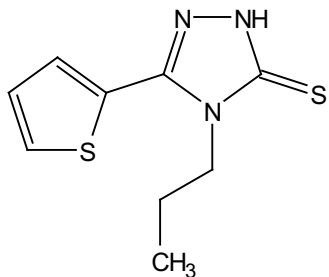
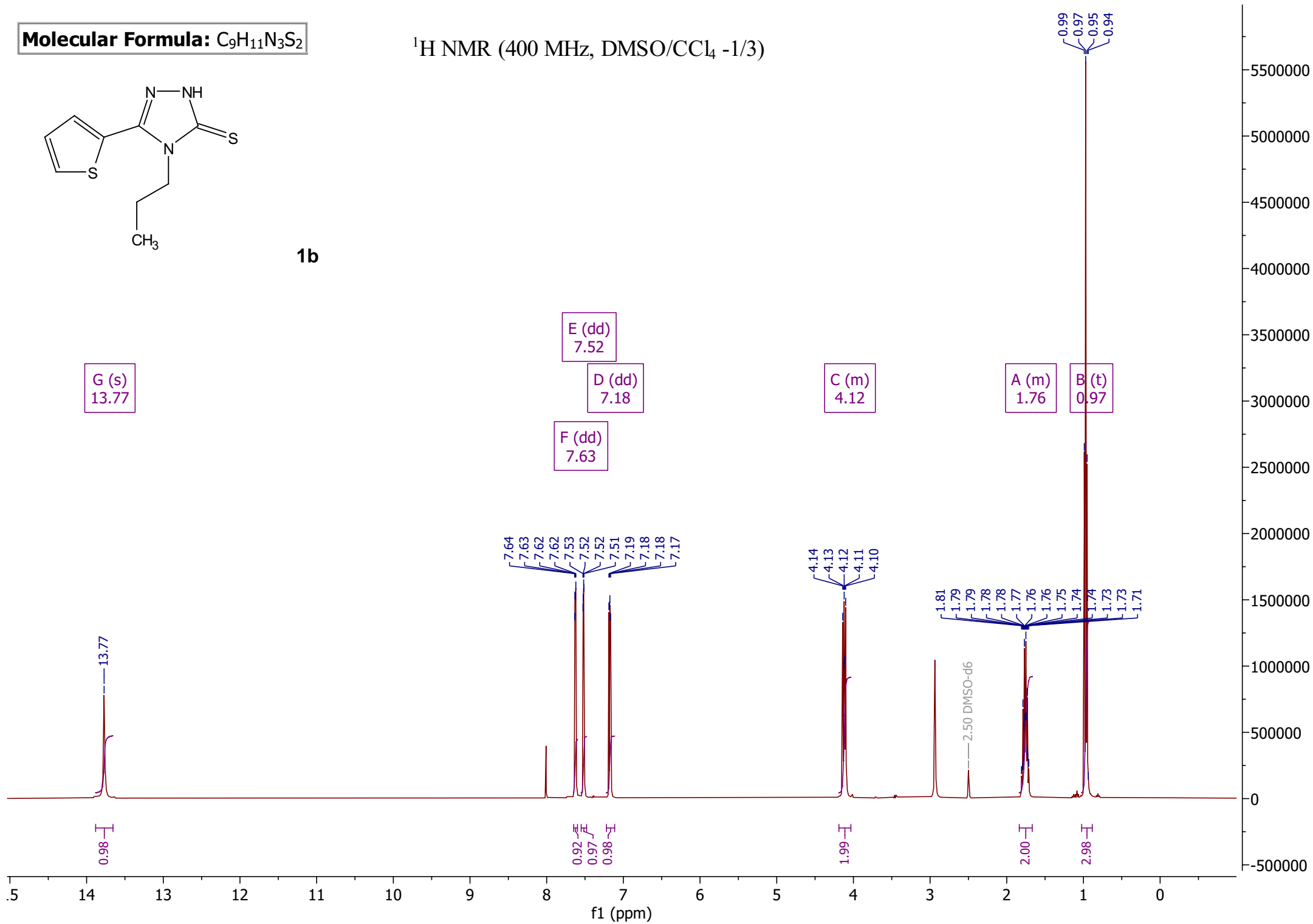


Molecular Formula: C₉H₁₁N₃S₂

¹H NMR (400 MHz, DMSO/CCl₄ -1/3)

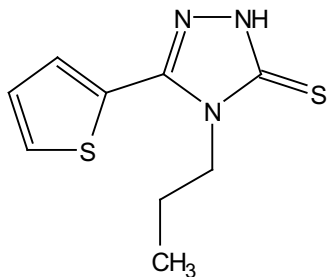


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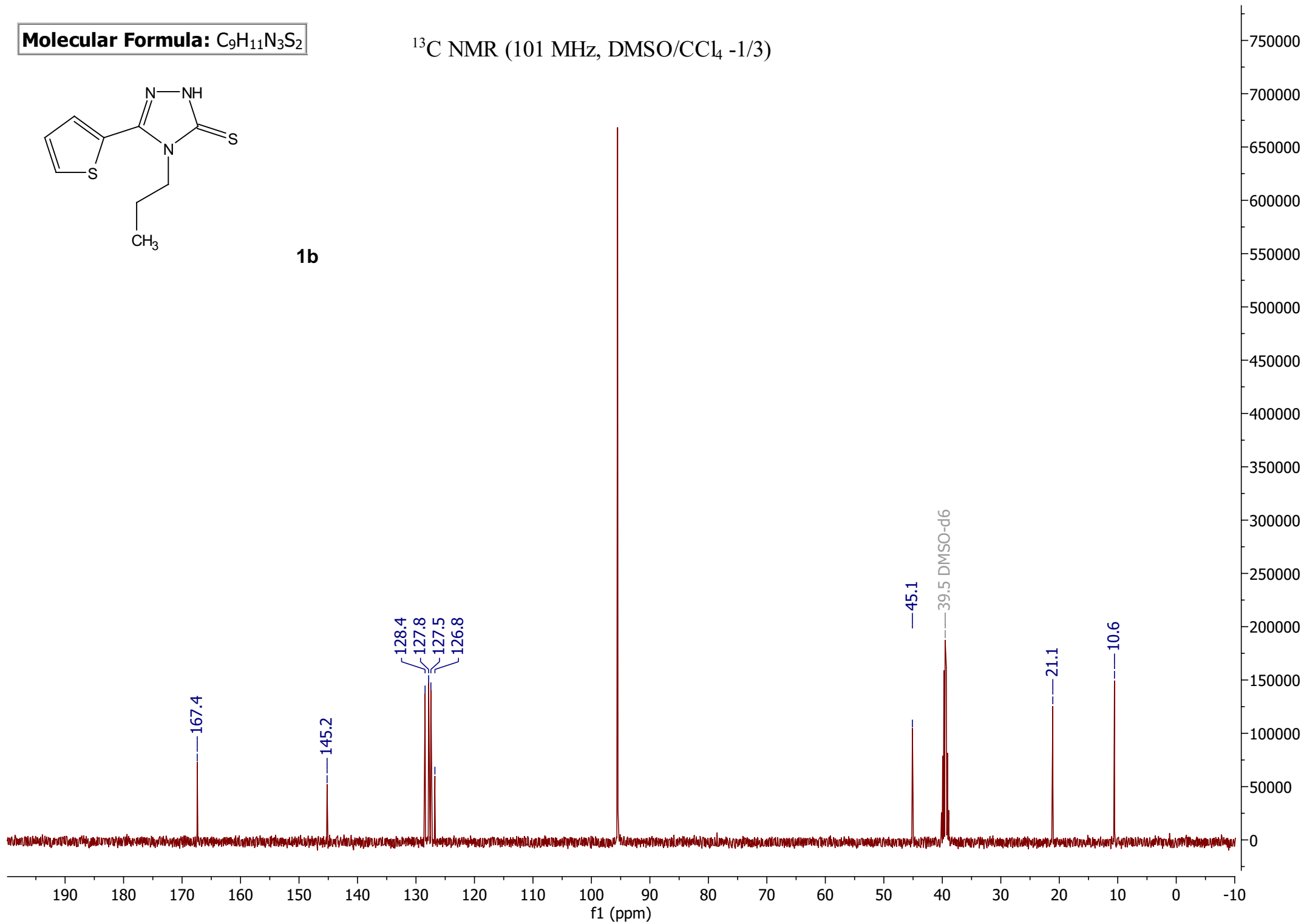


Molecular Formula: C₉H₁₁N₃S₂

¹³C NMR (101 MHz, DMSO/CCl₄ -1/3)

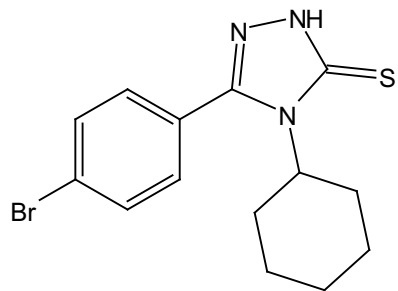


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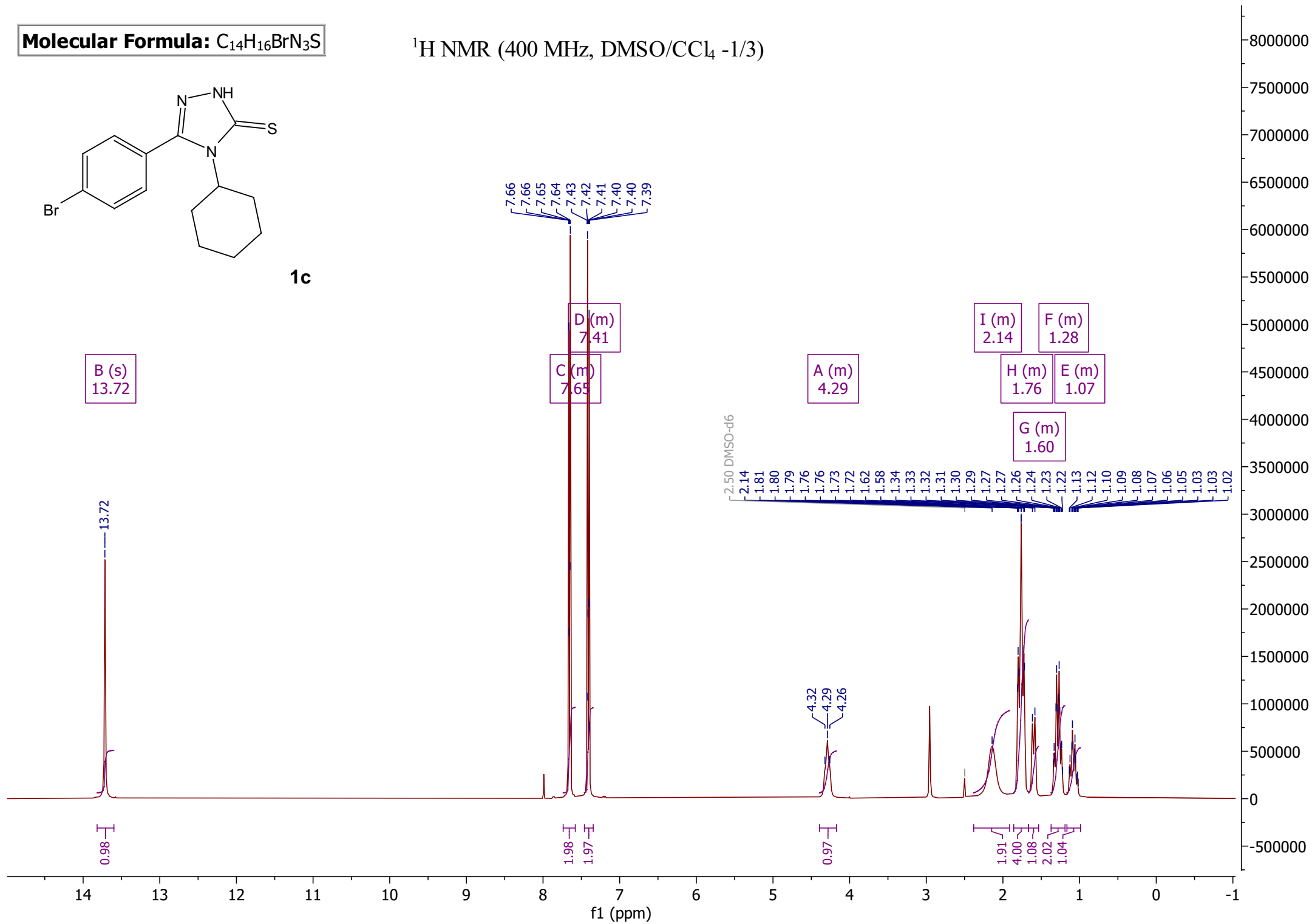


Molecular Formula: C₁₄H₁₆BrN₃S

¹H NMR (400 MHz, DMSO/CCl₄ -1/3)

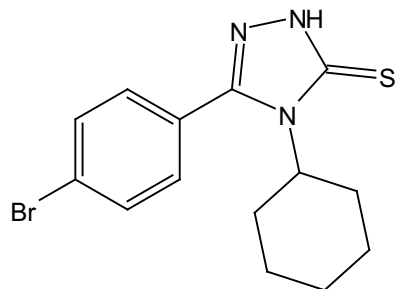


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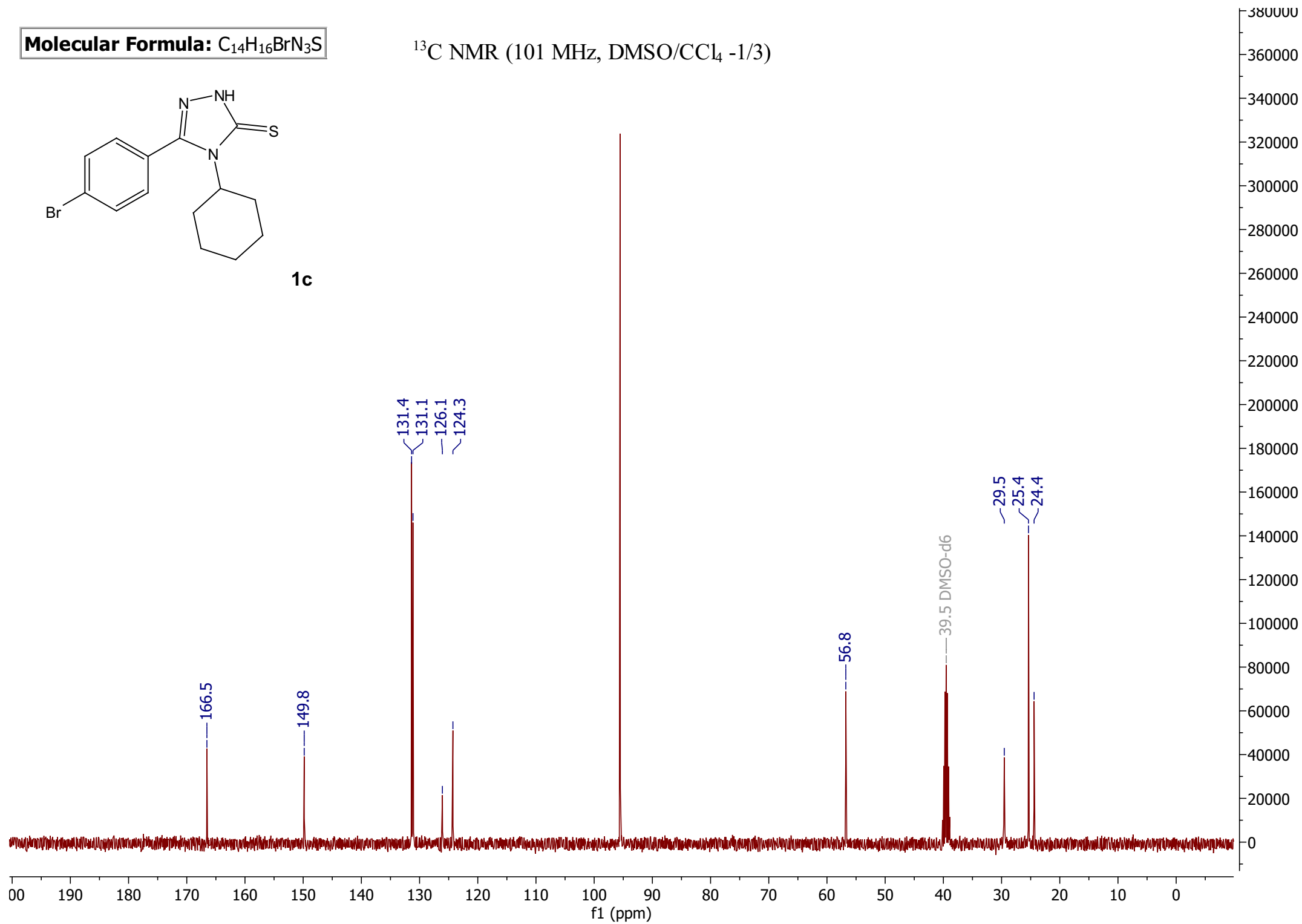


Molecular Formula: C₁₄H₁₆BrN₃S

¹³C NMR (101 MHz, DMSO/CCl₄ -1/3)

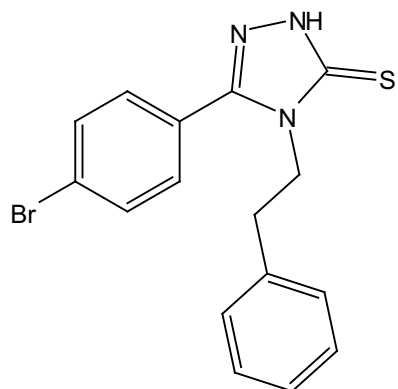


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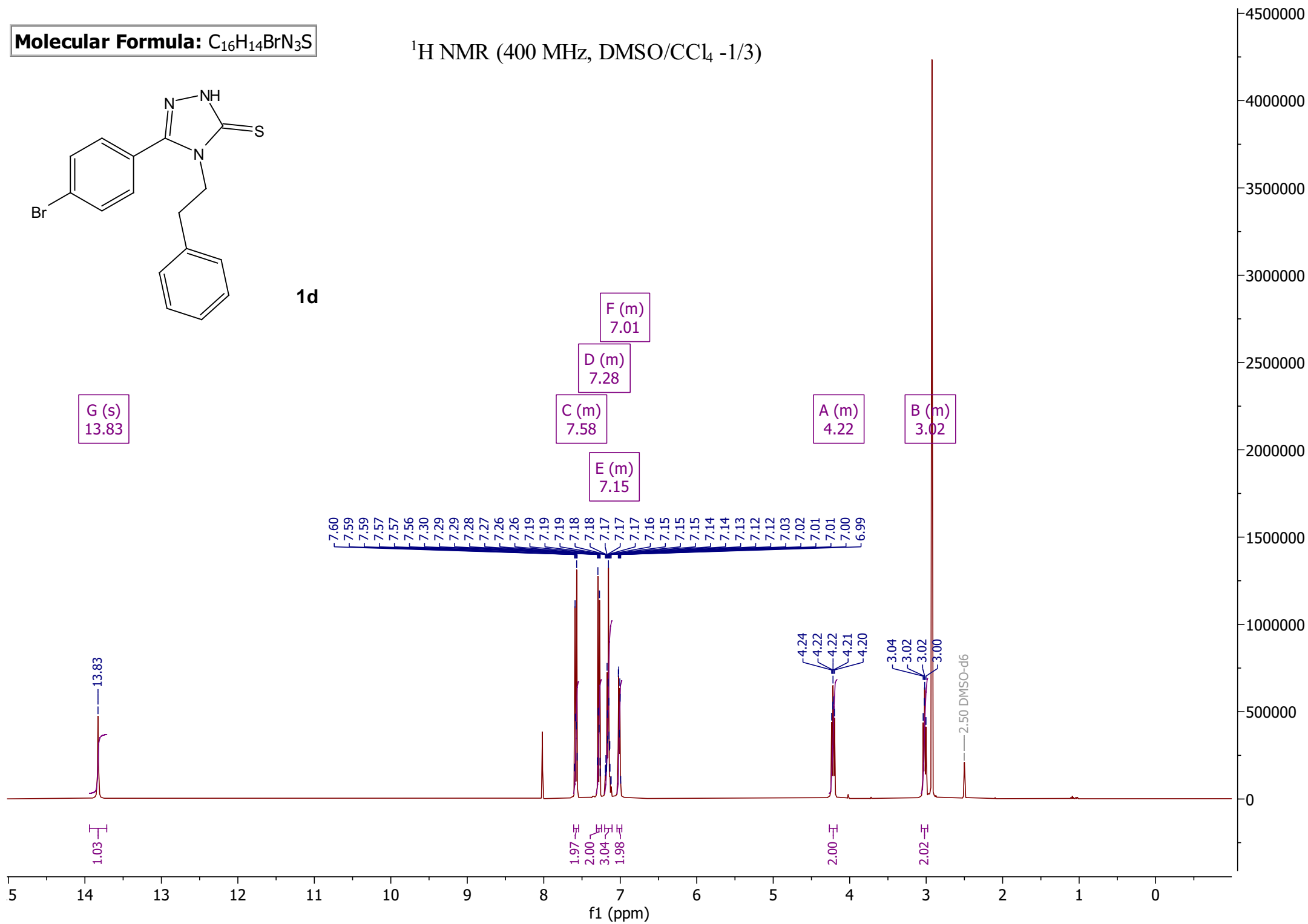


Molecular Formula: C₁₆H₁₄BrN₃S

¹H NMR (400 MHz, DMSO/CCl₄ -1/3)

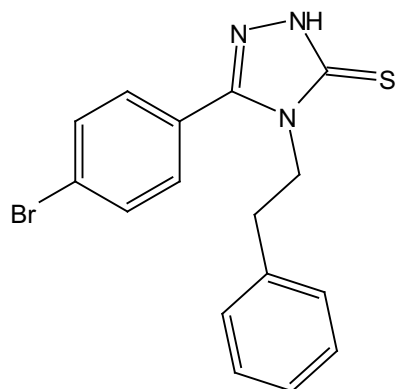


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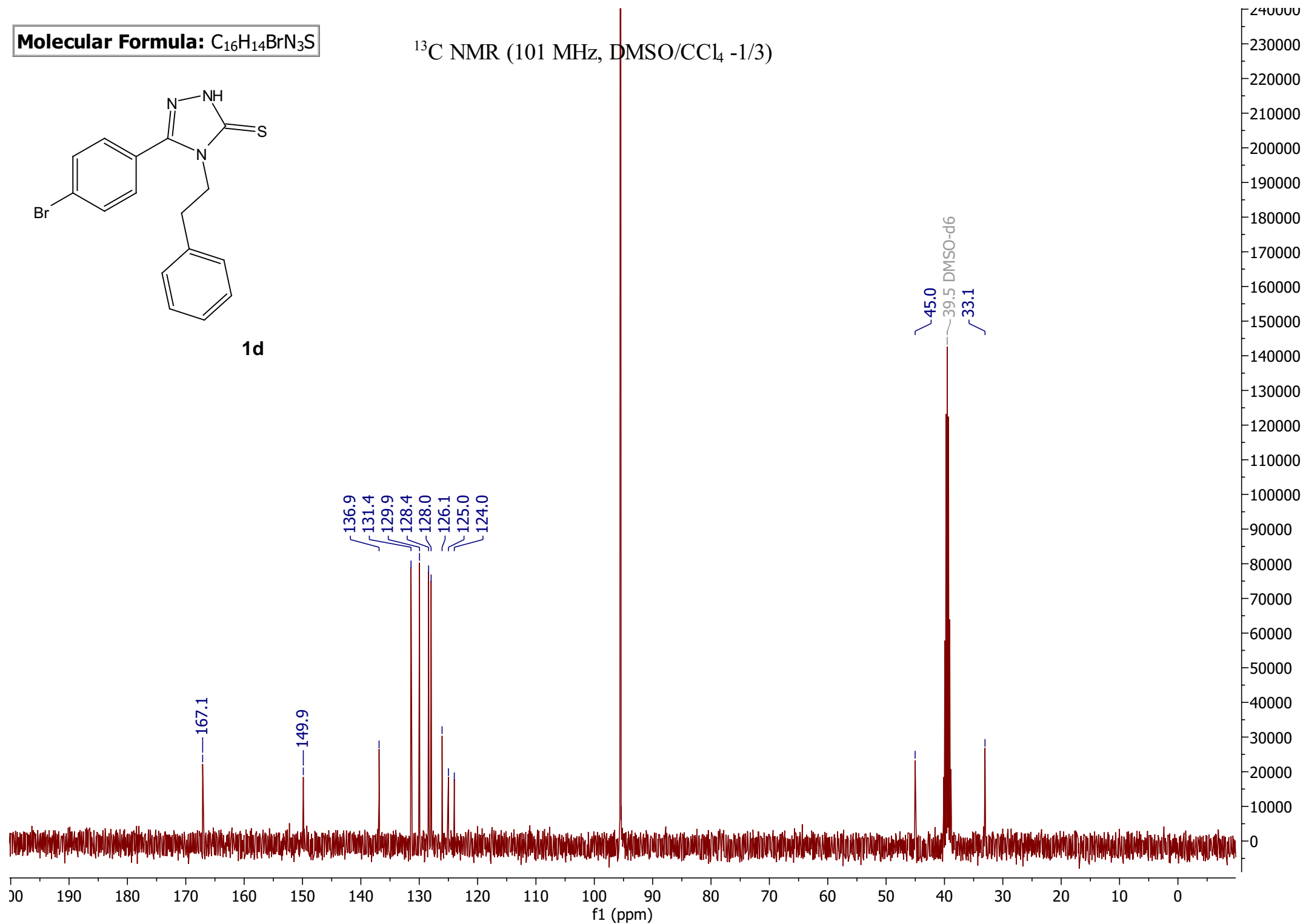


Molecular Formula: C₁₆H₁₄BrN₃S

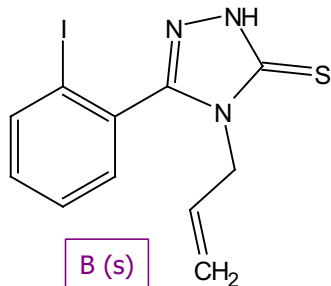
¹³C NMR (101 MHz, DMSO/CCl₄ -1/3)



1d

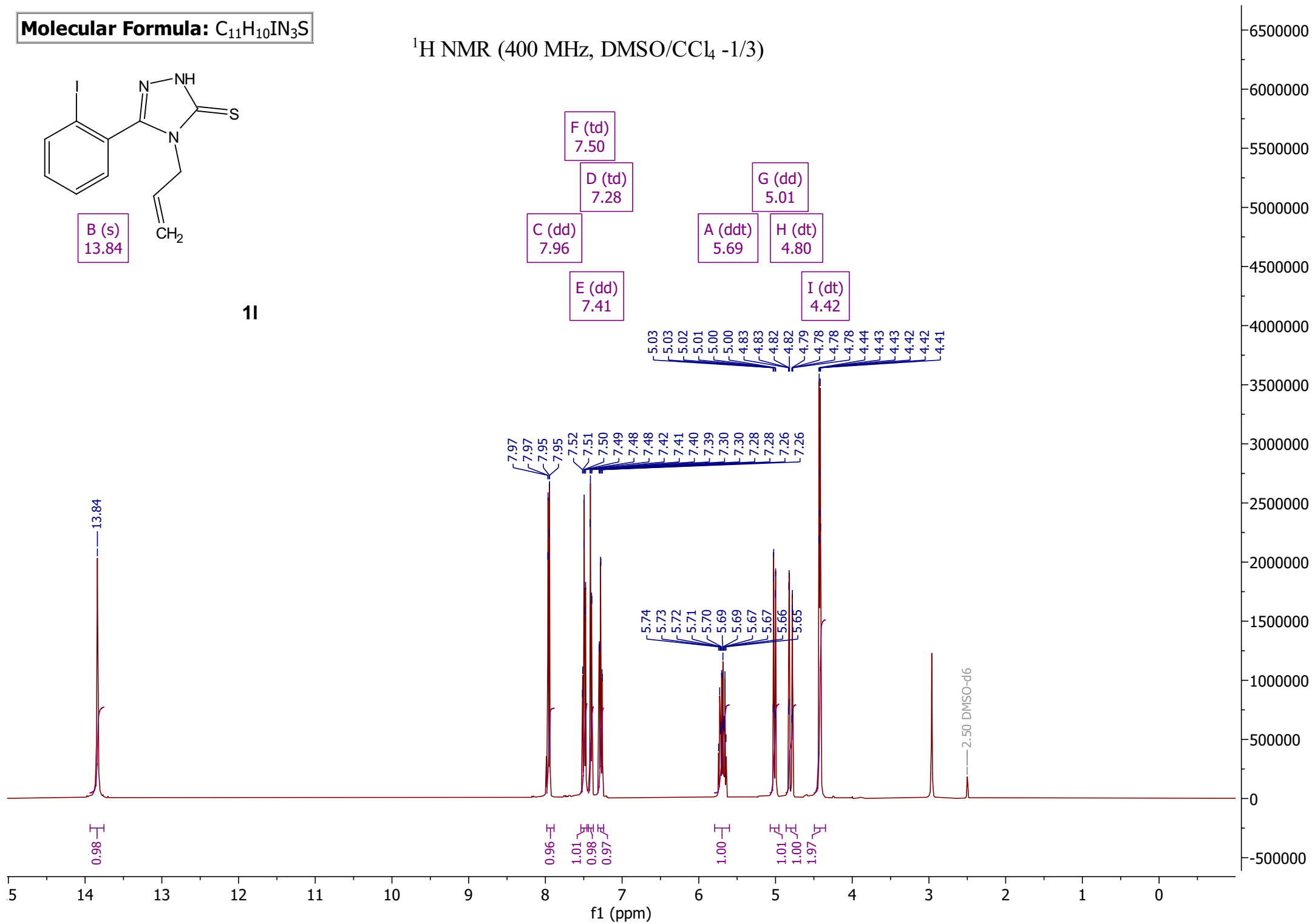


Molecular Formula: C₁₁H₁₀IN₃S



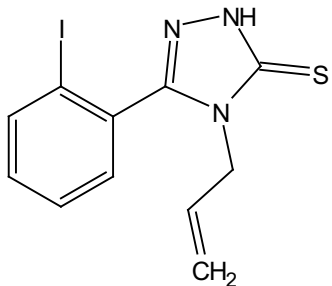
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¹H NMR (400 MHz, DMSO/CCl₄ -1/3)

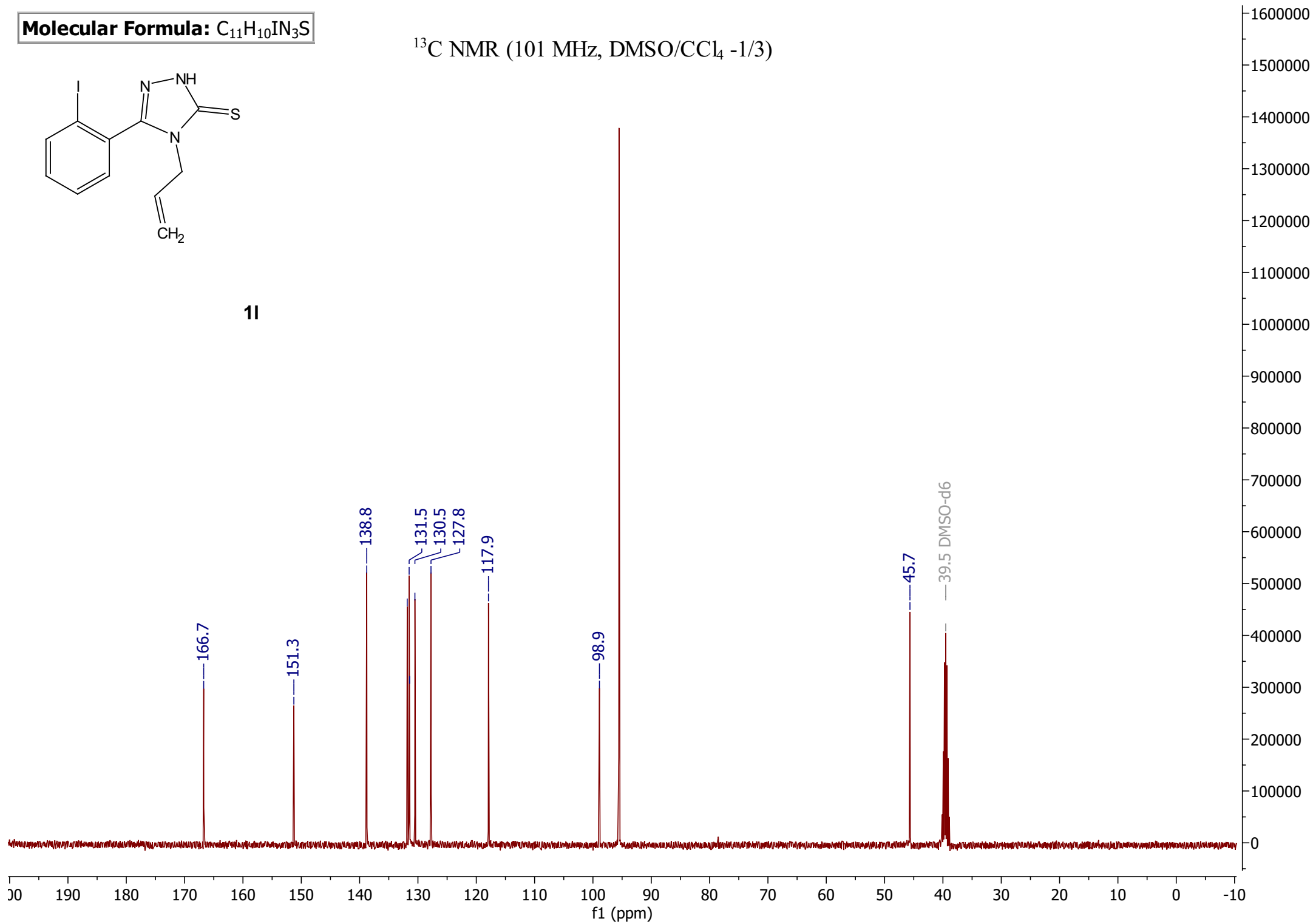


Molecular Formula: C₁₁H₁₀IN₃S

¹³C NMR (101 MHz, DMSO/CCl₄ -1/3)

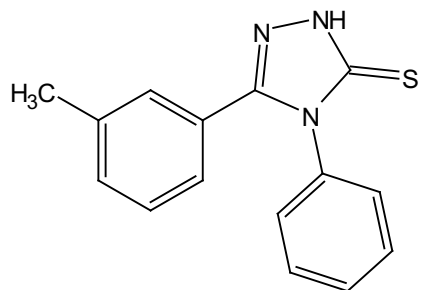


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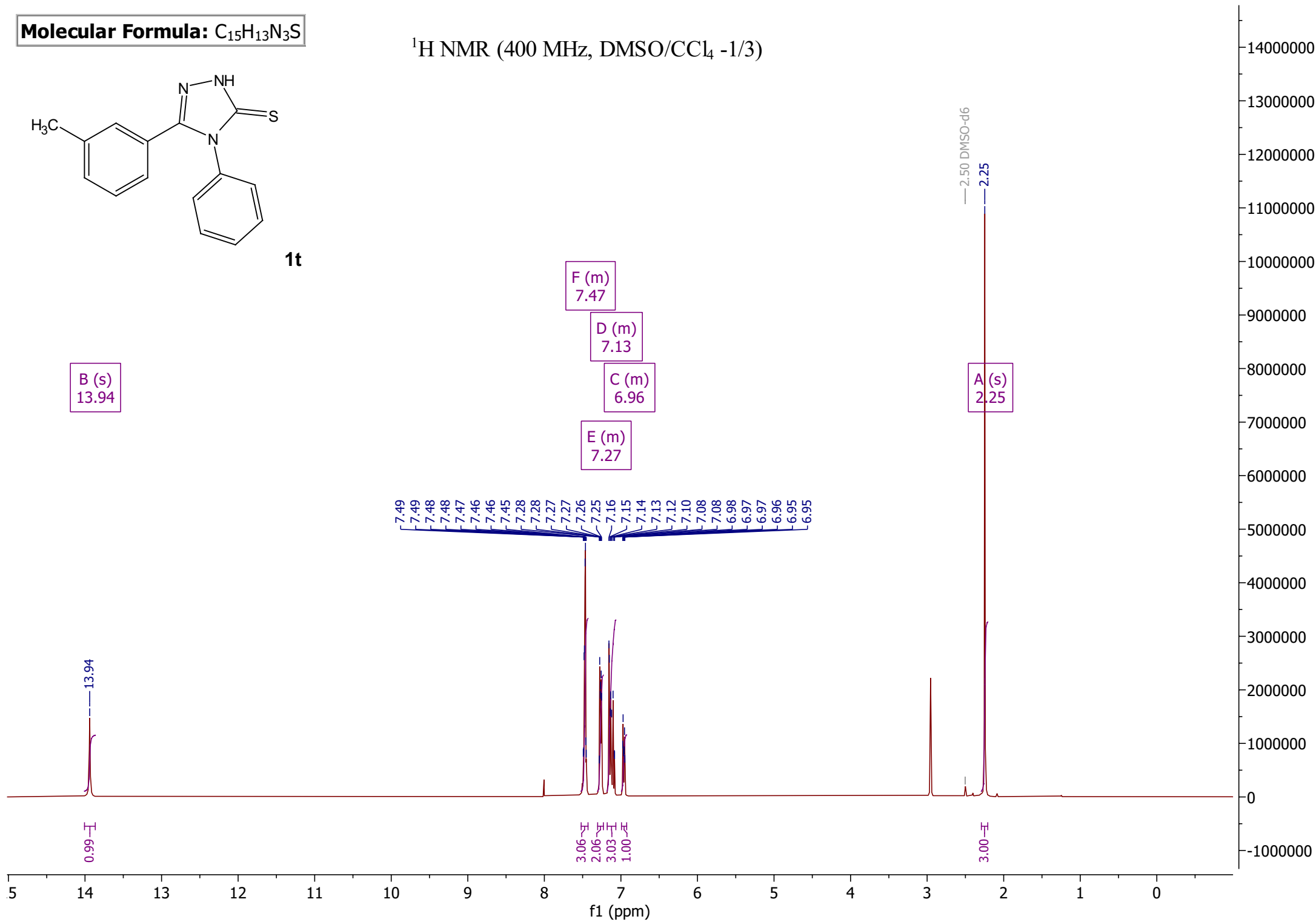


