Electronic Supplementary Material (ESI) for RSC Advances.

Synthesis, photophysical properties and anticancer activity of micro-environment sensitive amphiphilic bile acid dendrimers

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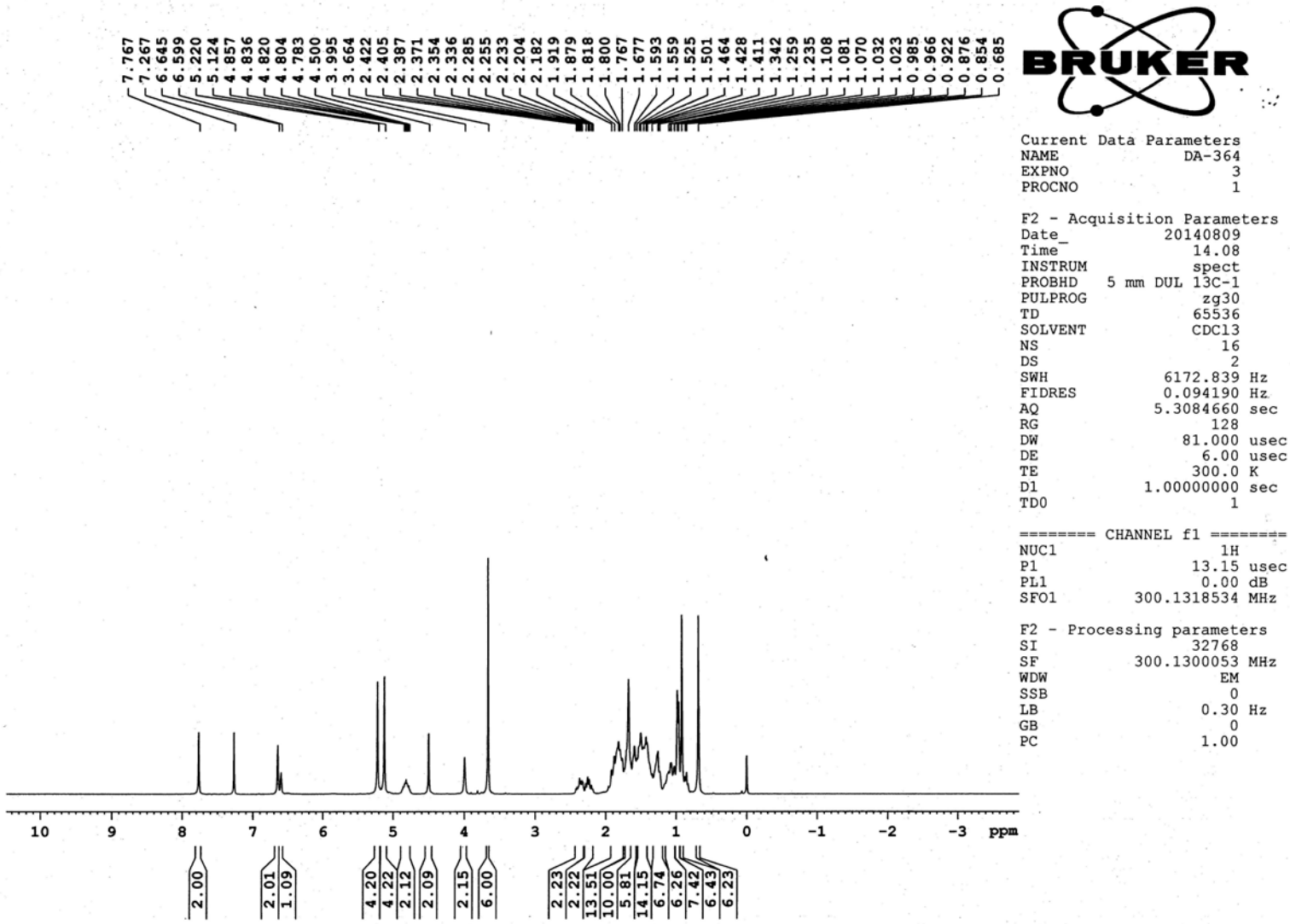
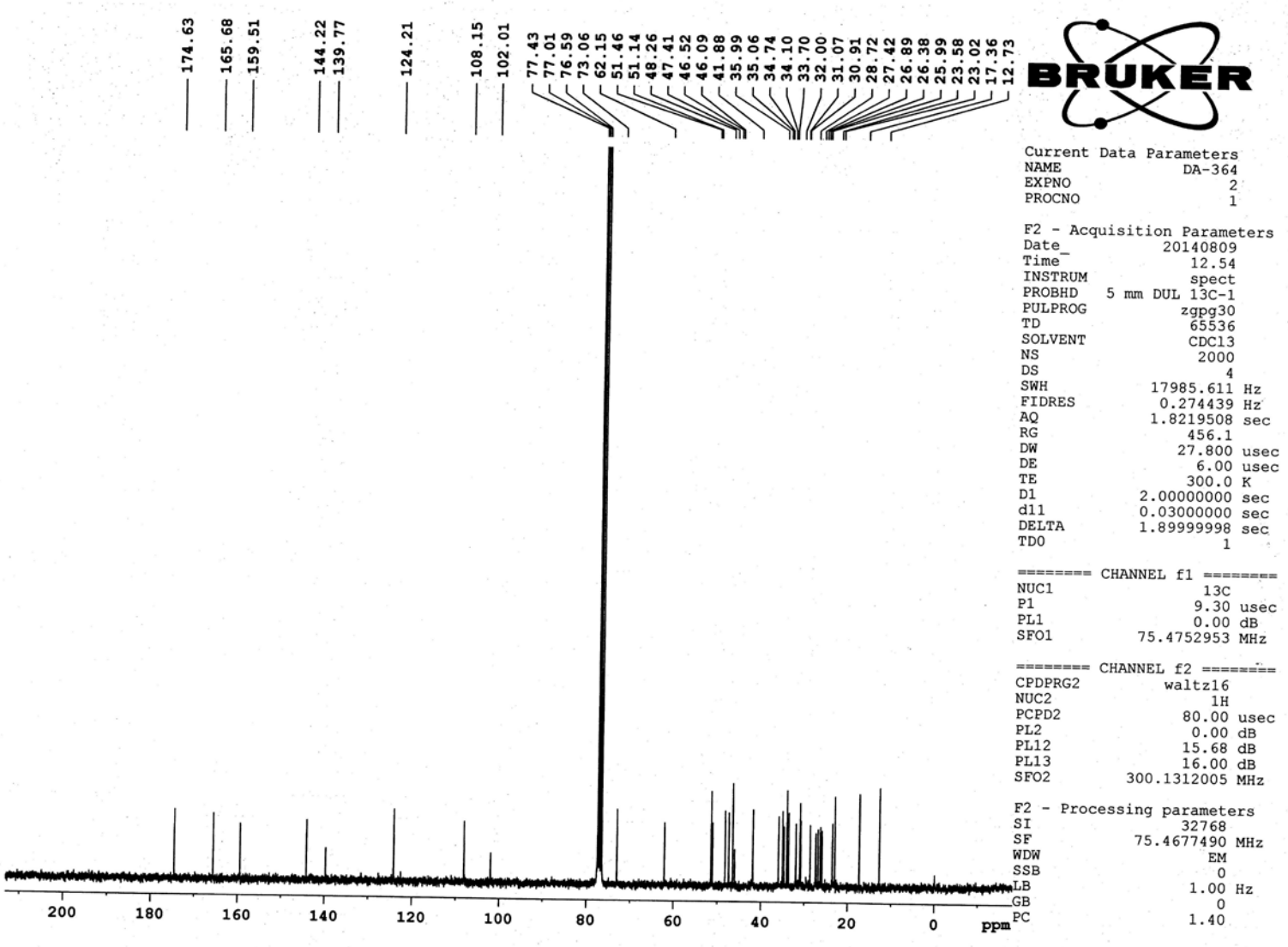
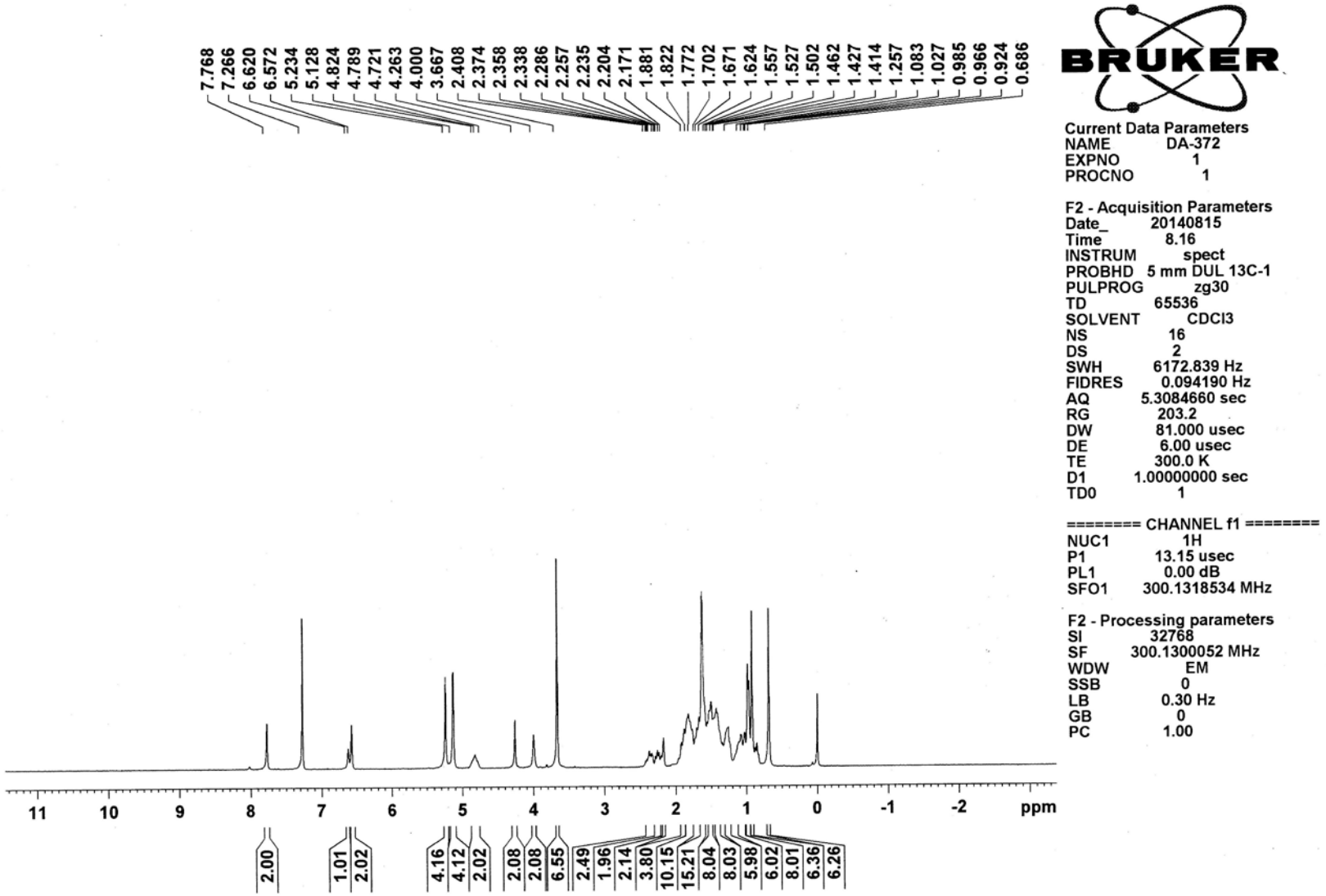


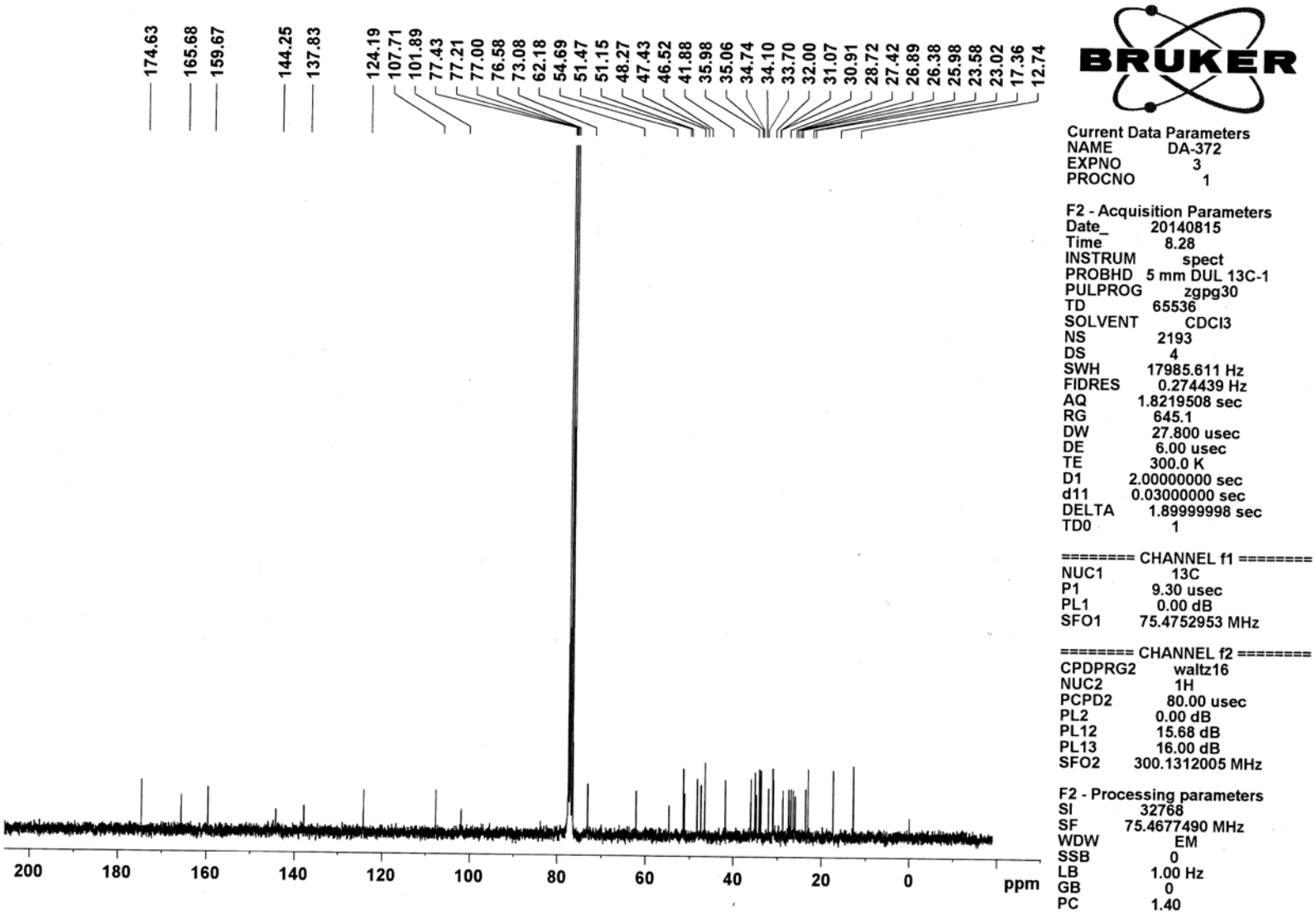
^{1}H NMR (300 MHz, $CDCl_3$) of compound **14**



