Supporting Information

One-Pot Syntheses of Immunostimulatory Glycolipids

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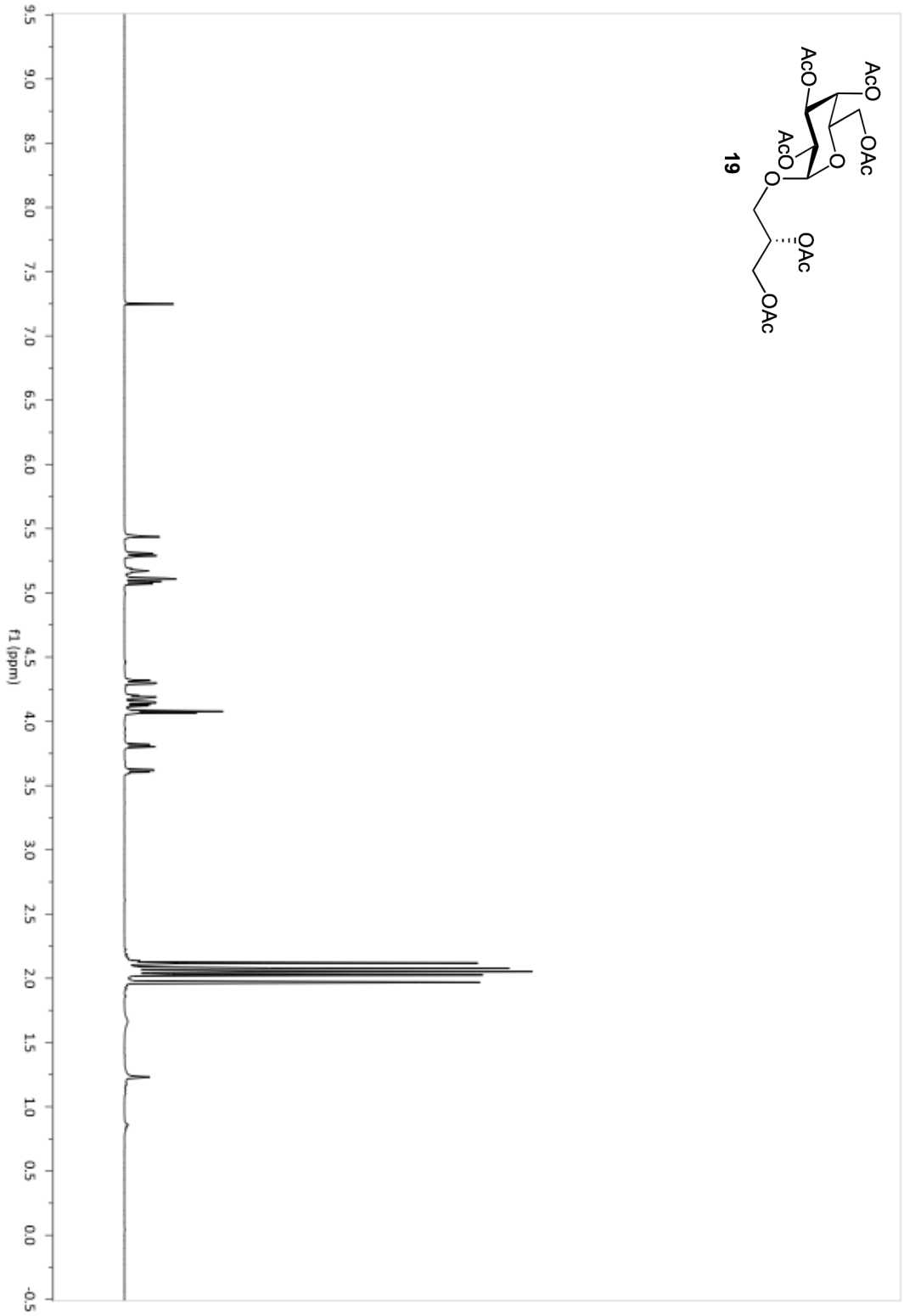
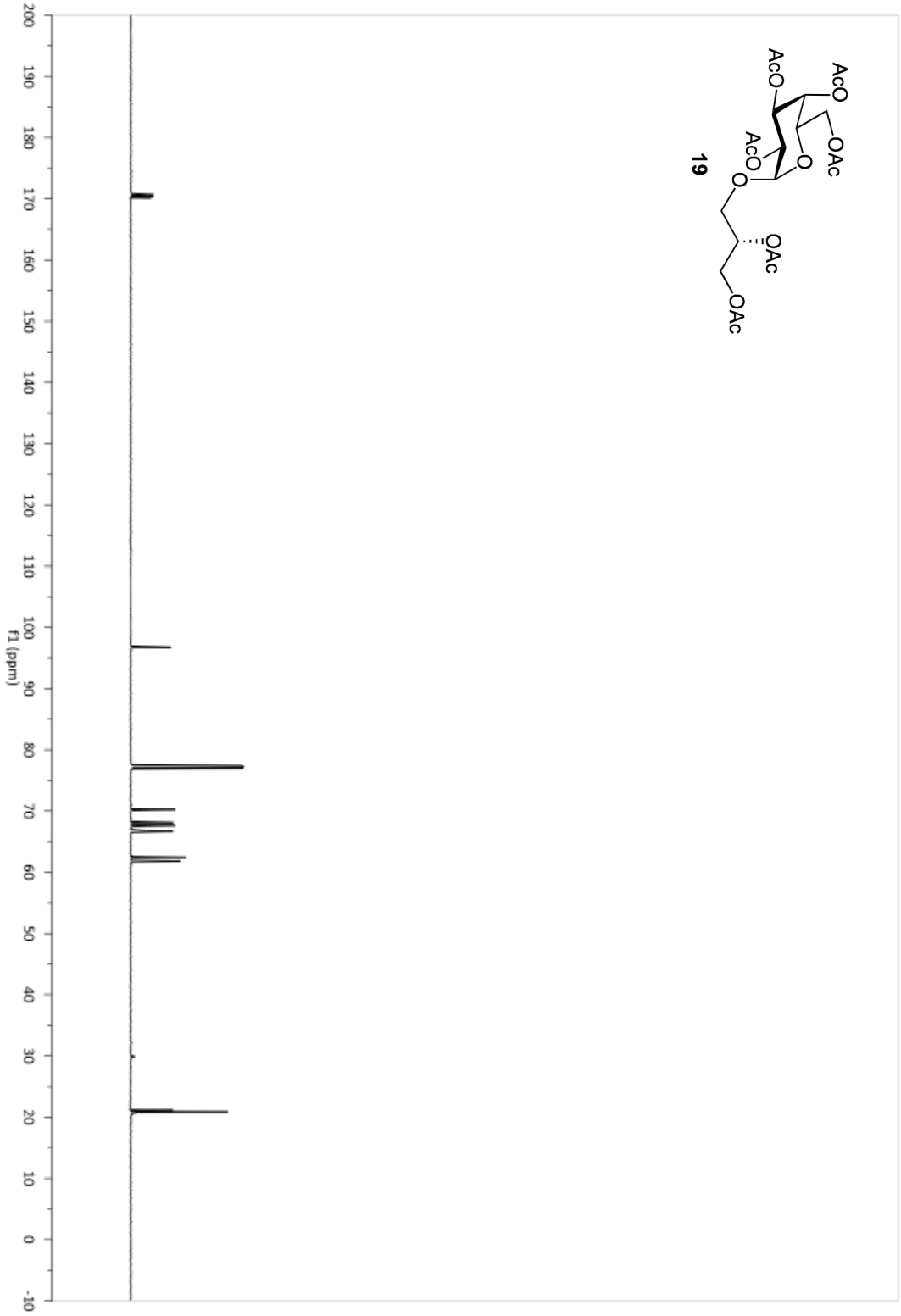
General Experimental

All reactions were conducted under a dried argon stream. The solvents (CH_2Cl_2 99.8%, benzene 99.8%) were purchased in capped DriSolv™ bottles and used without further purification and stored under argon. TMSI was stored at -20 °C under a desiccated atmosphere. All other solvents and reagents were purchased from commercial sources and used without further purification. All glassware utilized was flame-dried before use. Glass-backed TLC plates (Silica Gel 60 with a 254 nm fluorescent indicator) were used without further manipulation and stored over desiccant. TLC plates were visualized using a short-wave UV lamp, stained with an I_2-SiO_2 mixture, and /or by heating plates that were dipped in a solution of ammonium molybdate/cerium (IV) sulfate. Flash column chromatography was performed using a silica gel (32-63 μm) stationary phase with a variable mobile phase correlated with TLC mobility. Optical rotations were measured at 598 nm using a 100 mm cell. NMR experiments were conducted on a 600 MHz instrument using $CDCl_3$ (99.9% D), CD_3OD (99.9% D) or pyridine d_5 (99.9% D) as the solvent. Chemical shifts are referenced to the appropriate deuterated solvent peak and are in parts per million (ppm). Samples were analyzed by electrospray ionization in both the negative and positive mode using flow-injection analysis on the IonMax source. Standard source conditions were employed and NaI was used as an additive when necessary for cation generation. The microwave-assisted reaction was conducted in a Discover Labmate® (CEM Co., Matthews, NC) microwave reactor.