Molecular Formula: C₁₅H₁₃N₃S

¹H NMR (400 MHz, DMSO/CCl₄ -1/3)

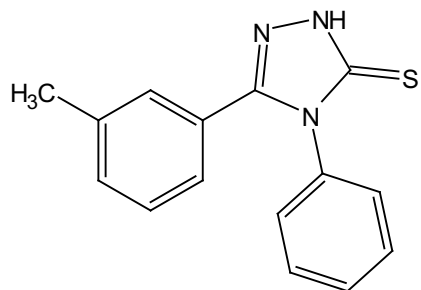


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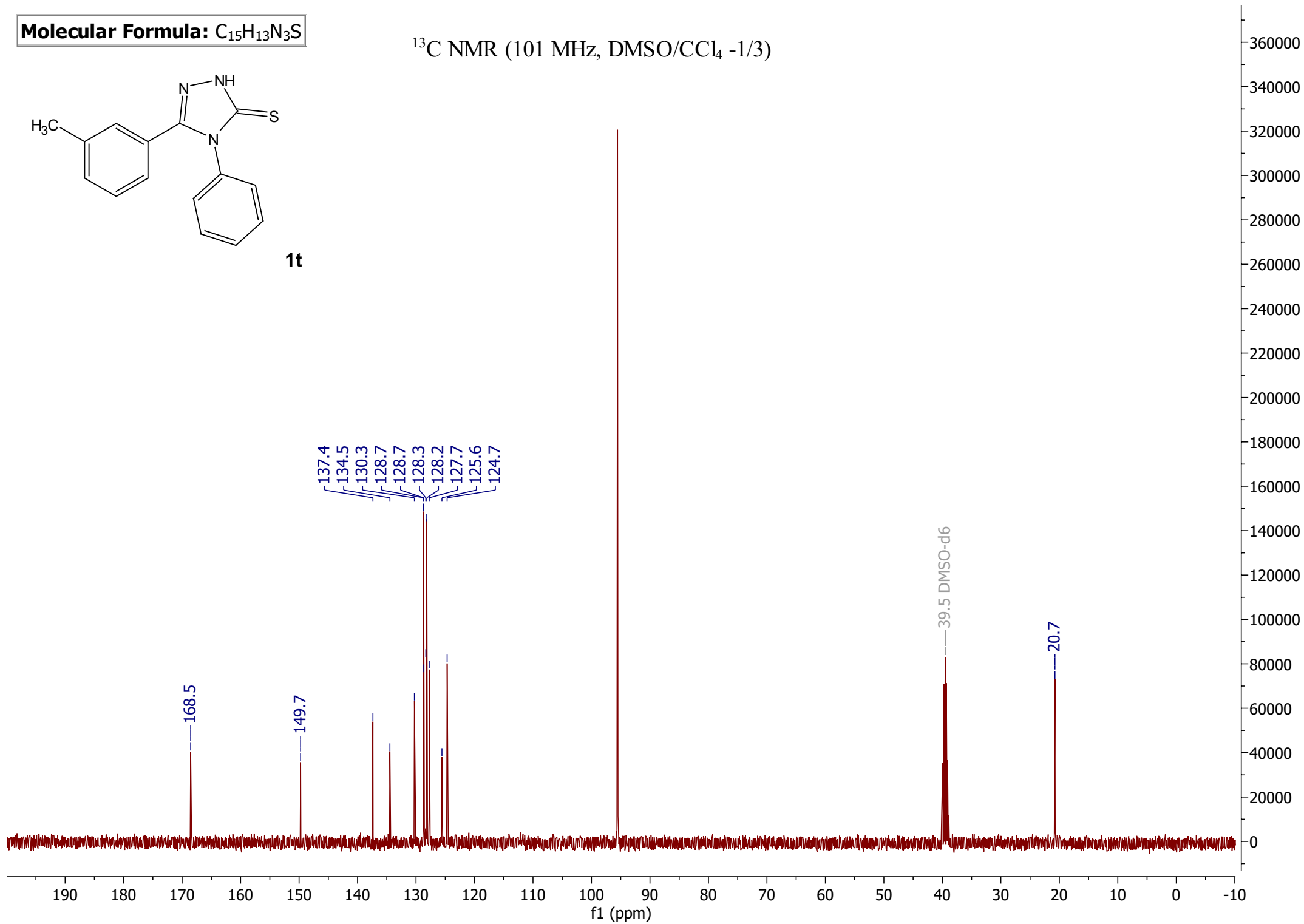


Molecular Formula: C₁₅H₁₃N₃S

¹³C NMR (101 MHz, DMSO/CCl₄ -1/3)

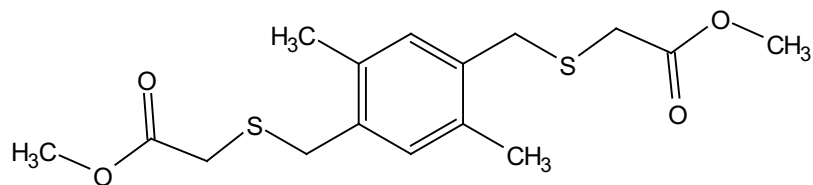


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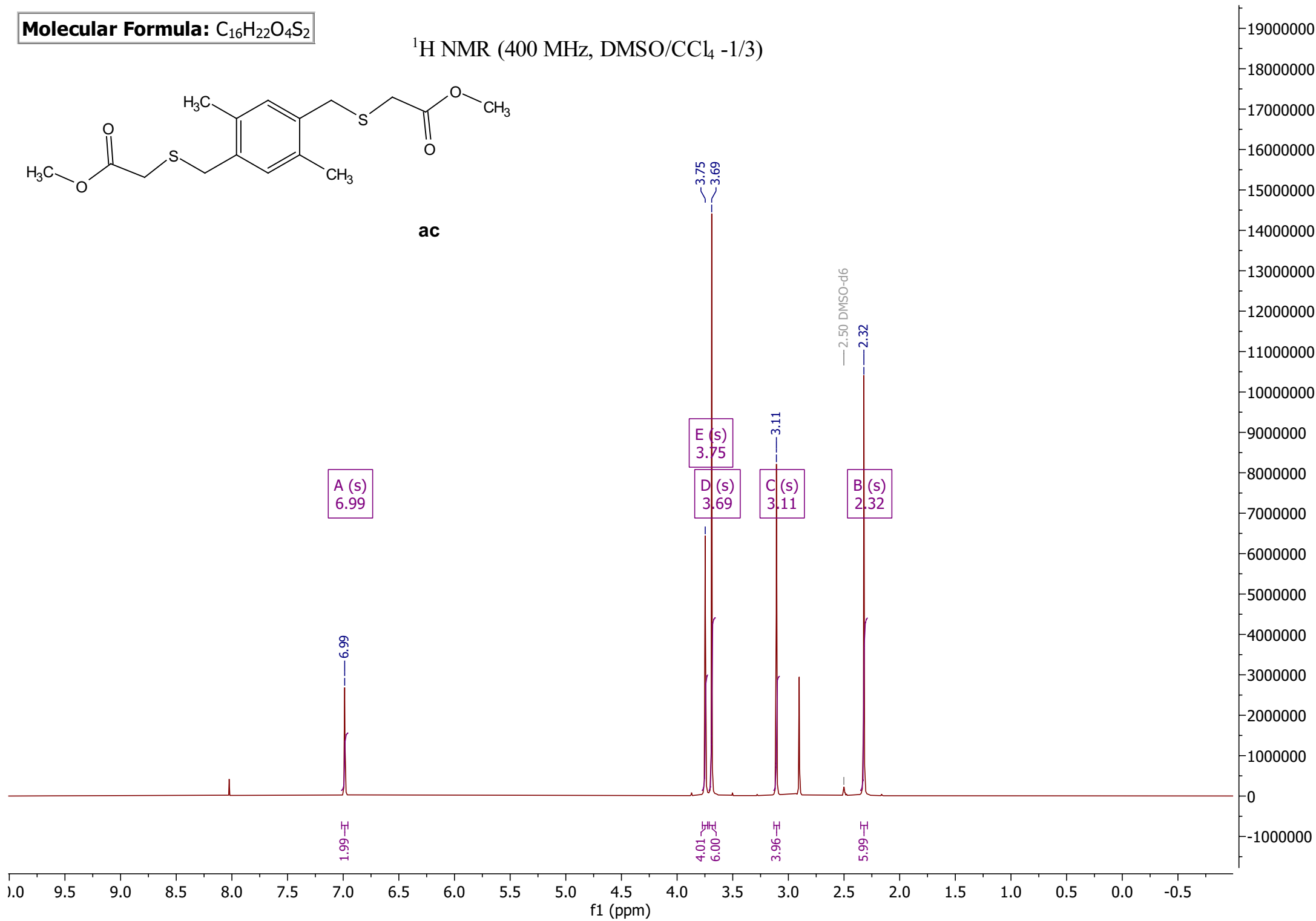


Molecular Formula: C₁₆H₂₂O₄S₂

¹H NMR (400 MHz, DMSO/CCl₄ -1/3)

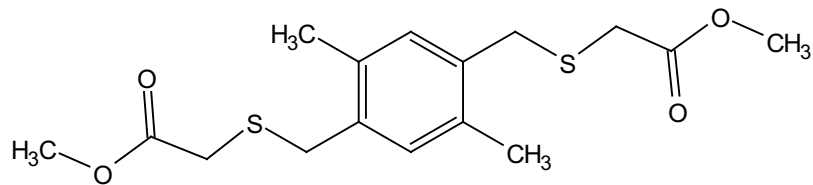


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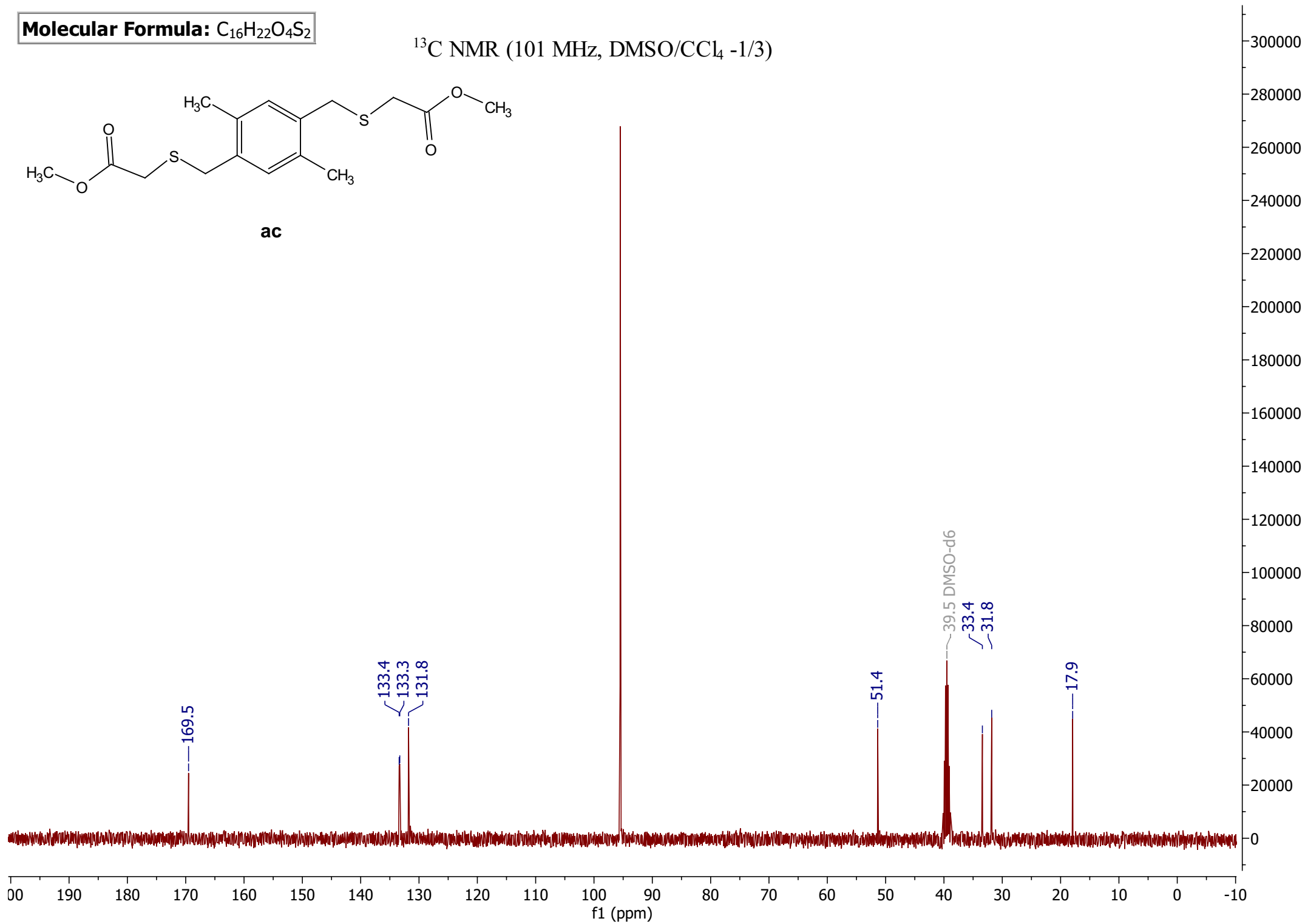


Molecular Formula: C₁₆H₂₂O₄S₂

¹³C NMR (101 MHz, DMSO/CCl₄ -1/3)

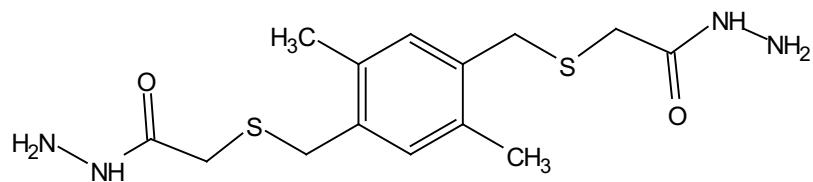


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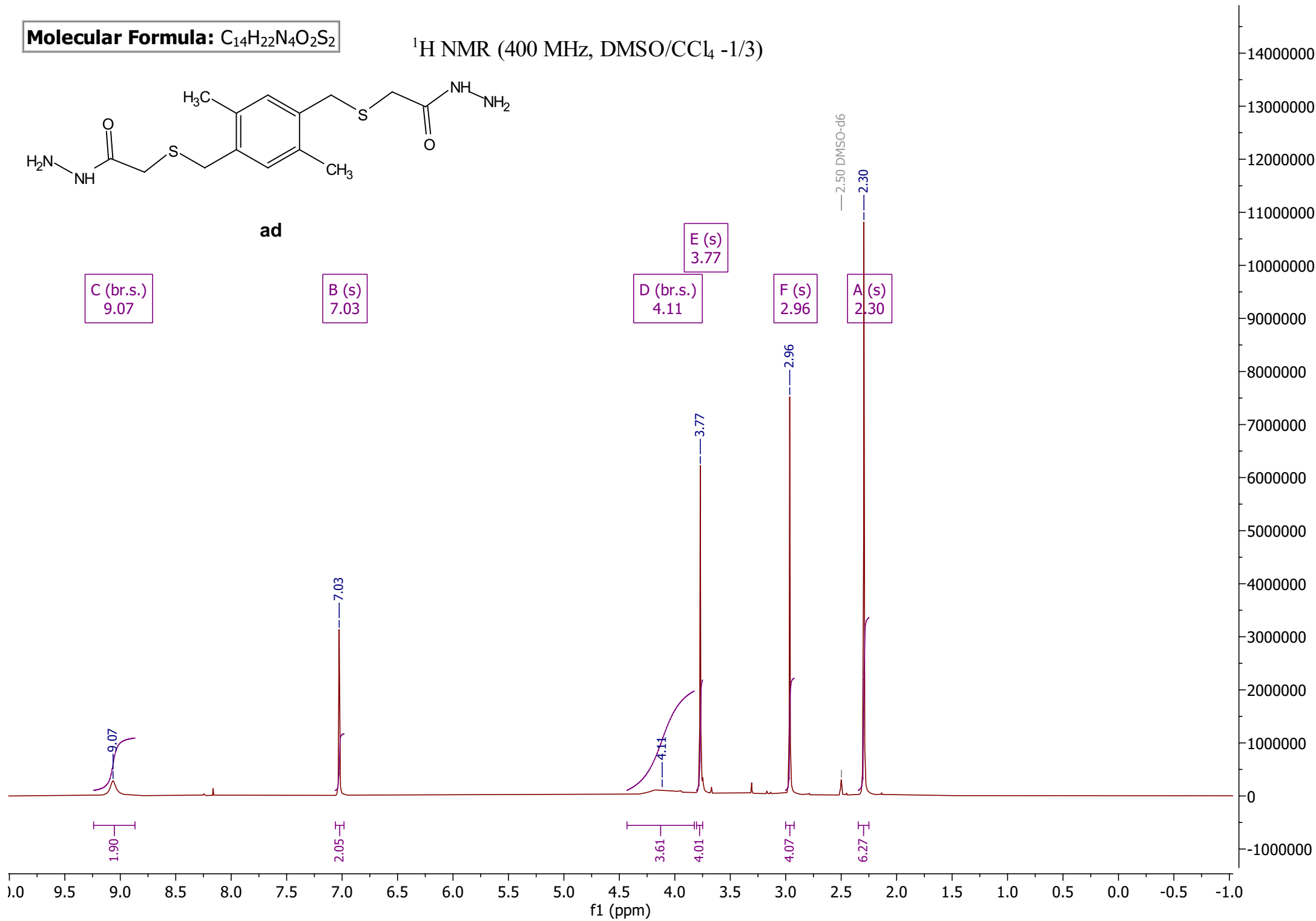


Molecular Formula: C₁₄H₂₂N₄O₂S₂

¹H NMR (400 MHz, DMSO/CCl₄ -1/3)

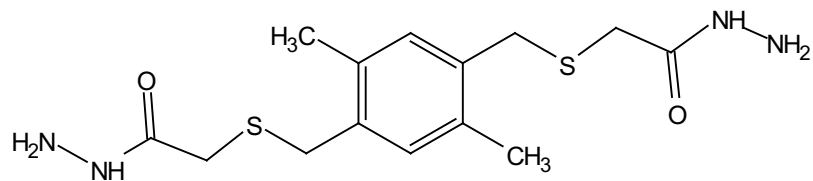


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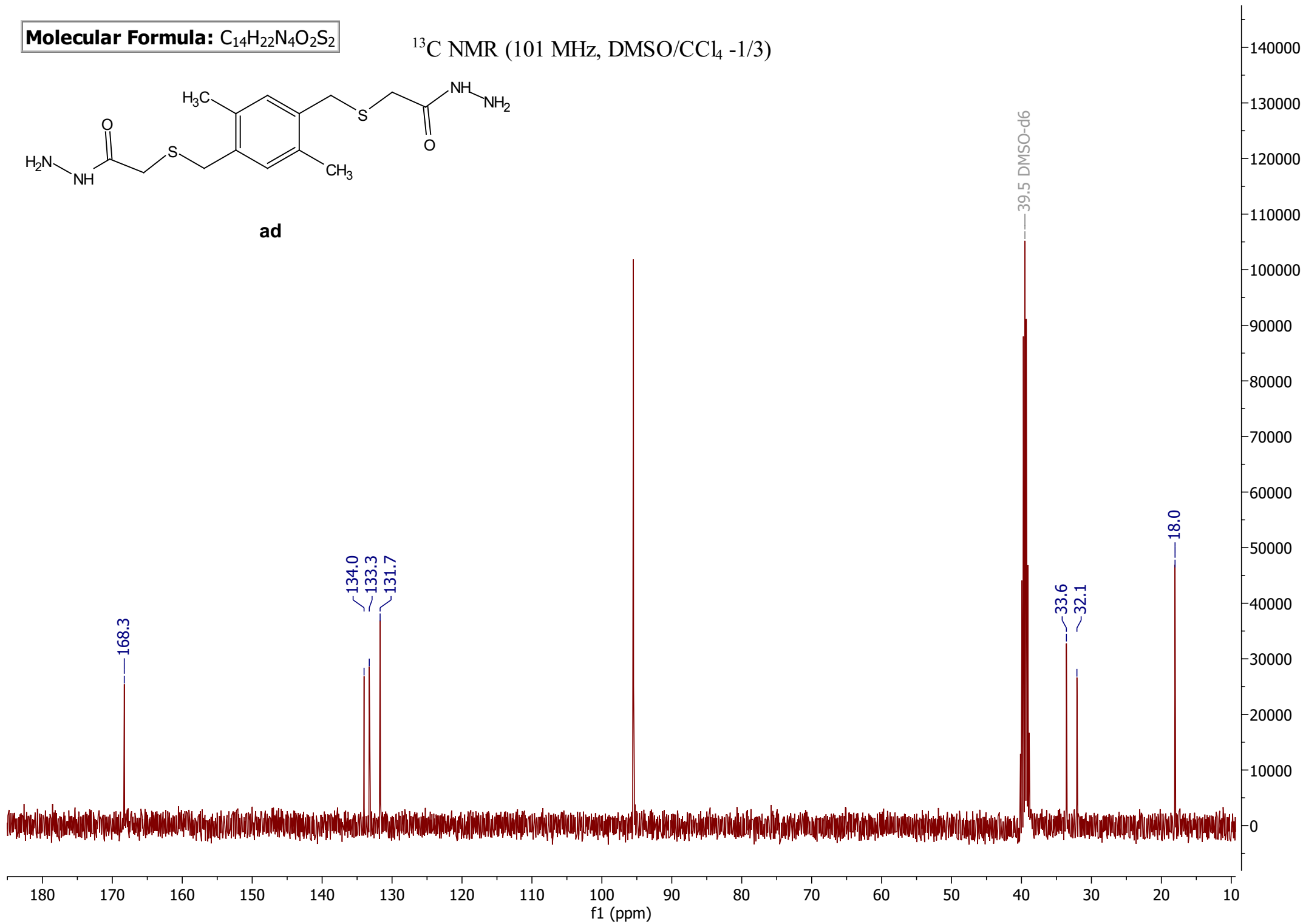


Molecular Formula: C₁₄H₂₂N₄O₂S₂

¹³C NMR (101 MHz, DMSO/CCl₄ -1/3)

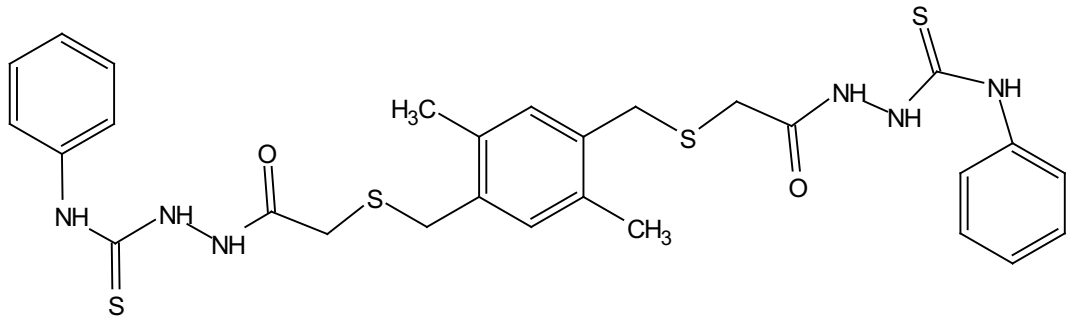


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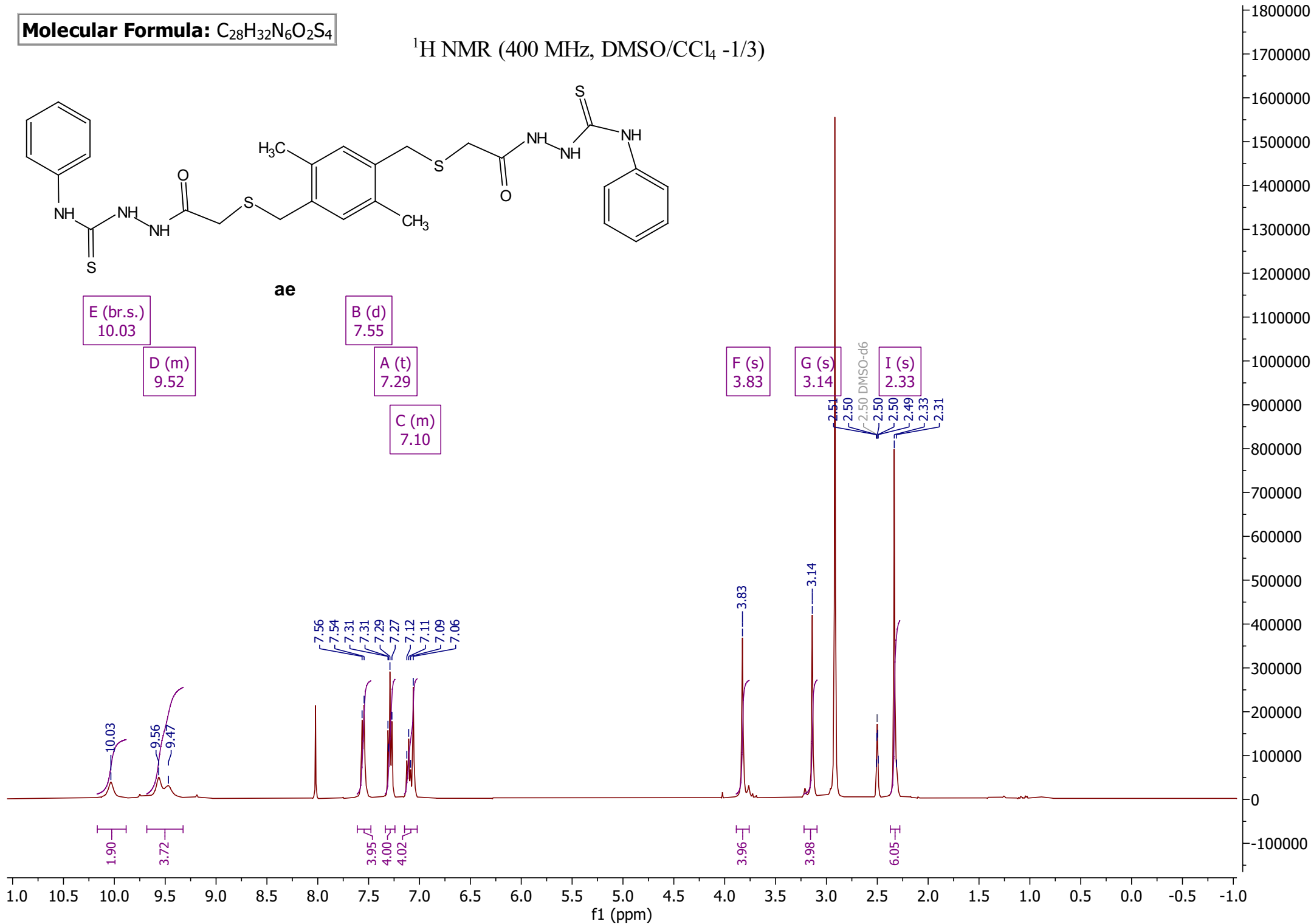


Molecular Formula: C₂₈H₃₂N₆O₂S₄

¹H NMR (400 MHz, DMSO/CCl₄ -1/3)

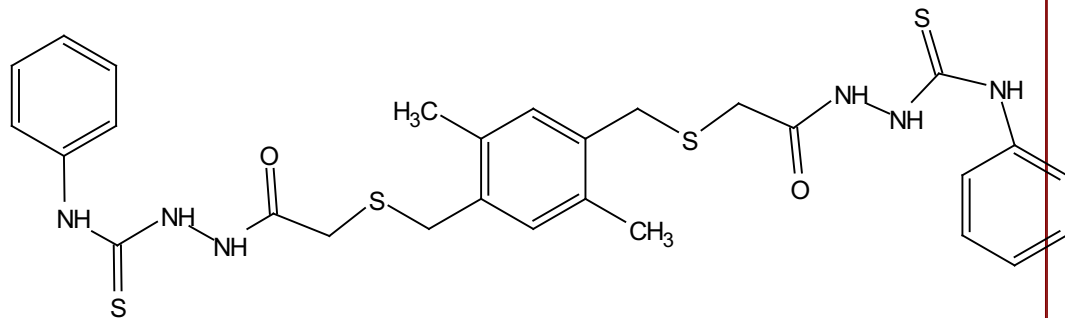


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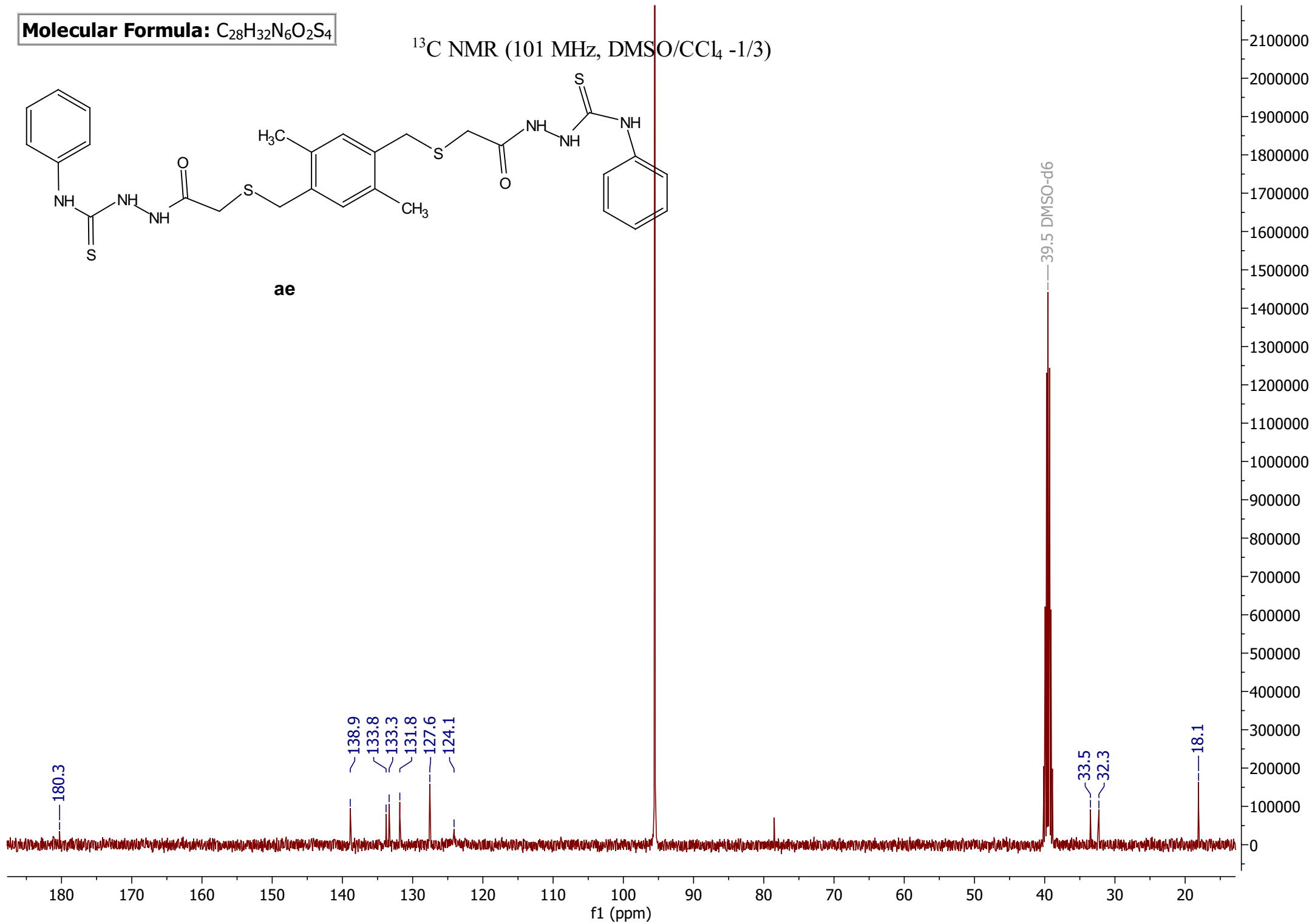


Molecular Formula: C₂₈H₃₂N₆O₂S₄

¹³C NMR (101 MHz, DMSO/CCl₄ -1/3)

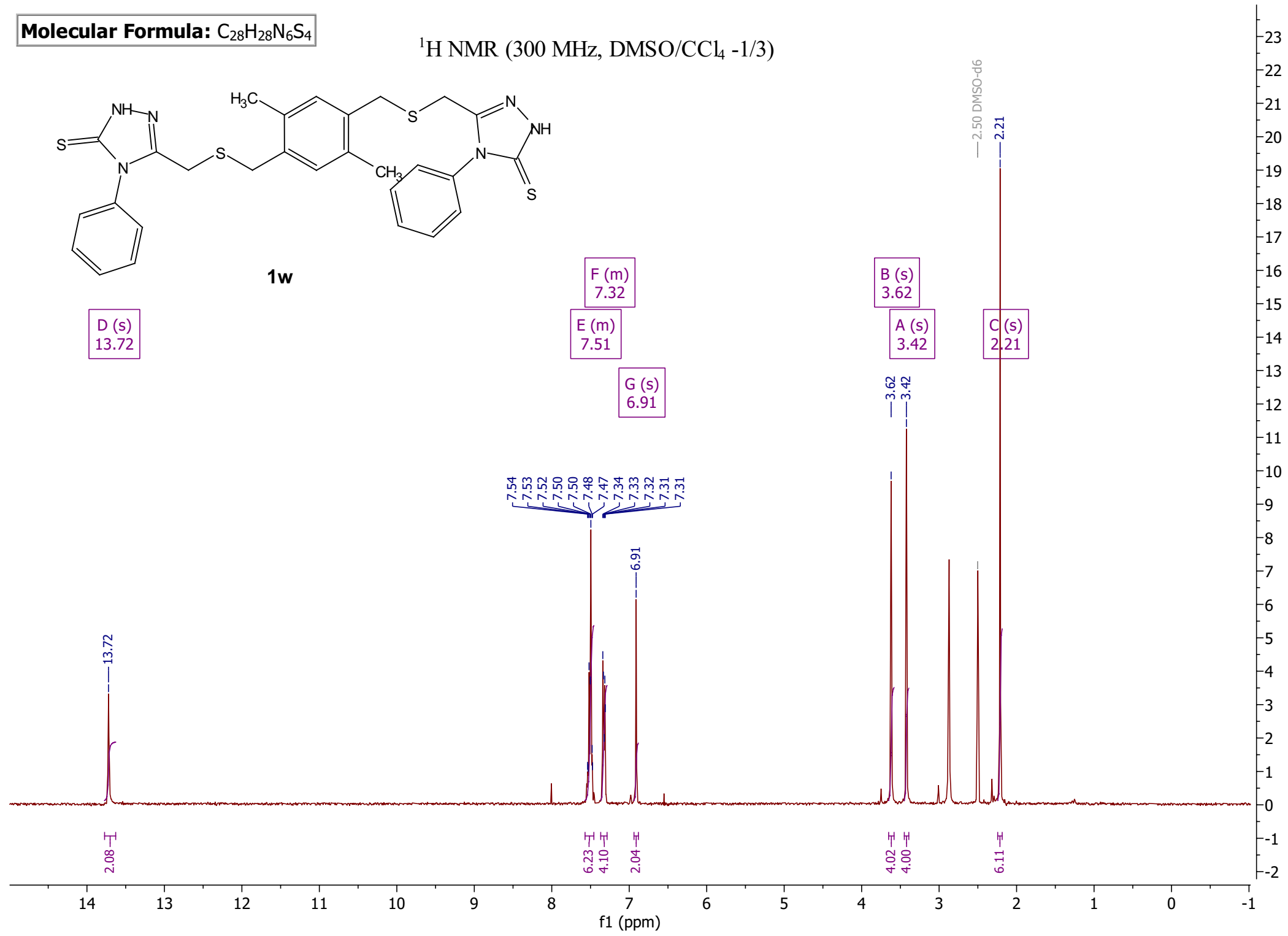
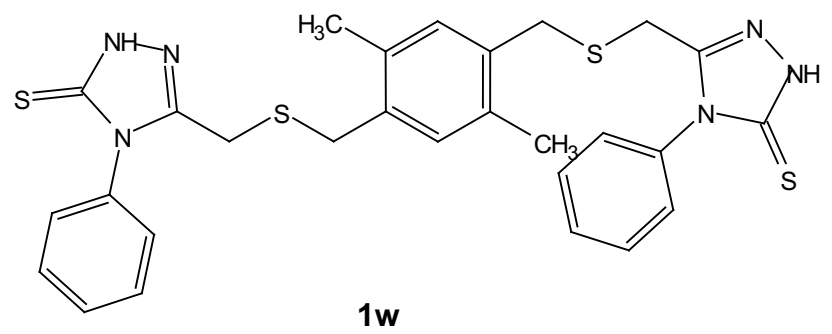


