

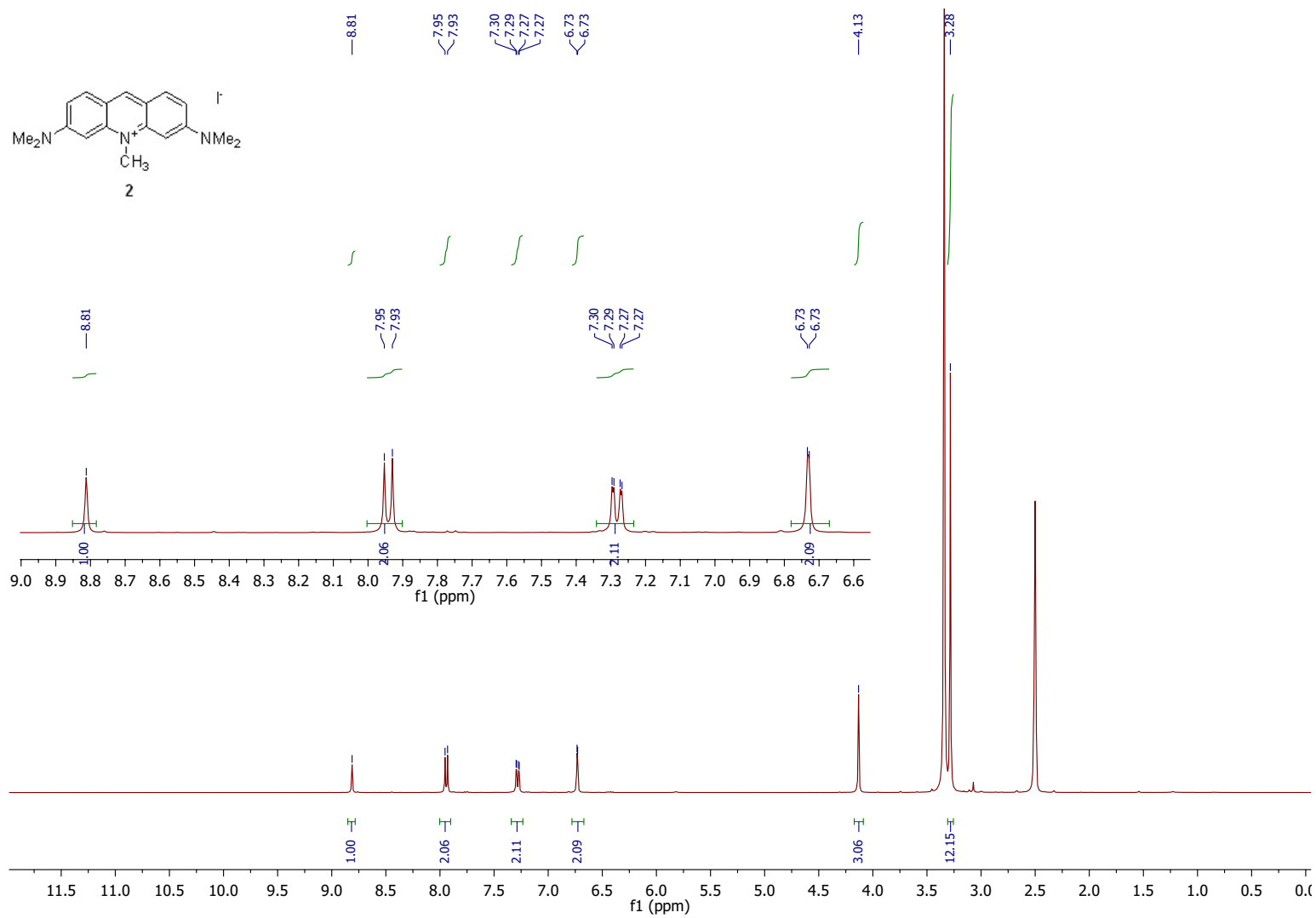
**Improved method for the preparation of nonyl acridine orange analogues
and utilization in detection of cardiolipin**

Pavels Dimitrijevs, Ilona Domracheva, and Pavel Arsenyan*

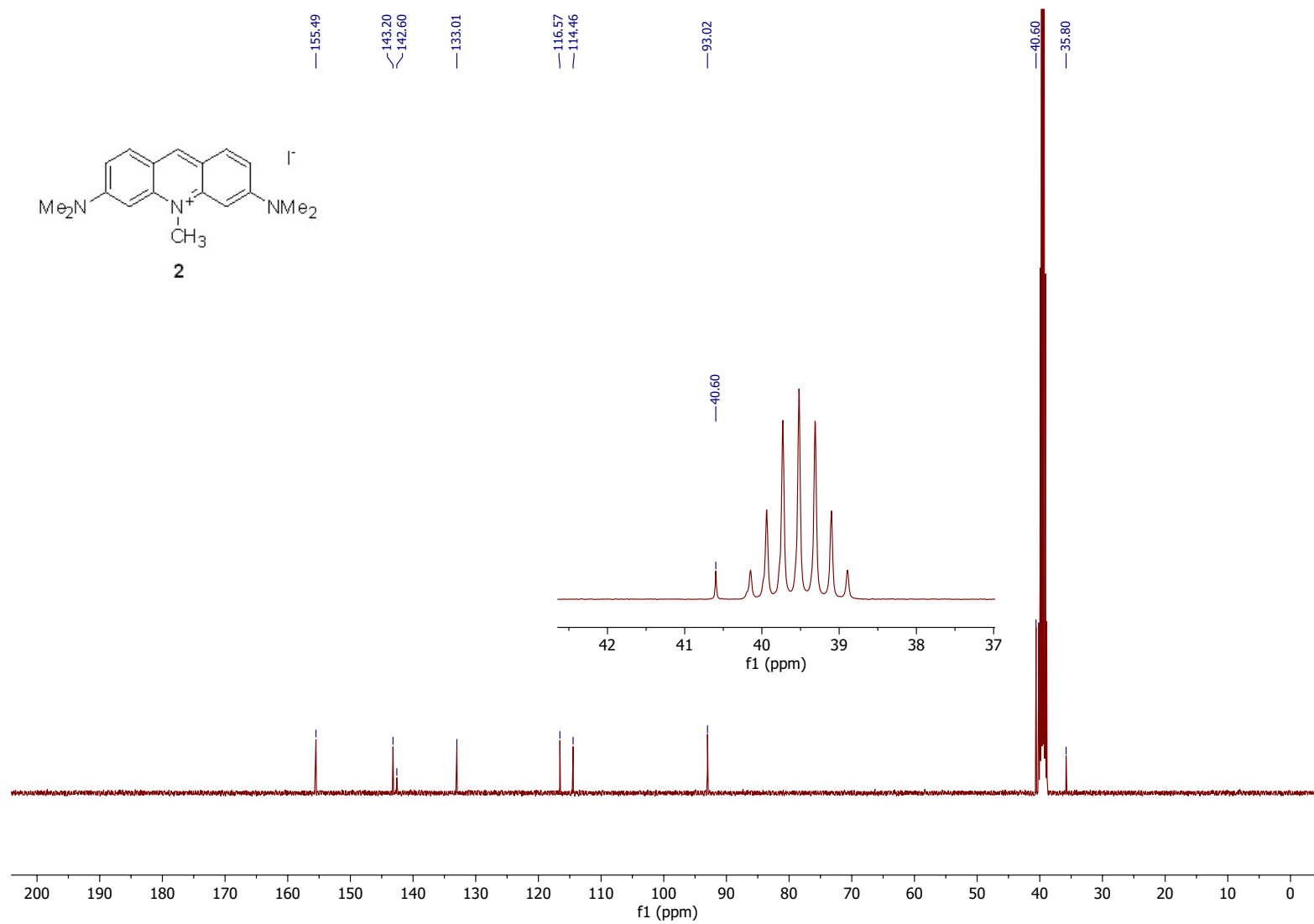
Latvian Institute of Organic Synthesis, Aizkraukles 21, LV-1006, Riga, Latvia.

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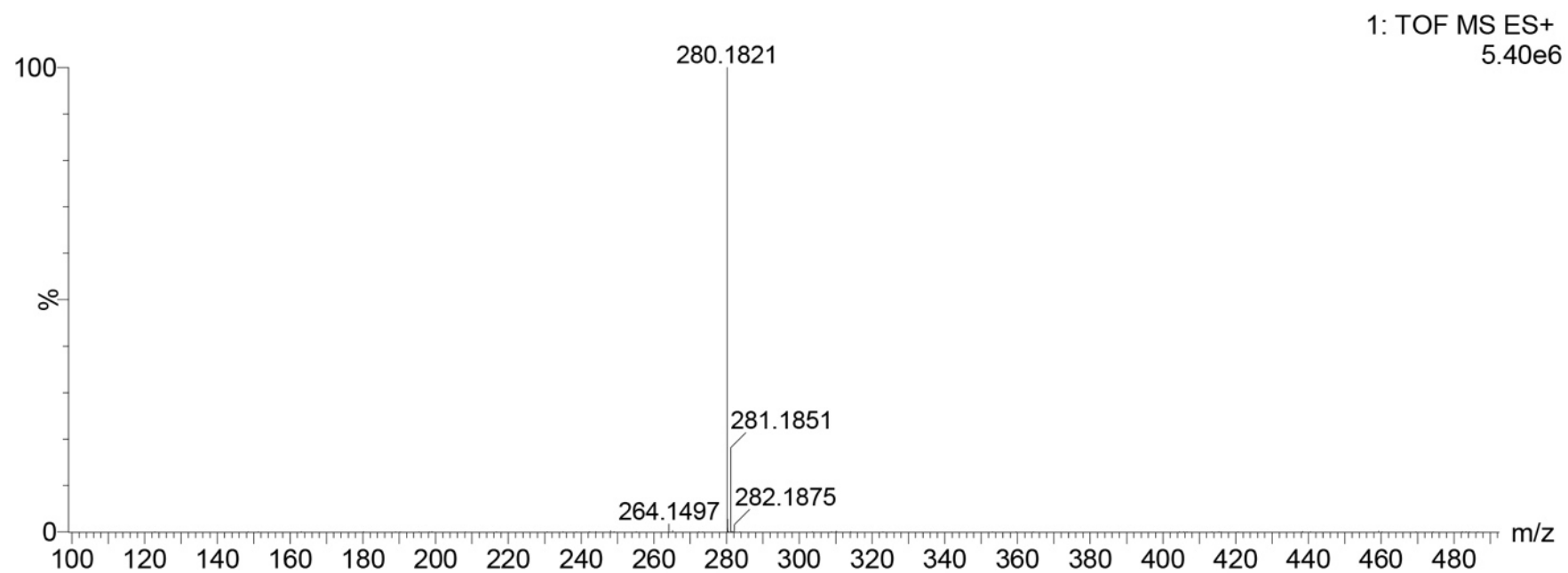
¹H NMR spectra of 10-methyl-3,6-bis(dimethylamino)acridin-10-ium iodide (**2**)



¹³C NMR spectra of **2**



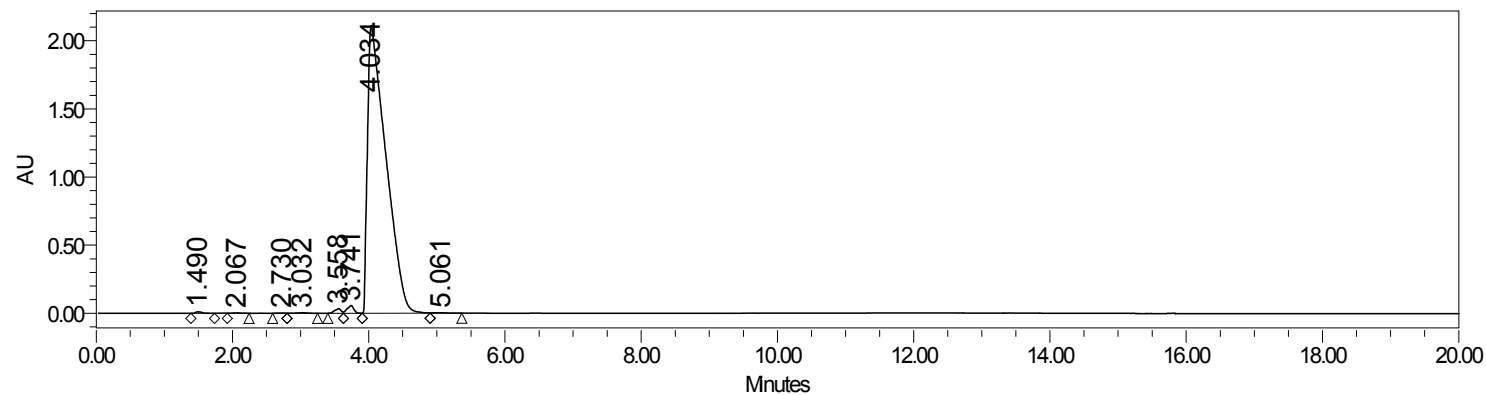
HRMS sprectra of **2**



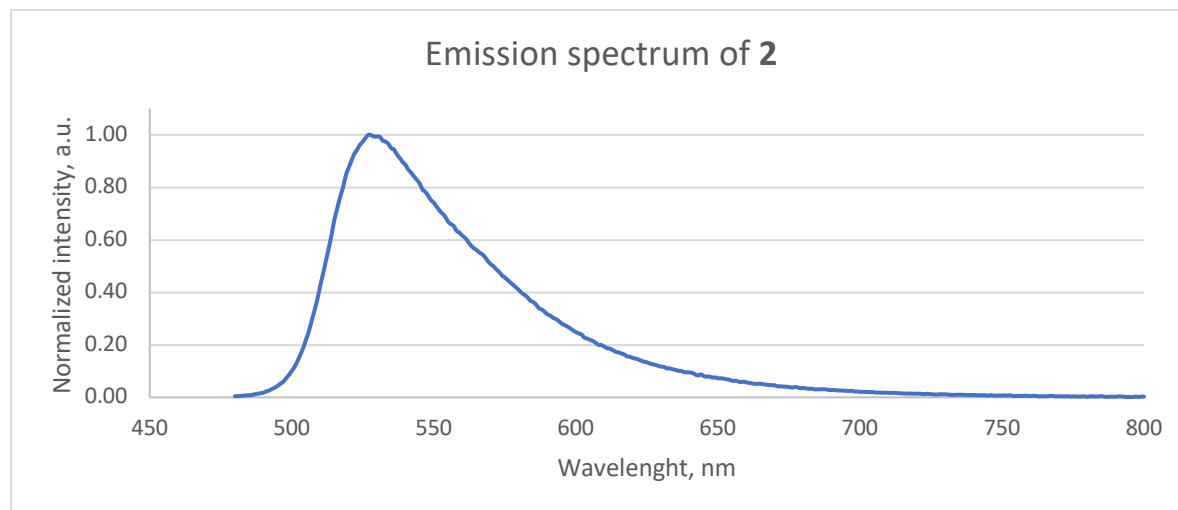
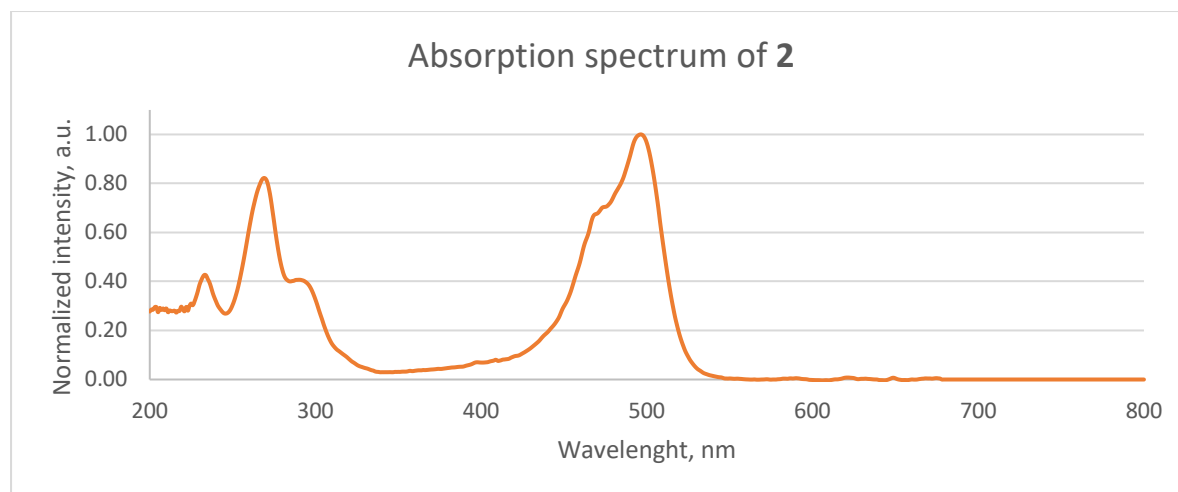
HPLC chromatogram of 2

