

Supporting Information

for

Alkylation and silylation of α -fluorobenzyl anion intermediates

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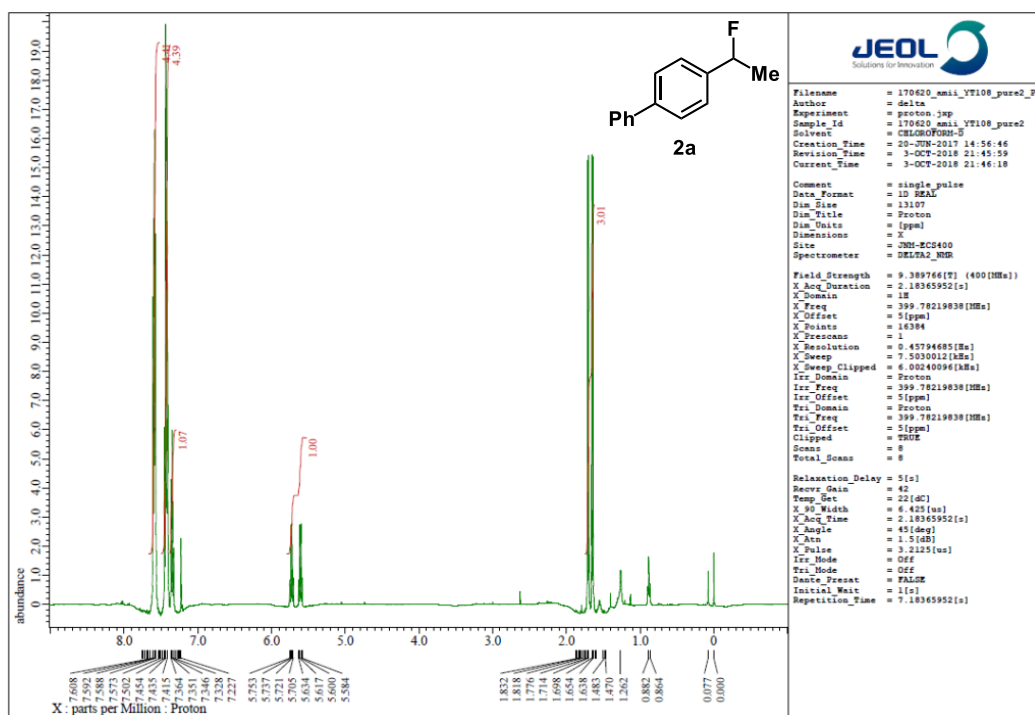
Email: Hideki Amii - amii@gunma-u.ac.jp

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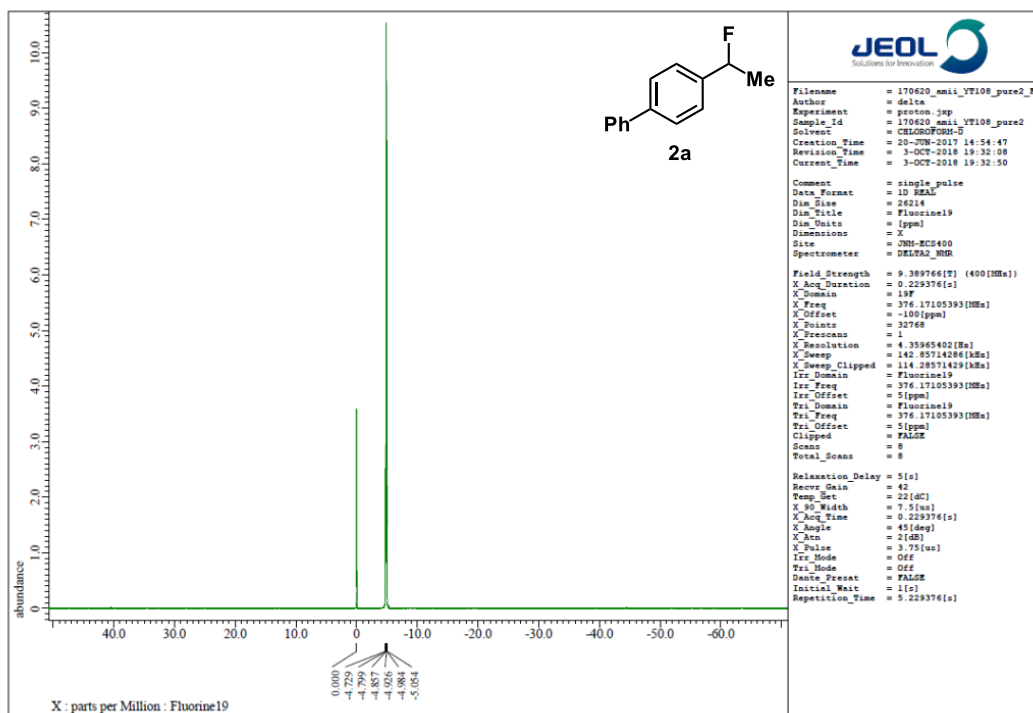
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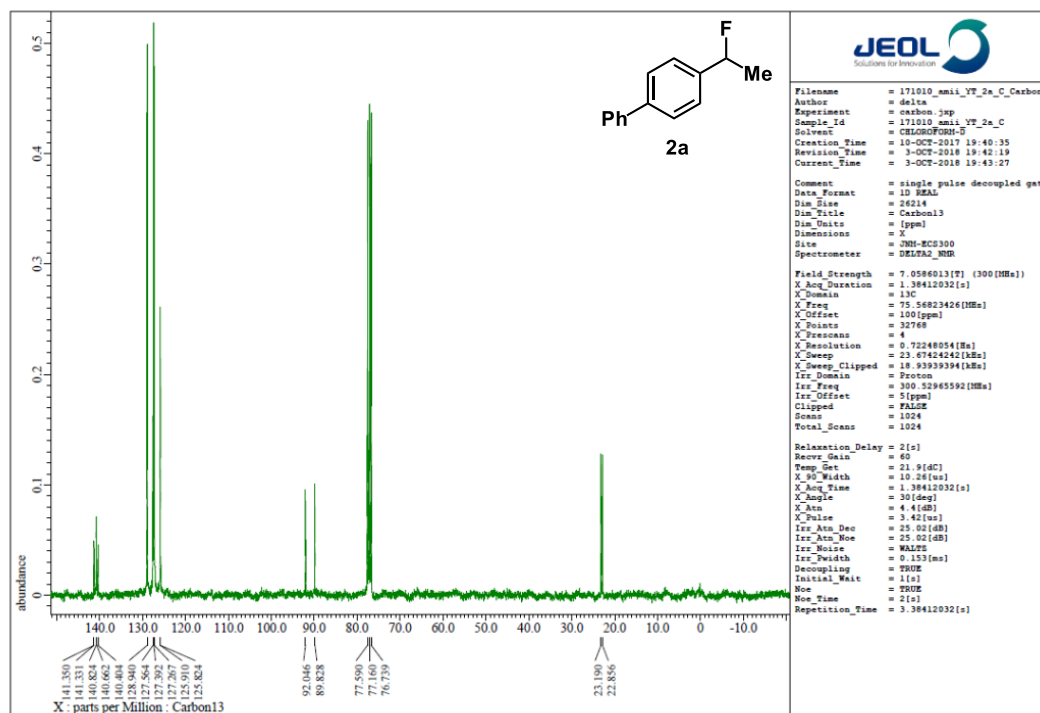
¹H NMR spectrum of 4-(1-Fluoroethyl)biphenyl (2a)



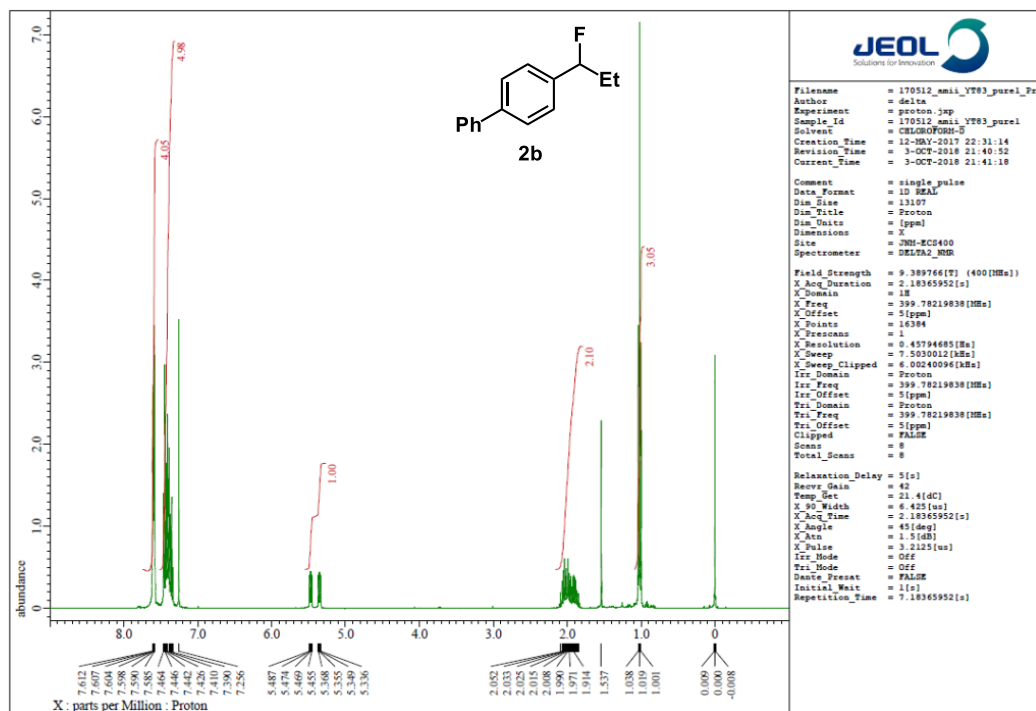
¹⁹F NMR spectrum of 4-(1-Fluoroethyl)biphenyl (2a)



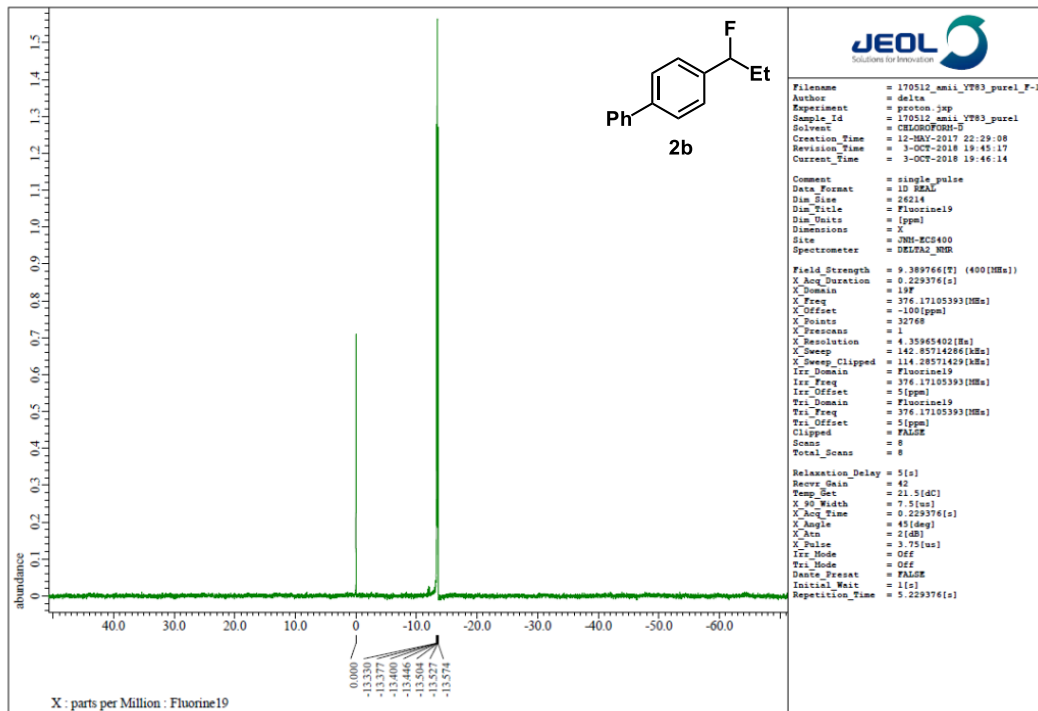
¹³C NMR spectrum of 4-(1-Fluoroethyl)biphenyl (2a)



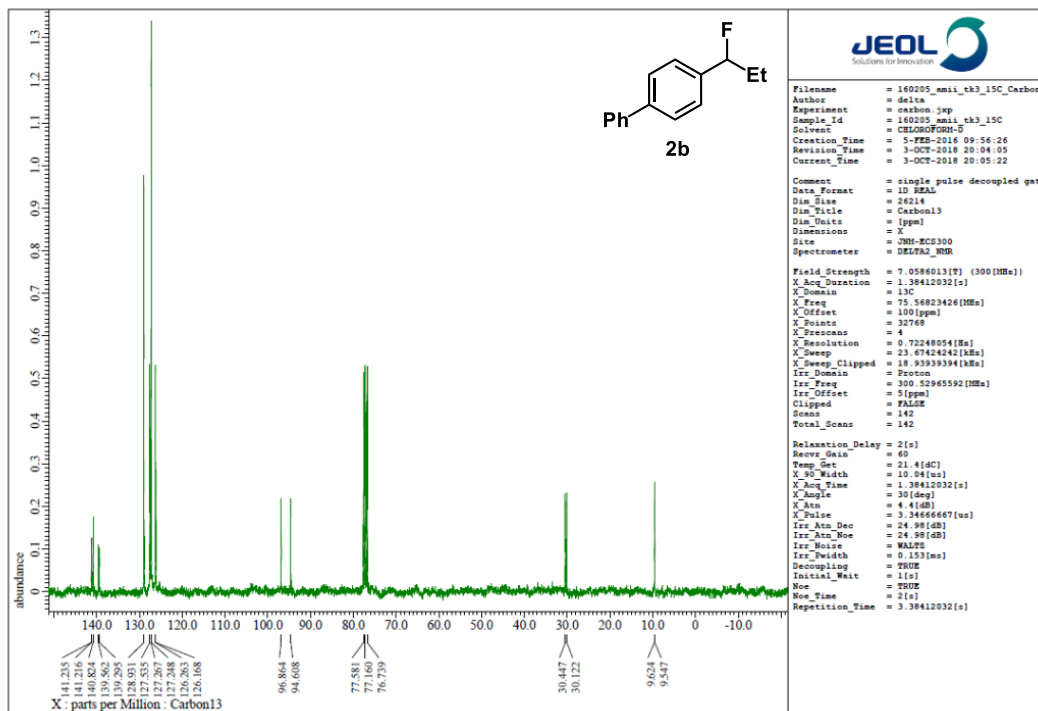
¹H NMR spectrum of 4-(1-Fluoropropyl)biphenyl (2b)