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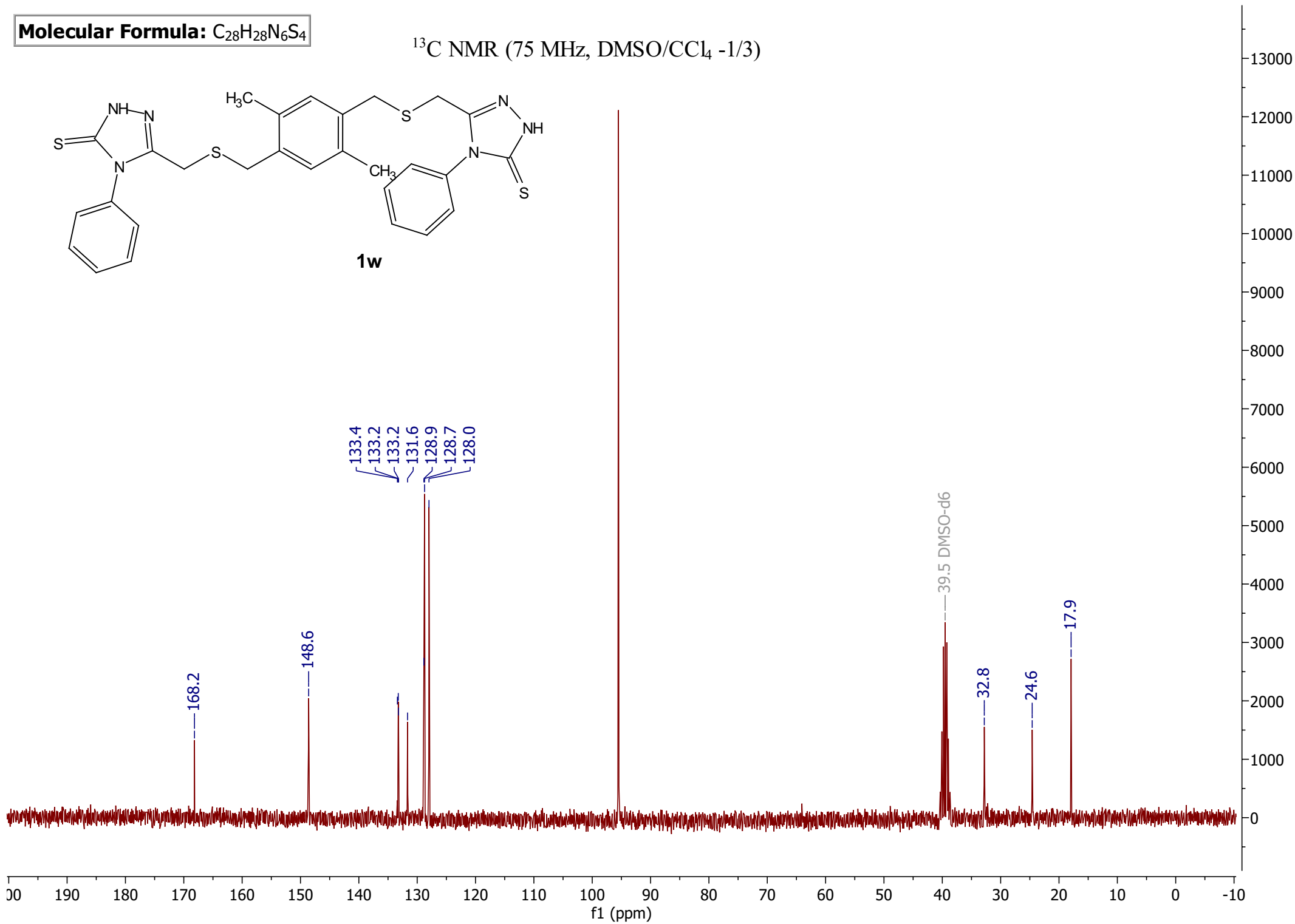
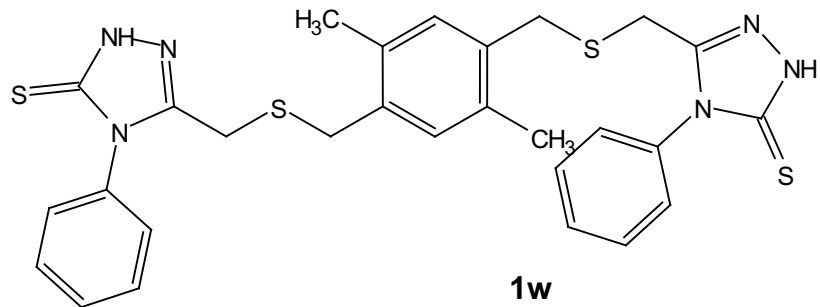
Molecular Formula: C₂₈H₂₈N₆S₄

¹H NMR (300 MHz, DMSO/CCl₄ -1/3)



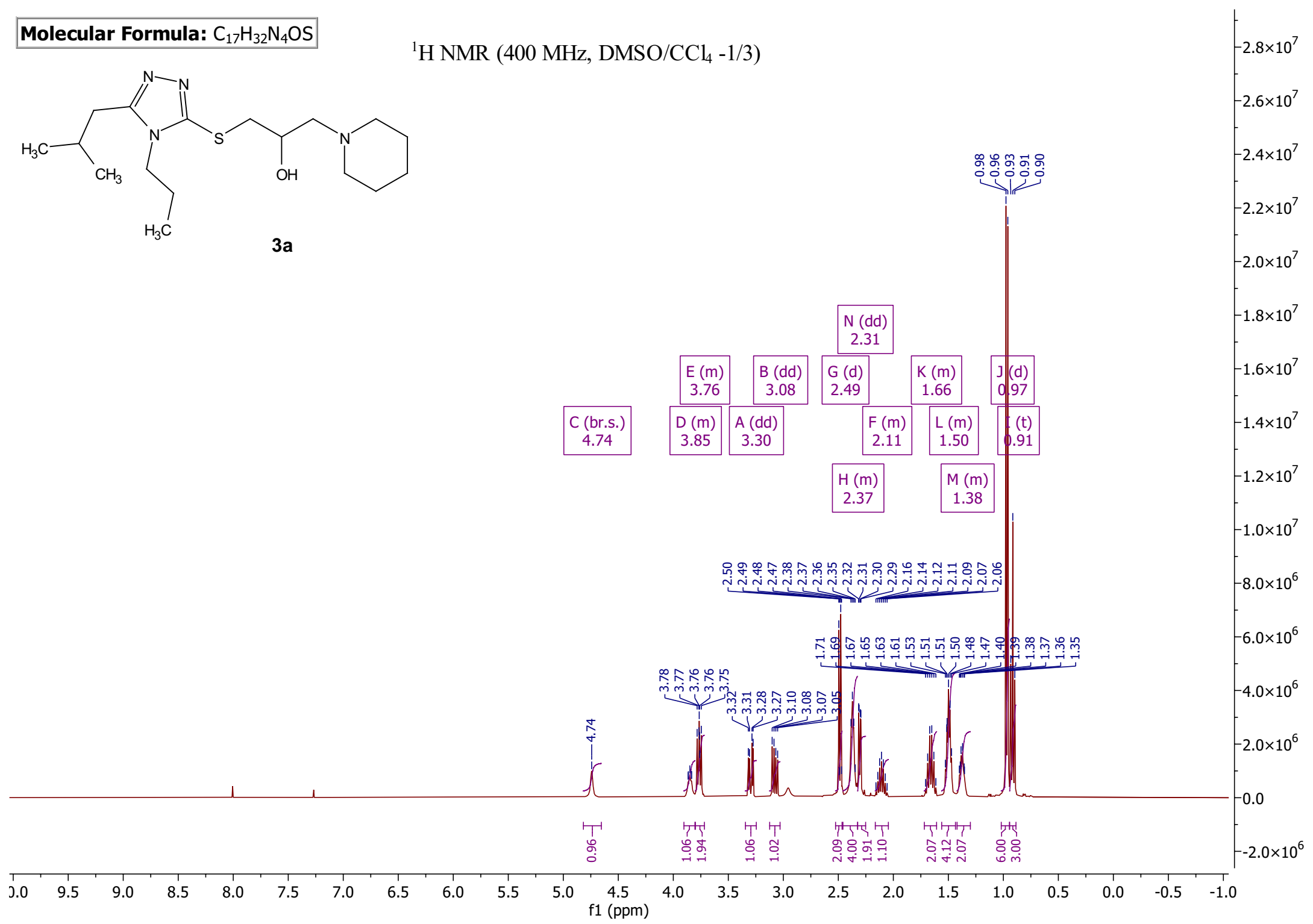
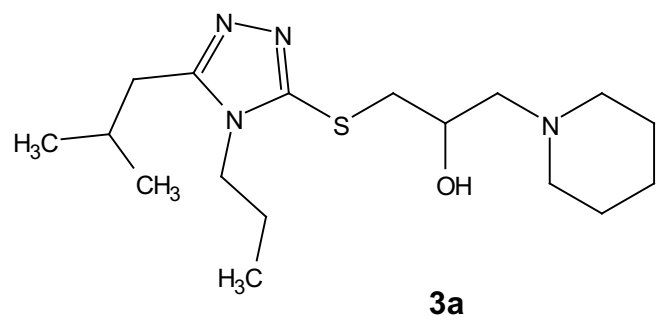
Molecular Formula: C₂₈H₂₈N₆S₄

¹³C NMR (75 MHz, DMSO/CCl₄ -1/3)



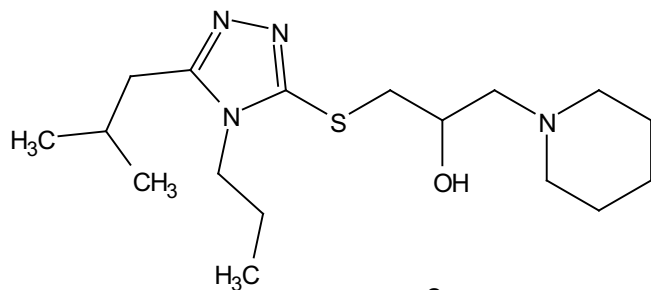
Molecular Formula: C₁₇H₃₂N₄OS

¹H NMR (400 MHz, DMSO/CCl₄ -1/3)

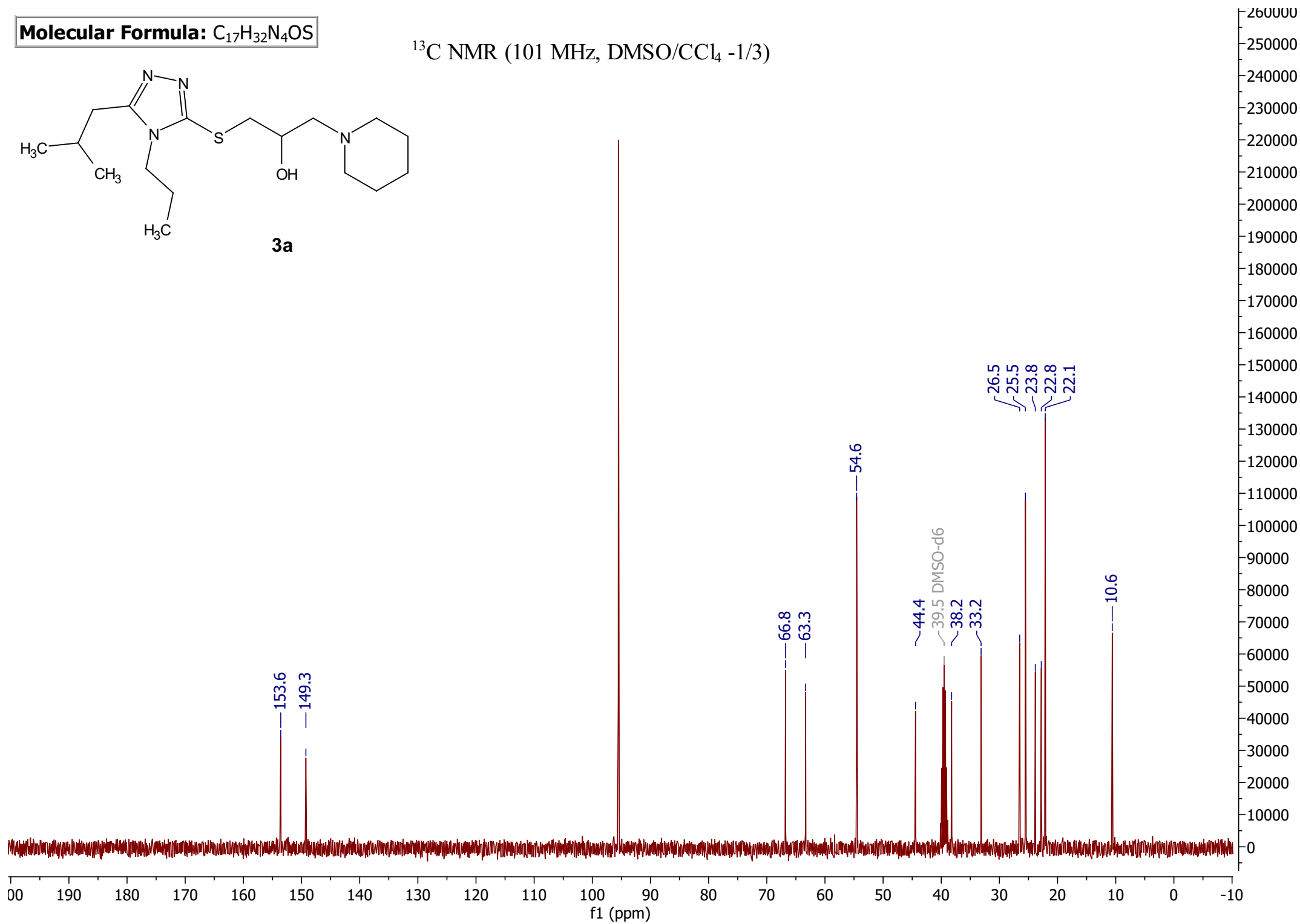


Molecular Formula: C₁₇H₃₂N₄OS

¹³C NMR (101 MHz, DMSO/CCl₄ -1/3)

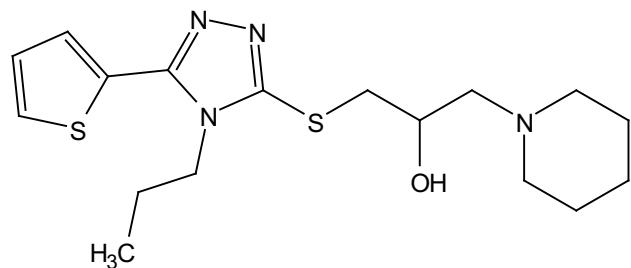


3a

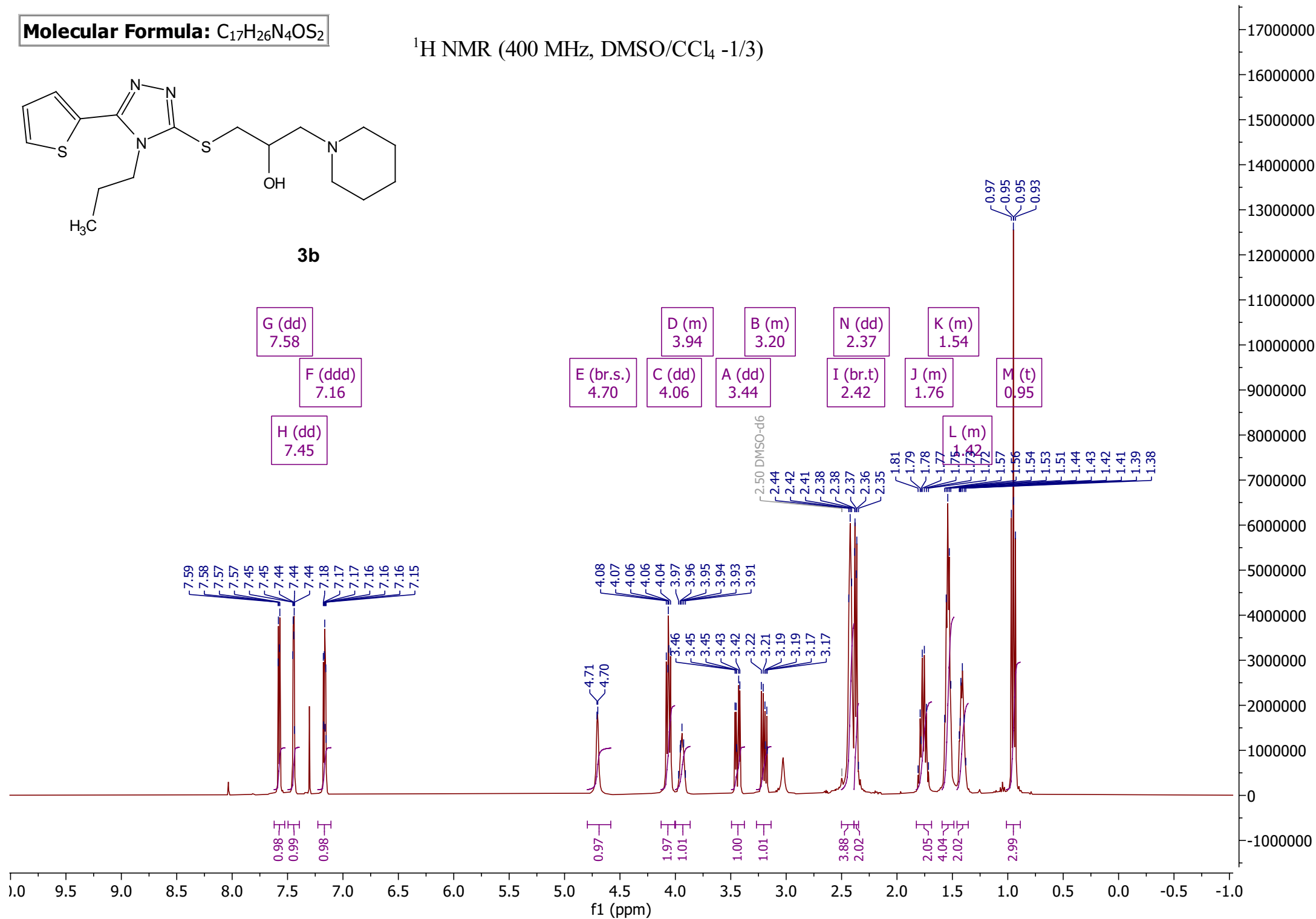


Molecular Formula: C₁₇H₂₆N₄OS₂

¹H NMR (400 MHz, DMSO/CCl₄ -1/3)

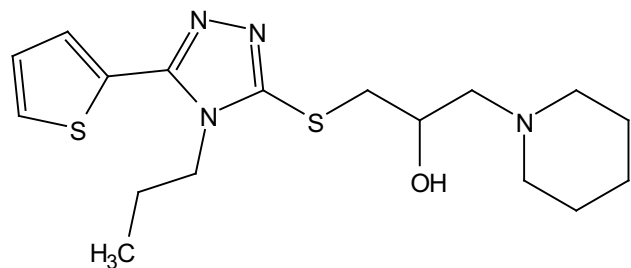


3b

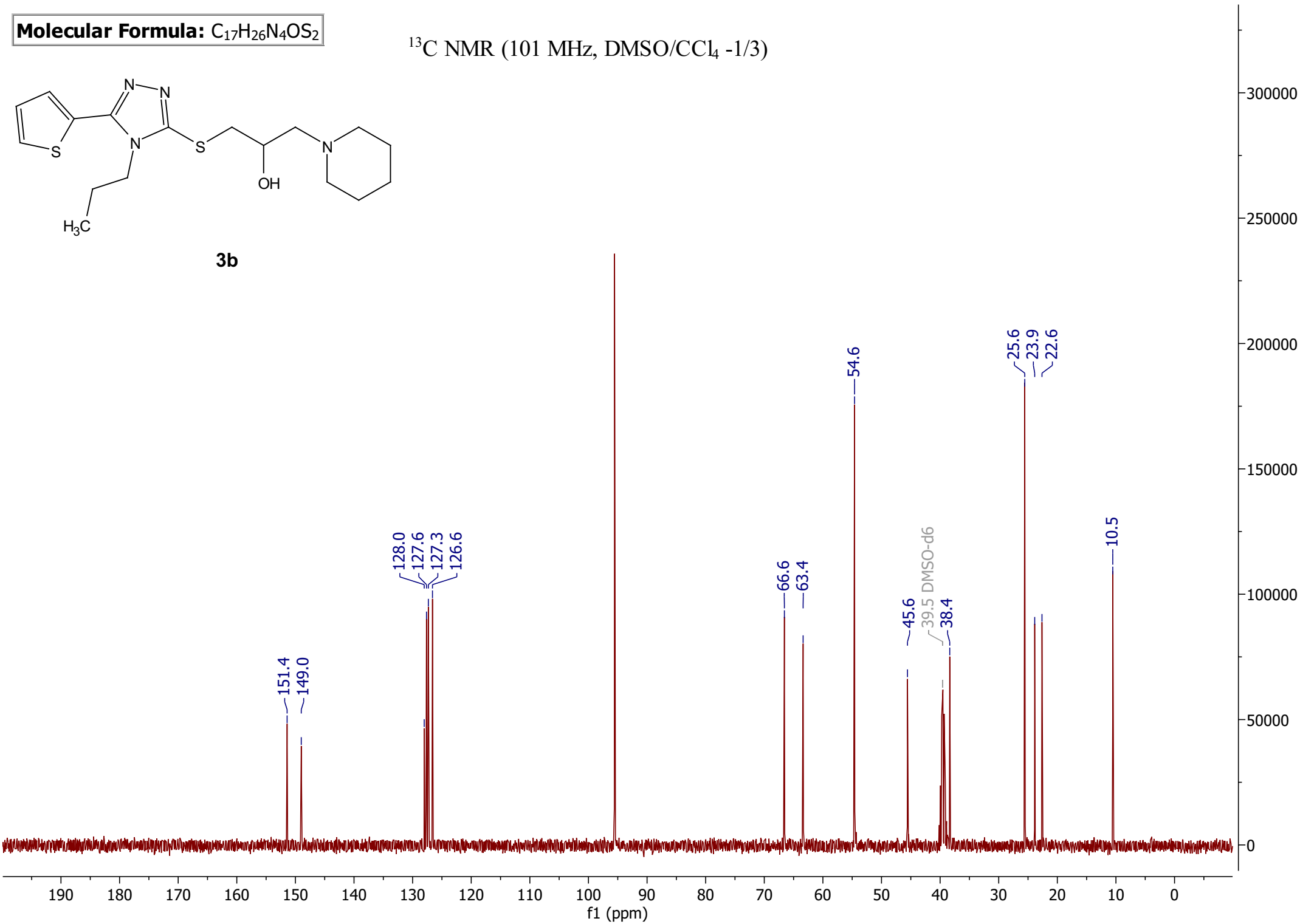


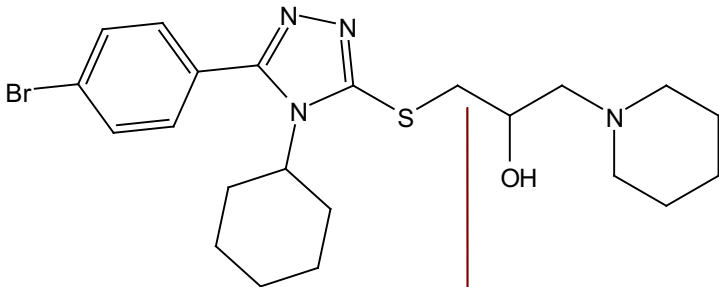
Molecular Formula: C₁₇H₂₆N₄OS₂

¹³C NMR (101 MHz, DMSO/CCl₄ -1/3)

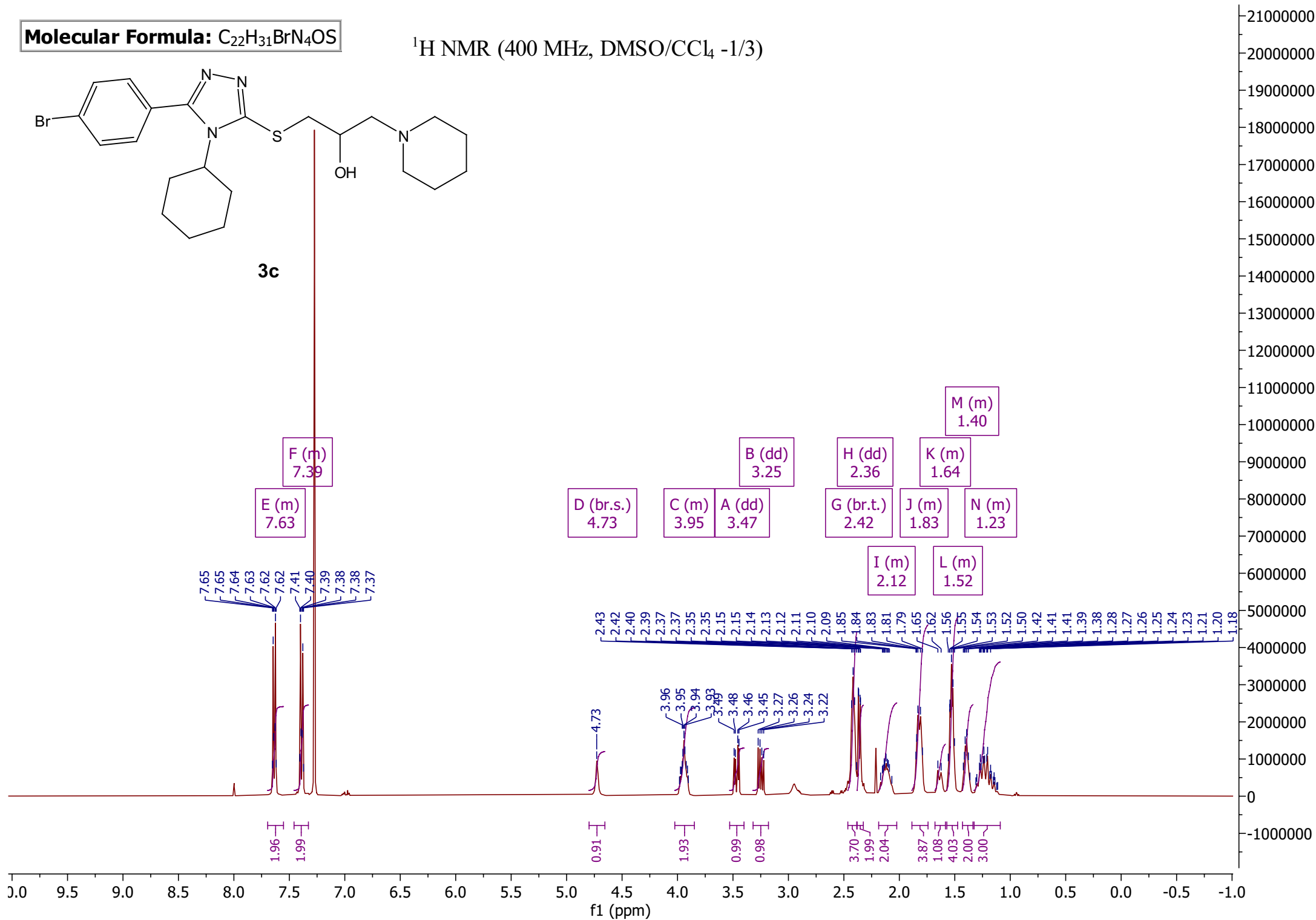


3b



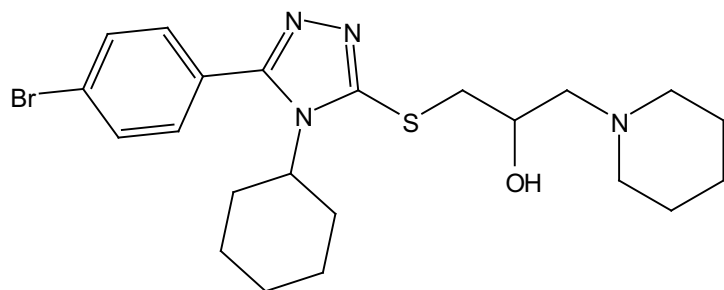
Molecular Formula: $\text{C}_{22}\text{H}_{31}\text{BrN}_4\text{OS}$ ¹H NMR (400 MHz, DMSO/CCl₄ -1/3)

3c

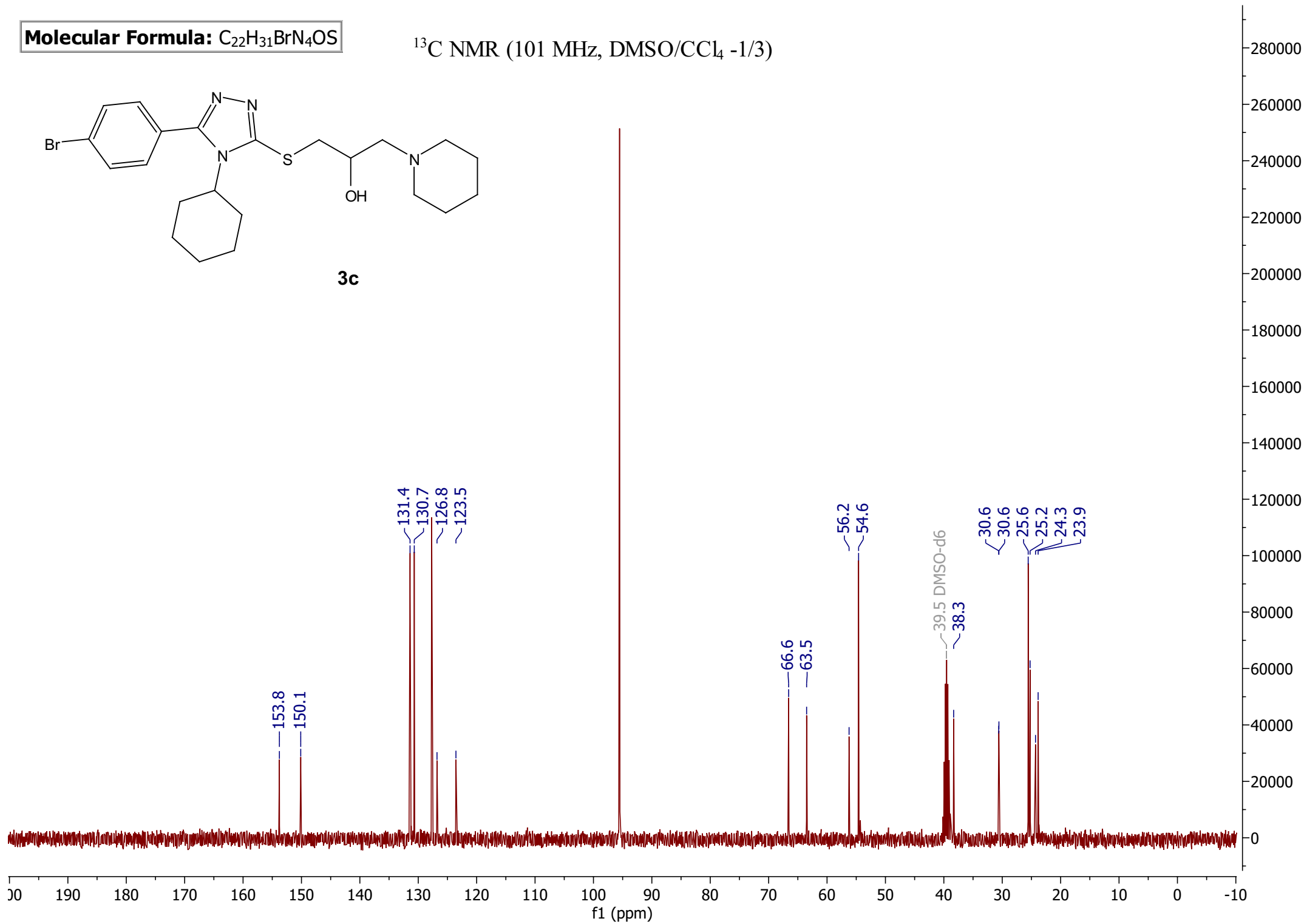


Molecular Formula: C₂₂H₃₁BrN₄OS

¹³C NMR (101 MHz, DMSO/CCl₄ -1/3)

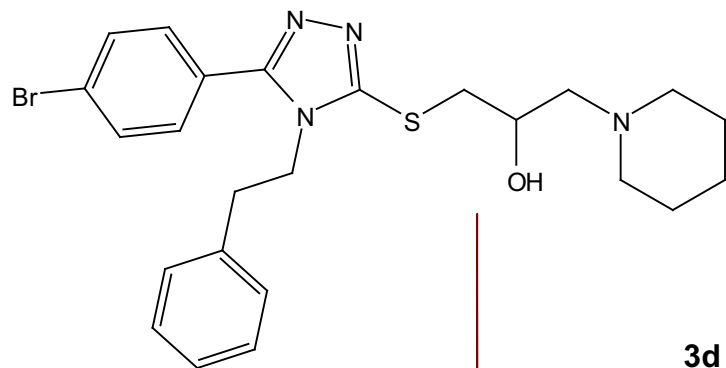


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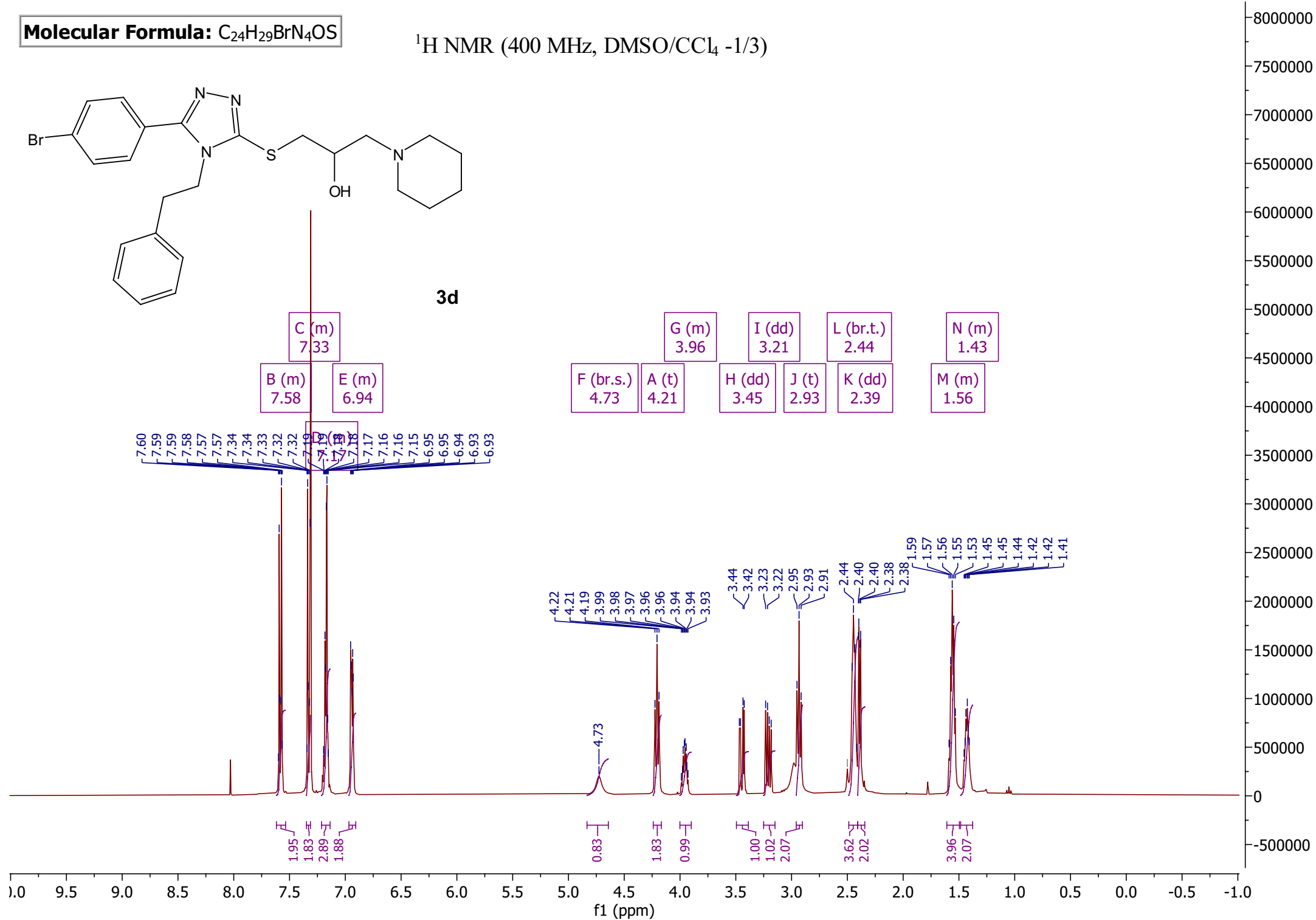


Molecular Formula: C₂₄H₂₉BrN₄OS

¹H NMR (400 MHz, DMSO/CCl₄ -1/3)