Apollo C18-9 (4.6x150 mm)

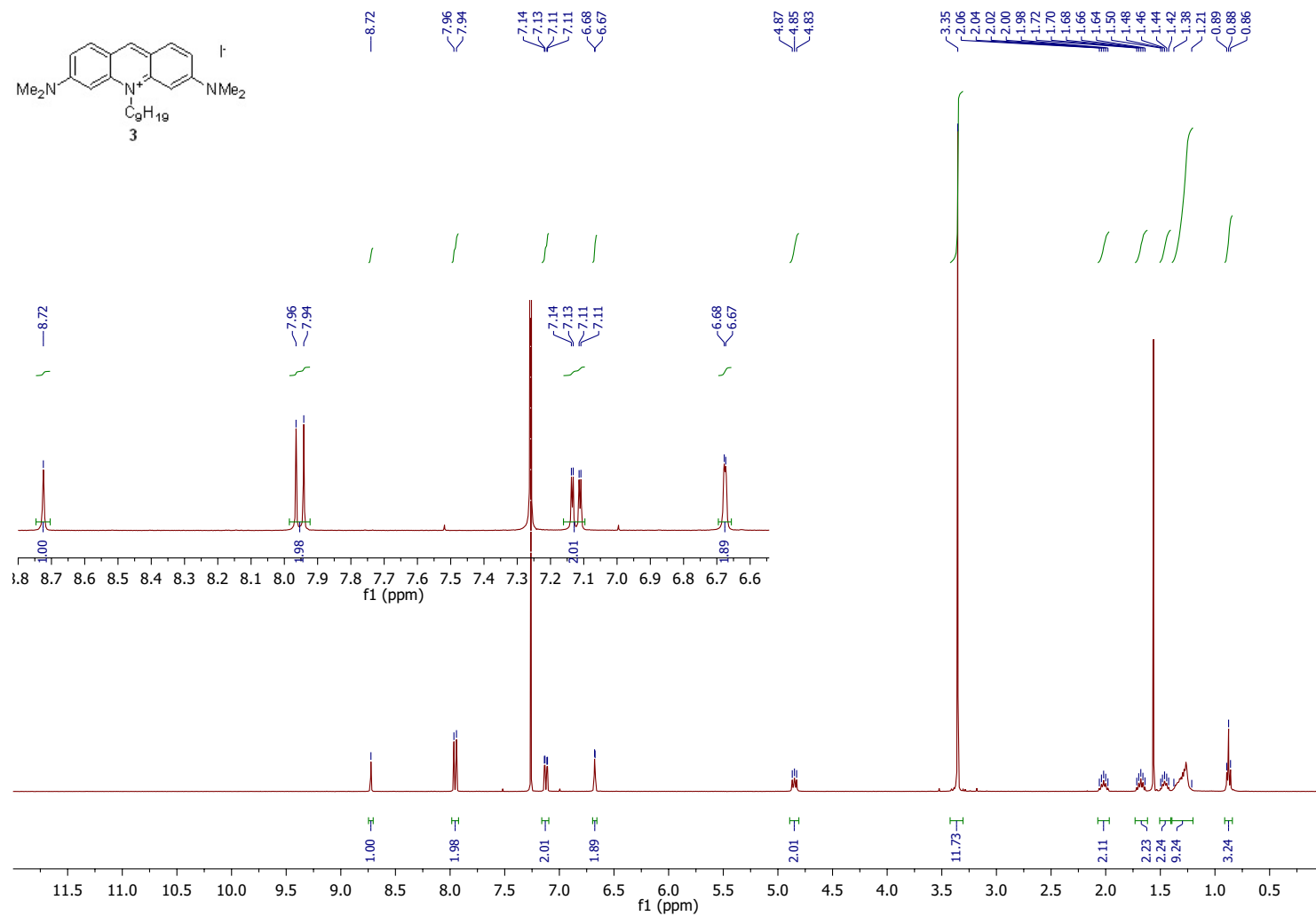
15min Gr. 40%-95%ACN+0.1%H3PO4; 5min Iz. 95%ACN; 3min Gr. 95-40%ACN, 2min Iz. 40%ACN; F=1mL/min;
40oC



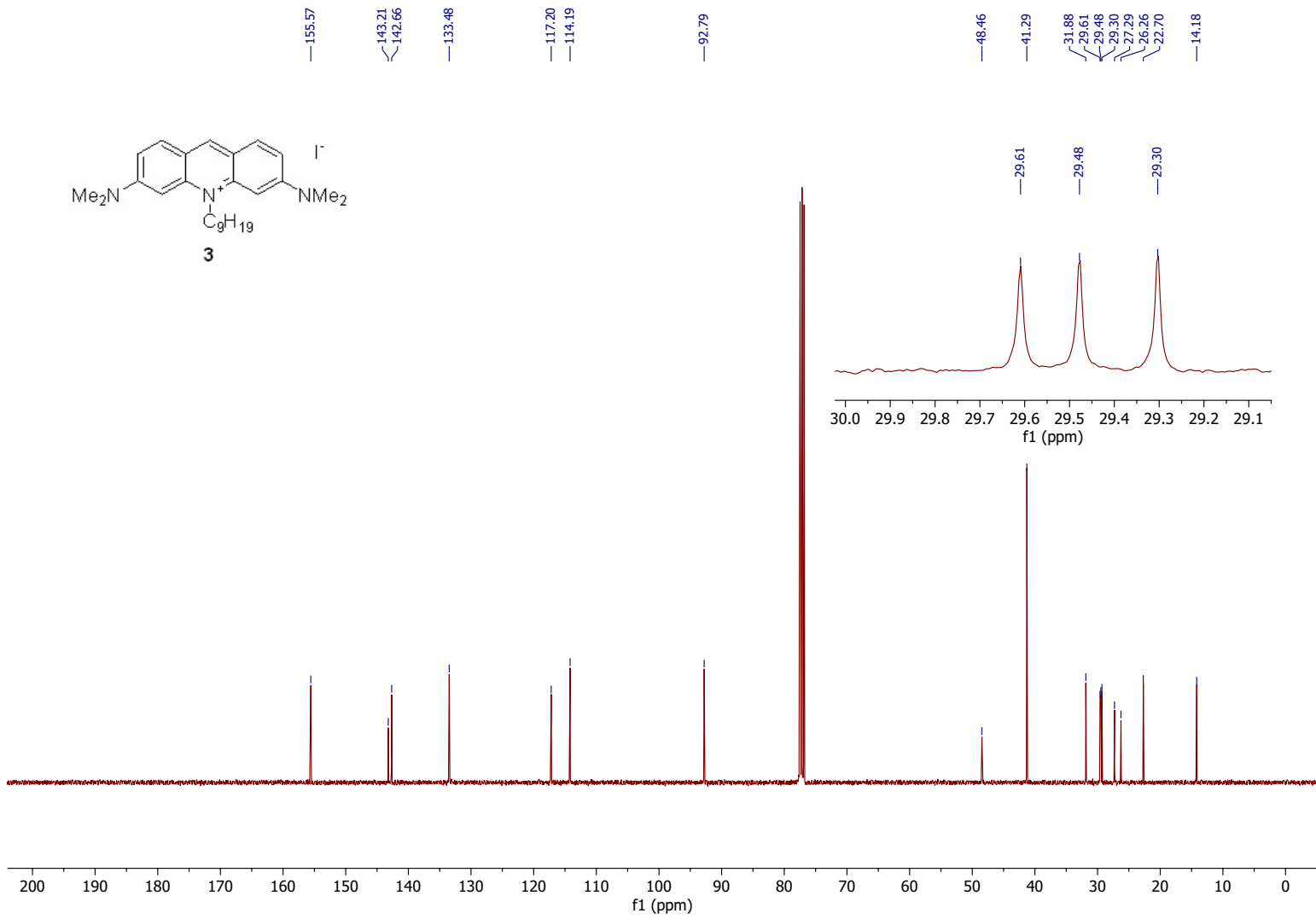
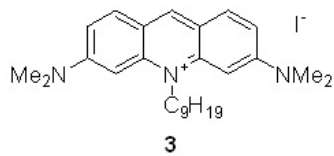
	RT	Area	%Area	Height	EP Plate Count	Width @50%	Resolution	Selectivity
1	1.490	65125	0.16	10416	1176	0.10		
2	2.067	25345	0.06	3153	1775	0.12	3.13	-57.80
3	2.730	8301	0.02	1226	3467	0.11	3.48	2.17
4	3.032	44289	0.11	4233	2396	0.15	1.40	1.25
5	3.558	220028	0.55	33704	5581	0.11	2.41	1.34
6	3.741	381701	0.95	56658	6303	0.11	0.97	1.09
7	4.034	39544492	98.03	2110970	1002	0.30	0.84	1.13
8	5.061	48257	0.12	3085				1.41
Sum		40337538.0						



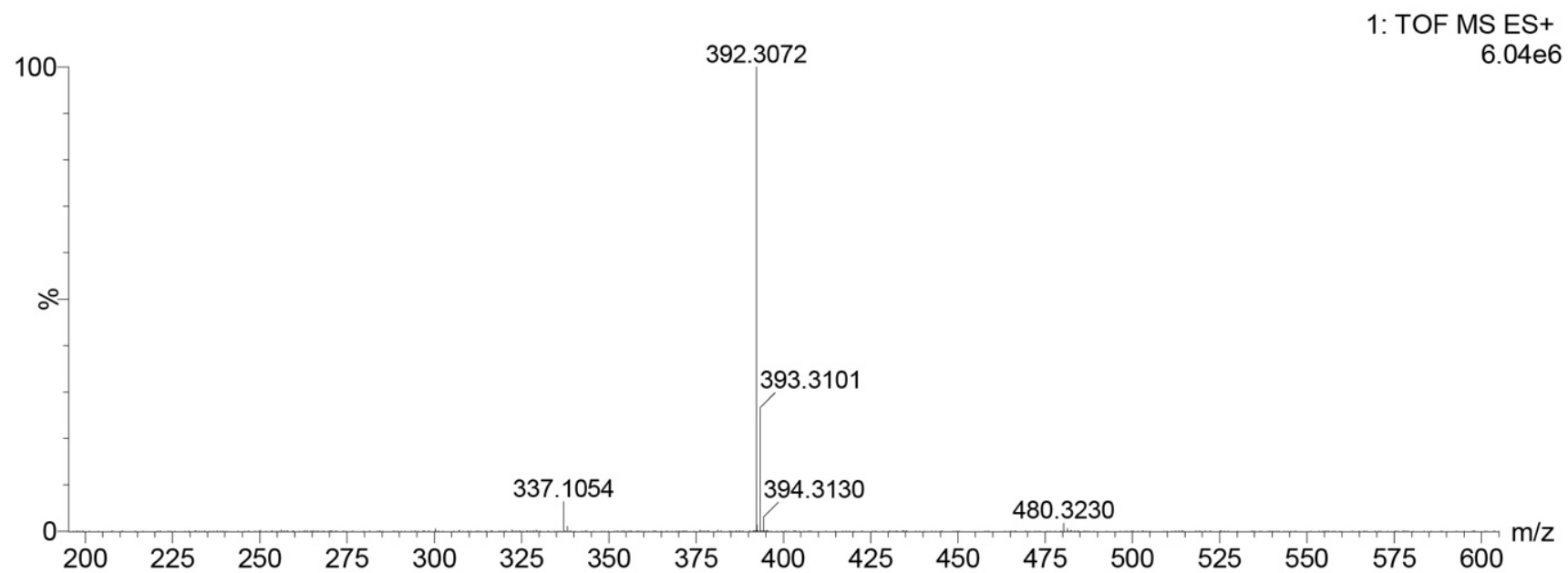
^1H NMR spectra of 10-nonyl-3,6-bis(dimethylamino)acridin-10-ium iodide (**3**)



¹³C NMR spectra of **3**



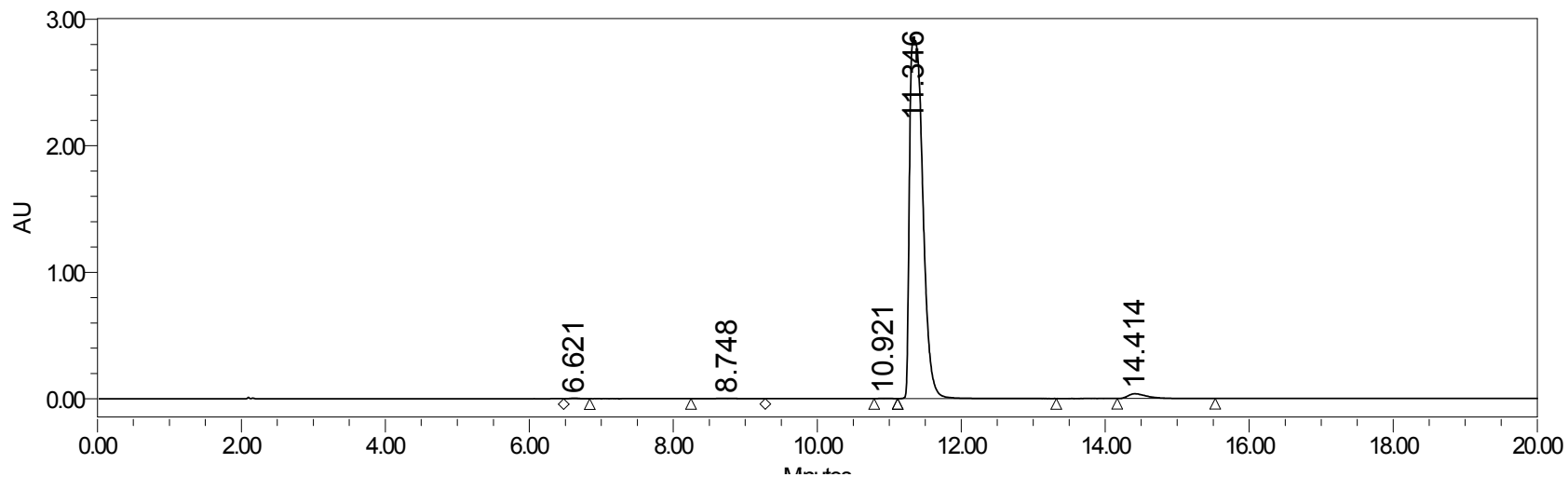
HRMS sprectra of **3**



HPLC chromatogram of 3

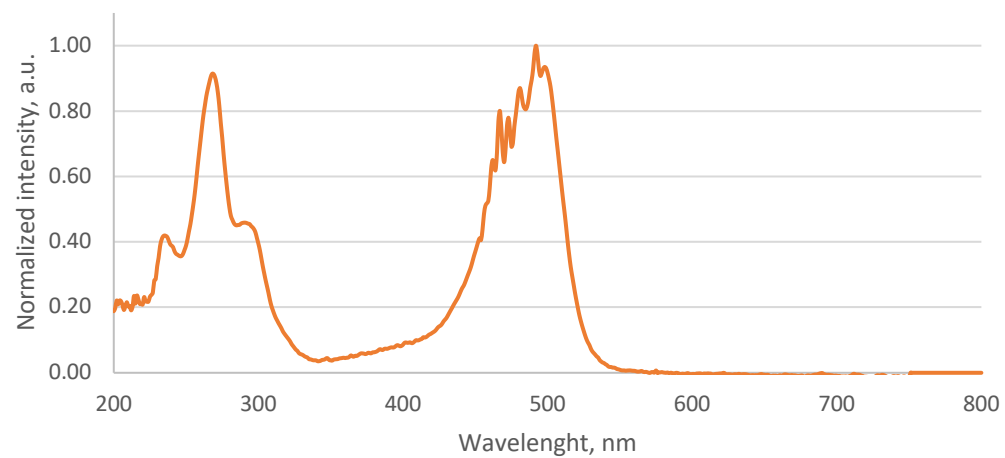
Inertsil CN-3 (4,6x150 mm)