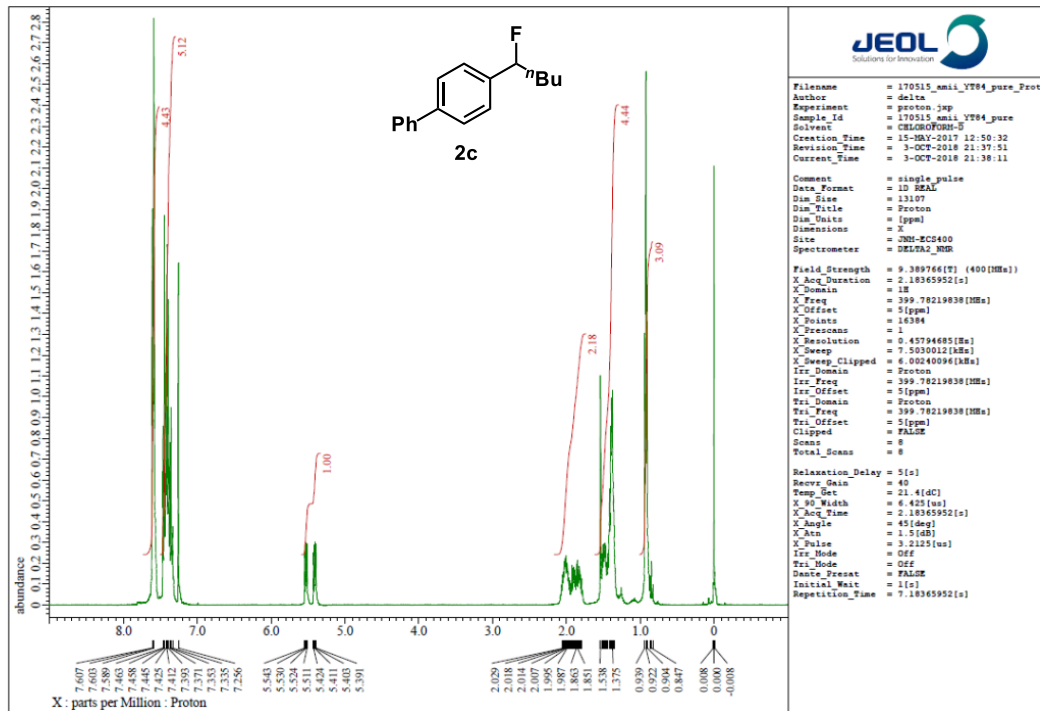
¹⁹F NMR spectrum of 4-(1-Fluoropropyl)biphenyl (**2b**)



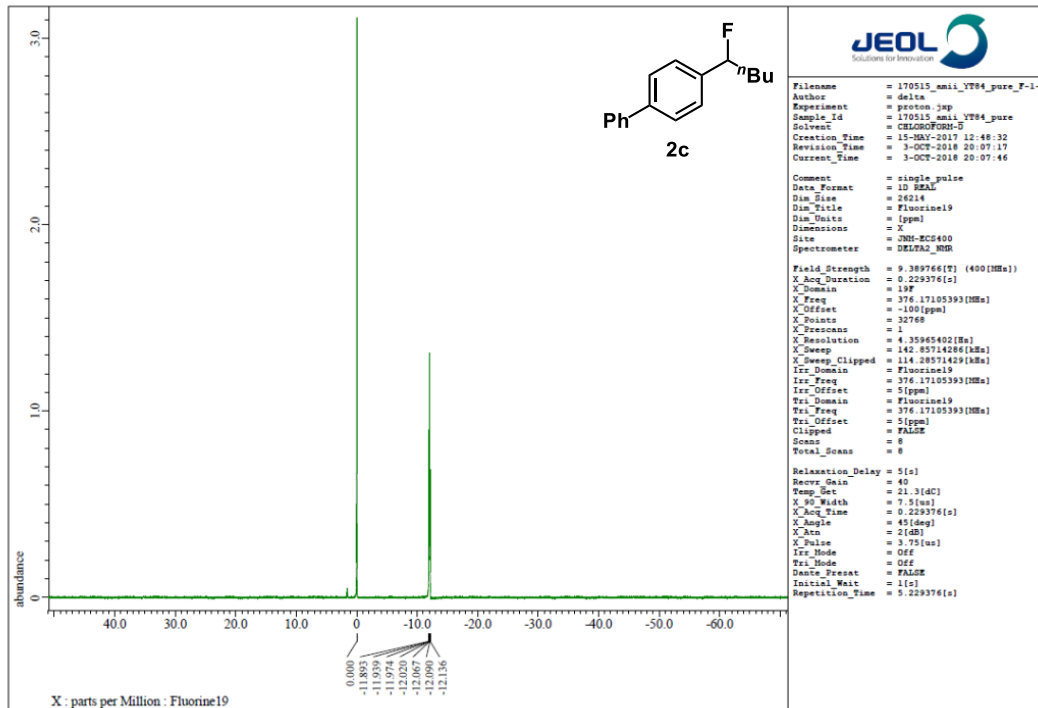
¹³C NMR spectrum of 4-(1-Fluoropropyl)biphenyl (**2b**)



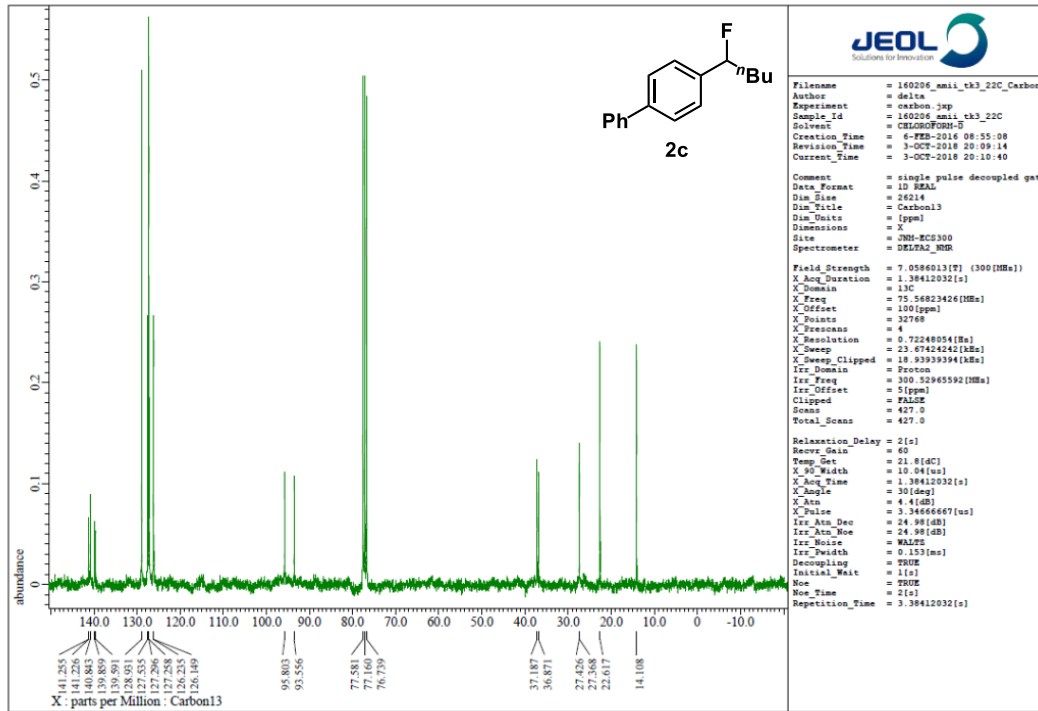
¹H NMR spectrum of 4-(1-Fluoropentyl)biphenyl (**2c**)



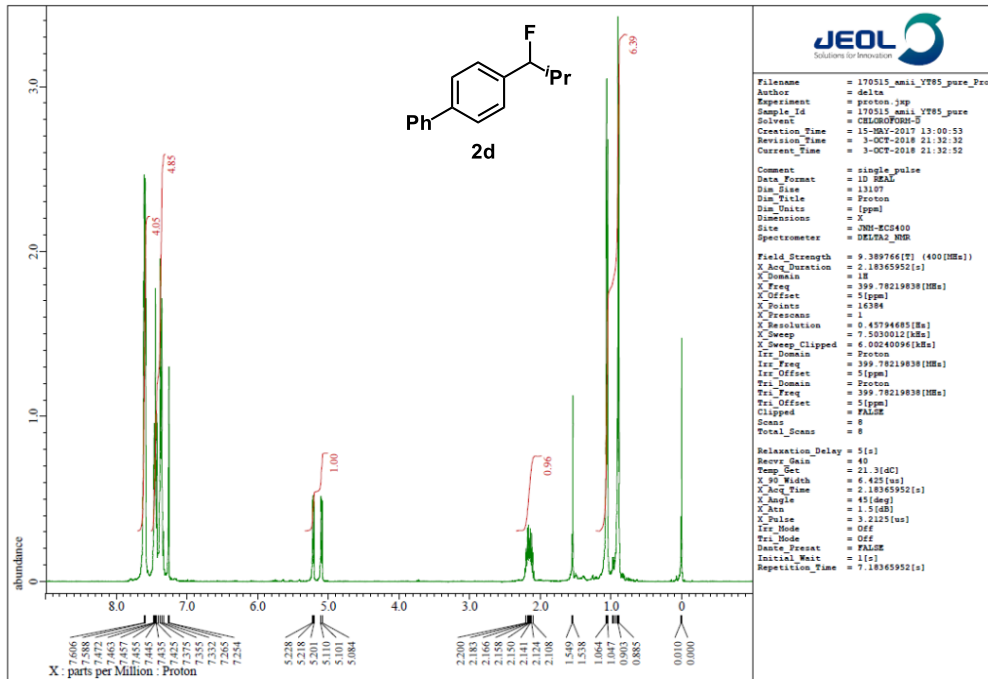
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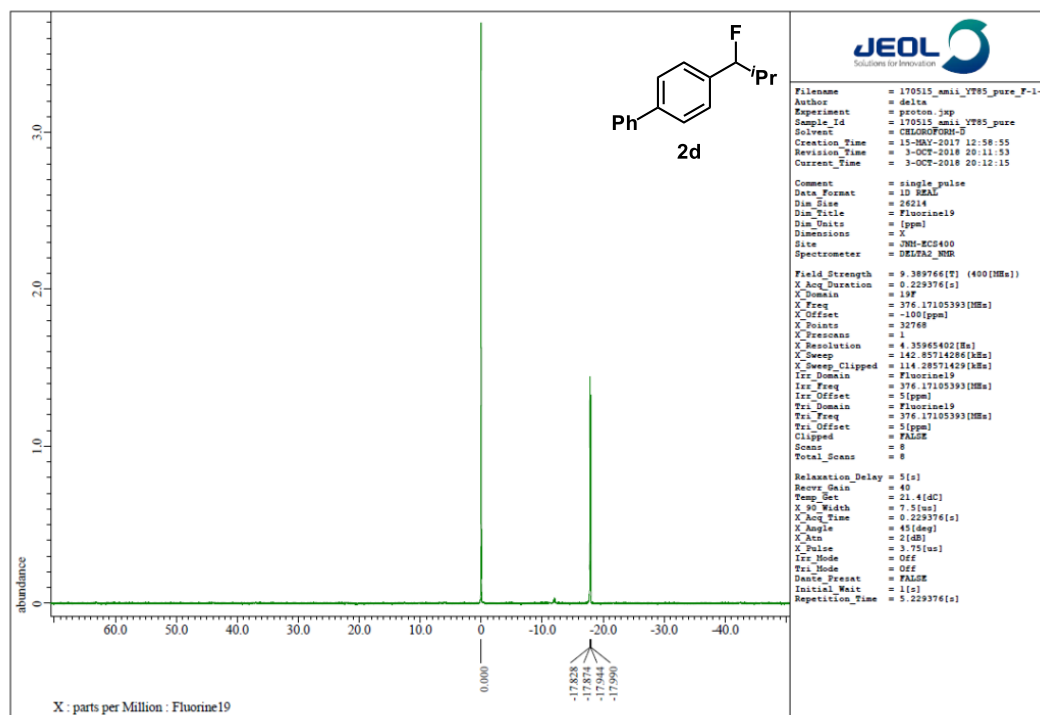
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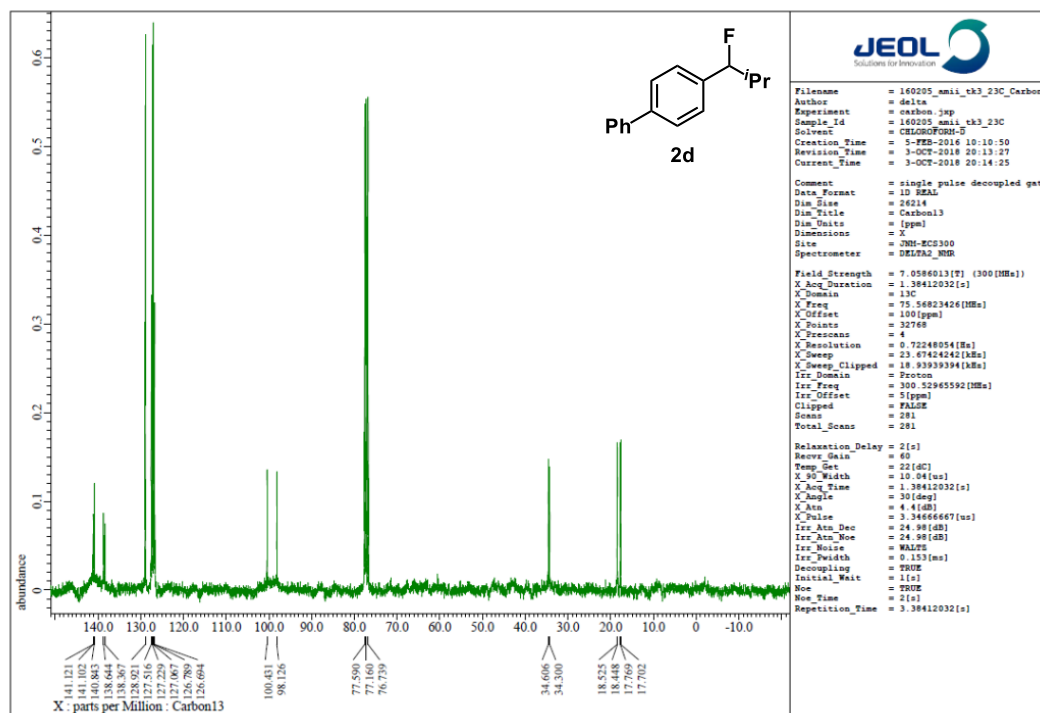
¹H NMR spectrum of 4-(1-Fluoro-2-methylpropyl)biphenyl (**2d**)



