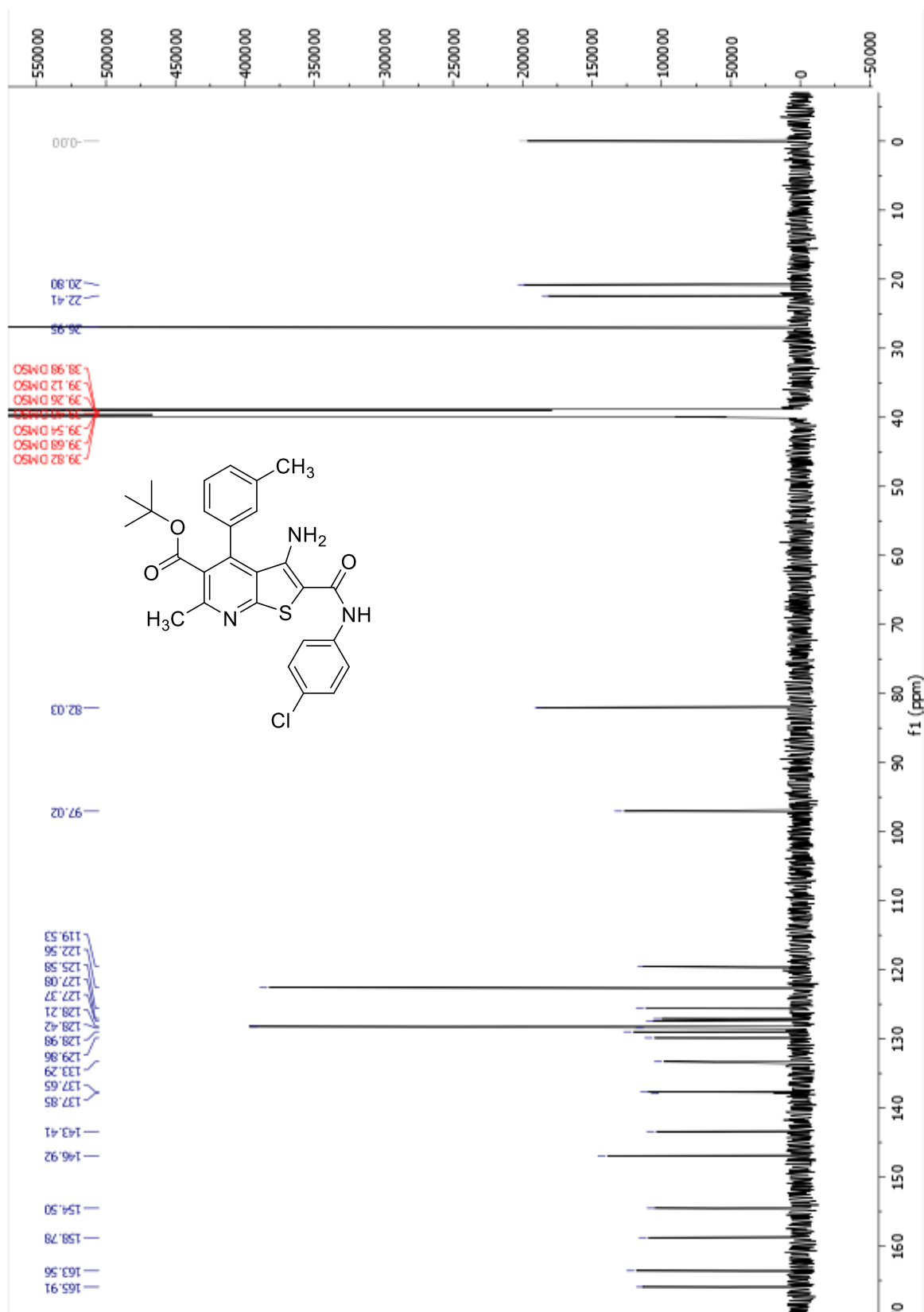
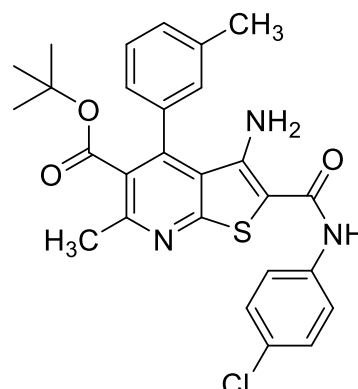
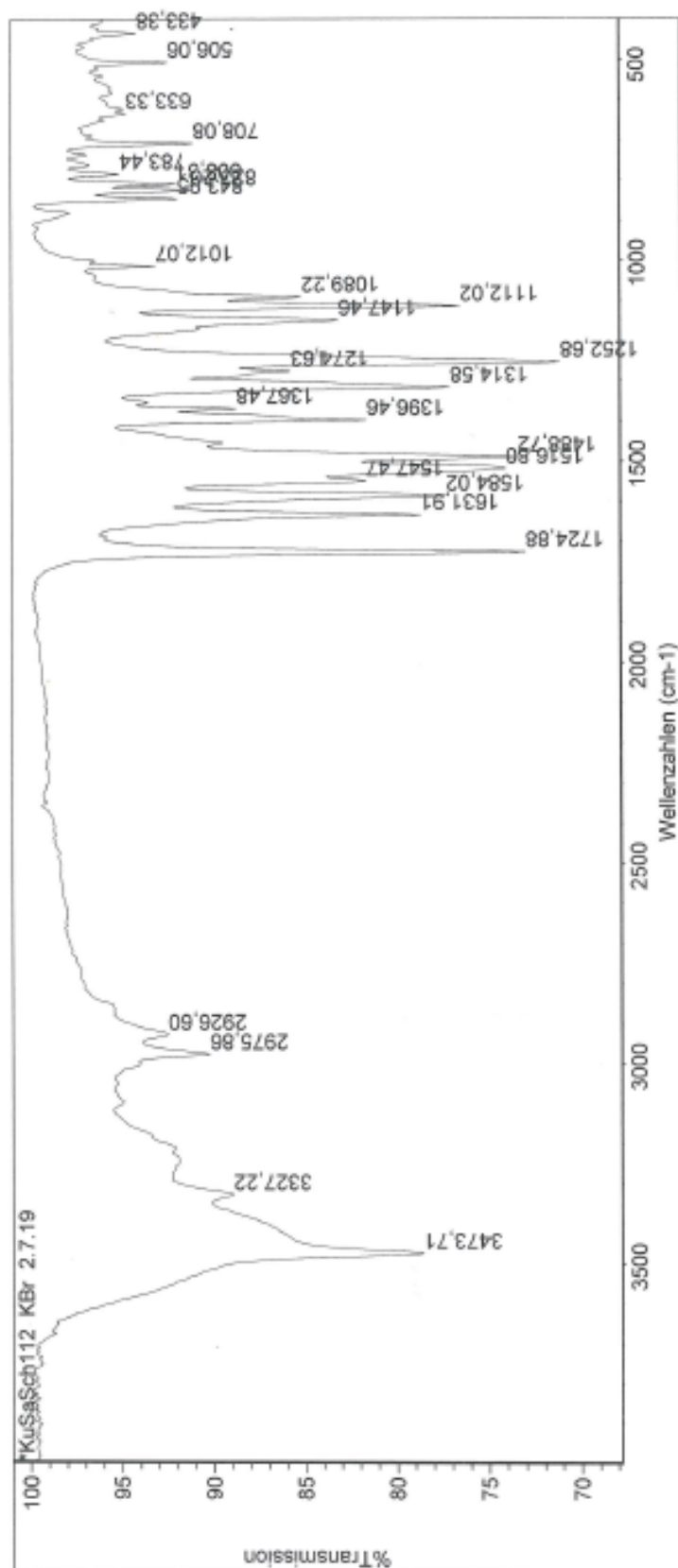
Figure S59:  $^{13}\text{C}$ -NMR spectrum of **17h** (KuSaSch112).