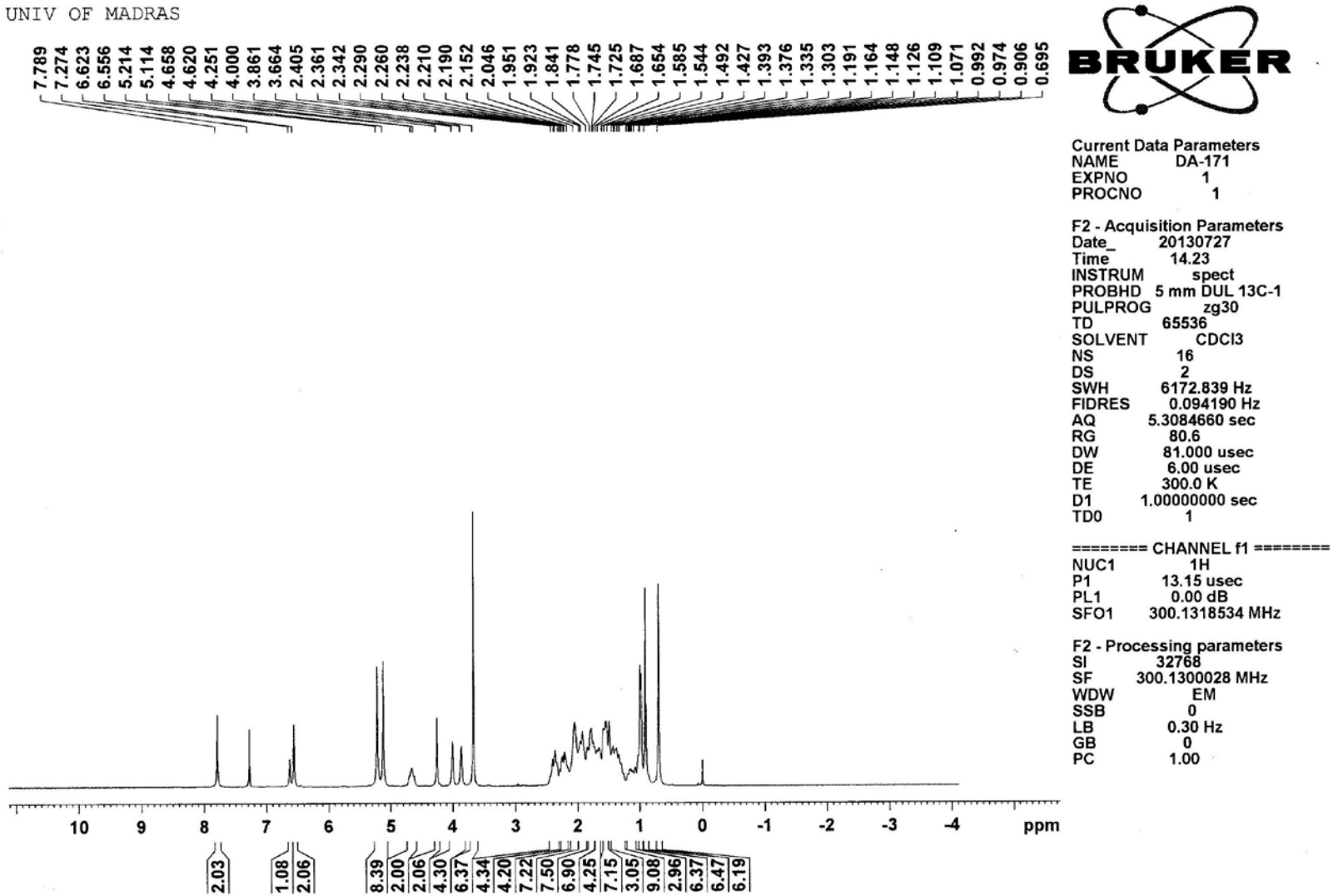
^{13}C NMR (75 MHz, $CDCl_3$) of compound **14**



^{1}H NMR (300 MHz, $CDCl_3$) of compound **16**



^{13}C NMR (75 MHz, $CDCl_3$) of compound **16**



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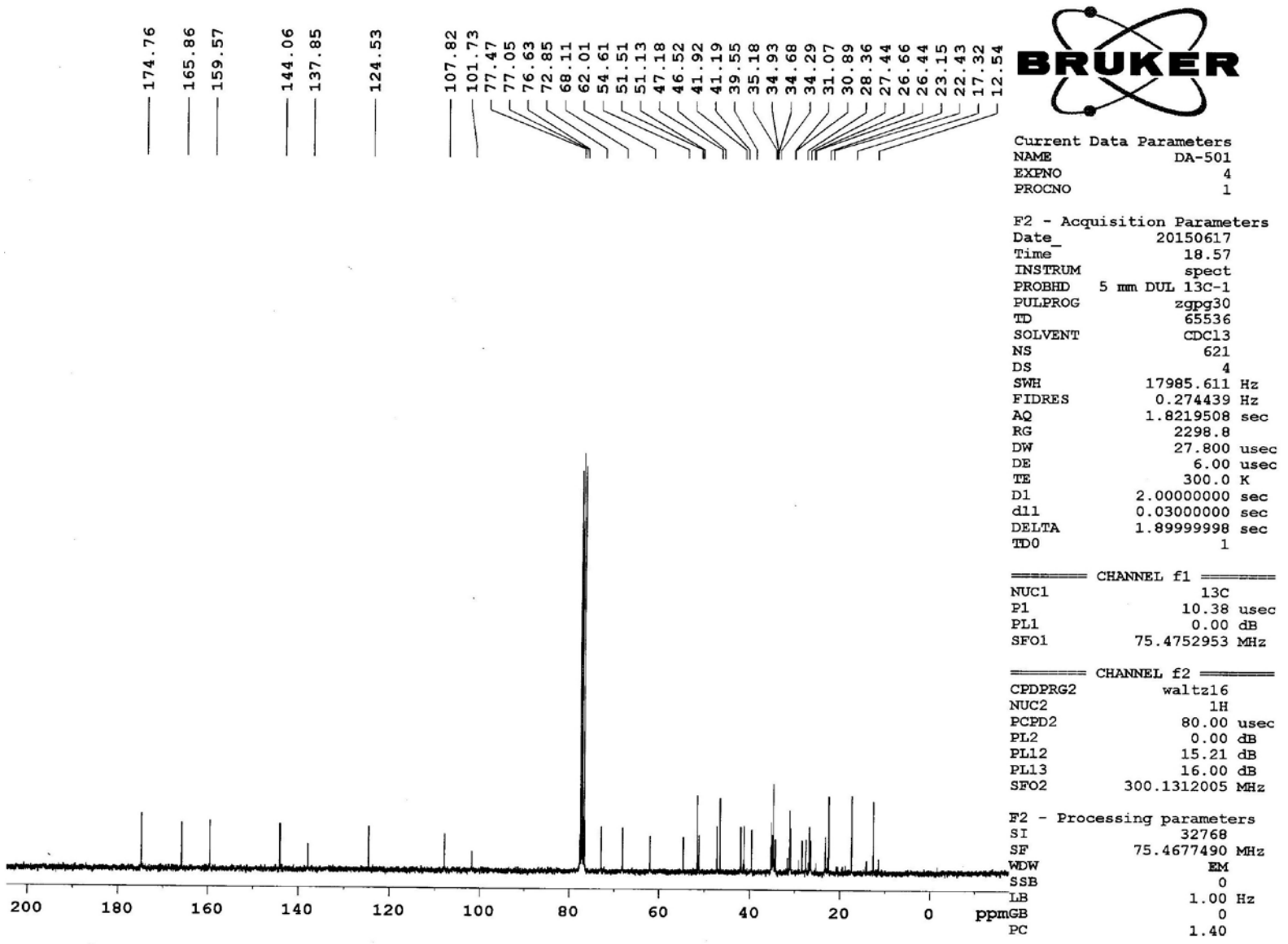

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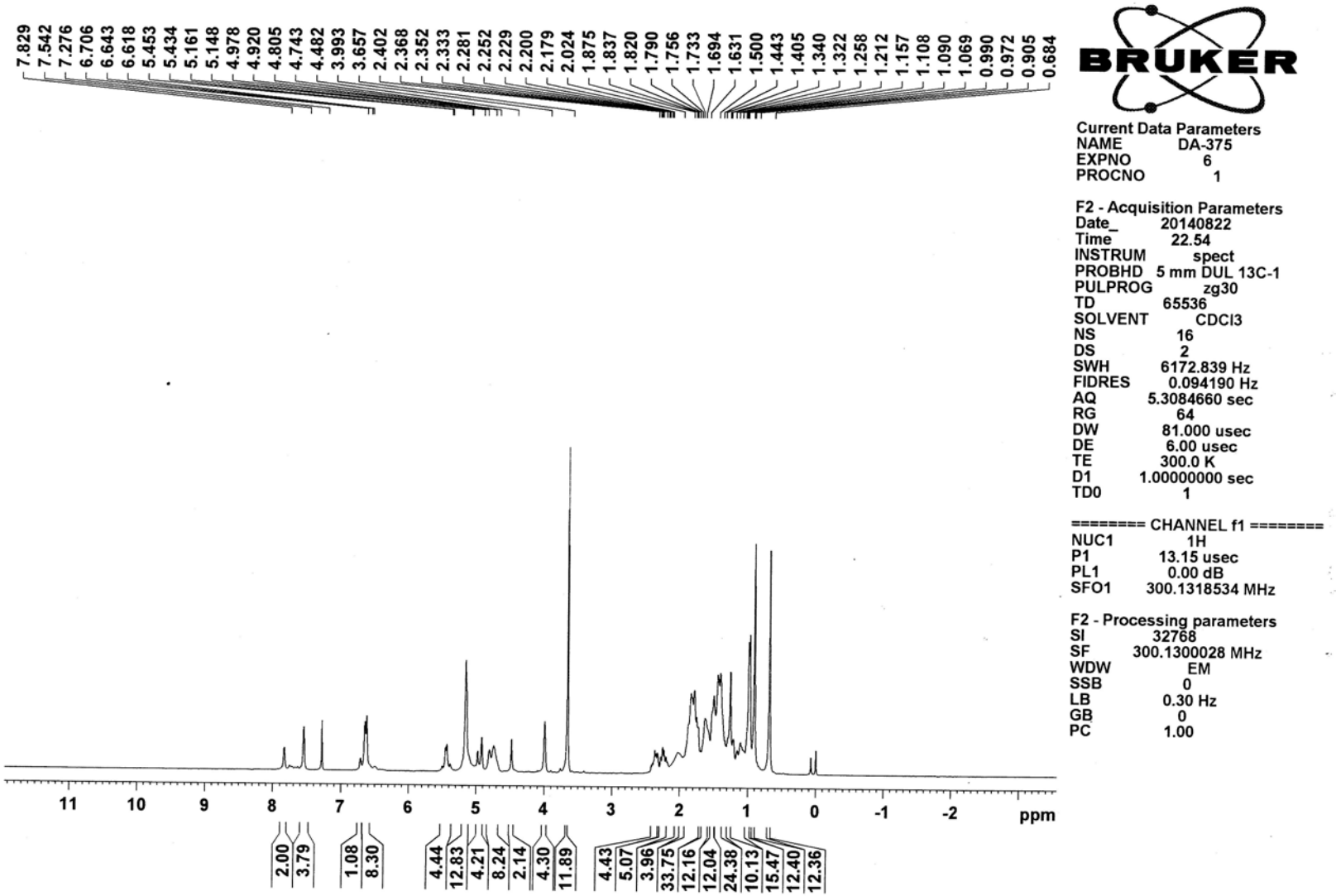

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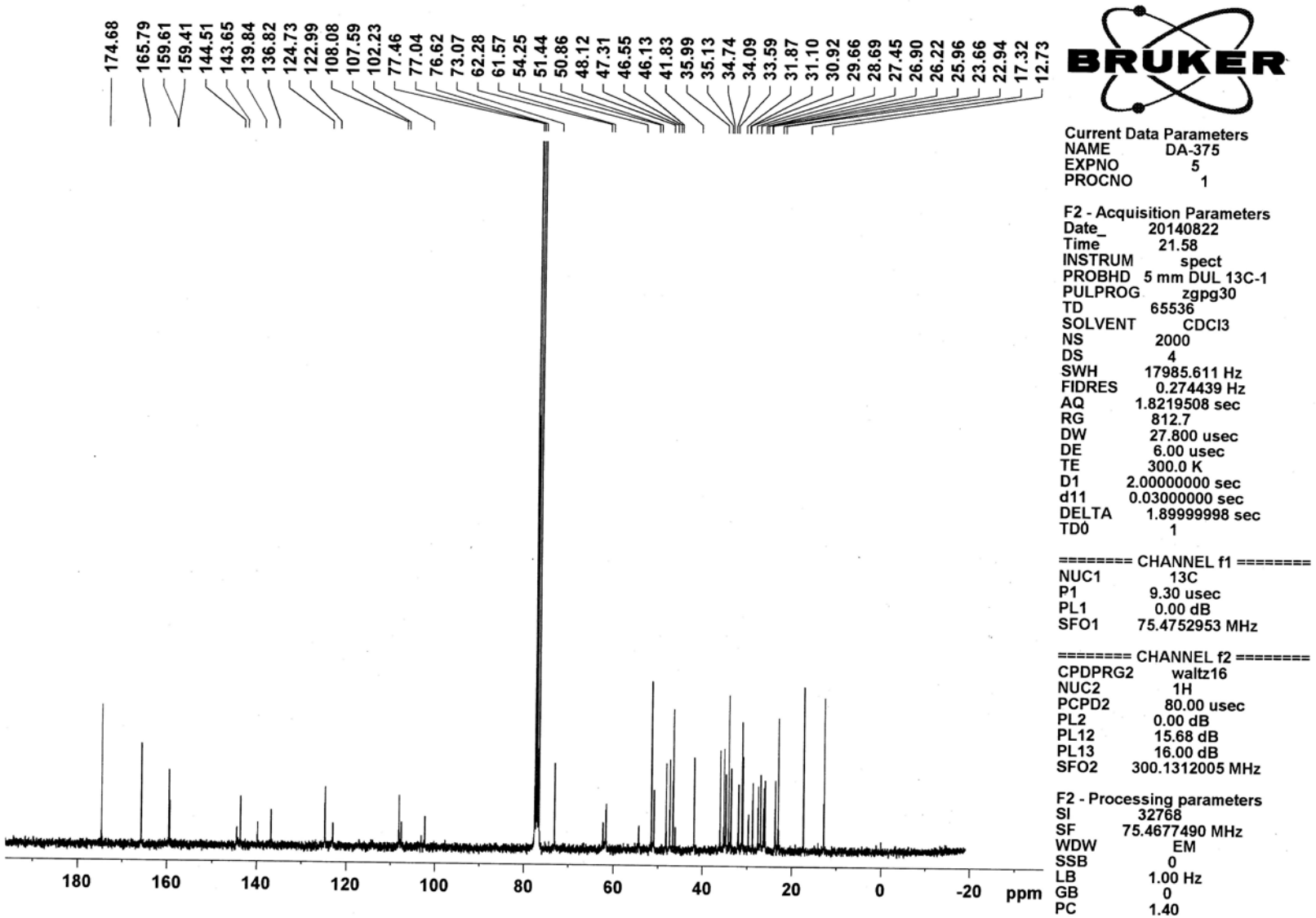