15min Gr. 5%-50%ACN+0.1%H₃PO₄; 5min Iz. 50%ACN; 3min Gr. 50-5%ACN, 2min Iz. 5%ACN; 1mL/min; 40oC

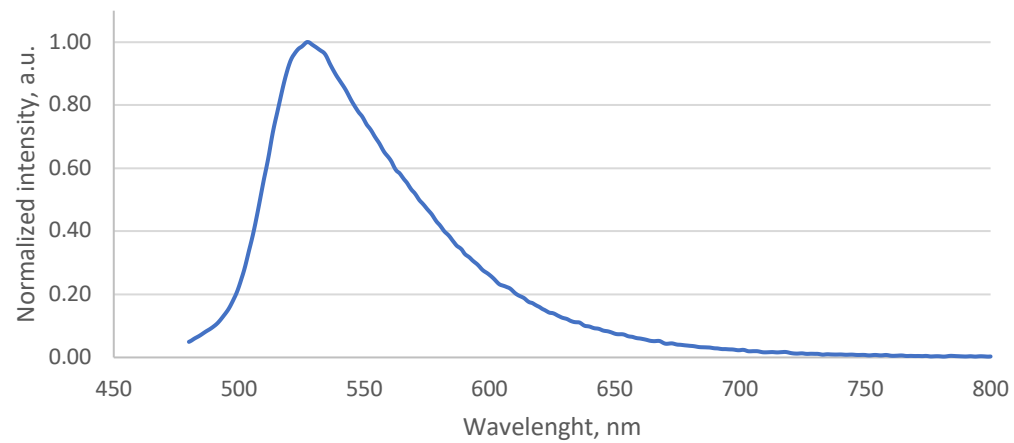


	RT	Area	%Area	Height	EP Plate Count	Width @50%	Resolution	Selectivity
1	6.621	39251	0.11	5102	17519	0.1177		
2	8.748	40248	0.11	1387	1970	0.4639	4.316	1.415
3	10.921	15584	0.04	1704	29903	0.1486	4.185	1.300
4	11.346	36467292	97.91	2858020	17581	0.2014	1.432	1.045
5	14.414	682928	1.83	37273	15791	0.2700	7.681	1.312
Sum		37245303.9						

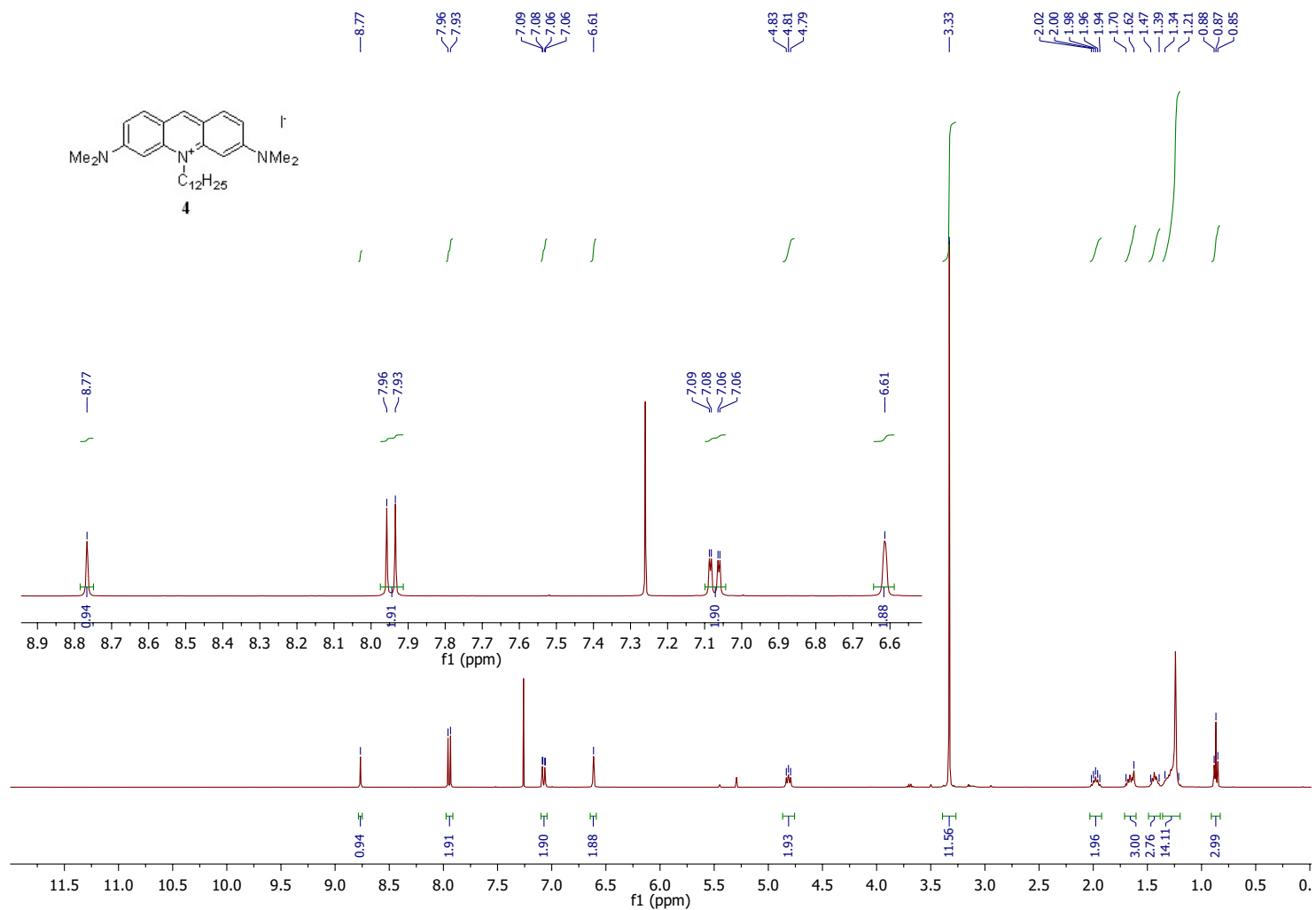
Absorption spectrum of **3**



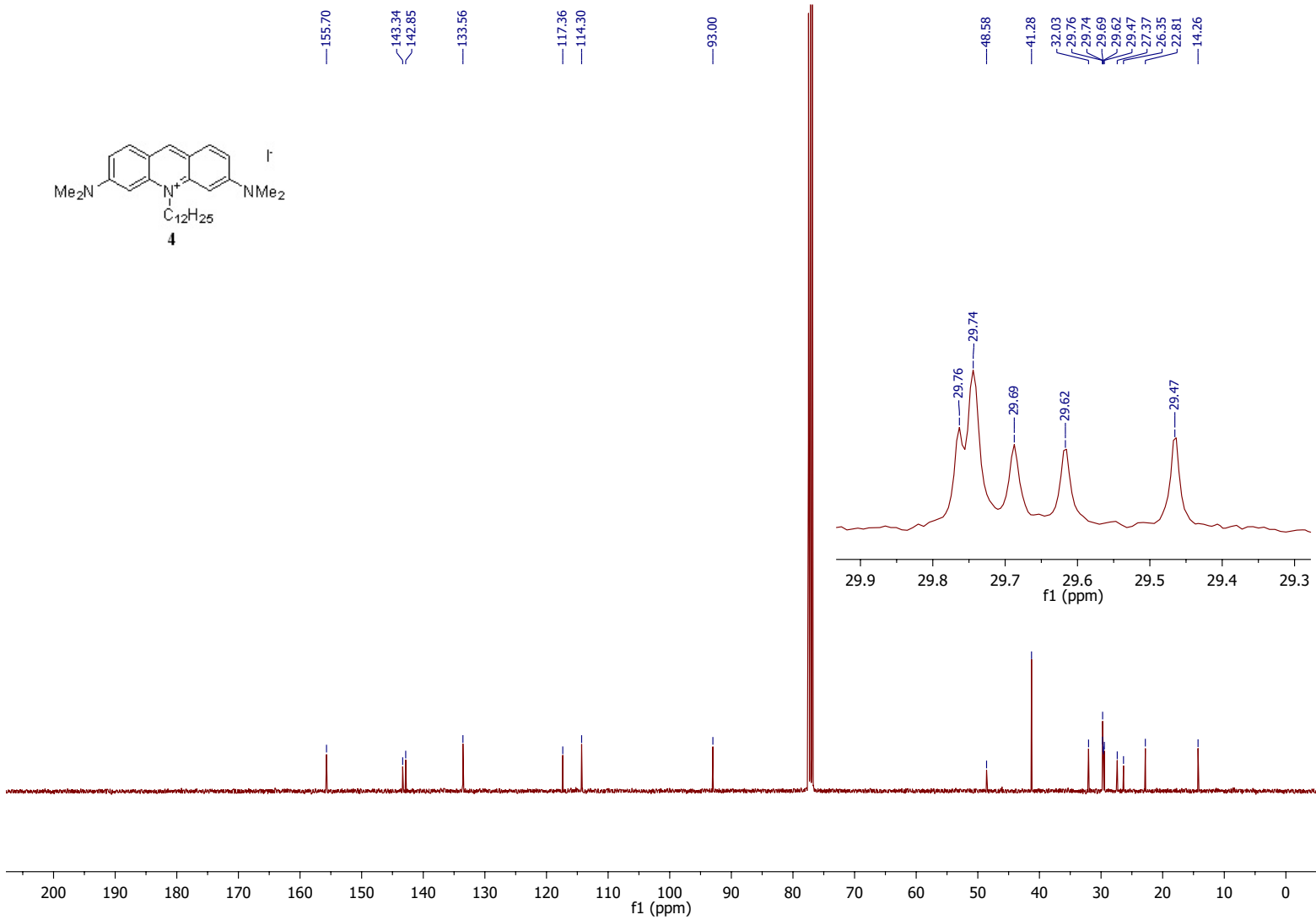
Emission spectrum of **3**



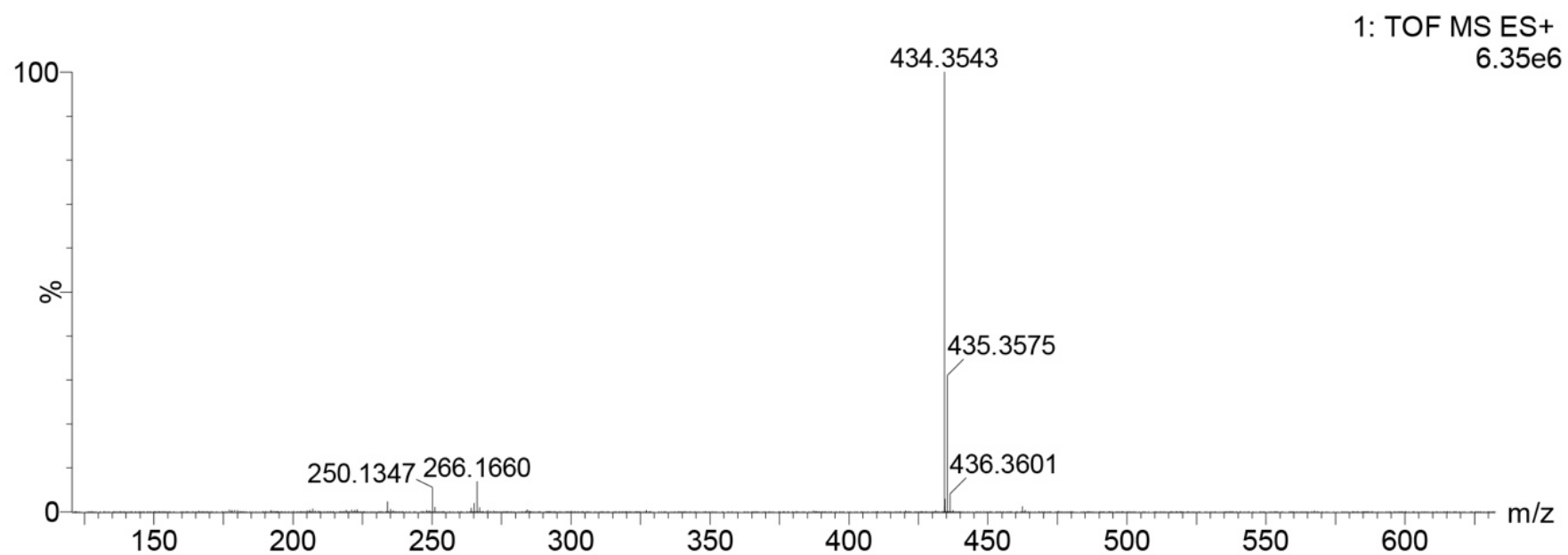
¹H NMR spectra of 10-dodecyl-3,6-bis(dimethylamino)acridin-10-ium iodide (**4**)



