



NJC

ARTICLE

Supporting information

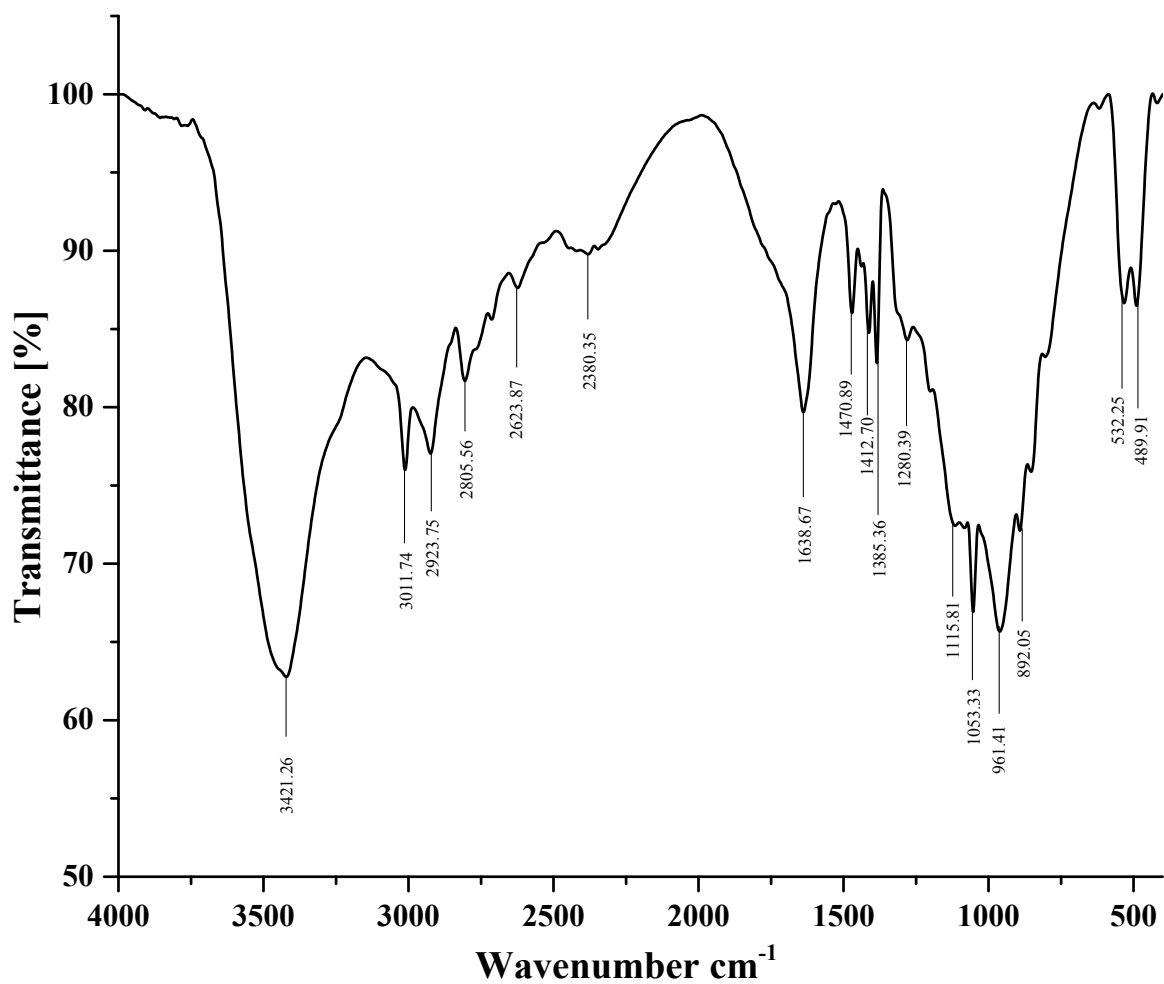
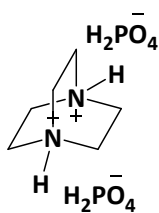
**DABCO-based ionic liquids: Introduction of two metal-free catalysts for one-pot synthesis of 1,2,4-triazolo[4,3-*a*]pyrimidines and pyrido[2,3-*d*]pyrimidines**