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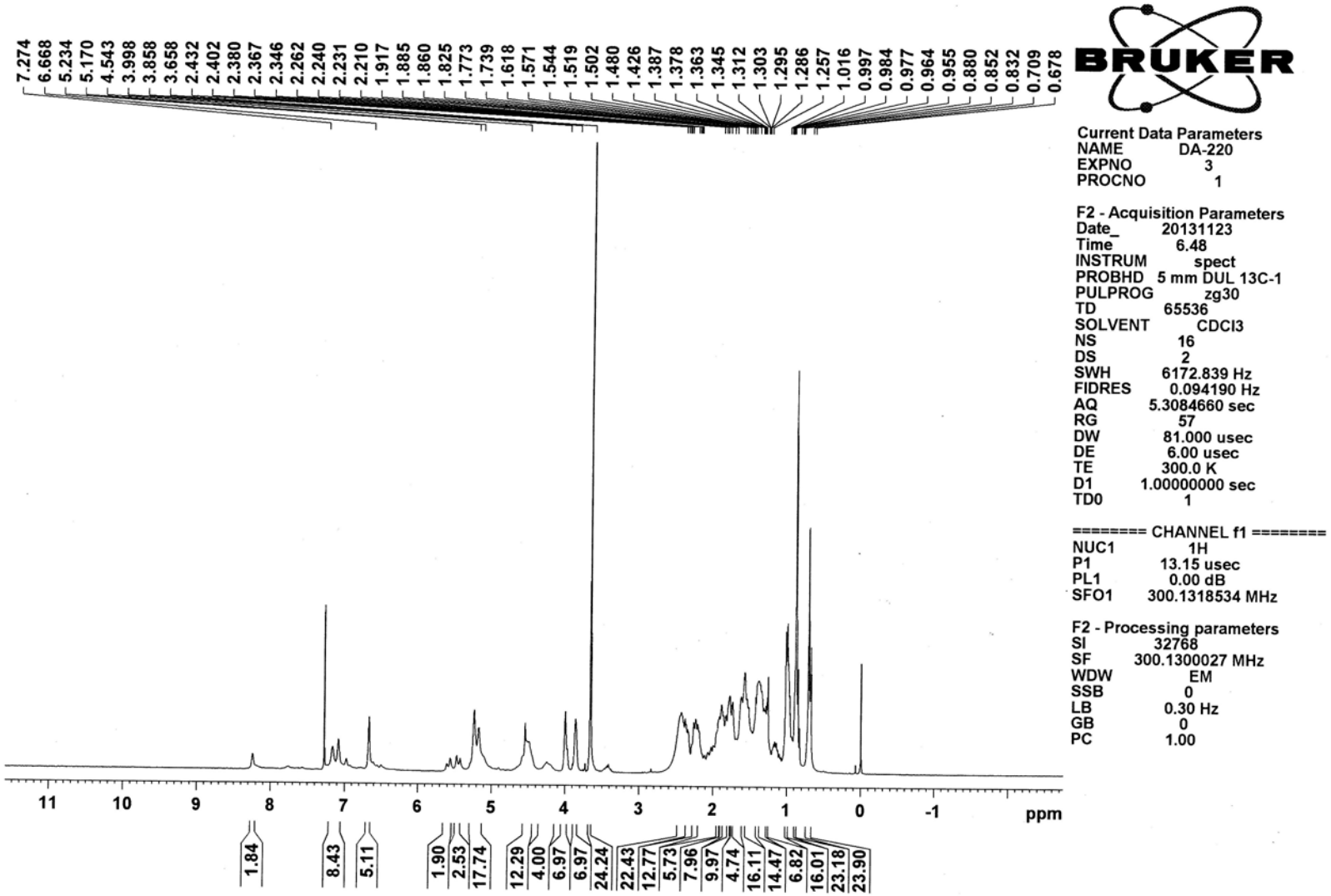

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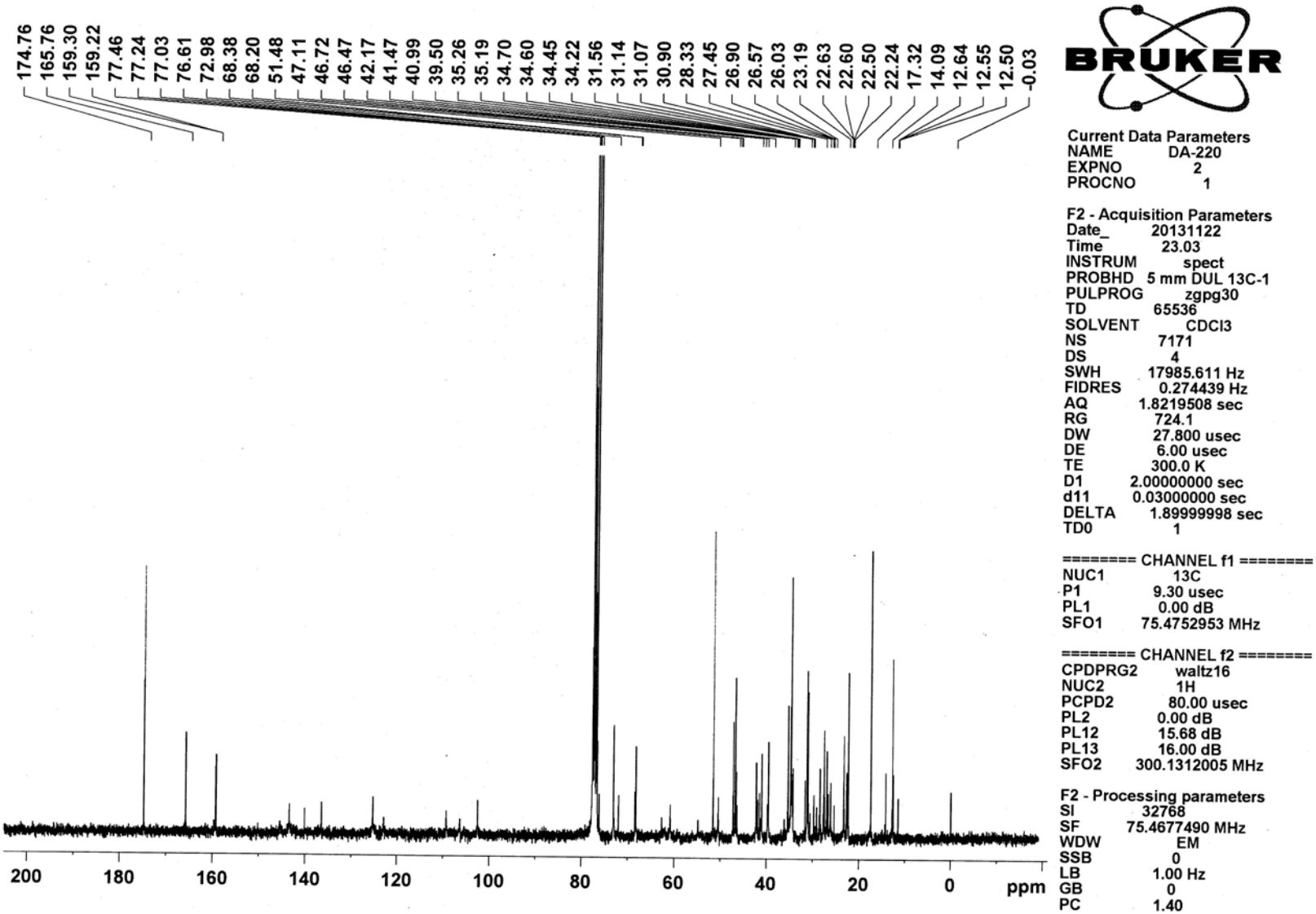
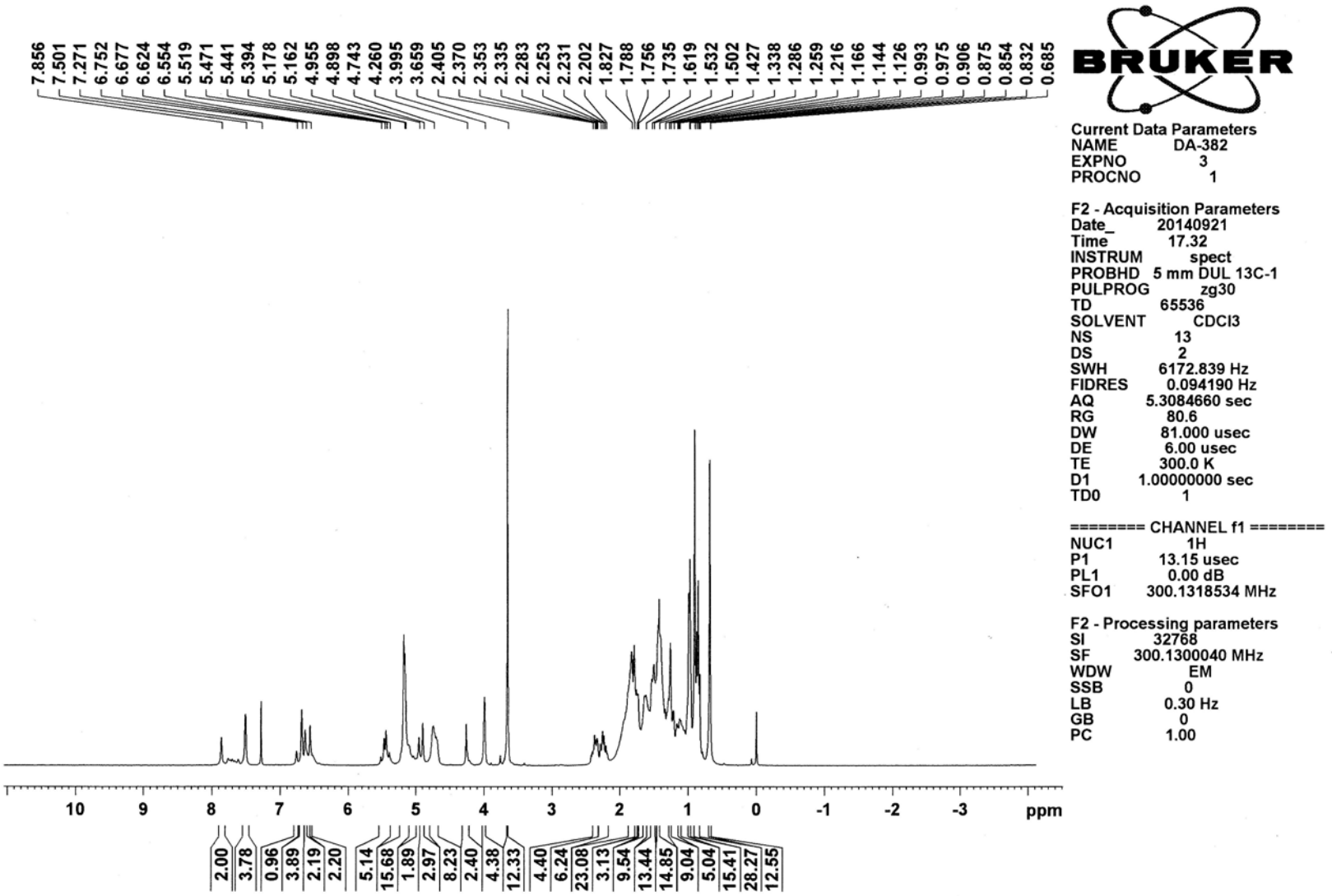


^{13}C NMR (75 MHz, $CDCl_3$) of compound **19**



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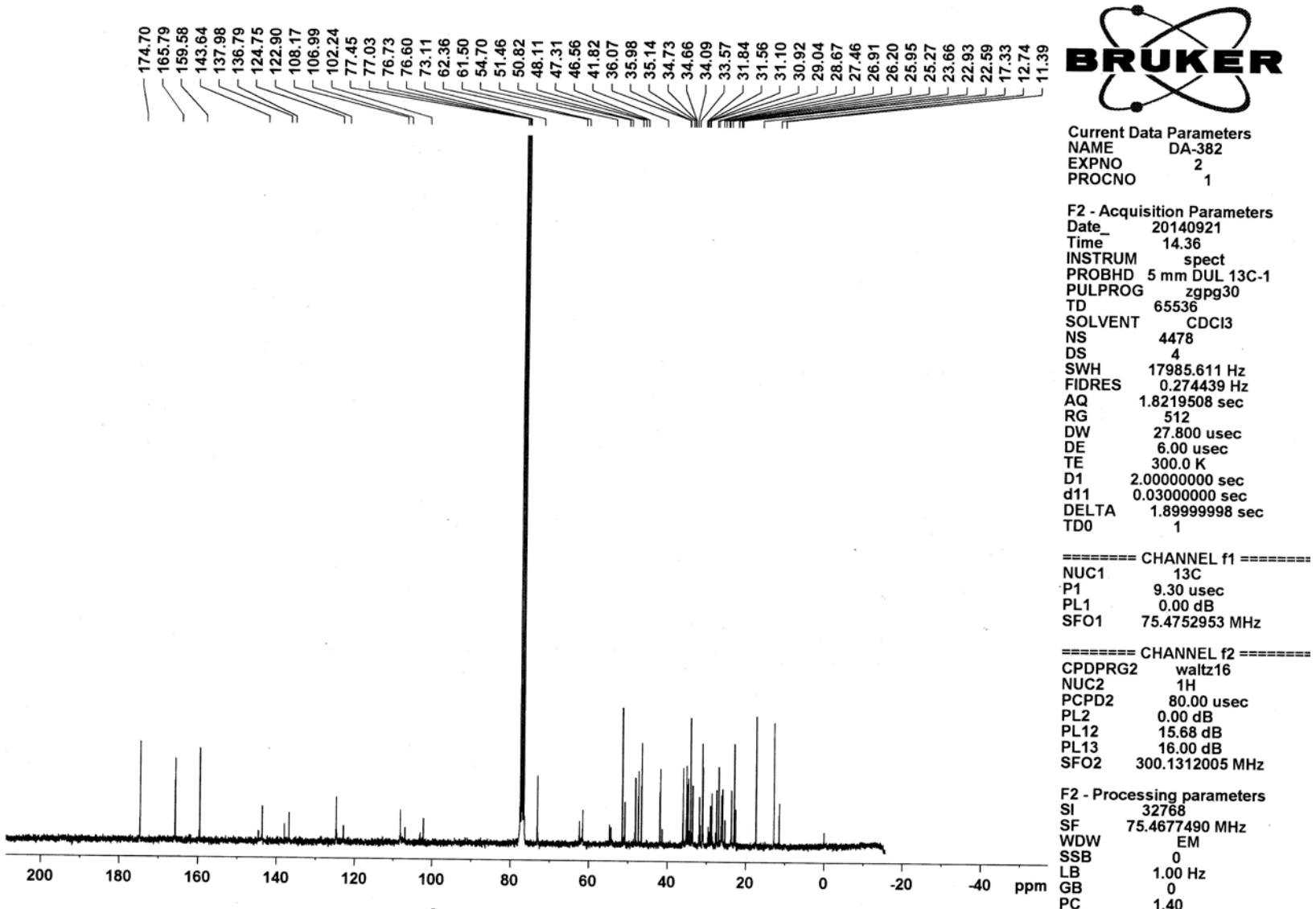
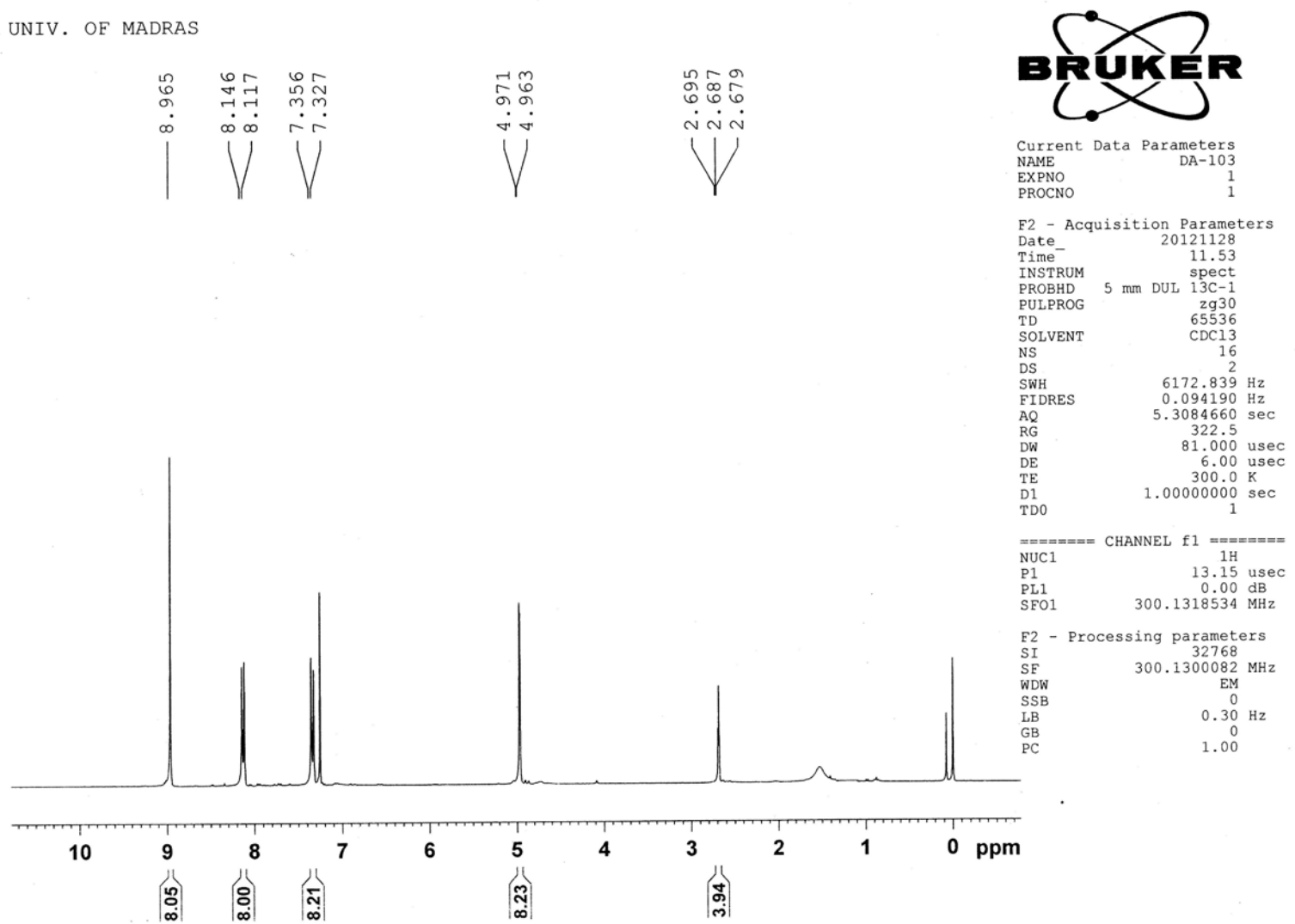
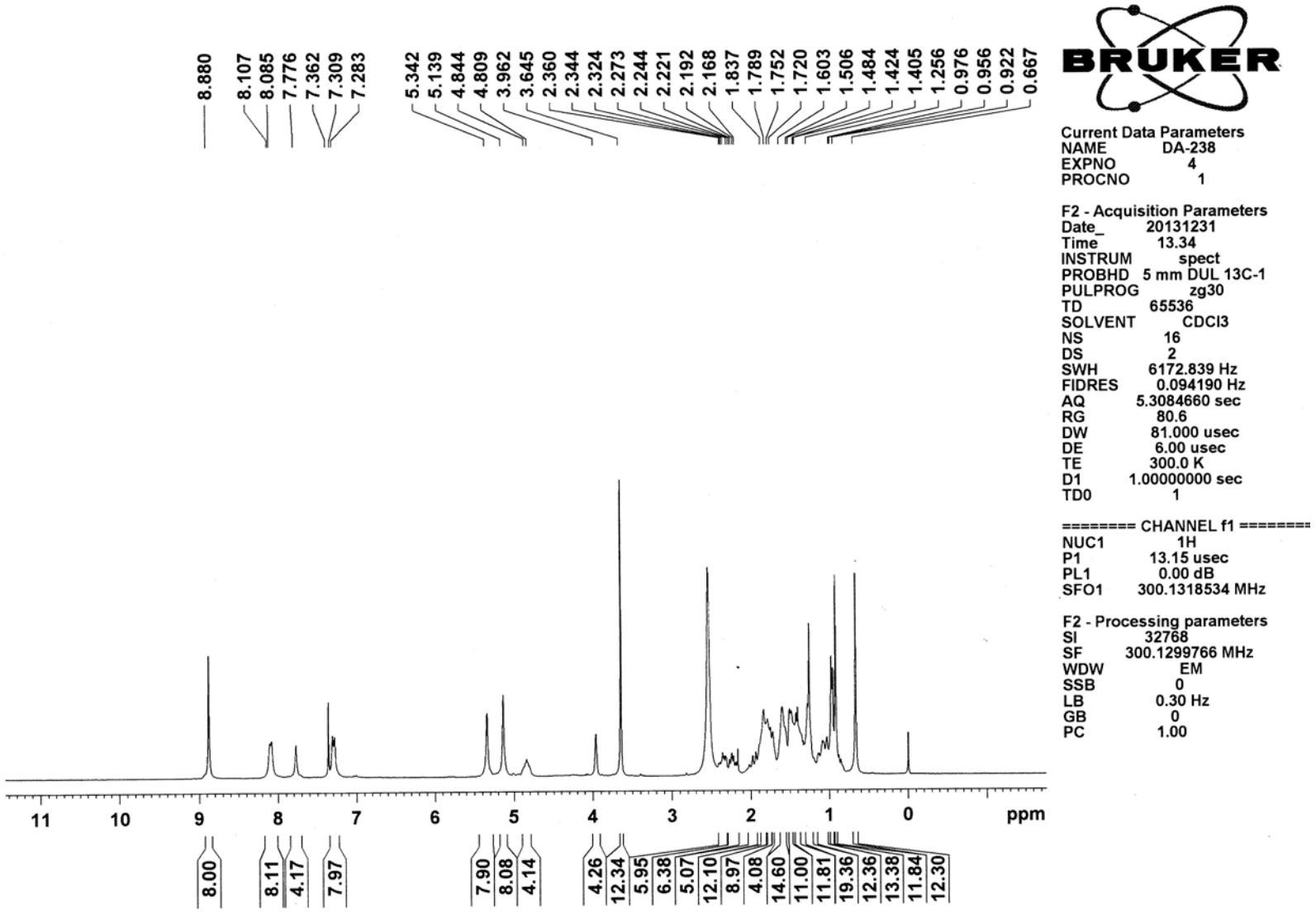