Figure S60: IR spectrum of **17h** (KuSaSch112).

Tue Jul 02 11:08:55 2019 (GMT+02:00)

SUCHE BANDEN:

Spektrum: \*KuSaSch112 KBr 2.7.19

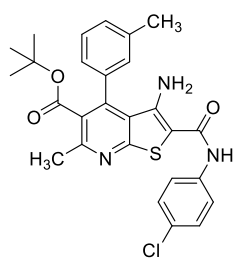
Bereich: 3999,64 400,00

Absoluter Schwellwert: 95,401

Sensitivität: 50

Bandentabelle:

Position:	1252,68	Intensität:	71,078
Position:	1724,88	Intensität:	72,978
Position:	1488,72	Intensität:	73,371
Position:	1516,80	Intensität:	74,028
Position:	1112,02	Intensität:	76,504
Position:	1314,58	Intensität:	77,063
Position:	1584,02	Intensität:	77,281

Figure S61: APCI-MS spectrum of **17h** (KuSaSch112).

Exact Mass: 507,13834

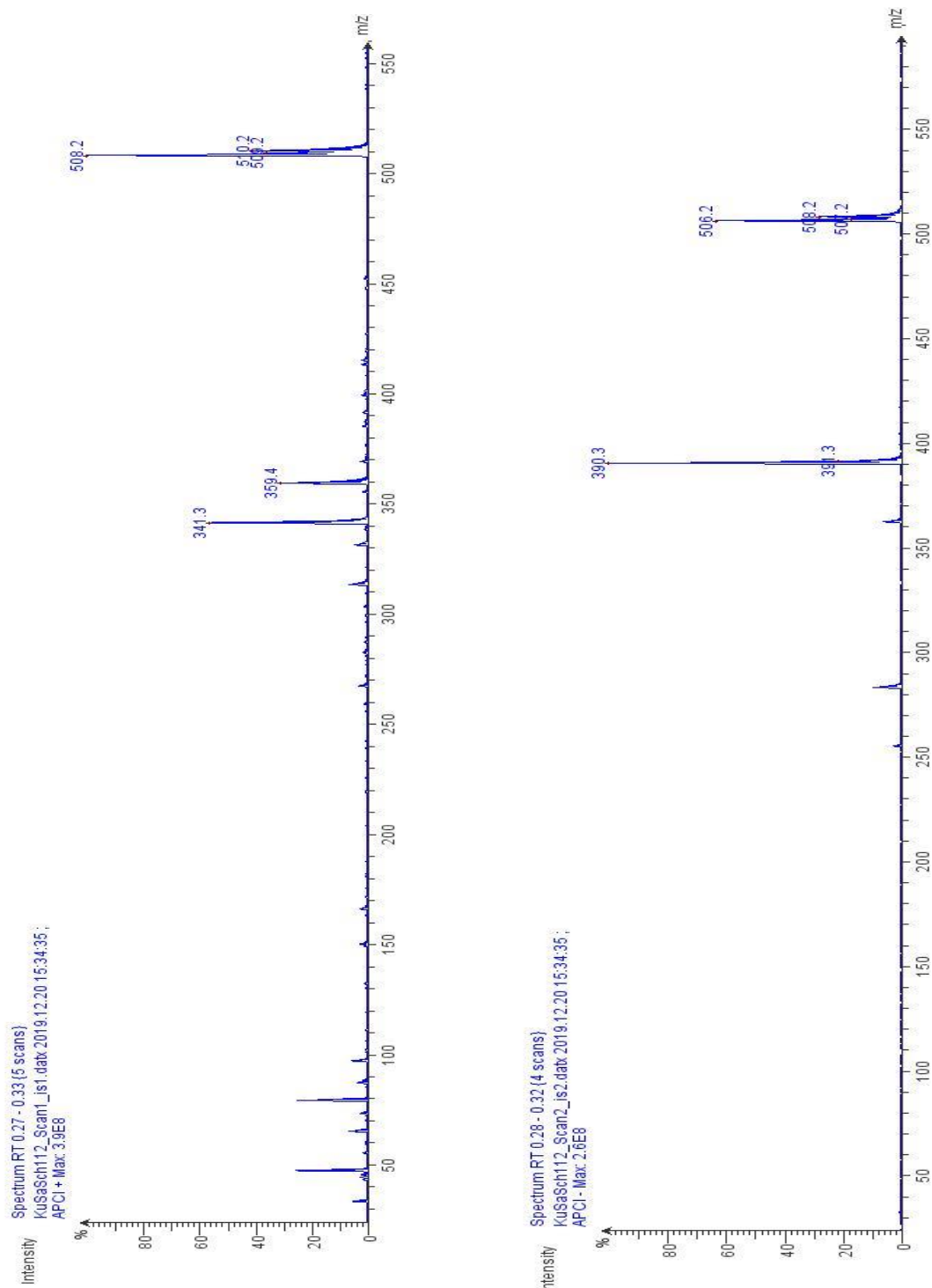


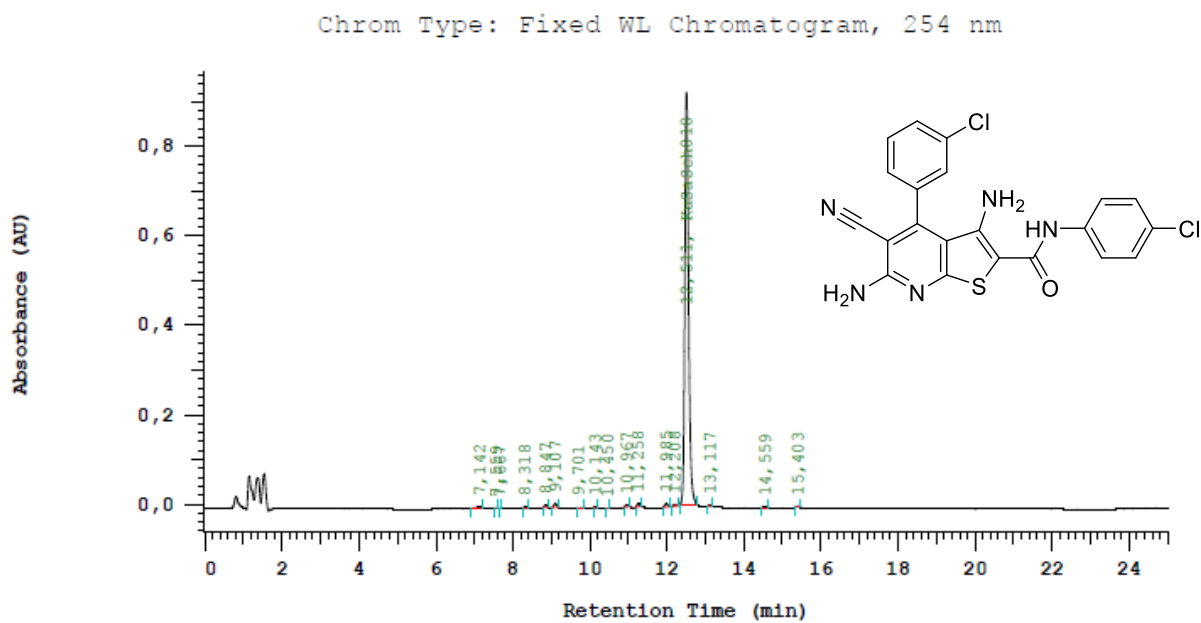
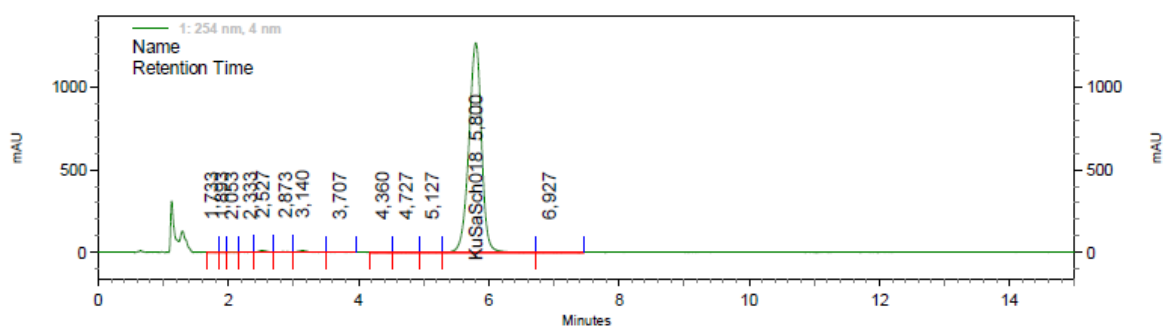
Figure S62: HPLC chromatogram of **9a** (KuSaSch018) – gradient method (HPLC 3)Figure S63: HPLC chromatogram of **9a** (KuSaSch018) – isocratic method (HPLC 1)