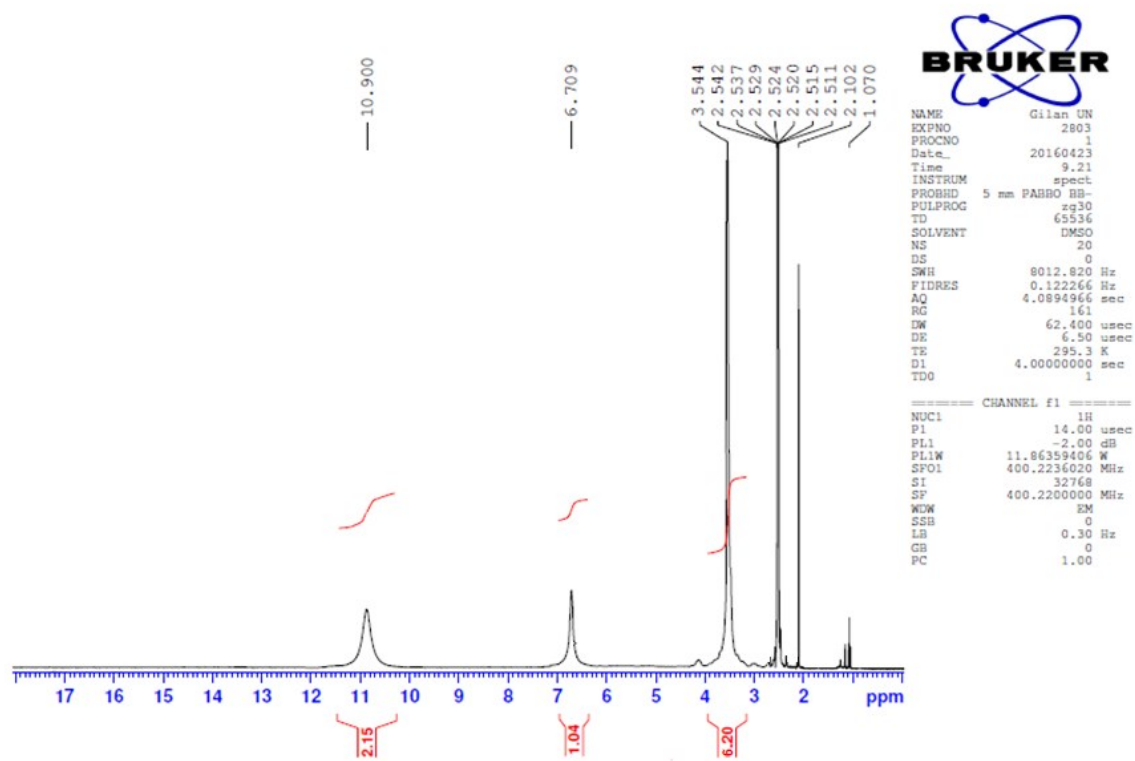
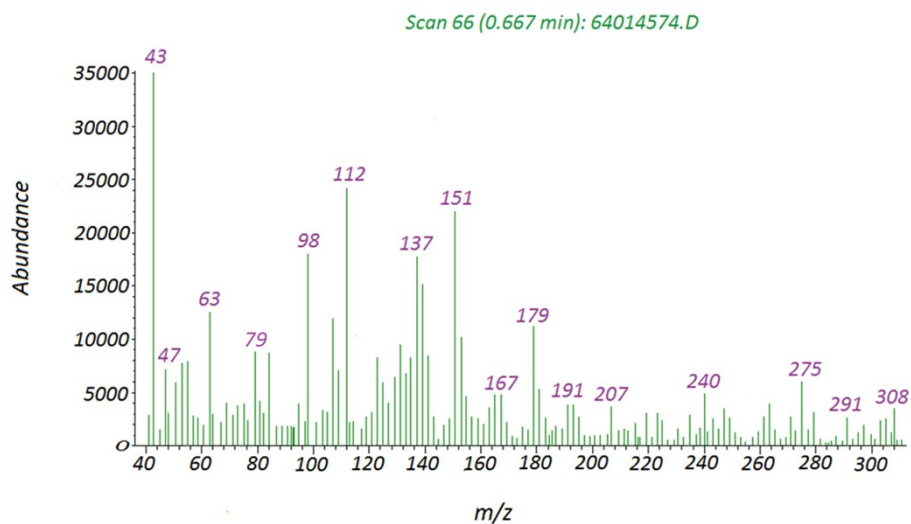
N. Jamasbi, M. Irankhah-Khanghah, F. Shirini,\* H. Tajik, M. S. N. Langarudi.

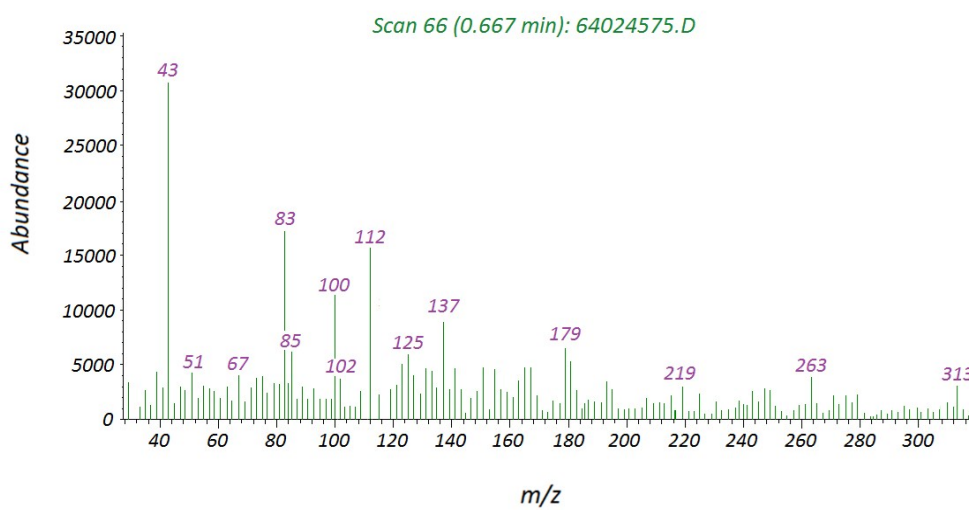
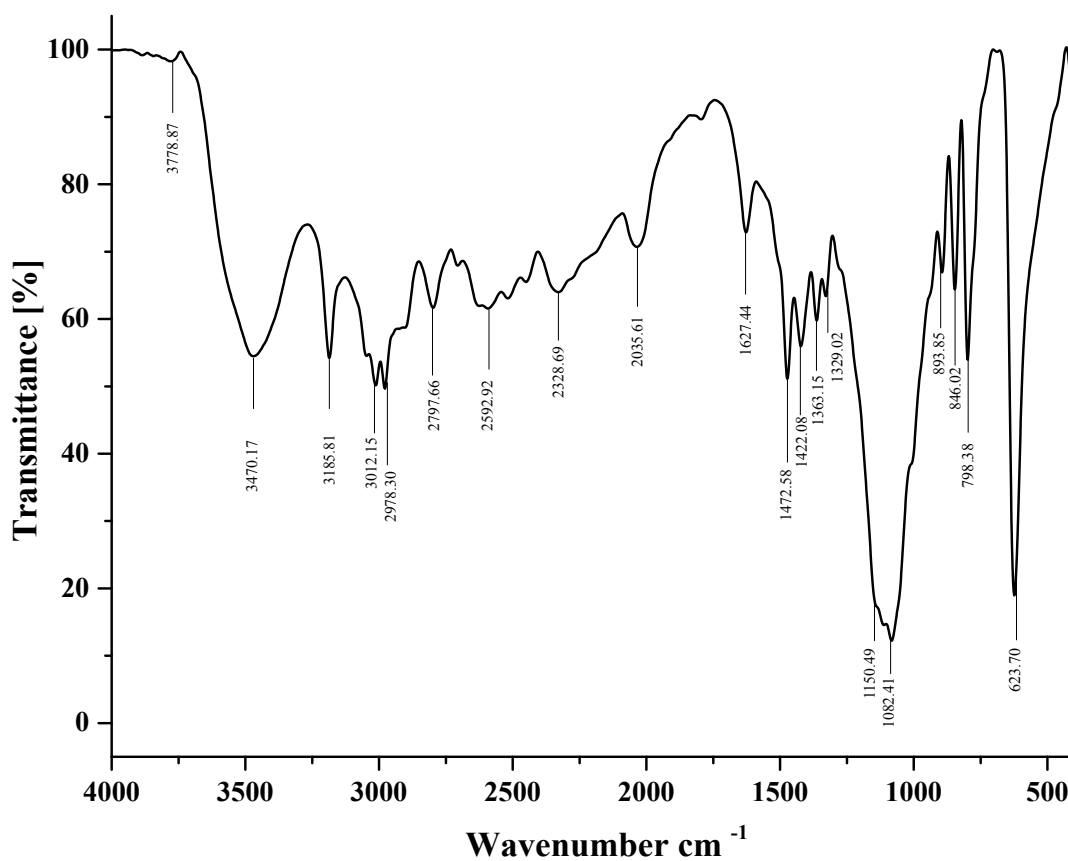
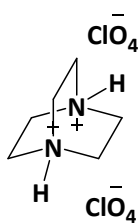