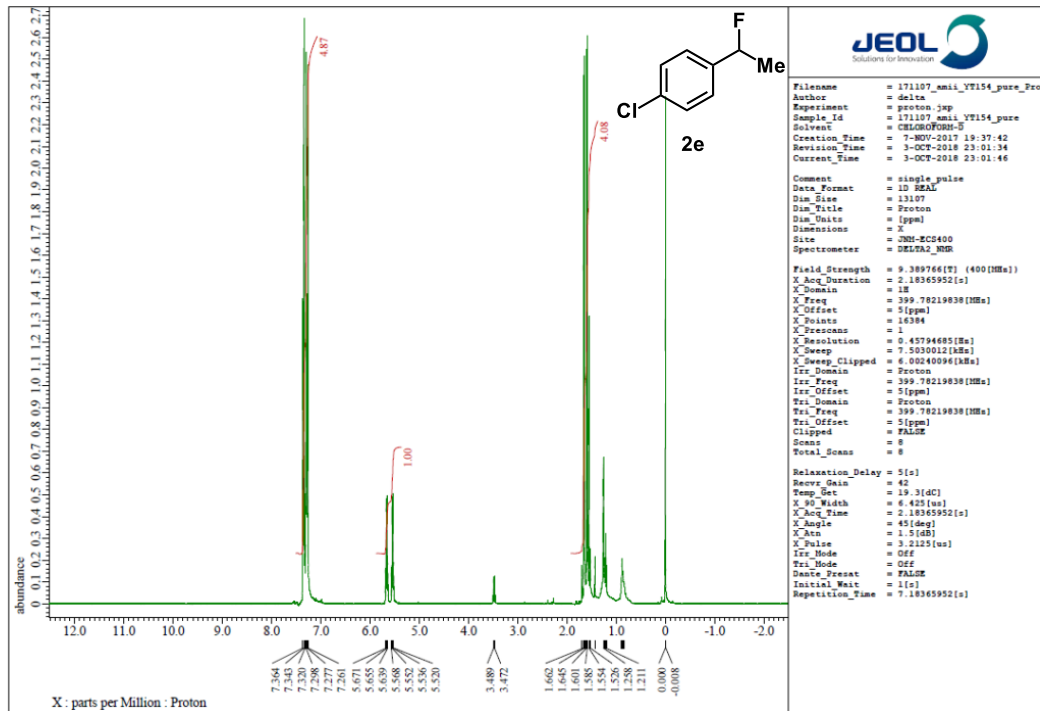
¹⁹F NMR spectrum of 4-(1-Fluoro-2-methylpropyl)biphenyl (**2d**)



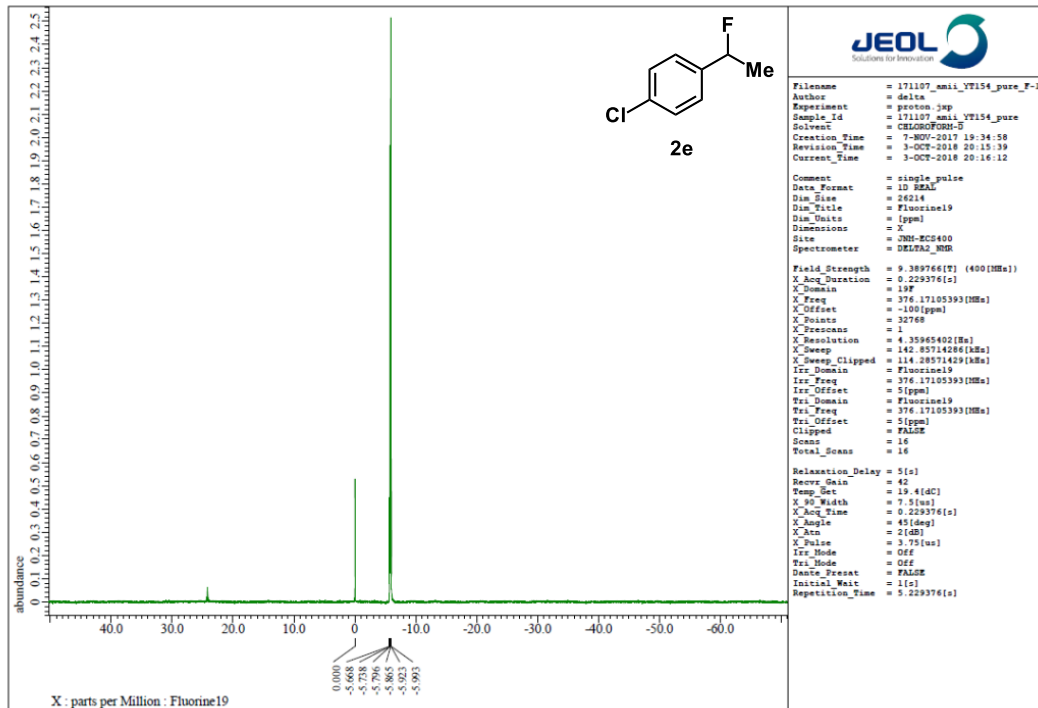
¹³C NMR spectrum of 4-(1-Fluoro-2-methylpropyl)biphenyl (**2d**)



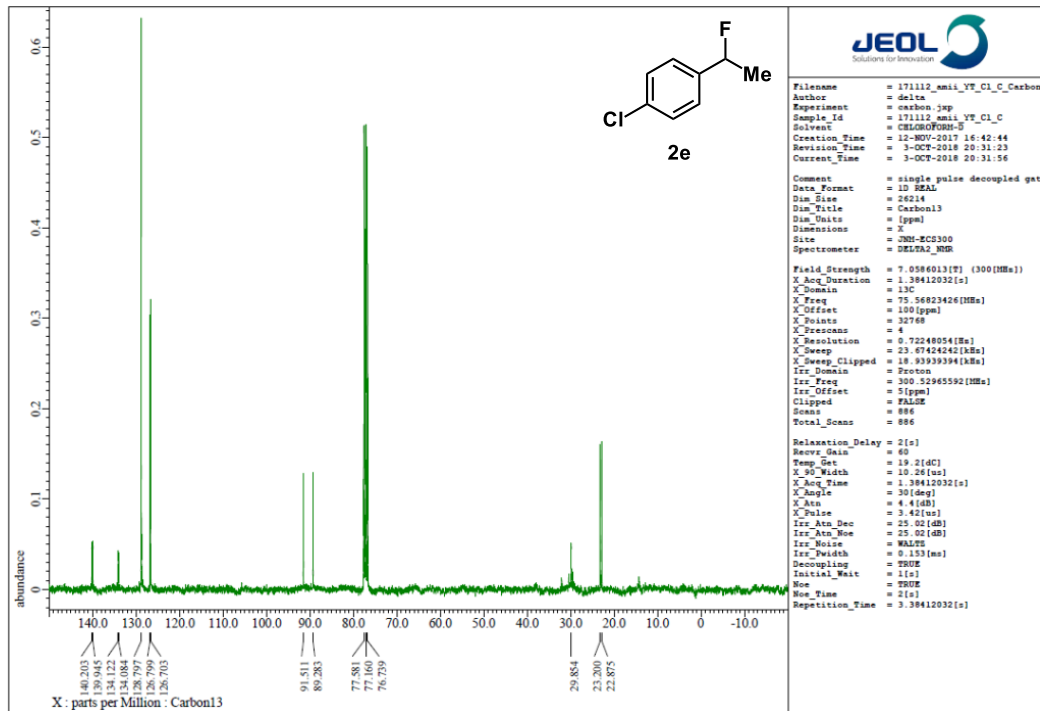
¹H NMR spectrum of 1-Chloro-4-(1-fluoroethyl)benzene (**2e**)



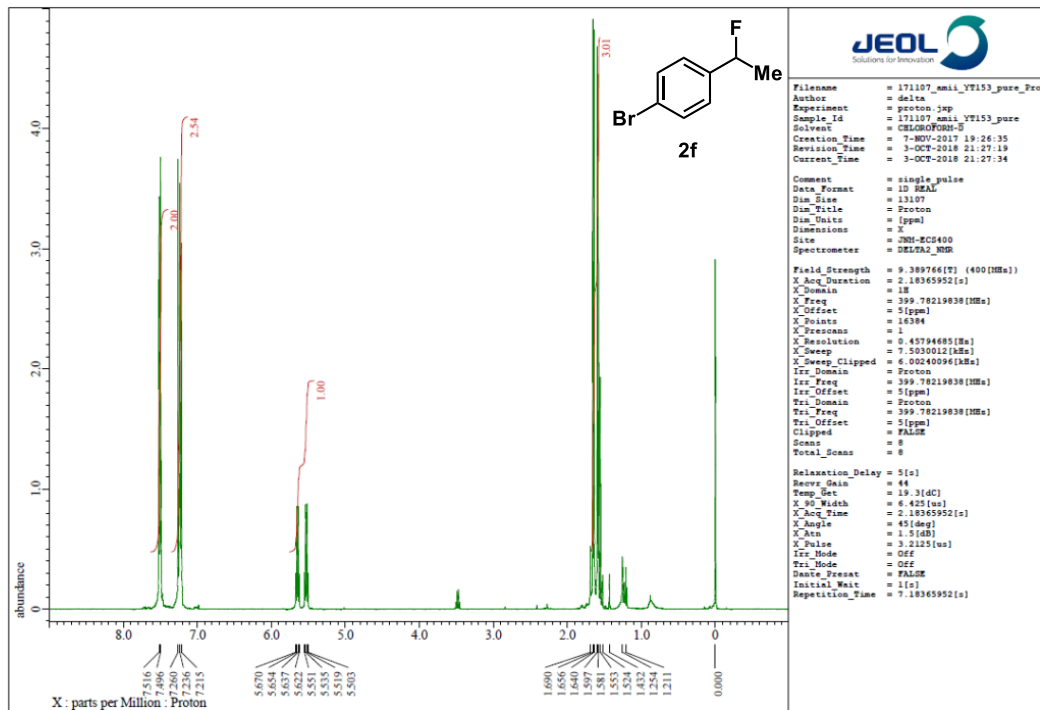
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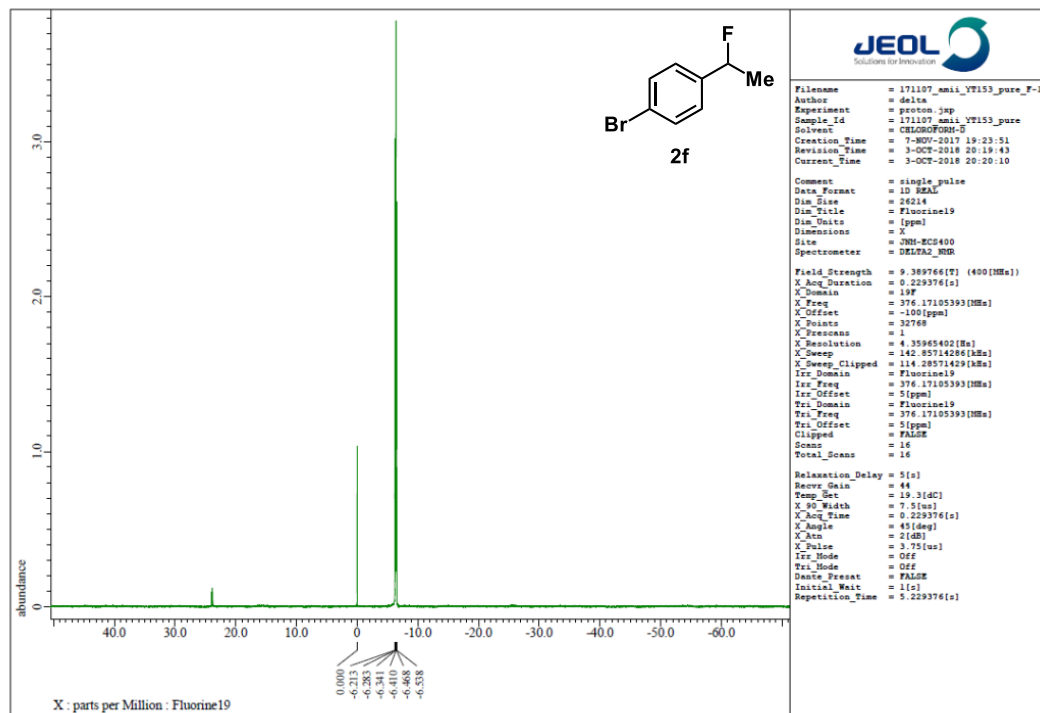
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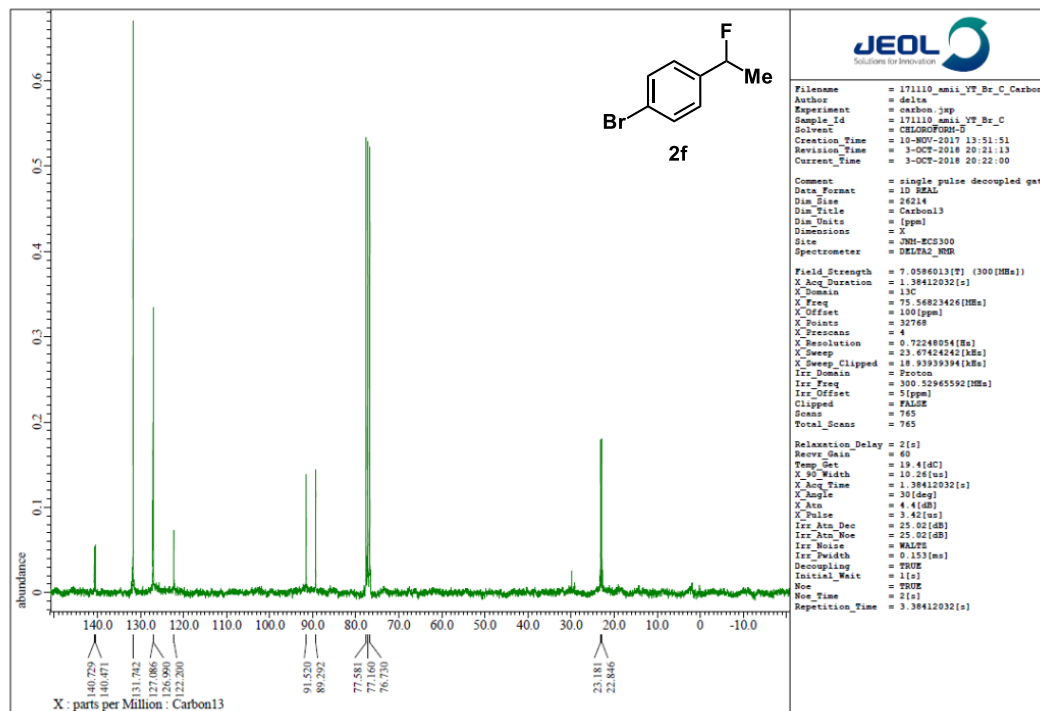
¹H NMR spectrum of 1-Bromo-4-(1-fluoroethyl)benzene (**2f**)