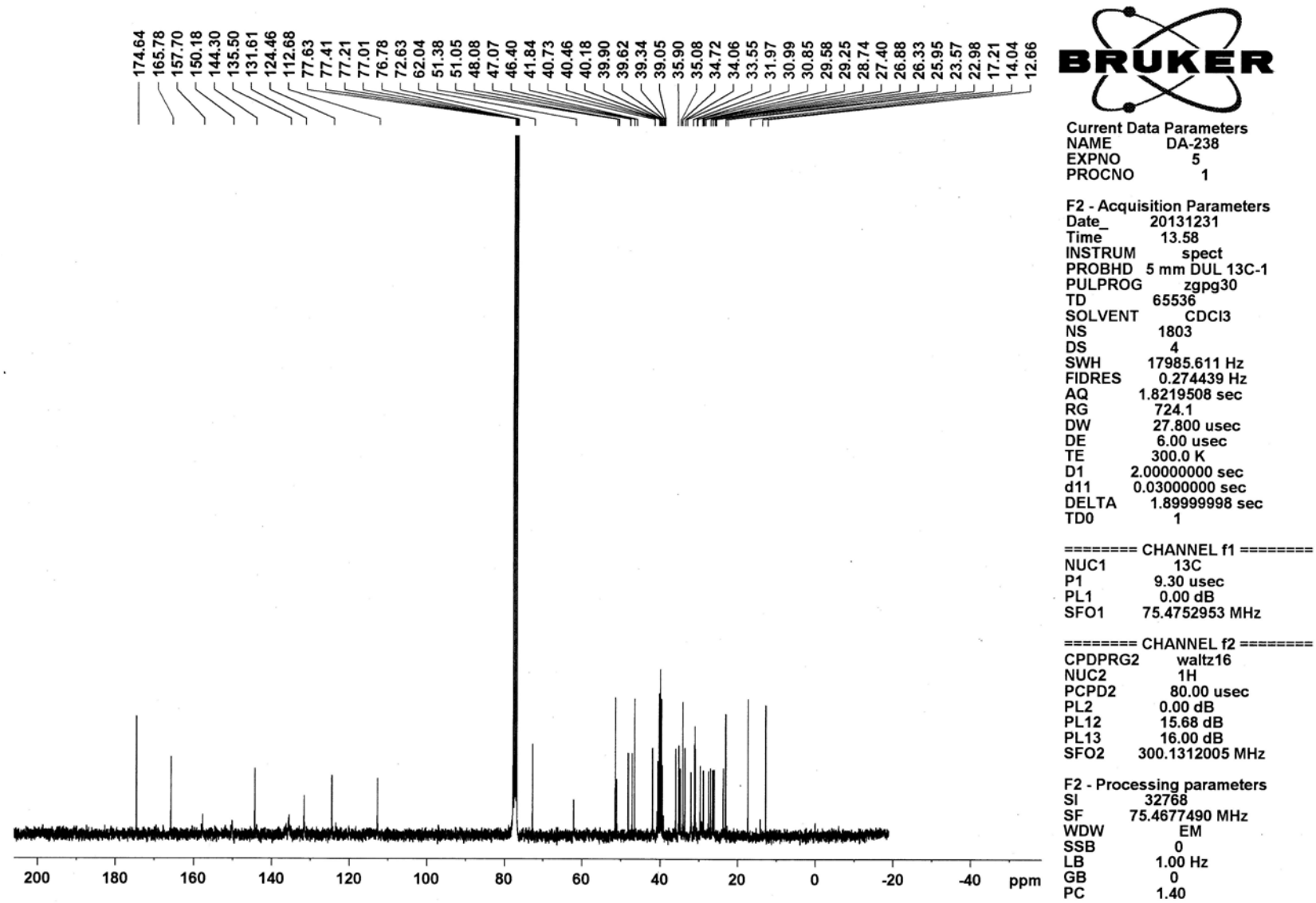
^{13}C NMR (75 MHz, $CDCl_3$) of compound **20**



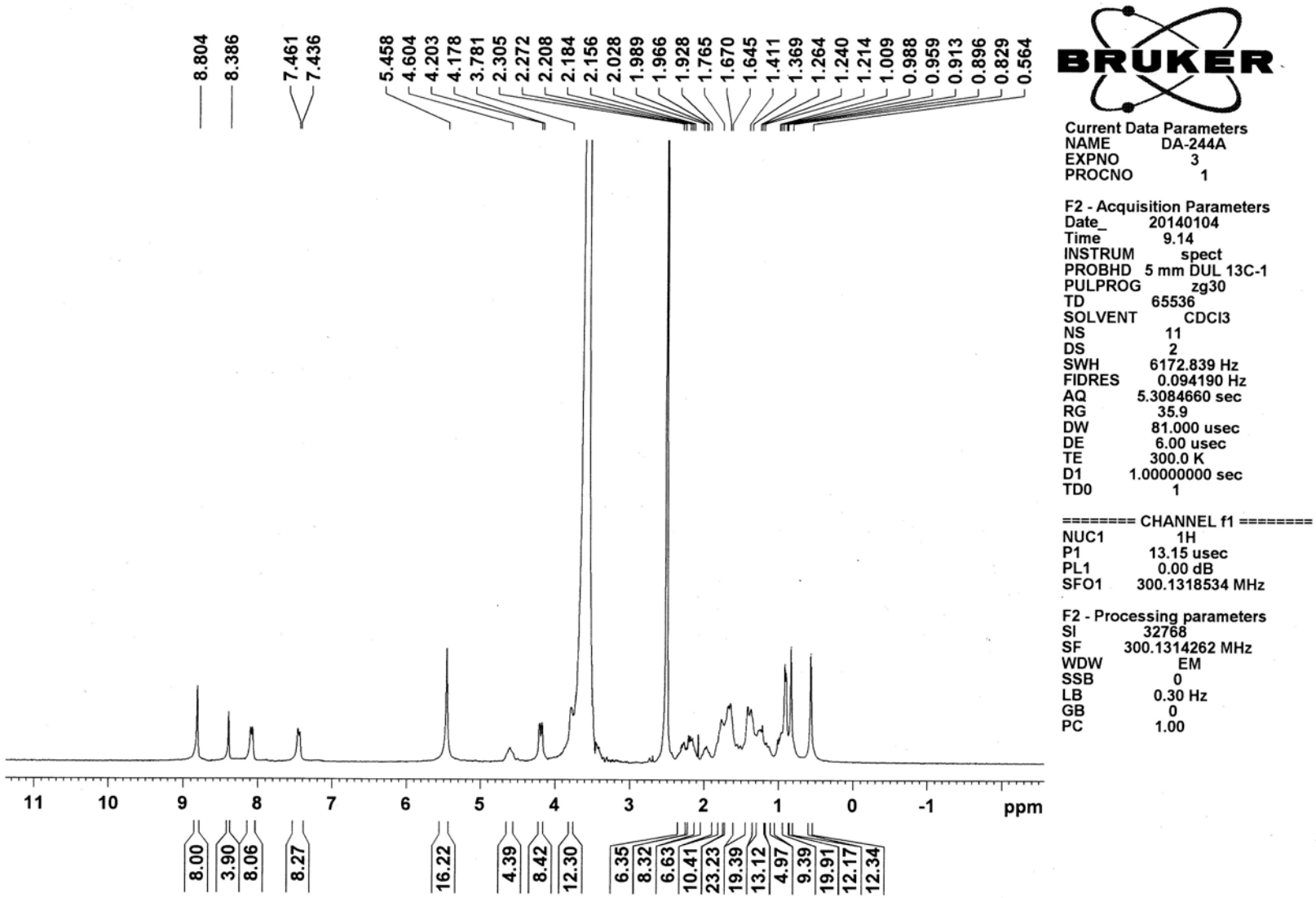
^{1}H NMR (300 MHz, $CDCl_3$) of compound **22**



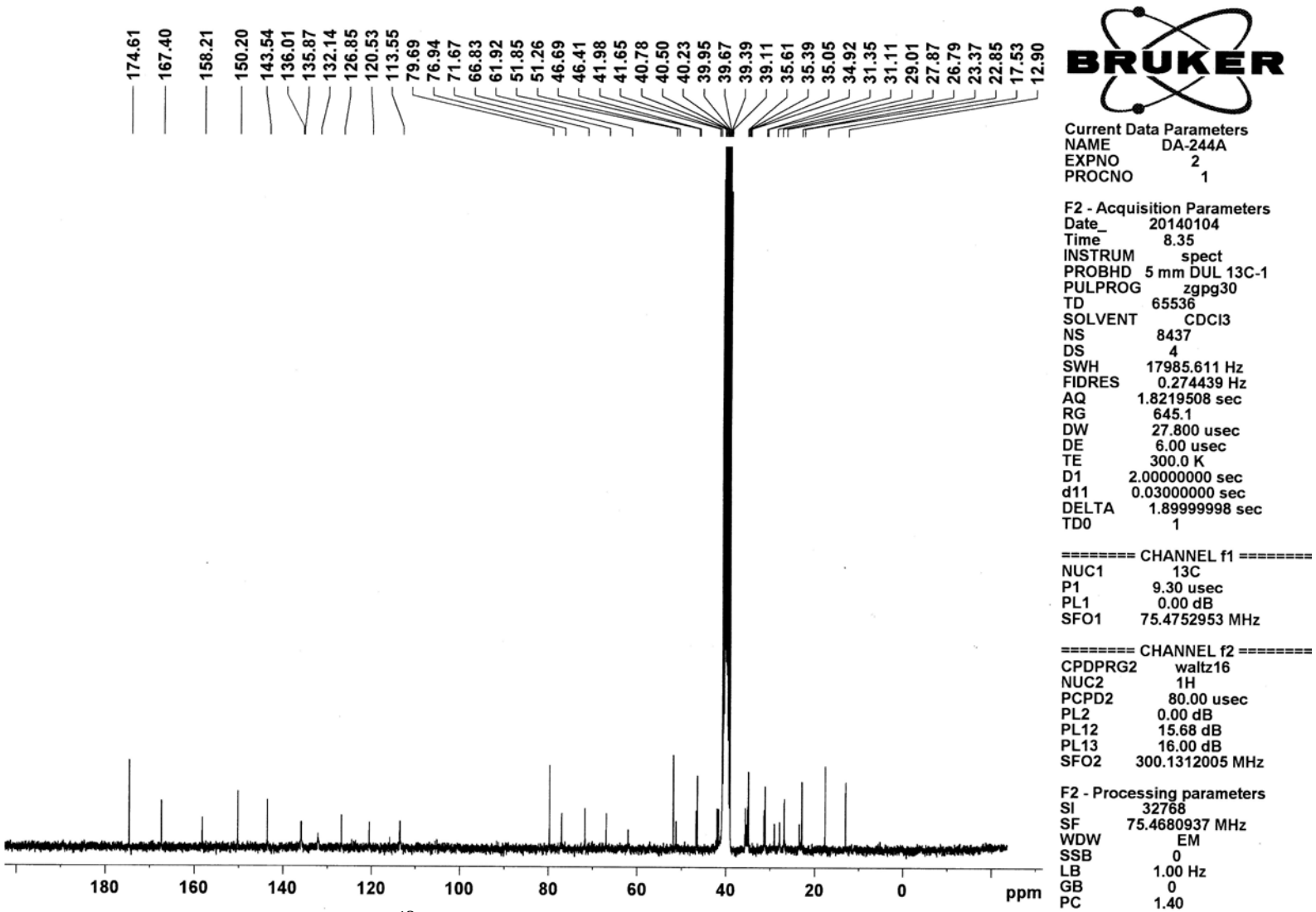
^{1}H NMR (300 MHz, $CDCl_3$ + DMSO-d_6) of compound **1**