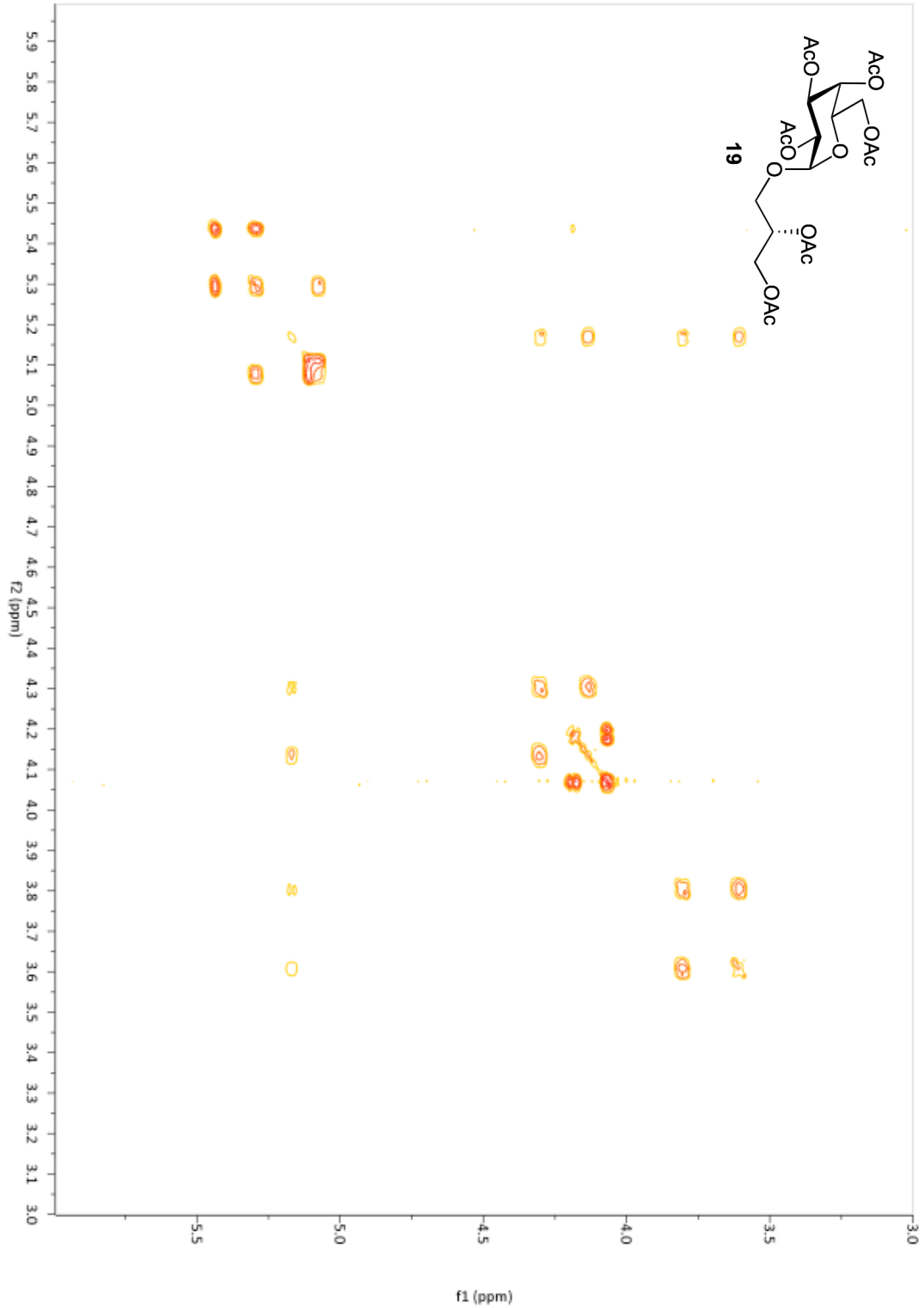
[1]H-NMR spectra of compound **19**



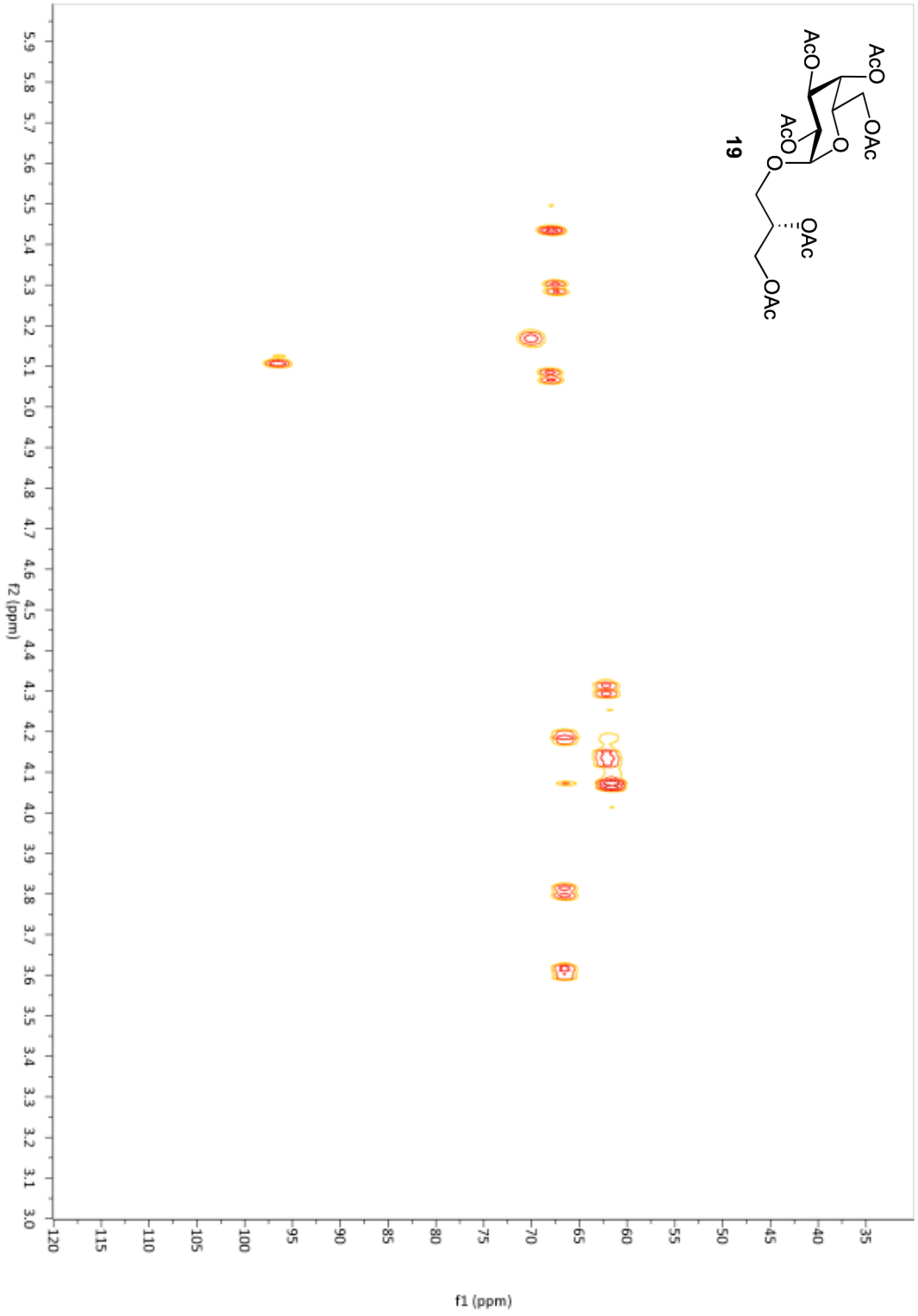
^{13}C-NMR spectra of compound **19**



COSY-NMR spectra of compound **19**



HSQC-NMR spectra of compound **19**



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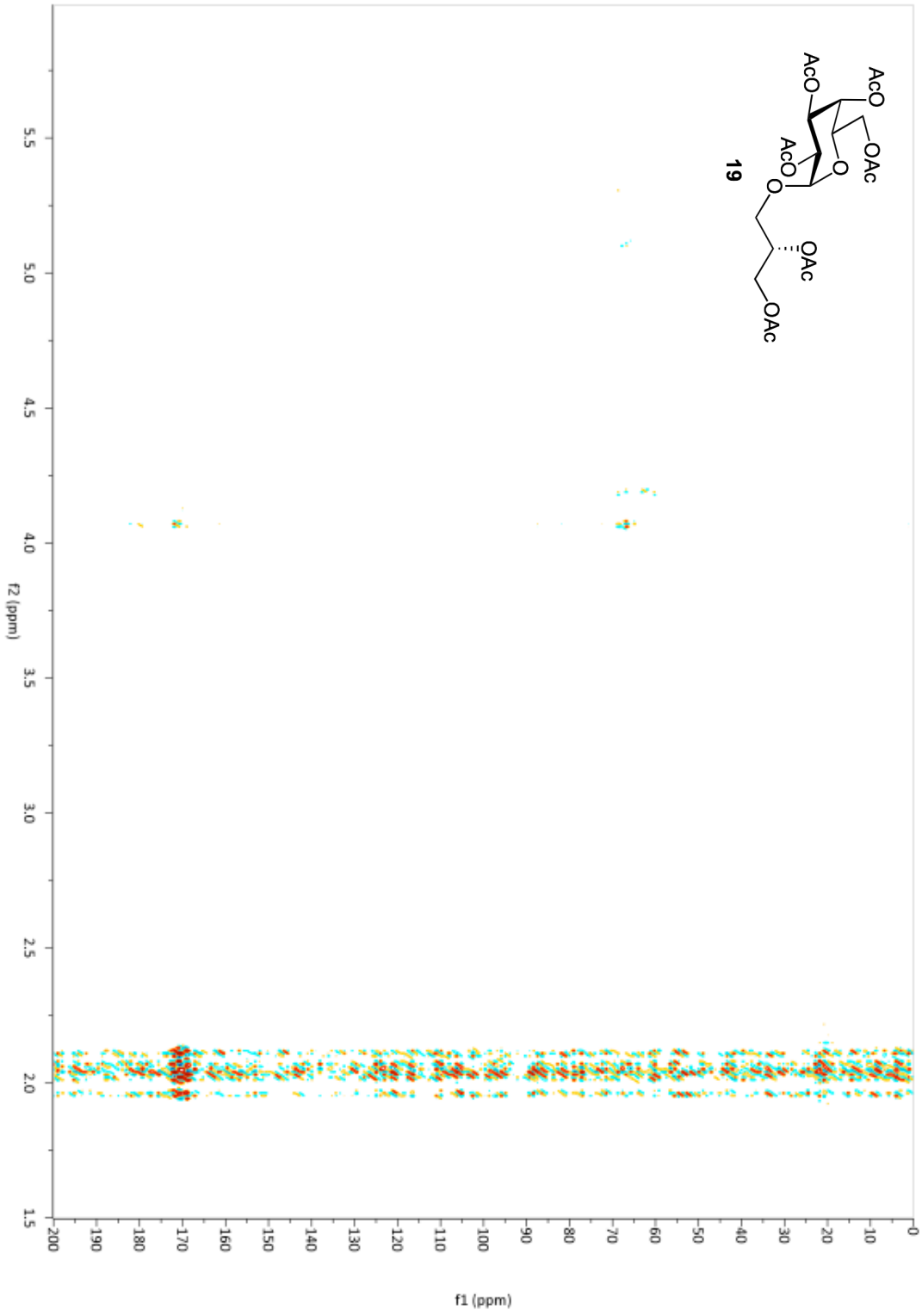

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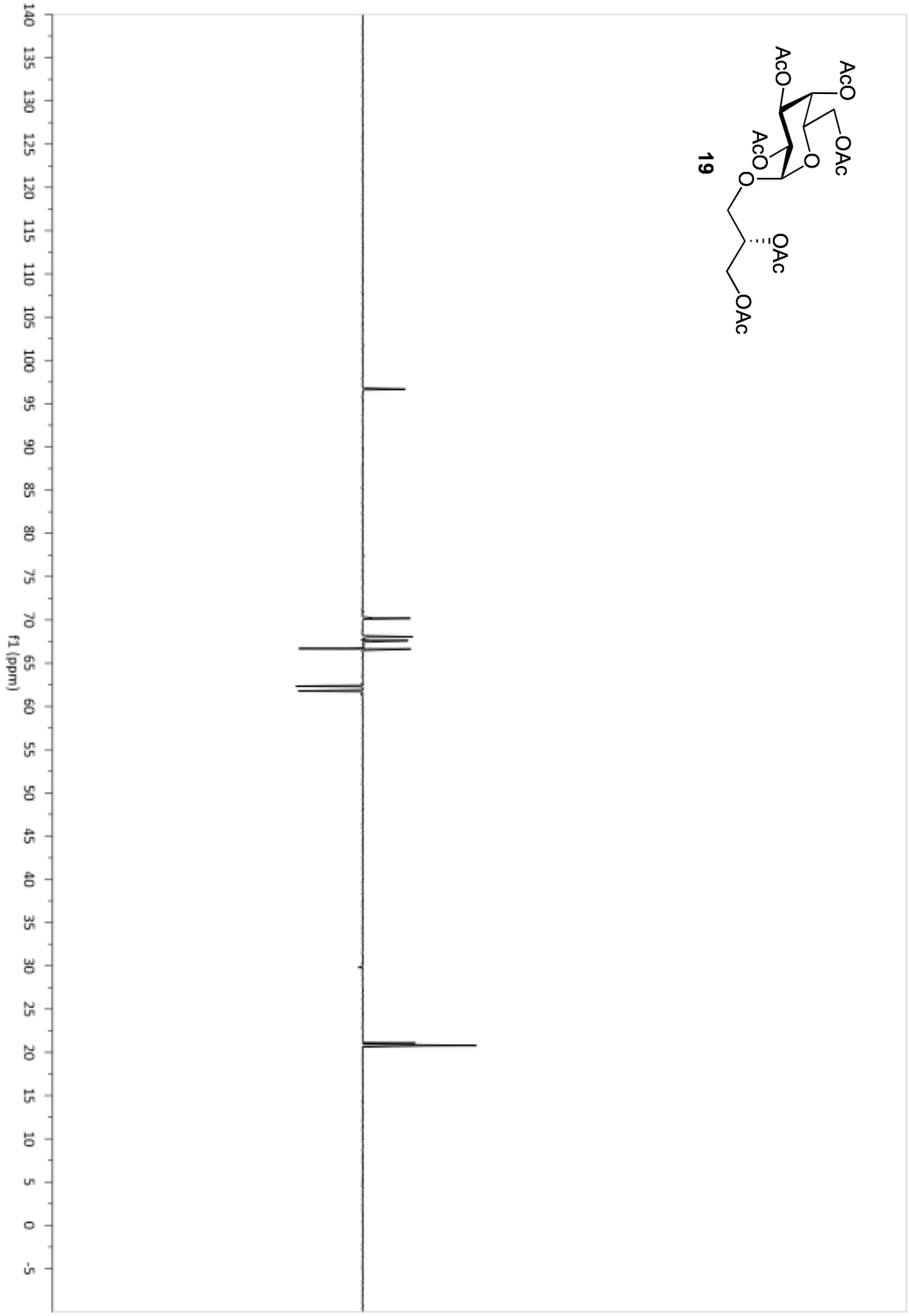

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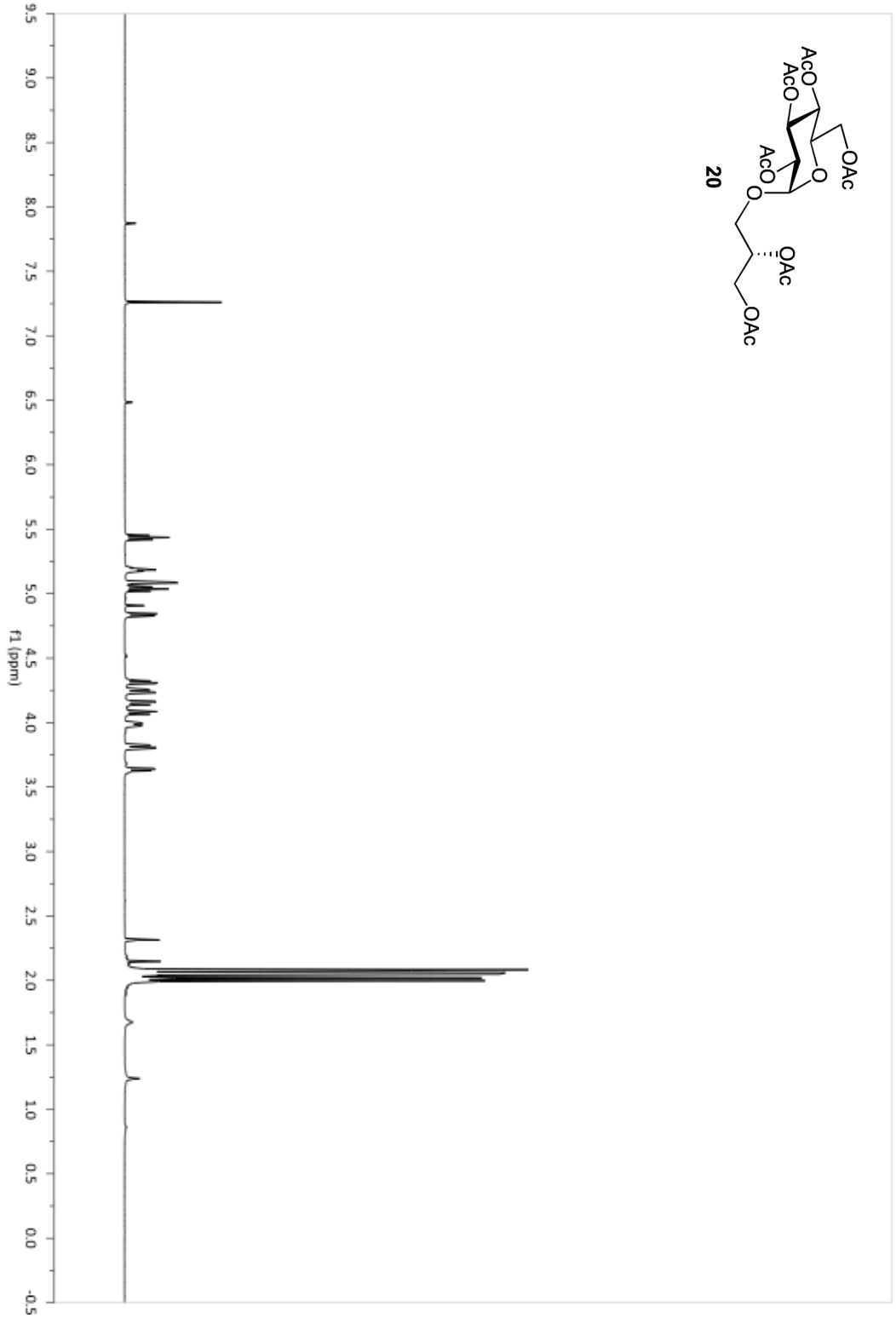