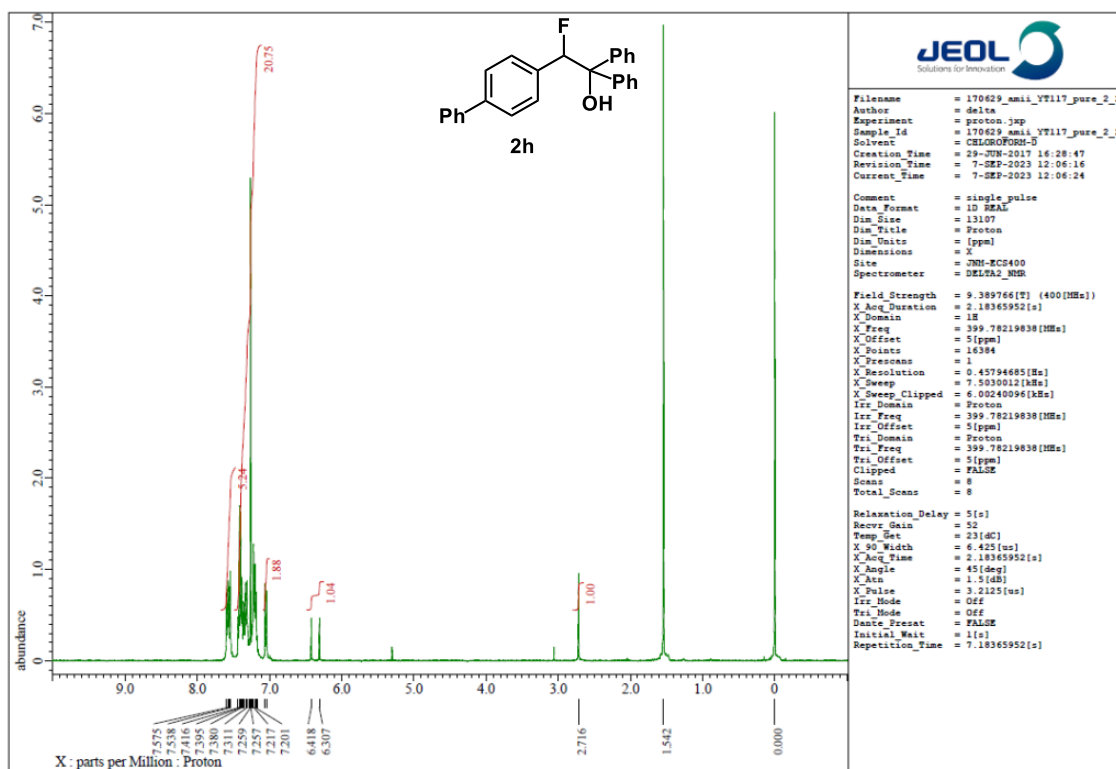
¹⁹F NMR spectrum of 1-Bromo-4-(1-fluoroethyl)benzene (**2f**)



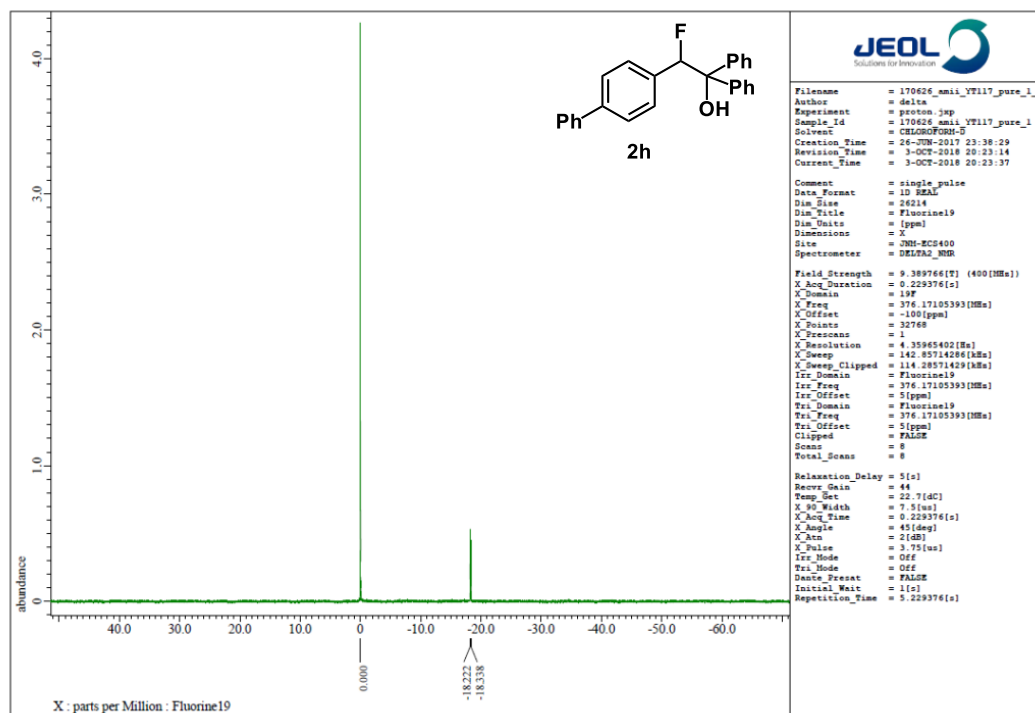
¹³C NMR spectrum of 1-Bromo-4-(1-fluoroethyl)benzene (**2f**)



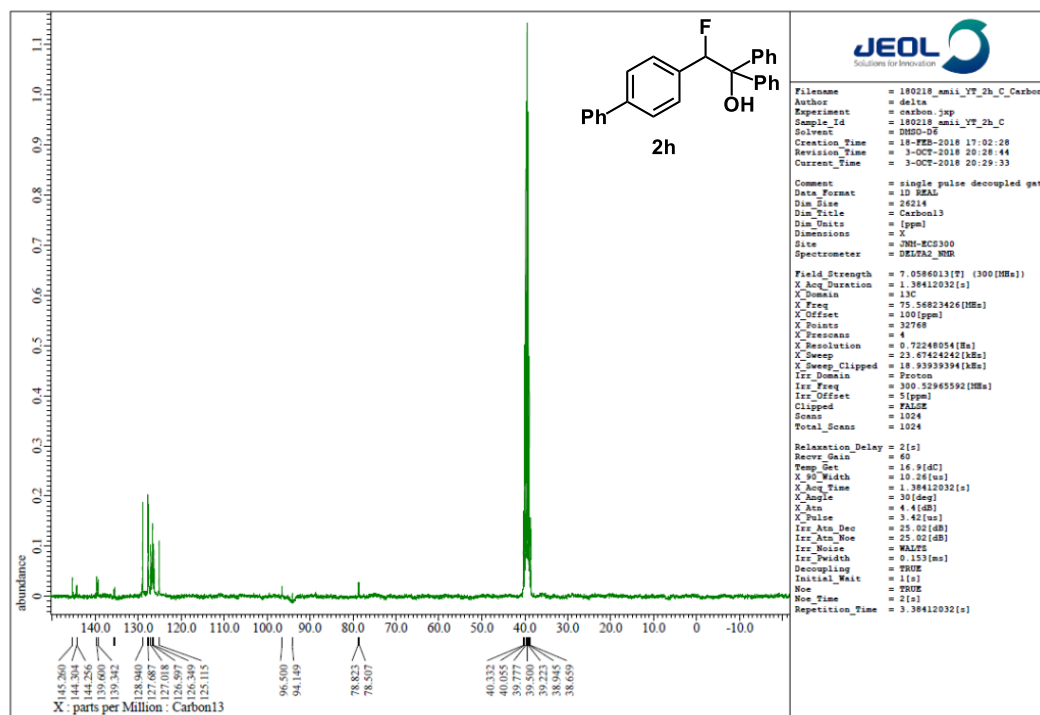
¹H NMR spectrum of 2-(4-biphenyl)-2-fluoro-1,1-diphenylethan-1-ol (**2h**)



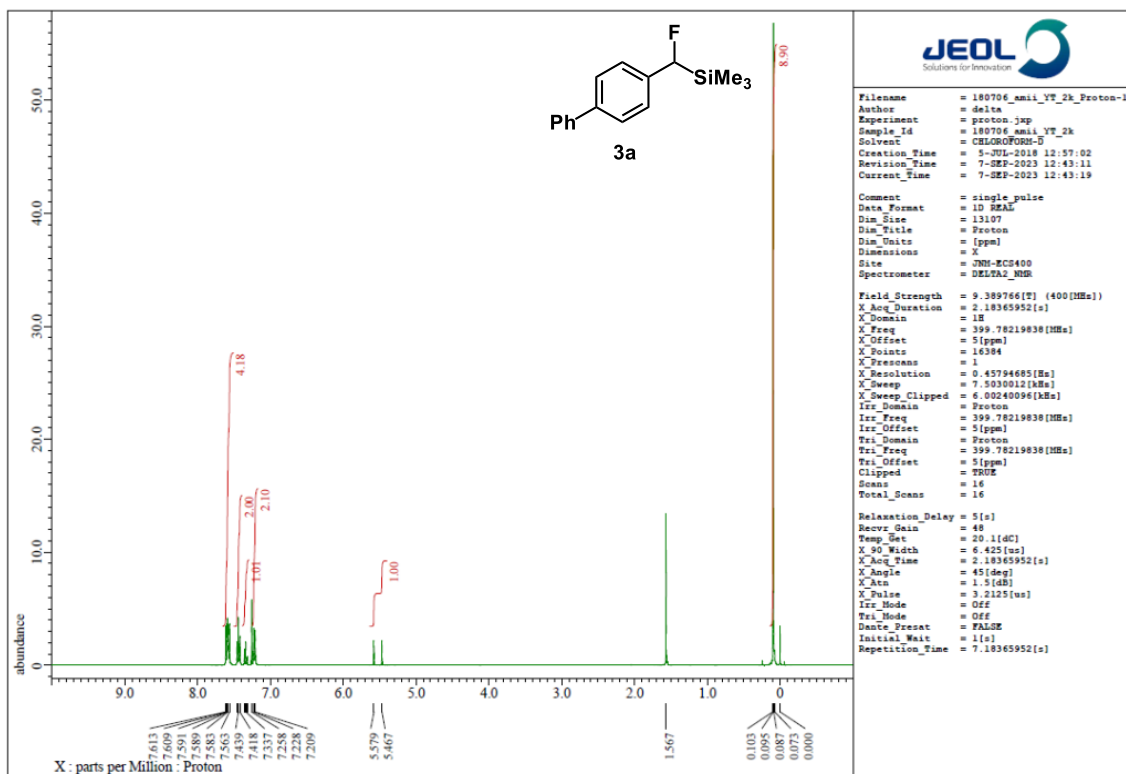
¹⁹F NMR spectrum of 2-(4-biphenyl)-2-fluoro-1,1-diphenylethan-1-ol (**2h**)