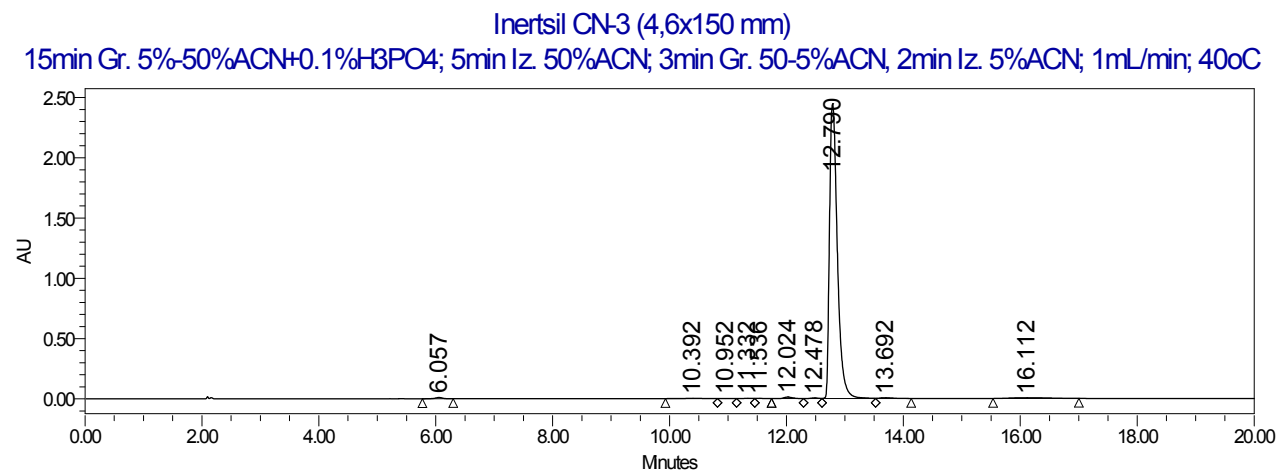
¹H NMR spectra of **4**



HRMS spectra of **4**

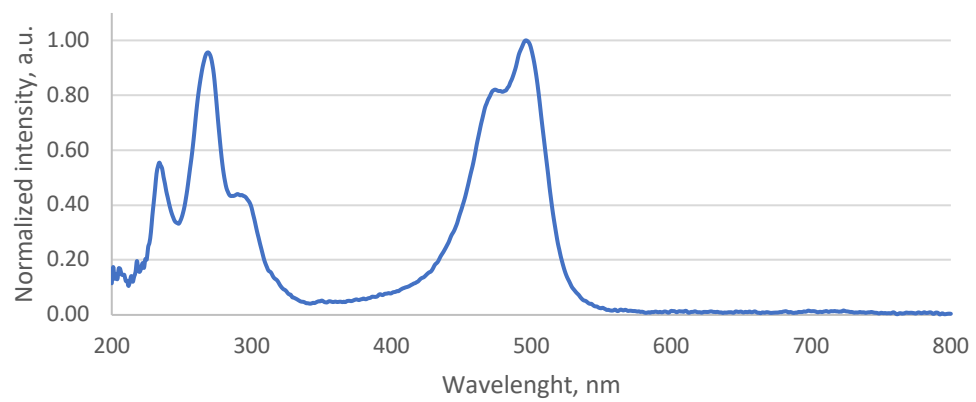


HPLC chromatogram of 4

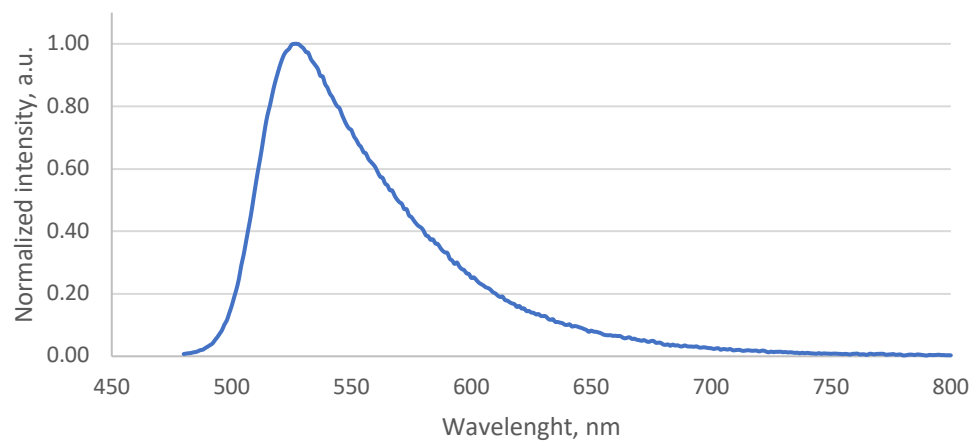


	RT	Area	%Area	Height	EP Plate Count	Width @50%	Resolution	Selectivity
1	6.057	94523	0.40	10831	12749	0.1263		
2	10.392	55180	0.23	1748	1970	0.5510	7.552	1.951
3	10.952	10708	0.05	1024	22490	0.1719	0.915	1.063
4	11.332	20791	0.09	1999				1.040
5	11.536	15685	0.07	1734				1.021
6	12.024	122957	0.52	12651	36525	0.1481		1.049
7	12.478	44432	0.19	4730	39783	0.1472	1.814	1.043
8	12.790	22786691	96.98	2446136	46498	0.1396	1.287	1.028
9	13.692	92874	0.40	5768	16580	0.2503	2.728	1.080
10	16.112	253357	1.08	5698	2690	0.7311	2.910	1.199
Sum		23497196.8						

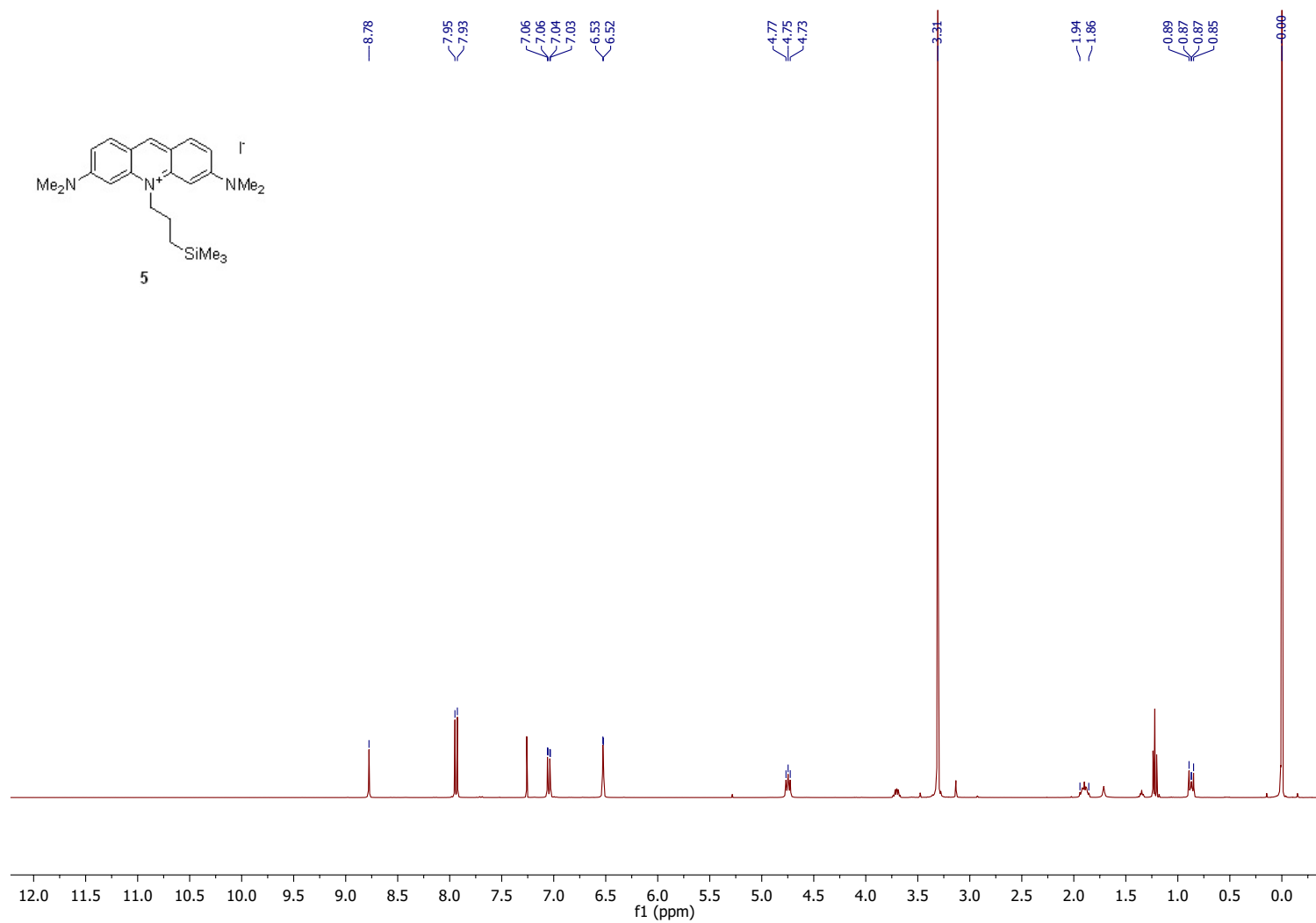
Absorption spectrum of **4**



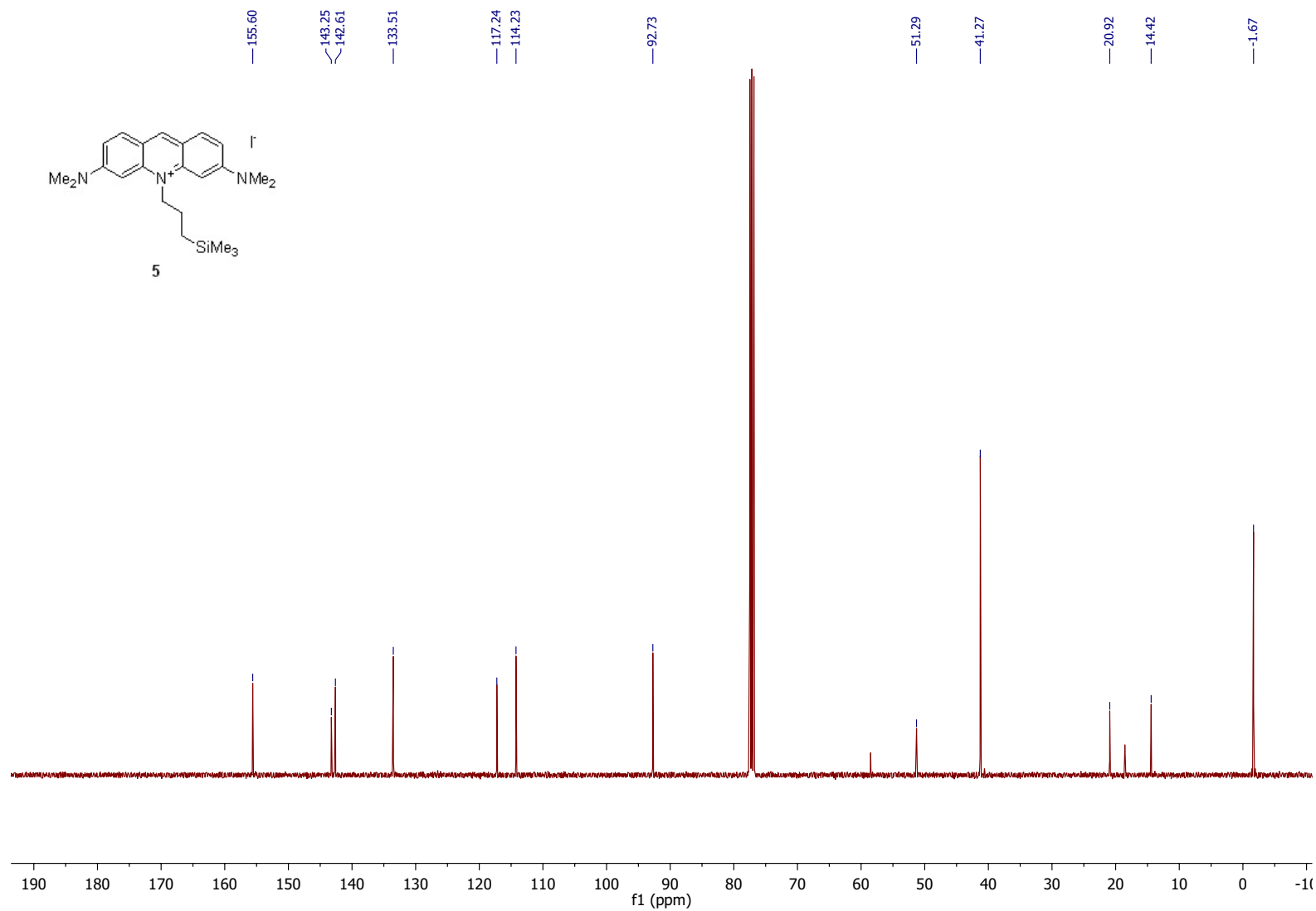
Emission spectrum of **4**



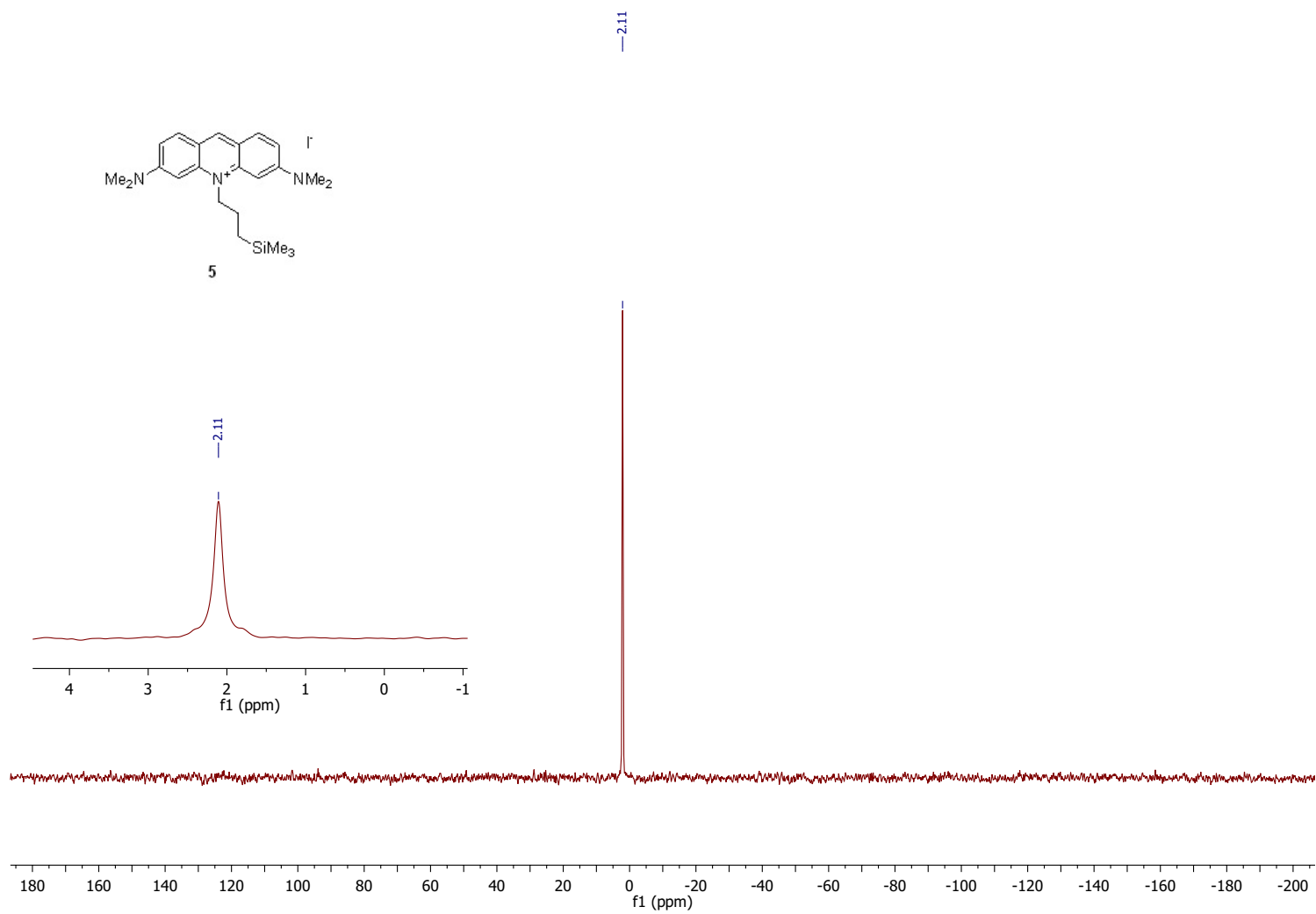
¹H NMR spectra of 10-(3-(trimethylsilyl)propyl)-3,6-bis(dimethylamino)acridin-10-ium iodide (**5**)