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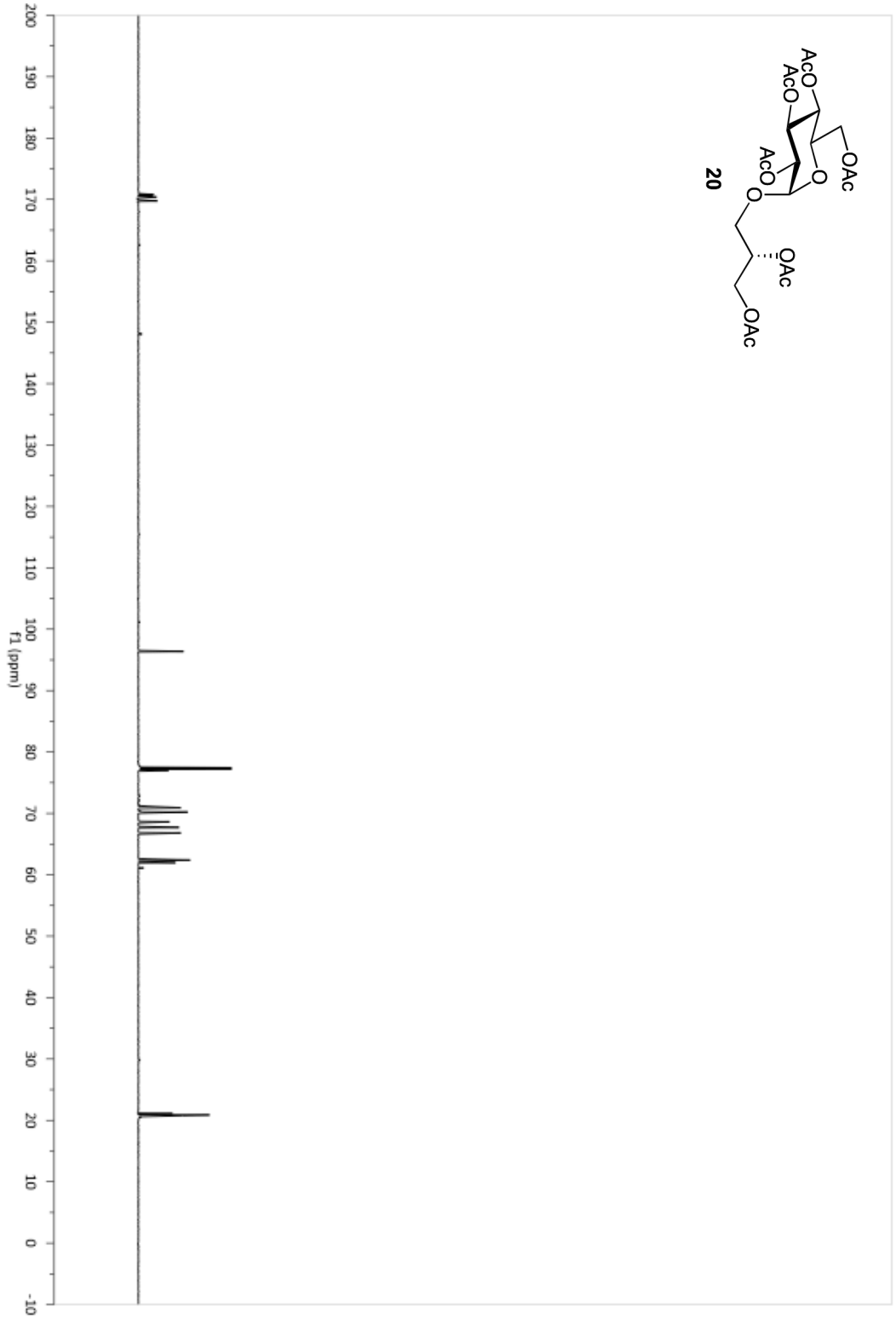

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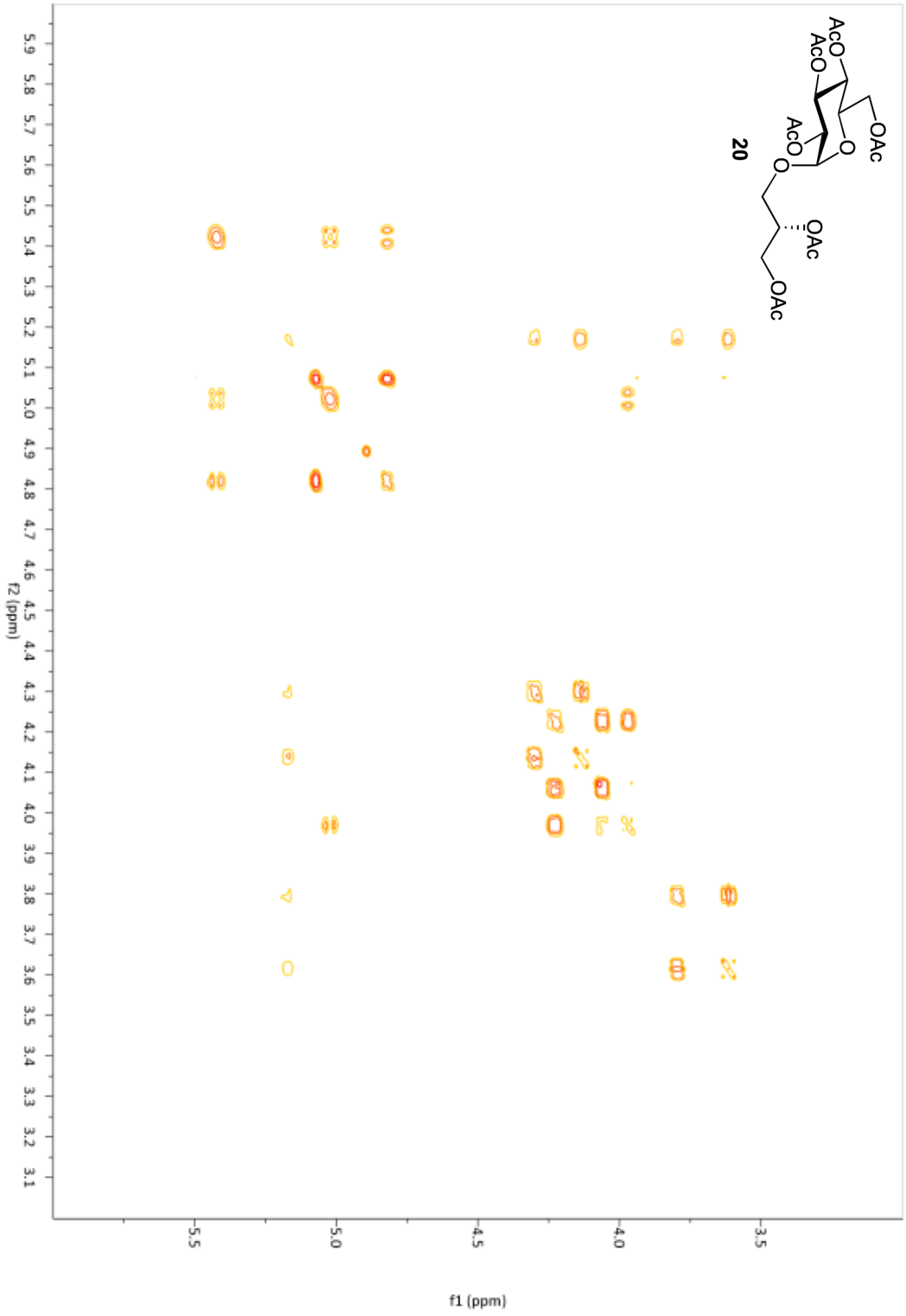

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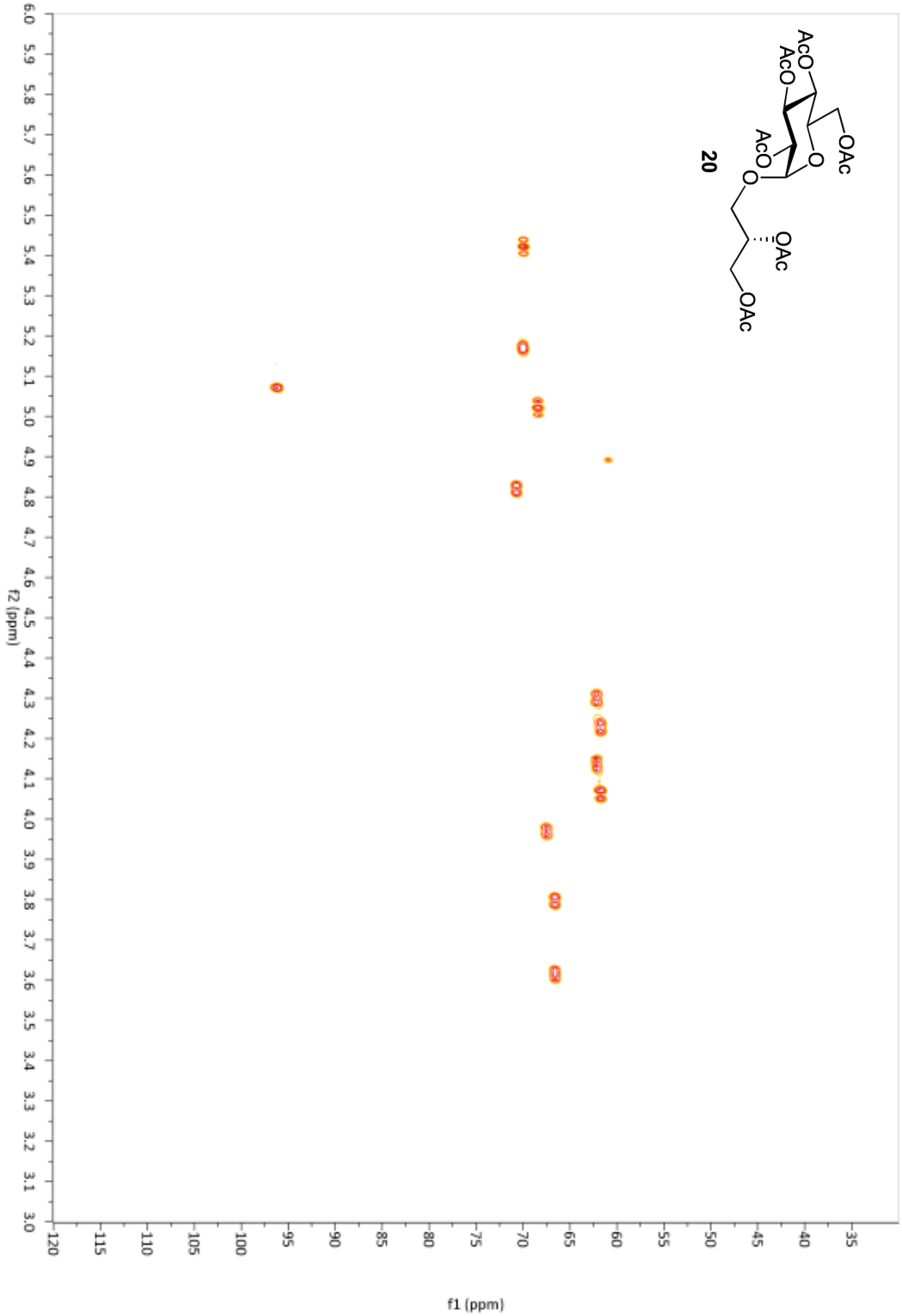

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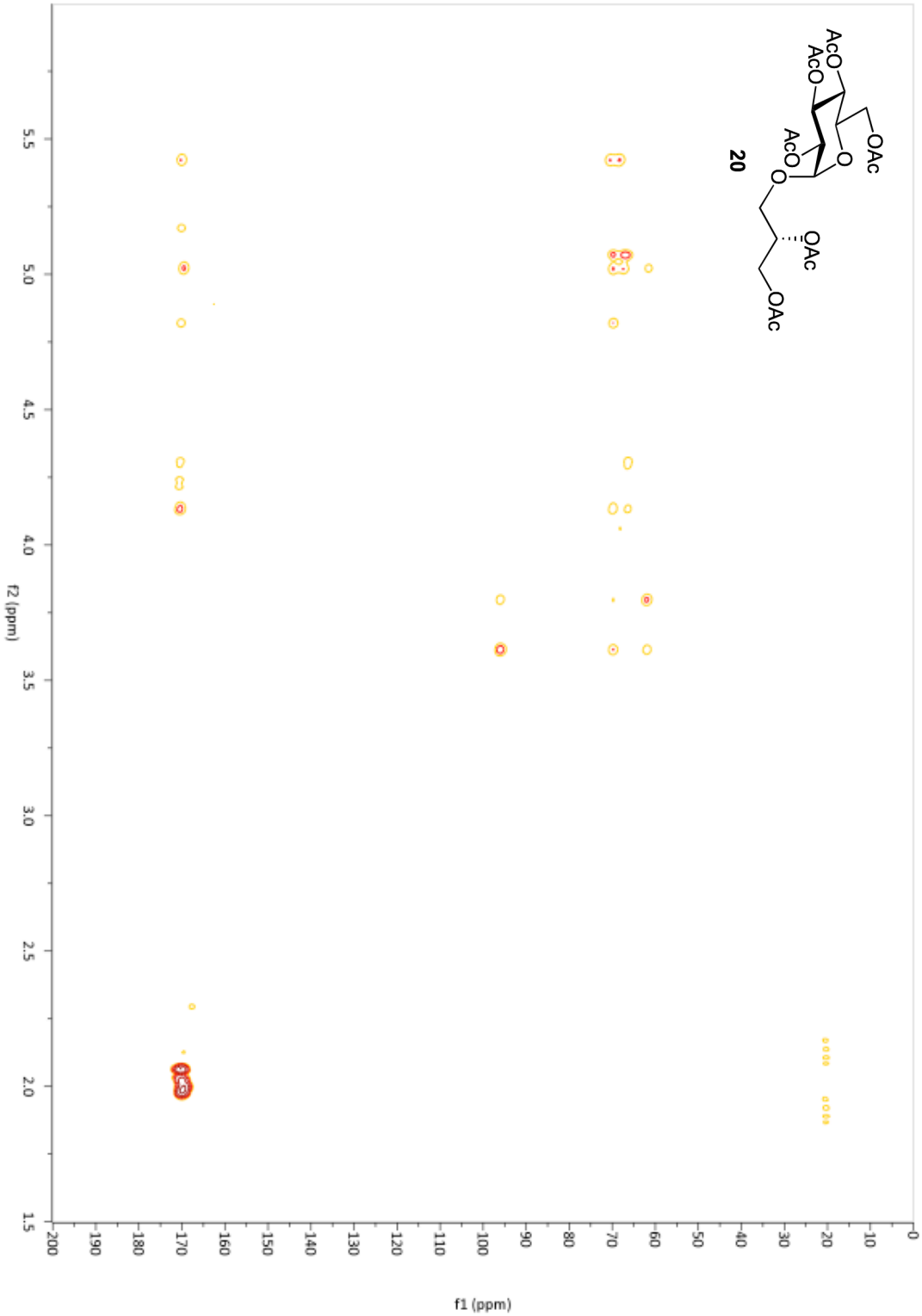