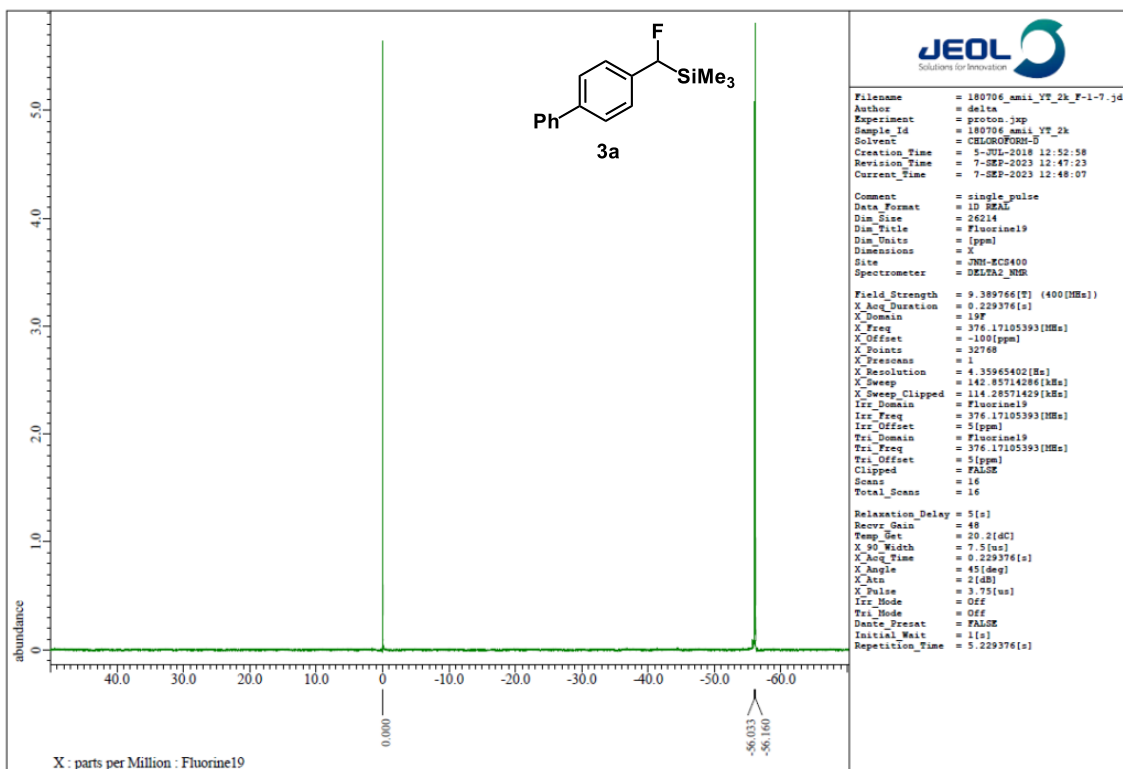
¹³C NMR spectrum of 2-(4-biphenyl)-2-fluoro-1,1-diphenylethan-1-ol (**2h**)



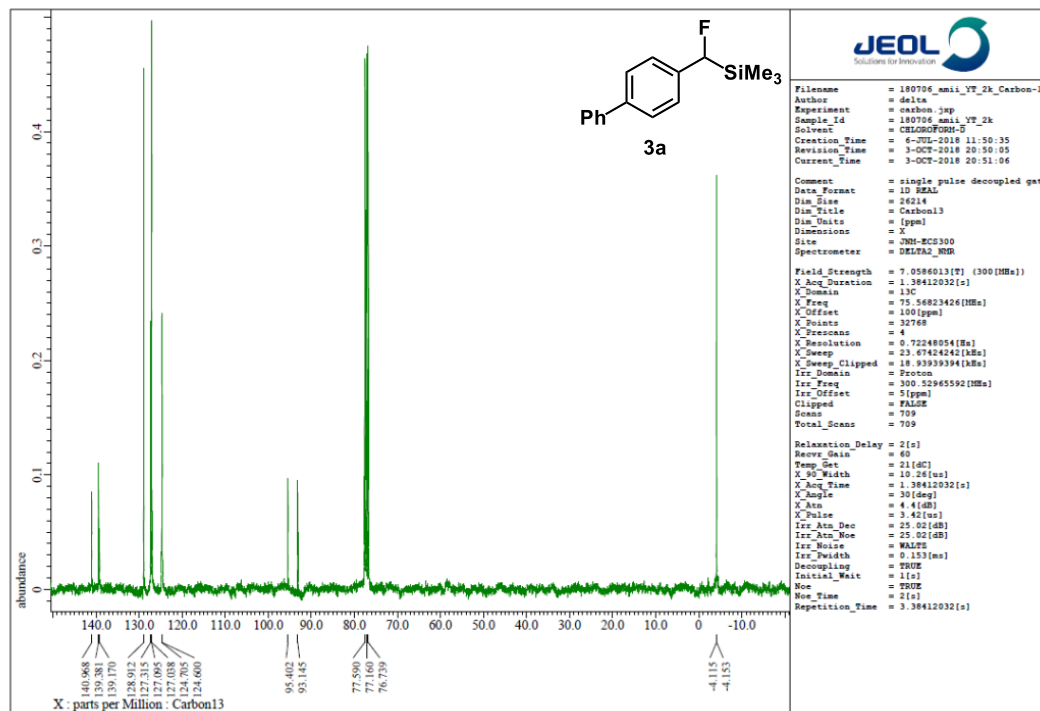
¹H NMR spectrum of 4-(1-Fluoro-1-trimethylsilylmethyl)biphenyl (**3a**)



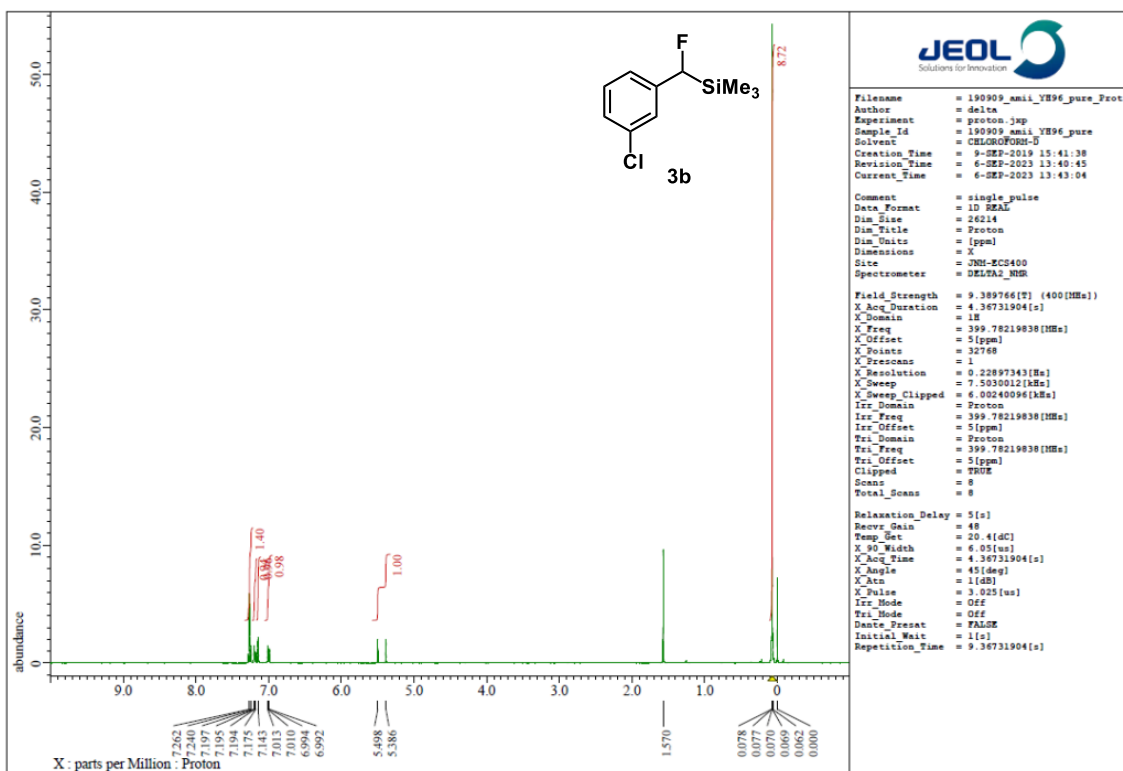
¹⁹F NMR spectrum of 4-(1-Fluoro-1-trimethylsilylmethyl)biphenyl (**3a**)



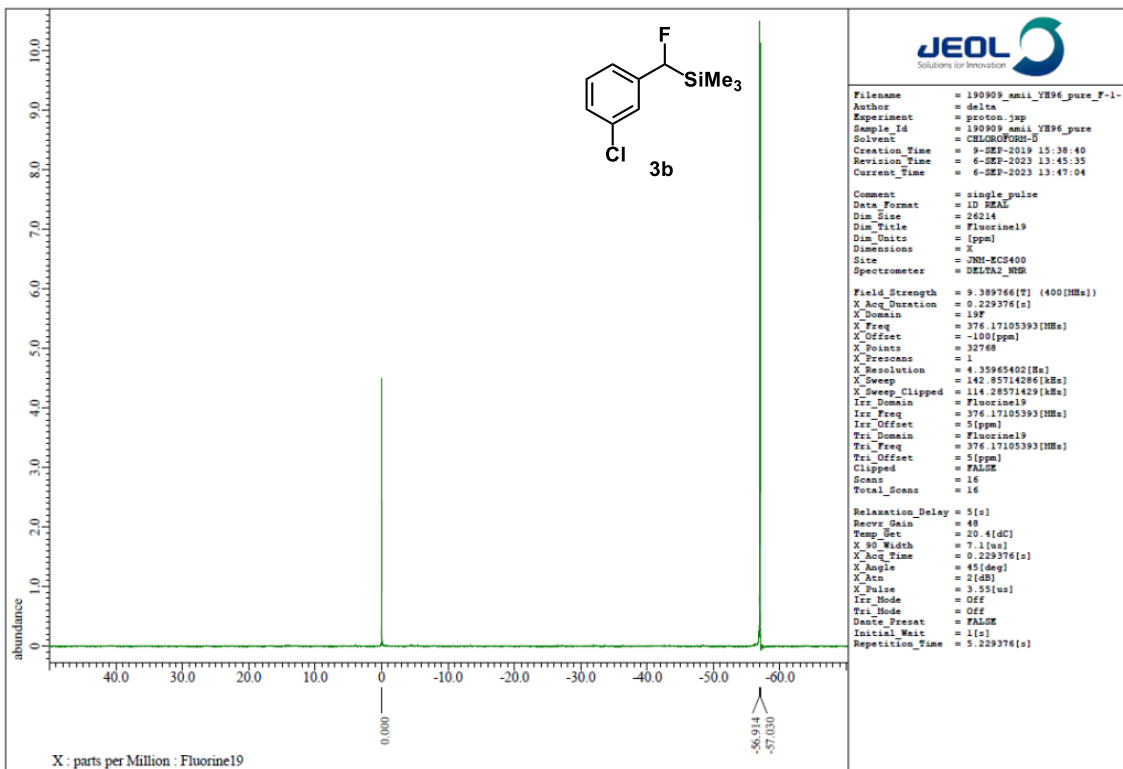
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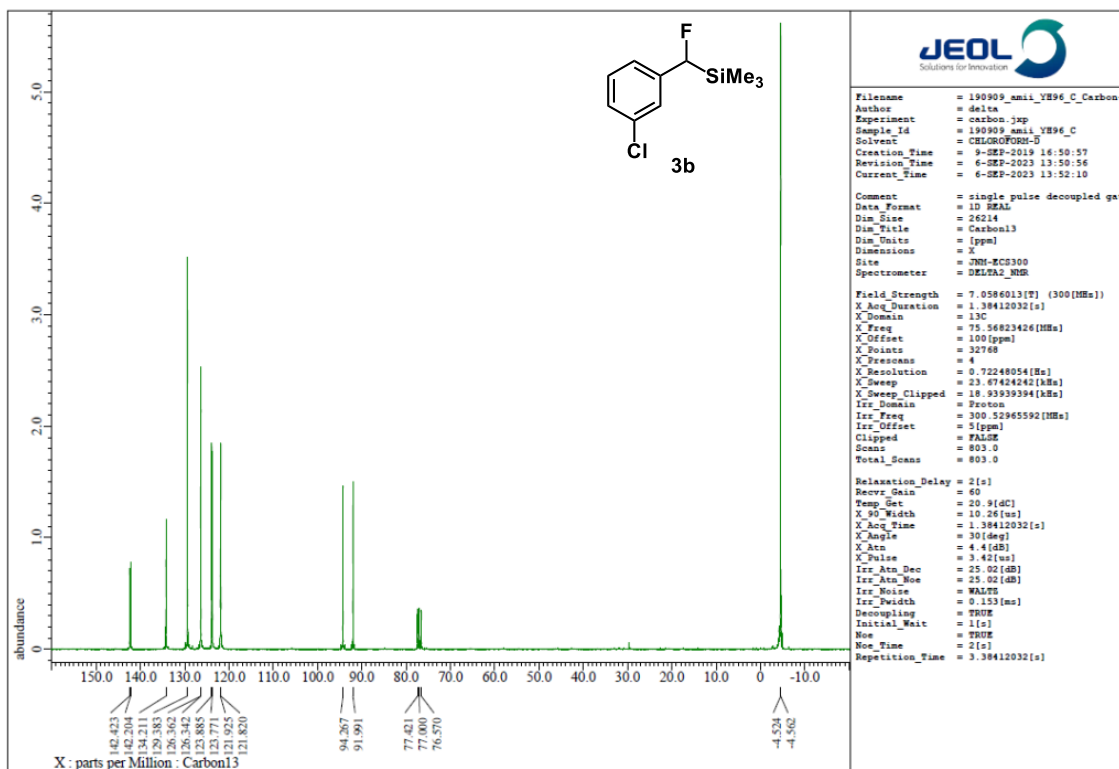
¹H NMR spectrum of 1-Chloro-3-(1-fluoro-1-trimethylsilylmethyl)benzene (**3b**)