*Department of Chemistry, College of Science, University of Guilan, Rasht, 41335-19141, Iran, Tel/Fax: +981313233262; e-mail: shirini@guilan.ac.ir (and also fshirini@gmail.com).*

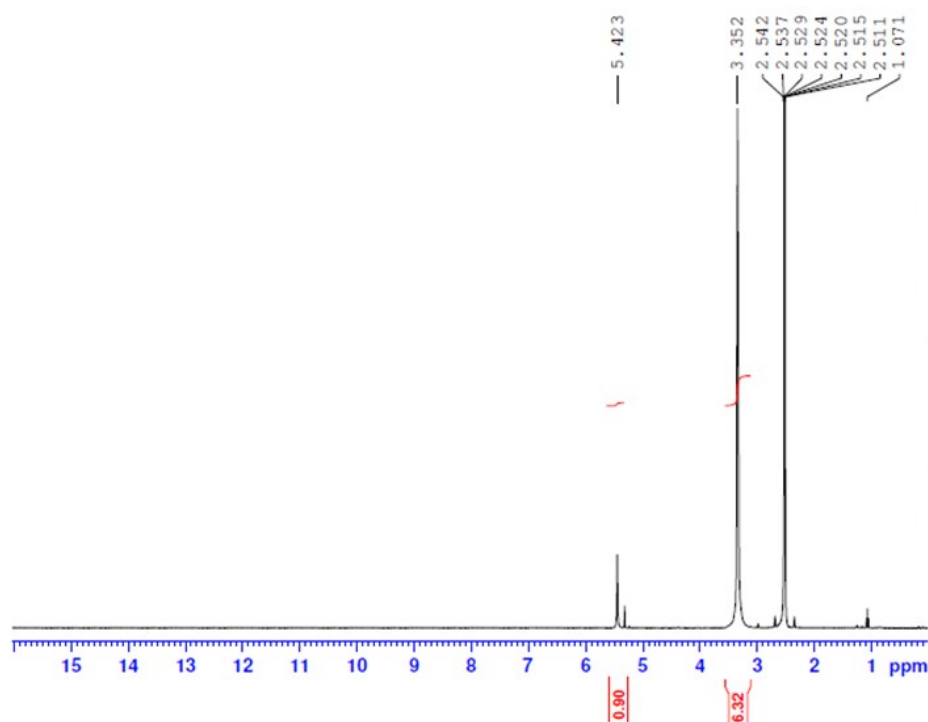
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I. A copy of FT-IR, Mass, and NMR spectra of  $[\text{H}_2\text{-DABCO}][\text{H}_2\text{PO}_4]_2^1$ 