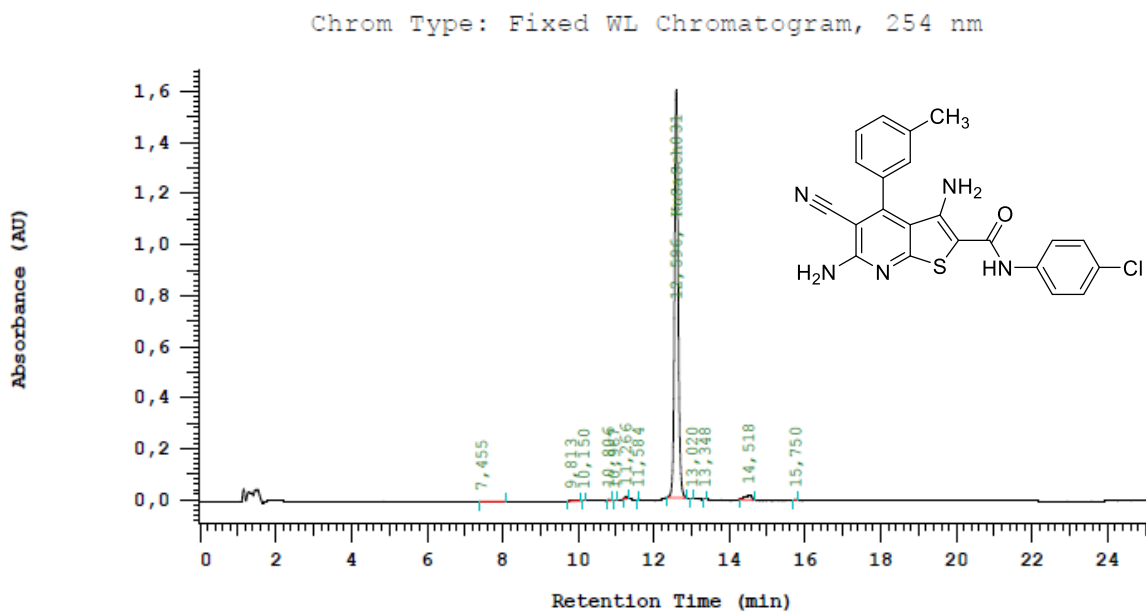
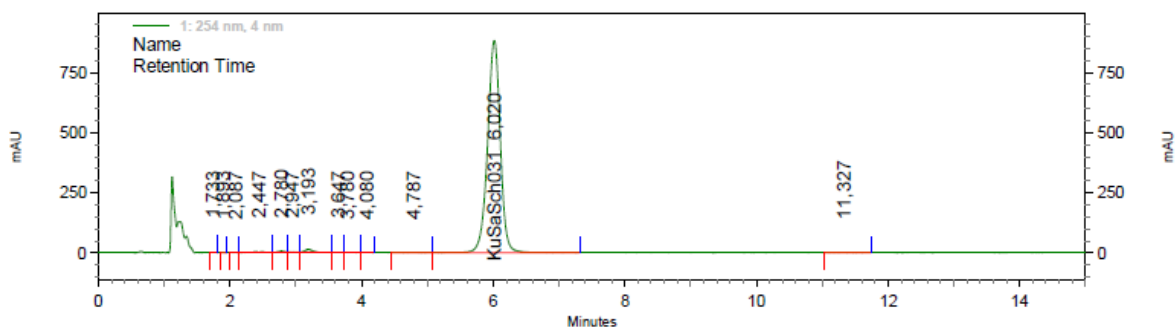
Figure S64: HPLC chromatogram of **9e** (KuSaSch031) – gradient method (HPLC 3)Figure S65: HPLC chromatogram of **9e** (KuSaSch031) – isocratic method (HPLC 1)

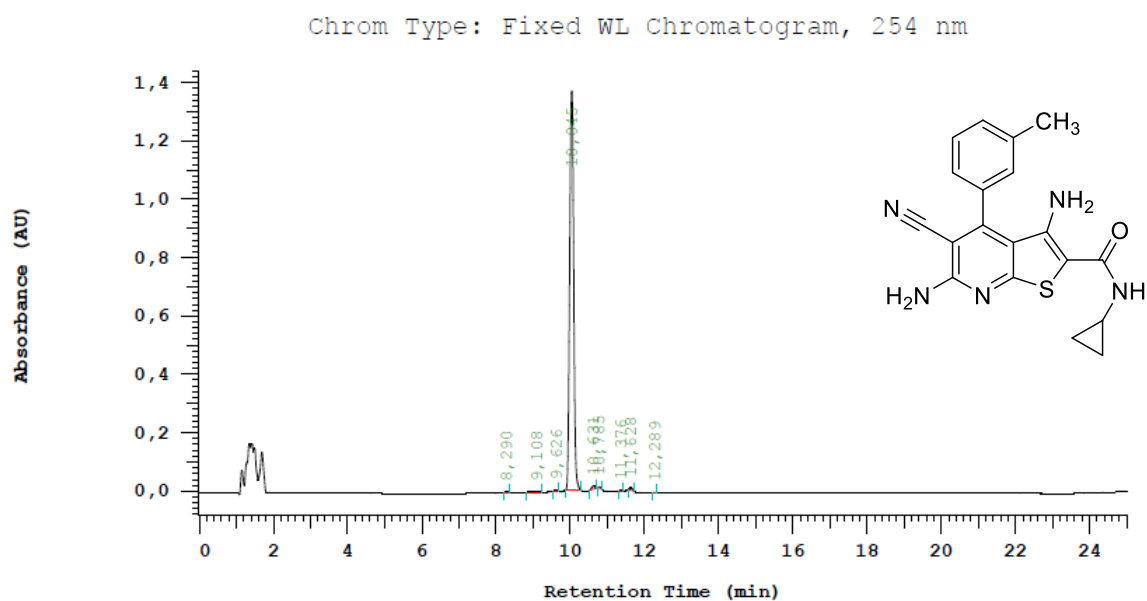
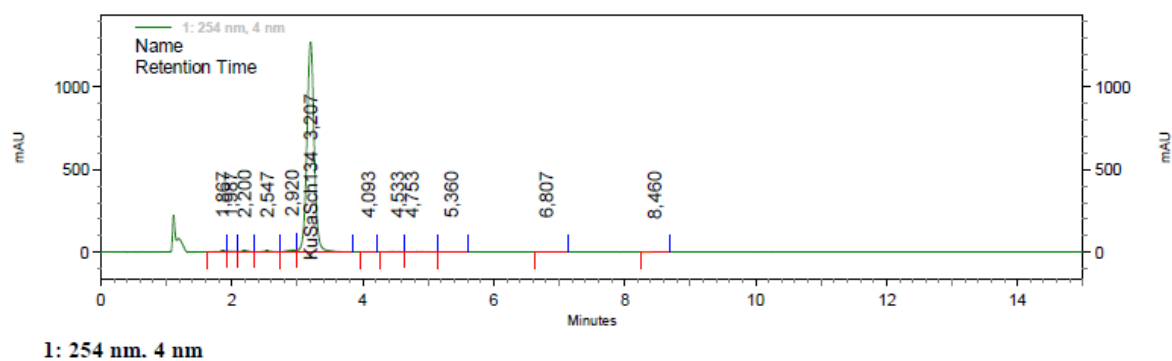
Figure S66: HPLC chromatogram of **9m** (KuSaSch134) – gradient method (HPLC 3)Figure S67: HPLC chromatogram of **9m** (KuSaSch134) – isocratic method (HPLC 1)