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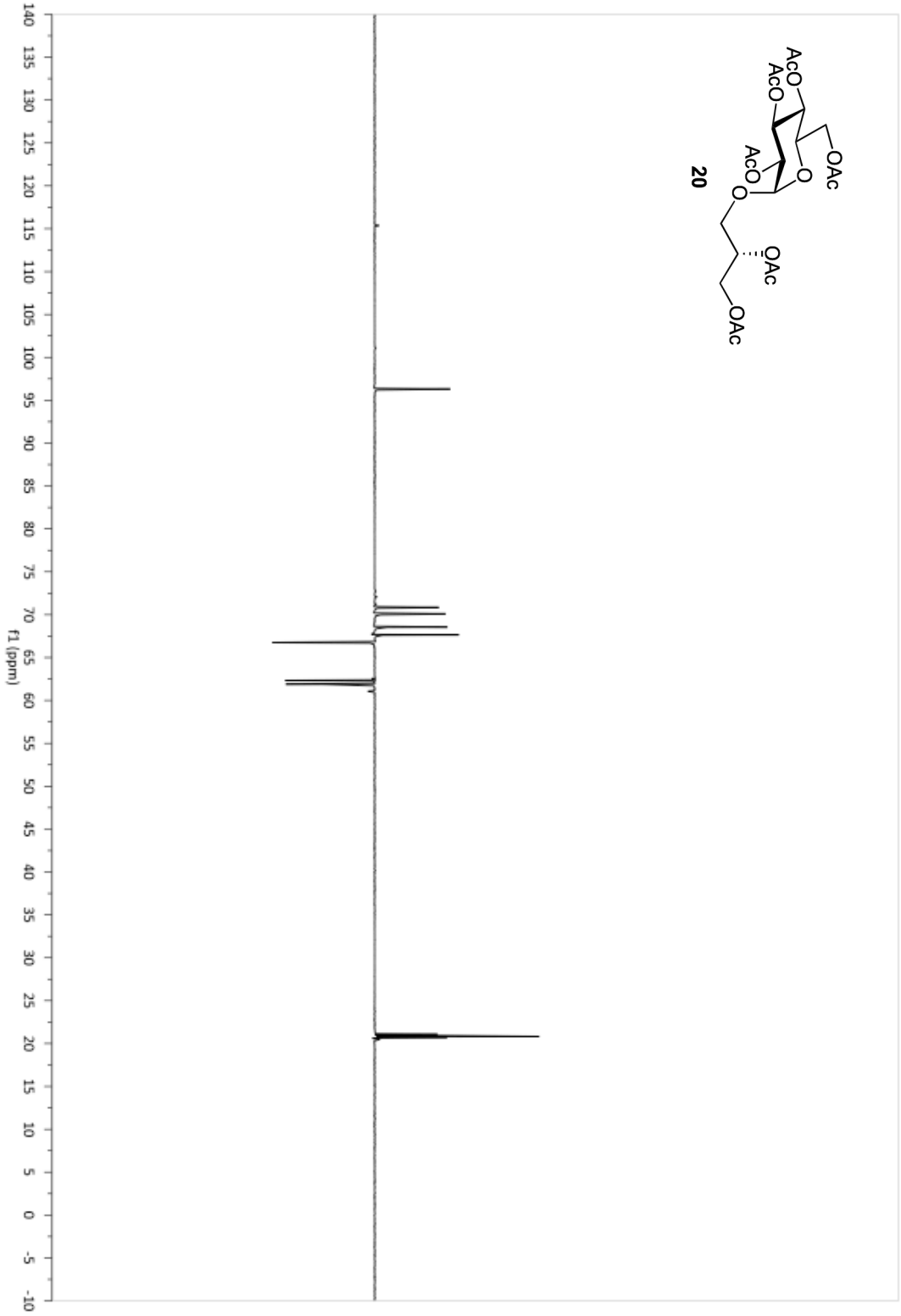

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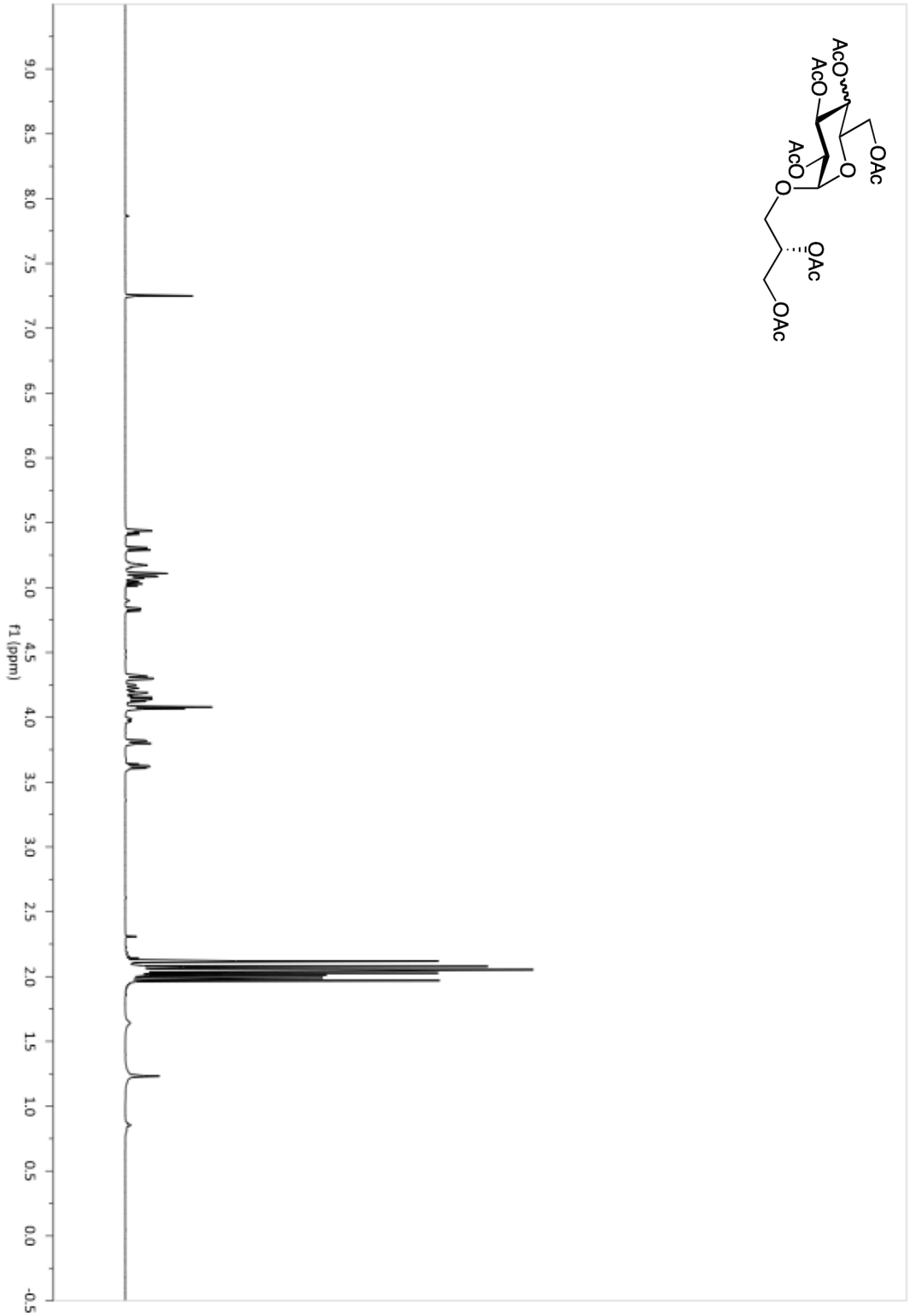

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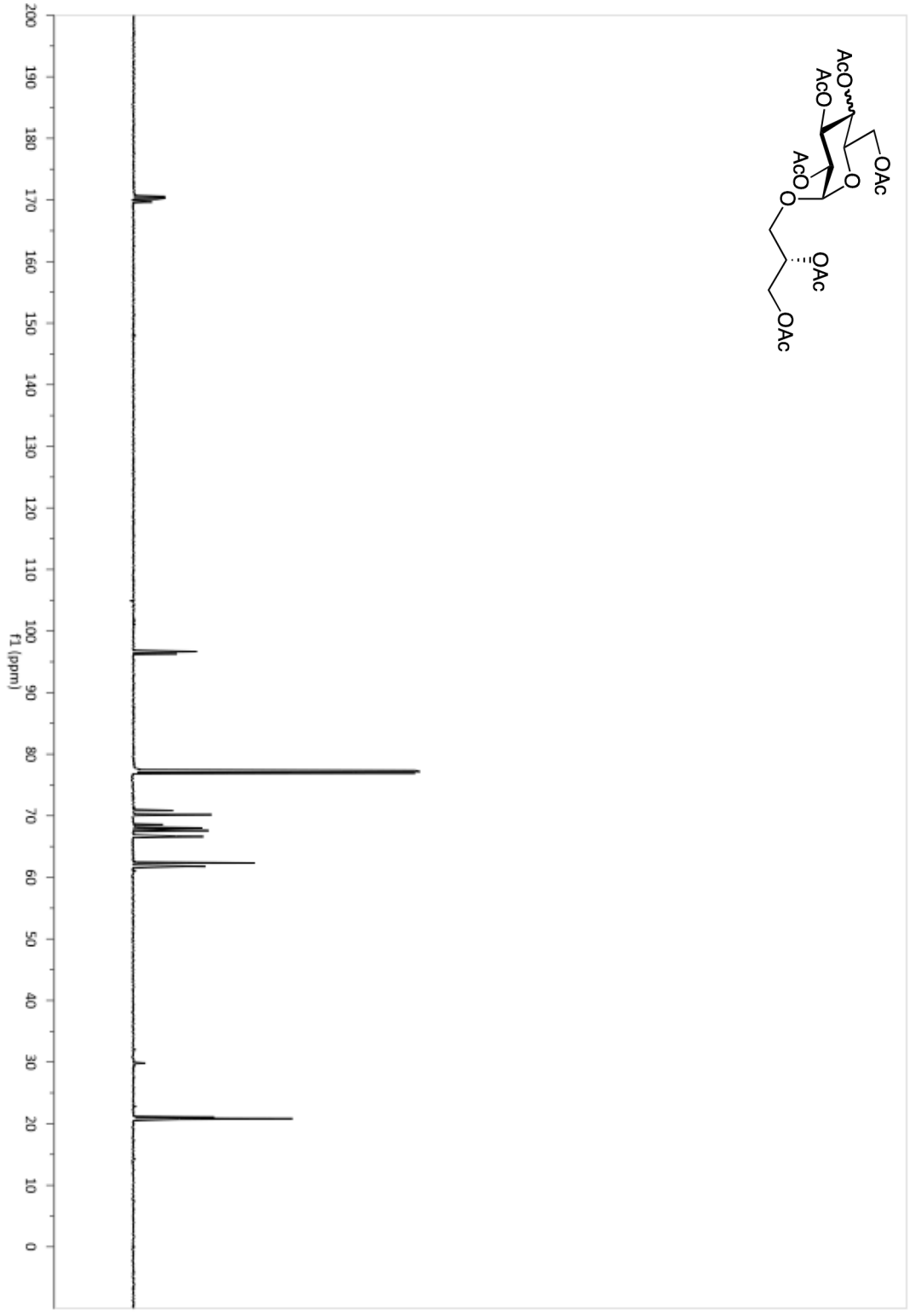

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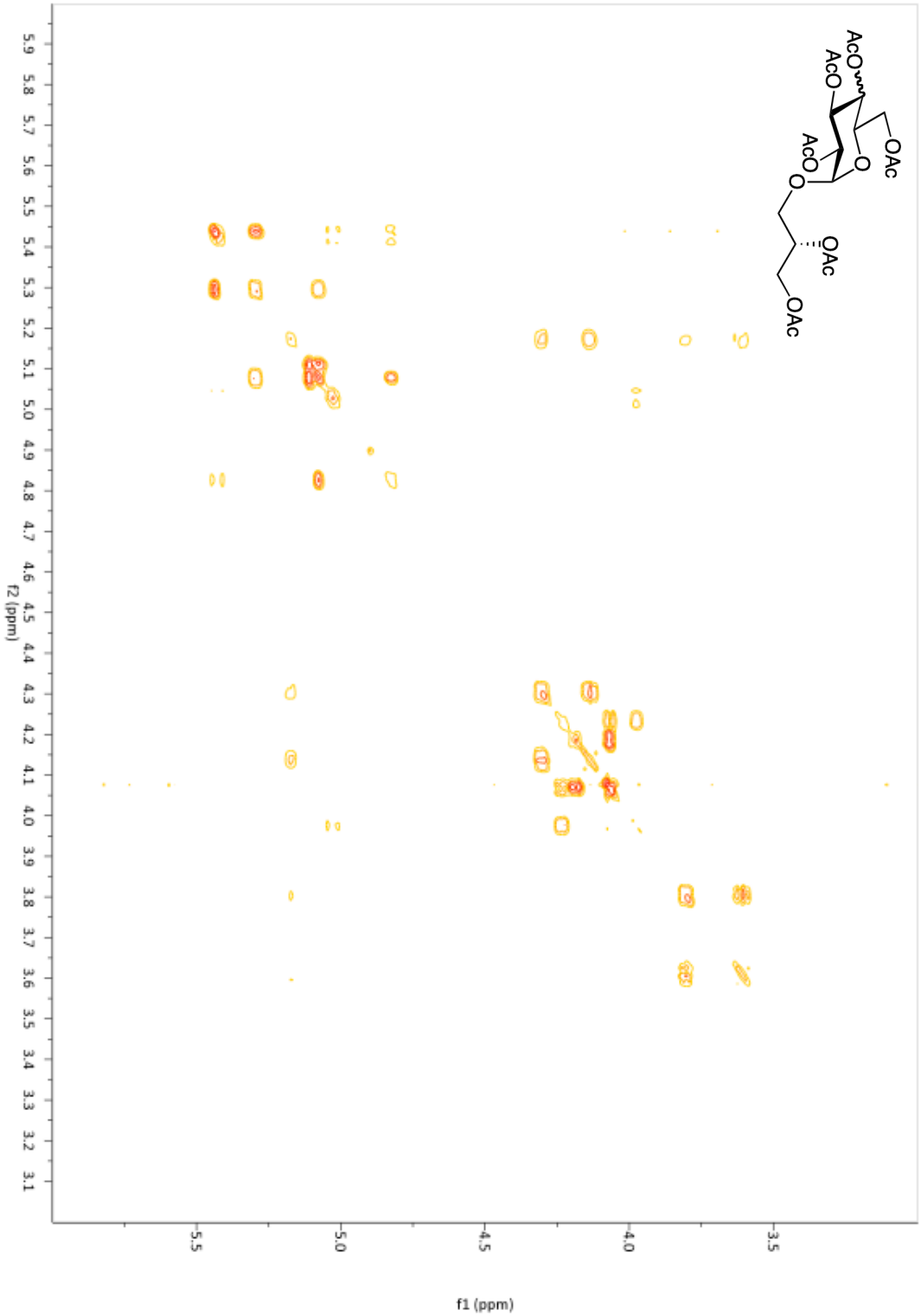