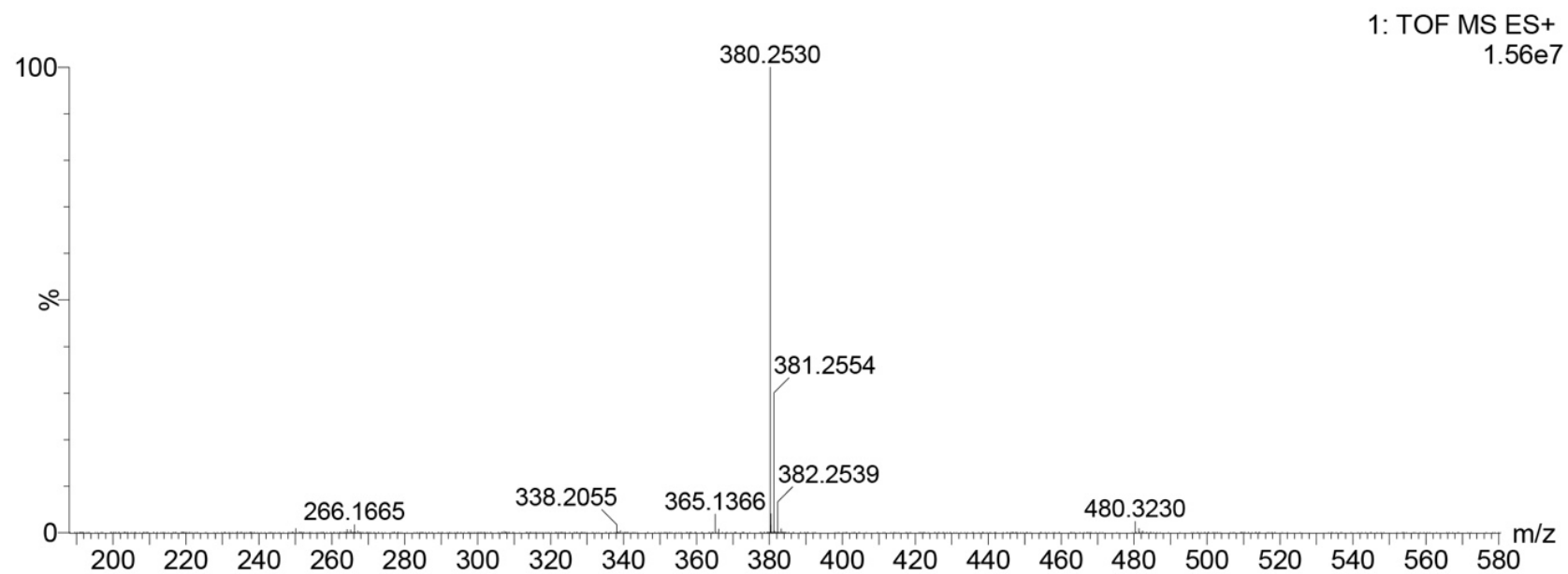
¹³C NMR spectra of **5**



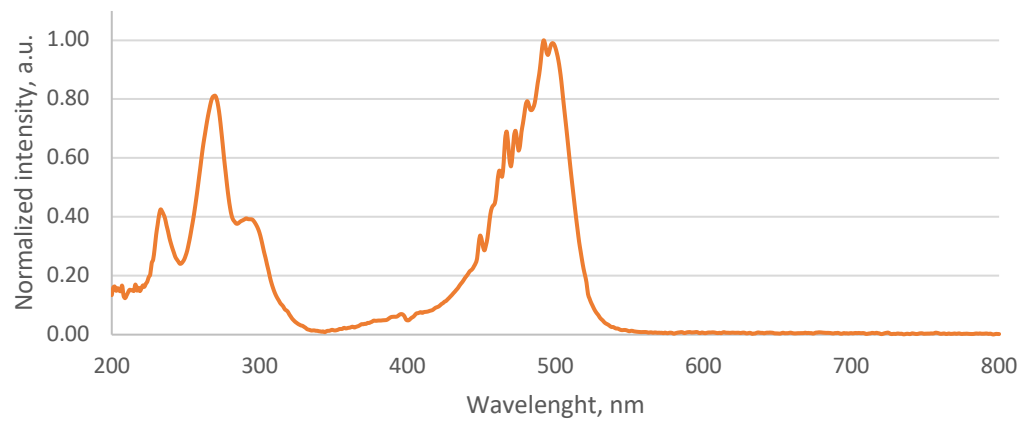
^{29}Si NMR spectra of **5**



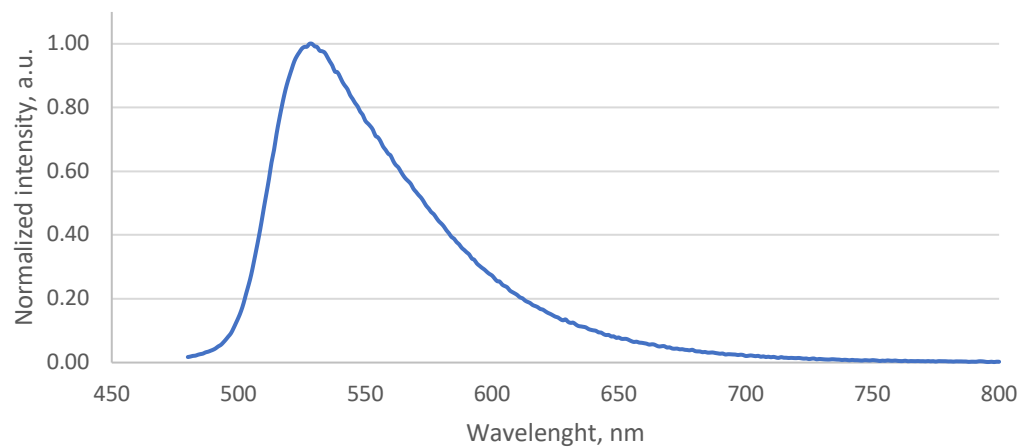
HRMS spectra of **5**

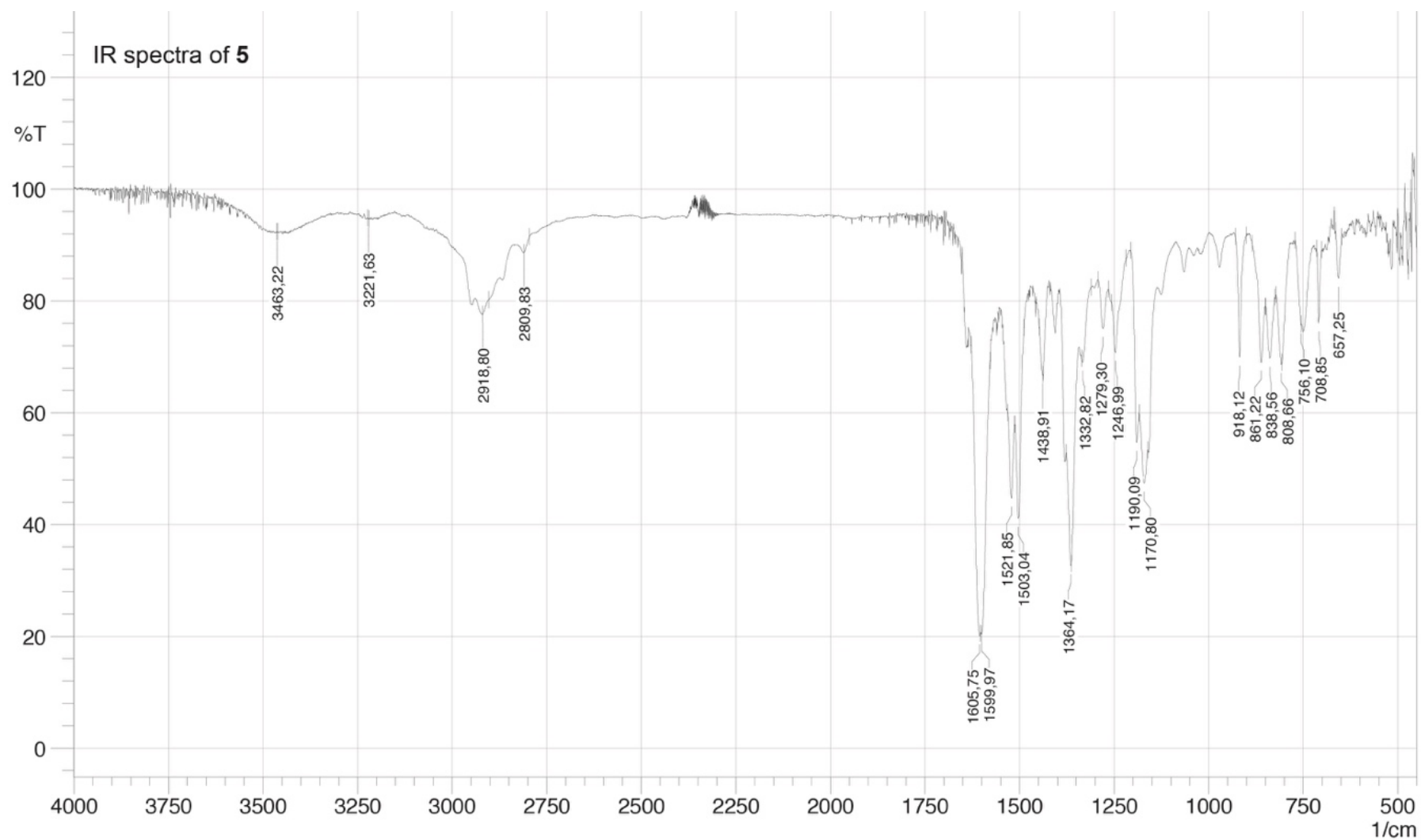


Absorption spectrum of **5**



Emission spectrum of **5**

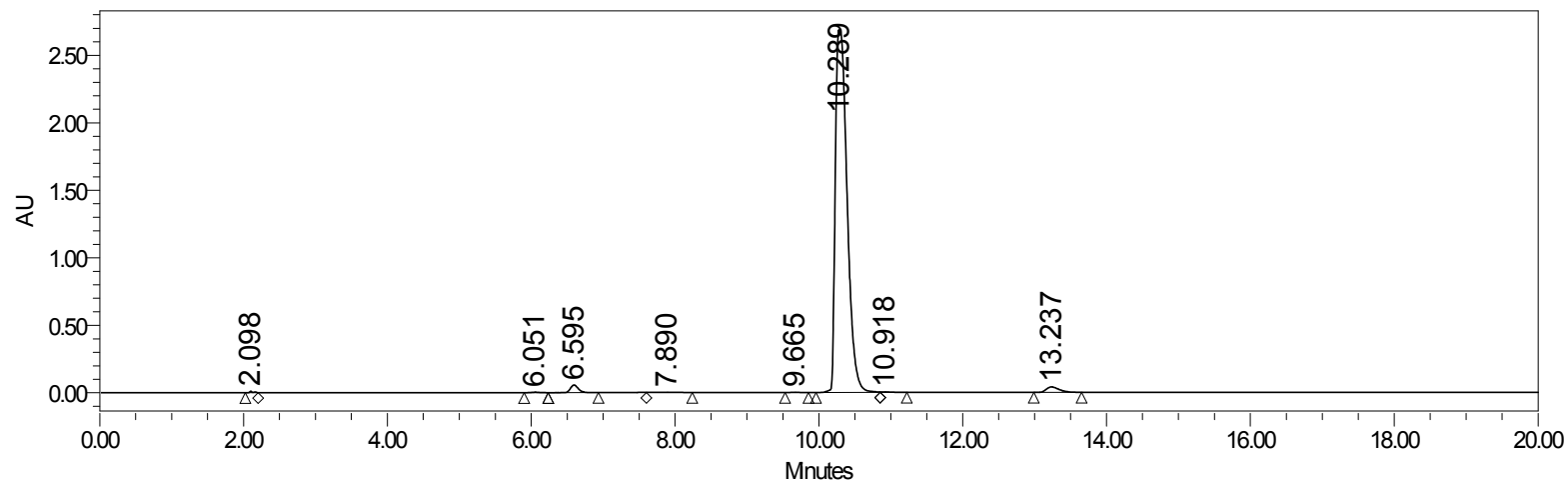




HPLC chromatogram of 5

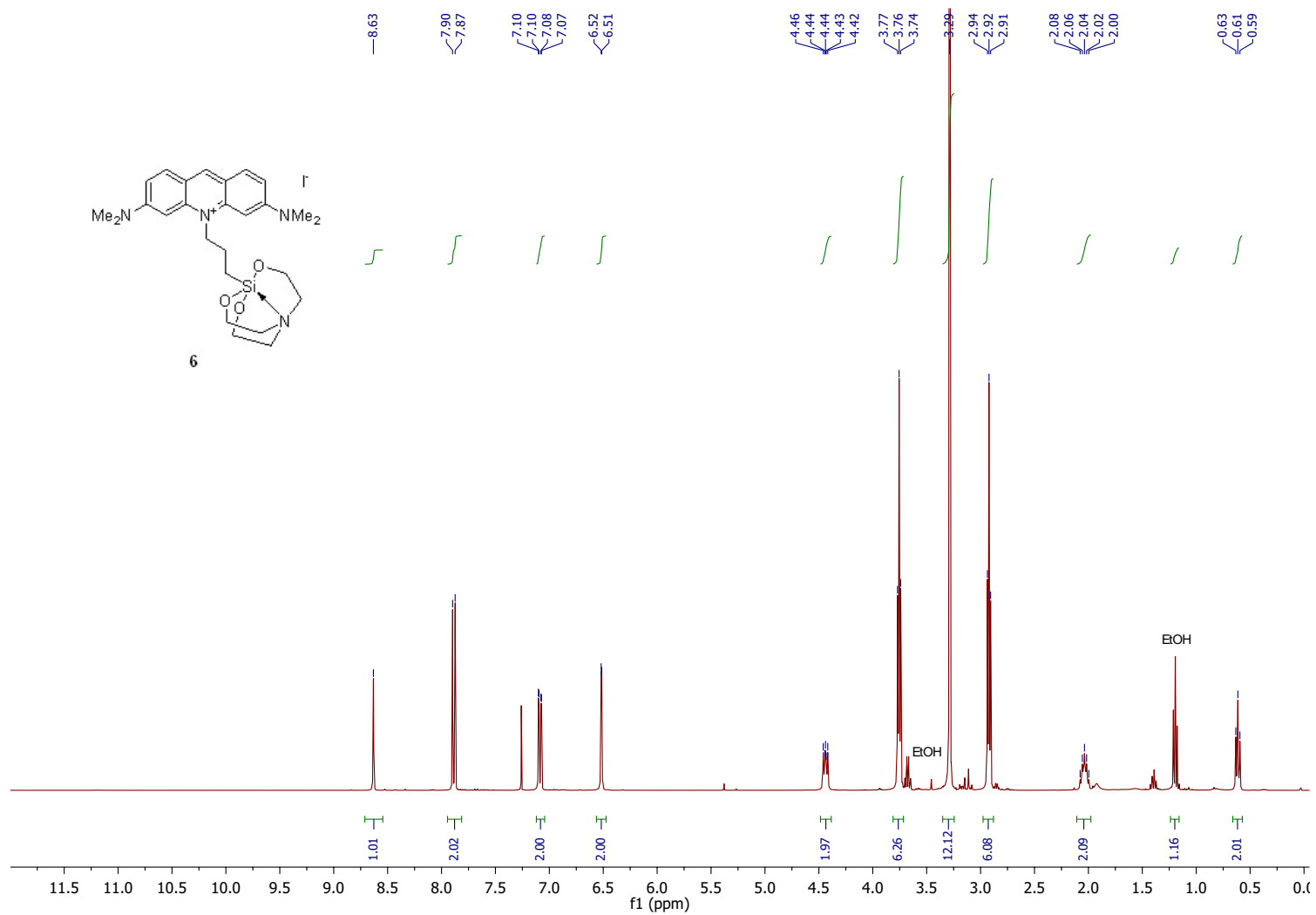
Inertsil CN-3 (4,6x150 mm)

15min Gr. 5%-50%ACN+0.1%H₃PO₄; 5min Iz. 50%ACN; 3min Gr. 50-5%ACN, 2min Iz. 5%ACN; 1mL/min; 40oC