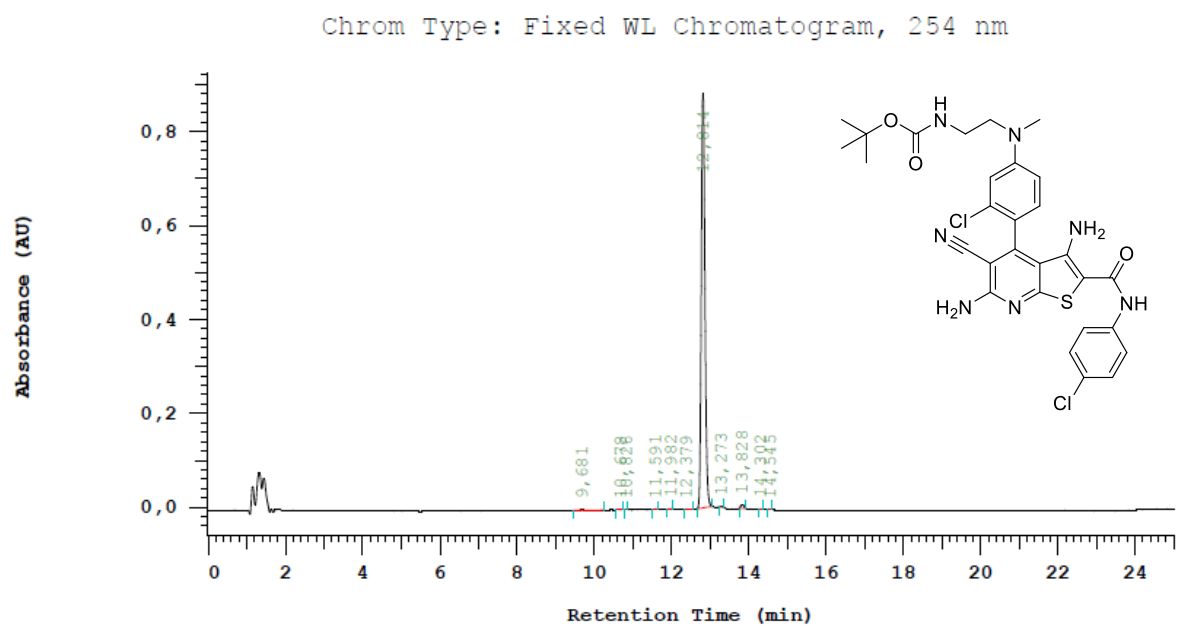
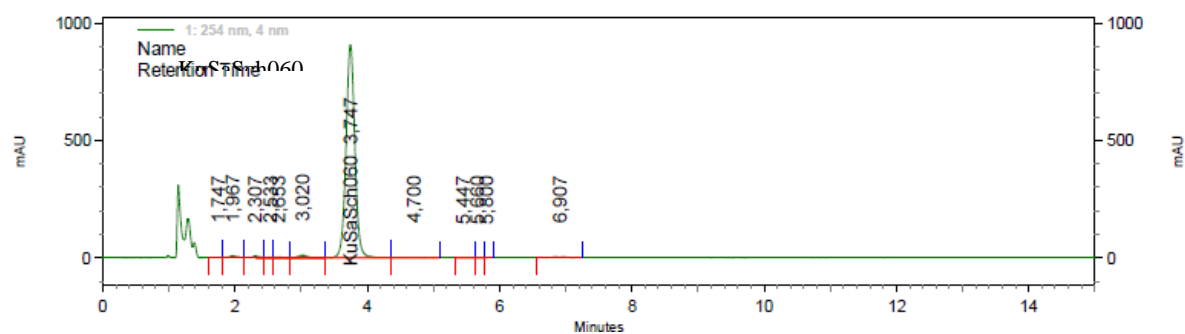
Figure S68: HPLC chromatogram of **9y** (KuSaSch060) – gradient method (HPLC 3)Figure S69: HPLC chromatogram of **9y** (KuSaSch060) – isocratic method (HPLC 1)

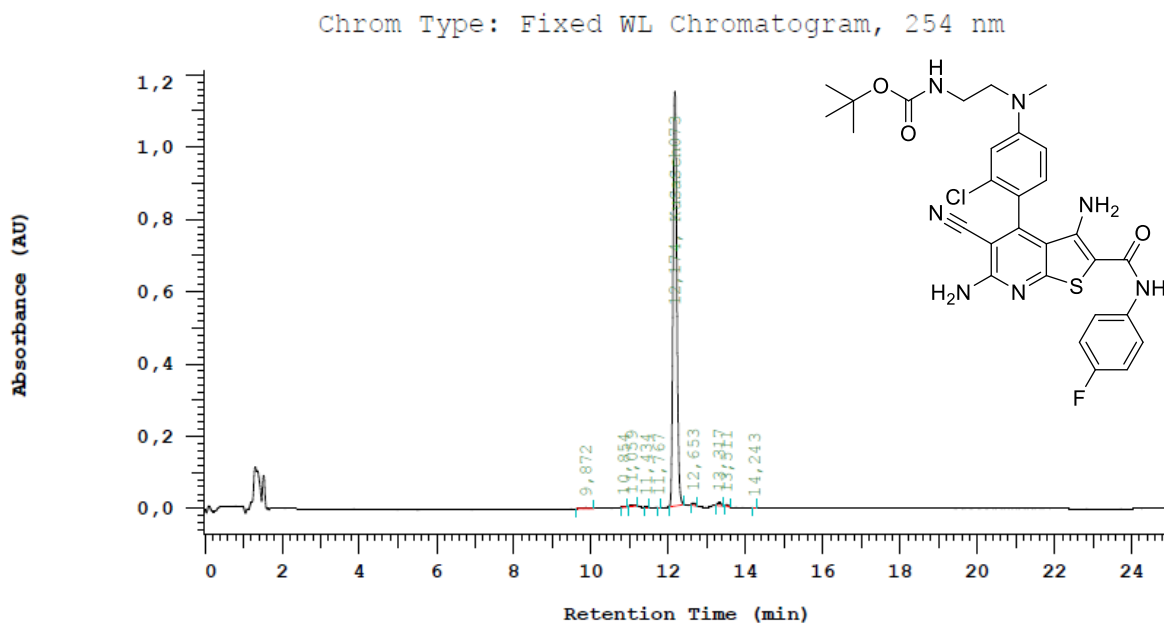
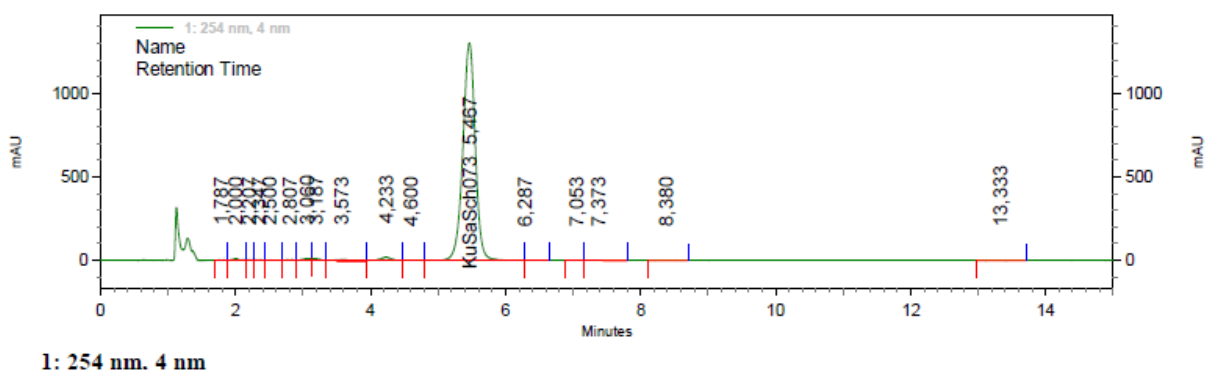
Figure S70: HPLC chromatogram of **9ac** (KuSaSch073) – gradient method (HPLC 3)Figure S71: HPLC chromatogram of **9ac** (KuSaSch073) – isocratic method (HPLC 1)