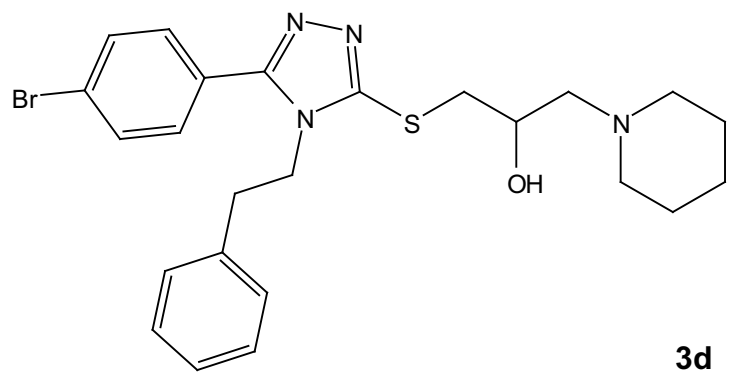


3d

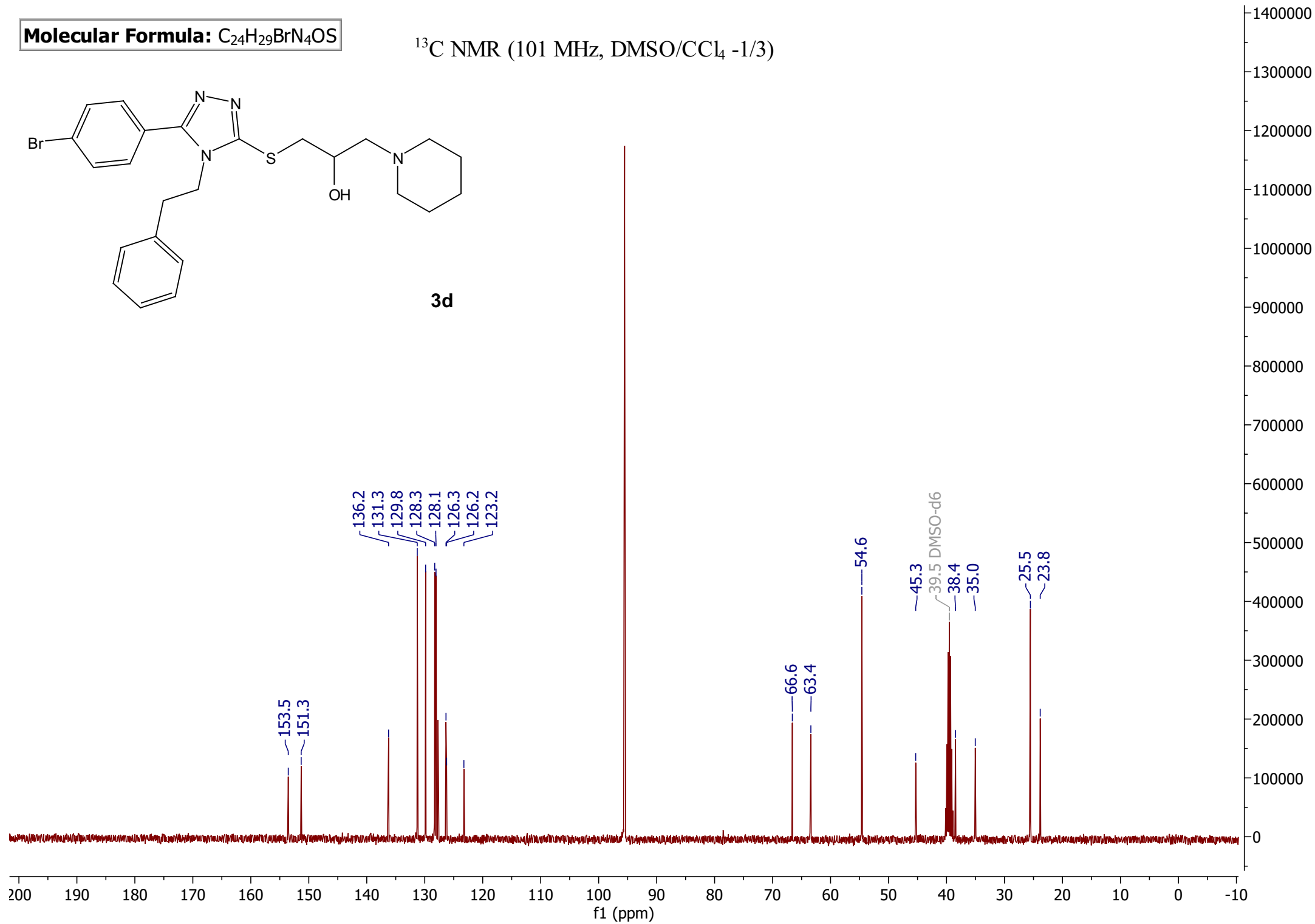


Molecular Formula: C₂₄H₂₉BrN₄OS

¹³C NMR (101 MHz, DMSO/CCl₄ -1/3)

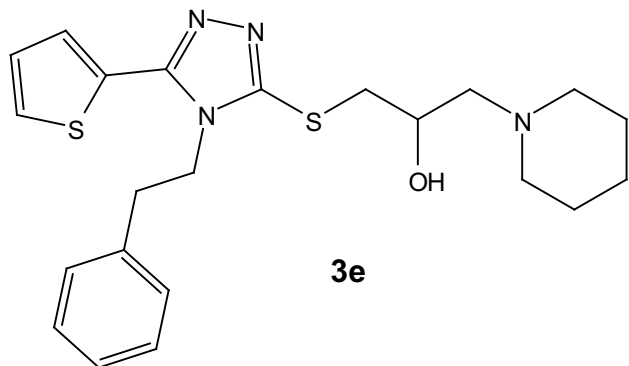


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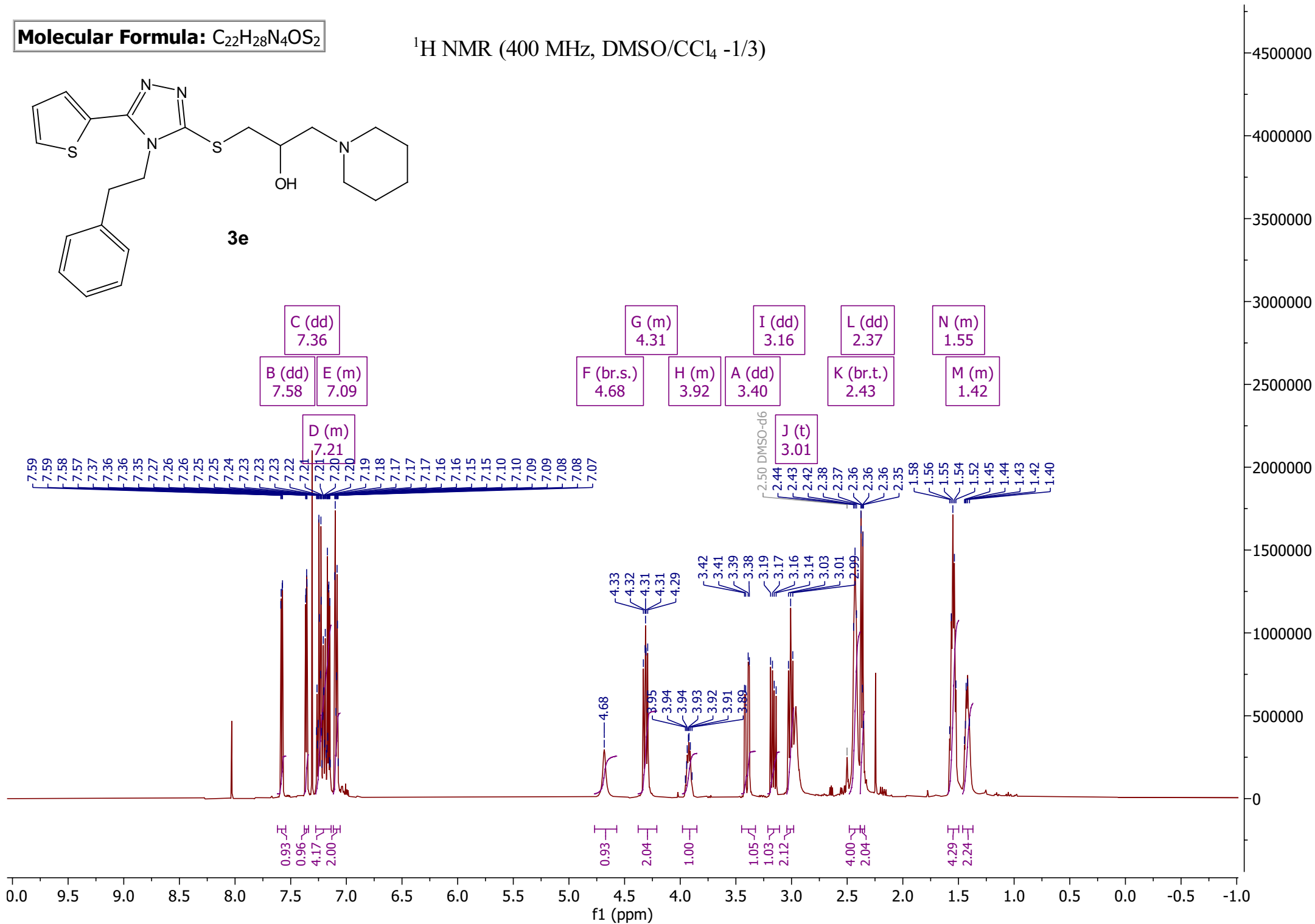


Molecular Formula: C₂₂H₂₈N₄OS₂

¹H NMR (400 MHz, DMSO/CCl₄ -1/3)

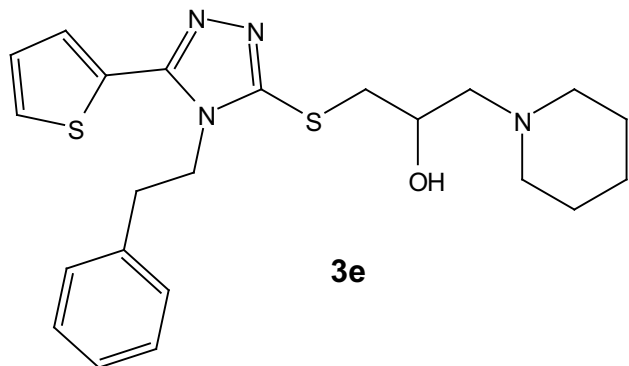


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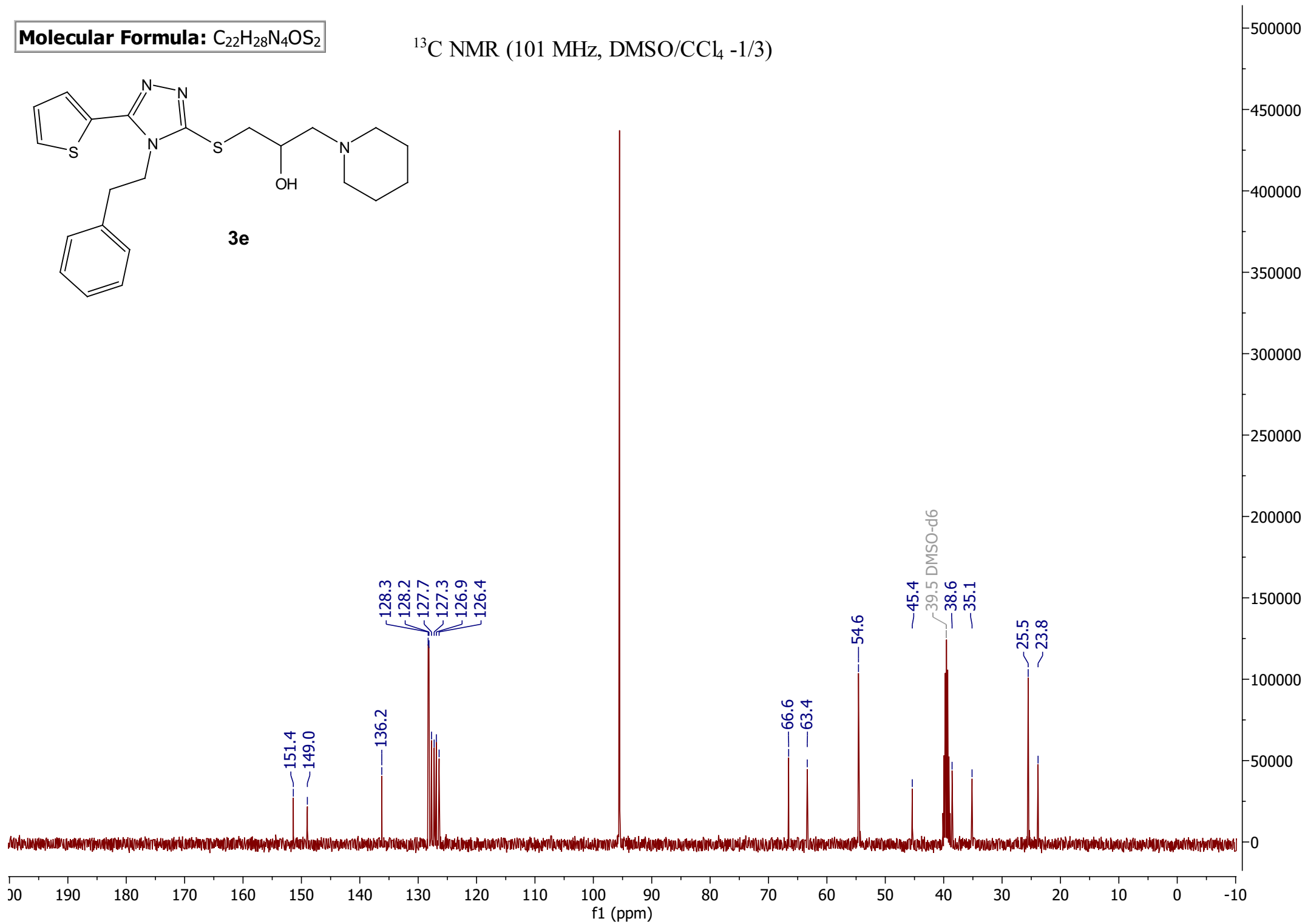


Molecular Formula: C₂₂H₂₈N₄OS₂

¹³C NMR (101 MHz, DMSO/CCl₄ -1/3)

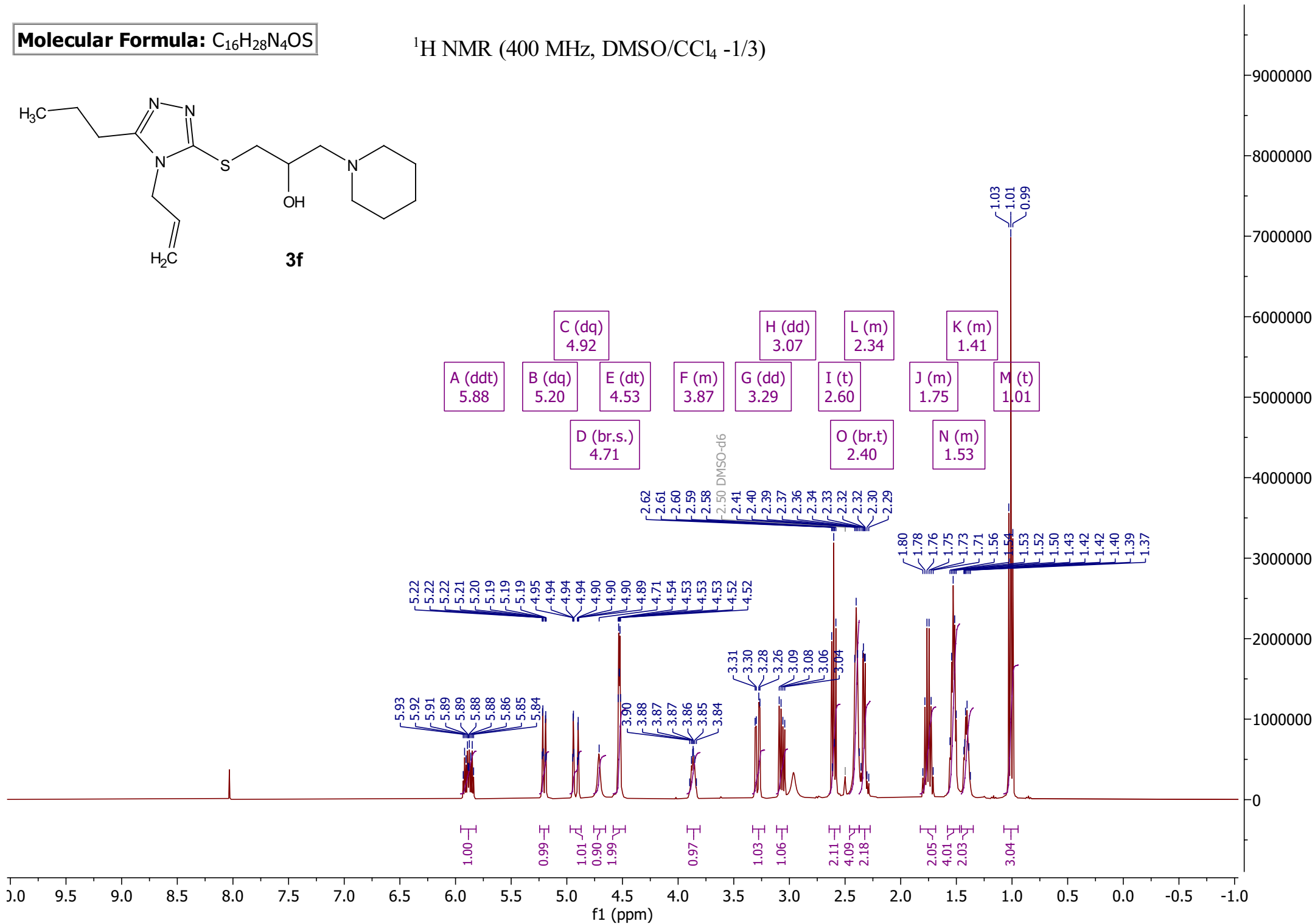
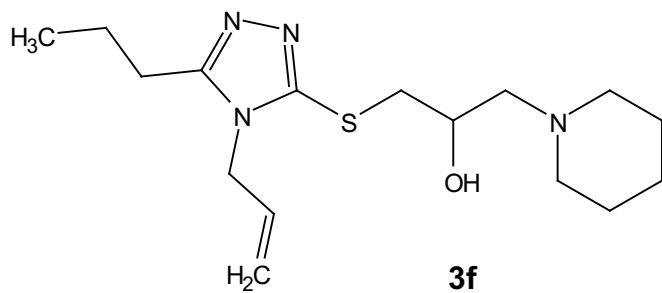


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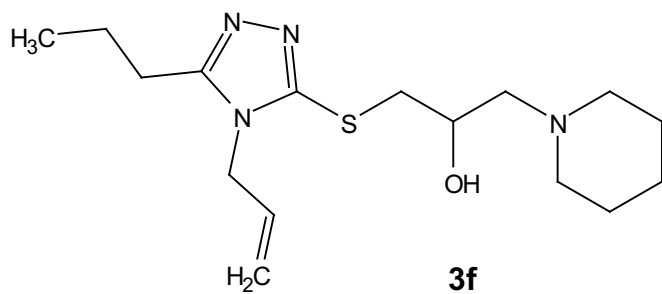
Molecular Formula: C₁₆H₂₈N₄OS

¹H NMR (400 MHz, DMSO/CCl₄ -1/3)

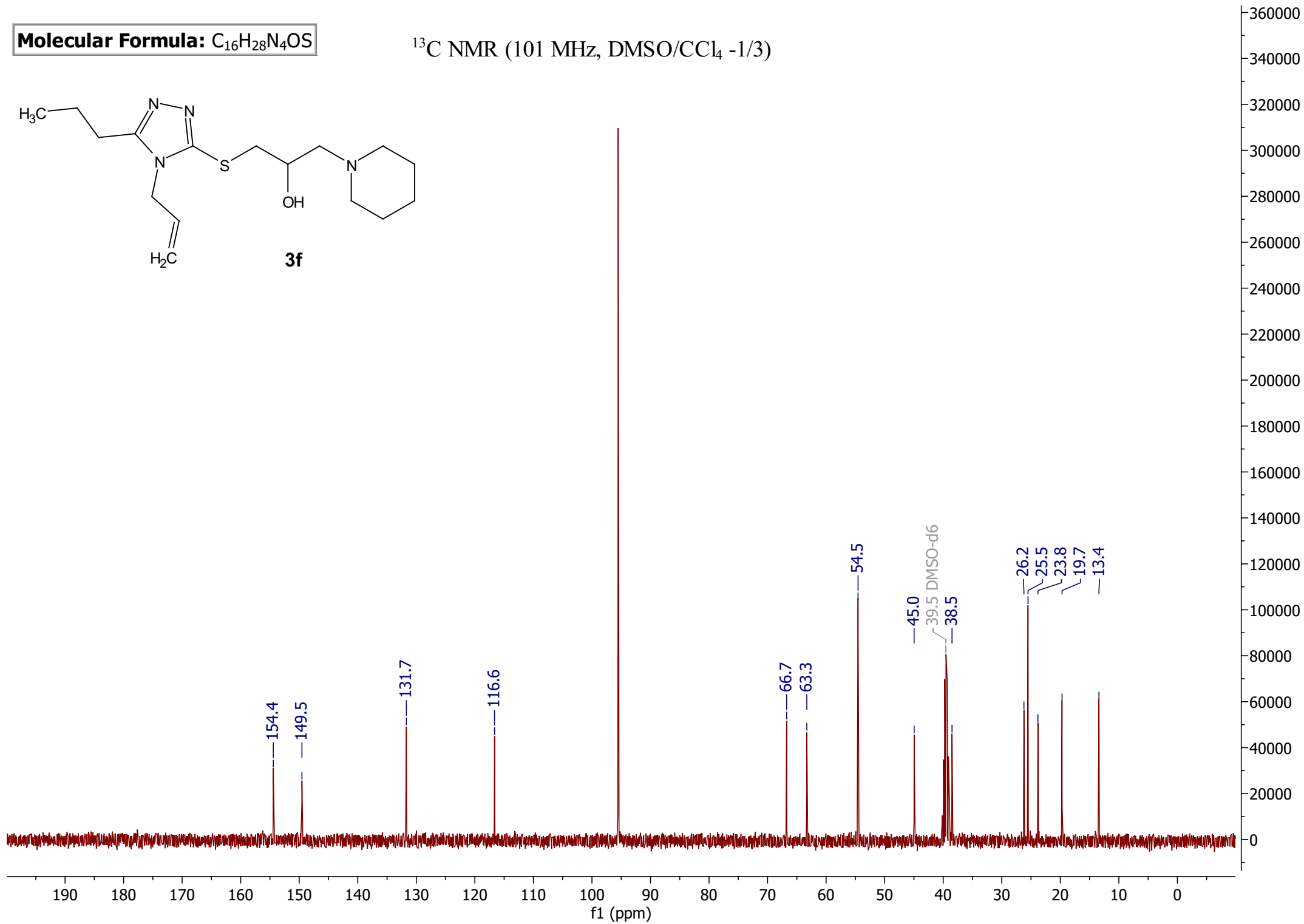


Molecular Formula: C₁₆H₂₈N₄OS

¹³C NMR (101 MHz, DMSO/CCl₄ -1/3)

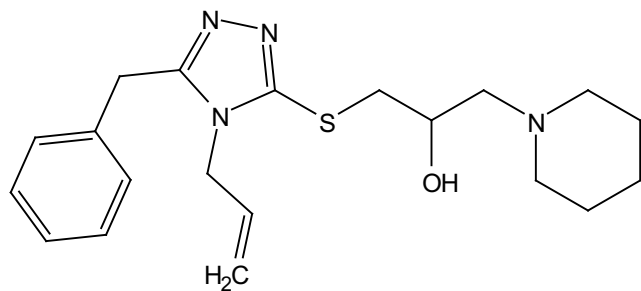


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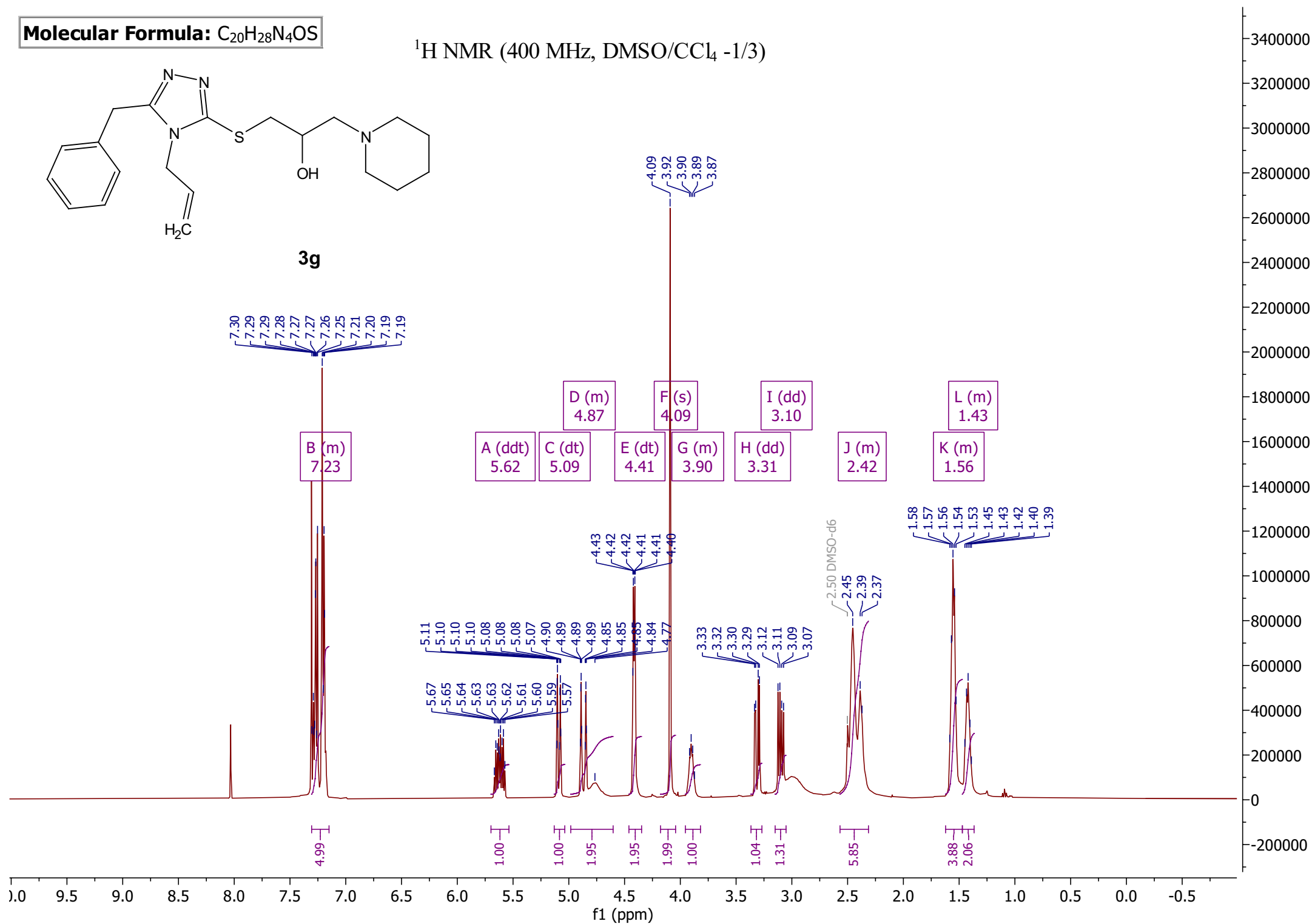


Molecular Formula: C₂₀H₂₈N₄OS

¹H NMR (400 MHz, DMSO/CCl₄ -1/3)

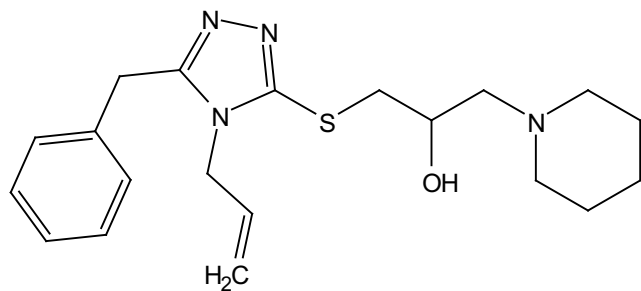


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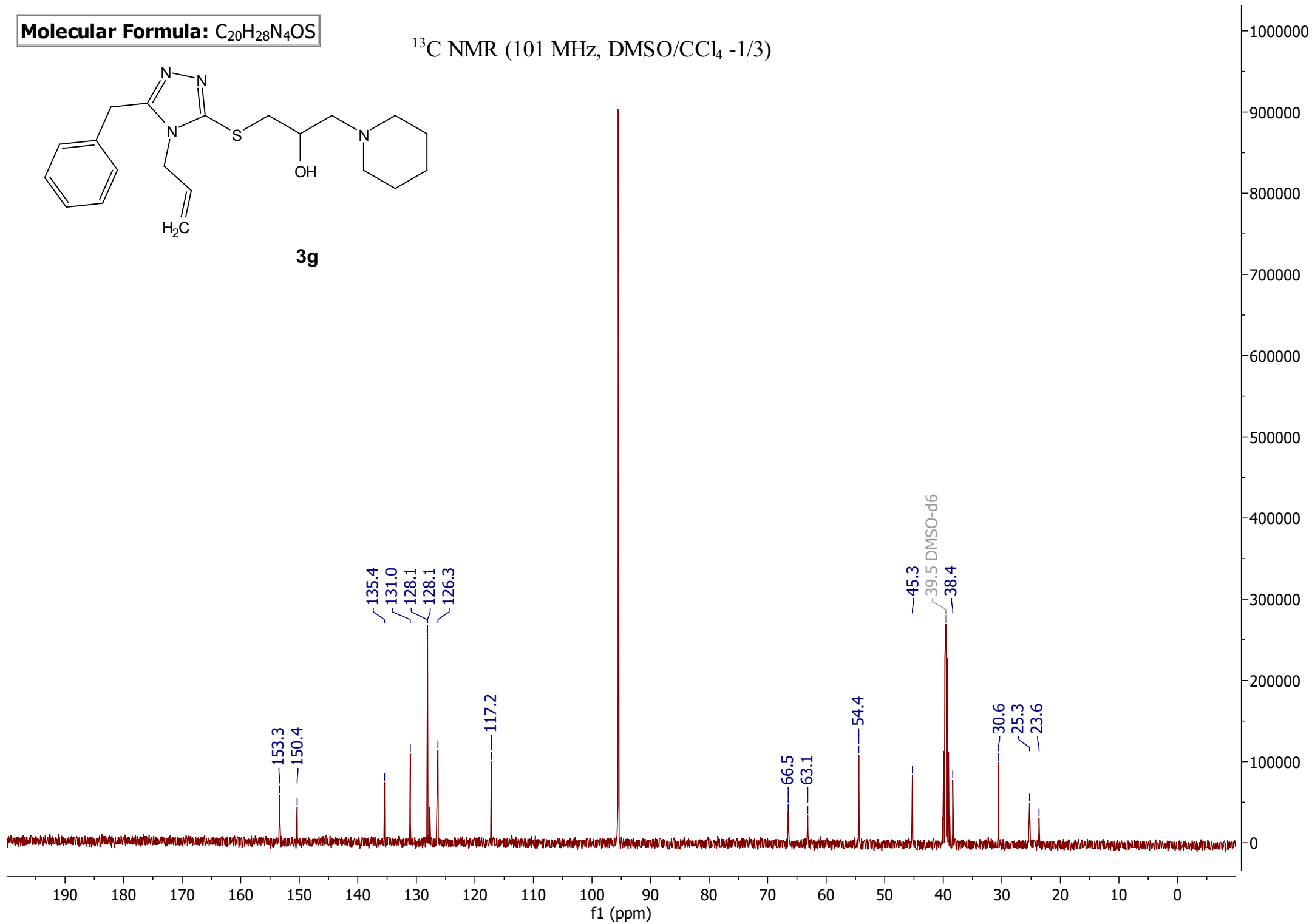


Molecular Formula: C₂₀H₂₈N₄OS

¹³C NMR (101 MHz, DMSO/CCl₄ -1/3)

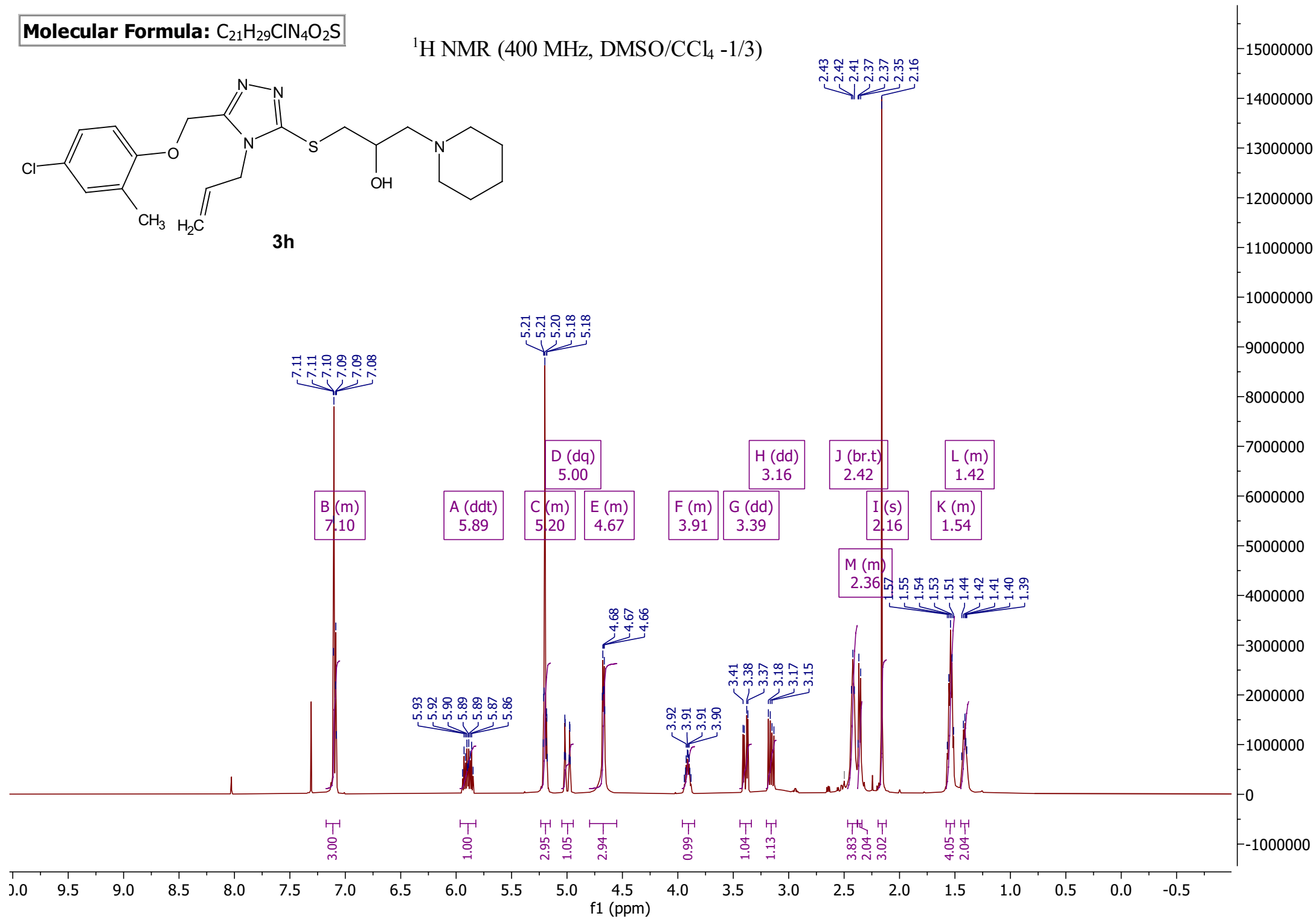
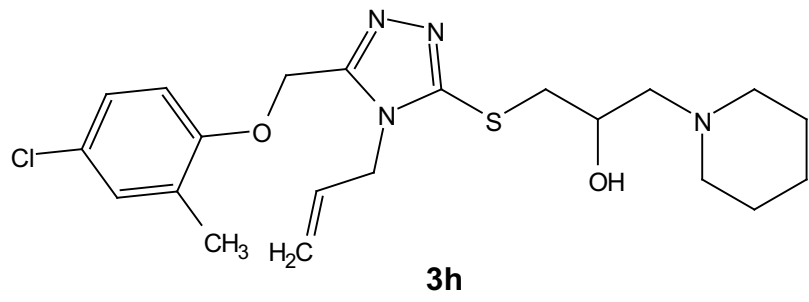


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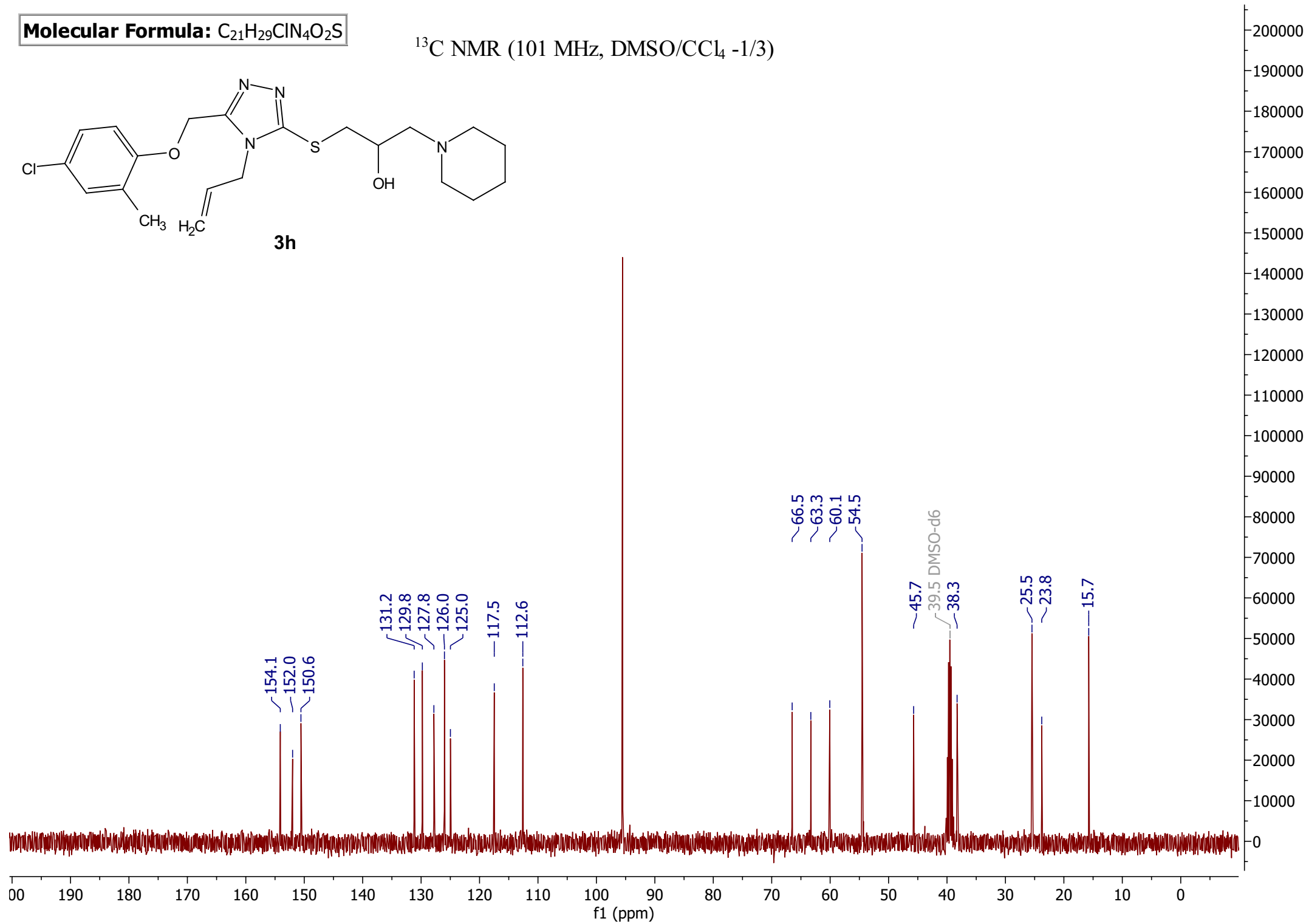
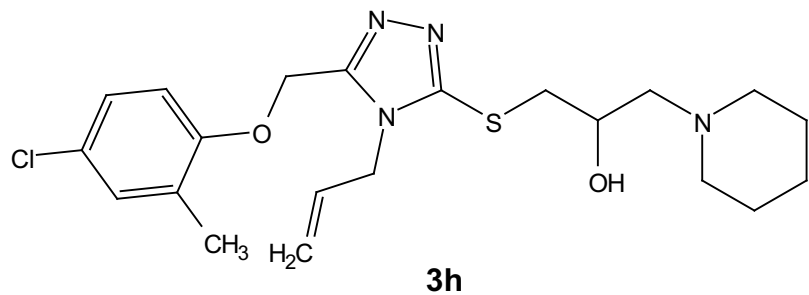
Molecular Formula: C₂₁H₂₉ClN₄O₂S