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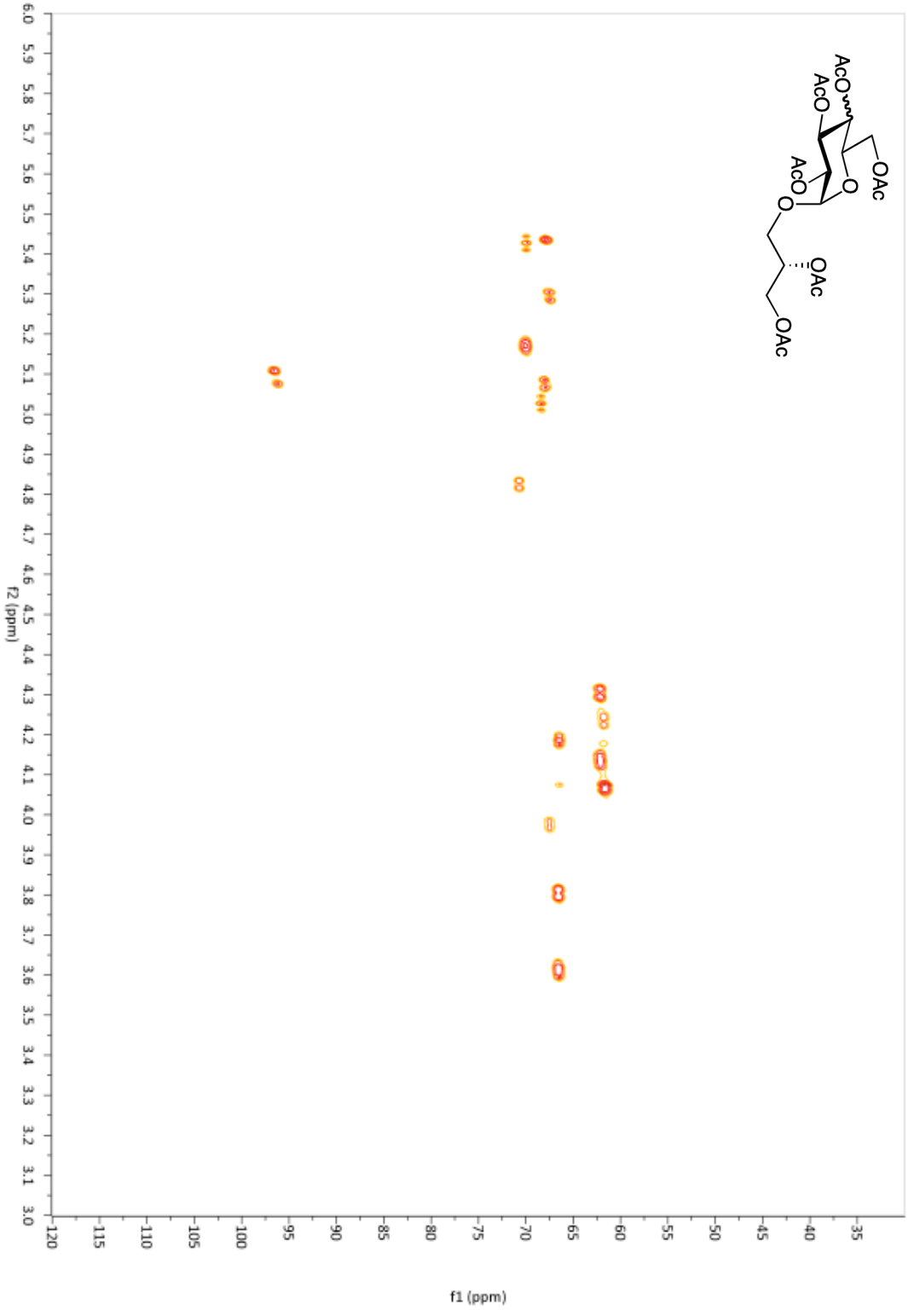

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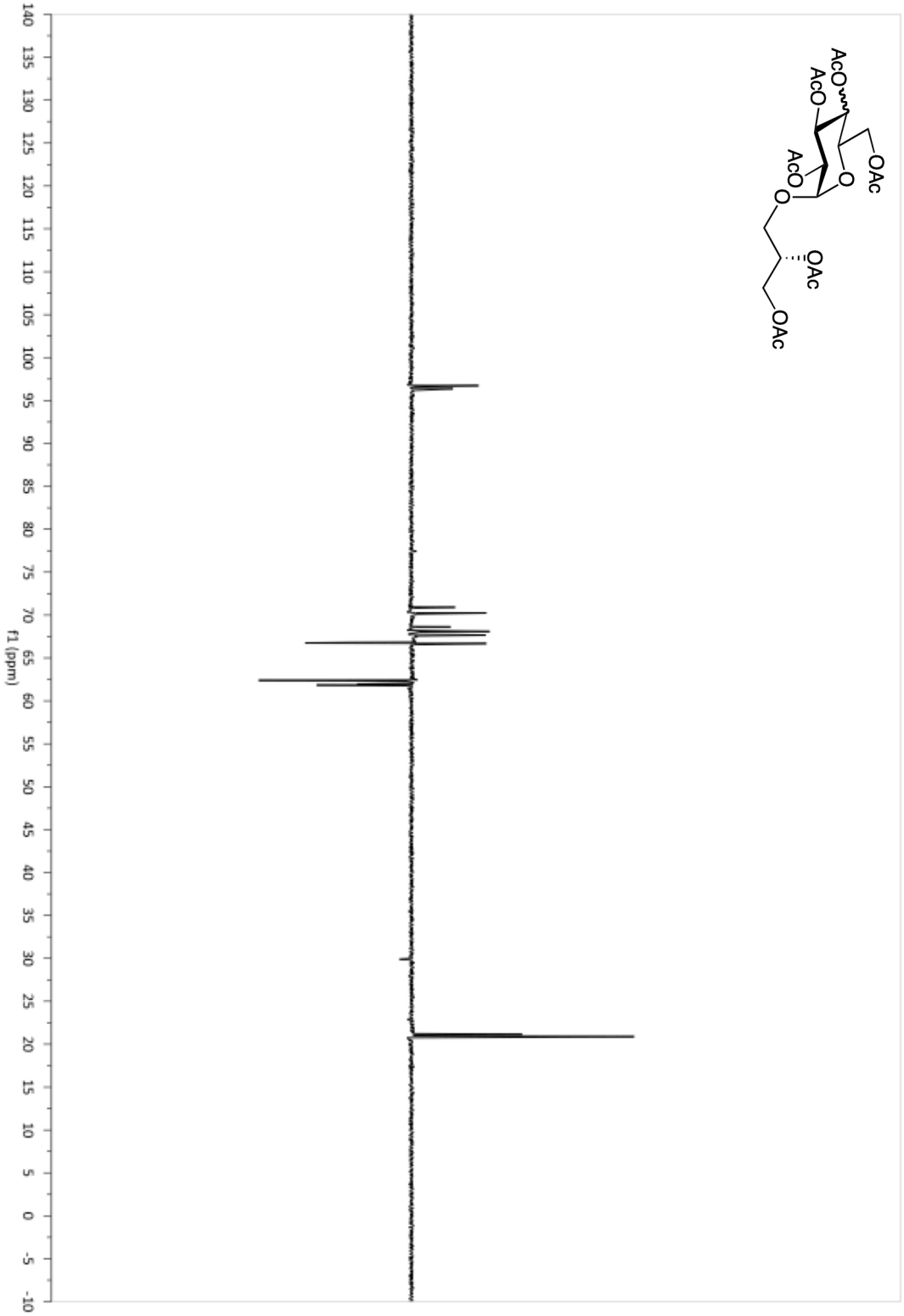

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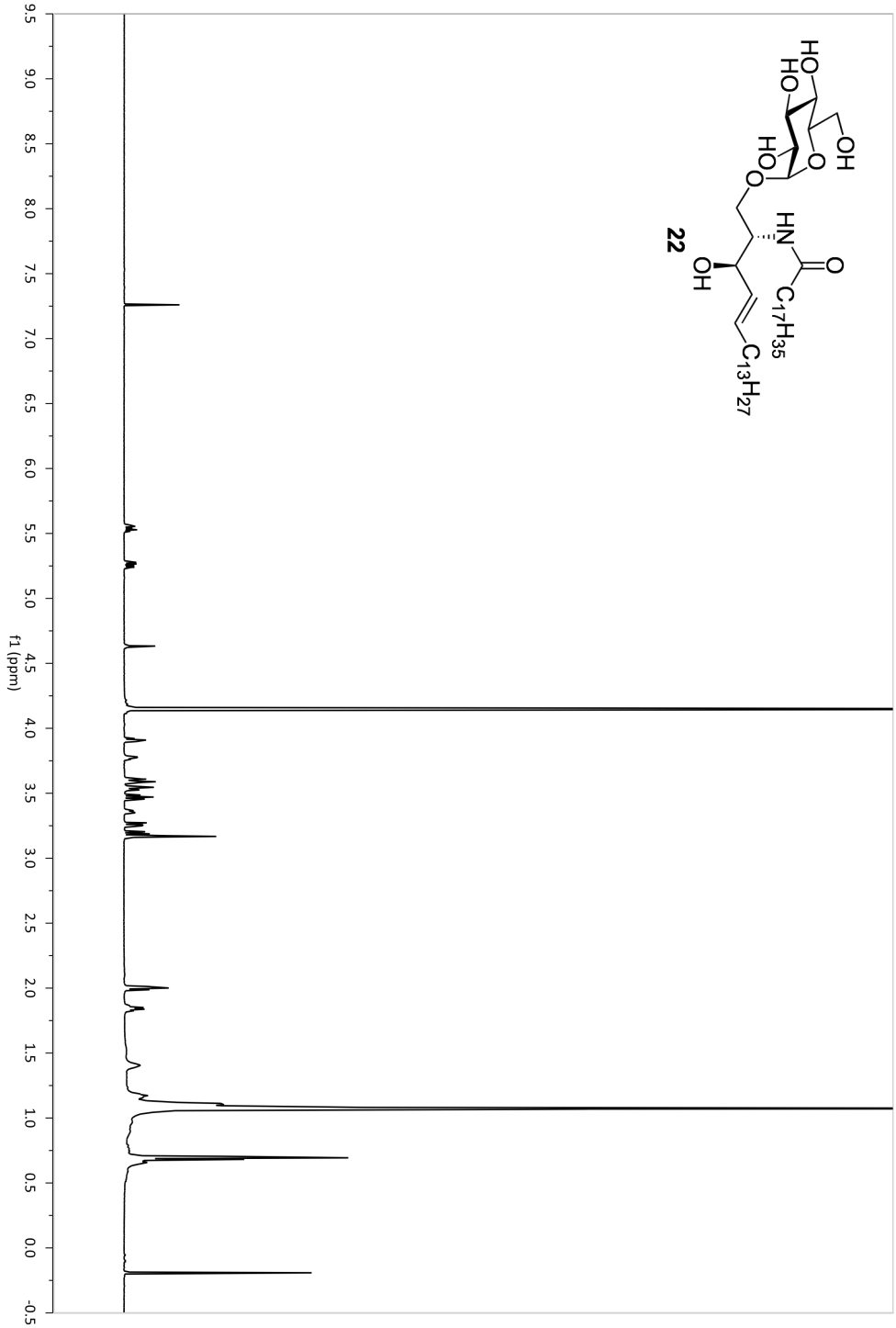

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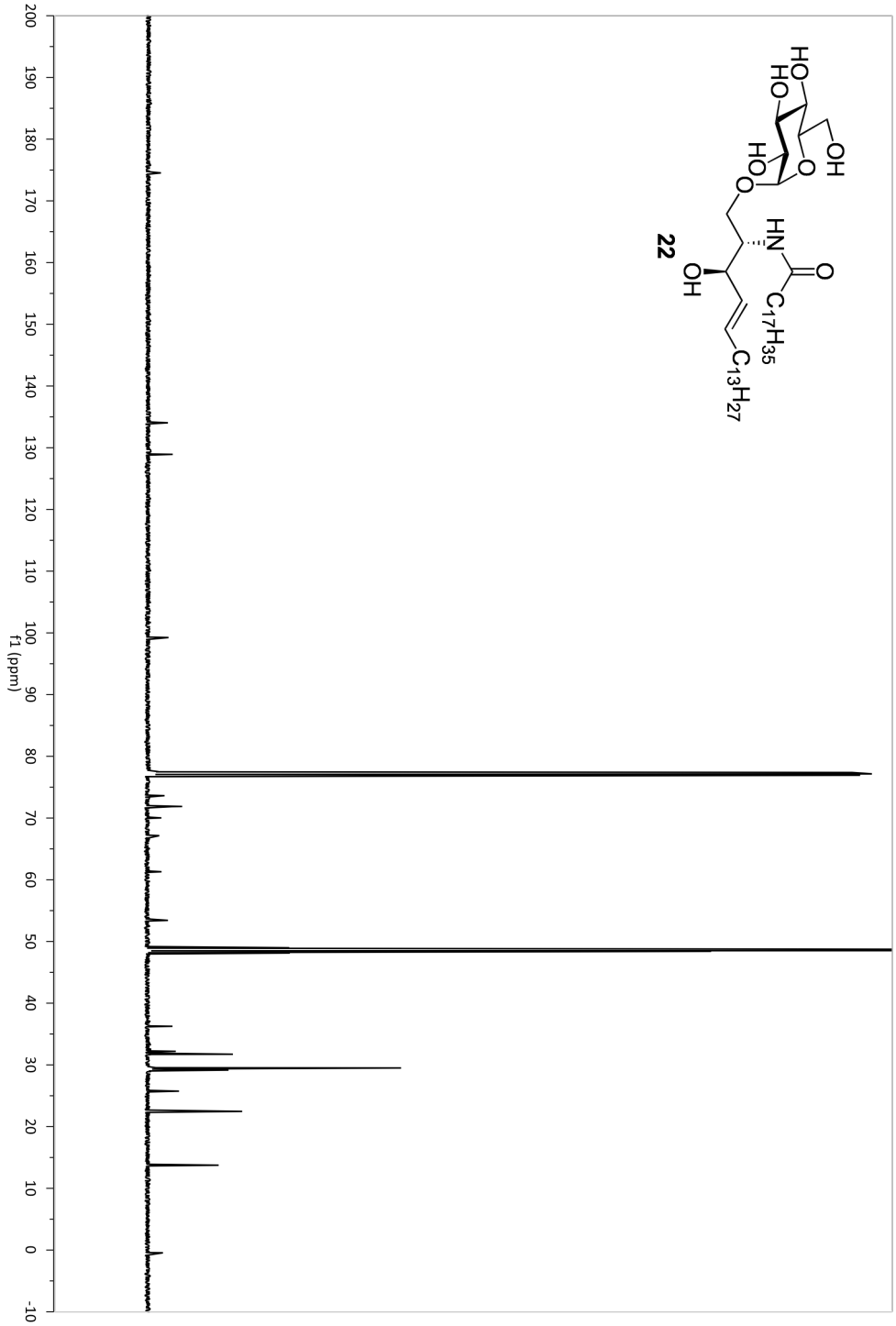