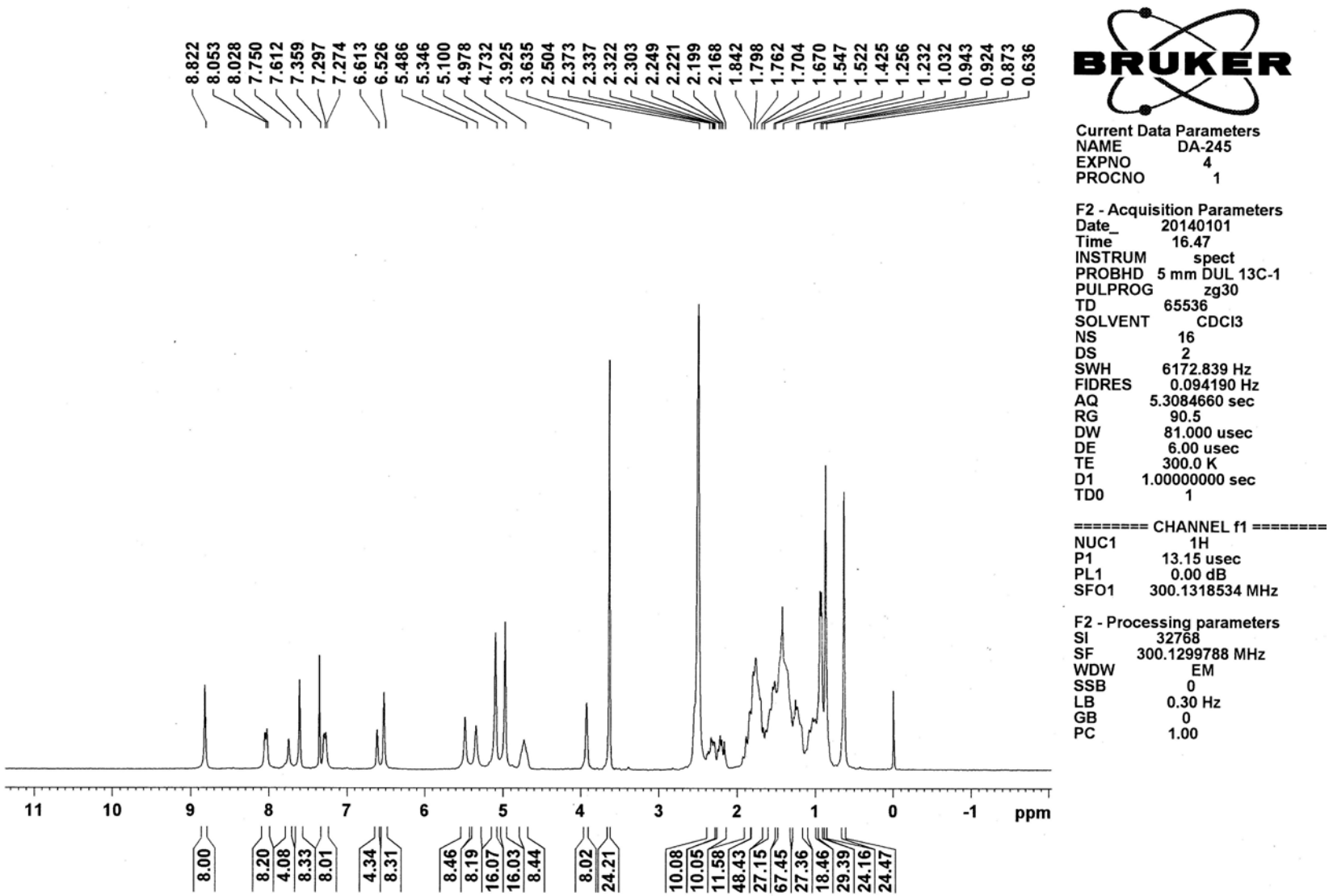
^{13}C NMR (75 MHz, $CDCl_3$) of compound **1**



^{1}H NMR (300 MHz, DMSO-d_6) of compound **2**



^{13}C NMR (75 MHz, DMSO-d_6) of compound **2**



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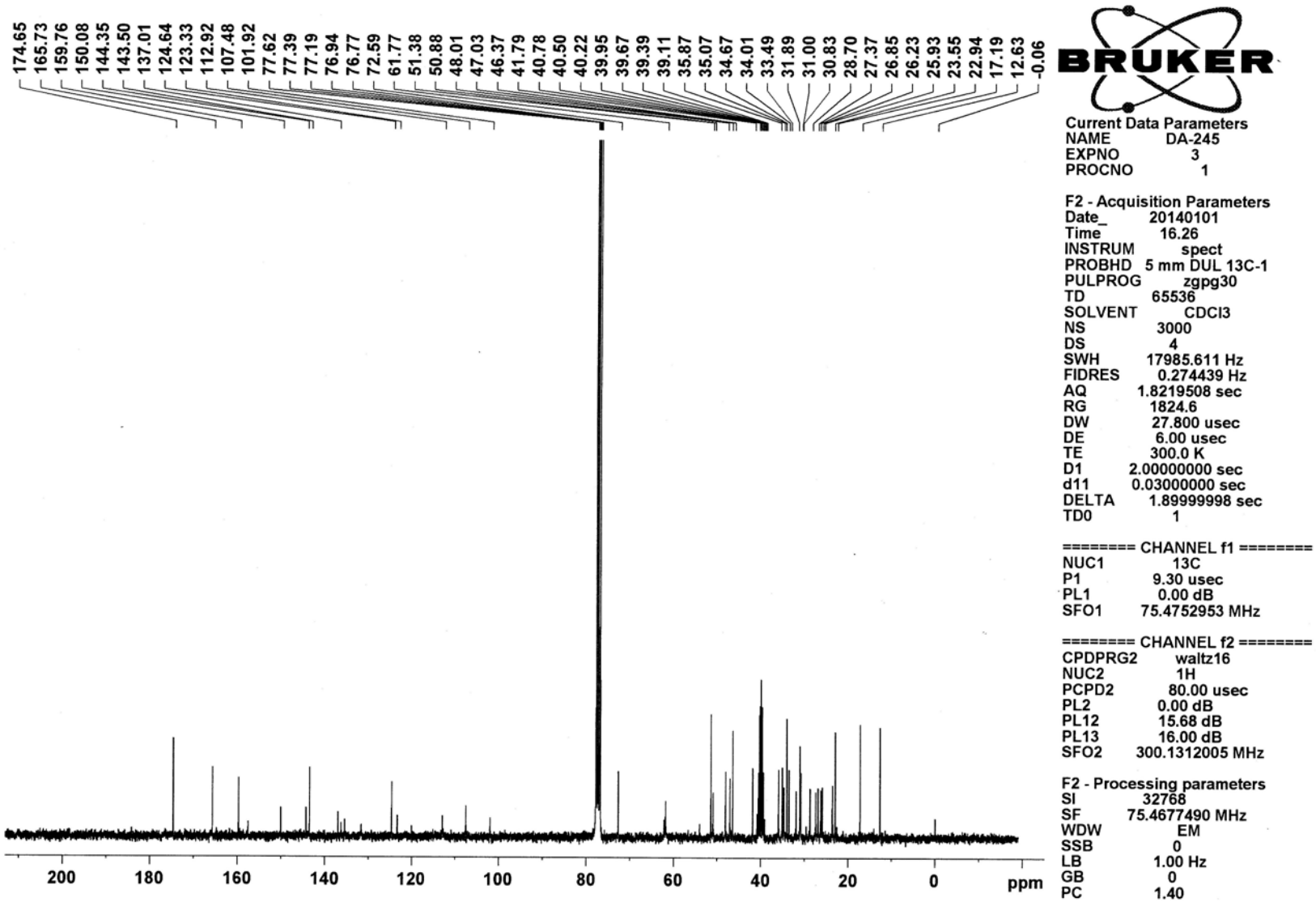
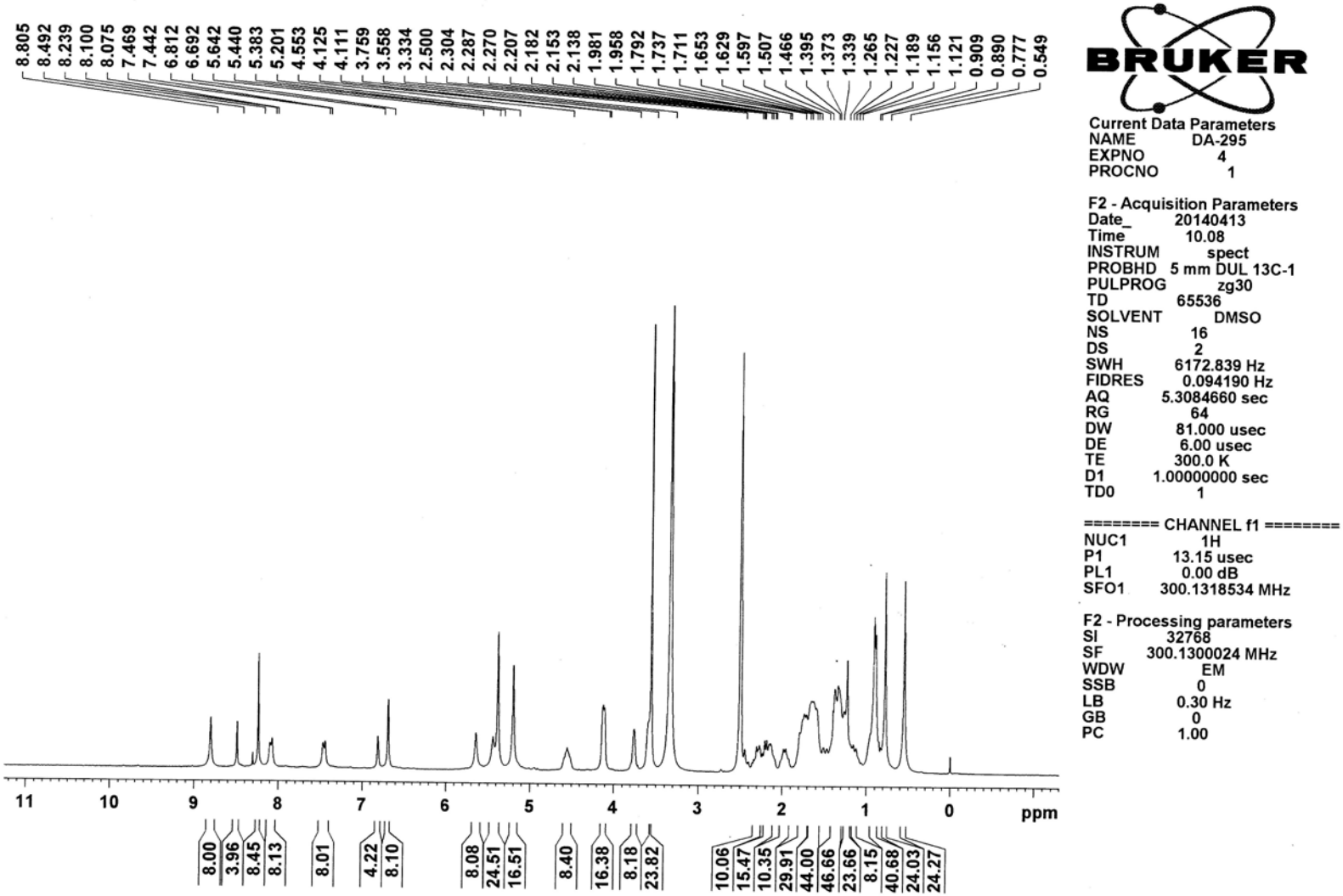
^{1}H NMR (300 MHz, $CDCl_3$ + DMSO-d_6) of compound **3**