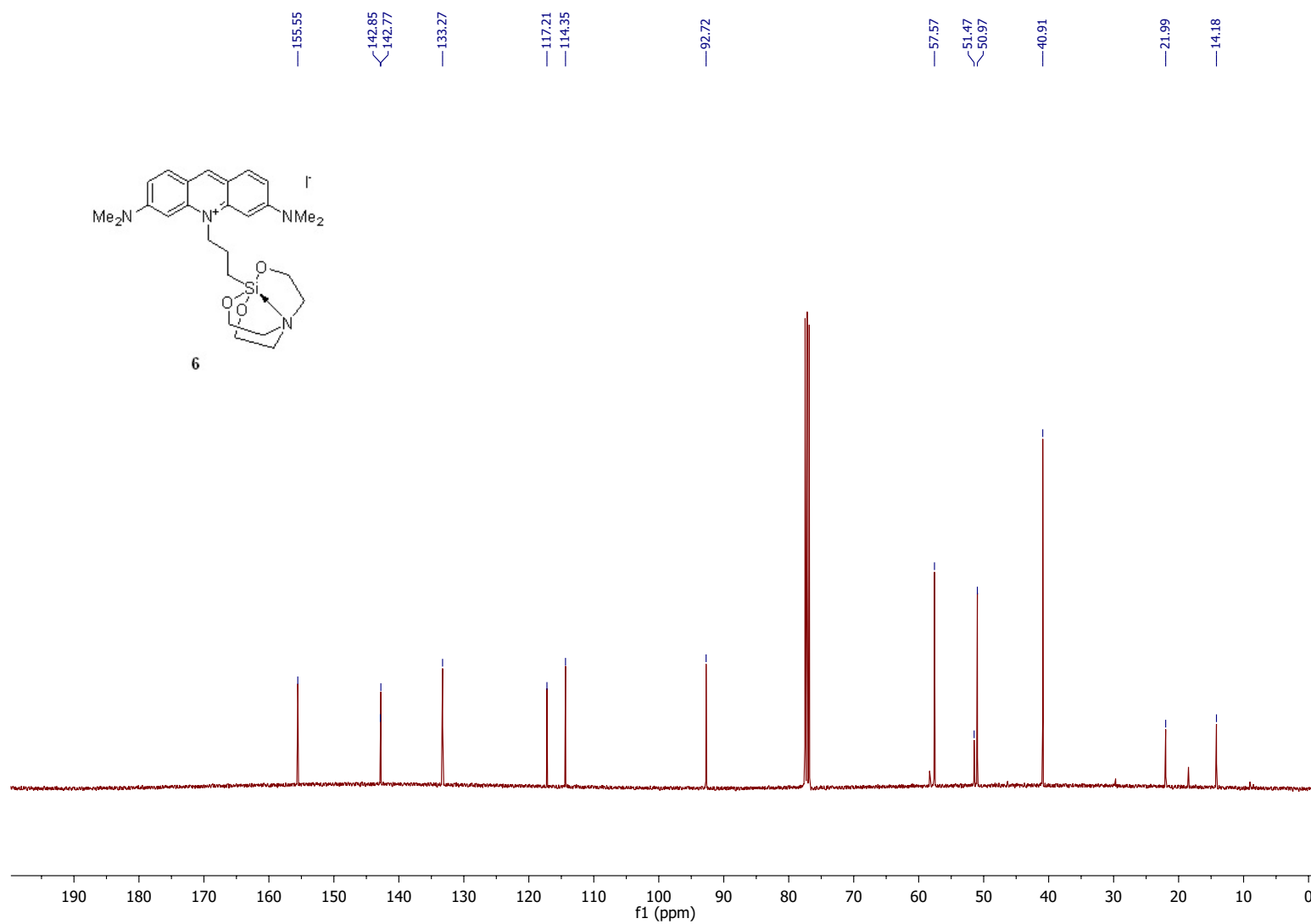


	RT	Area	%Area	Height	EP Plate Count	Width @50%	Resolution	Selectivity
1	2.098	42596	0.13	12021	26767	0.0302		
2	6.051	26372	0.08	3517	15705	0.1137	32.428	7.607
3	6.595	433774	1.37	56443	17515	0.1173	2.779	1.120
4	7.890	45510	0.14	2102	2064	0.4088	2.905	1.254
5	9.665	9796	0.03	1281	37680	0.1172	3.982	1.278
6	10.289	30518224	96.53	2690311	18867	0.1763	2.507	1.076
7	10.918	36485	0.12	3516				1.072
8	13.237	501530	1.59	40262	26372	0.1919		1.246
Sum		31614287.7						

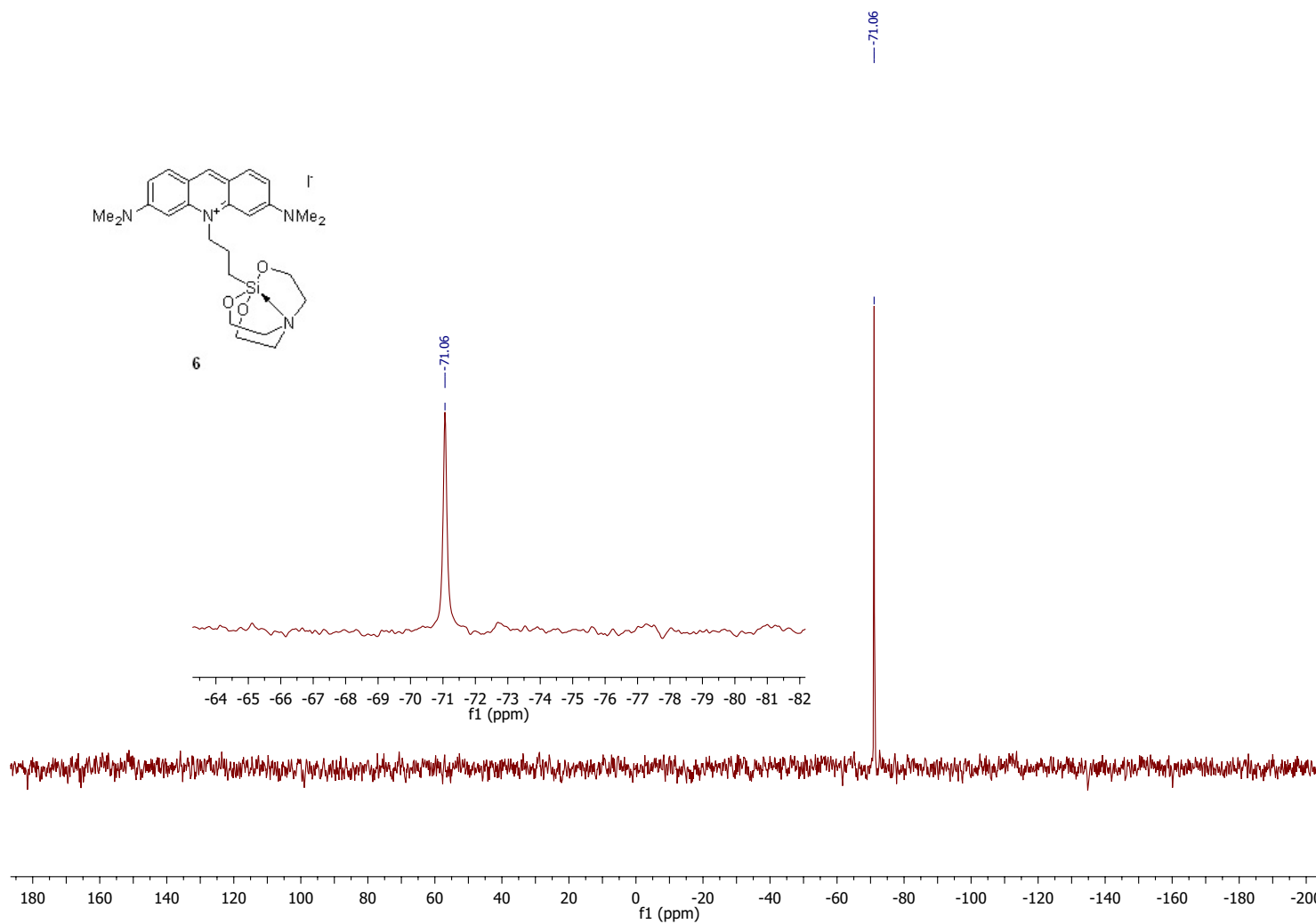
¹H NMR spectra of 10-(3-(silatranyl)propyl)-3,6-bis(dimethylamino)acridin-10-ium iodide (**6**)