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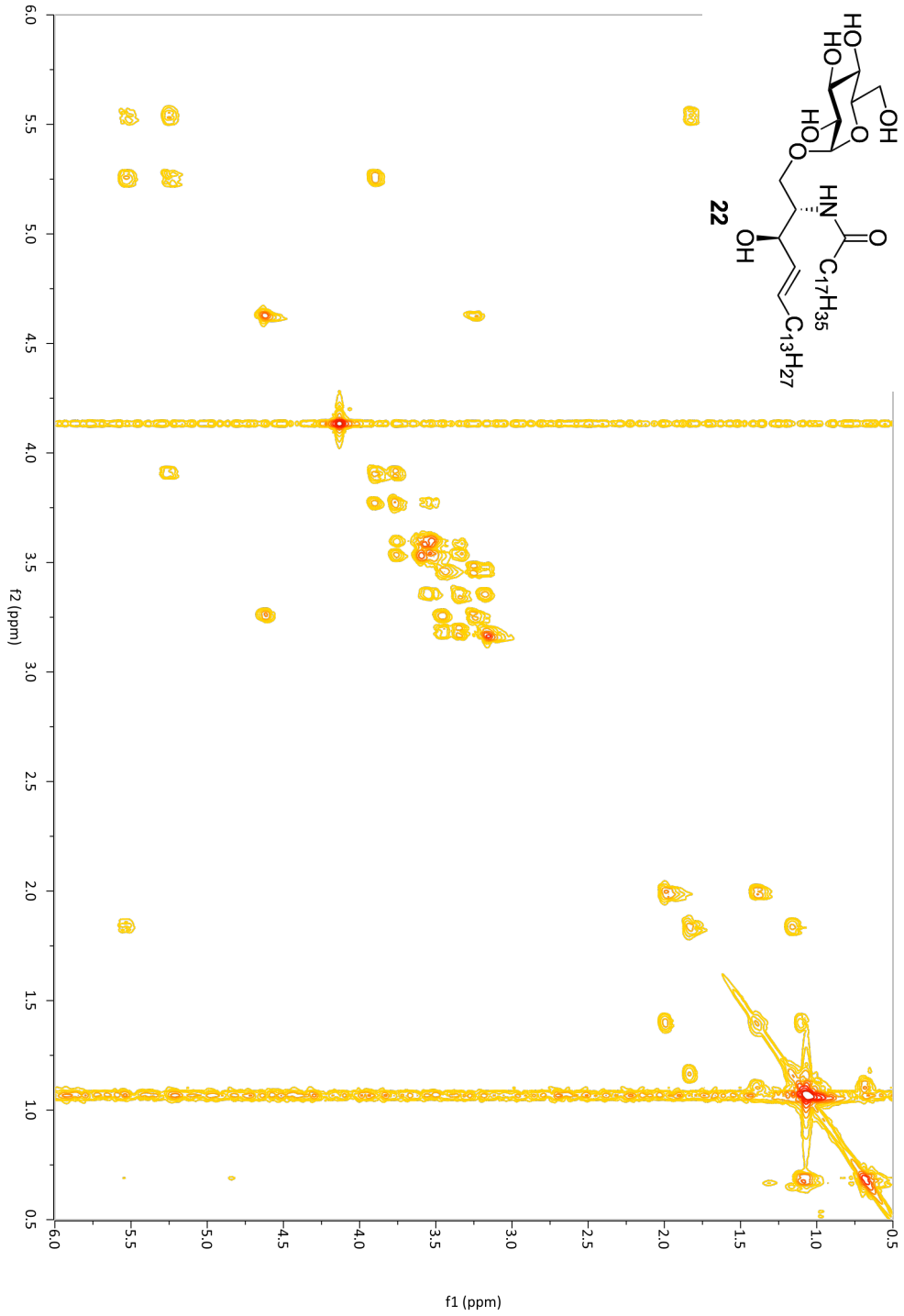

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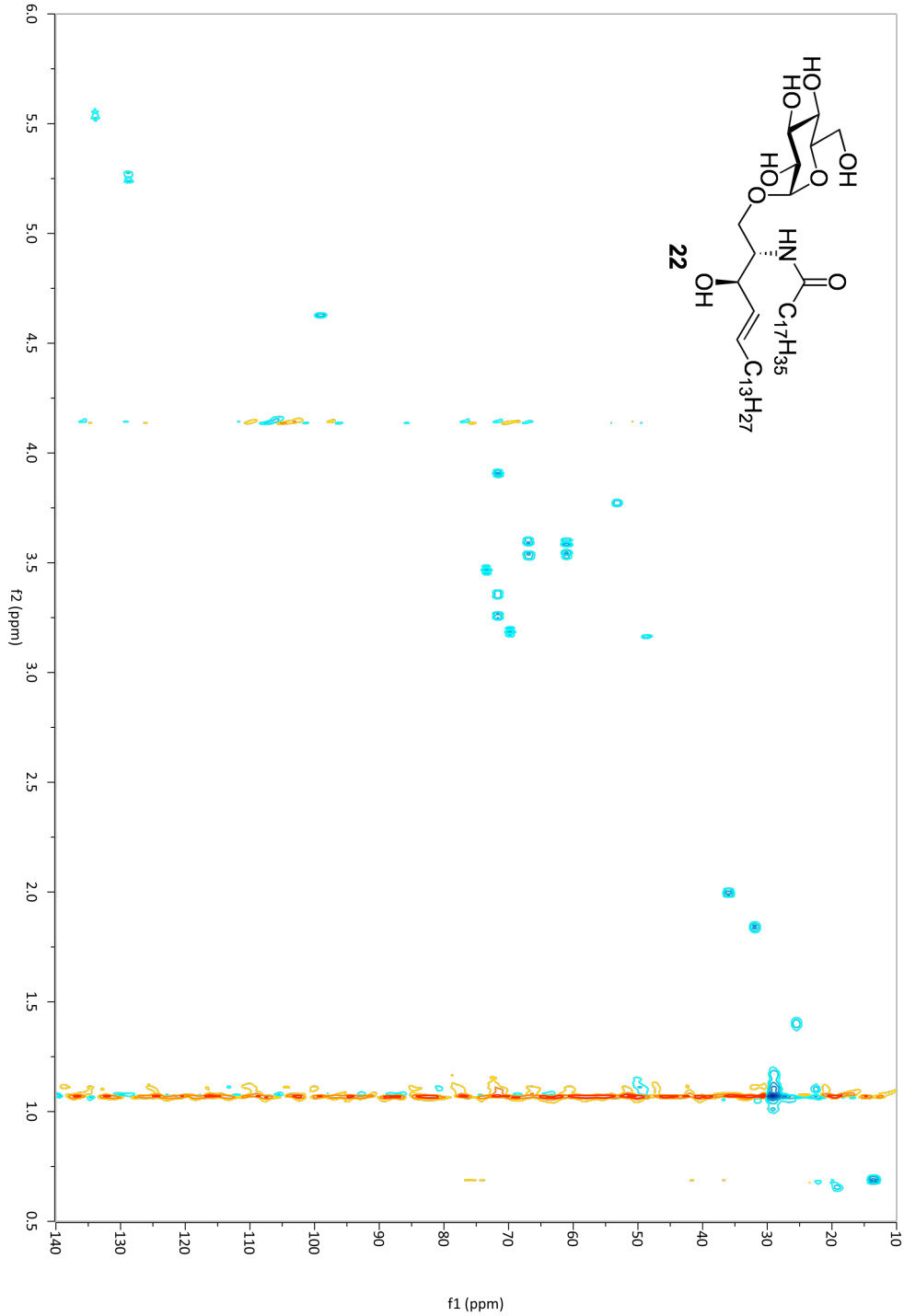

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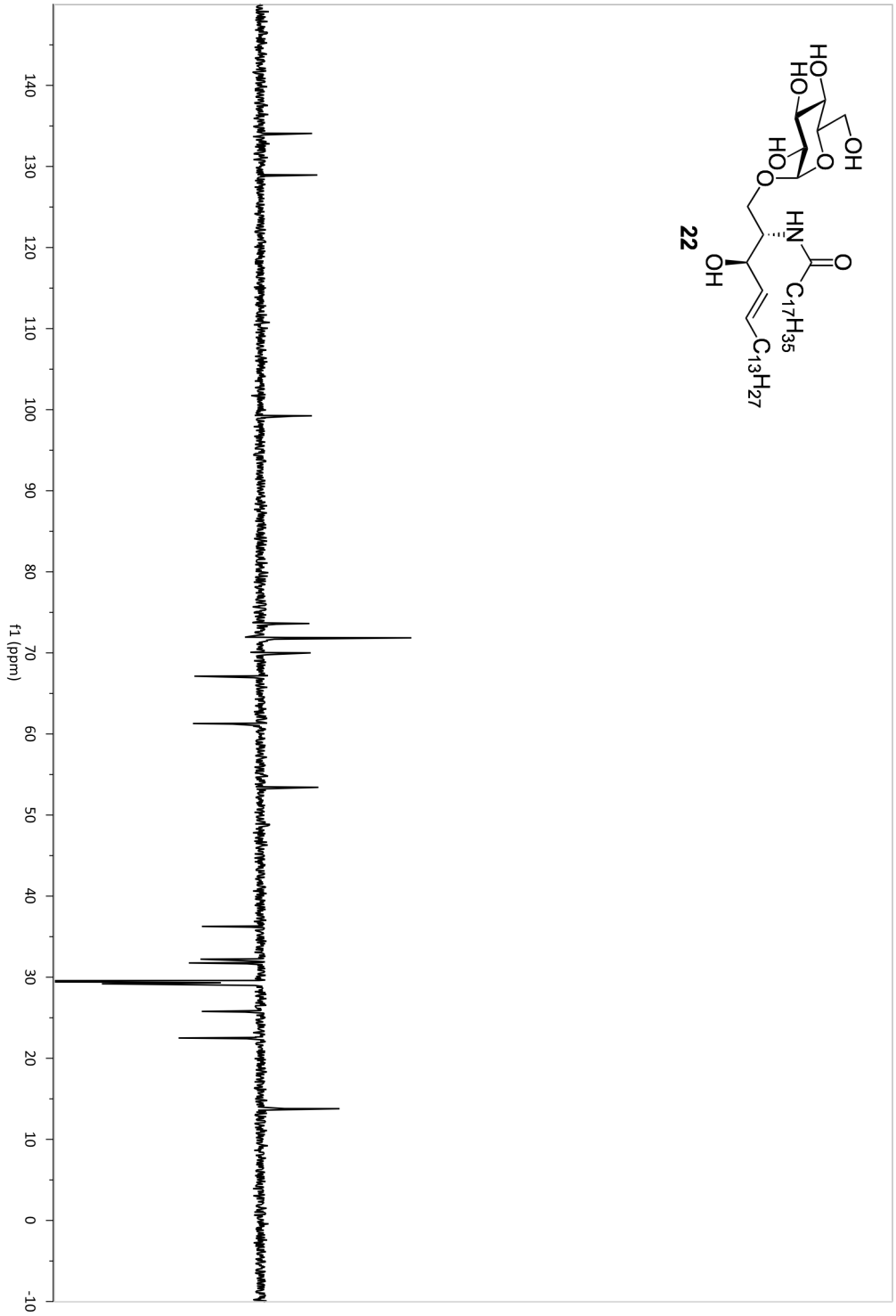

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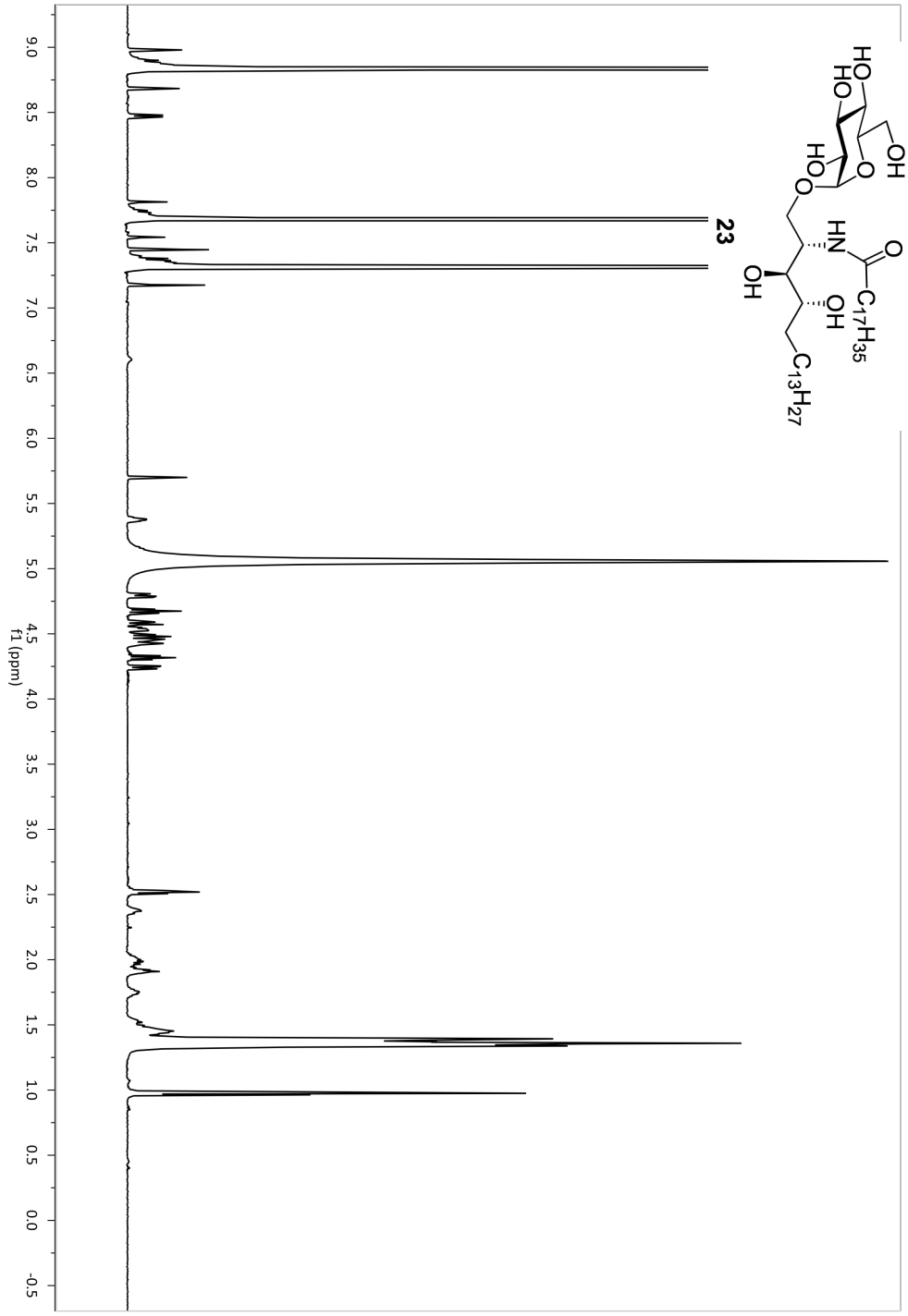