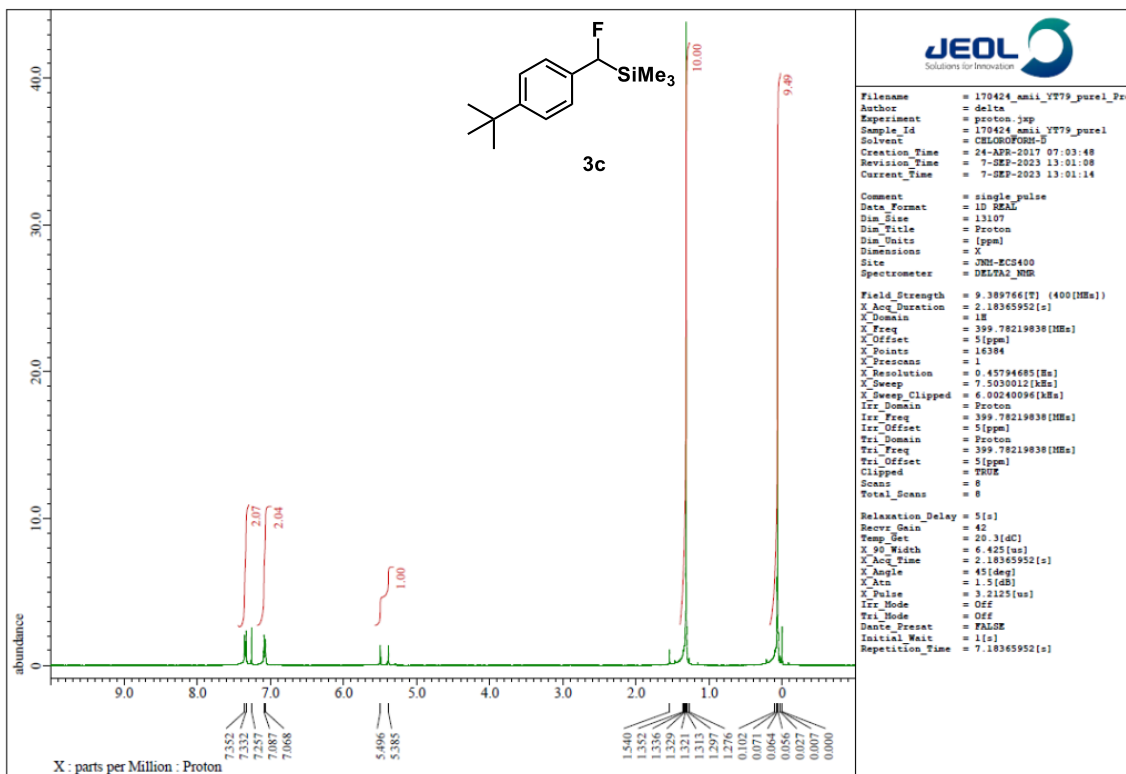
¹⁹F NMR spectrum of 1-Chloro-3-(1-fluoro-1-trimethylsilylmethyl)benzene (**3b**)



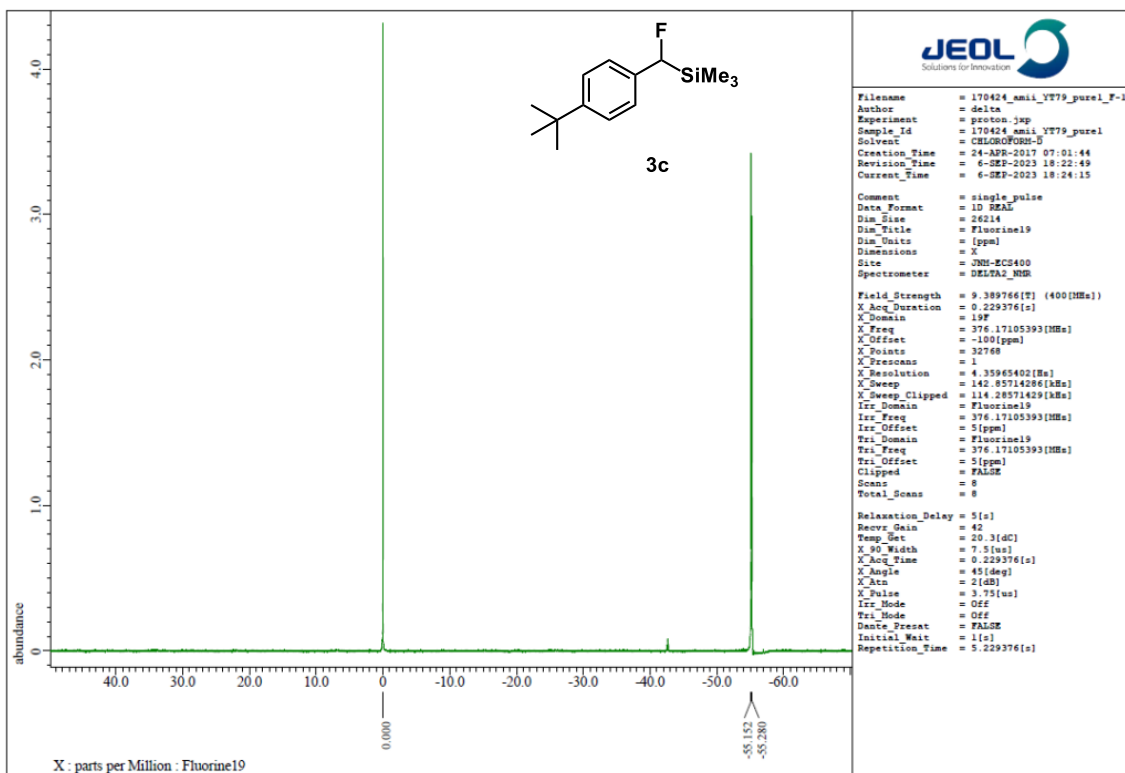
¹³C NMR spectrum of 1-Chloro-3-(1-fluoro-1-trimethylsilylmethyl)benzene (**3b**)



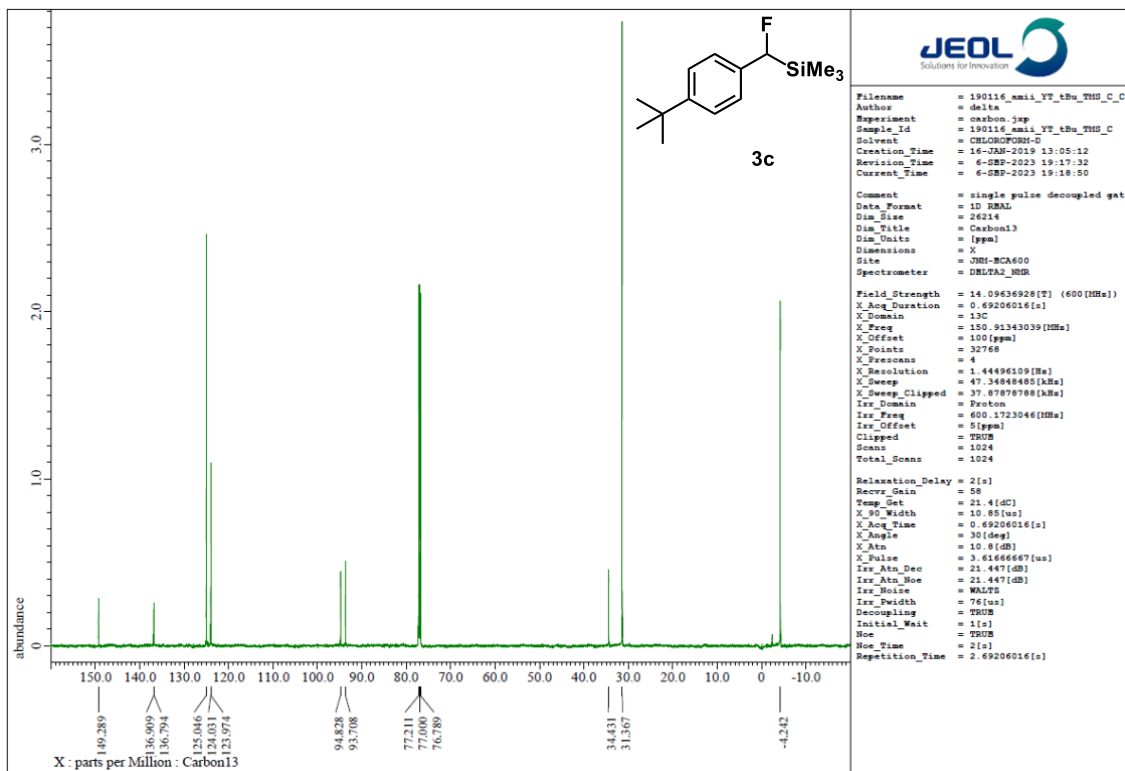
¹H NMR spectrum of 1-(1-Fluoro-1-trimethylsilylmethyl)-4-tertiarybutylbenzene (**3c**)



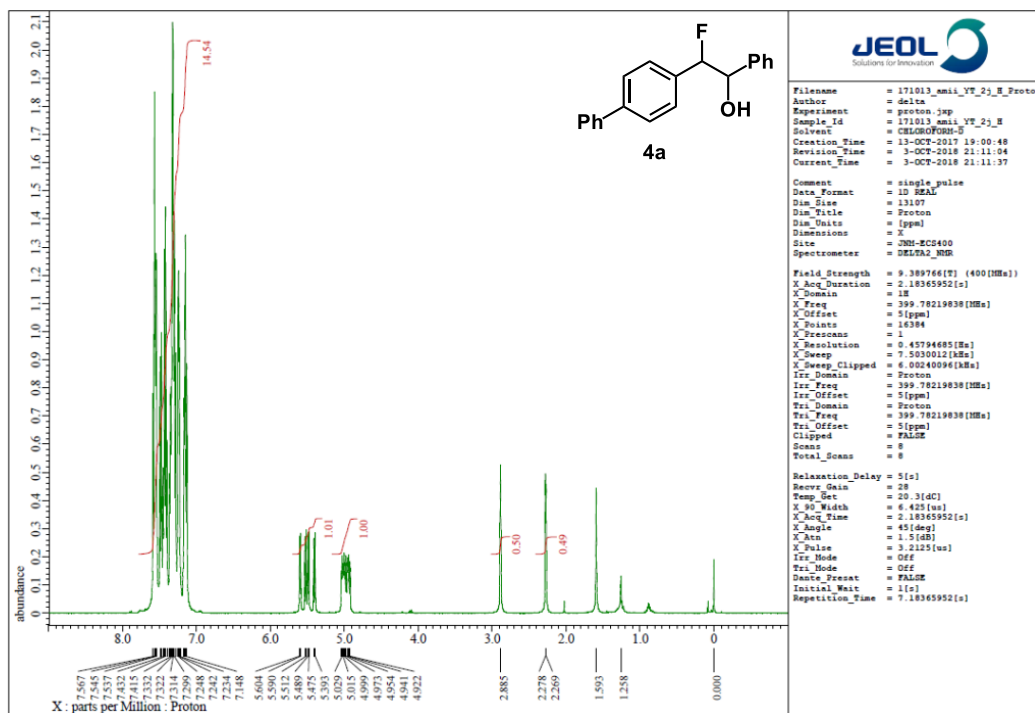
¹⁹F NMR spectrum of 1-(1-Fluoro-1-trimethylsilylmethyl)-4-tertiarybutylbenzene (**3c**)



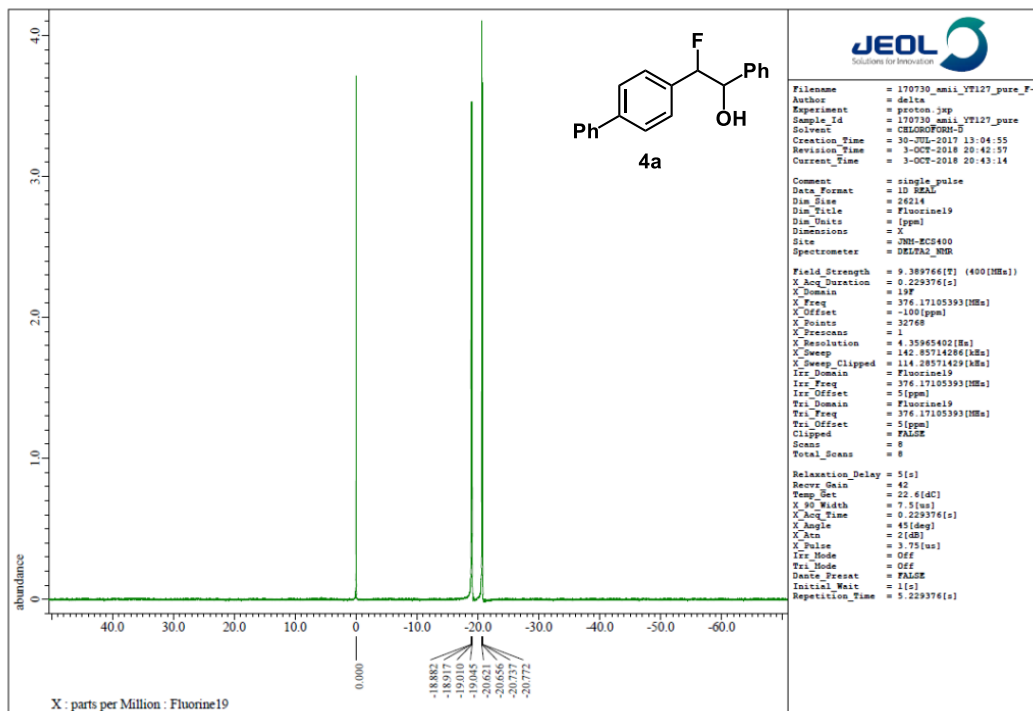
¹³C NMR spectrum of 1-(1-Fluoro-1-trimethylsilylmethyl)-4-tertiarybutylbenzene (**3c**)