¹H NMR (400 MHz, DMSO/CCl₄ -1/3)



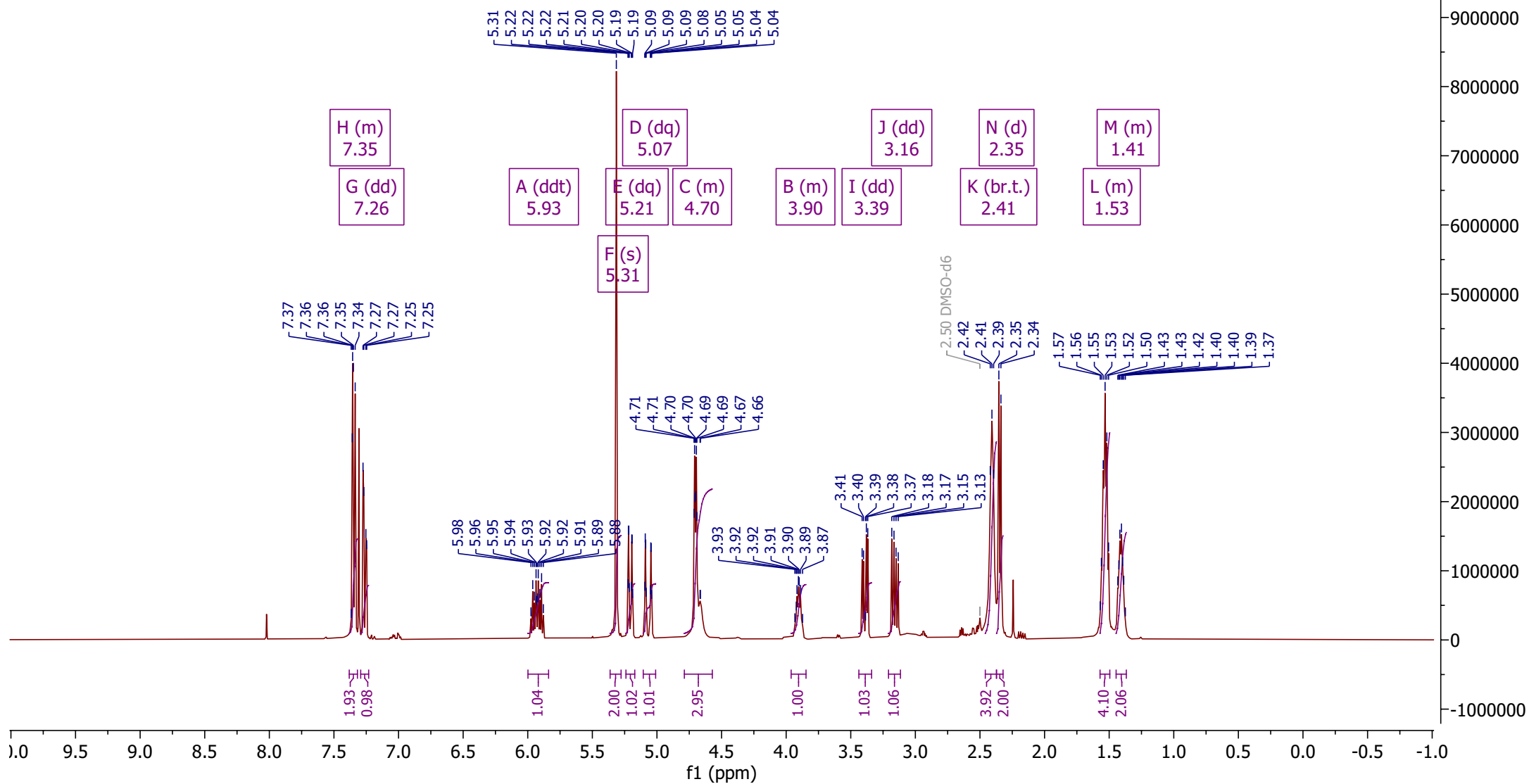
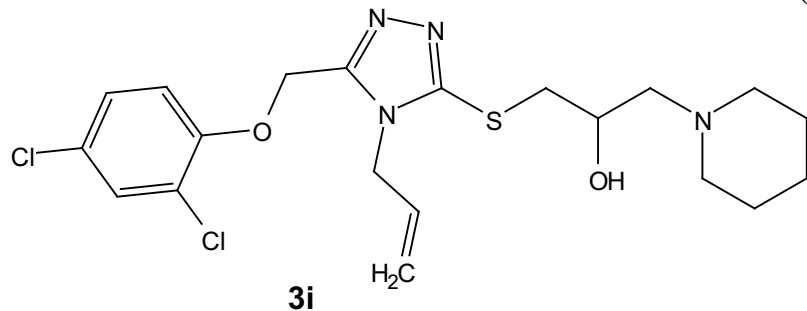
Molecular Formula: C₂₁H₂₉ClN₄O₂S

¹³C NMR (101 MHz, DMSO/CCl₄ -1/3)



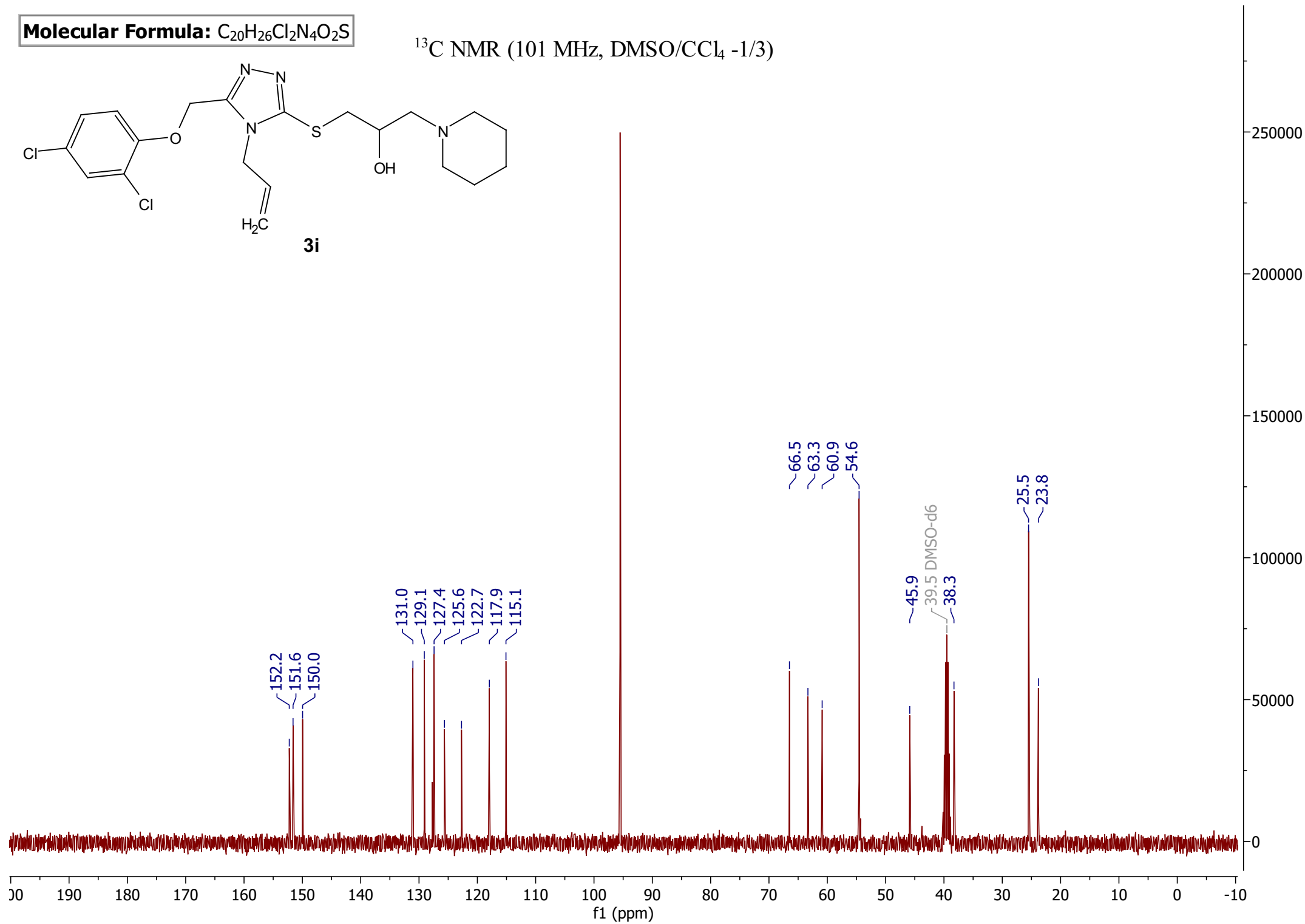
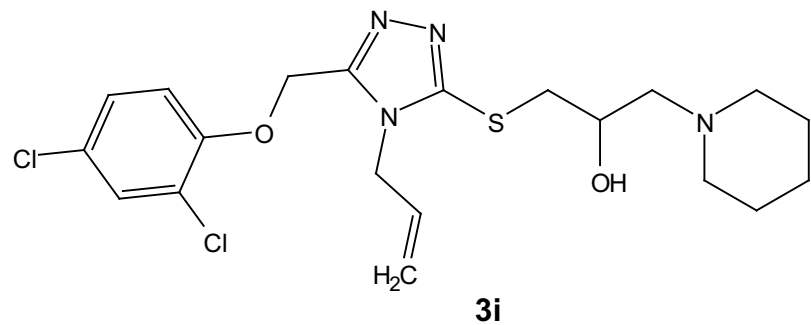
Molecular Formula: C₂₀H₂₆Cl₂N₄O₂S

¹H NMR (400 MHz, DMSO/CCl₄ -1/3)



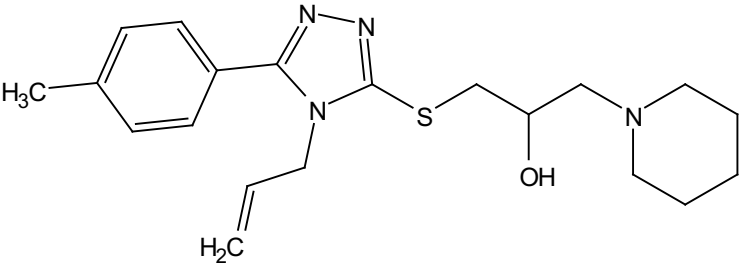
Molecular Formula: C₂₀H₂₆Cl₂N₄O₂S

¹³C NMR (101 MHz, DMSO/CCl₄ -1/3)

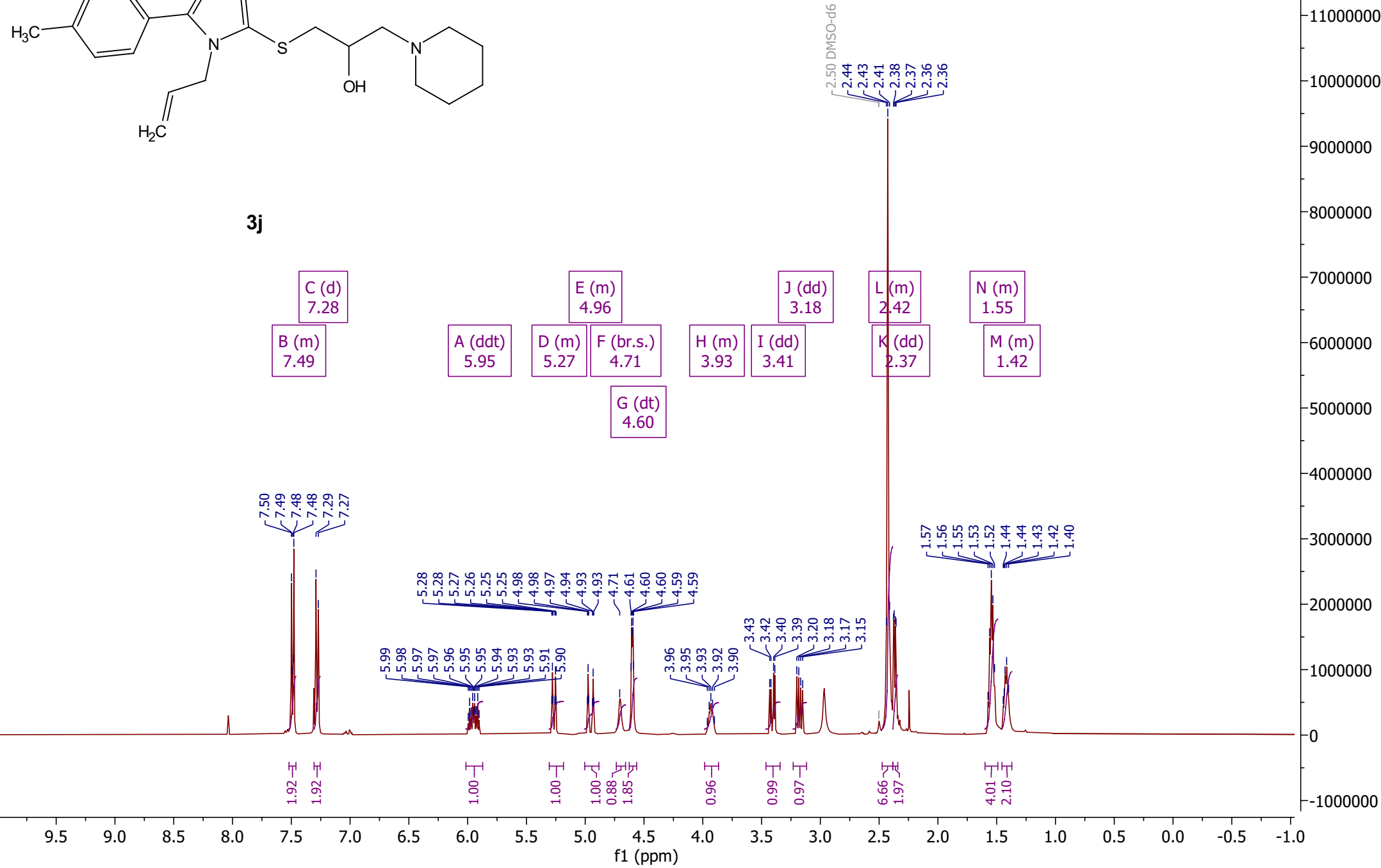


Molecular Formula: C₂₀H₂₈N₄OS

¹H NMR (400 MHz, DMSO/CCl₄ -1/3)

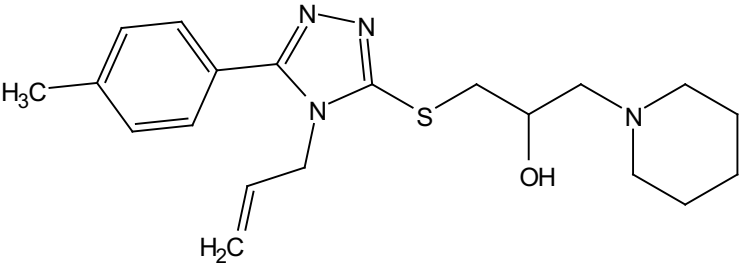


3j

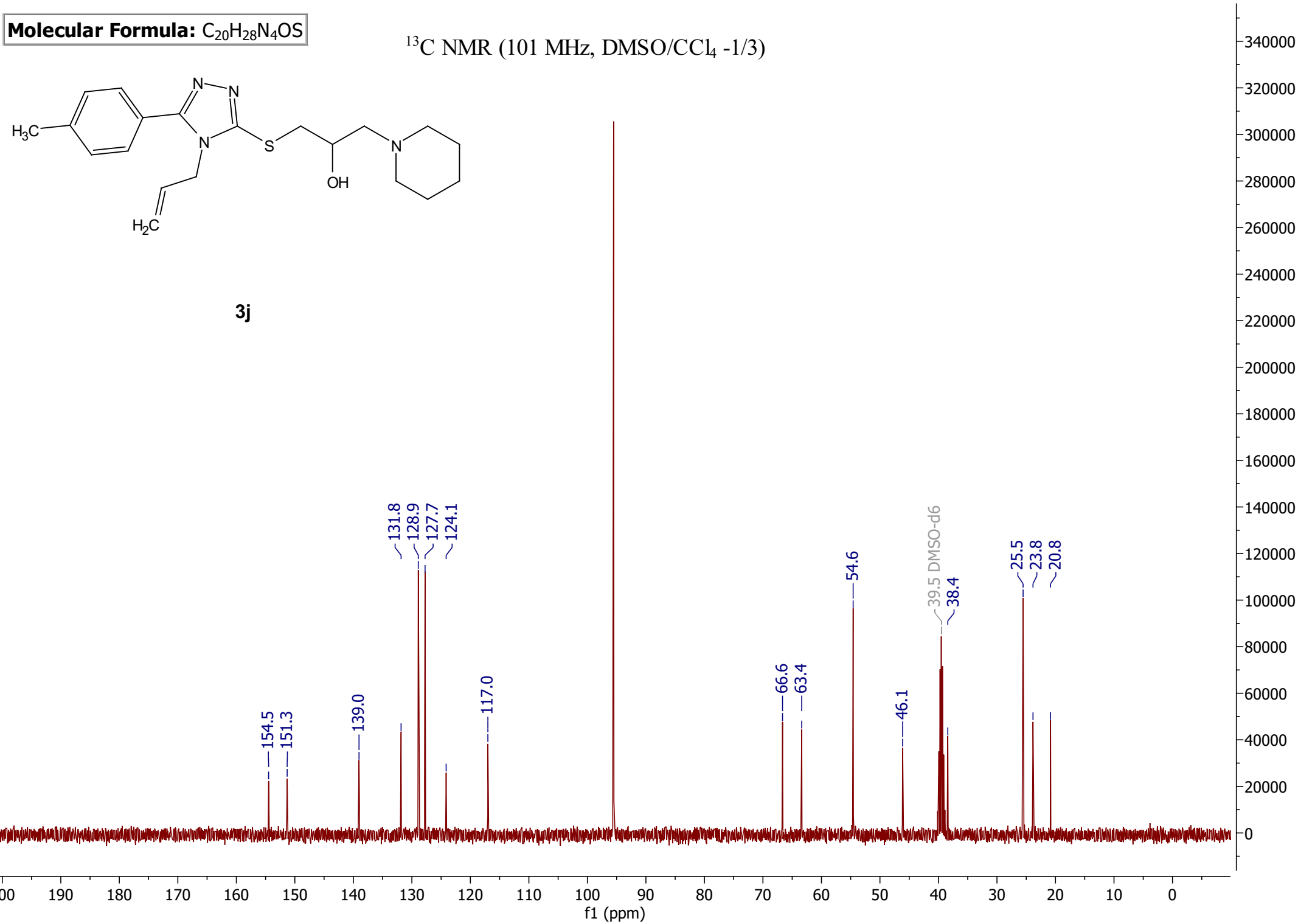


Molecular Formula: C₂₀H₂₈N₄OS

¹³C NMR (101 MHz, DMSO/CCl₄ -1/3)

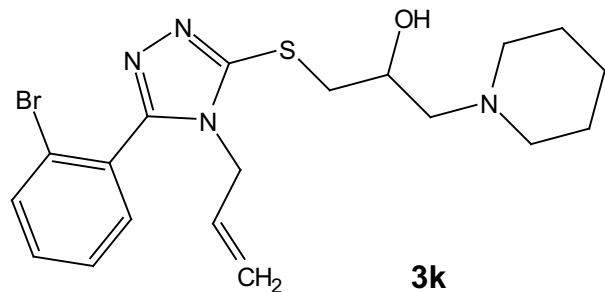


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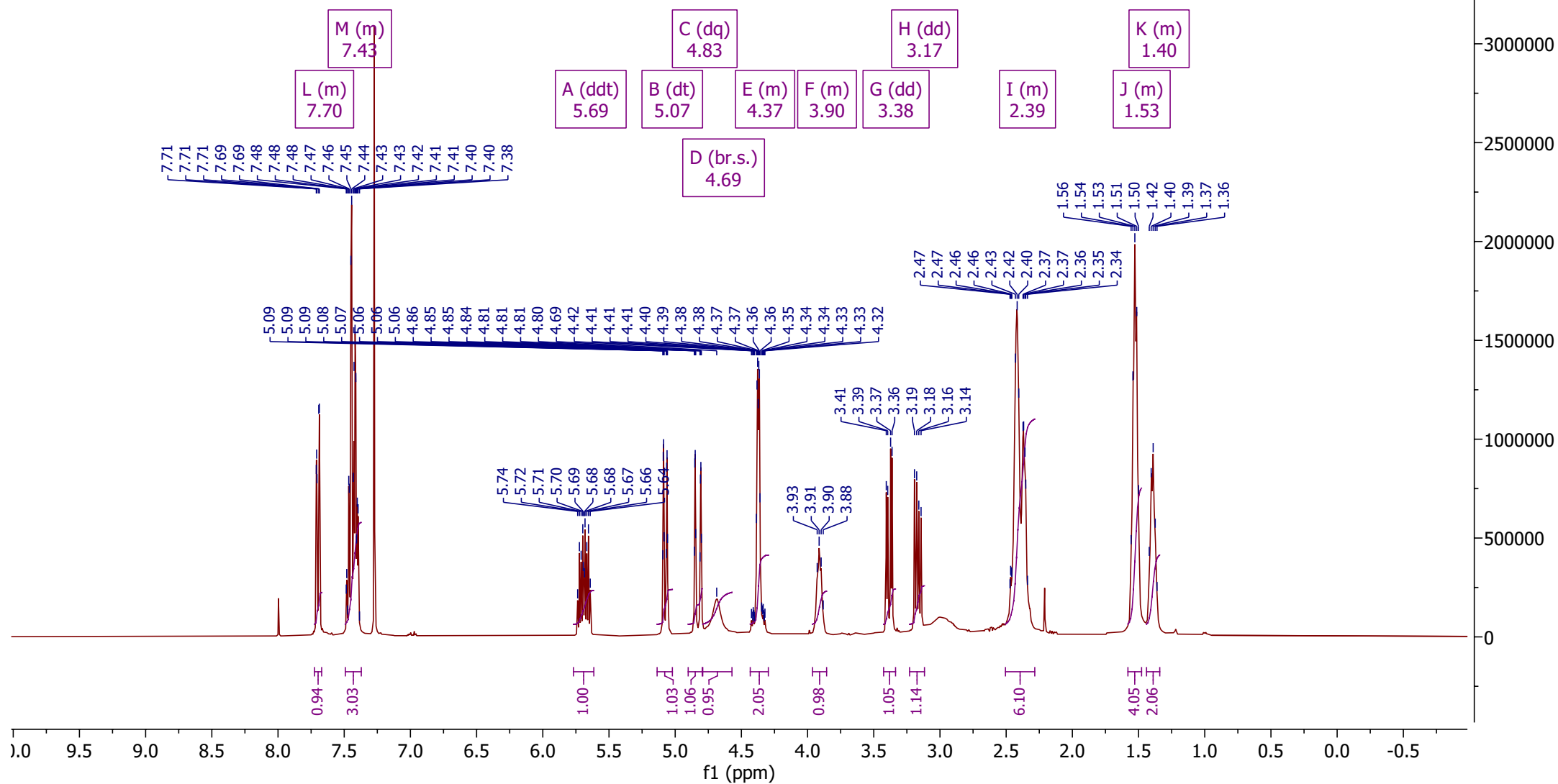


Molecular Formula: C₁₉H₂₅BrN₄OS

¹H NMR (400 MHz, DMSO/CCl₄ -1/3)

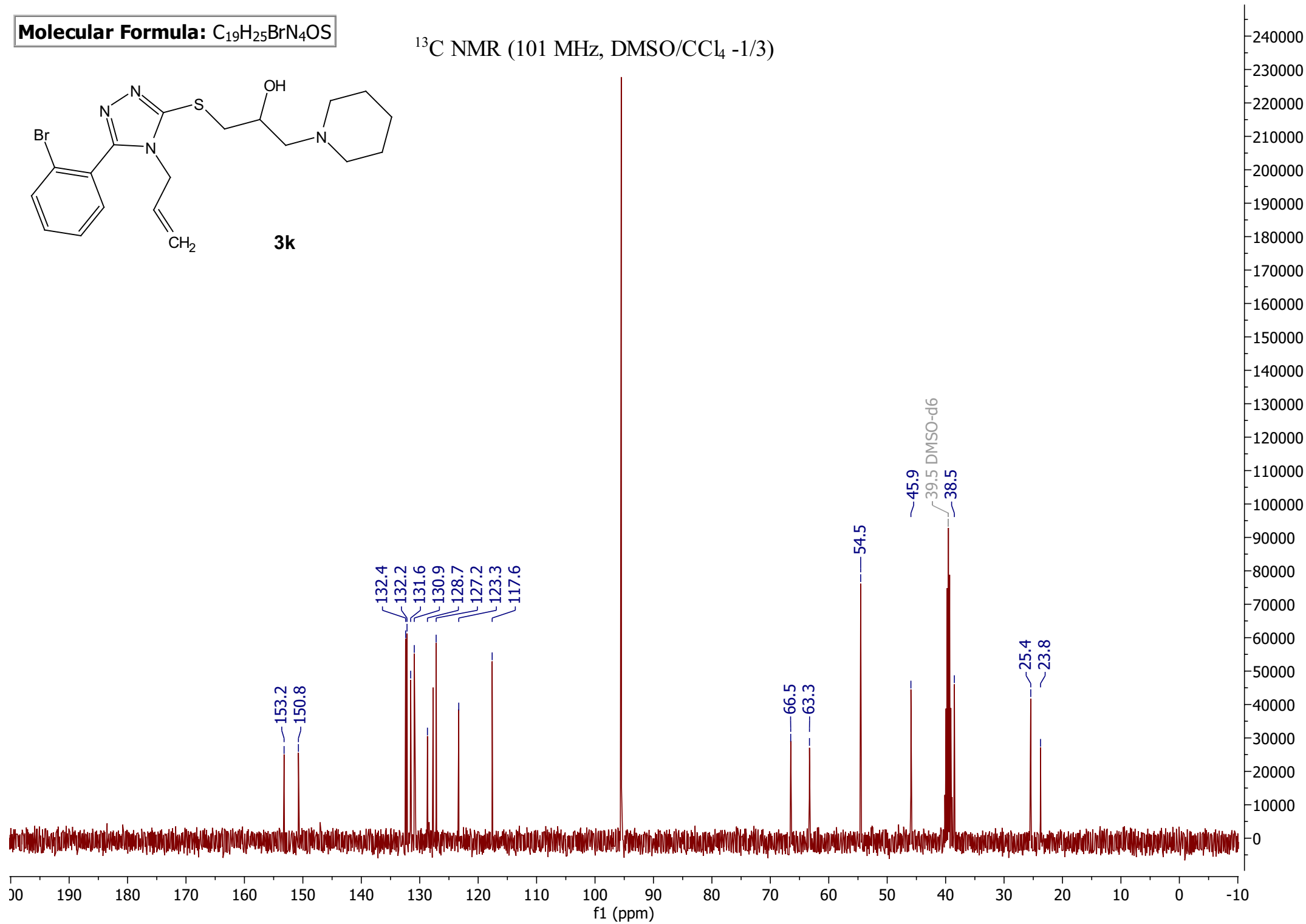
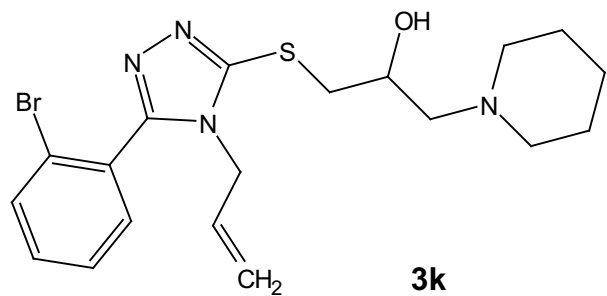


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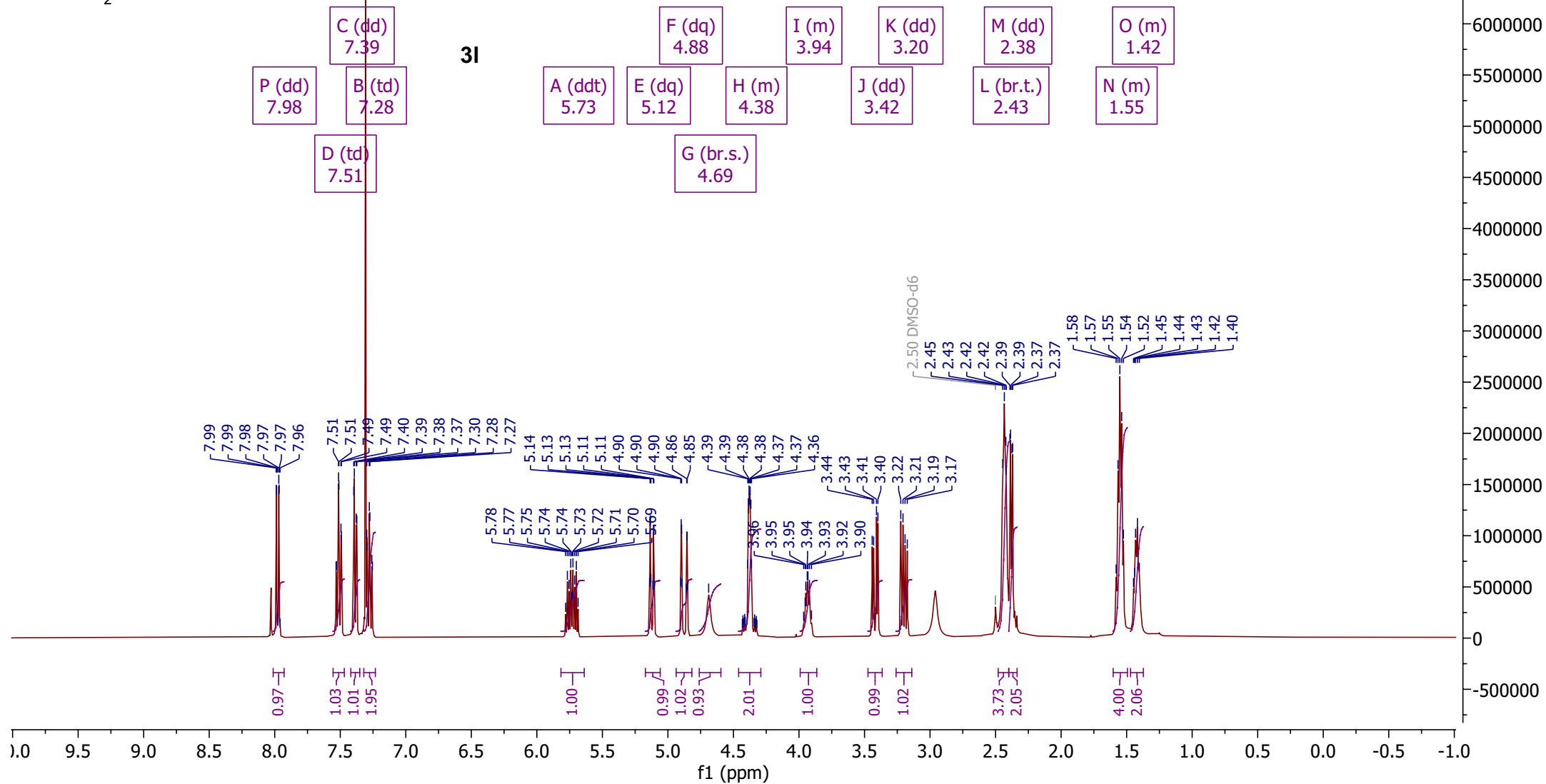
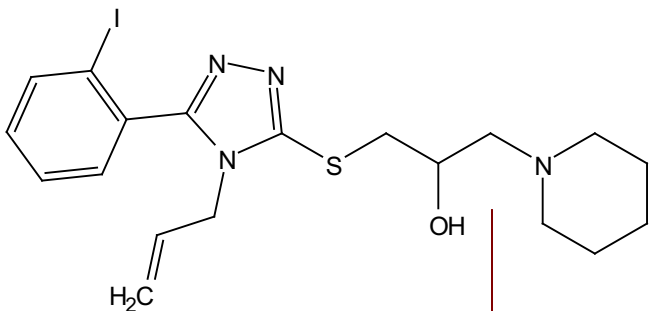
Molecular Formula: C₁₉H₂₅BrN₄OS

¹³C NMR (101 MHz, DMSO/CCl₄ -1/3)



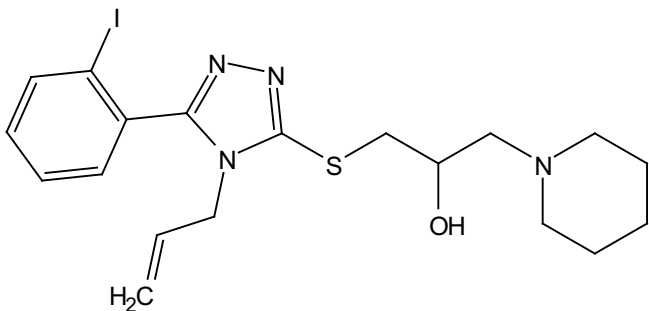
Molecular Formula: C₁₉H₂₅IN₄OS

¹H NMR (400 MHz, DMSO/CCl₄ -1/3)

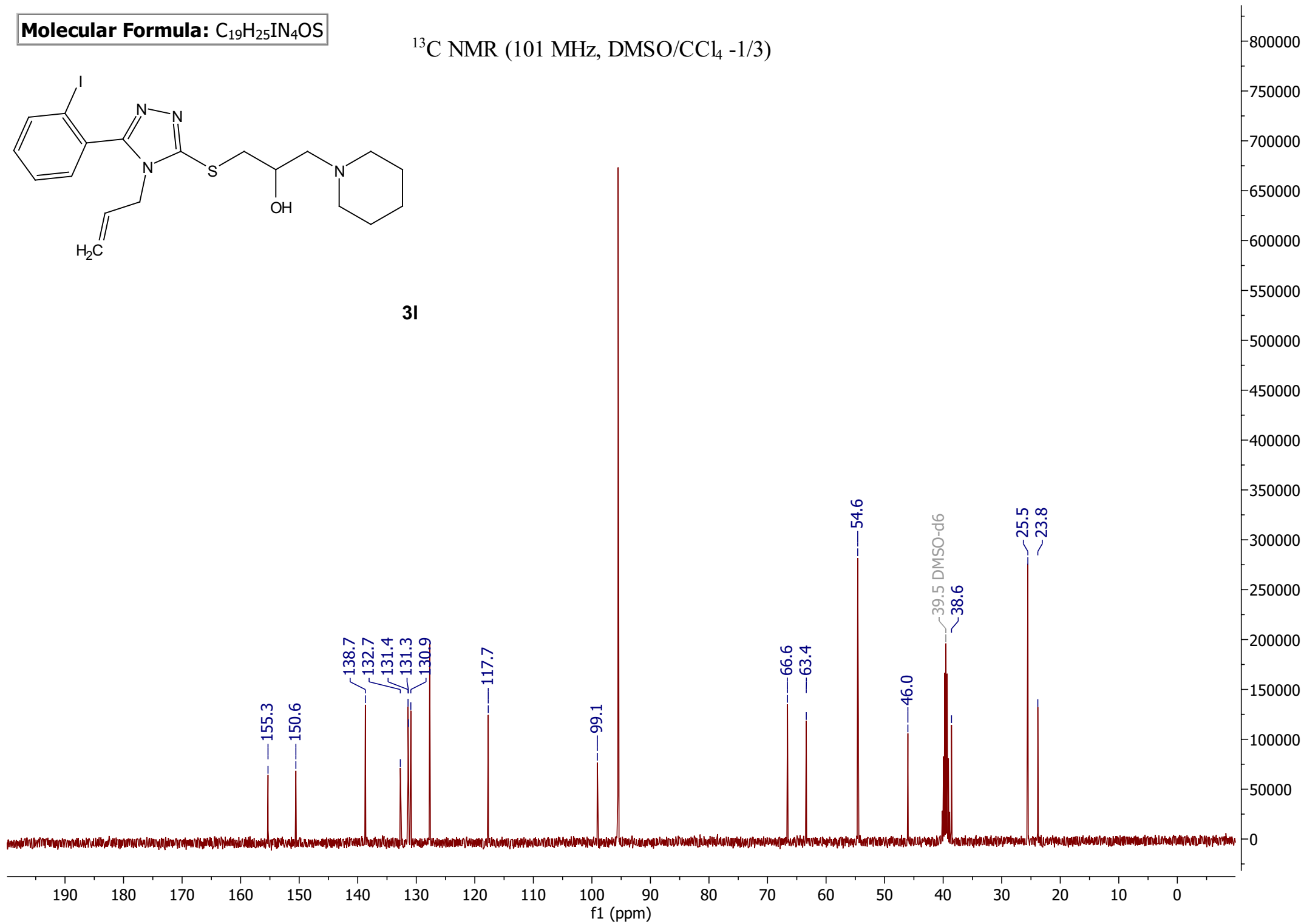


Molecular Formula: C₁₉H₂₅IN₄OS

¹³C NMR (101 MHz, DMSO/CCl₄ -1/3)