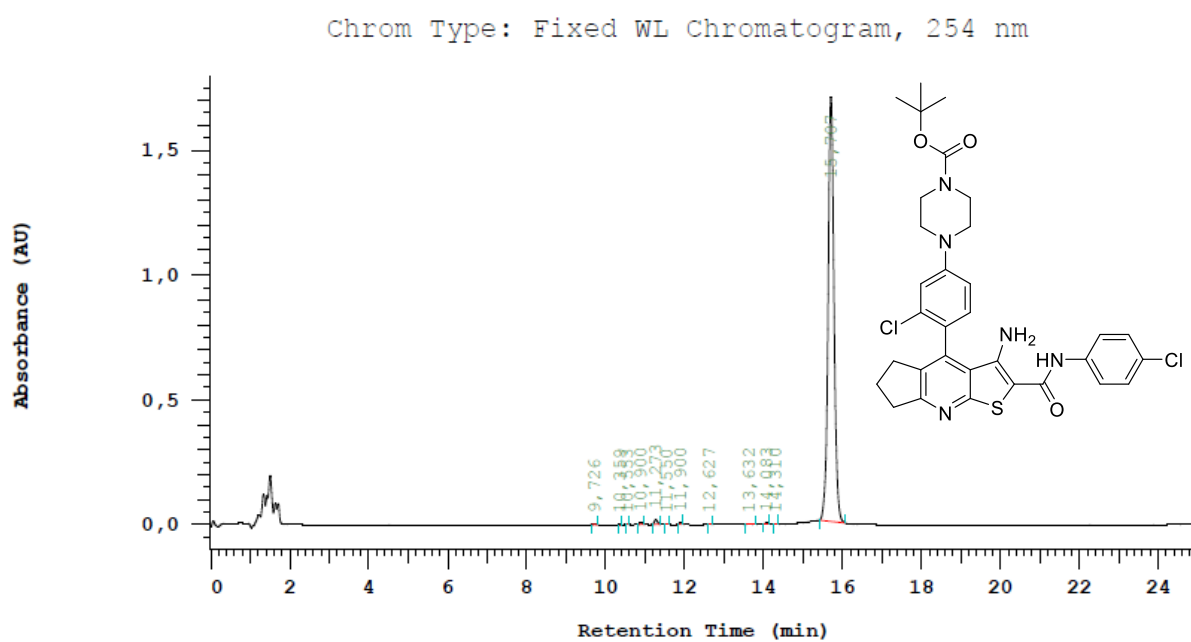
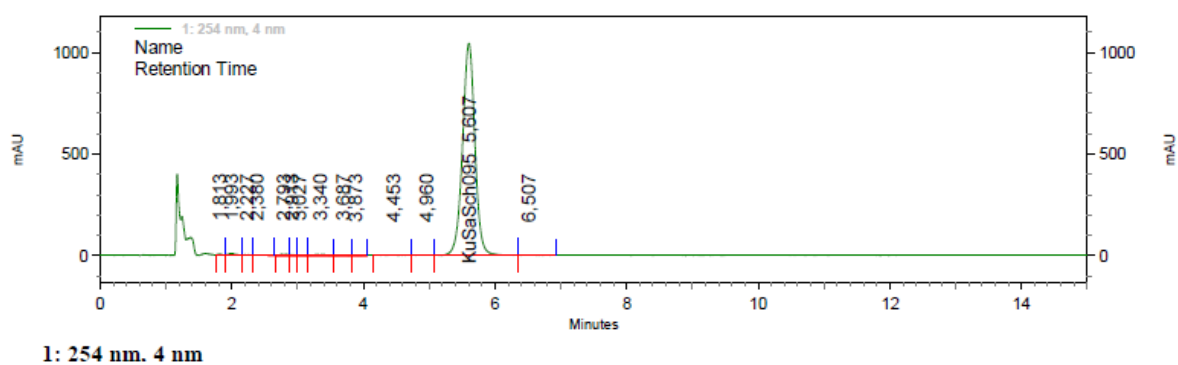
Figure S72: HPLC chromatogram of **17a** (KuSaSch095) – gradient method (HPLC 3)Figure S73: HPLC chromatogram of **17a** (KuSaSch095) – isocratic method (HPLC 1)