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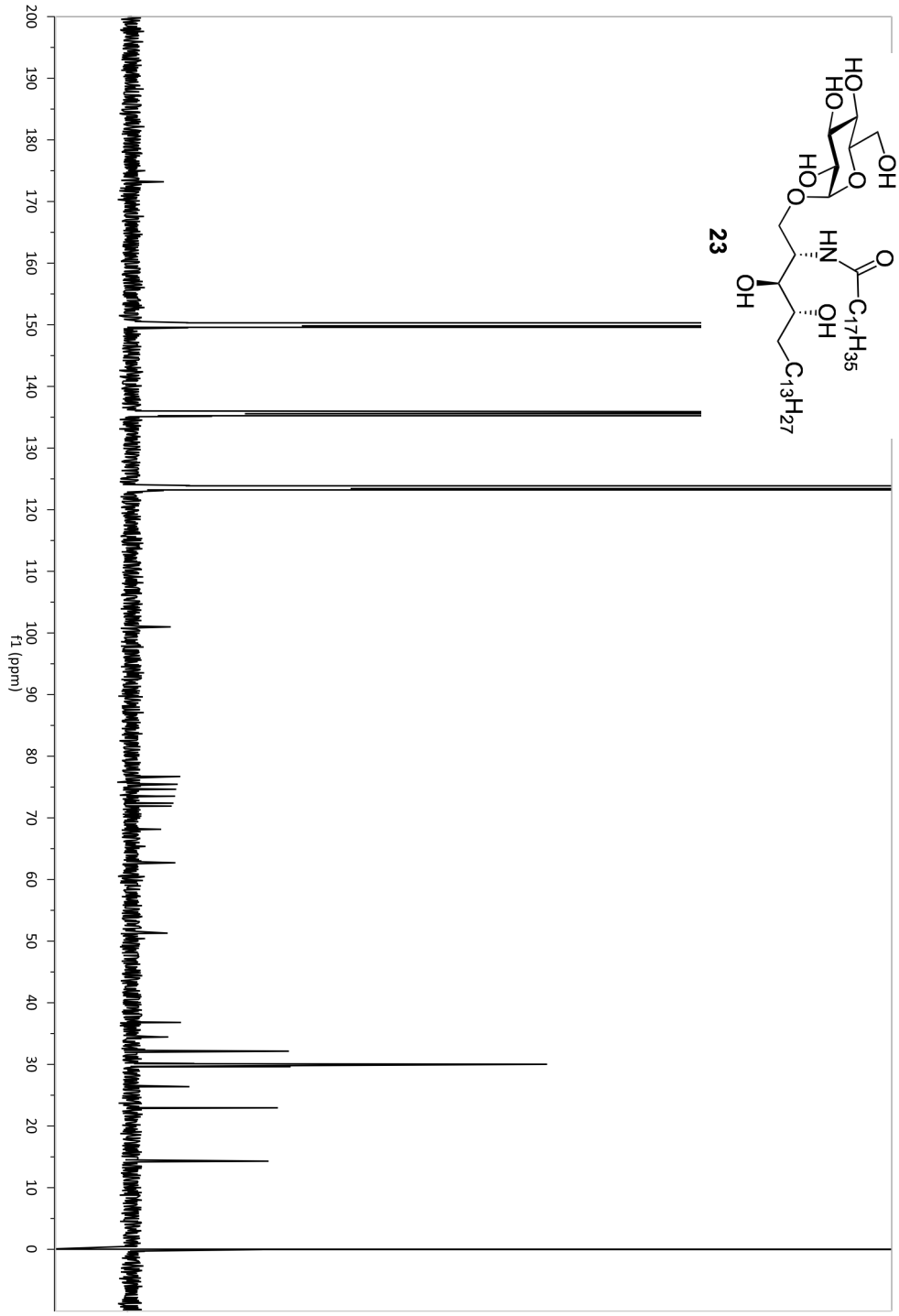

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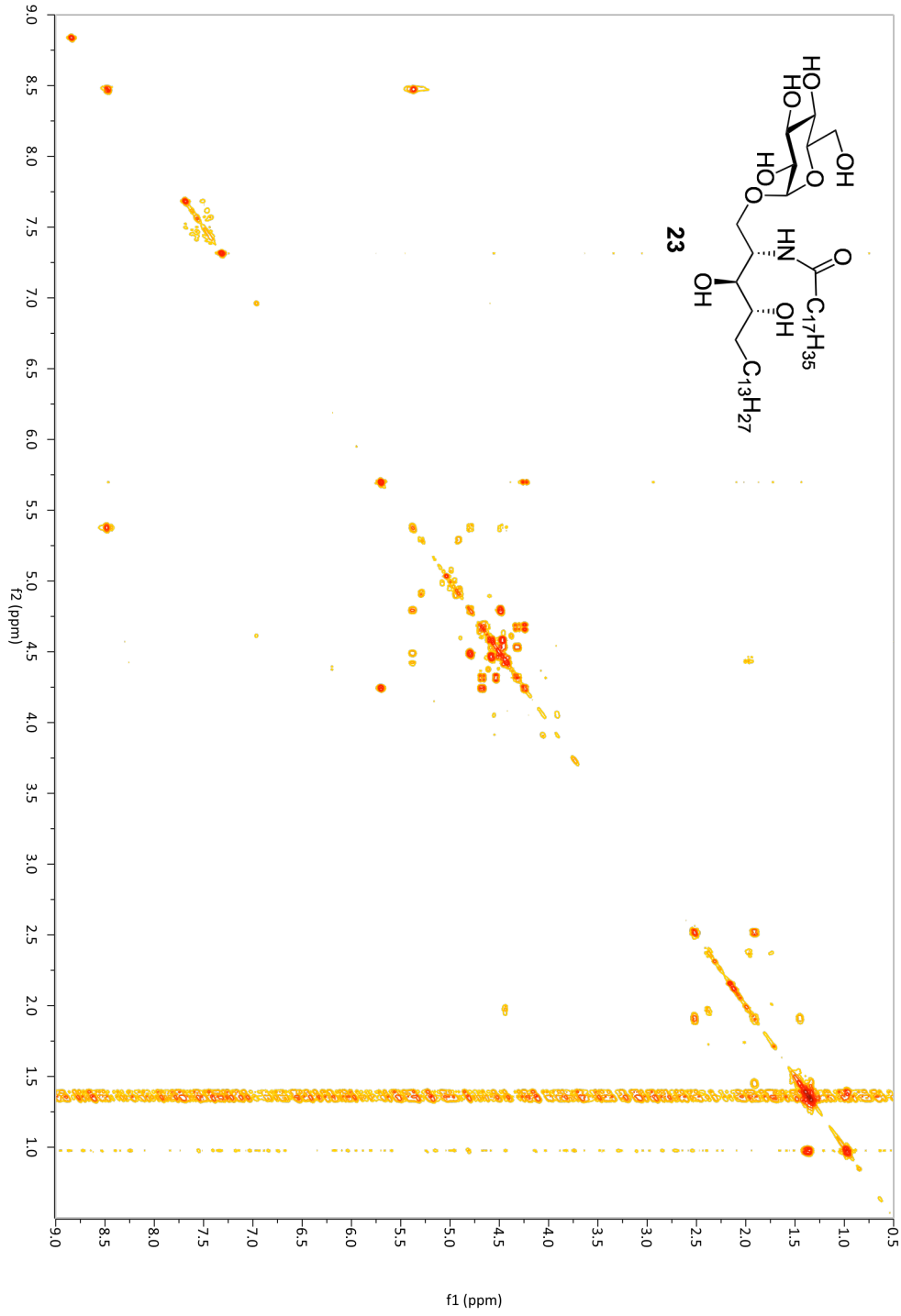

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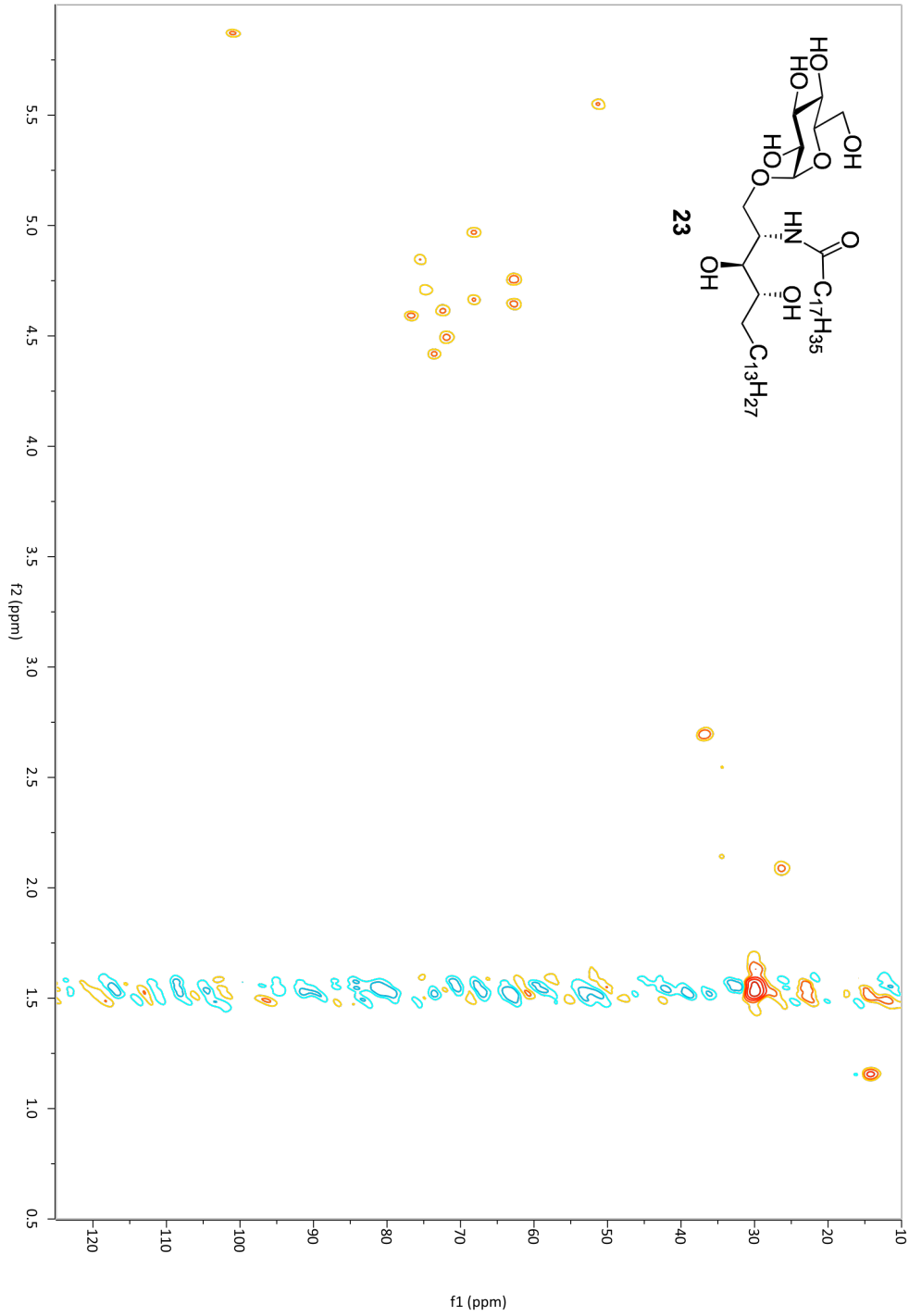

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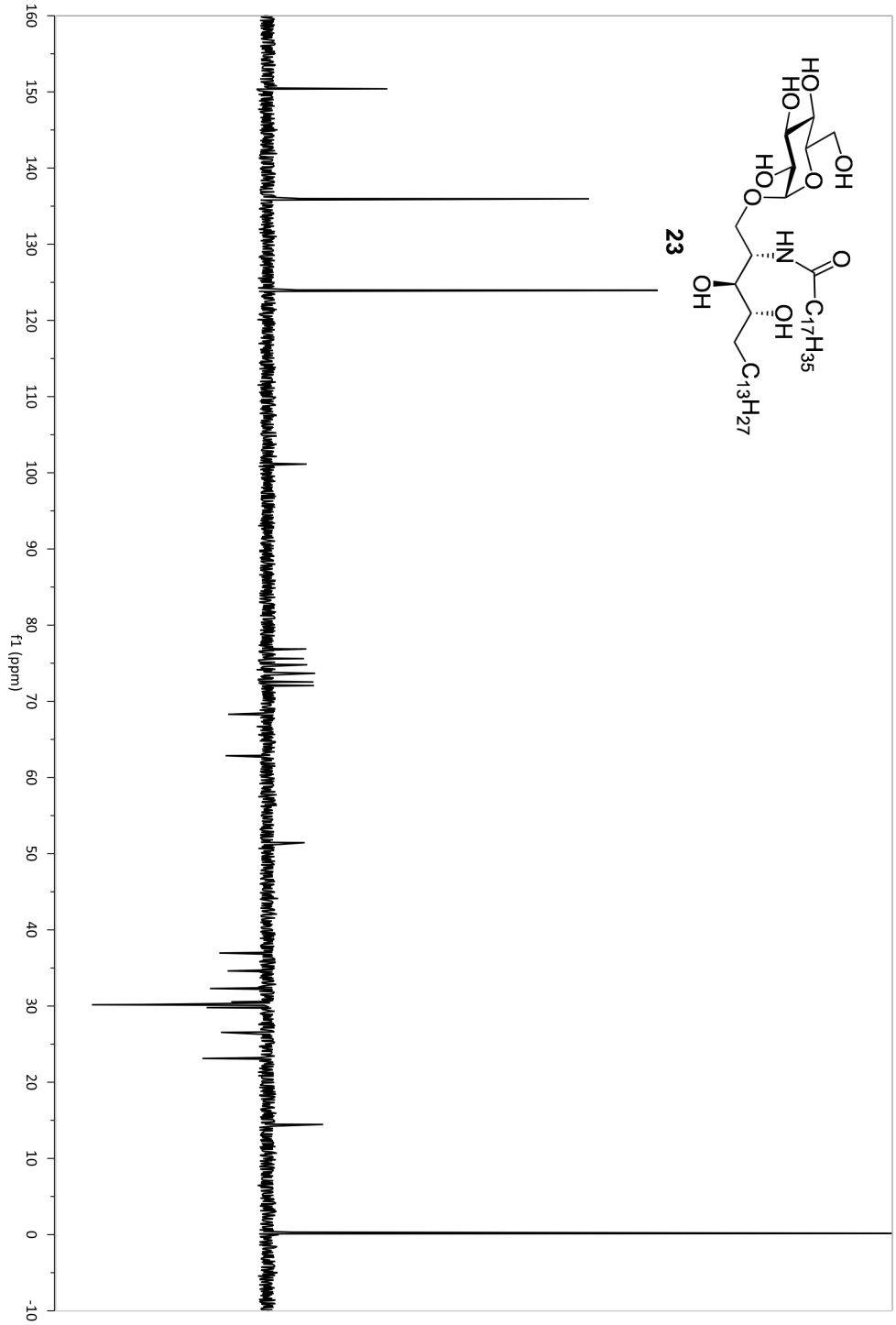