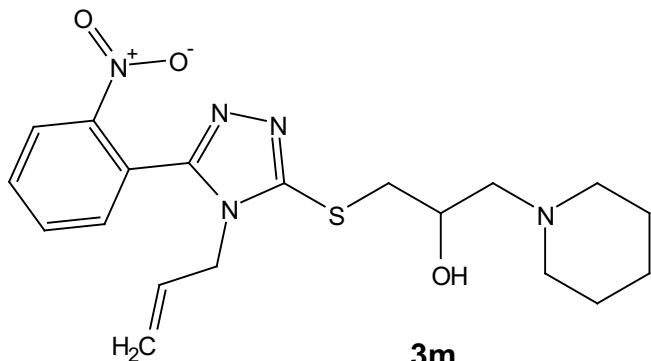


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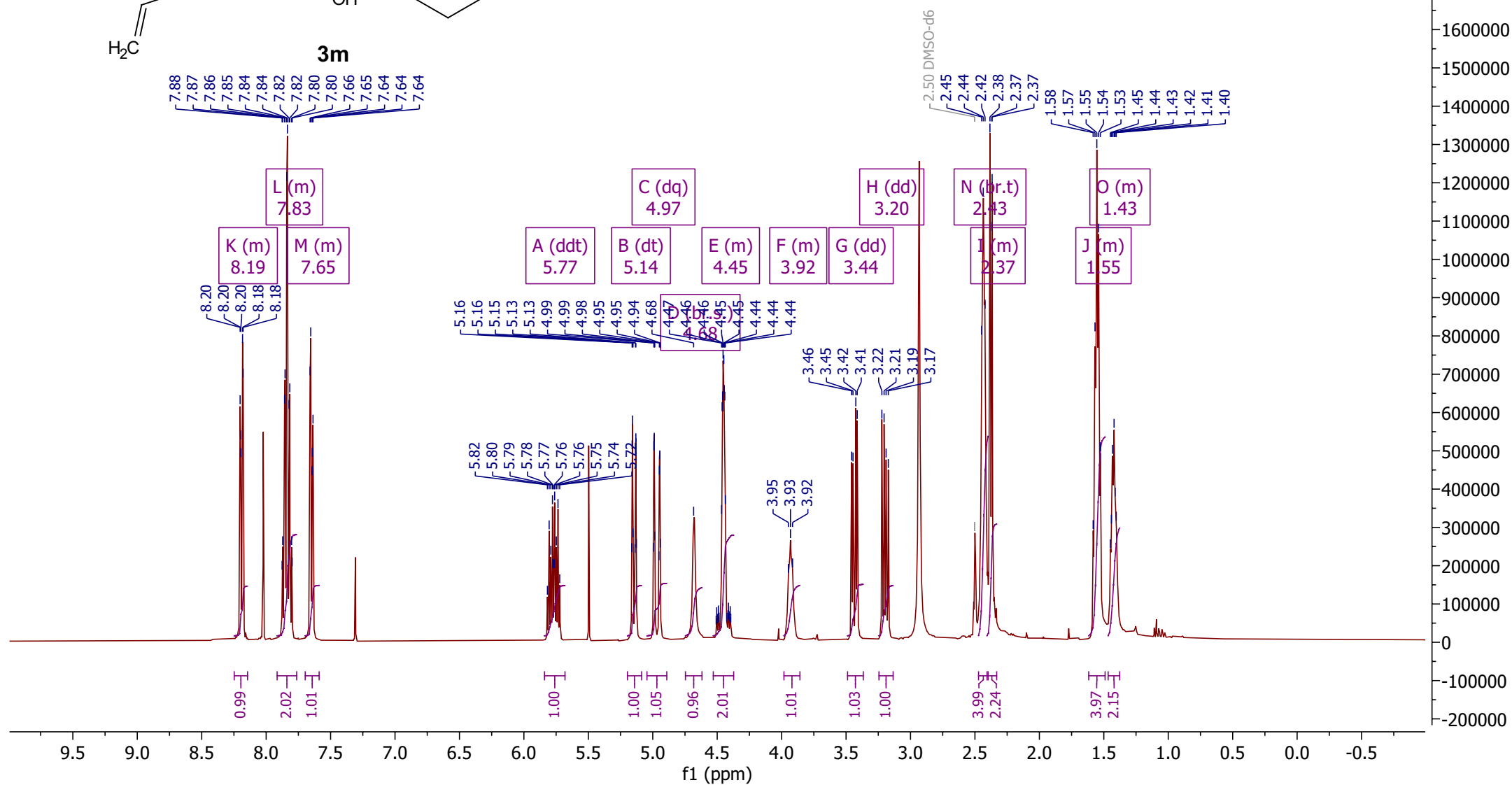


Molecular Formula: C₁₉H₂₅N₅O₃S

¹H NMR (400 MHz, DMSO/CCl₄ -1/3)

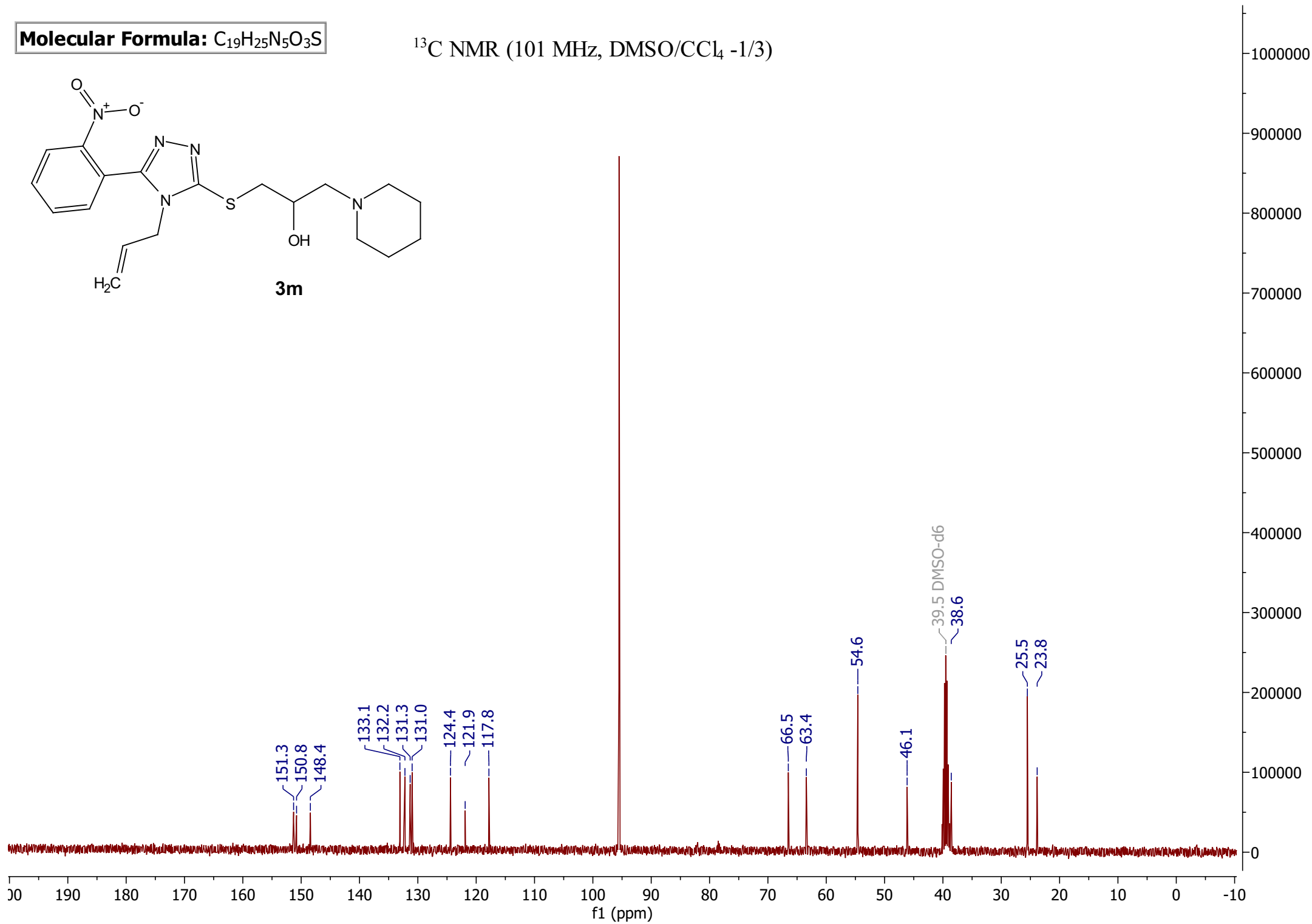
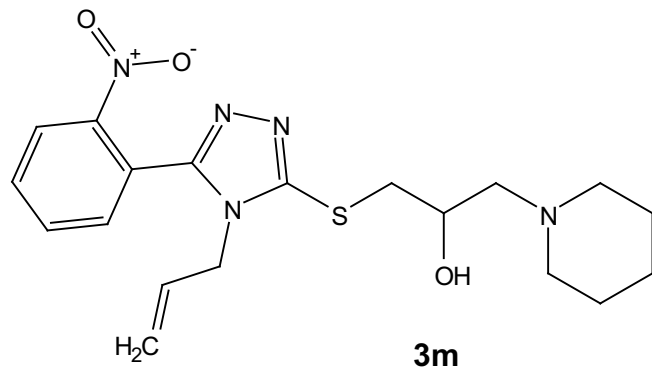


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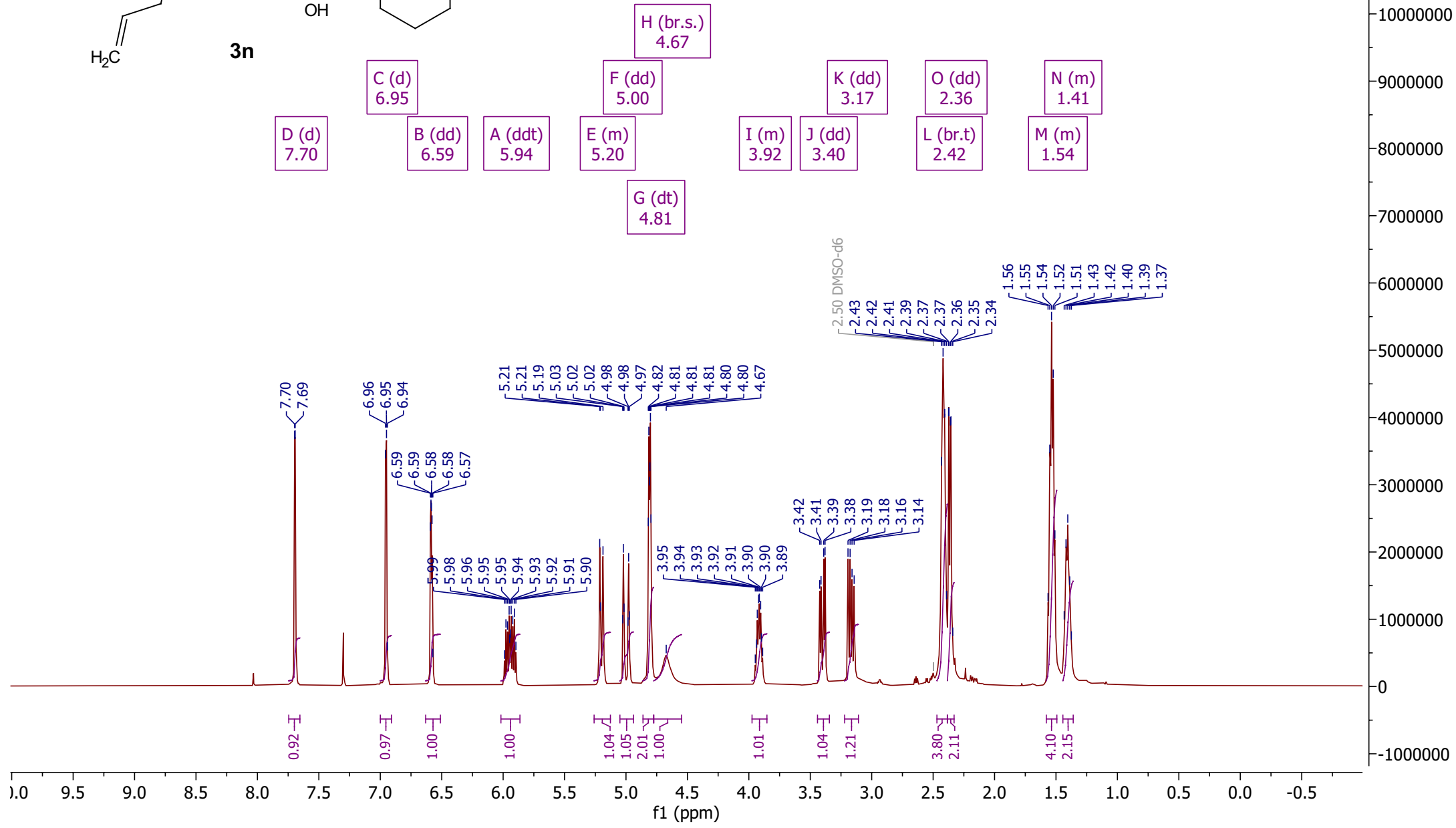
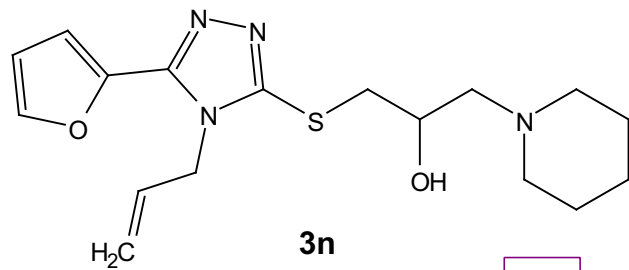
Molecular Formula: C₁₉H₂₅N₅O₃S

¹³C NMR (101 MHz, DMSO/CCl₄ -1/3)



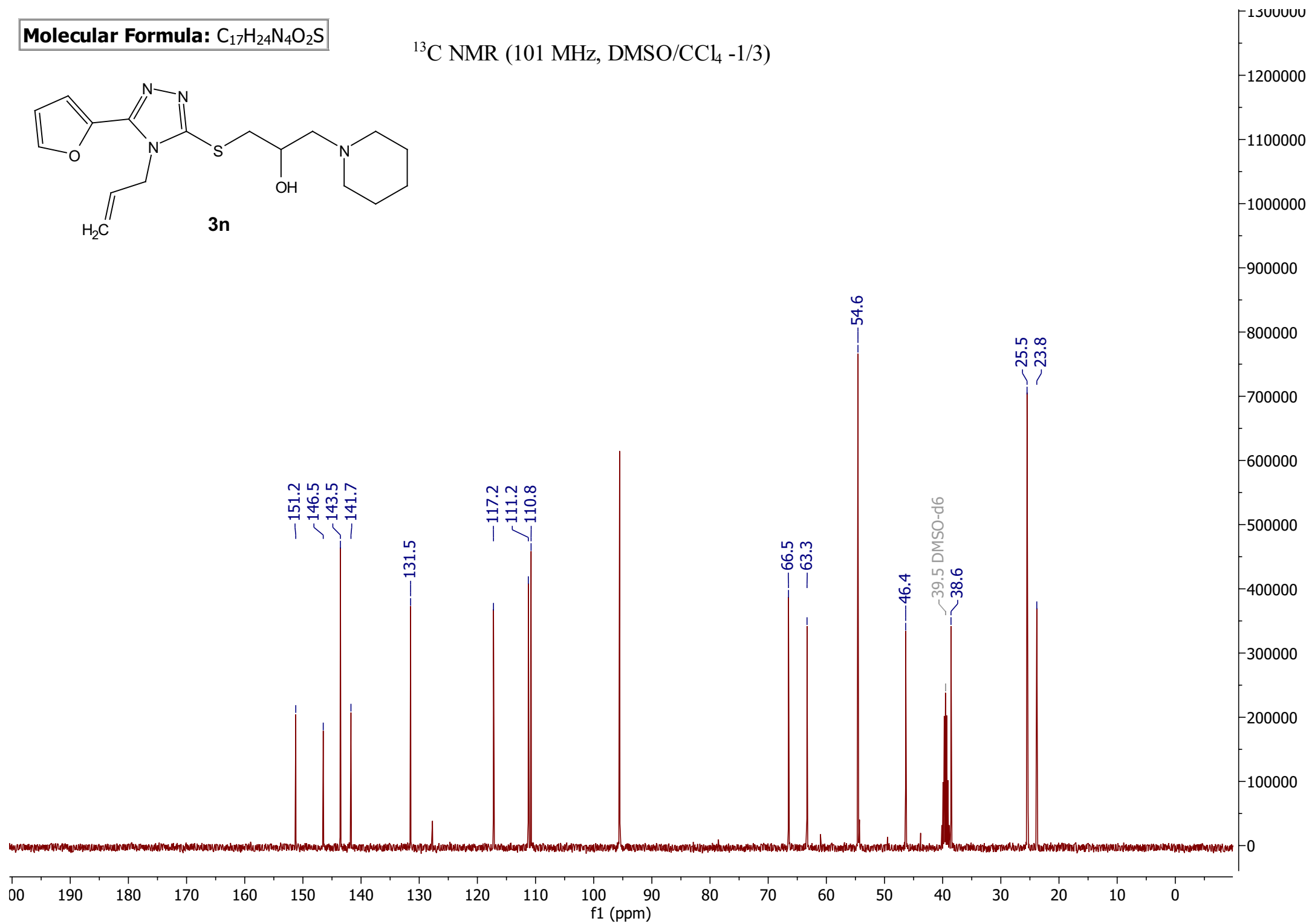
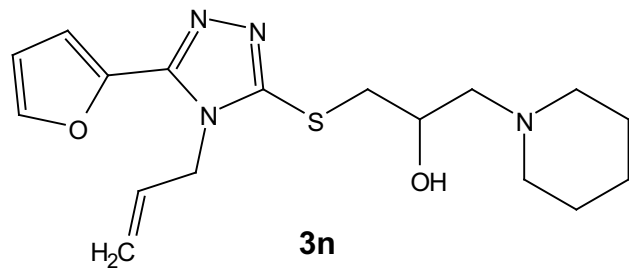
Molecular Formula: C₁₇H₂₄N₄O₂S

¹H NMR (400 MHz, DMSO/CCl₄ -1/3)



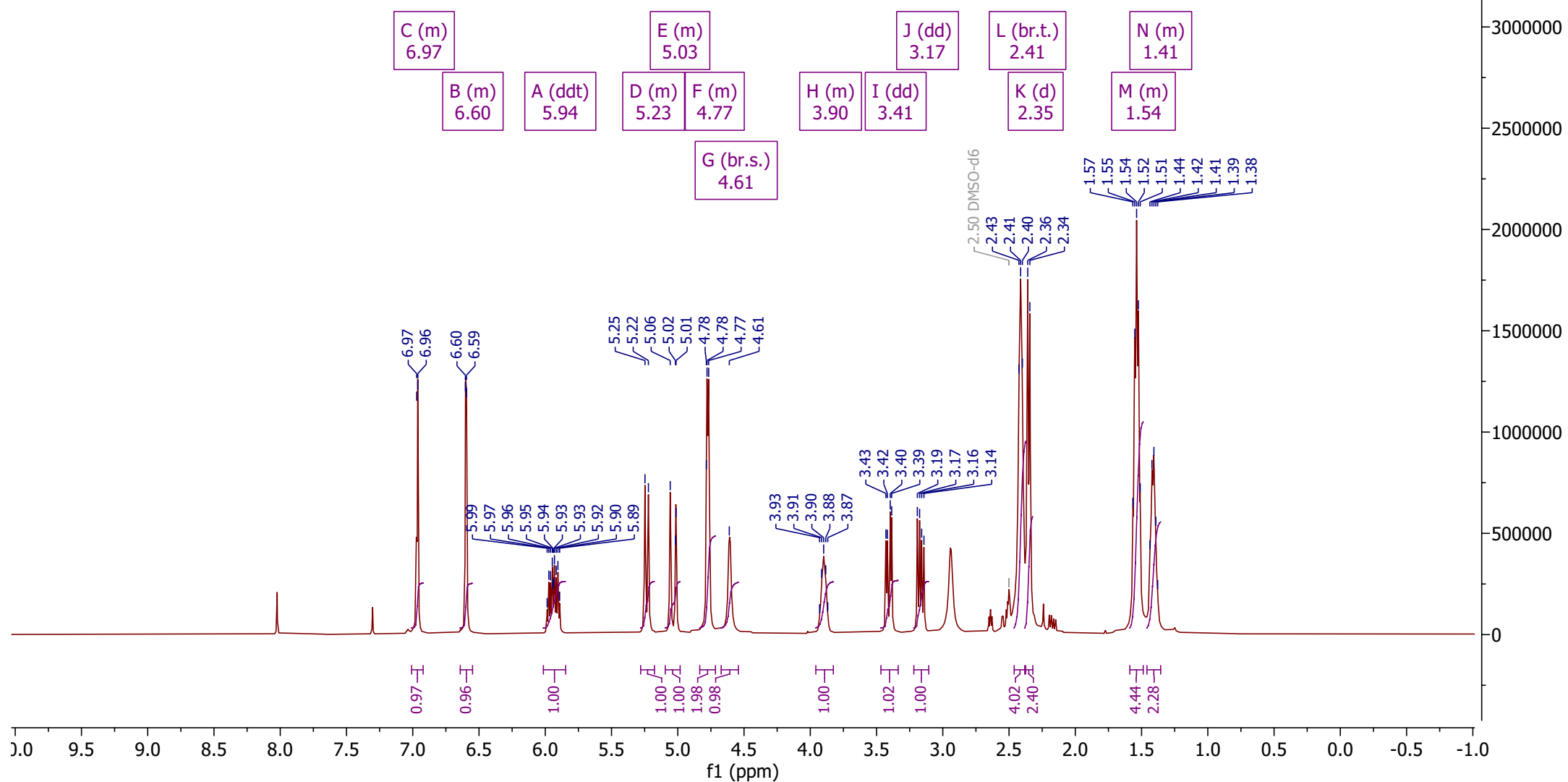
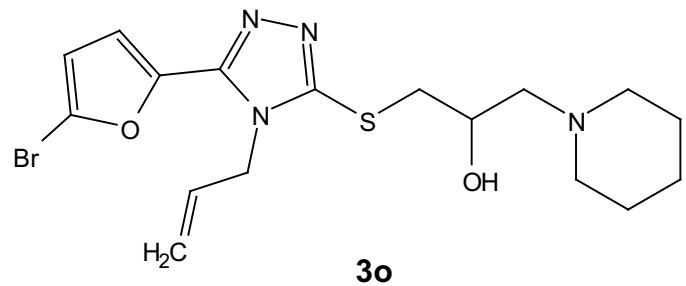
Molecular Formula: C₁₇H₂₄N₄O₂S

¹³C NMR (101 MHz, DMSO/CCl₄ -1/3)



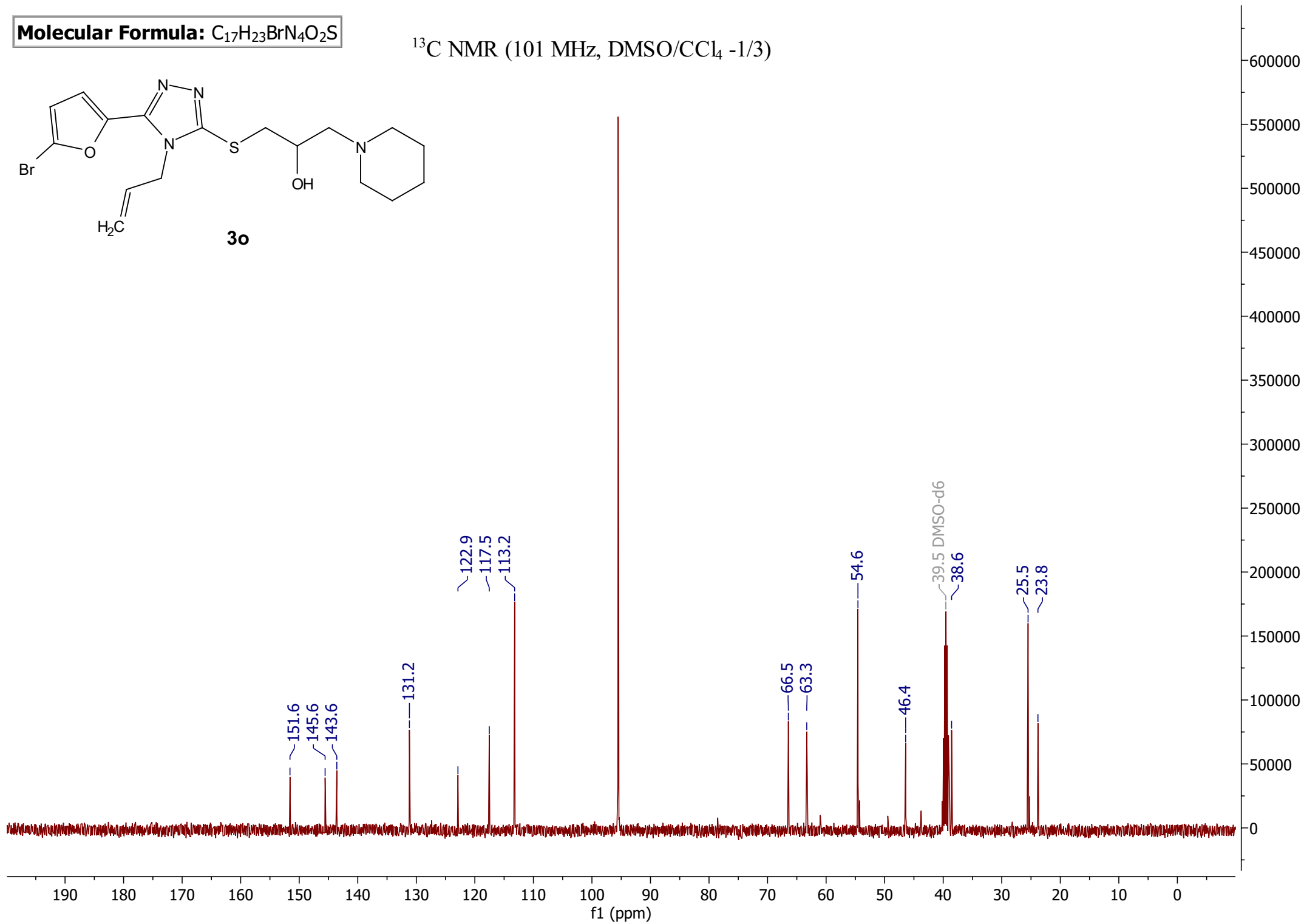
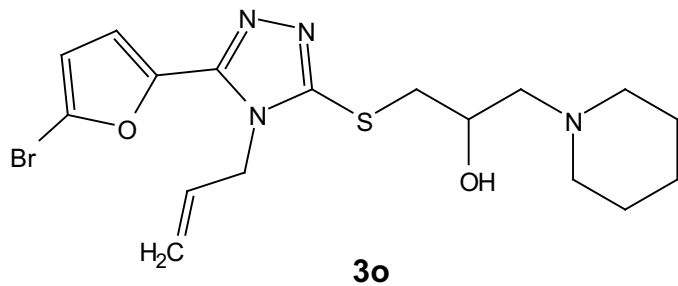
Molecular Formula: C₁₇H₂₃BrN₄O₂S

¹H NMR (400 MHz, DMSO/CCl₄ -1/3)



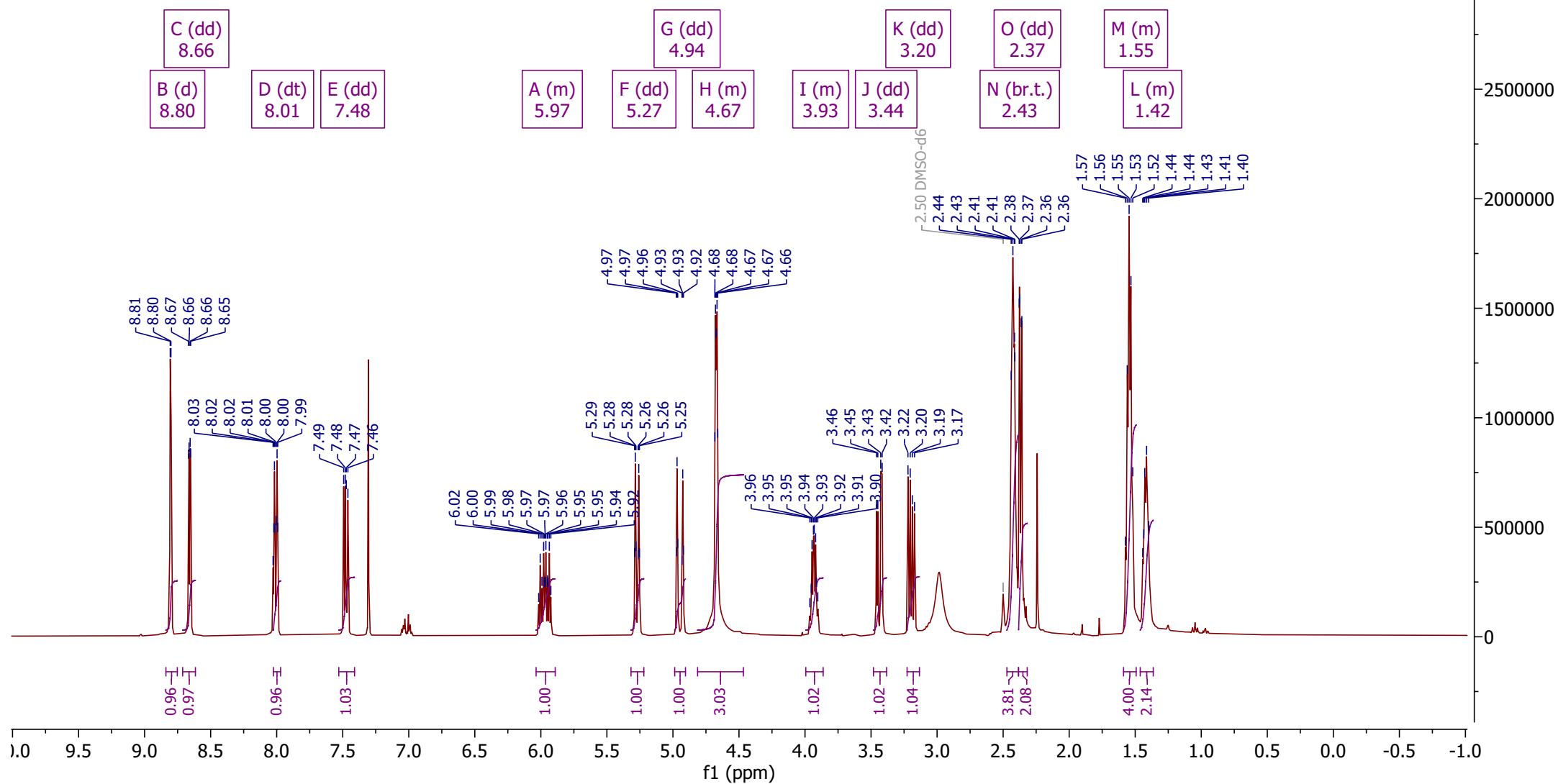
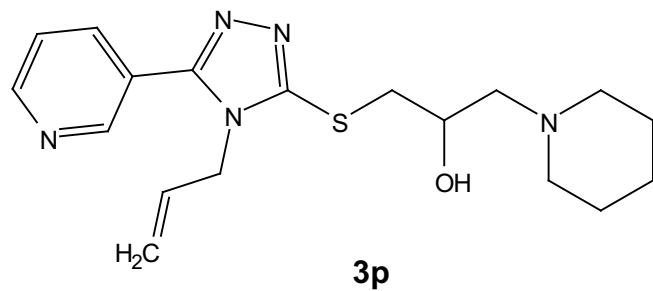
Molecular Formula: C₁₇H₂₃BrN₄O₂S

¹³C NMR (101 MHz, DMSO/CCl₄ -1/3)



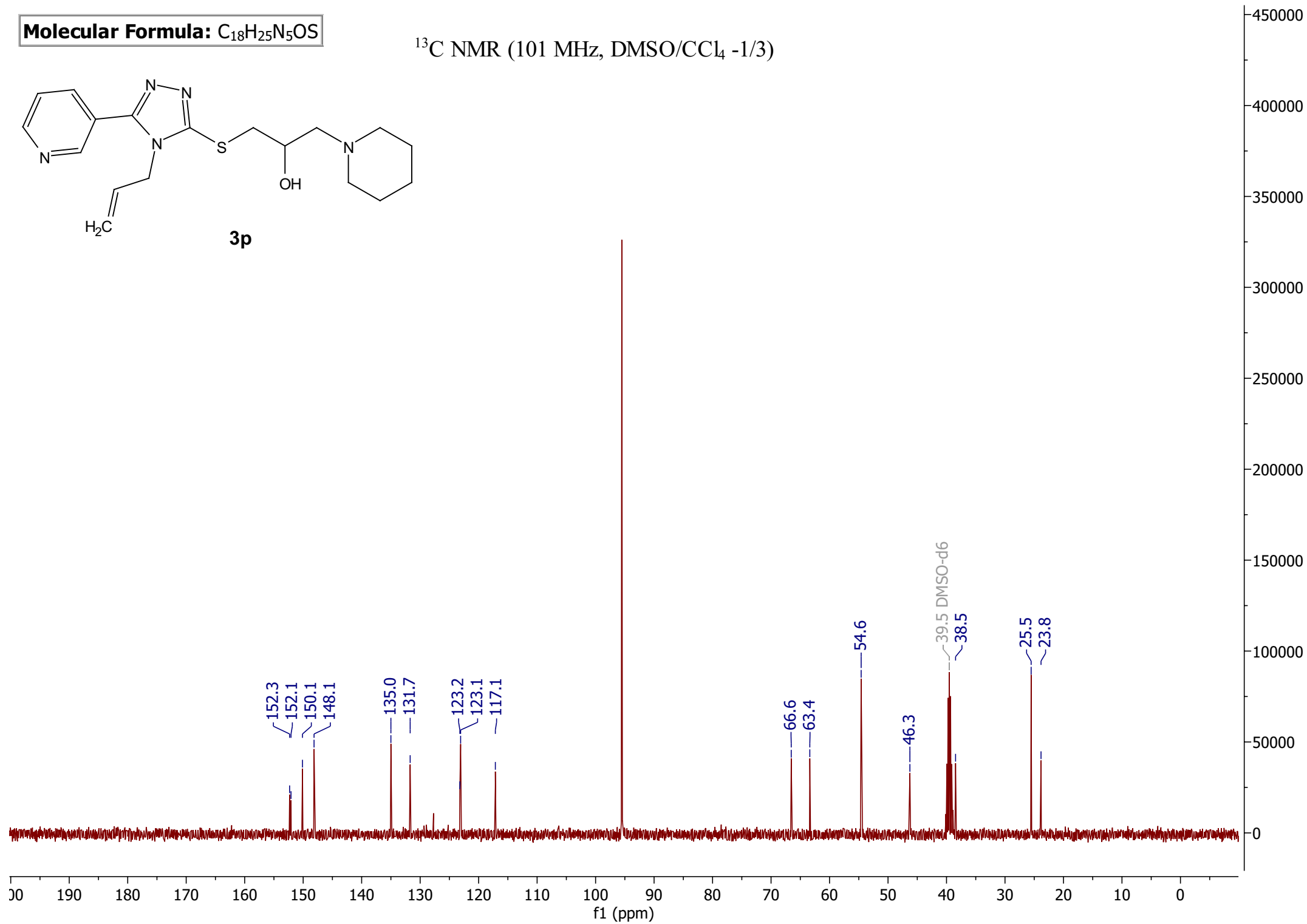
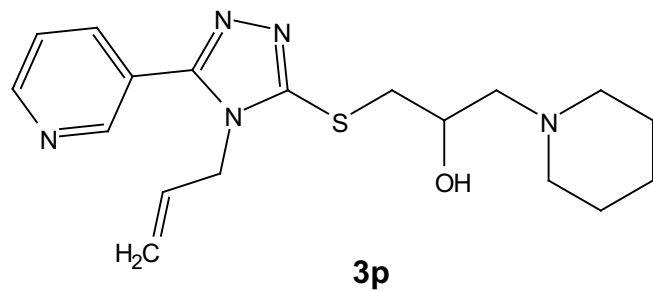
Molecular Formula: C₁₈H₂₅N₅OS

¹H NMR (400 MHz, DMSO/CCl₄ -1/3)