^{13}C NMR (75 MHz, $CDCl_3$ + DMSO-d_6) of compound **3**



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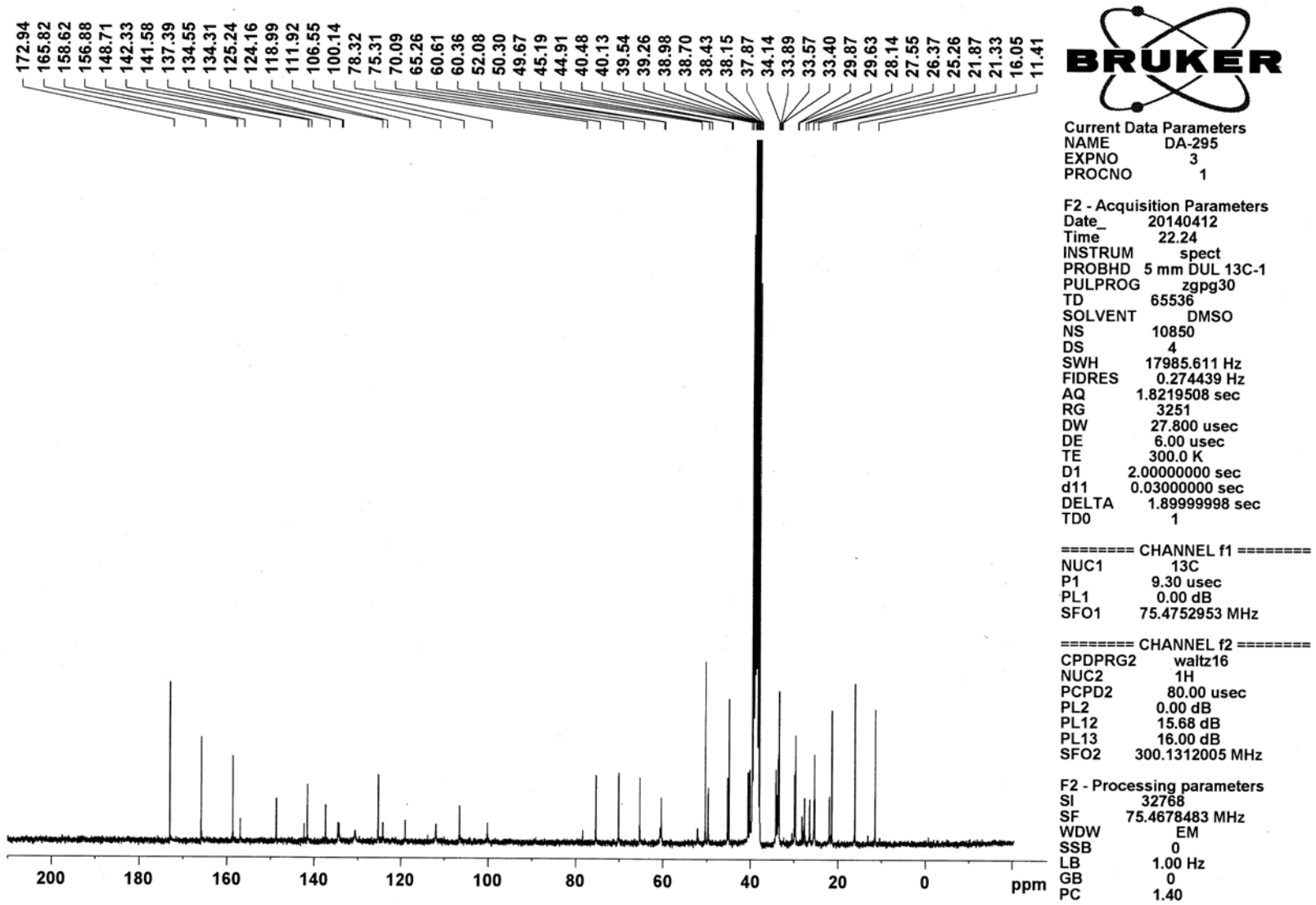
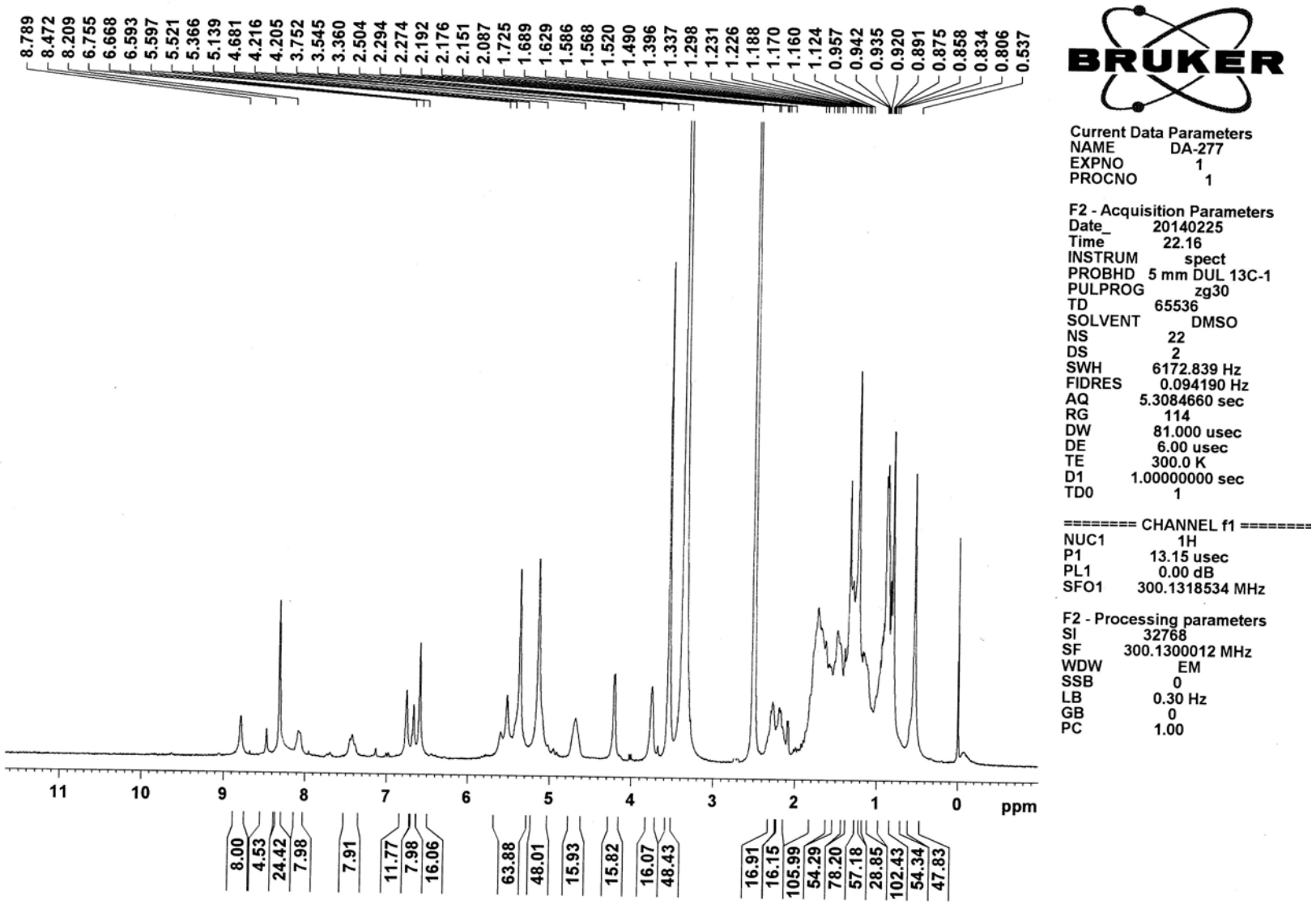
^{1}H NMR (300 MHz, DMSO-d_6) of compound **4**



^{13}C NMR (75 MHz, DMSO-d_6) of compound **4**



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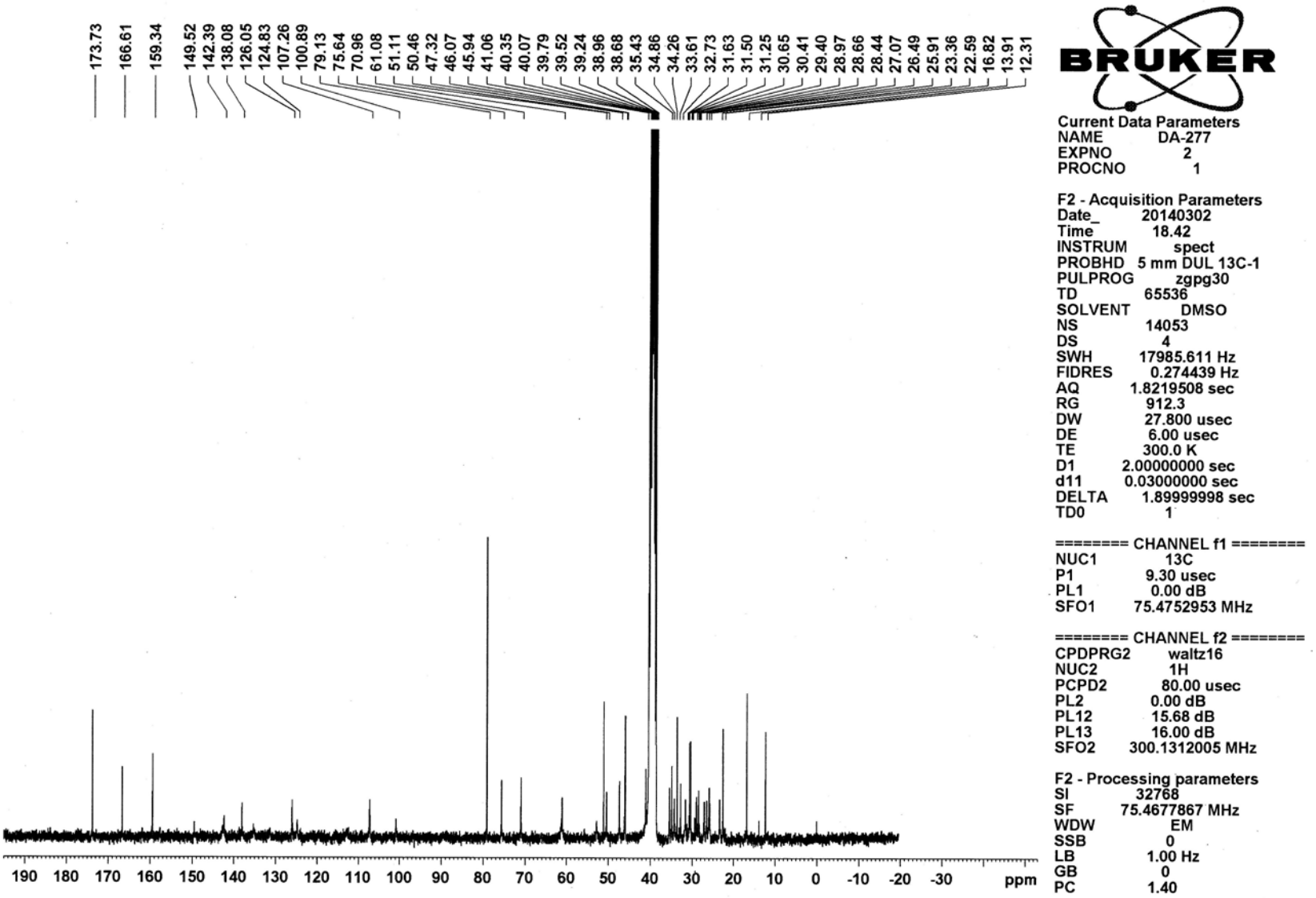
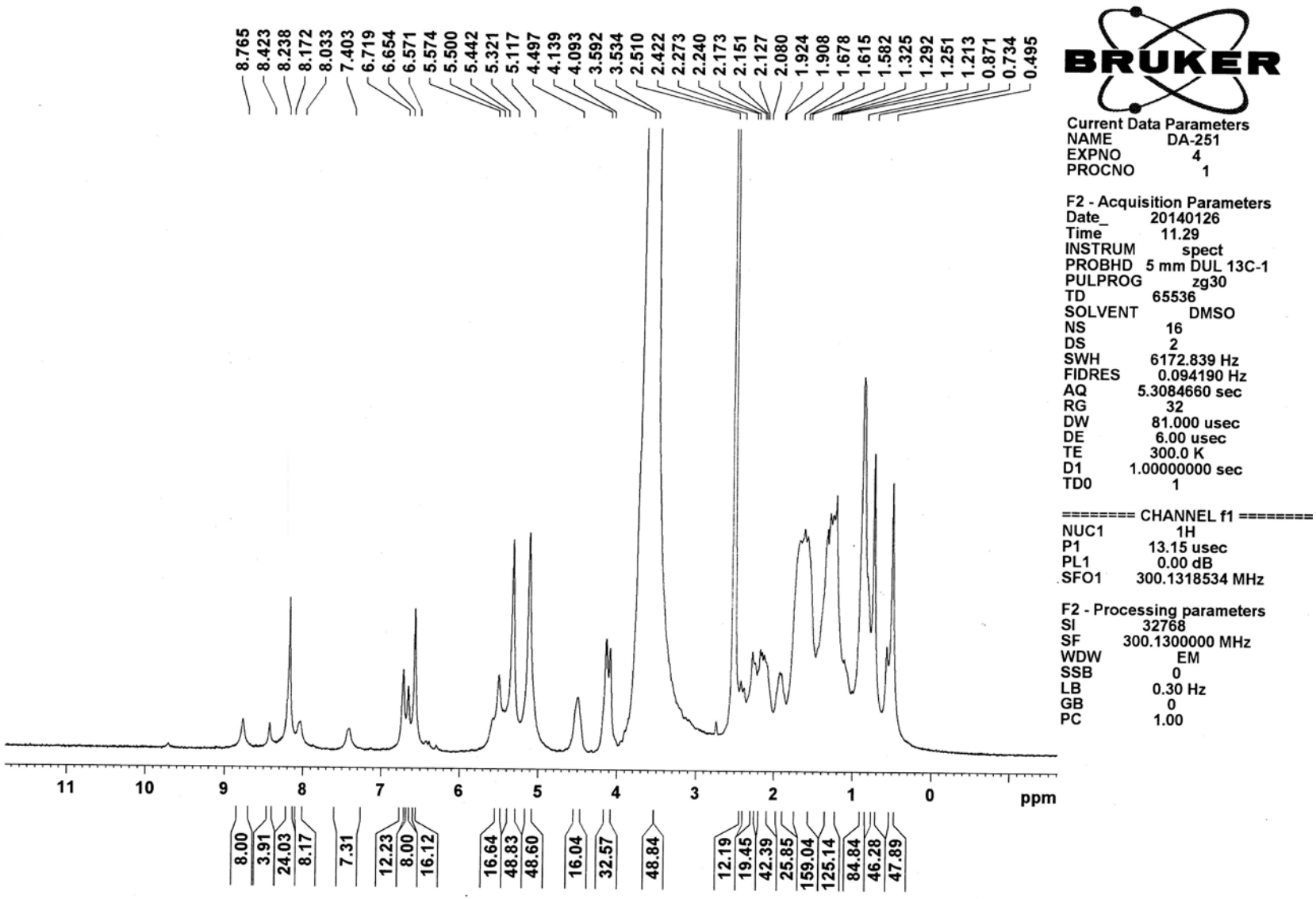
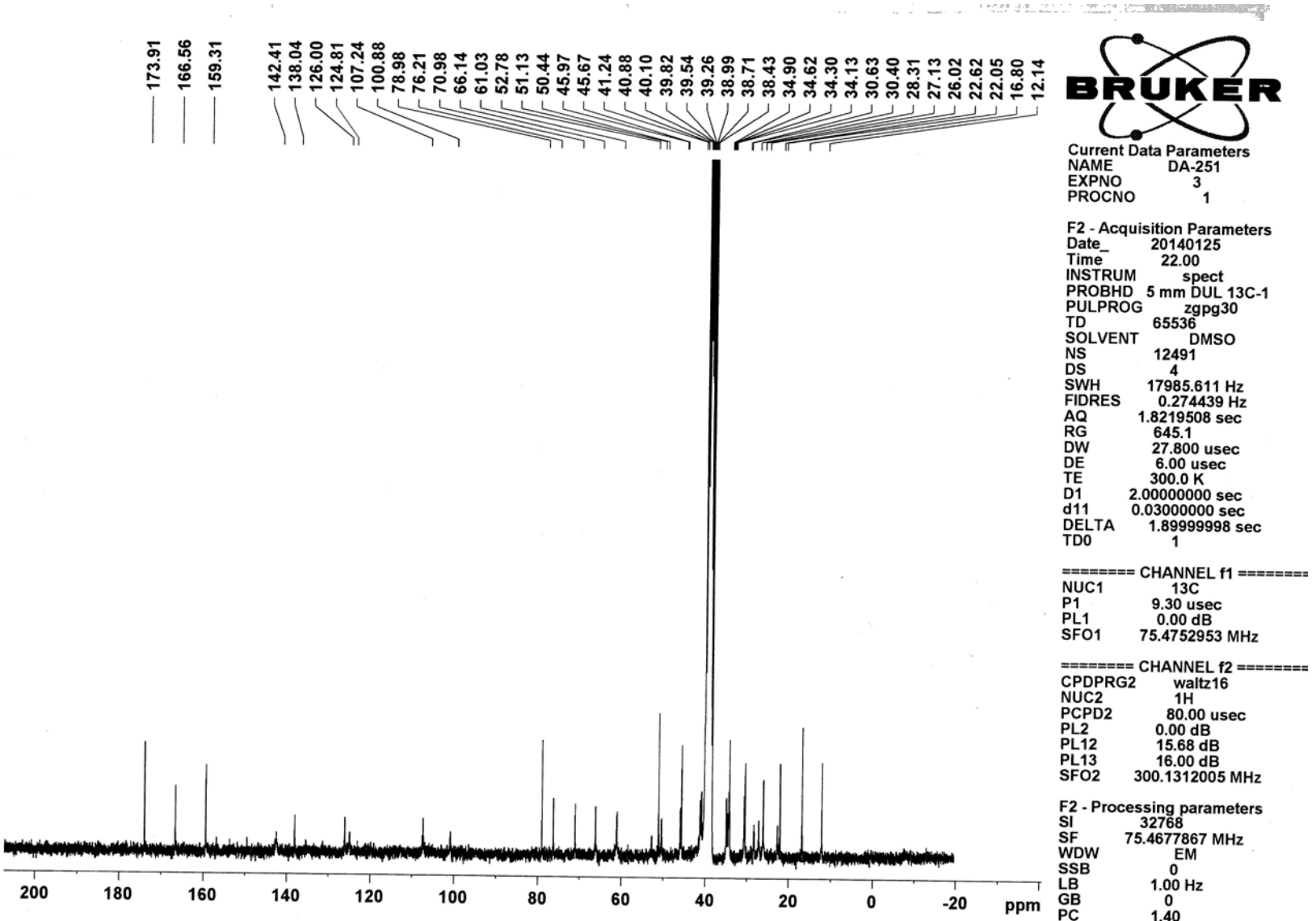
^{1}H NMR (300 MHz, DMSO-d_6) of compound **5**