II. A copy of FT-IR, Mass, and NMR spectra of  $[\text{H}_2\text{-DABCO}][\text{ClO}_4]_2$ 



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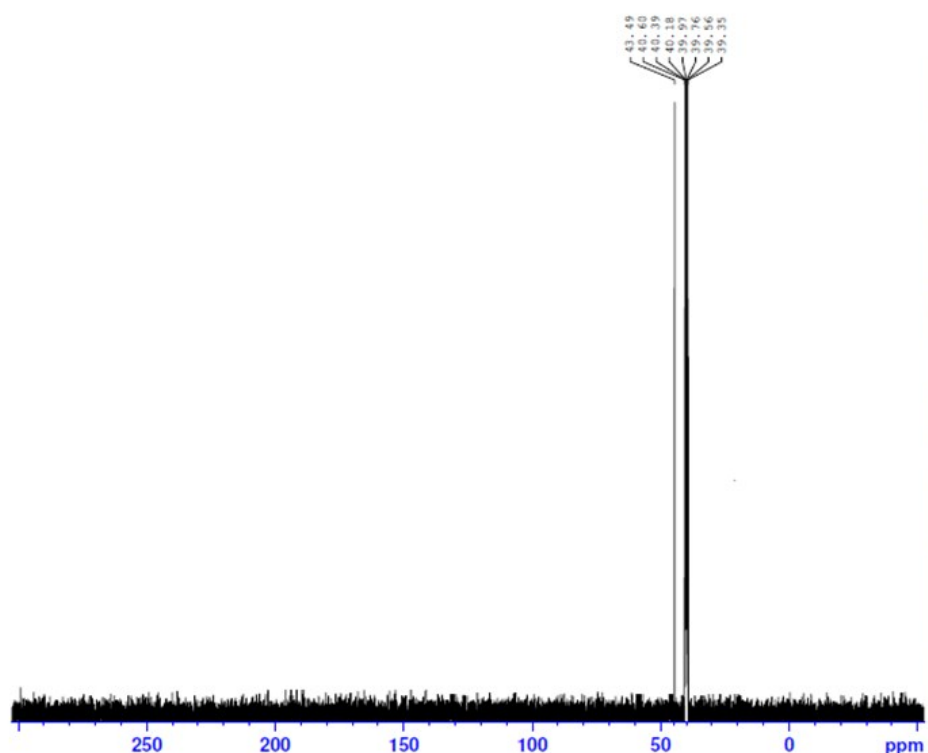
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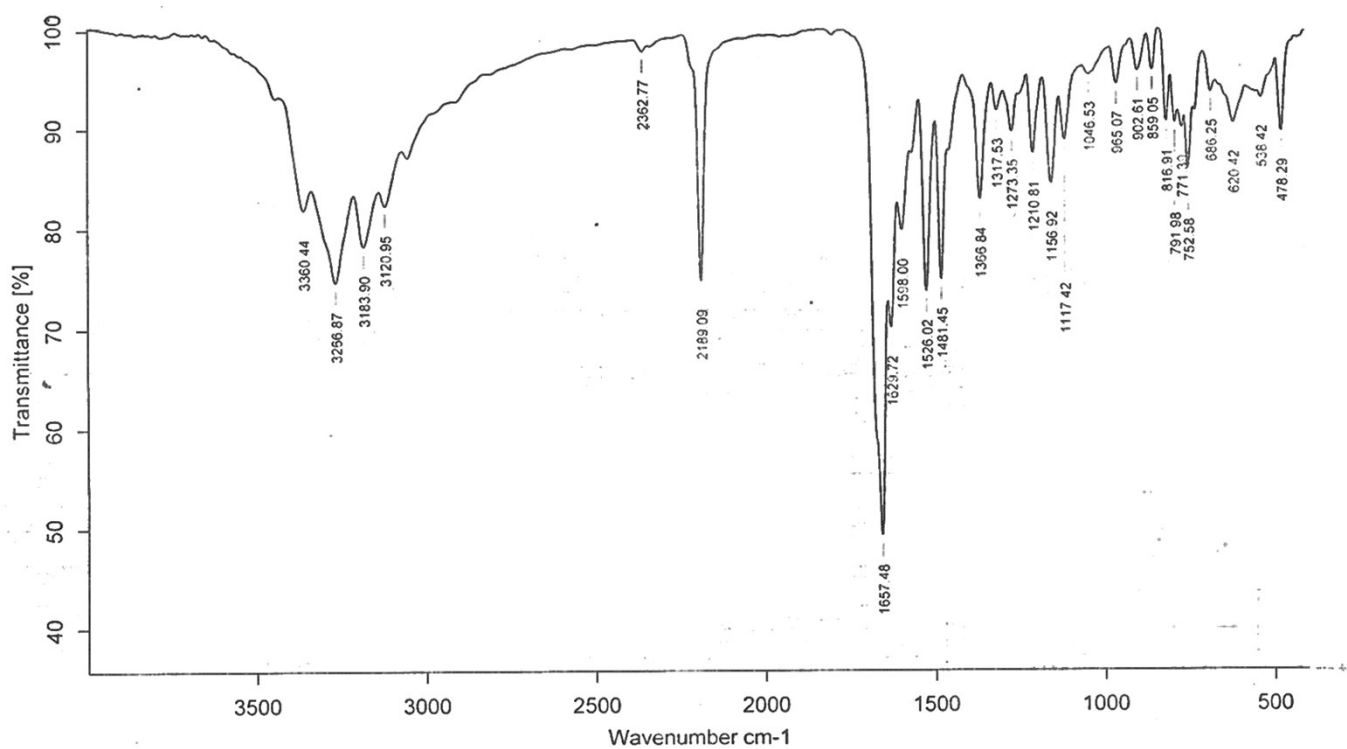