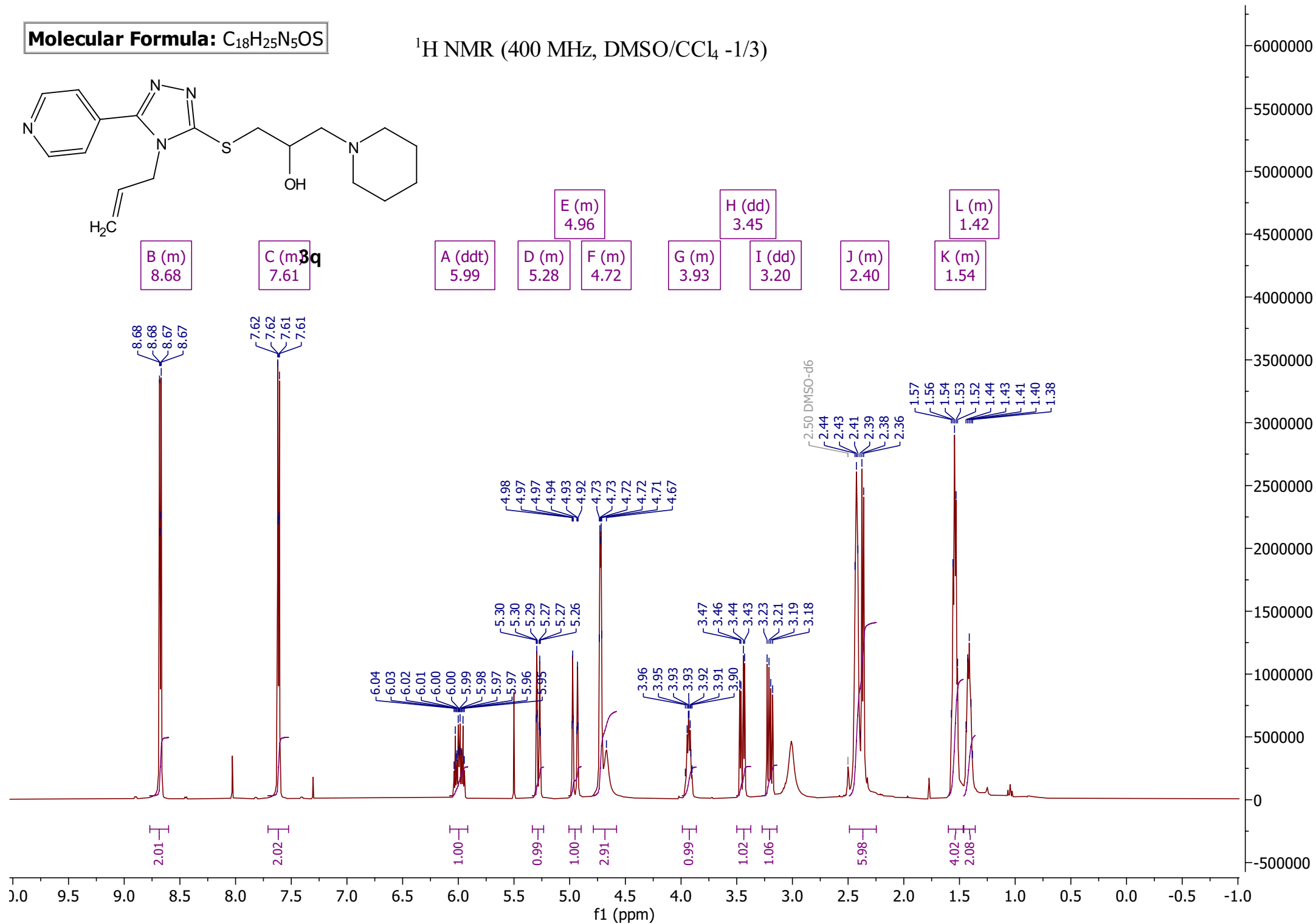
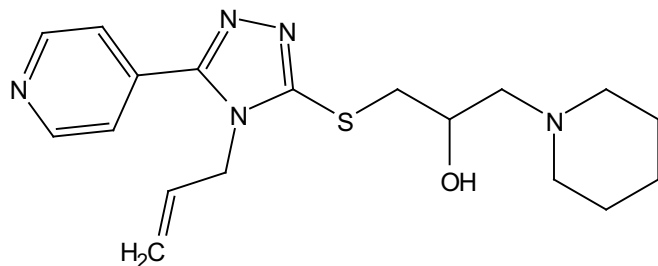
Molecular Formula: C₁₈H₂₅N₅OS

¹³C NMR (101 MHz, DMSO/CCl₄ -1/3)



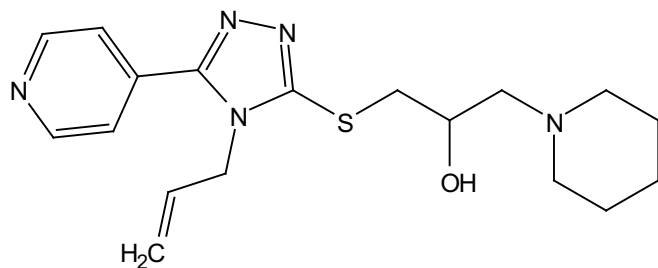
Molecular Formula: C₁₈H₂₅N₅OS

¹H NMR (400 MHz, DMSO/CCl₄ -1/3)

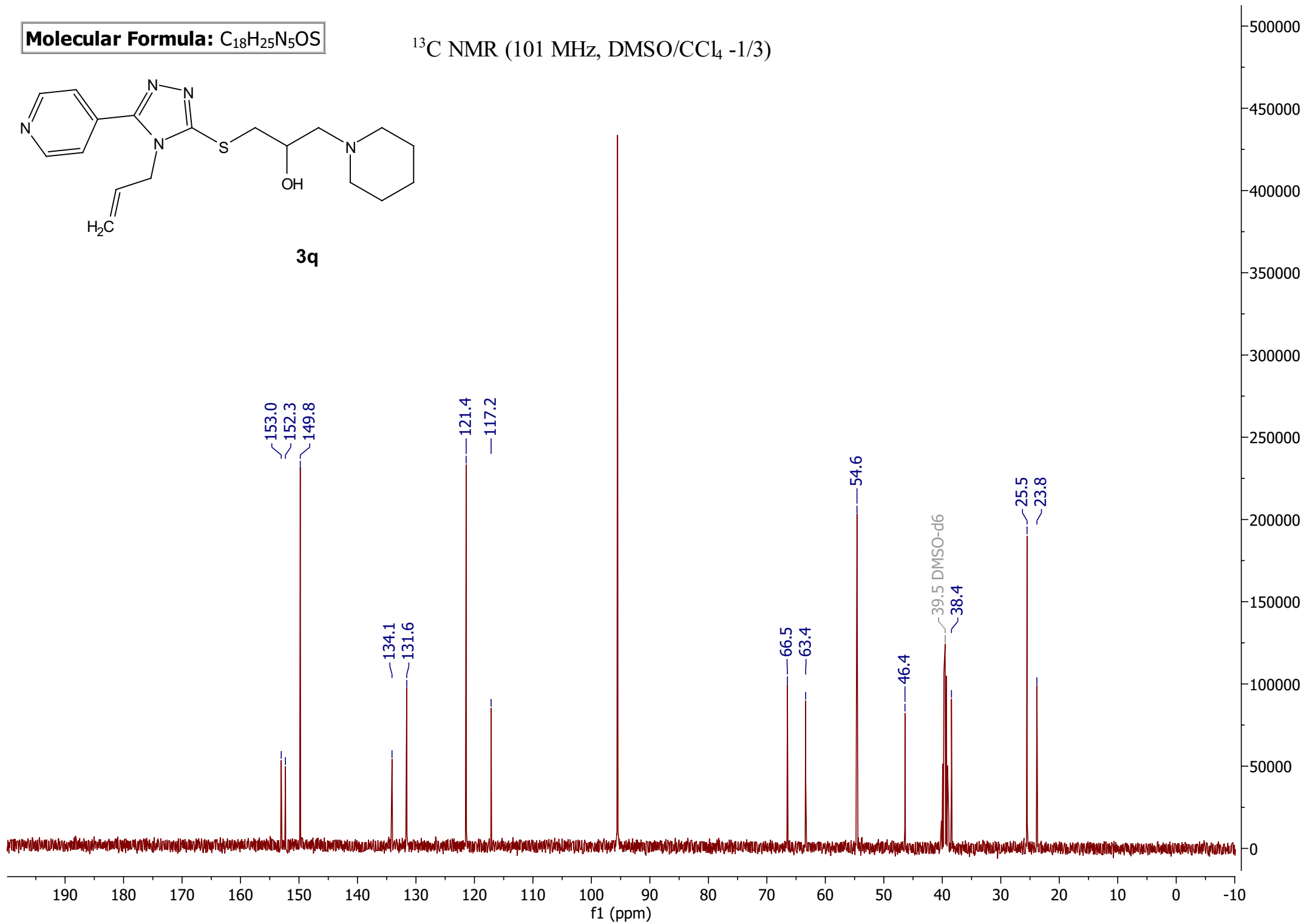


Molecular Formula: C₁₈H₂₅N₅OS

¹³C NMR (101 MHz, DMSO/CCl₄ -1/3)

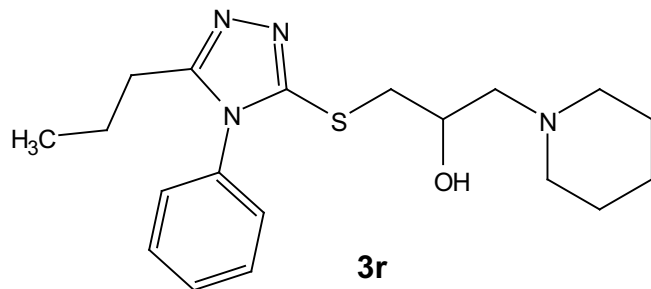


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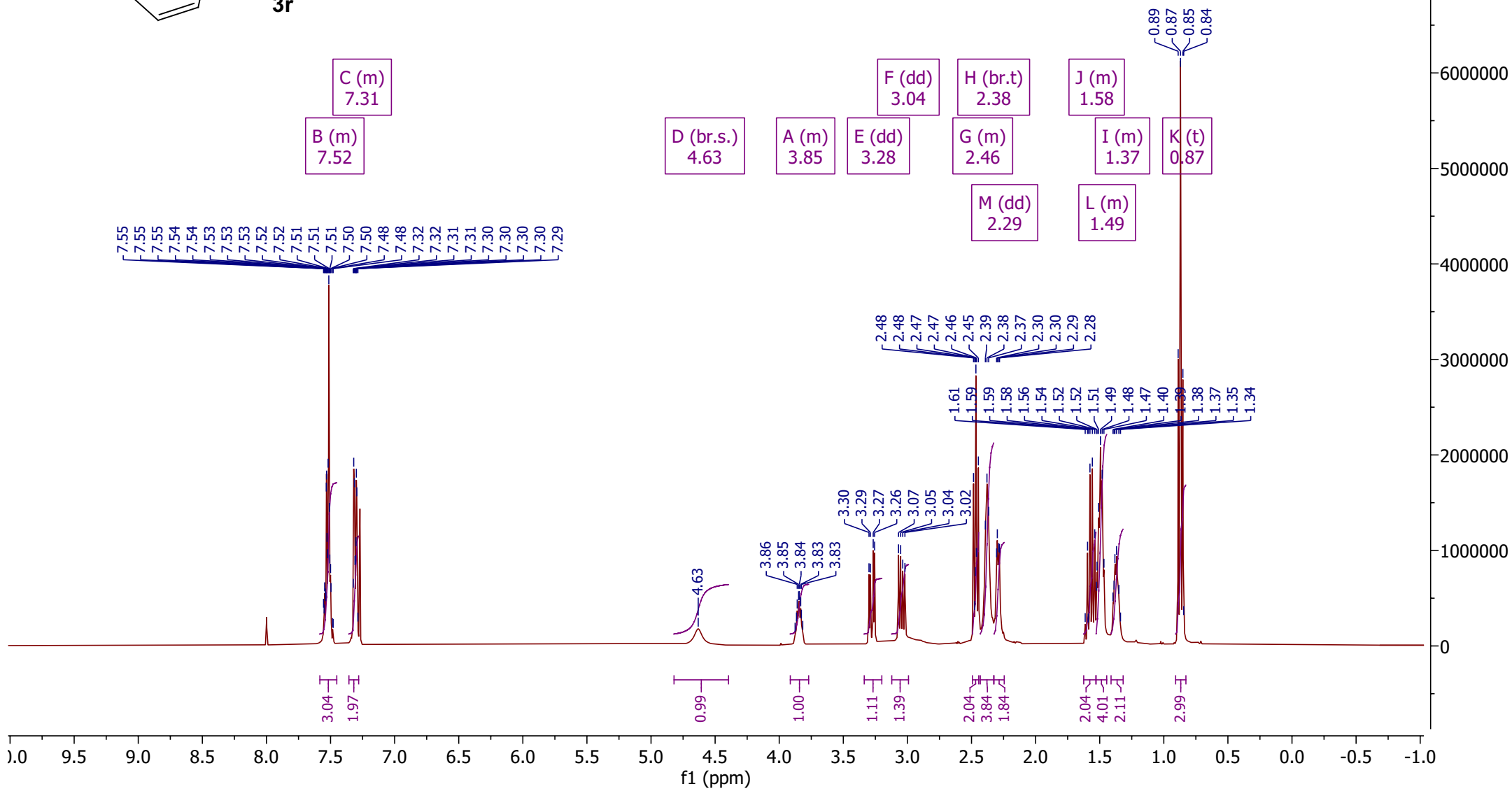


Molecular Formula: C₁₉H₂₈N₄OS

¹H NMR (400 MHz, DMSO/CCl₄ -1/3)

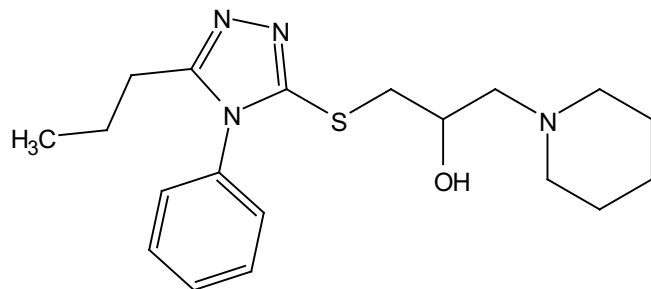


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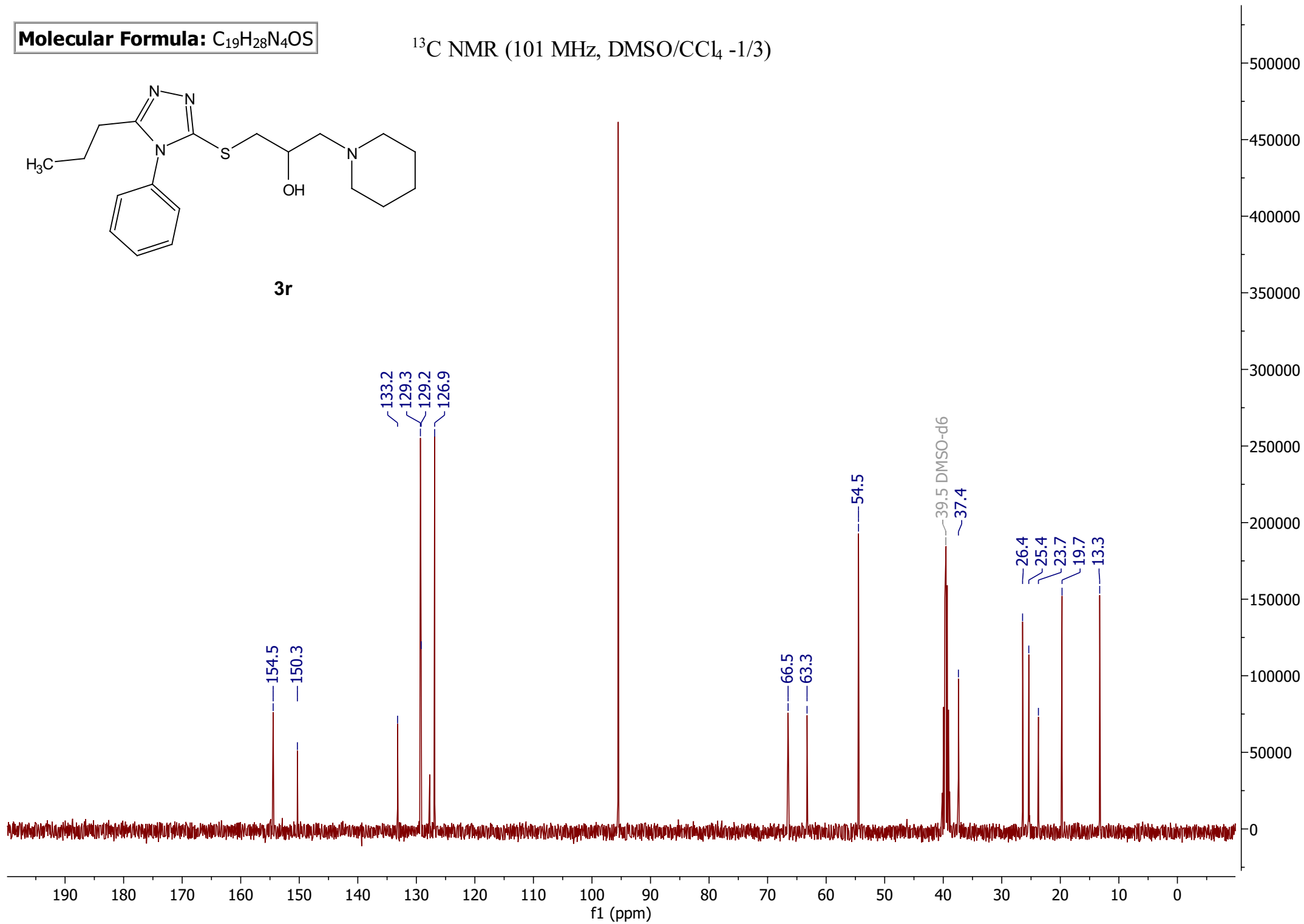


Molecular Formula: C₁₉H₂₈N₄OS

¹³C NMR (101 MHz, DMSO/CCl₄ -1/3)

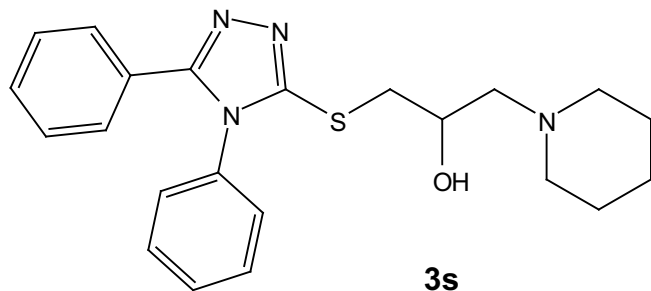


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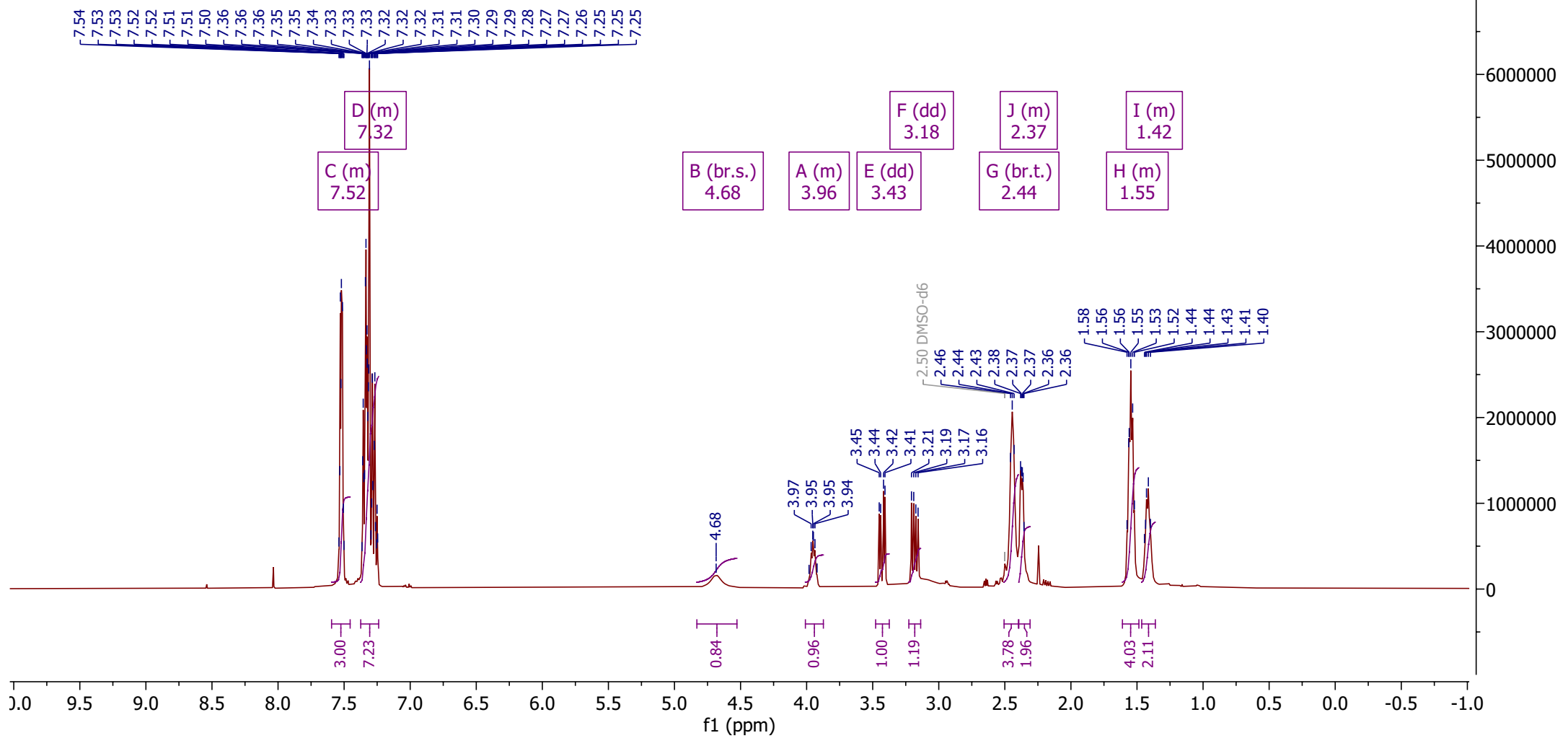


Molecular Formula: C₂₂H₂₆N₄OS

¹H NMR (400 MHz, DMSO/CCl₄ -1/3)

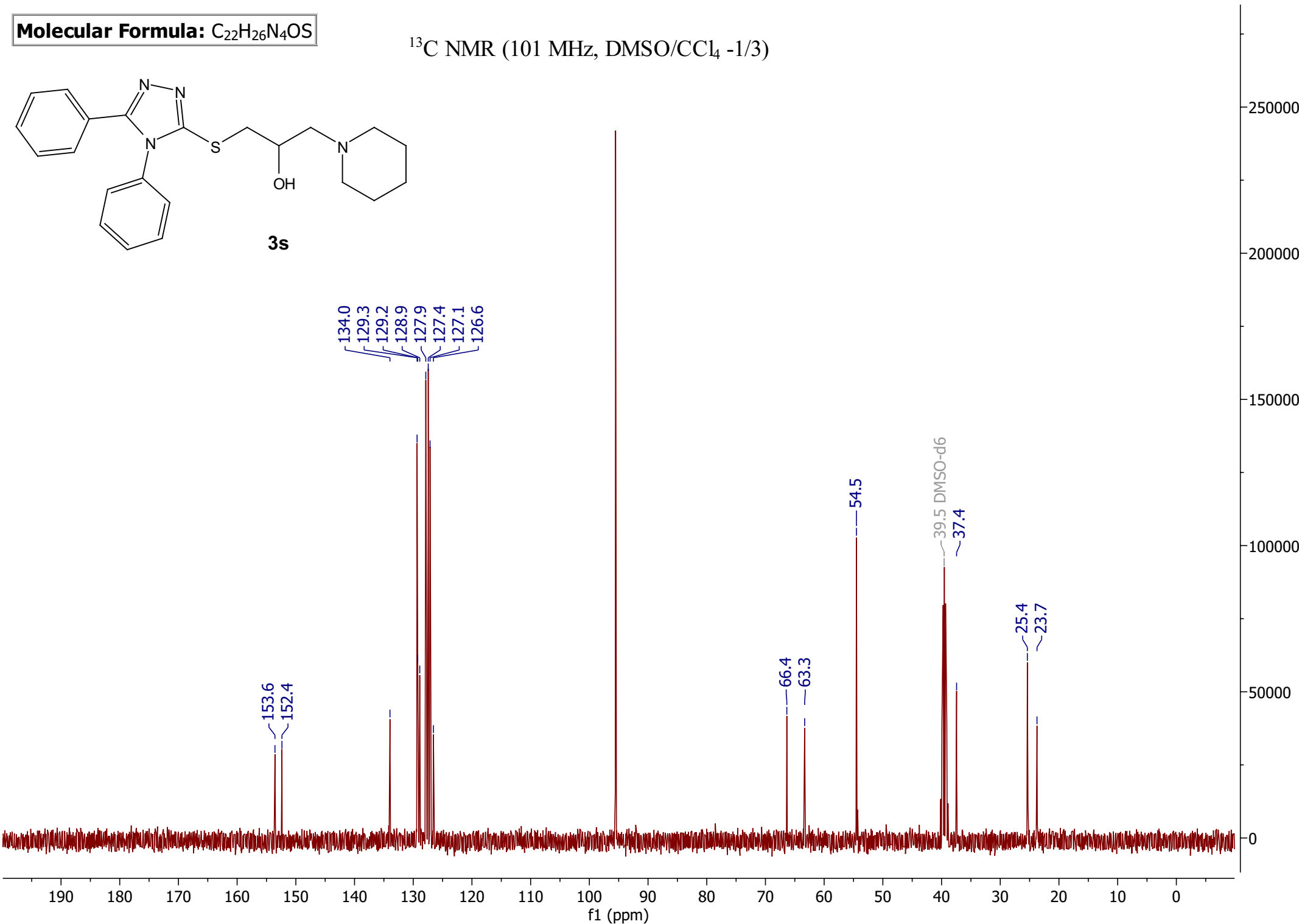
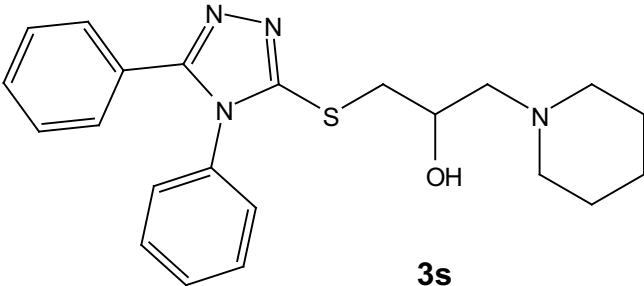


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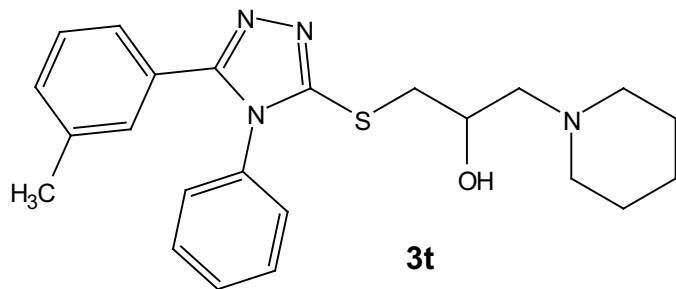
Molecular Formula: C₂₂H₂₆N₄OS

¹³C NMR (101 MHz, DMSO/CCl₄ -1/3)



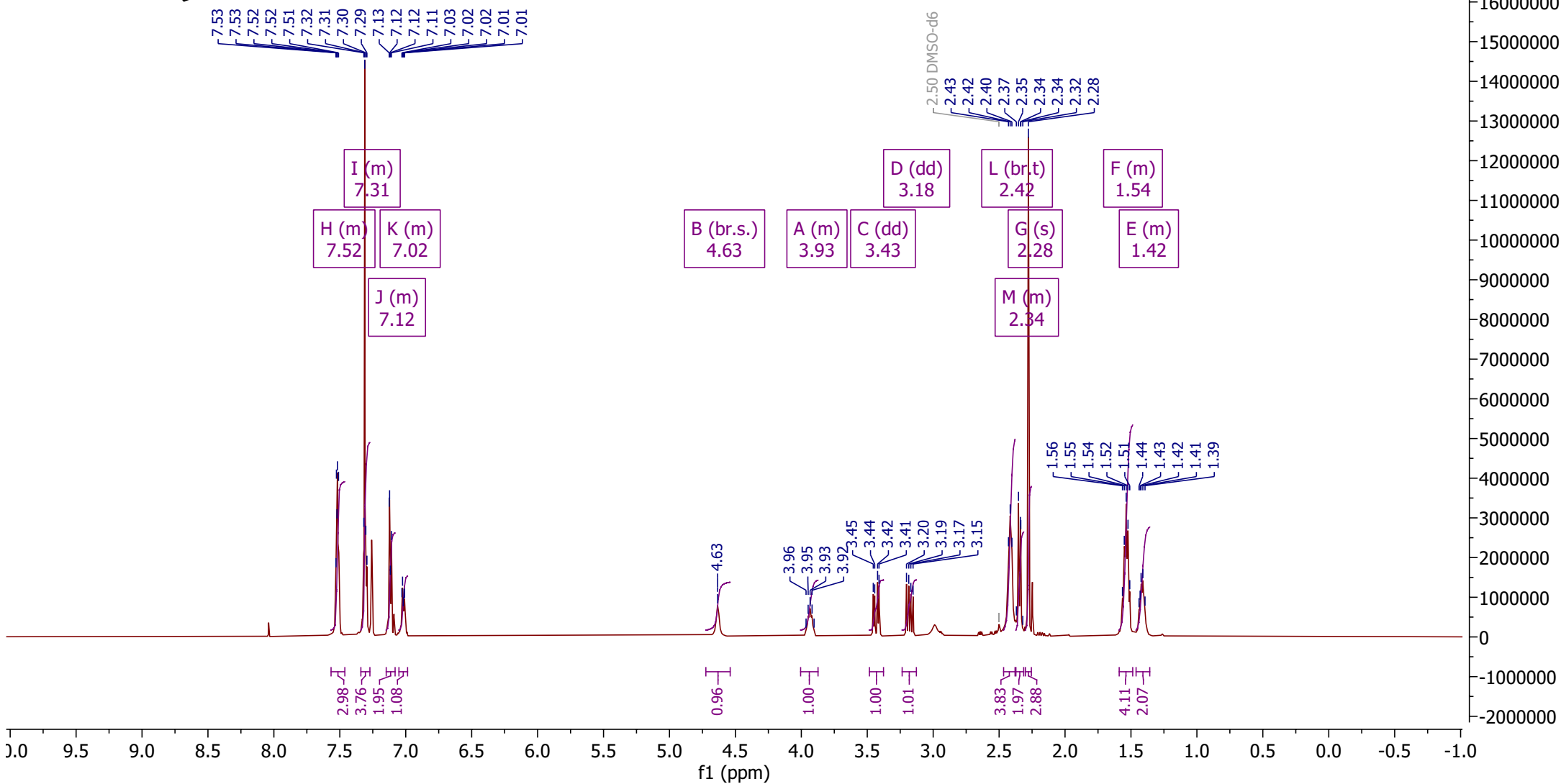
Molecular Formula: C₂₃H₂₈N₄OS

¹H NMR (400 MHz, DMSO/CCl₄ -1/3)



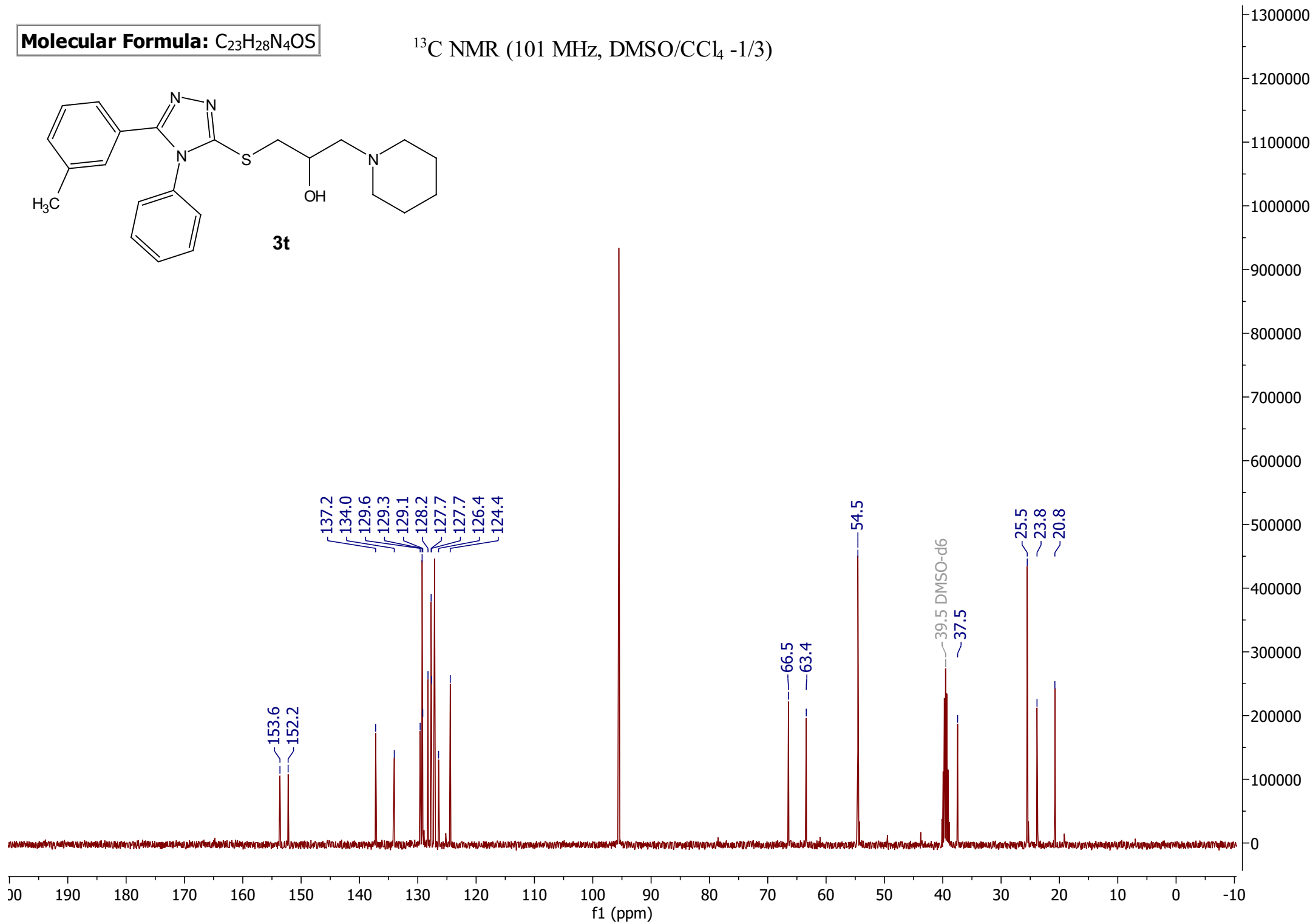
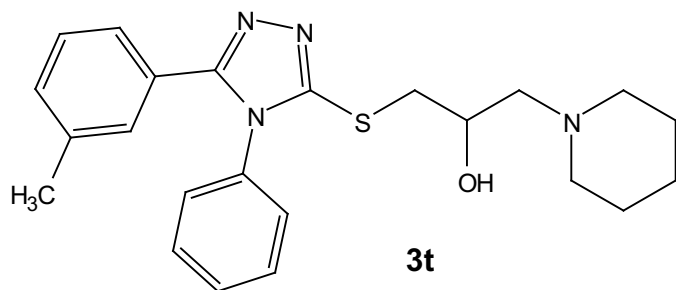
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7.01

3t



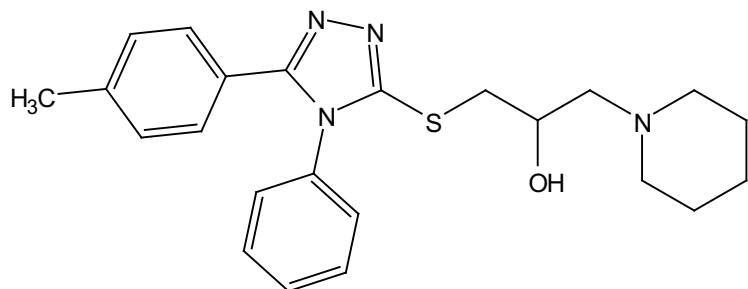
Molecular Formula: C₂₃H₂₈N₄OS

¹³C NMR (101 MHz, DMSO/CCl₄ -1/3)