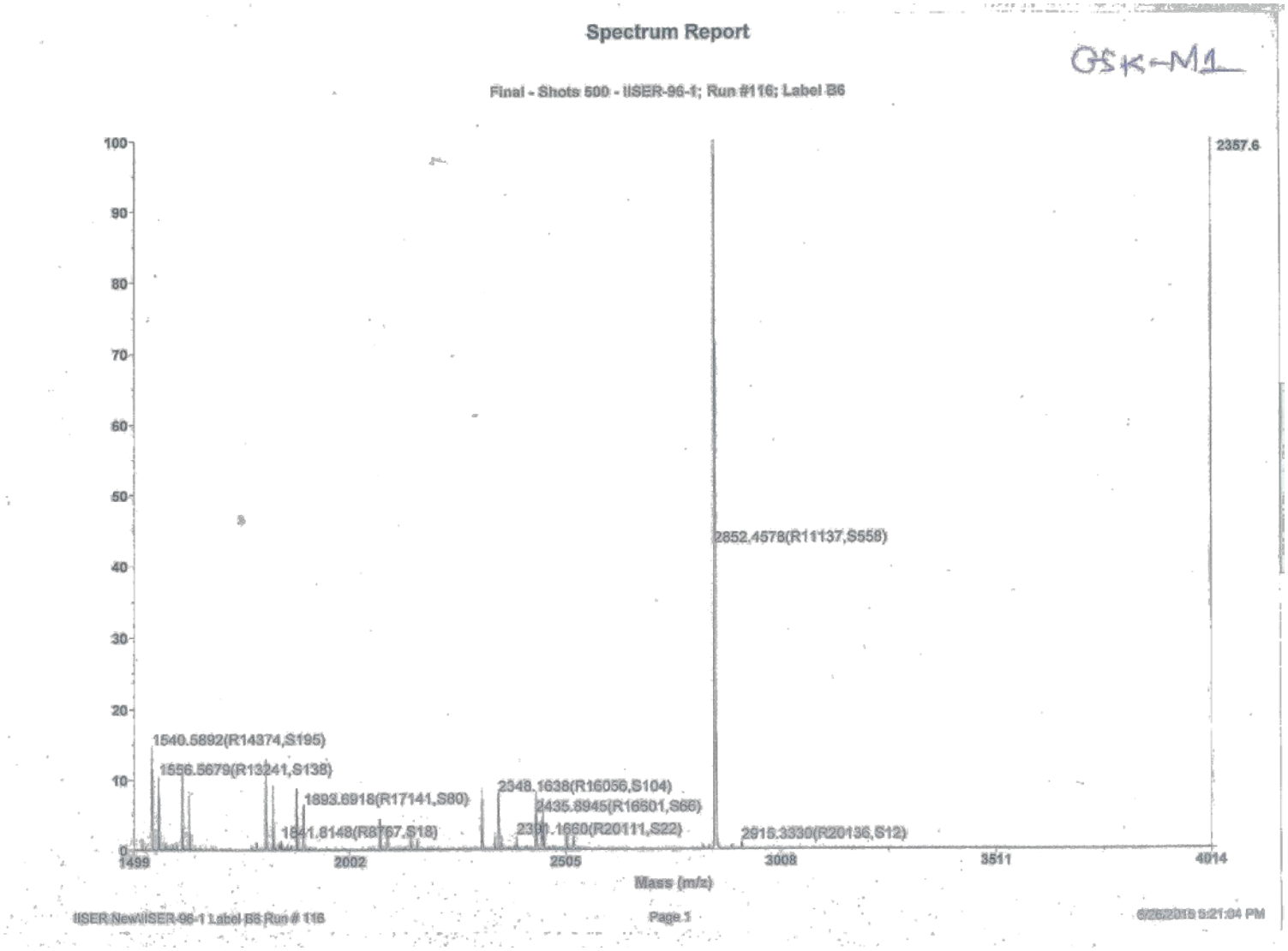
^{13}C NMR (75 MHz, DMSO-d_6) of compound **5**



^{1}H NMR (300 MHz, DMSO-d_6) of compound **6**



^{13}C NMR (75 MHz, DMSO-d_6) of compound **6**



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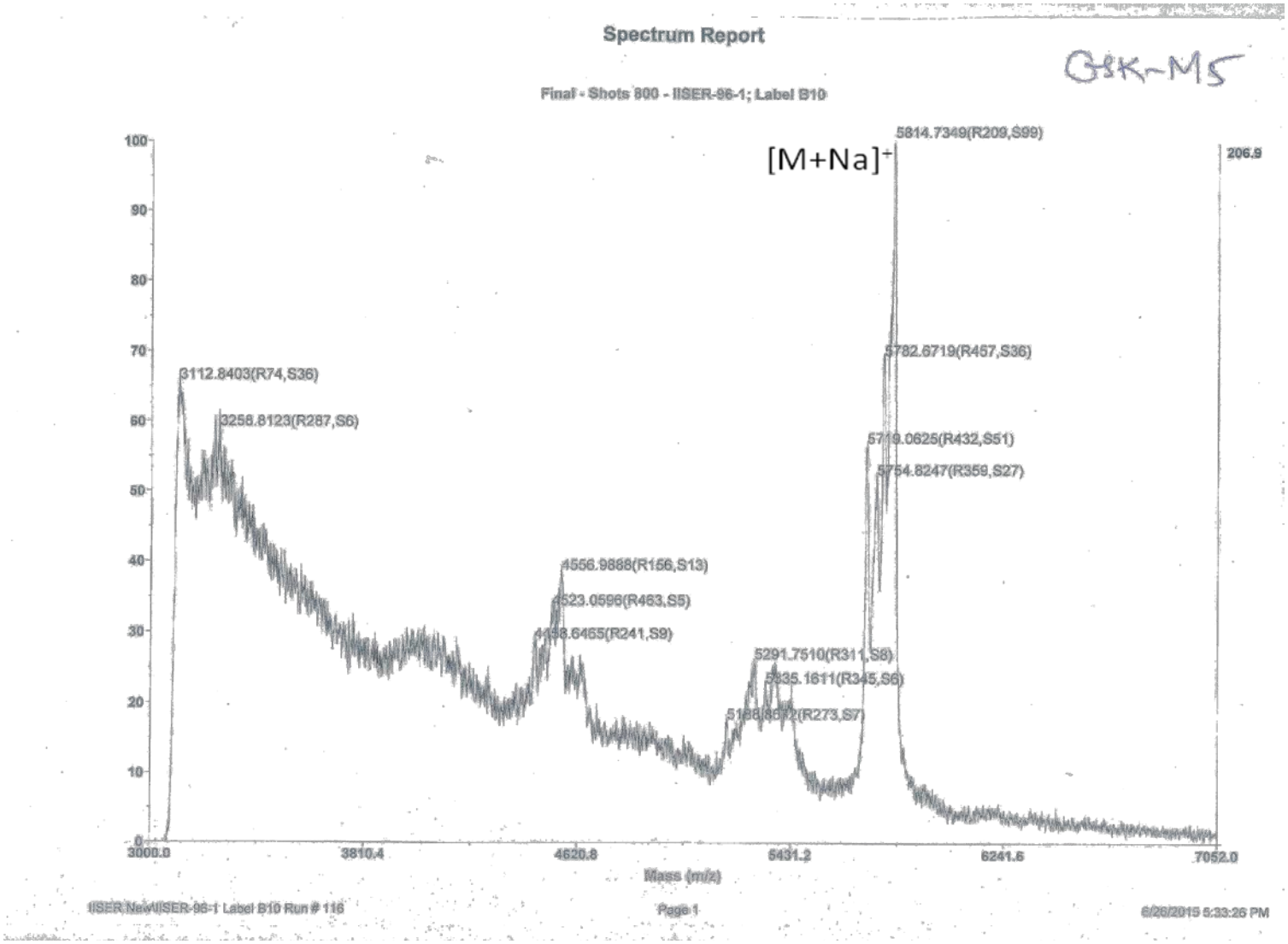

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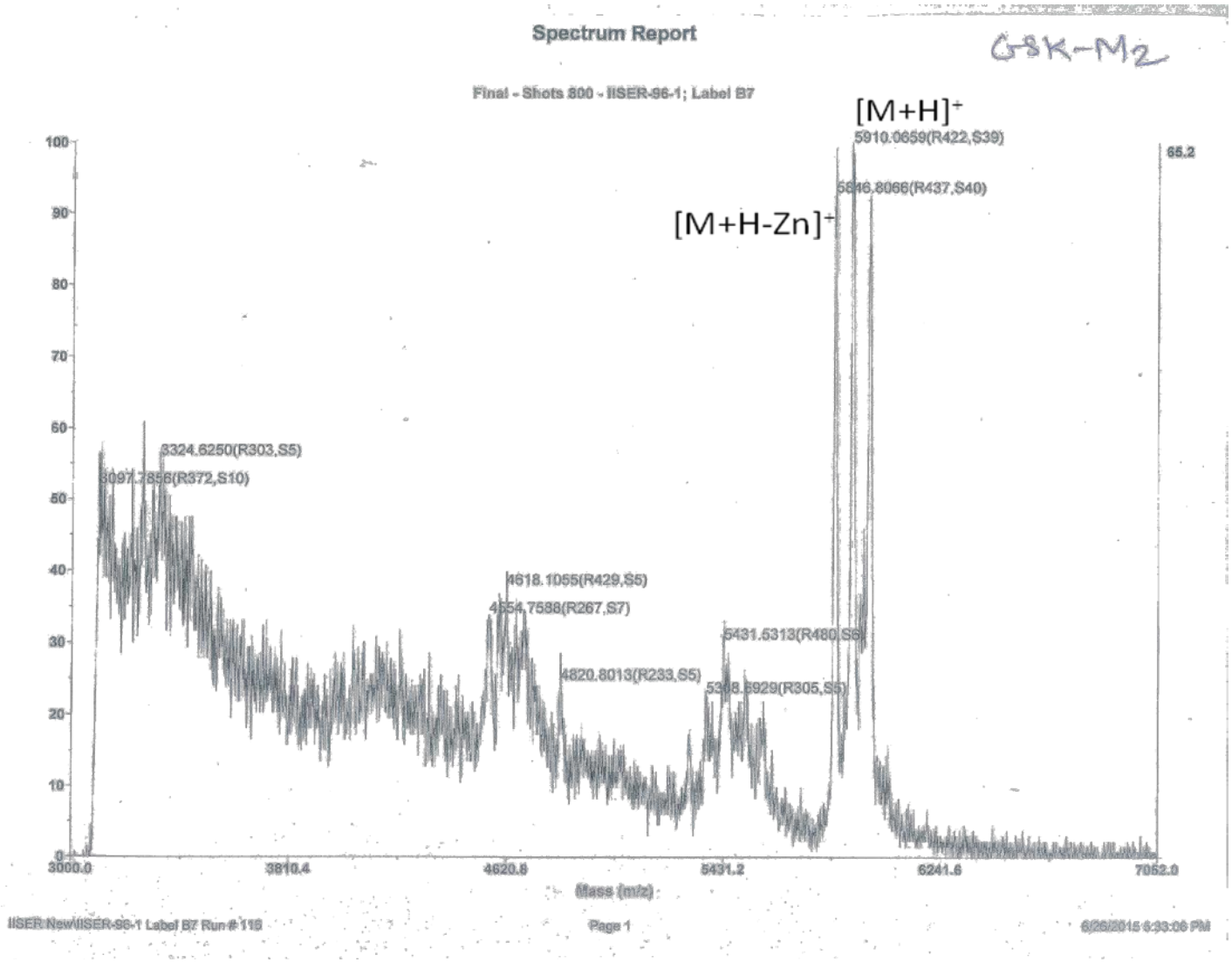
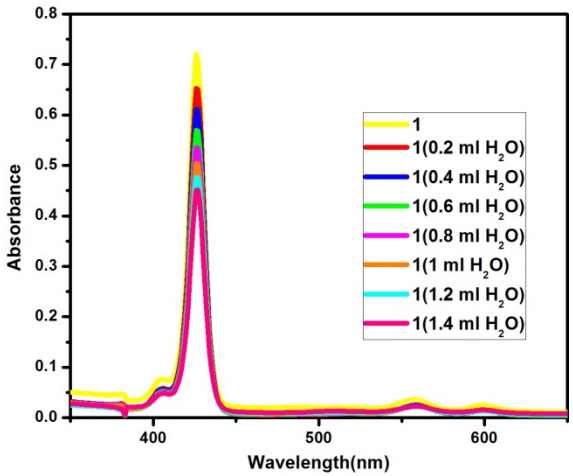


MALDI-TOF of Dendrimer **4**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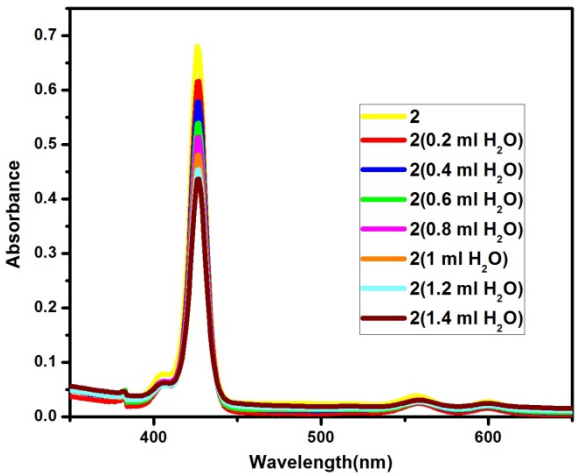
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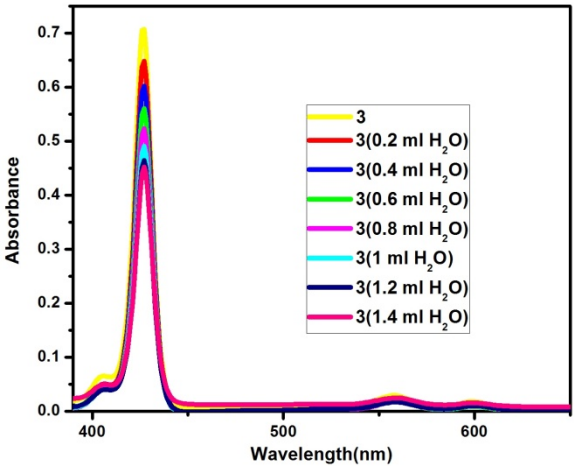
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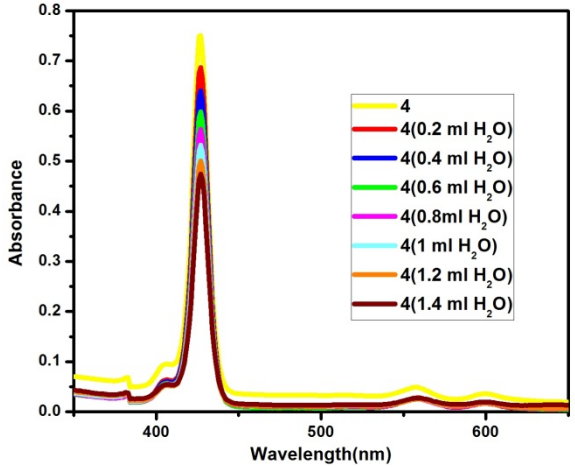
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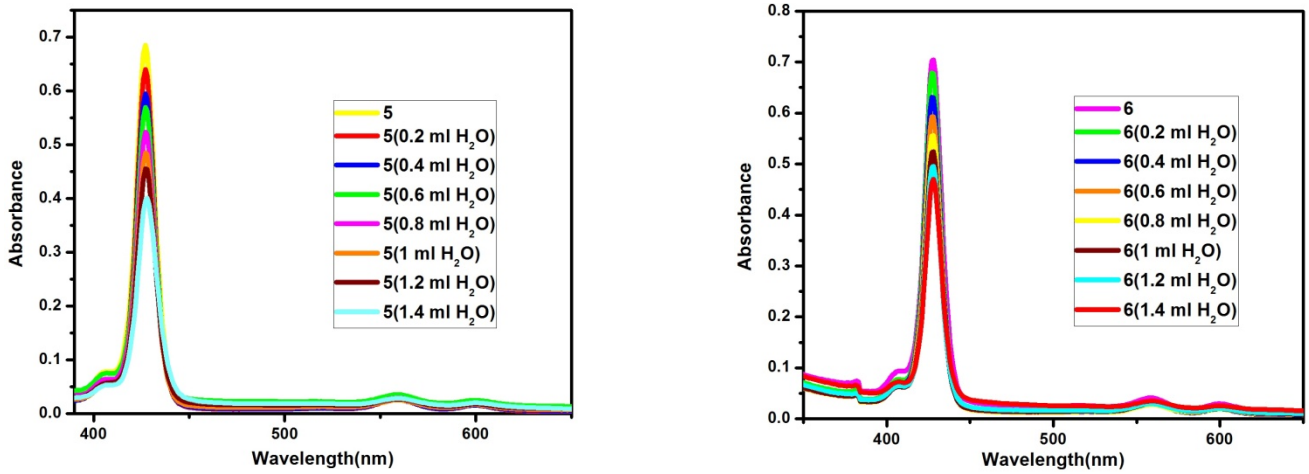

Fig. 1: Absorption spectrum of Dendrimers **1-6** at 70% water in THF (conc. = 10^{-5} M)

Compound		λ_a^{max}					
	Water (ml)	**Soret band**	ε_{max}	Q_1	ε_{max}	Q_2	ε_{max}
1	---	426	0.72	558	0.036	599	0.025
1	0.2	426	0.66	558	0.026	599	0.014
1	0.4	426	0.61	558	0.025	599	0.014
1	0.6	426	0.57	558	0.023	599	0.013
1	0.8	426	0.53	558	0.023	599	0.015
1	1	426	0.50	559	0.021	599	0.013
1	1.2	426	0.47	559	0.022	599	0.015
1	1.4	426	0.45	559	0.023	599	0.015

Table 1. Absorption studies of **1** in THF with 70% water at rt.