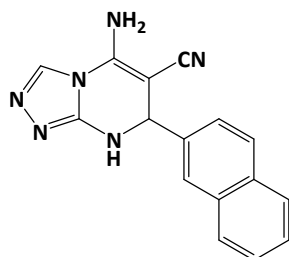
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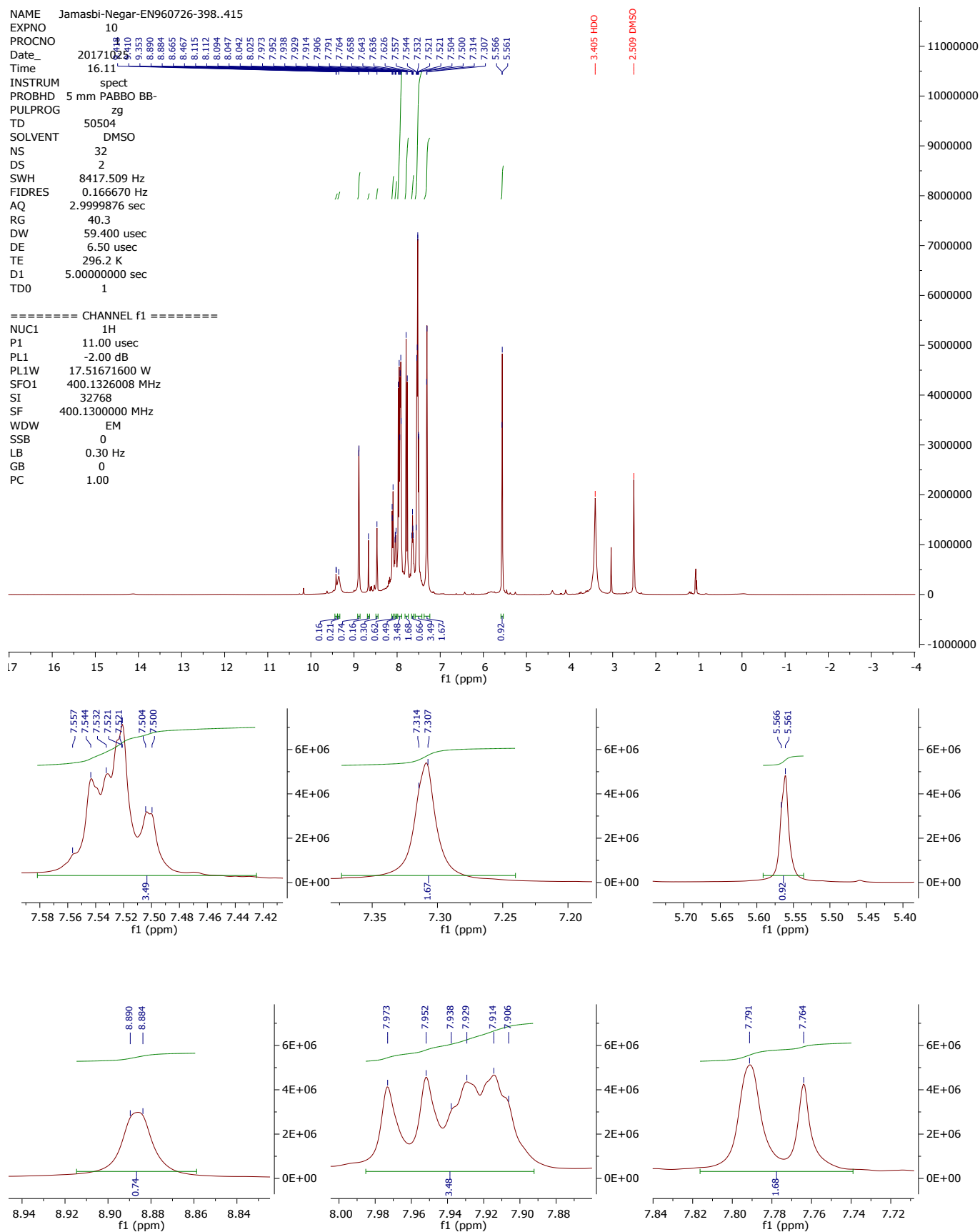
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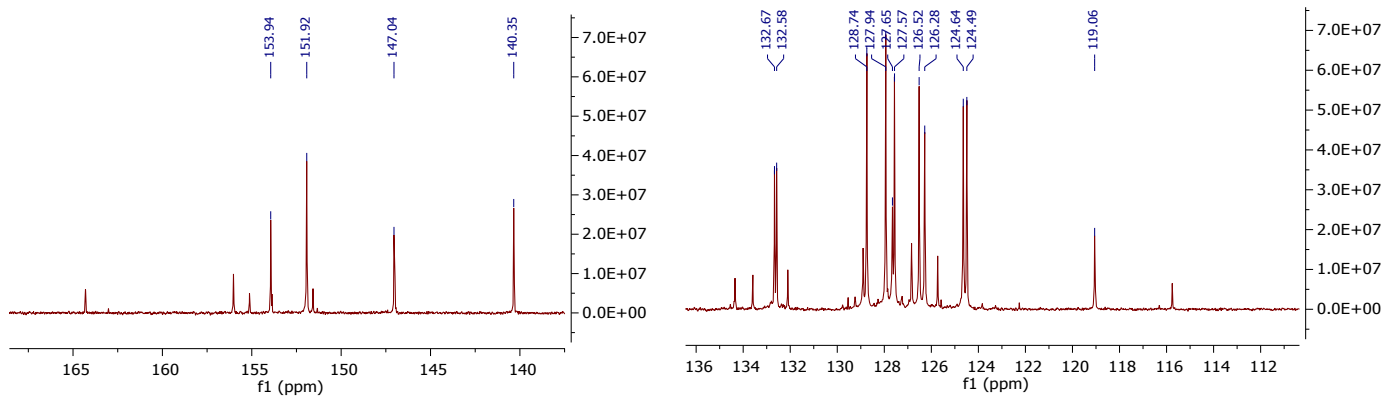
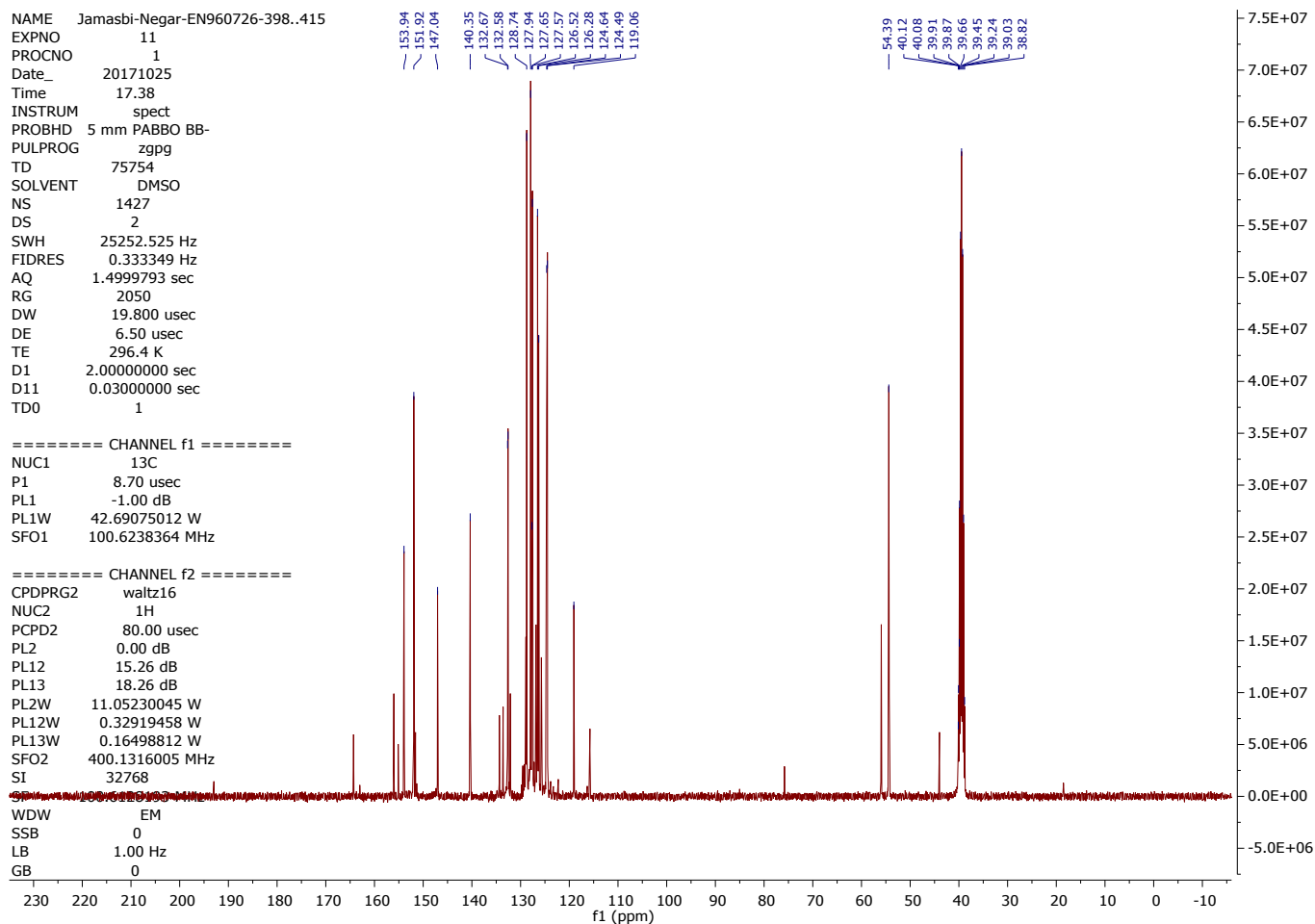