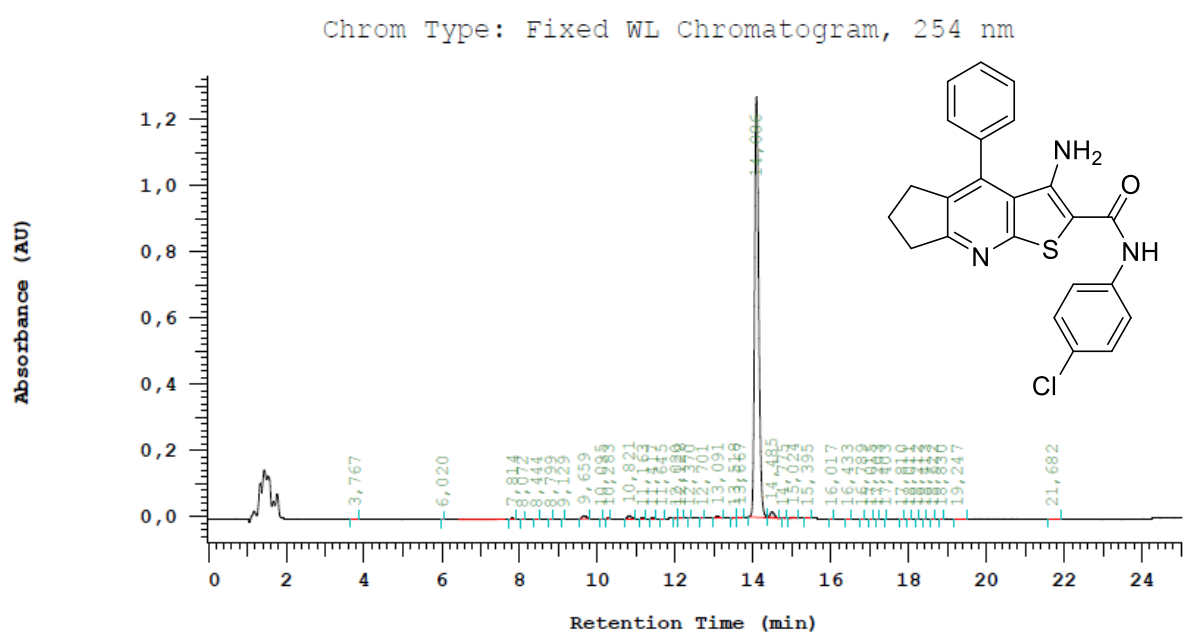
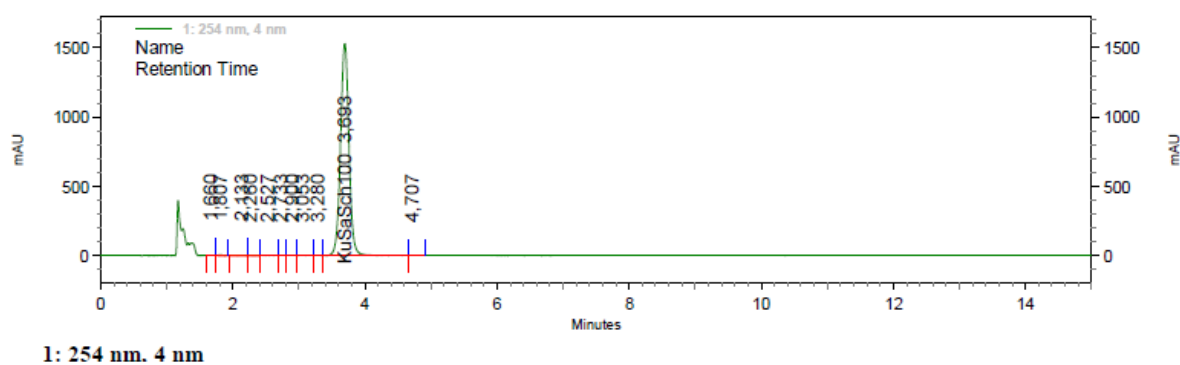
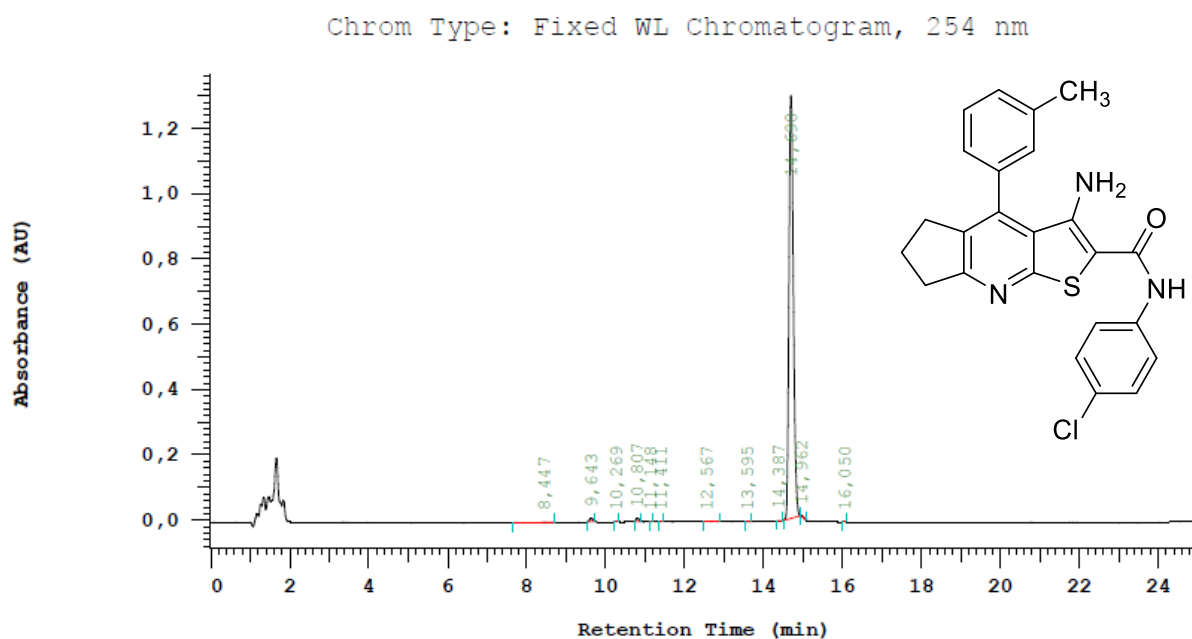
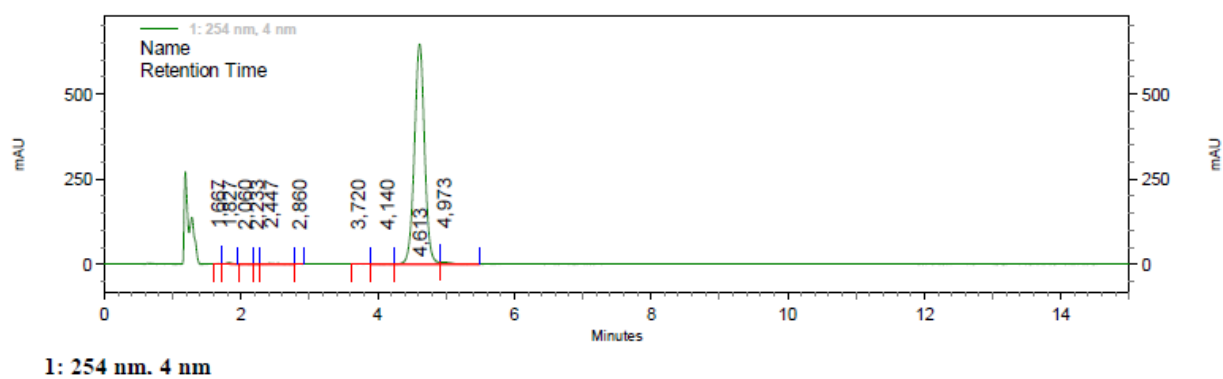
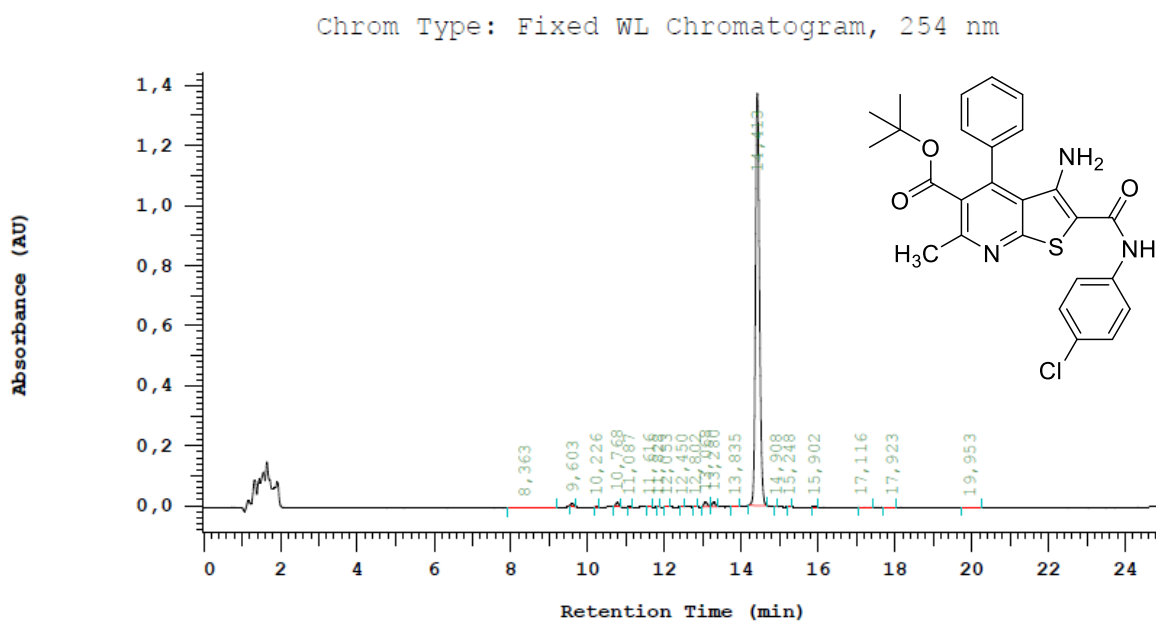
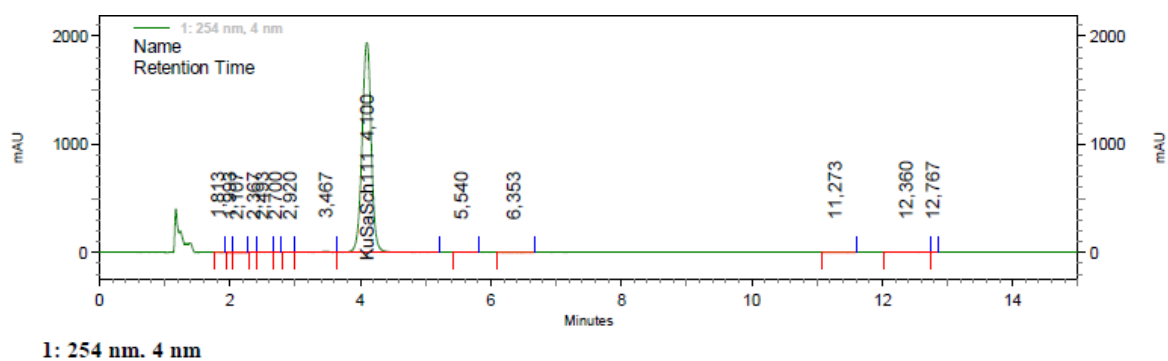
Figure S74: HPLC chromatogram of **17b** (KuSaSch100) – gradient method (HPLC 3)Figure S75: HPLC chromatogram of **17b** (KuSaSch100) – isocratic method (HPLC 1)

Figure S76: HPLC chromatogram of **17f** (KuSaSch110) – gradient method (HPLC 3)Figure S77: HPLC chromatogram of **17f** (KuSaSch110) – isocratic method (HPLC 1)

1: 254 nm, 4 nm

Figure S78: HPLC chromatogram of **17g** (KuSaSch111) – gradient method (HPLC 3)Figure S79: HPLC chromatogram of **17g** (KuSaSch111) – isocratic method (HPLC 1)

**Sample Availability:** Samples of the compounds are not available from the authors.



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