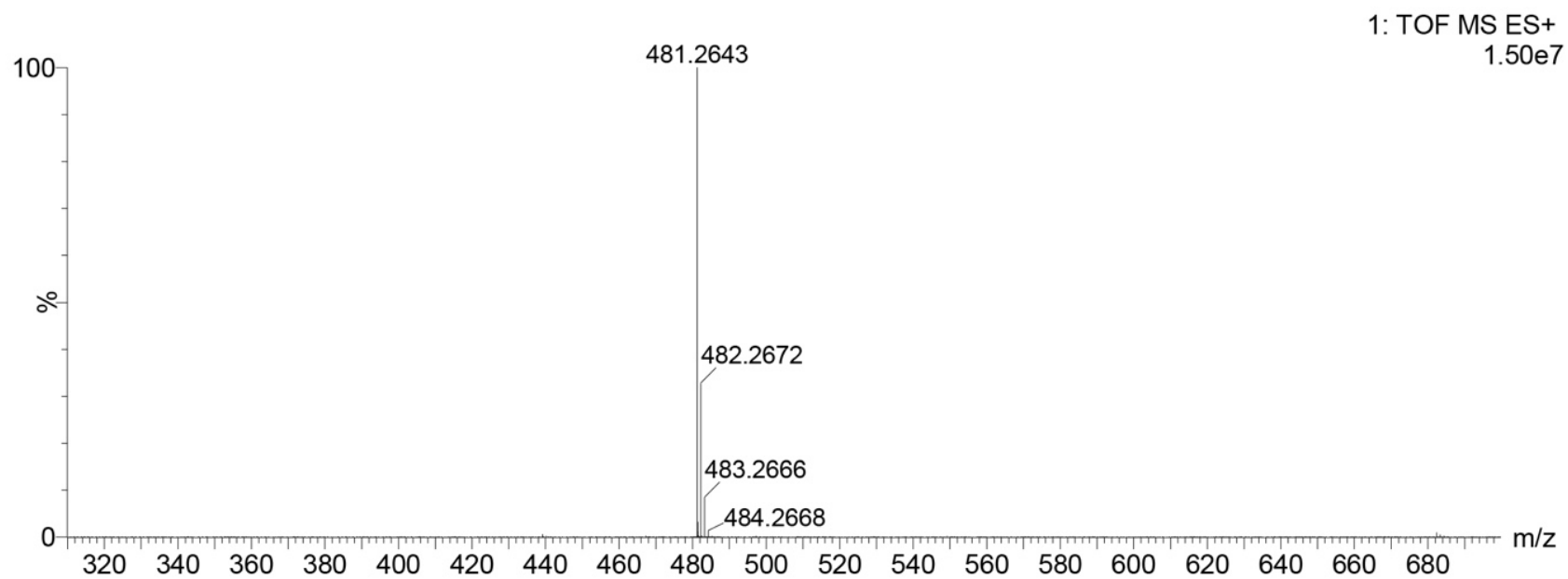
^{13}C NMR spectra of **6**

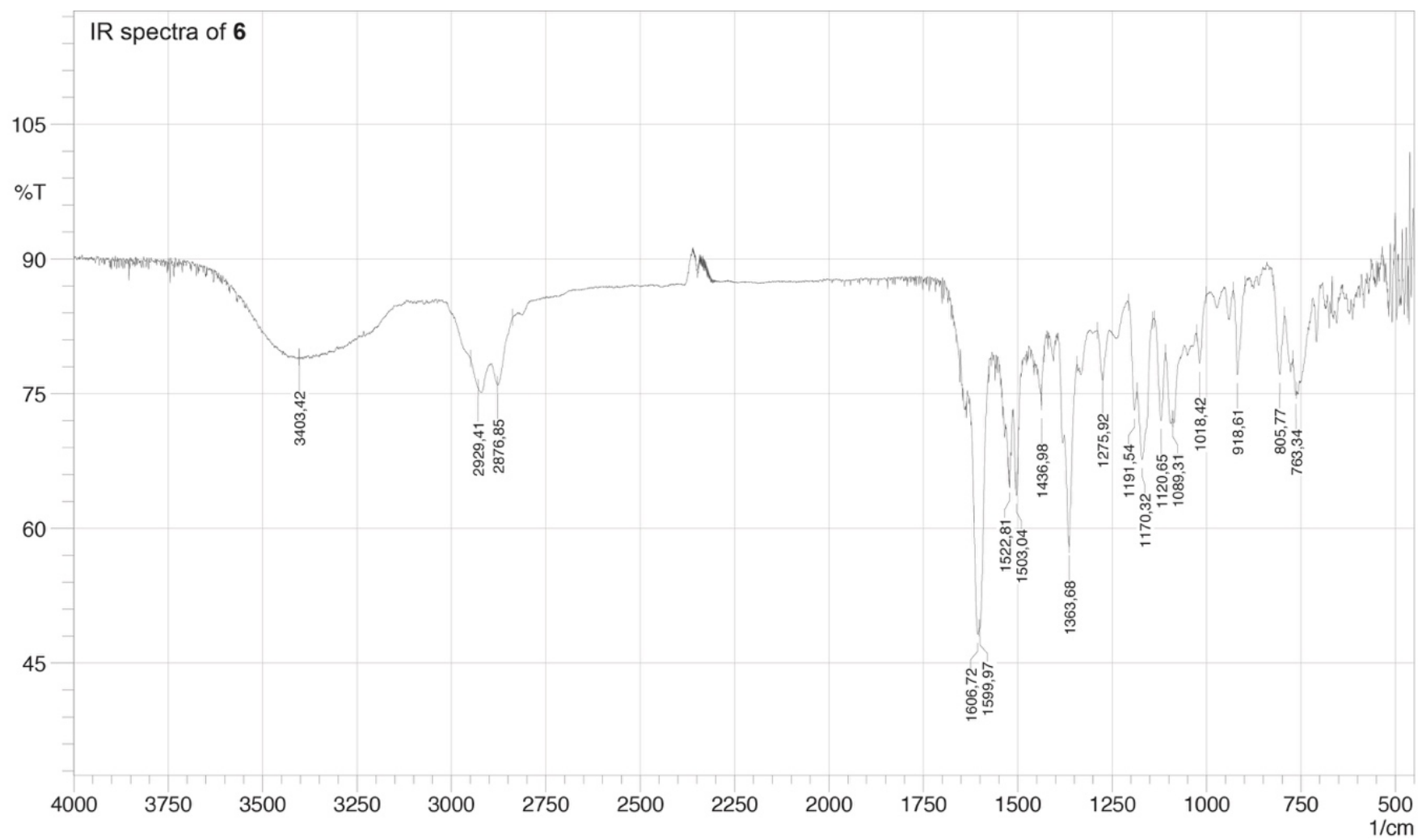


^{29}Si NMR spectra of **6**



HRMS sprectra of **6**

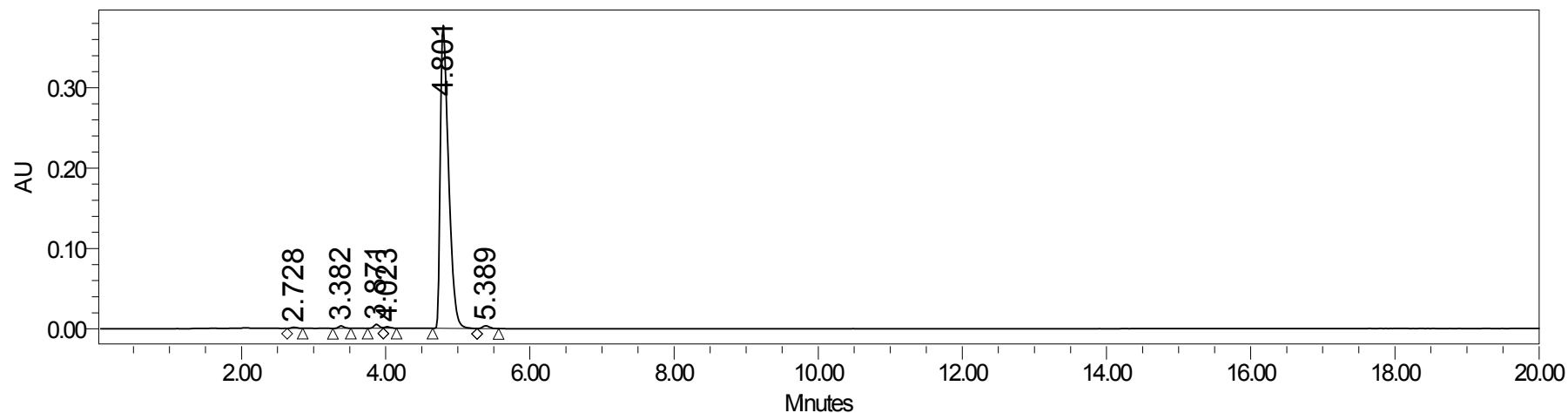




HPLC chromatogram of 6

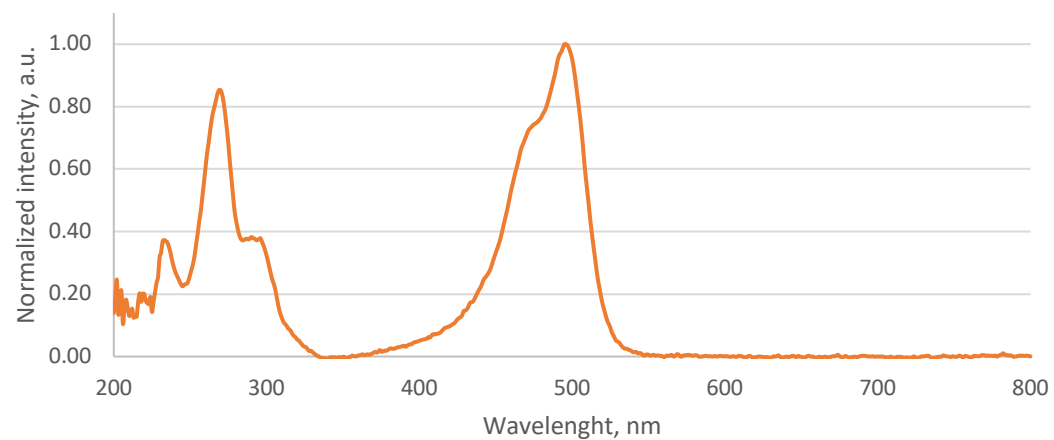
Apollo C18-11(4.6 x 150mm)

15min Gr. 40-95%ACN + 0.1% H₃PO₄; 5min Iz. 95% ACN; 3min Gr 95-40% ACN, 2min Iz. 40% ACN; 270nm;
1mL/min:40oC

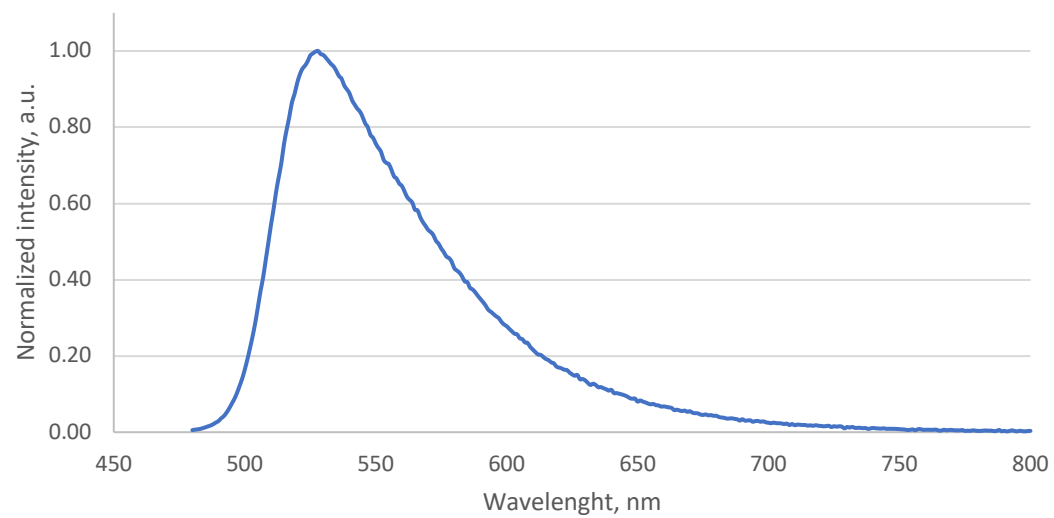


	RT	Area	%Area	Height	EP Plate Count	Width @50%	Resolution	Selectivity
1	2.728	6316	0.21	1204	6505	0.08		
2	3.382	14338	0.47	2879	11090	0.08	4.97	1.58
3	3.871	25002	0.81	4748	12978	0.08	3.71	1.27
4	4.023	9902	0.32	1833	10797	0.09	1.04	1.07
5	4.801	2994917	97.44	376781	8516	0.12	4.30	1.32
6	5.389	23147	0.75	3501	15389	0.10	3.09	1.18
Sum		3073621.8						

Absorption spectrum of **6**



Emission spectrum of **6**



Stereo view of 5

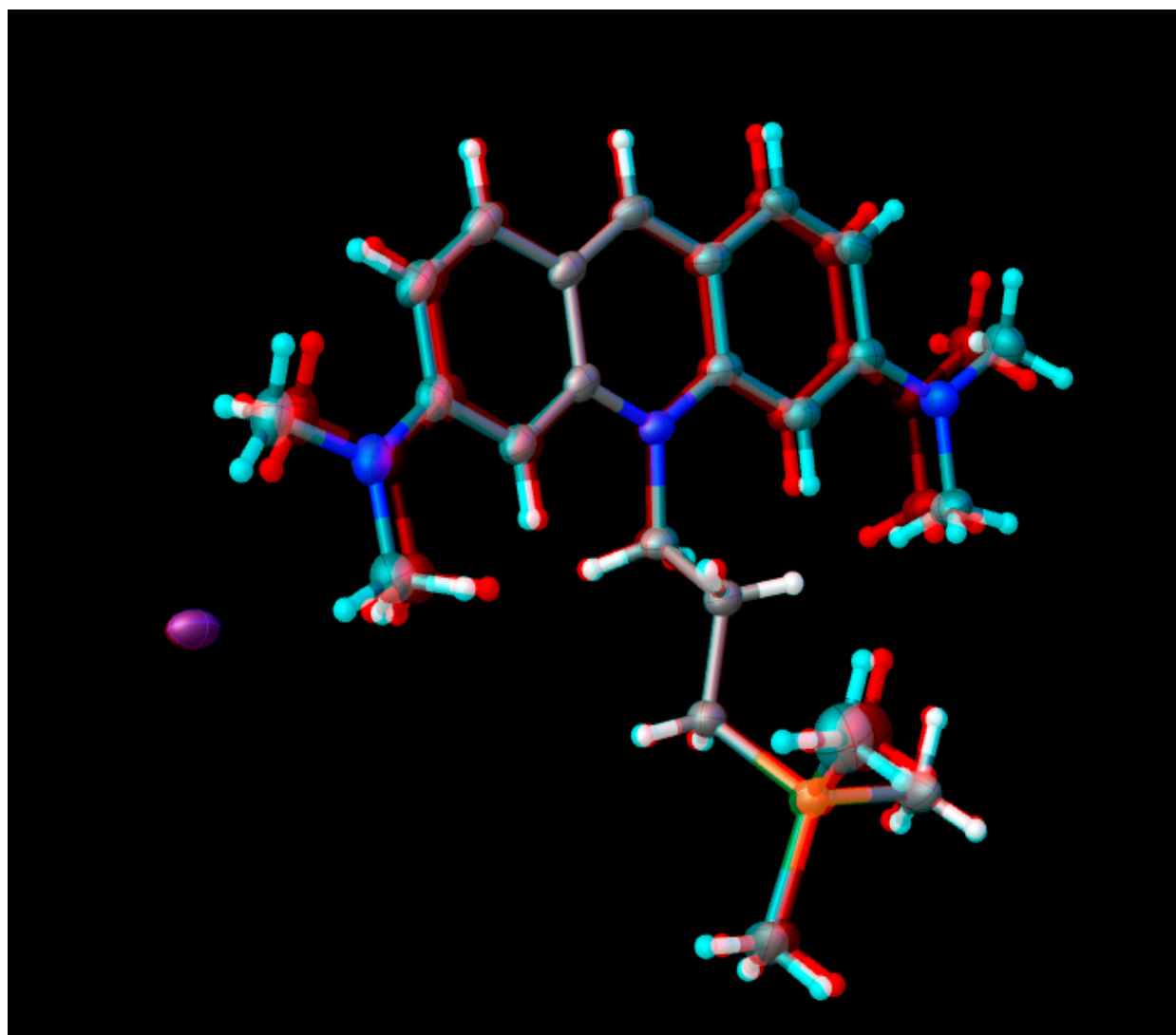


Table 1. Crystal data and structure refinement for 5.

Empirical formula	C ₂₃ H ₃₄ IN ₃ Si
Formula weight	507.52
Temperature	150.0(2) K
Wavelength	0.71073 Å
Crystal system, space group	Monoclinic, I 2/a
Unit cell dimensions	a = 19.4926(7) Å alpha = 90 deg. b = 9.8565(4) Å beta = 102.680(4) deg. c = 25.4939(11) Å gamma = 90 deg.
Volume	4778.7(3) Å ³
Z, Calculated density	8, 1.411 Mg/m ³
Absorption coefficient	1.404 mm ⁻¹
F(000)	2080
Crystal size	0.17 x 0.09 x 0.06 mm
Two-theta max. for data	60.0 deg.
Limiting indices	-28<=h<=29, -14<=k<=12, -35<=l<=35
Reflections collected / unique	27563 / 7979 [R(int) = 0.0544]
Completeness to theta = 30.0	99 %
Absorption correction	Multi-scan
Max. and min. transmission	0.9241 and 0.7378
Refinement method	Full-matrix least-squares on F ²
Data / restraints / parameters	7979 / 0 / 260
Goodness-of-fit on F ²	1.117
Final R indices [I>2sigma(I)]	R1 = 0.0345, wR2 = 0.0886
R indices (all data)	R1 = 0.0563, wR2 = 0.1050
Largest diff. peak and hole	1.417 and -1.232 e.Å ⁻³

Table 2. Atomic coordinates ($\times 10^4$) and equivalent isotropic displacement parameters ($\text{\AA}^2 \times 10^3$) for **5**. $U(\text{eq})$ is defined as one third of the trace of the orthogonalized U_{ij} tensor.

	x	y	z	$U(\text{eq})$
I(1)	4255(1)	6018(1)	1157(1)	45(1)
Si(24)	6061(1)	6085(1)	4528(1)	34(1)
N(10)	7234(1)	4326(2)	2944(1)	25(1)
N(15)	8525(1)	1128(2)	4218(1)	32(1)
N(18)	6090(1)	7996(2)	1835(1)	37(1)
C(11)	7193(1)	5220(2)	2517(1)	26(1)
C(12)	7717(1)	5134(2)	2206(1)	28(1)
C(14)	7811(1)	3497(2)	3123(1)	25(1)
C(5)	6652(1)	6165(2)	2387(1)	29(1)
C(13)	8347(1)	3460(2)	2820(1)	27(1)
C(9)	8277(1)	4251(2)	2360(1)	30(1)
C(3)	8462(1)	1860(2)	3763(1)	27(1)
C(1)	8926(1)	2574(2)	3002(1)	31(1)
C(4)	7876(1)	2712(2)	3585(1)	27(1)
C(6)	6595(1)	7027(2)	1940(1)	31(1)
C(22)	6673(1)	5219(2)	3670(1)	29(1)
C(7)	7094(1)	6867(2)	1608(1)	34(1)
C(8)	7633(1)	5974(2)	1741(1)	33(1)
C(21)	6627(1)	4237(2)	3200(1)	27(1)
C(17)	7980(1)	1150(2)	4526(1)	36(1)
C(2)	8991(1)	1794(2)	3450(1)	31(1)
C(23)	5976(1)	5319(2)	3847(1)	32(1)
C(20)	5597(1)	8156(3)	2180(1)	41(1)
C(16)	9108(1)	194(2)	4414(1)	40(1)
C(19)	5953(2)	8766(2)	1336(1)	45(1)
C(25)	6479(1)	4778(3)	5026(1)	52(1)
C(26)	5175(1)	6546(4)	4629(1)	56(1)
C(27)	6629(2)	7617(3)	4587(1)	63(1)

Table 3. Bond lengths [$\text{\AA}$] and angles [deg] for **5**.

Si(24)-C(27)	1.858(3)	N(10)-C(14)-C(13)	118.22(17)
Si(24)-C(26)	1.858(2)	C(4)-C(14)-C(13)	120.11(18)
Si(24)-C(25)	1.865(3)	C(11)-C(5)-C(6)	121.30(18)
Si(24)-C(23)	1.869(2)	C(11)-C(5)-H(5)	119.4

N(10)-C(14)	1.385(3)	C(6)-C(5)-H(5)	119.4
N(10)-C(11)	1.388(2)	C(9)-C(13)-C(1)	122.98(17)
N(10)-C(21)	1.475(2)	C(9)-C(13)-C(14)	119.64(19)
N(15)-C(3)	1.350(3)	C(1)-C(13)-C(14)	117.37(18)
N(15)-C(17)	1.453(3)	C(12)-C(9)-C(13)	121.12(17)
N(15)-C(16)	1.462(3)	C(12)-C(9)-H(9)	119.4
N(18)-C(6)	1.354(3)	C(13)-C(9)-H(9)	119.4
N(18)-C(20)	1.448(3)	N(15)-C(3)-C(4)	120.71(17)
N(18)-C(19)	1.454(3)	N(15)-C(3)-C(2)	120.76(18)
C(11)-C(5)	1.392(3)	C(4)-C(3)-C(2)	118.53(18)
C(11)-C(12)	1.427(3)	C(2)-C(1)-C(13)	122.96(17)
C(12)-C(9)	1.385(3)	C(2)-C(1)-H(1)	118.5
C(12)-C(8)	1.425(3)	C(13)-C(1)-H(1)	118.5
C(14)-C(4)	1.390(3)	C(14)-C(4)-C(3)	121.43(17)
C(14)-C(13)	1.431(2)	C(14)-C(4)-H(4)	119.3
C(5)-C(6)	1.406(3)	C(3)-C(4)-H(4)	119.3
C(5)-H(5)	0.9300	N(18)-C(6)-C(5)	120.76(19)
C(13)-C(9)	1.389(3)	N(18)-C(6)-C(7)	121.28(19)
C(13)-C(1)	1.421(3)	C(5)-C(6)-C(7)	117.95(19)
C(9)-H(9)	0.9300	C(21)-C(22)-C(23)	111.65(16)
C(3)-C(4)	1.409(3)	C(21)-C(22)-H(22A)	109.3
C(3)-C(2)	1.437(3)	C(23)-C(22)-H(22A)	109.3
C(1)-C(2)	1.360(3)	C(21)-C(22)-H(22B)	109.3
C(1)-H(1)	0.9300	C(23)-C(22)-H(22B)	109.3
C(4)-H(4)	0.9300	H(22A)-C(22)-H(22B)	108.0
C(6)-C(7)	1.432(3)	C(8)-C(7)-C(6)	120.94(19)
C(22)-C(21)	1.526(3)	C(8)-C(7)-H(7)	119.5
C(22)-C(23)	1.526(3)	C(6)-C(7)-H(7)	119.5
C(22)-H(22A)	0.9700	C(7)-C(8)-C(12)	121.77(19)
C(22)-H(22B)	0.9700	C(7)-C(8)-H(8)	119.1
C(7)-C(8)	1.355(3)	C(12)-C(8)-H(8)	119.1
C(7)-H(7)	0.9300	N(10)-C(21)-C(22)	113.22(15)
C(8)-H(8)	0.9300	N(10)-C(21)-H(21A)	108.9
C(21)-H(21A)	0.9700	C(22)-C(21)-H(21A)	108.9
C(21)-H(21B)	0.9700	N(10)-C(21)-H(21B)	108.9
C(17)-H(17A)	0.9600	C(22)-C(21)-H(21B)	108.9
C(17)-H(17B)	0.9600	H(21A)-C(21)-H(21B)	107.7
C(17)-H(17C)	0.9600	N(15)-C(17)-H(17A)	109.5
C(2)-H(2)	0.9300	N(15)-C(17)-H(17B)	109.5
C(23)-H(23A)	0.9700	H(17A)-C(17)-H(17B)	109.5
C(23)-H(23B)	0.9700	N(15)-C(17)-H(17C)	109.5
C(20)-H(20A)	0.9600	H(17A)-C(17)-H(17C)	109.5
C(20)-H(20B)	0.9600	H(17B)-C(17)-H(17C)	109.5
C(27)-H(27C)	0.9600	C(1)-C(2)-C(3)	119.58(18)
		C(1)-C(2)-H(2)	120.2
		C(3)-C(2)-H(2)	120.2
		C(22)-C(23)-Si(24)	113.43(14)