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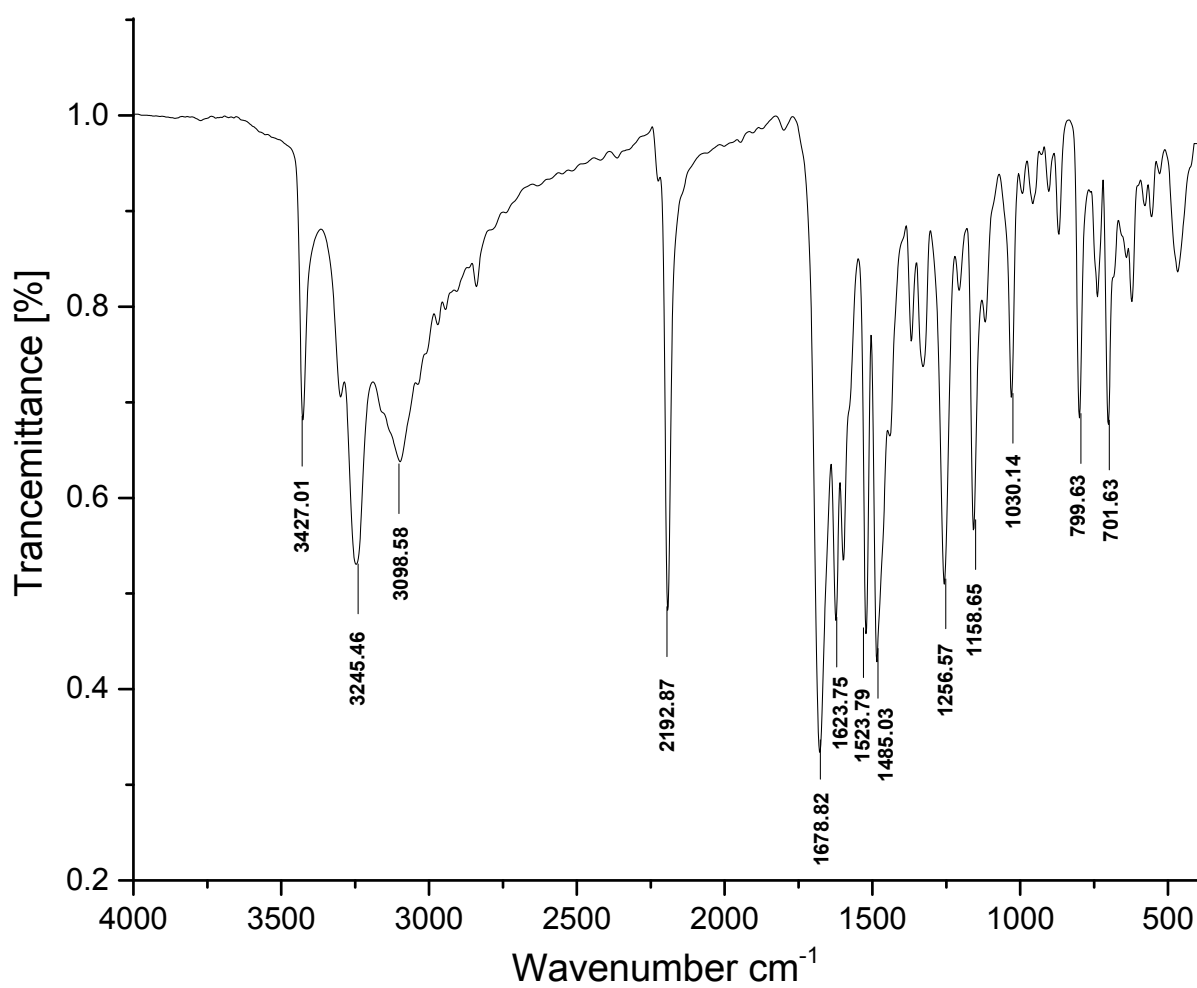
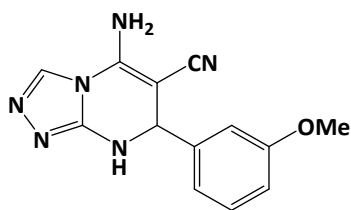
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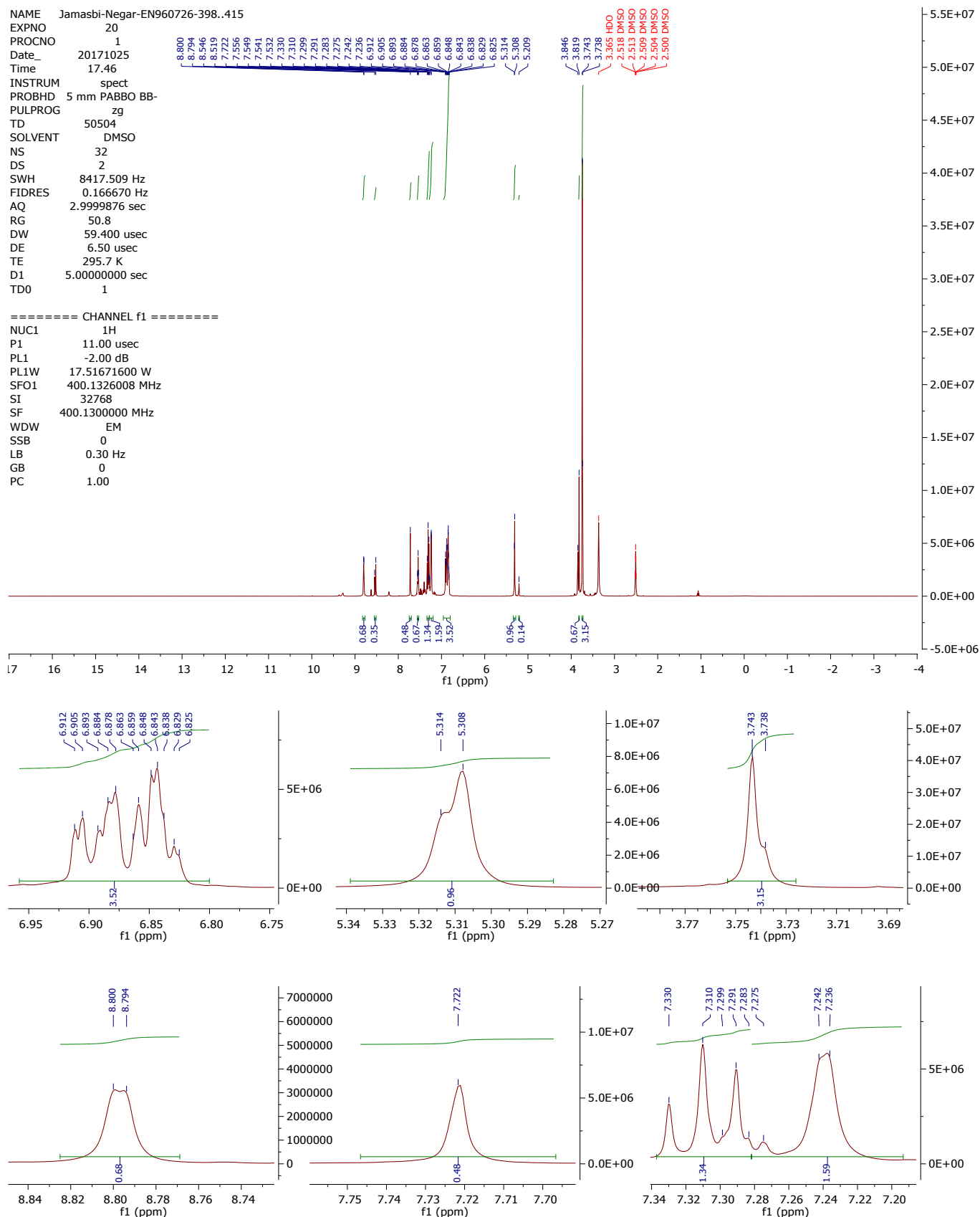
**III. A copy of FT-IR and NMR spectra of 5-amino-7-(naphthalen-2-yl)-7,8-dihydro-[1,2,4]triazolo[4,3-*a*]pyrimidine-6-carbonitrile (4i)**

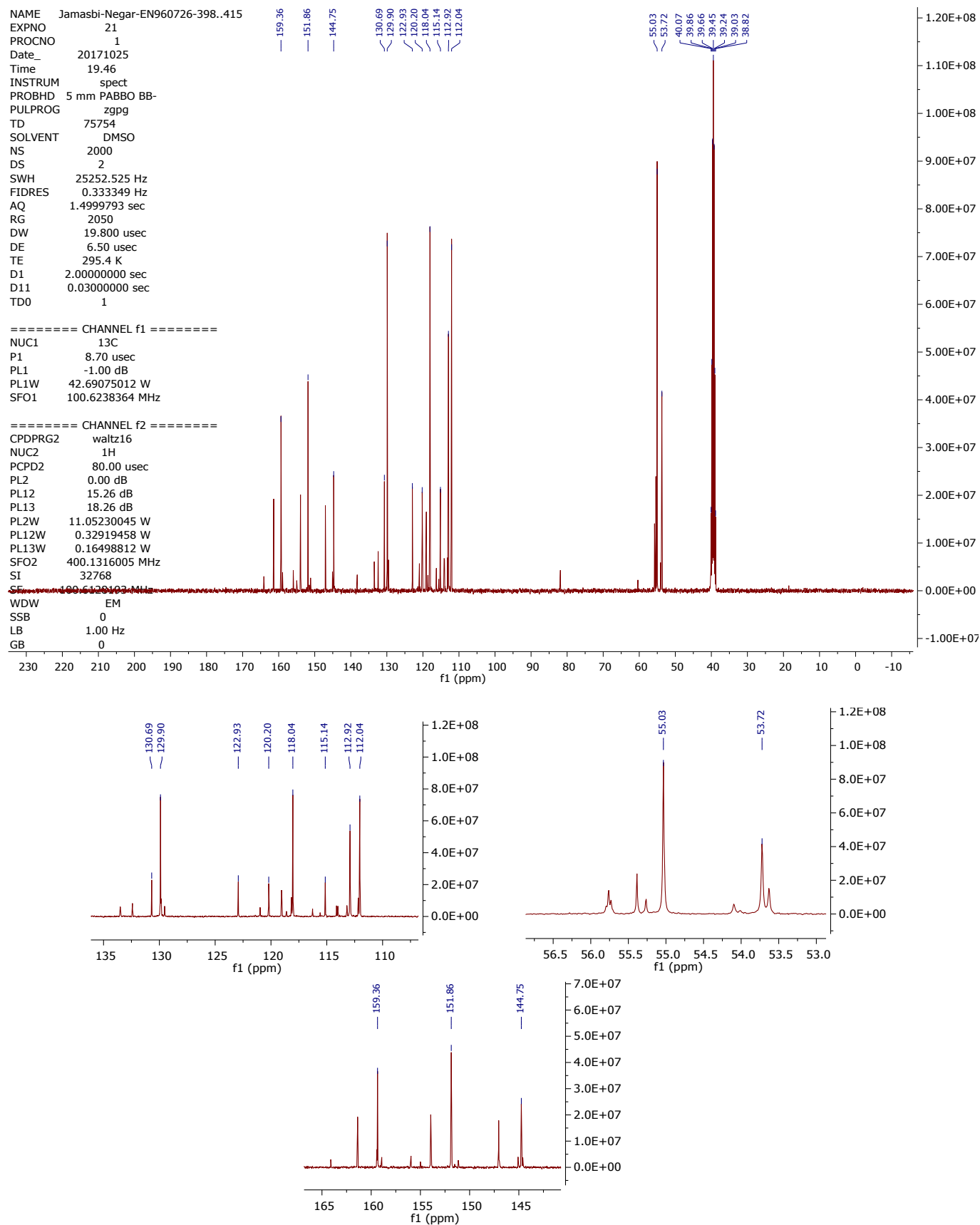




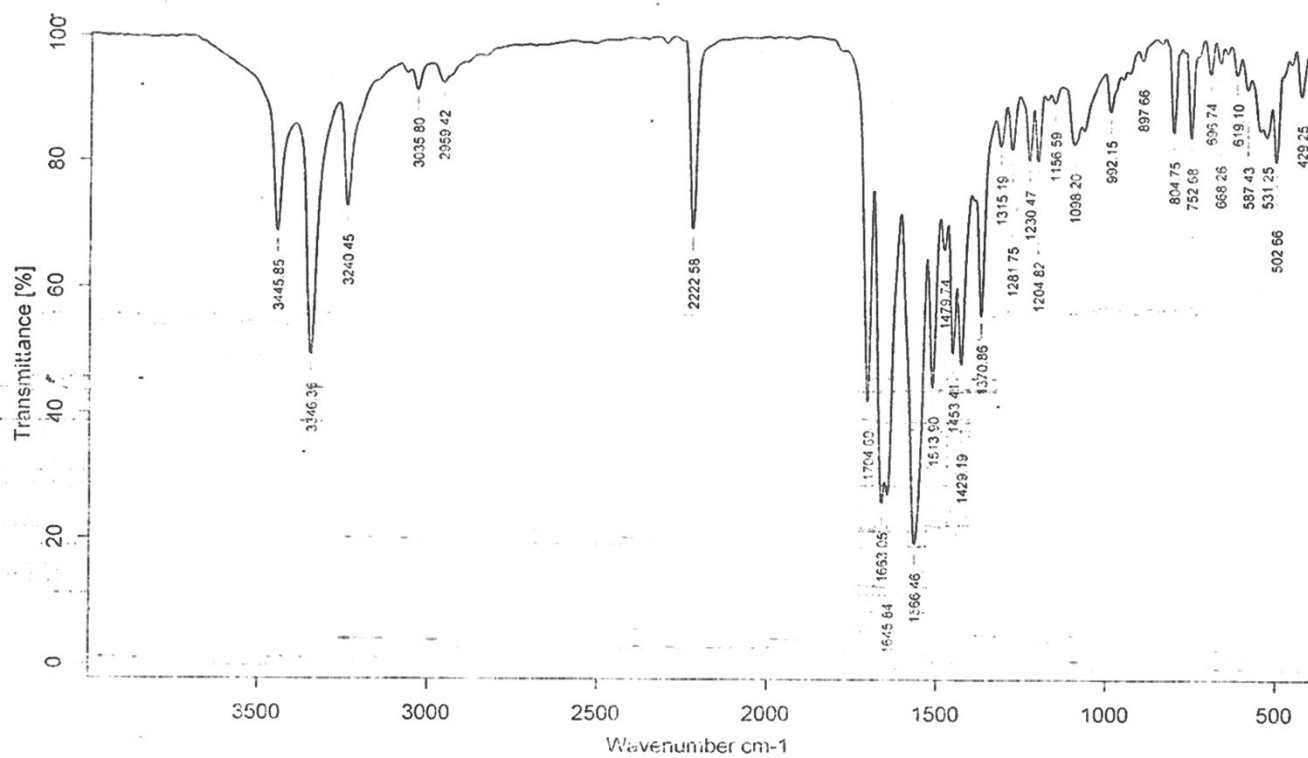
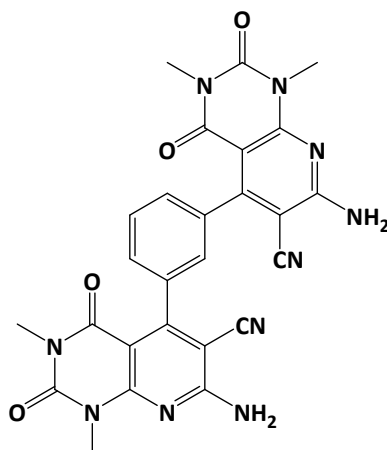


**IV. A copy of FT-IR and NMR spectra of 5-amino-7-(3-methoxyphenyl)-7,8-dihydro-[1,2,4]triazolo[4,3-*a*]pyrimidine-6-carbonitrile (4j)**



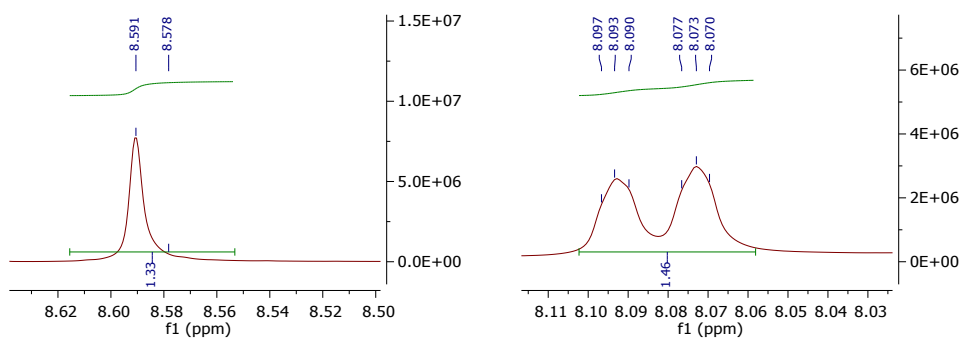