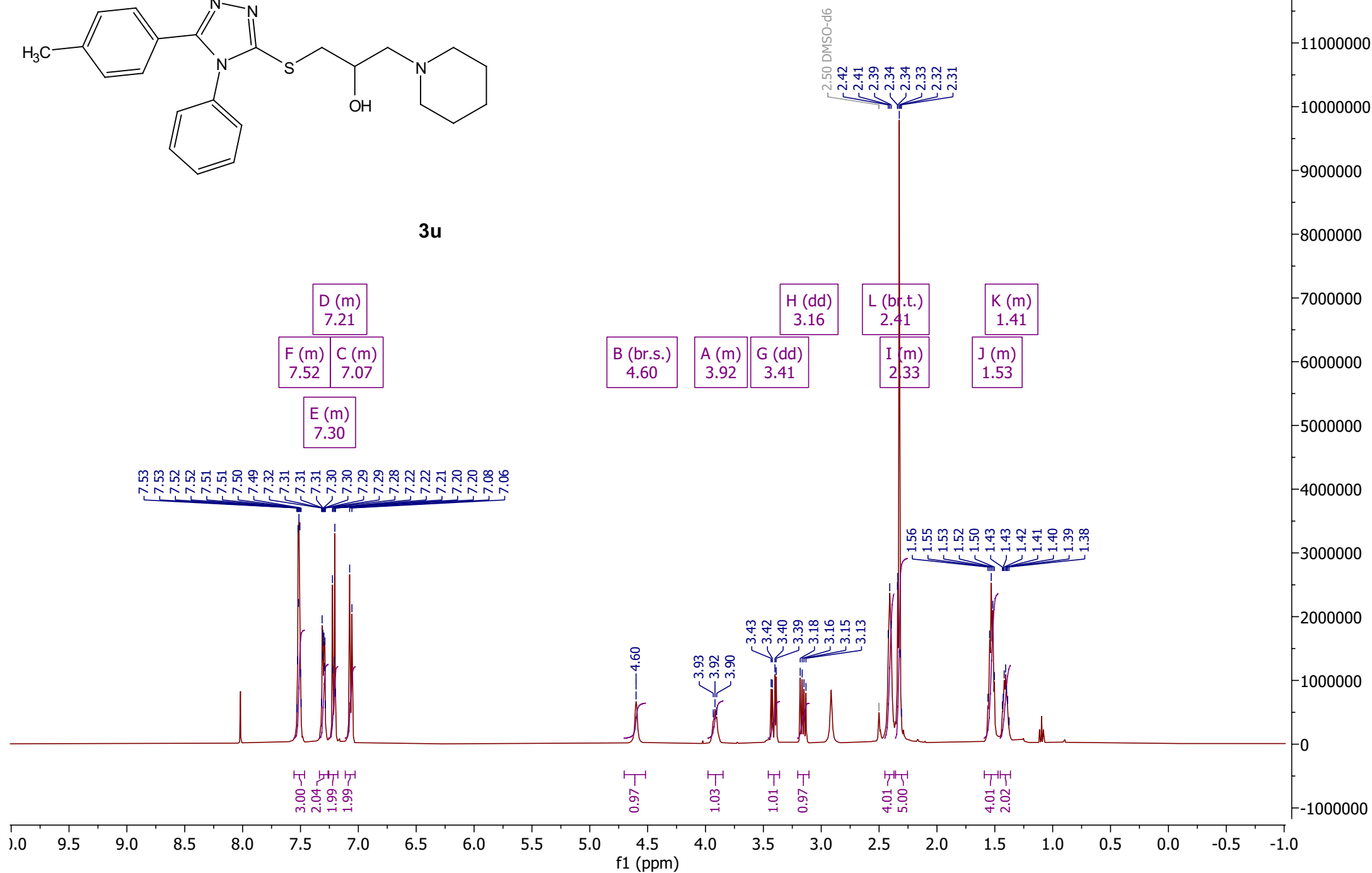


Molecular Formula: C₂₃H₂₈N₄OS

¹H NMR (400 MHz, DMSO/CCl₄ -1/3)

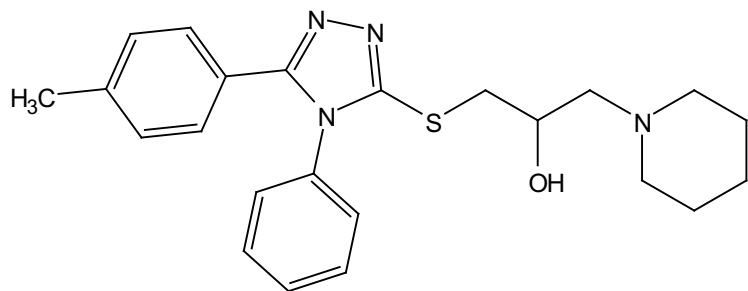


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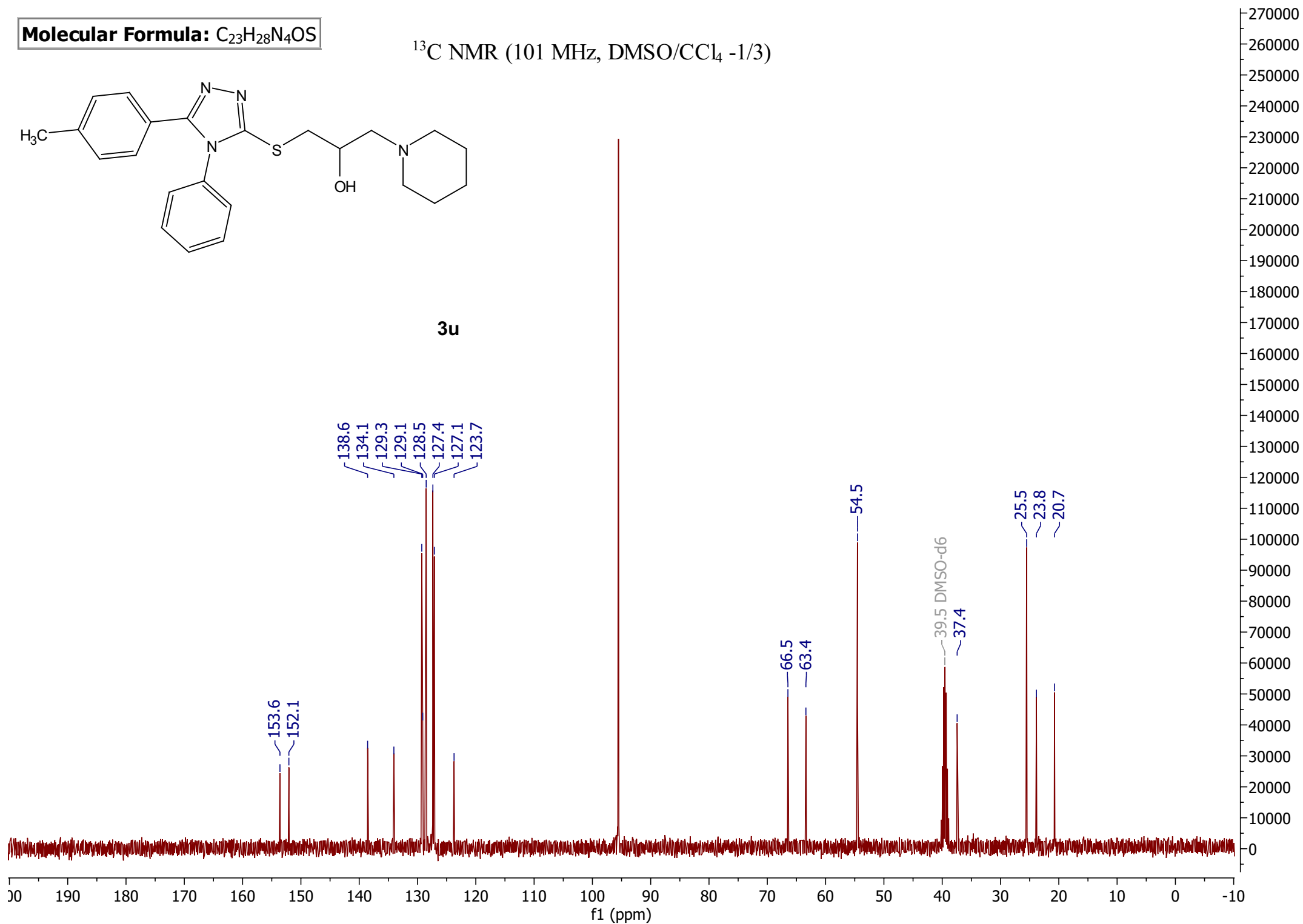


Molecular Formula: C₂₃H₂₈N₄OS

¹³C NMR (101 MHz, DMSO/CCl₄ -1/3)

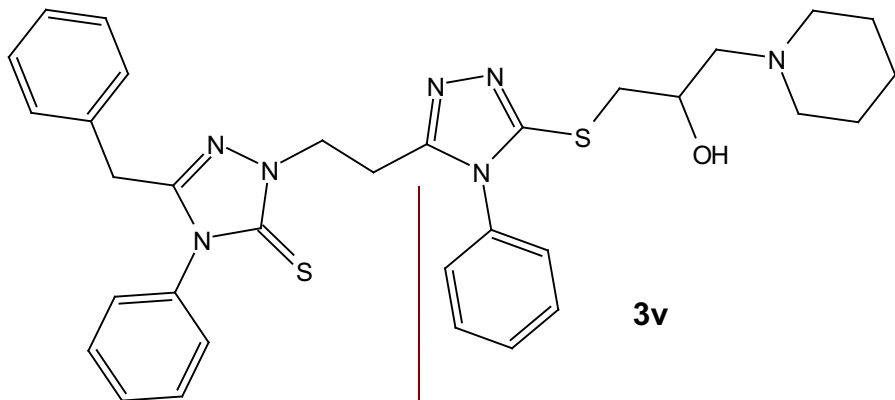


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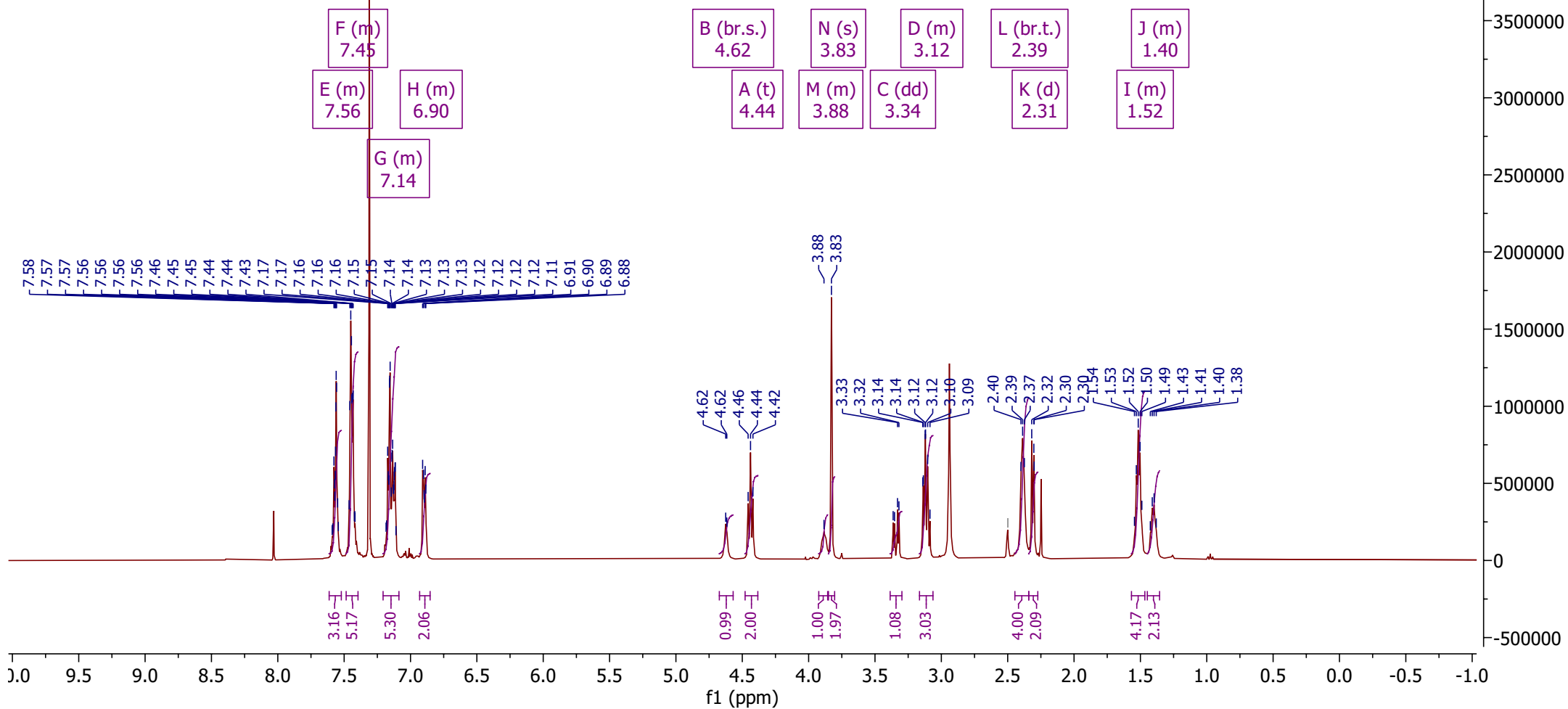


Molecular Formula: C₃₃H₃₇N₇OS₂

¹H NMR (400 MHz, DMSO/CCl₄ -1/3)

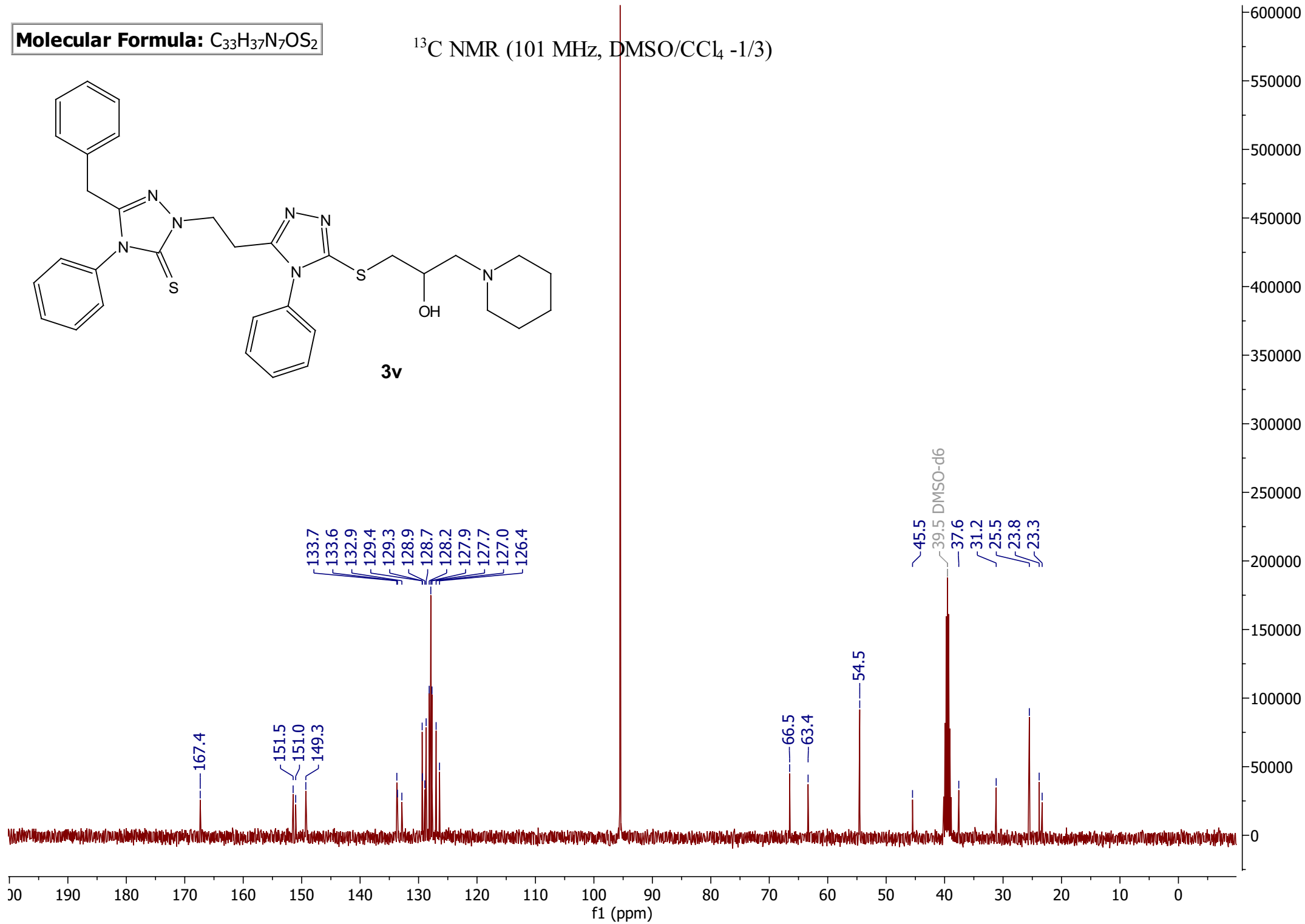
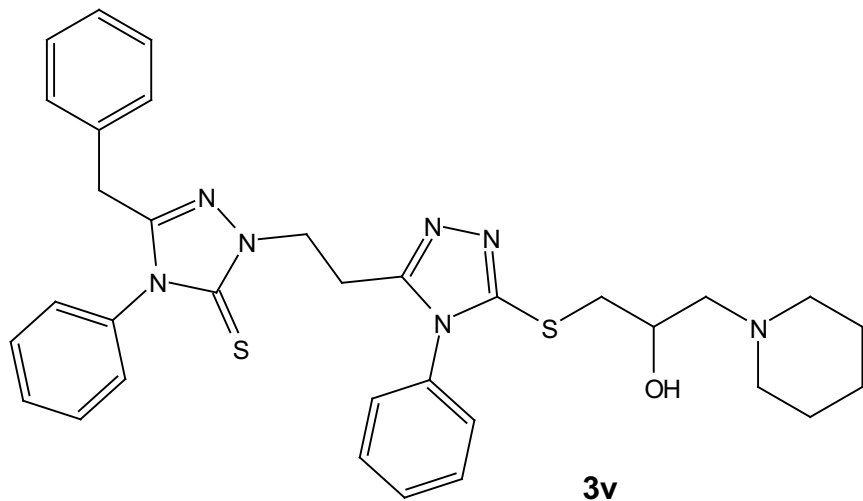


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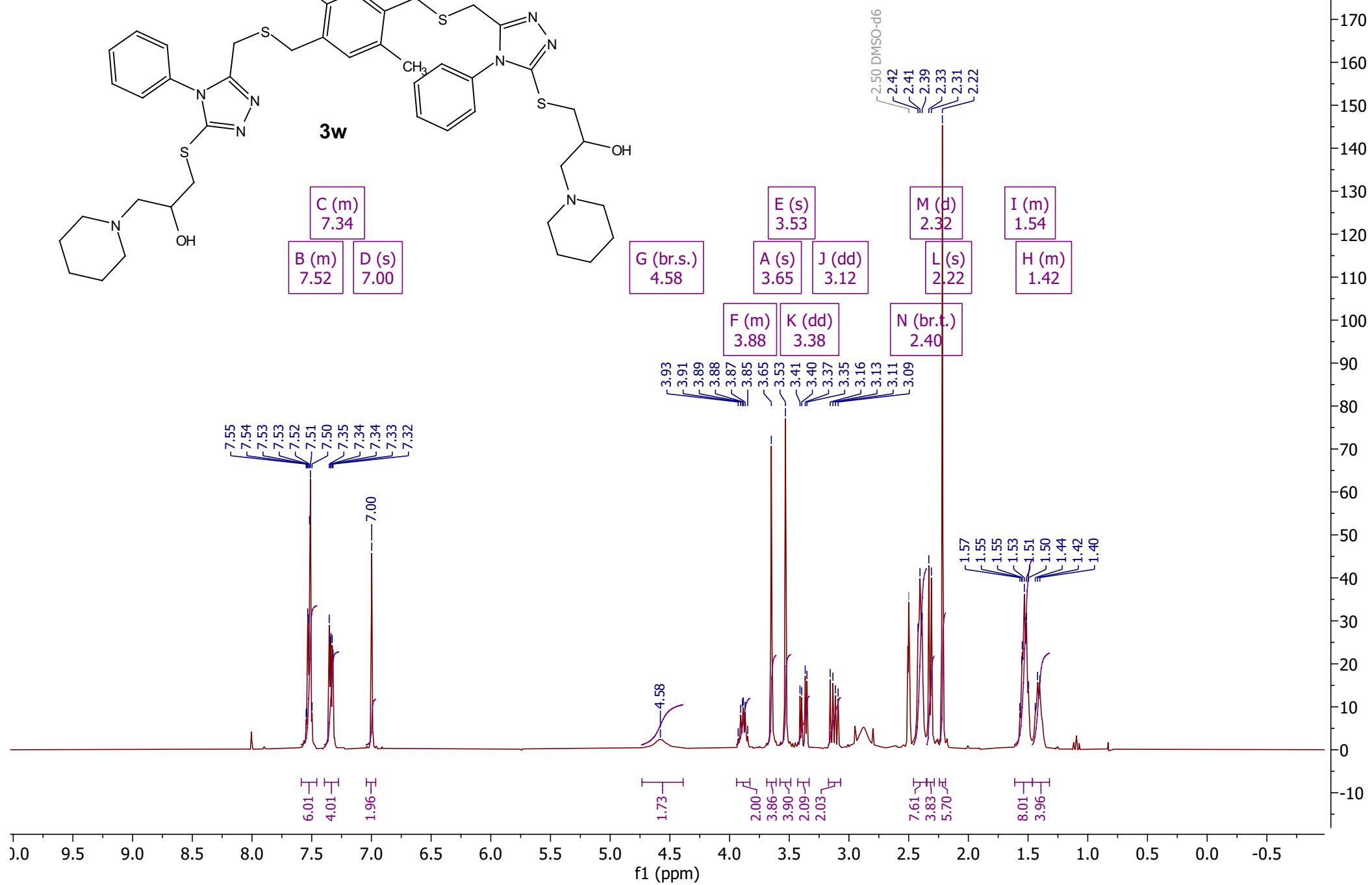
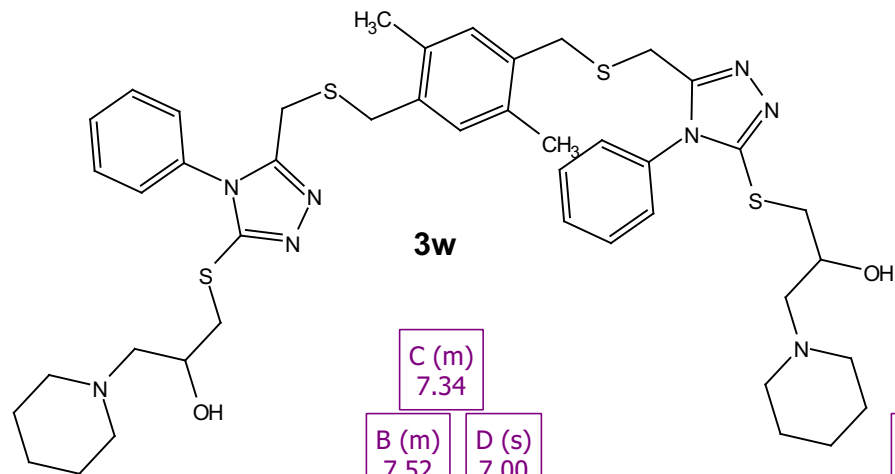
Molecular Formula: C₃₃H₃₇N₇OS₂

¹³C NMR (101 MHz, DMSO/CCl₄ -1/3)



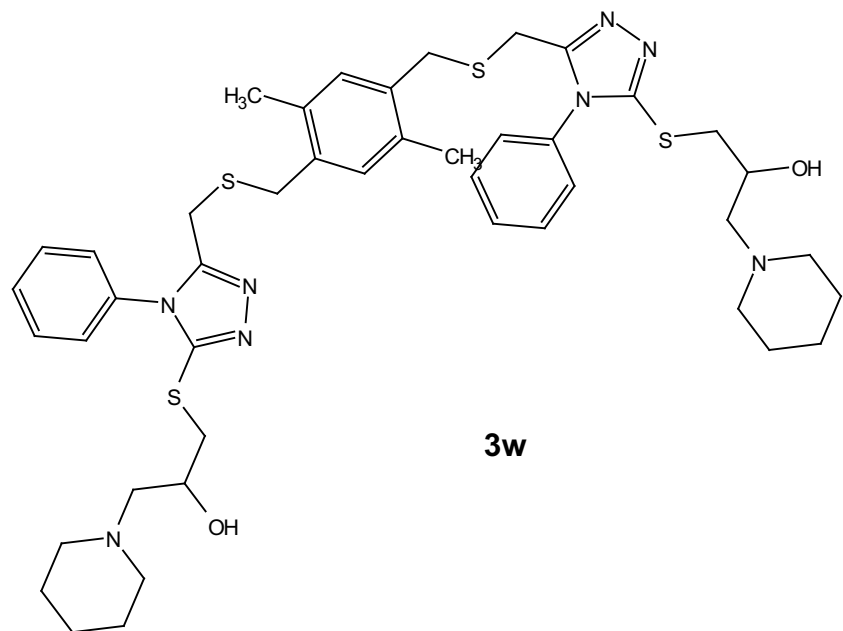
Molecular Formula: C₄₄H₅₈N₈O₂S₄

¹H NMR (300 MHz, DMSO/CCl₄ -1/3)

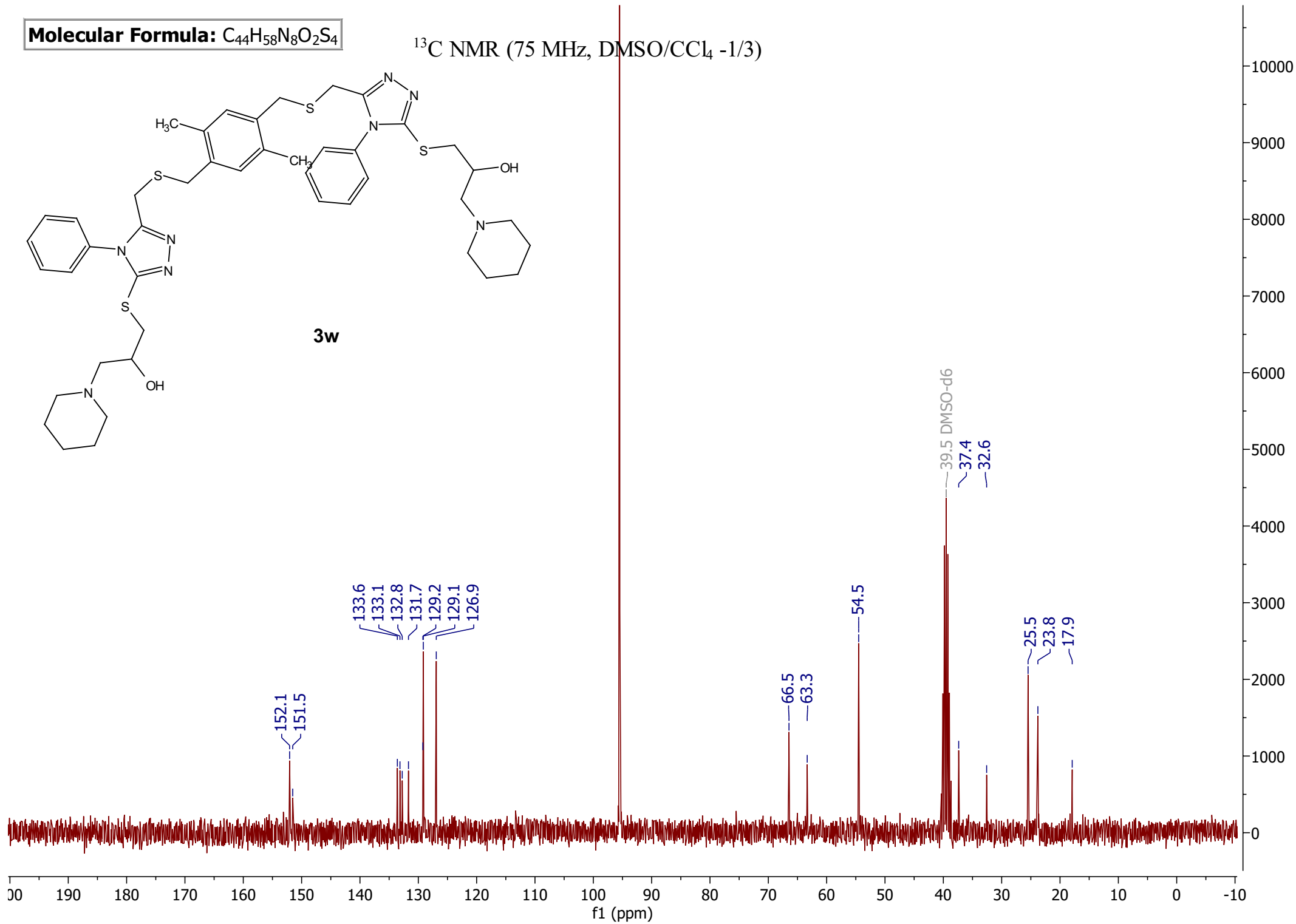


Molecular Formula: C₄₄H₅₈N₈O₂S₄

¹³C NMR (75 MHz, DMSO/CCl₄ -1/3)

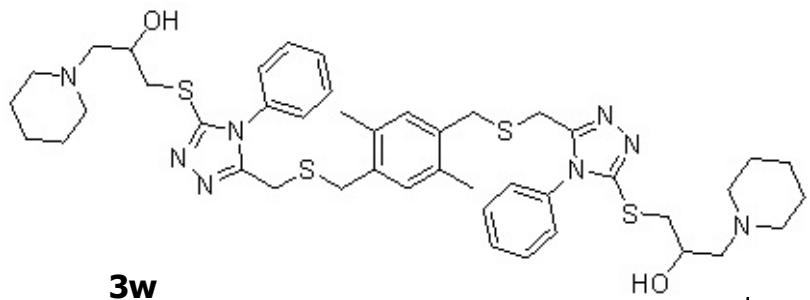


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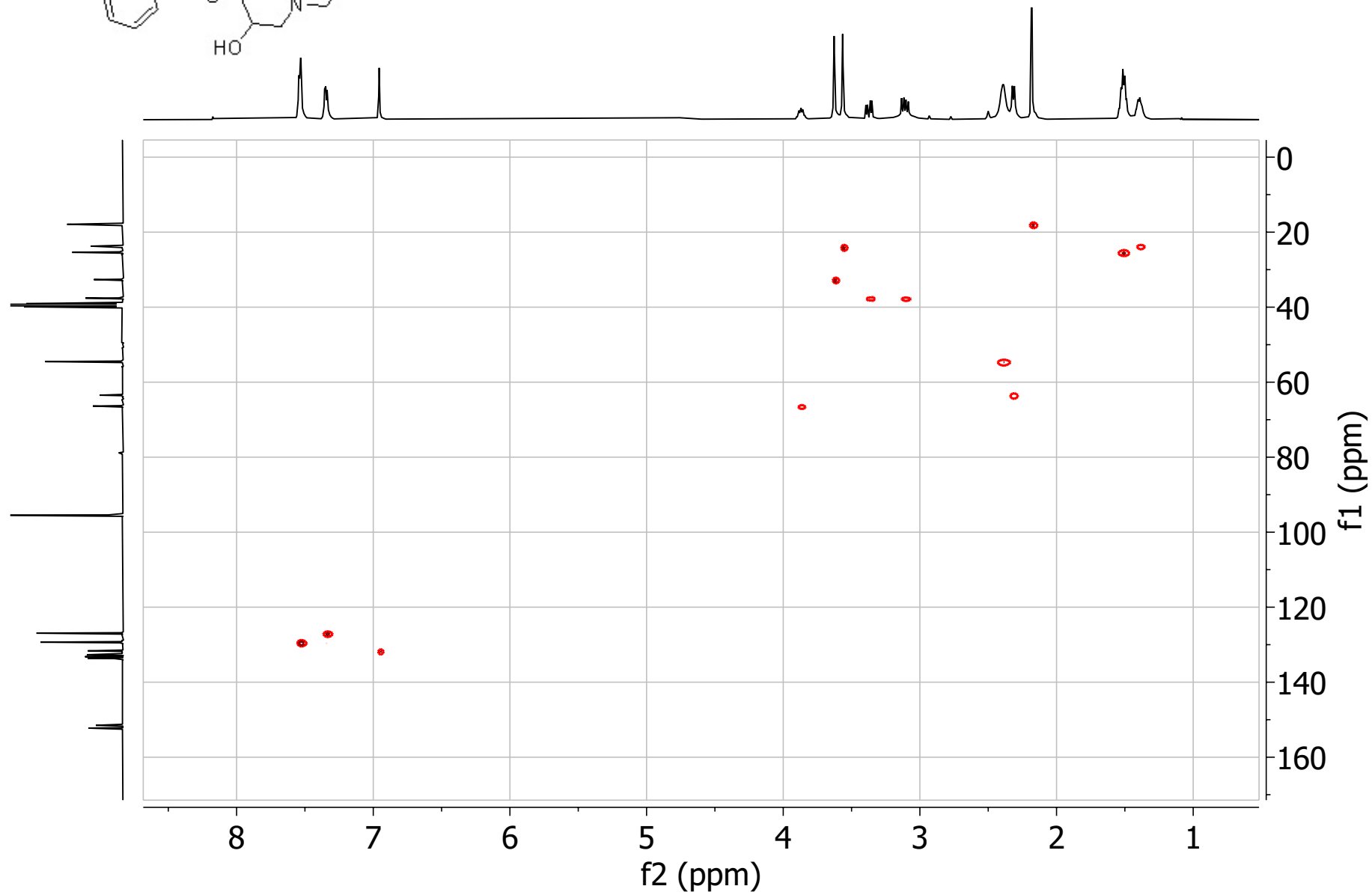


Molecular Formula: C₄₄H₅₈N₈O₂S₄

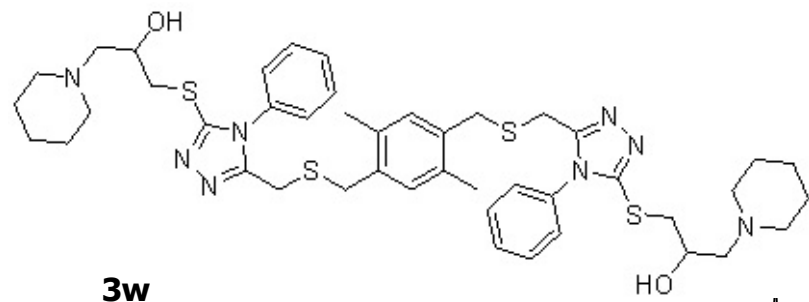
¹H-¹³C HSQC, (DMSO/CCl₄ -1/3)



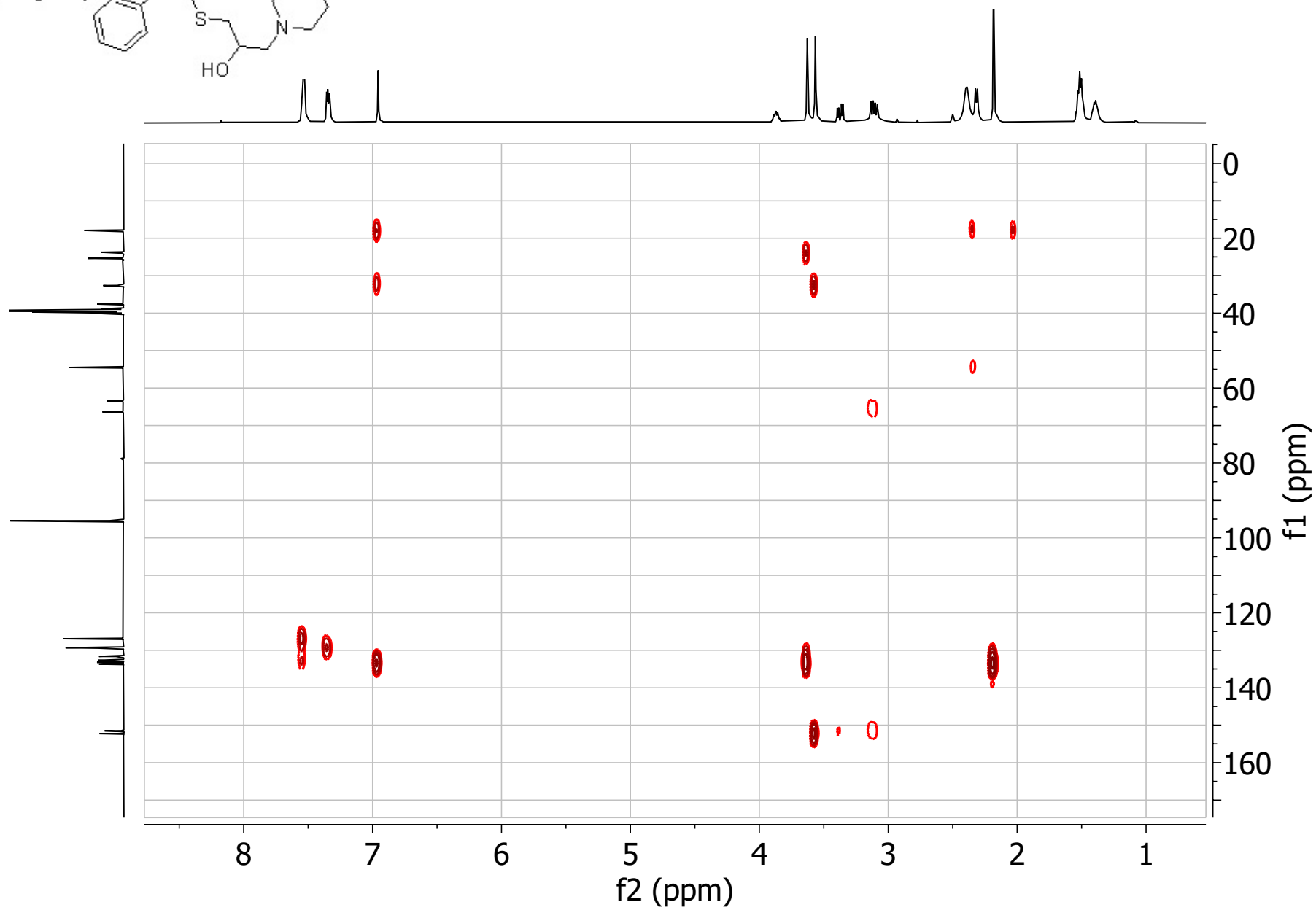
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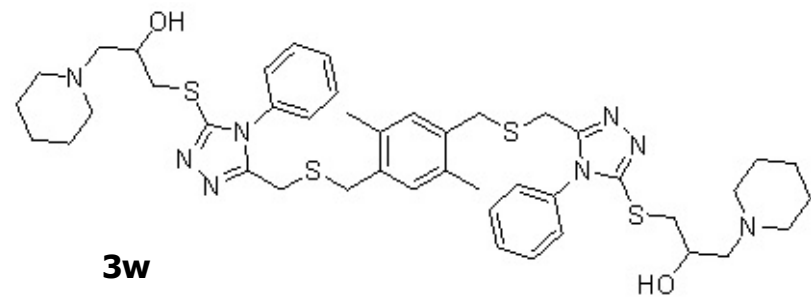
Molecular Formula: C₄₄H₅₈N₈O₂S₄



¹H-¹³C HMBC, (DMSO/CCl₄ -1/3)



Molecular Formula: C₄₄H₅₈N₈O₂S₄



NOESY, (DMSO/CCl₄ -1/3)