C(27)-Si(24)-C(26)	110.18(16)		C(22)-C(23)-H(23A)	108.9
C(27)-Si(24)-C(25)	110.10(15)		Si(24)-C(23)-H(23A)	108.9
C(26)-Si(24)-C(25)	110.78(12)		C(22)-C(23)-H(23B)	108.9
C(27)-Si(24)-C(23)	109.48(13)		Si(24)-C(23)-H(23B)	108.9
C(26)-Si(24)-C(23)	109.34(12)		H(23A)-C(23)-H(23B)	107.7
C(25)-Si(24)-C(23)	106.90(12)		N(18)-C(20)-H(20A)	109.5
C(14)-N(10)-C(11)	122.46(15)		N(18)-C(20)-H(20B)	109.5
C(14)-N(10)-C(21)	119.43(16)		H(20A)-C(20)-H(20B)	109.5
C(11)-N(10)-C(21)	118.08(16)		N(18)-C(20)-H(20C)	109.5
C(3)-N(15)-C(17)	121.09(17)		H(20A)-C(20)-H(20C)	109.5
C(3)-N(15)-C(16)	123.23(18)		H(20B)-C(20)-H(20C)	109.5
C(17)-N(15)-C(16)	115.53(18)		N(15)-C(16)-H(16A)	109.5
C(6)-N(18)-C(20)	120.41(19)		N(15)-C(16)-H(16B)	109.5
C(6)-N(18)-C(19)	121.8(2)	C(20)-	H(16A)-C(16)-H(16B)	109.5
N(18)-C(19)	117.1(2)	N(10)-	N(15)-C(16)-H(16C)	109.5
C(11)-C(5)	121.50(17)	N(10)-	H(16A)-C(16)-H(16C)	109.5
C(11)-C(12)	118.22(18)	C(5)-	H(16B)-C(16)-H(16C)	109.5
C(11)-C(12)	120.27(18)	C(9)-	N(18)-C(19)-H(19A)	109.5
C(12)-C(8)	122.70(18)	C(9)-	N(18)-C(19)-H(19B)	109.5
C(12)-C(11)	119.75(18)	C(8)-	H(19A)-C(19)-H(19B)	109.5
C(12)-C(11)	117.55(19)	N(10)-	N(18)-C(19)-H(19C)	109.5
C(14)-C(4)	121.67(16)		H(19A)-C(19)-H(19C)	109.5
			H(19B)-C(19)-H(19C)	109.5
			Si(24)-C(27)-H(27B)	109.5
			H(27A)-C(27)-H(27B)	109.5
			Si(24)-C(27)-H(27C)	109.5
			H(27A)-C(27)-H(27C)	109.5
			H(27B)-C(27)-H(27C)	109.5

Table 4. Anisotropic displacement parameters ($\text{\AA}^2 \times 10^3$) for **5**. The anisotropic displacement factor exponent takes the form:

$$-2 \pi^2 [h^2 a^{*2} U_{11} + \dots + 2 h k a^* b^* U_{12}]$$

	U11	U22	U33	U23	U13	U12
I(1)	37(1)	56(1)	46(1)	-16(1)	20(1)	-5(1)
Si(24)	34(1)	41(1)	27(1)	1(1)	10(1)	12(1)
N(10)	25(1)	30(1)	22(1)	-3(1)	8(1)	-5(1)
N(15)	30(1)	32(1)	34(1)	1(1)	9(1)	1(1)
N(18)	37(1)	41(1)	31(1)	4(1)	2(1)	-4(1)
C(11)	30(1)	29(1)	21(1)	-6(1)	6(1)	-10(1)
C(12)	32(1)	33(1)	21(1)	-7(1)	8(1)	-11(1)
C(14)	25(1)	26(1)	24(1)	-8(1)	8(1)	-7(1)

C(5)	29(1)	34(1)	24(1)	-2(1)	5(1)	-7(1)
C(13)	27(1)	31(1)	25(1)	-8(1)	9(1)	-8(1)
C(9)	32(1)	35(1)	26(1)	-10(1)	13(1)	-9(1)
C(3)	27(1)	26(1)	28(1)	-6(1)	8(1)	-5(1)
C(1)	26(1)	40(1)	28(1)	-11(1)	10(1)	-5(1)
C(4)	27(1)	29(1)	27(1)	-5(1)	10(1)	-5(1)
C(6)	33(1)	32(1)	25(1)	-3(1)	1(1)	-10(1)
C(22)	27(1)	35(1)	27(1)	-3(1)	9(1)	-3(1)
C(7)	43(1)	37(1)	23(1)	-1(1)	7(1)	-14(1)
C(8)	41(1)	38(1)	23(1)	-5(1)	11(1)	-14(1)
C(21)	25(1)	32(1)	27(1)	-2(1)	10(1)	-5(1)
C(17)	38(1)	40(1)	35(1)	5(1)	15(1)	2(1)
C(2)	25(1)	37(1)	31(1)	-8(1)	7(1)	-1(1)
C(23)	26(1)	42(1)	30(1)	-3(1)	8(1)	2(1)
C(20)	37(1)	45(1)	40(1)	1(1)	6(1)	1(1)
C(16)	37(1)	37(1)	45(1)	5(1)	9(1)	6(1)
C(19)	51(1)	44(1)	36(1)	9(1)	2(1)	-3(1)
C(25)	39(1)	80(2)	42(1)	22(1)	16(1)	25(1)
C(26)	46(1)	86(2)	37(1)	3(1)	12(1)	35(1)
C(27)	72(2)	49(2)	63(2)	-17(1)	7(2)	-2(1)

Table 5. Hydrogen coordinates ($\times 10^4$) and isotropic displacement parameters ($\text{\AA}^2 \times 10^3$) for **5**.

	x	y	z	U(eq)
H(5)	6322	6228	2599	35
H(9)	8613	4186	2152	36
H(1)	9275	2526	2806	37
H(4)	7526	2750	3780	33
H(22A)	6805	6110	3564	35
H(22B)	7037	4914	3970	35
H(7)	7048	7383	1297	41
H(8)	7956	5907	1523	40
H(21A)	6593	3318	3328	33
H(21B)	6200	4425	2933	33
H(17A)	7896	2070	4620	54
H(17B)	8129	625	4848	54
H(17C)	7555	772	4314	54
H(2)	9377	1222	3554	37
H(23A)	5777	4417	3847	39
H(23B)	5652	5861	3587	39
H(20A)	5300	7370	2151	62
H(20B)	5314	8947	2074	62

H(20C)	5851	8257	2546	62
H(16A)	8993	-686	4258	60
H(16B)	9189	127	4799	60
H(16C)	9525	527	4315	60
H(19A)	6385	9148	1281	67
H(19B)	5626	9482	1356	67
H(19C)	5758	8176	1041	67
H(25A)	6178	3998	4997	79
H(25B)	6549	5146	5383	79
H(25C)	6924	4517	4955	79
H(26A)	4967	7210	4366	83
H(26B)	5216	6914	4983	83
H(26C)	4883	5751	4589	83
H(27A)	7078	7374	4519	94
H(27B)	6691	7985	4943	94
H(27C)	6410	8283	4329	94

Table 6. Torsion angles [deg] for **5**.

C(14)-N(10)-C(11)-C(5)	-171.64(17)
C(21)-N(10)-C(11)-C(5)	10.3(3)
C(14)-N(10)-C(11)-C(12)	9.3(3)
C(21)-N(10)-C(11)-C(12)	-168.71(16)
N(10)-C(11)-C(12)-C(9)	-5.1(3)
C(5)-C(11)-C(12)-C(9)	175.79(18)
N(10)-C(11)-C(12)-C(8)	174.56(17)
C(5)-C(11)-C(12)-C(8)	-4.5(3)
C(11)-N(10)-C(14)-C(4)	173.26(17)
C(21)-N(10)-C(14)-C(4)	-8.8(3)
C(11)-N(10)-C(14)-C(13)	-6.9(3)
C(21)-N(10)-C(14)-C(13)	171.12(16)
N(10)-C(11)-C(5)-C(6)	-177.15(17)
C(12)-C(11)-C(5)-C(6)	1.9(3)
N(10)-C(14)-C(13)-C(9)	0.2(3)
C(4)-C(14)-C(13)-C(9)	-179.89(17)
N(10)-C(14)-C(13)-C(1)	-178.28(16)
C(4)-C(14)-C(13)-C(1)	1.6(3)
C(8)-C(12)-C(9)-C(13)	179.11(18)
C(11)-C(12)-C(9)-C(13)	-1.2(3)
C(1)-C(13)-C(9)-C(12)	-177.90(18)
C(14)-C(13)-C(9)-C(12)	3.7(3)
C(17)-N(15)-C(3)-C(4)	2.6(3)
C(16)-N(15)-C(3)-C(4)	177.95(19)
C(17)-N(15)-C(3)-C(2)	-177.74(18)
C(16)-N(15)-C(3)-C(2)	-2.4(3)

C(9)-C(13)-C(1)-C(2)	-179.55(19)
C(14)-C(13)-C(1)-C(2)	-1.1(3)
N(10)-C(14)-C(4)-C(3)	179.41(17)
C(13)-C(14)-C(4)-C(3)	-0.5(3)
N(15)-C(3)-C(4)-C(14)	178.47(17)
C(2)-C(3)-C(4)-C(14)	-1.2(3)
C(20)-N(18)-C(6)-C(5)	-0.3(3)
C(19)-N(18)-C(6)-C(5)	-170.9(2)
C(20)-N(18)-C(6)-C(7)	-178.97(19)
C(19)-N(18)-C(6)-C(7)	10.5(3)
C(11)-C(5)-C(6)-N(18)	-176.21(18)
C(11)-C(5)-C(6)-C(7)	2.5(3)
N(18)-C(6)-C(7)-C(8)	174.4(2)
C(5)-C(6)-C(7)-C(8)	-4.3(3)
C(6)-C(7)-C(8)-C(12)	1.6(3)
C(9)-C(12)-C(8)-C(7)	-177.54(19)
C(11)-C(12)-C(8)-C(7)	2.8(3)
C(14)-N(10)-C(21)-C(22)	91.2(2)
C(11)-N(10)-C(21)-C(22)	-90.7(2)
C(23)-C(22)-C(21)-N(10)	167.83(17)
C(13)-C(1)-C(2)-C(3)	-0.6(3)
N(15)-C(3)-C(2)-C(1)	-177.96(19)
C(4)-C(3)-C(2)-C(1)	1.7(3)
C(21)-C(22)-C(23)-Si(24)	163.28(15)
C(27)-Si(24)-C(23)-C(22)	45.3(2)
C(26)-Si(24)-C(23)-C(22)	166.06(17)
C(25)-Si(24)-C(23)-C(22)	-73.97(18)

Cardiolipin / DOPC liposomes size

Sample Details

Sample Name: CL/DOPC 20 mM HEPES pH 7.4

SOP Name: Disposable cuvette.sop

General Notes: Average result created from record number(s): 133 134 135

File Name: cardiolipin fluorimetrija.dts	Dispersant Name: Water
Record Number: 155	Dispersant RI: 1,330
Material RI: 1,59	Viscosity (cP): 0,8872
Material Absorbtion: 0,010	Measurement Date and Time: trešdiena, 2020. gada 25. ...

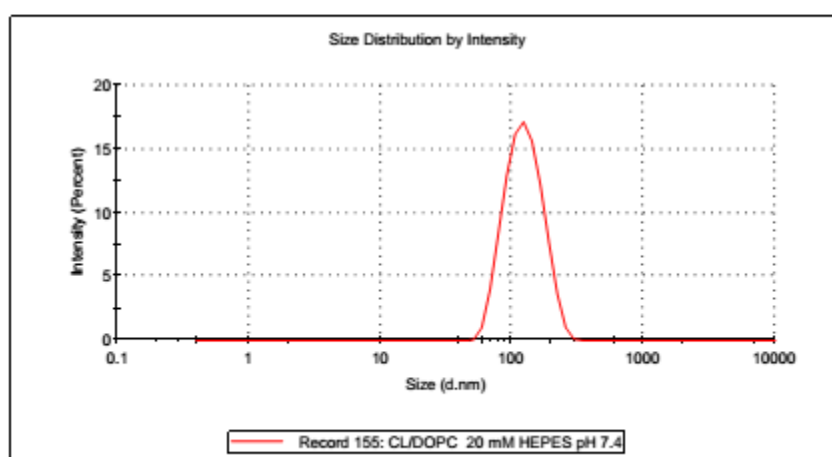
System

Temperature (°C): 25,0	Duration Used (s): 25
Count Rate (kcps): 249,1	Measurement Position (mm): 4,65
Cell Description: Disposable sizing cuvette	Attenuator: 6

Results

	Size (d.nm...	% Intensity:	St Dev (d.n...
Z-Average (d.nm): 115,2	Peak 1: 127,7	100,0	40,63
Pdl: 0,089	Peak 2: 0,000	0,0	0,000
Intercept: 0,960	Peak 3: 0,000	0,0	0,000

Result quality **Good**



Cardiolipin / PI/PE/DOPC liposomes size

Sample Details

Sample Name: CL/PI/DOPE/DOPC 20mM HEPES pH 7.4

SOP Name: Disposable cuvette.sop

General Notes: Average result created from record number(s): 139 140 141

File Name:	cardiolipin fluorimetrija.dts	Dispersant Name:	Water
Record Number:	154	Dispersant RI:	1,330
Material RI:	1,59	Viscosity (cP):	0,8872
Material Absorbance:	0,010	Measurement Date and Time:	trešdiena, 2020. gada 25. ...

System

Temperature (°C):	25,1	Duration Used (s):	25
Count Rate (kcps):	243,0	Measurement Position (mm):	4,65
Cell Description:	Disposable sizing cuvette	Attenuator:	6

Results

	Size (d.nm...)	% Intensity:	St Dev (d.n...
Z-Average (d.nm): 115,4	Peak 1: 131,9	100,0	48,55
Pdl: 0,117	Peak 2: 0,000	0,0	0,000
Intercept: 0,953	Peak 3: 0,000	0,0	0,000

Result quality **Good**