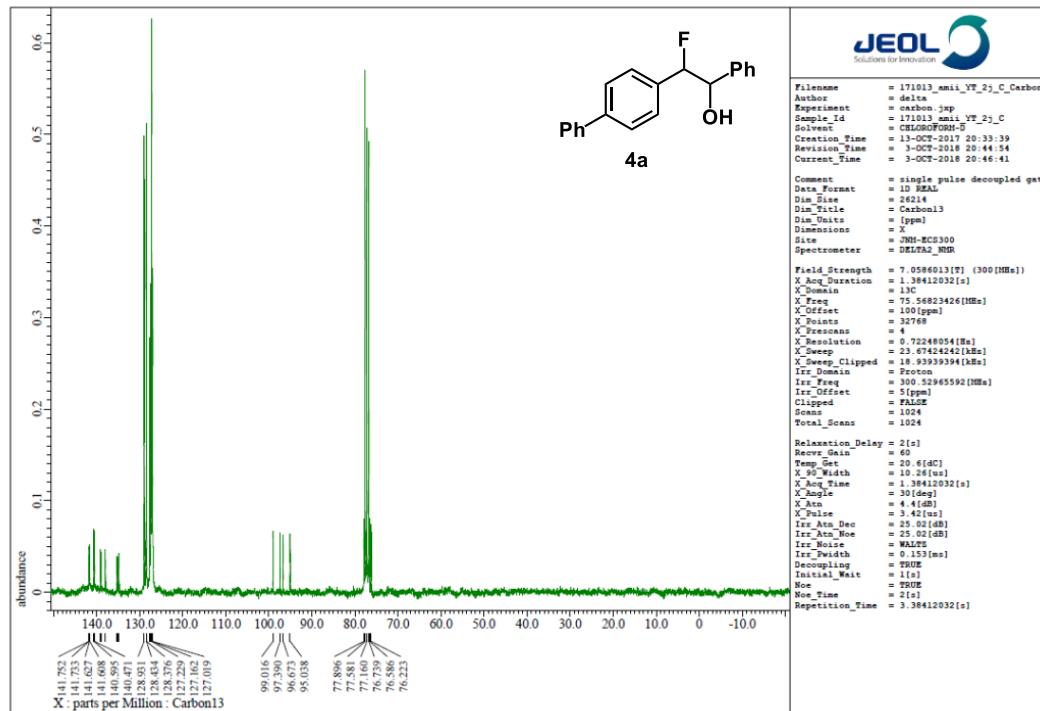
¹H NMR spectrum of 2-(4-Biphenyl)-2-fluoro-1-phenylethanol (4a)



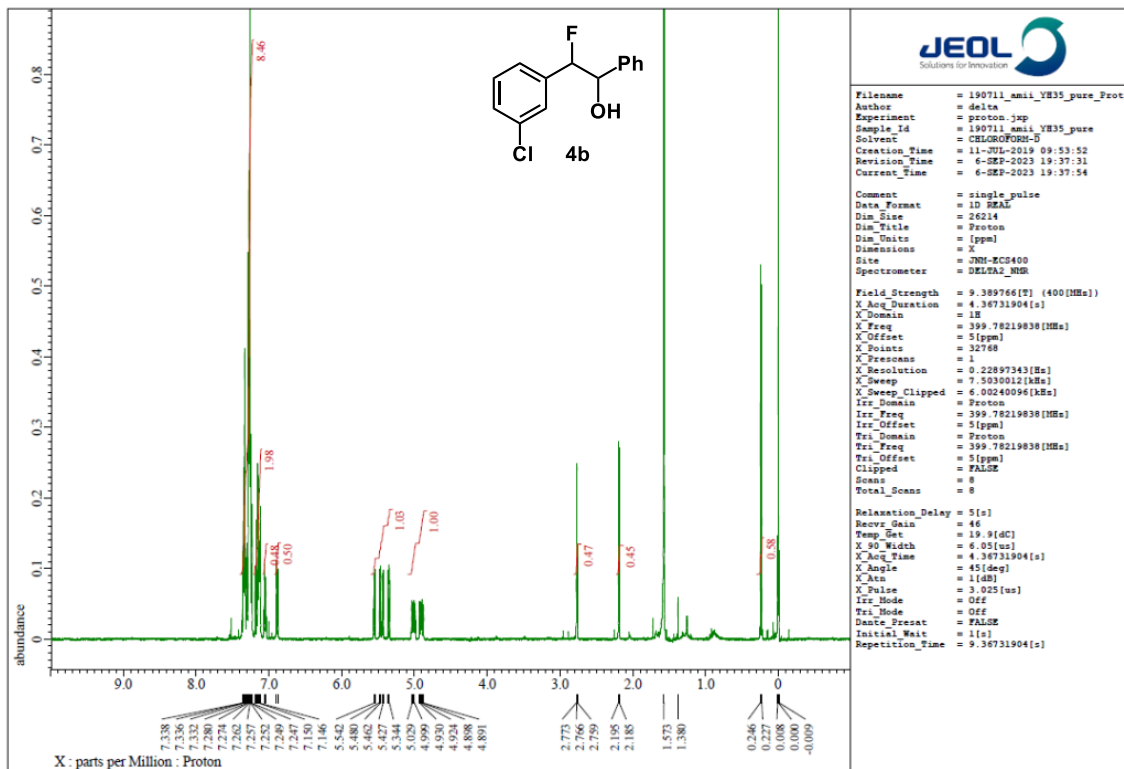
¹⁹F NMR spectrum of 2-(4-Biphenyl)-2-fluoro-1-phenylethanol (4a)



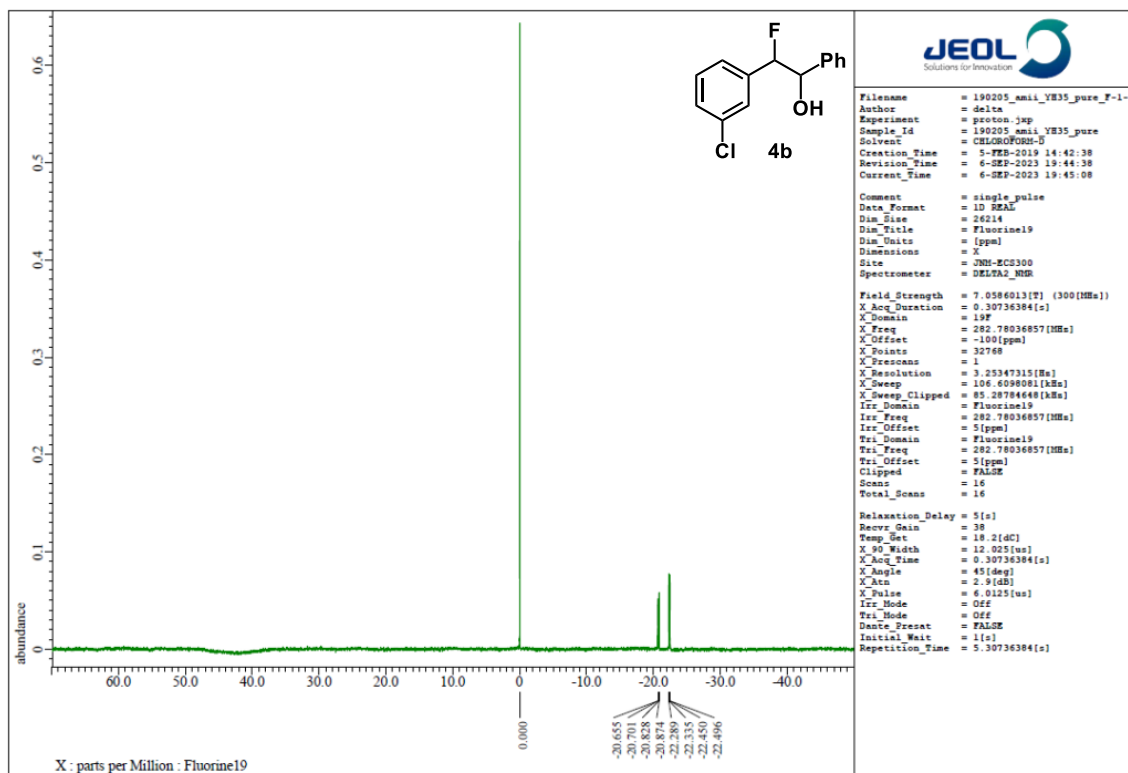
¹³C NMR spectrum of 2-(4-Biphenyl)-2-fluoro-1-phenylethanol (**4a**)



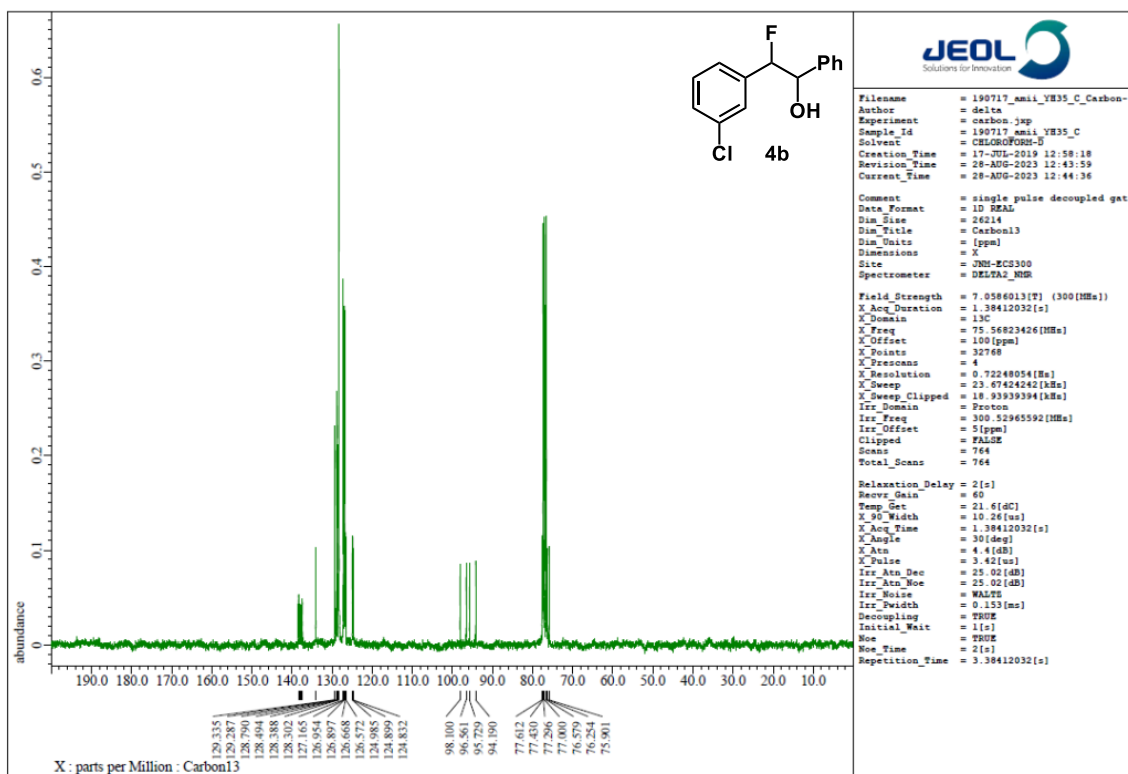
¹H NMR spectrum of 2-(3-chlorophenyl)-2-fluoro-1-phenylethanol (**4b**)



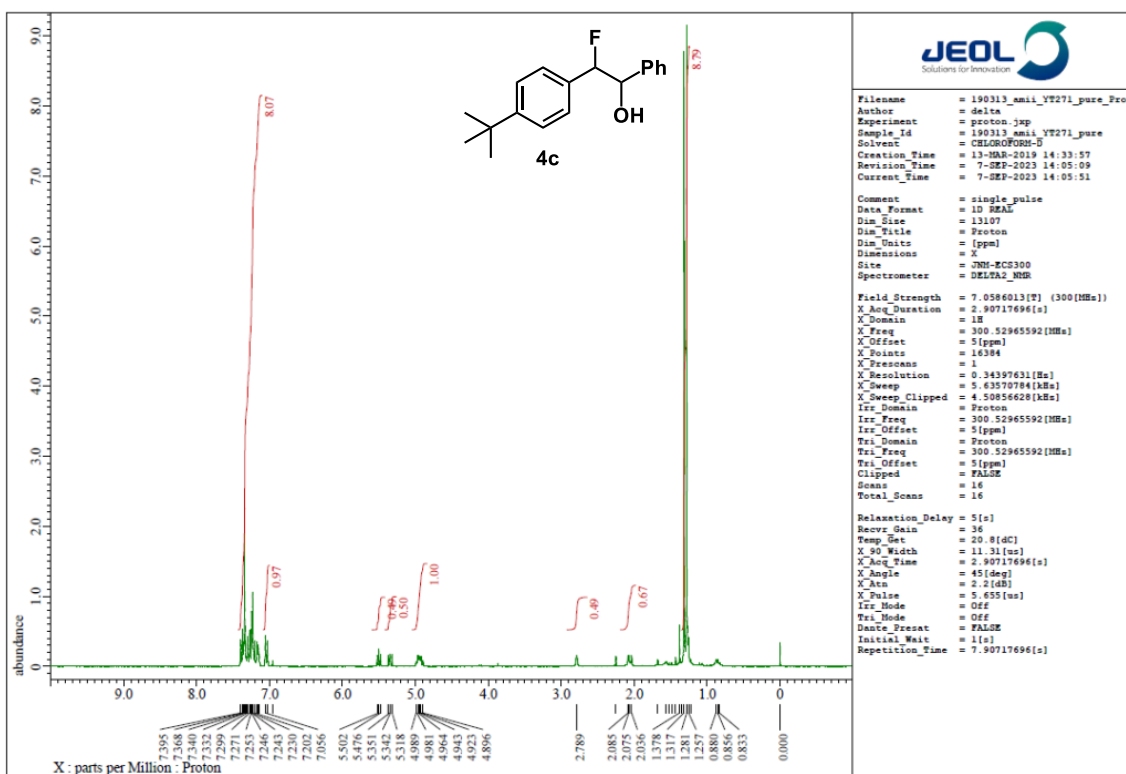
¹⁹F NMR spectrum of 2-(3-chlorophenyl)-2-fluoro-1-phenylethan-1-ol (4b)