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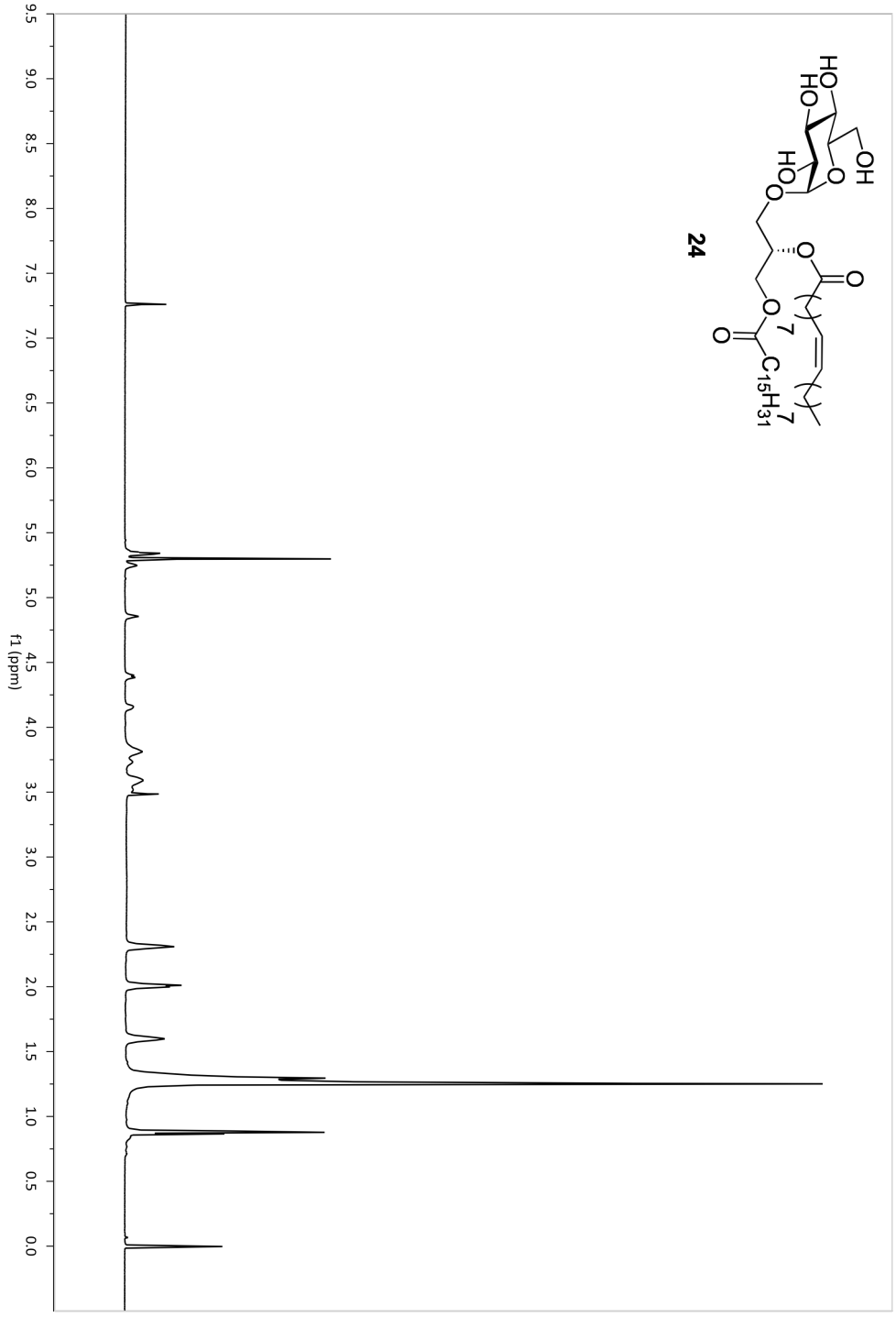

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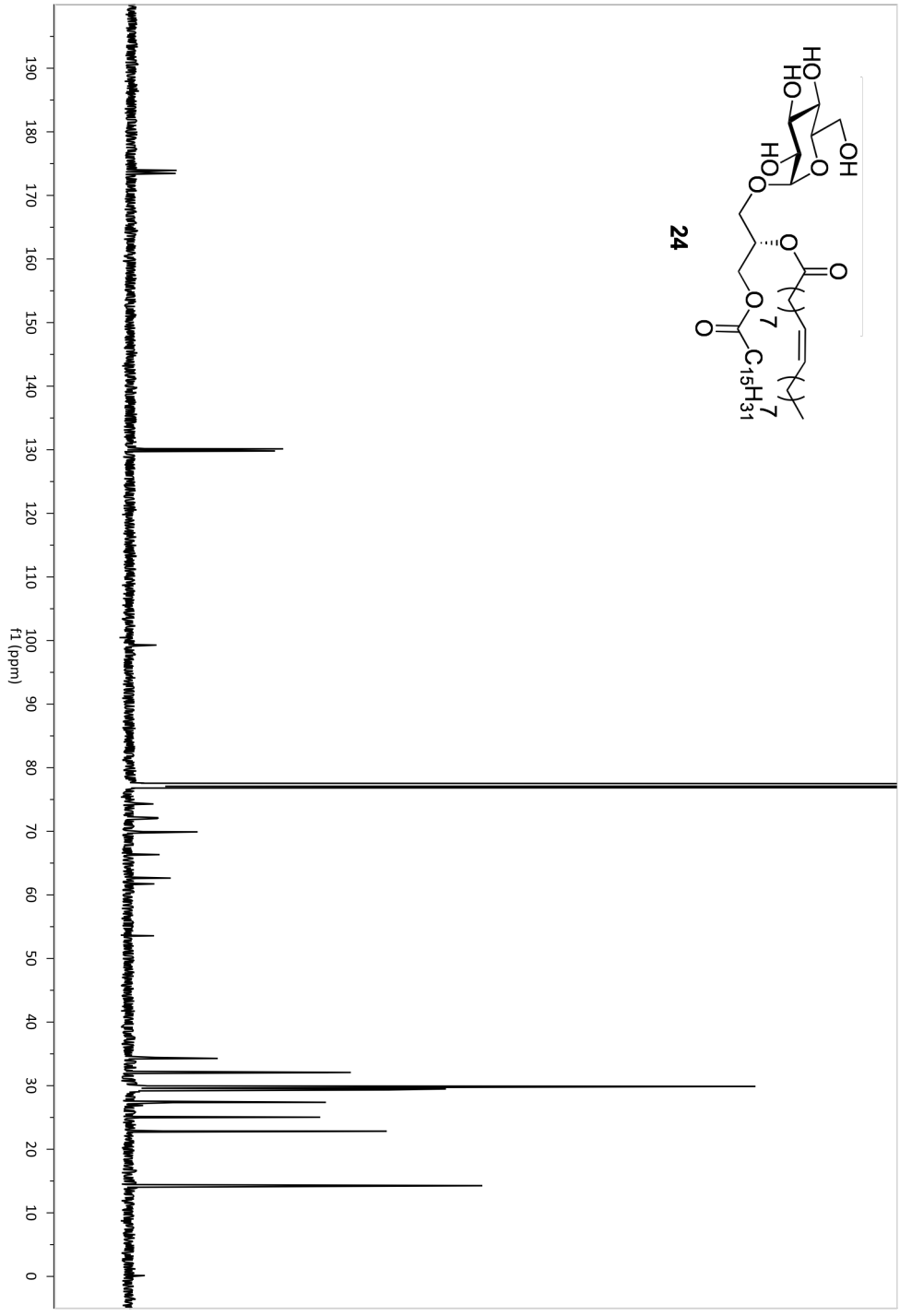

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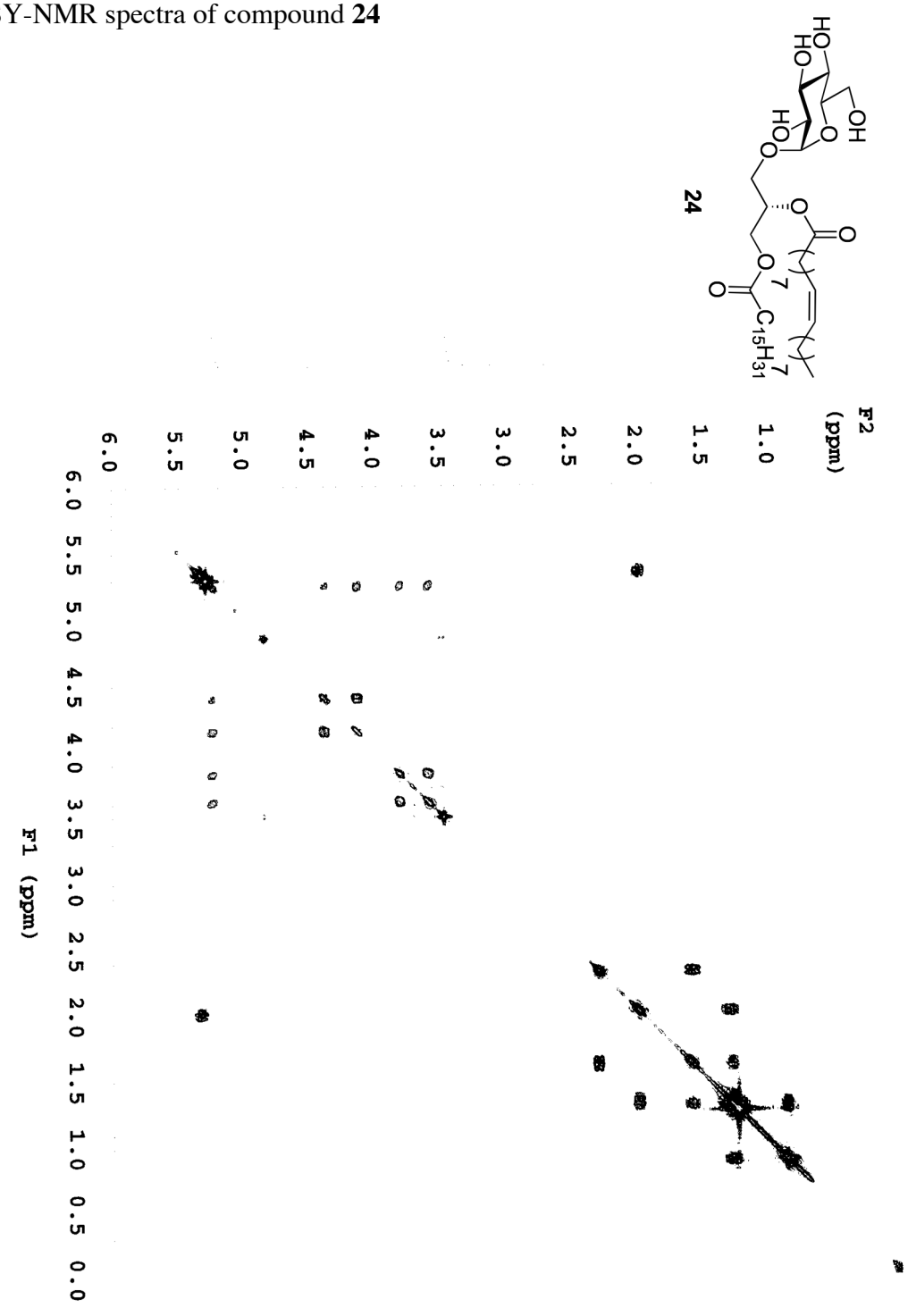

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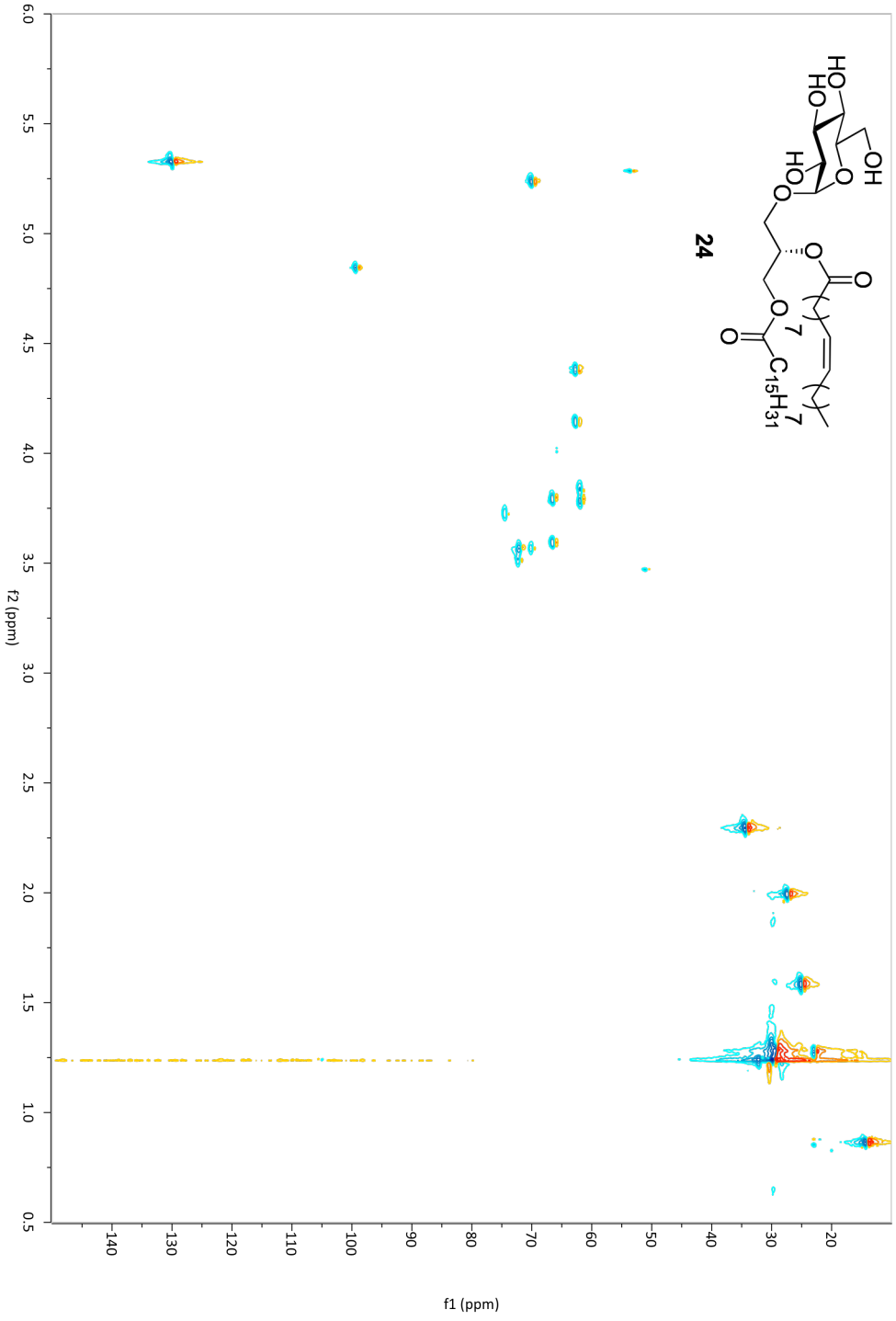

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