Compound			λ_a^{max}				
	Water (ml)	Soret band	ε_{max}	Q_1	ε_{max}		Q_2
			ε_{max}				
2	---	426	0.68	559	0.039	599	0.028
2	0.2	426	0.62	559	0.025	599	0.015
2	0.4	426	0.58	559	0.028	599	0.019
2	0.6	426	0.57	559	0.027	599	0.020
2	0.8	426	0.51	559	0.031	599	0.024
2	1	426	0.48	559	0.029	599	0.021
2	1.2	426	0.45	559	0.027	599	0.020
2	1.4	426	0.43	559	0.030	599	0.025

Table 2. Absorption studies of **2** in THF with 70% water at rt.

Compound			λ_a^{max}				
	Water (ml)	Soret band	ε_{max}	Q_1	ε_{max}	Q_2	ε_{max}
3	---	427	0.71	558	0.029	599	0.018
3	0.2	427	0.65	559	0.021	600	0.009
3	0.4	427	0.60	559	0.022	600	0.009
3	0.6	427	0.56	559	0.019	600	0.009
3	0.8	427	0.52	559	0.018	600	0.010
3	1	427	0.49	559	0.017	600	0.009
3	1.2	427	0.46	559	0.017	600	0.010
3	1.4	427	0.45	559	0.025	599	0.015

Table 3. Absorption studies of **3** in THF with 70% water at rt.

Compound			λ_a^{max}				
	Water (ml)	Soret band	ε_{max}	Q_1	ε_{max}	Q_2	ε_{max}
4	---	427	0.75	558	0.049	599	0.036
4	0.2	427	0.69	558	0.028	599	0.017
4	0.4	427	0.64	559	0.027	599	0.017
4	0.6	427	0.59	559	0.026	599	0.016
4	0.8	427	0.56	559	0.025	599	0.016
4	1	427	0.53	559	0.025	599	0.017
4	1.2	427	0.50	559	0.025	599	0.017
4	1.4	427	0.47	559	0.027	600	0.019

Table 4. Absorption studies of **4** in THF with 70% water at rt.

Compound			λ_a^{max}				
	Water (ml)	**Soret band**	ε_{max}	Q_1	ε_{max}	Q_2	ε_{max}
5	---	427	0.68	558	0.035	599	0.023
5	0.2	427	0.64	559	0.026	600	0.015
5	0.4	427	0.59	559	0.026	600	0.016
5	0.6	427	0.56	560	0.035	600	0.025
5	0.8	427	0.52	559	0.029	600	0.019
5	1	427	0.48	559	0.025	600	0.017
5	1.2	427	0.45	560	0.027	600	0.018
5	1.4	428	0.39	560	0.029	600	0.020

Table 5. Absorption studies of **5** in THF with 70% water at rt.

Compound		λ_a^{max}					
	Water (ml)	**Soret band**	ε_{max}	Q_1	ε_{max}	Q_2	ε_{max}
6	---	428	0.70	559	0.042	600	0.029
6	0.2	427	0.68	559	0.032	600	0.021
6	0.4	427	0.63	559	0.029	600	0.019
6	0.6	427	0.59	559	0.030	600	0.019
6	0.8	427	0.55	559	0.028	600	0.019
6	1	427	0.53	559	0.030	600	0.020
6	1.2	427	0.49	559	0.029	600	0.020
6	1.4	428	0.47	559	0.035	600	0.026

Table 6. Absorption studies of **6** in THF with 70% water at rt.

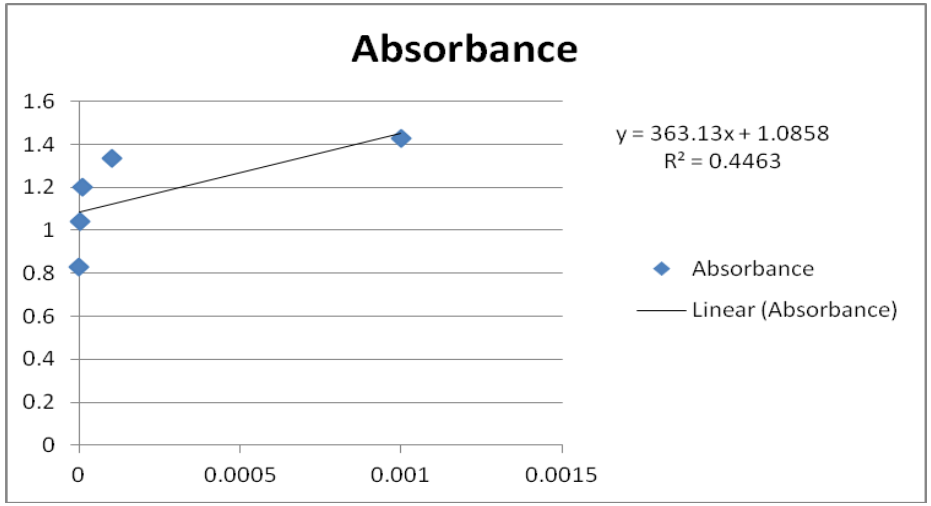

Fig 2: Beer-Lambert slope in different concentration (10^{-3}, 10^{-4}, 10^{-5}, 10^{-6} and 10^{-7} M) in **1**

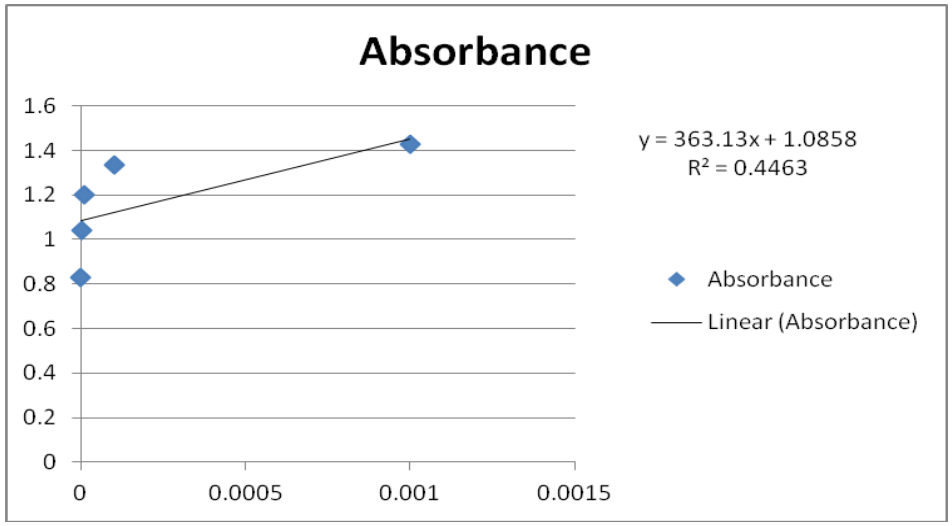

Fig 3: Beer-Lambert slope in different concentration (10^{-3}, 10^{-4}, 10^{-5}, 10^{-6} and 10^{-7} M) in **2**

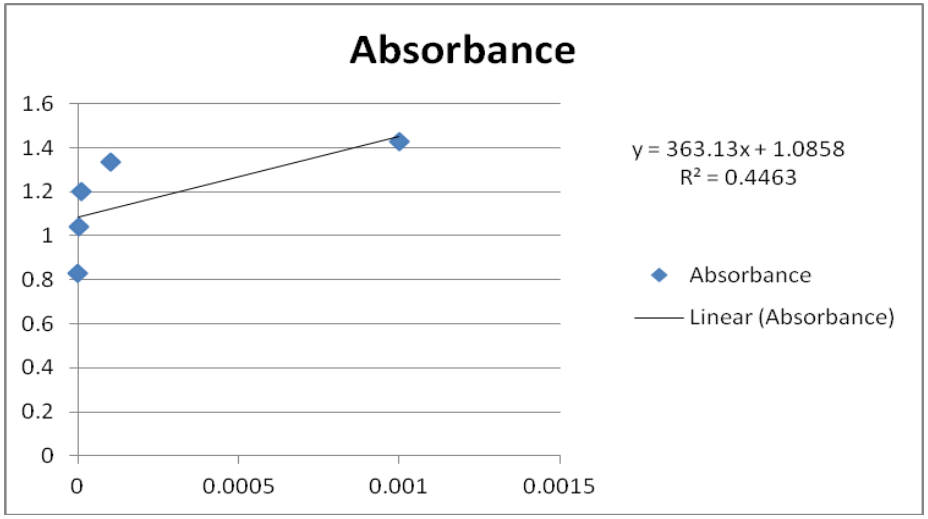

Fig 4: Beer-Lambert slope in different concentration (10^{-3}, 10^{-4}, 10^{-5}, 10^{-6} and 10^{-7} M) in **3**

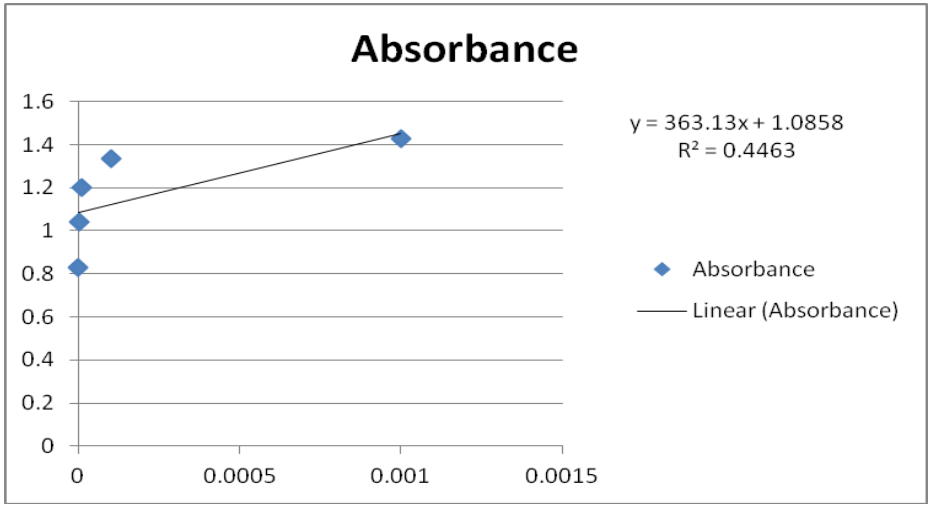

Fig 5: Beer-Lambert slope in different concentration (10^{-3}, 10^{-4}, 10^{-5}, 10^{-6} and 10^{-7} M) in **4**

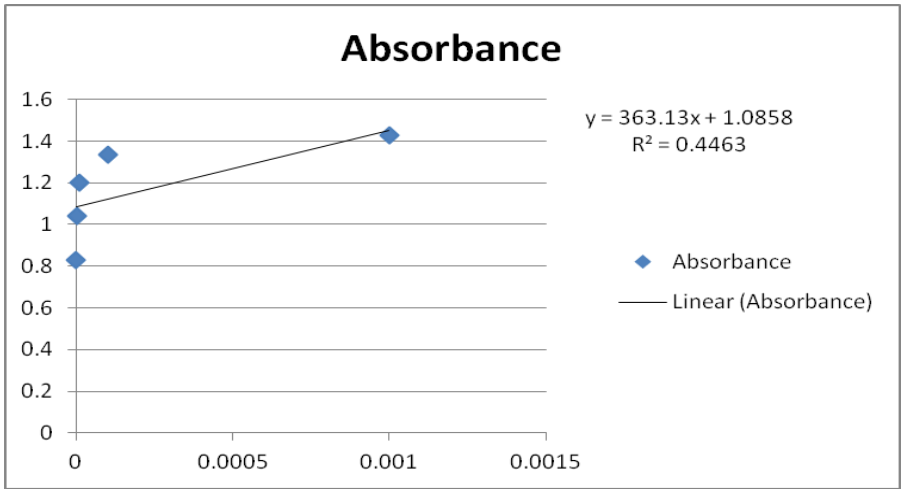

Fig 6: Beer-Lambert slope in different concentration (10^{-3}, 10^{-4}, 10^{-5}, 10^{-6} and 10^{-7} M) in **5**

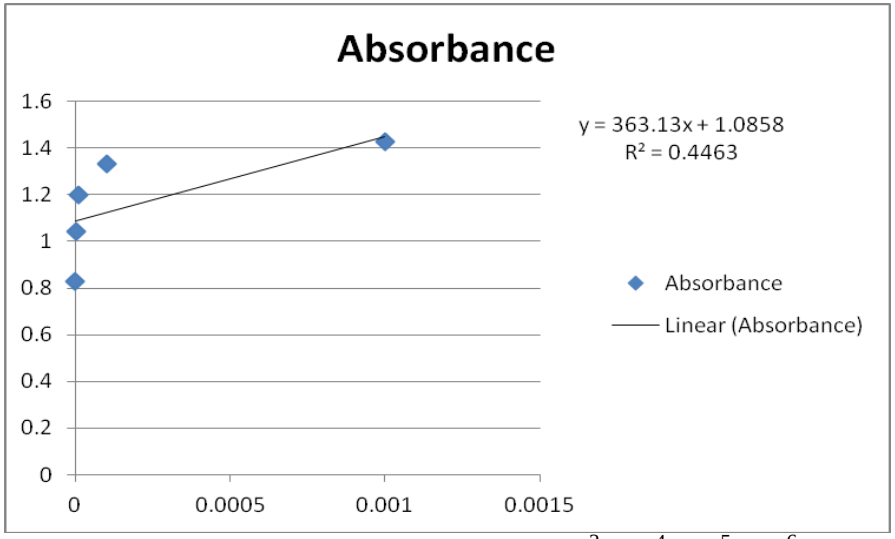

Fig 7: Beer-Lambert slope in different concentration (10^{-3}, 10^{-4}, 10^{-5}, 10^{-6} and 10^{-7} M) in **6**