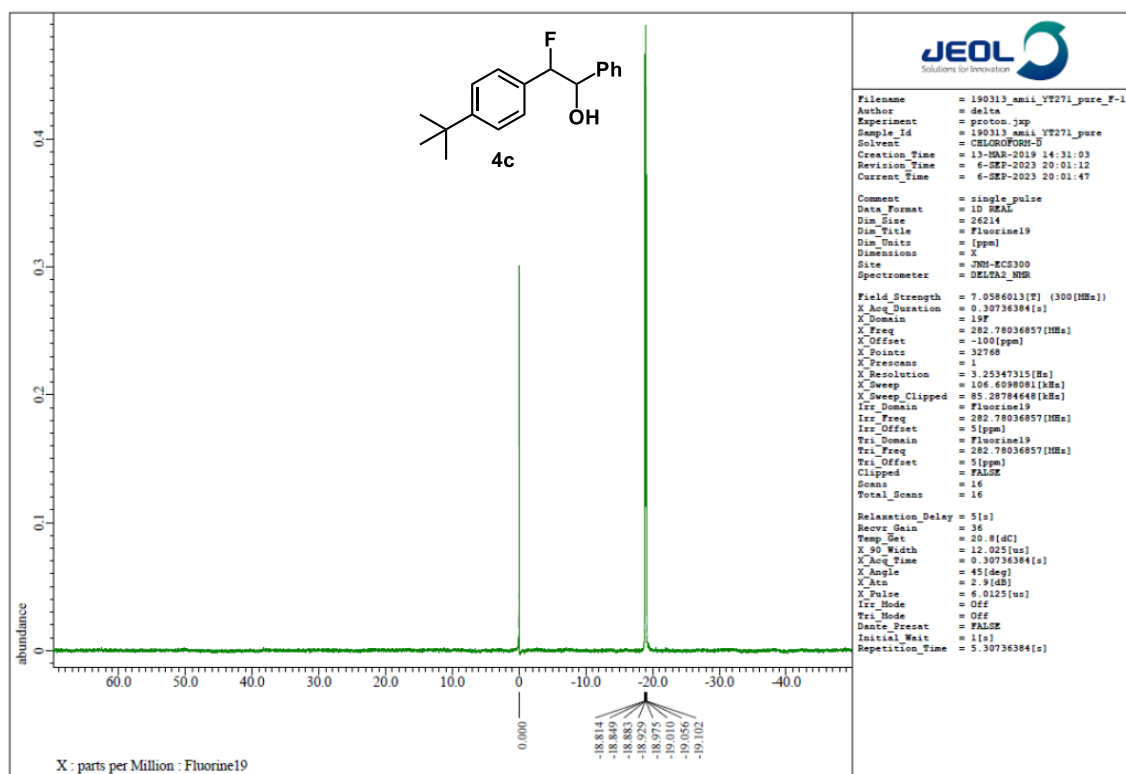
¹³C NMR spectrum of 2-(3-chlorophenyl)-2-fluoro-1-phenylethan-1-ol (4b)



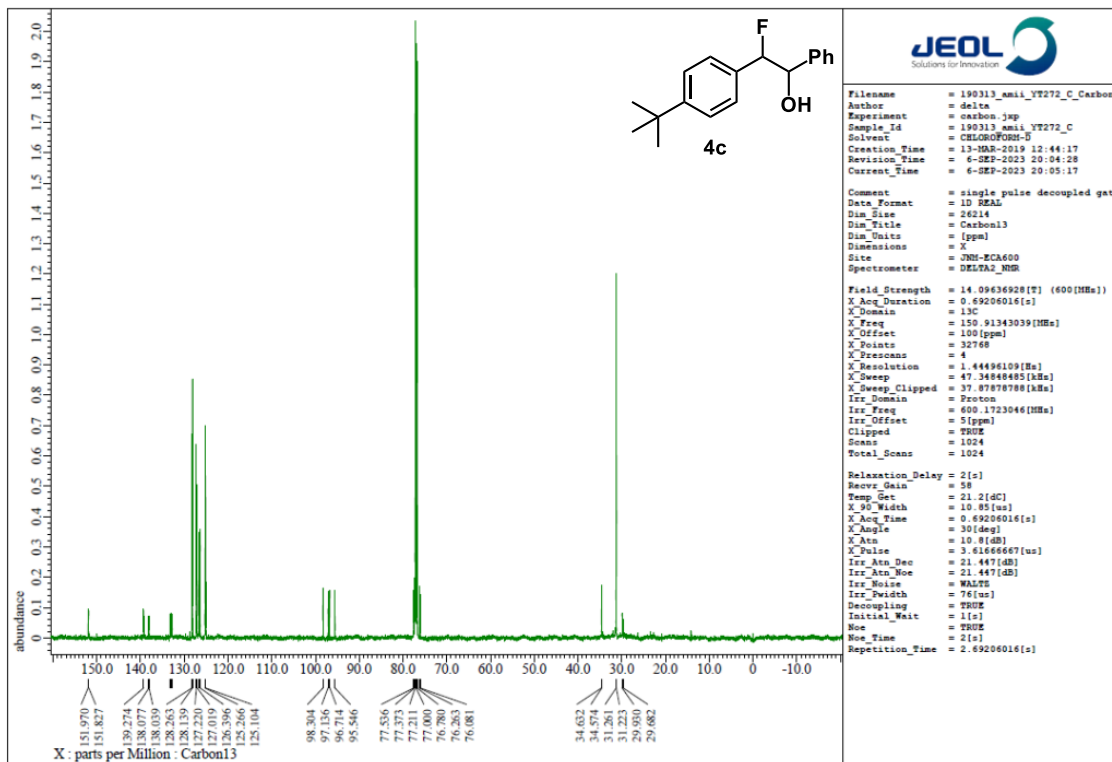
¹H NMR spectrum of 2-(4-(tert-butyl)phenyl)-2-fluoro-1-phenylethan-1-ol (**4c**)



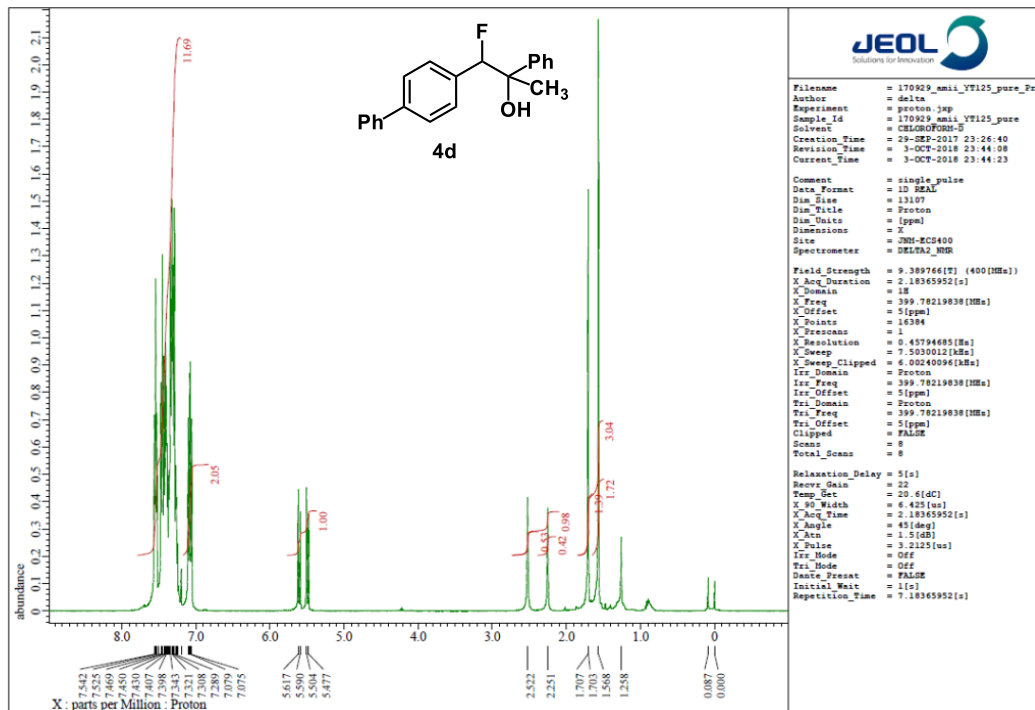
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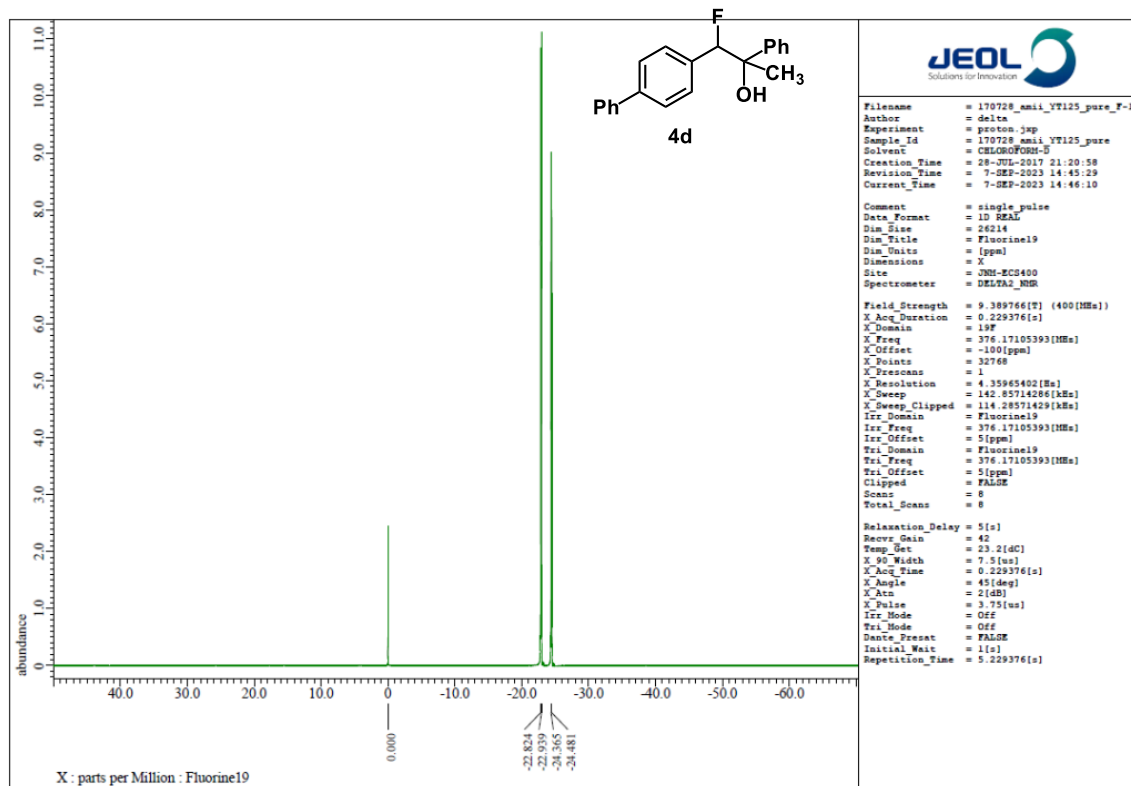
¹³C NMR spectrum of 2-(4-(tert-butyl)phenyl)-2-fluoro-1-phenylethan-1-ol (**4c**)



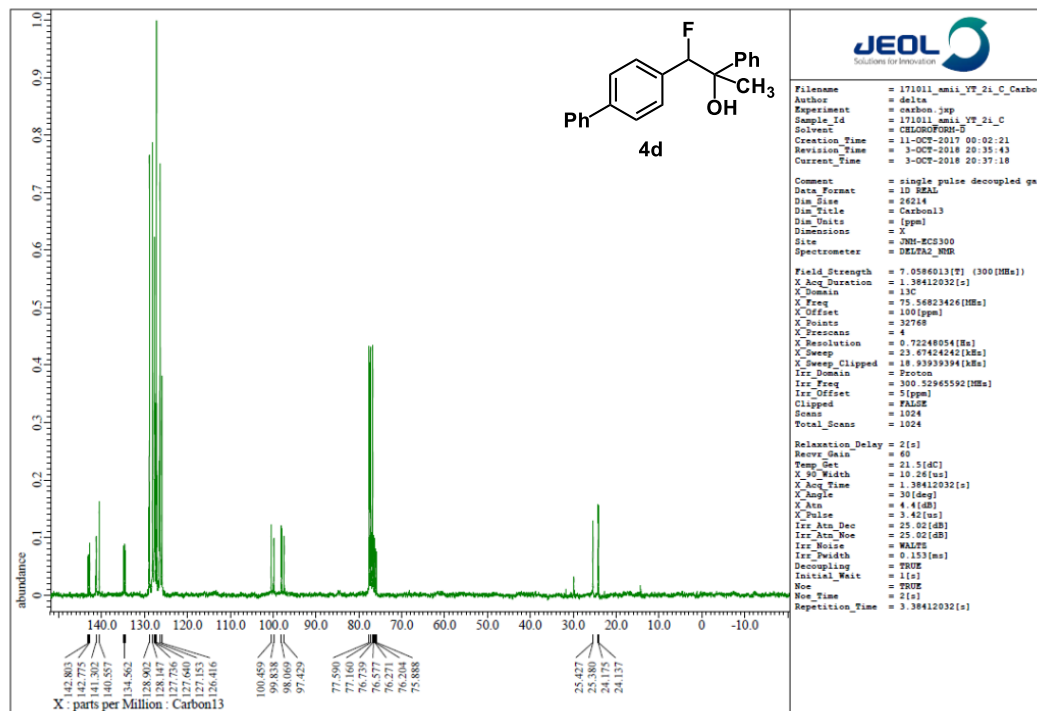
¹H NMR spectrum of 3-(4-Biphenyl)-3-fluoro-2-phenylpropan-2-ol (**4d**)



¹⁹F NMR spectrum of 3-(4-Biphenyl)-3-fluoro-2-phenylpropan-2-ol (**4d**)



¹³C NMR spectrum of 3-(4-Biphenyl)-3-fluoro-2-phenylpropan-2-ol (**4d**)



Appendix

The starting materials (benzyl fluorides) **1** were prepared by the conventional nucleophilic fluorination of the corresponding bromides with CsF.

CAS Registry No.

1a (*p*-Ph-C₆H₄-CH₂-F): 848348-07-2

1b (*p*-Cl-C₆H₄-CH₂-F): 352-12-5

1c (*p*-Br-C₆H₄-CH₂-F): 459-49-4

1d (*p*-(*t*-Bu)-C₆H₄-CH₂-F): 329-13-5

1e (*m*-Cl-C₆H₄-CH₂-F): 350-52-7

2a: 1487496-30-9

2b: 2114389-58-9

2d: 2121931-01-7

2e: 1487496-35-4

2f: 159298-87-0