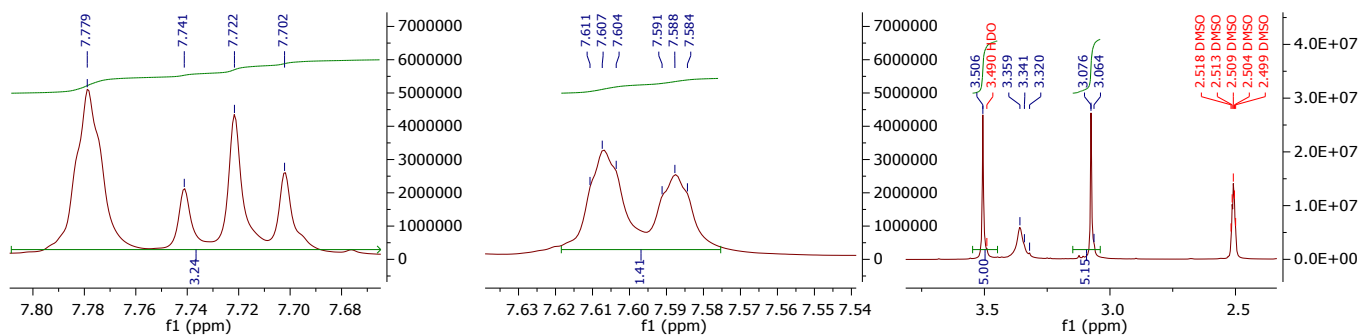
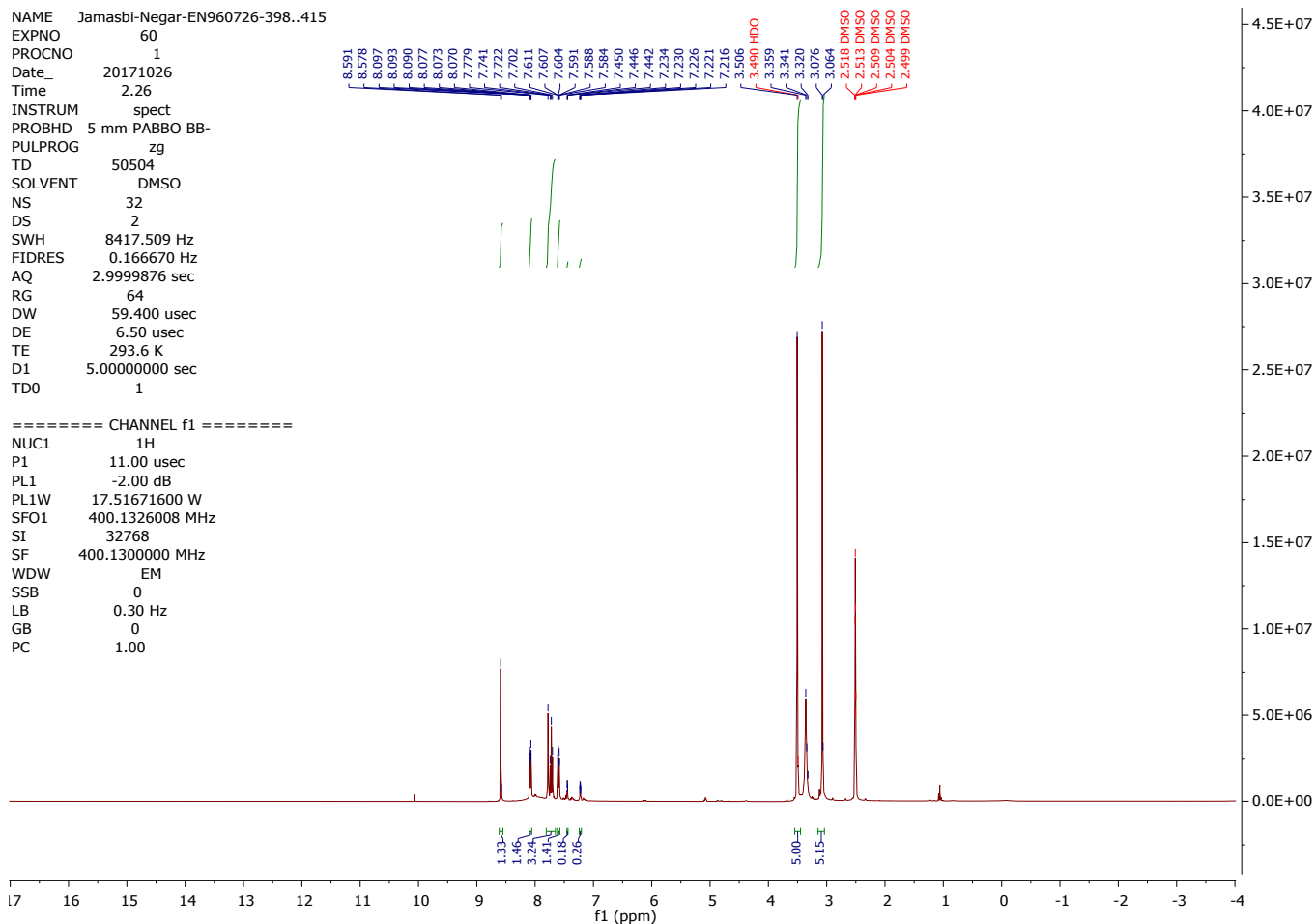


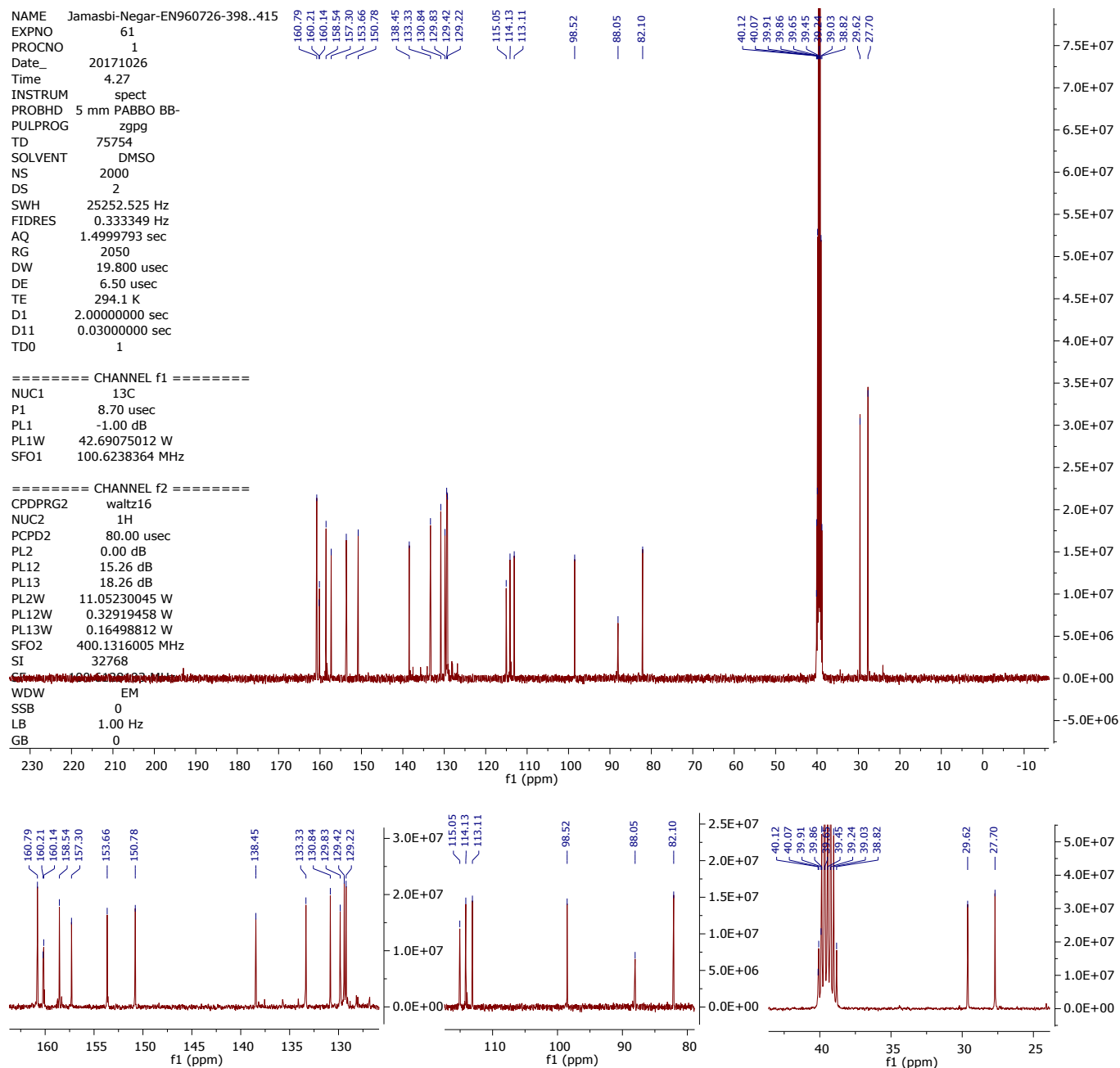
V. A copy of FT-IR and NMR spectra of 5,5'-(1,3-phenylene)bis(7-amino-1,3-dimethyl-2,4-dioxo-1,2,3,4-tetrahydropyrido[2,3-d]pyrimidine-6-carbonitrile) (6o)

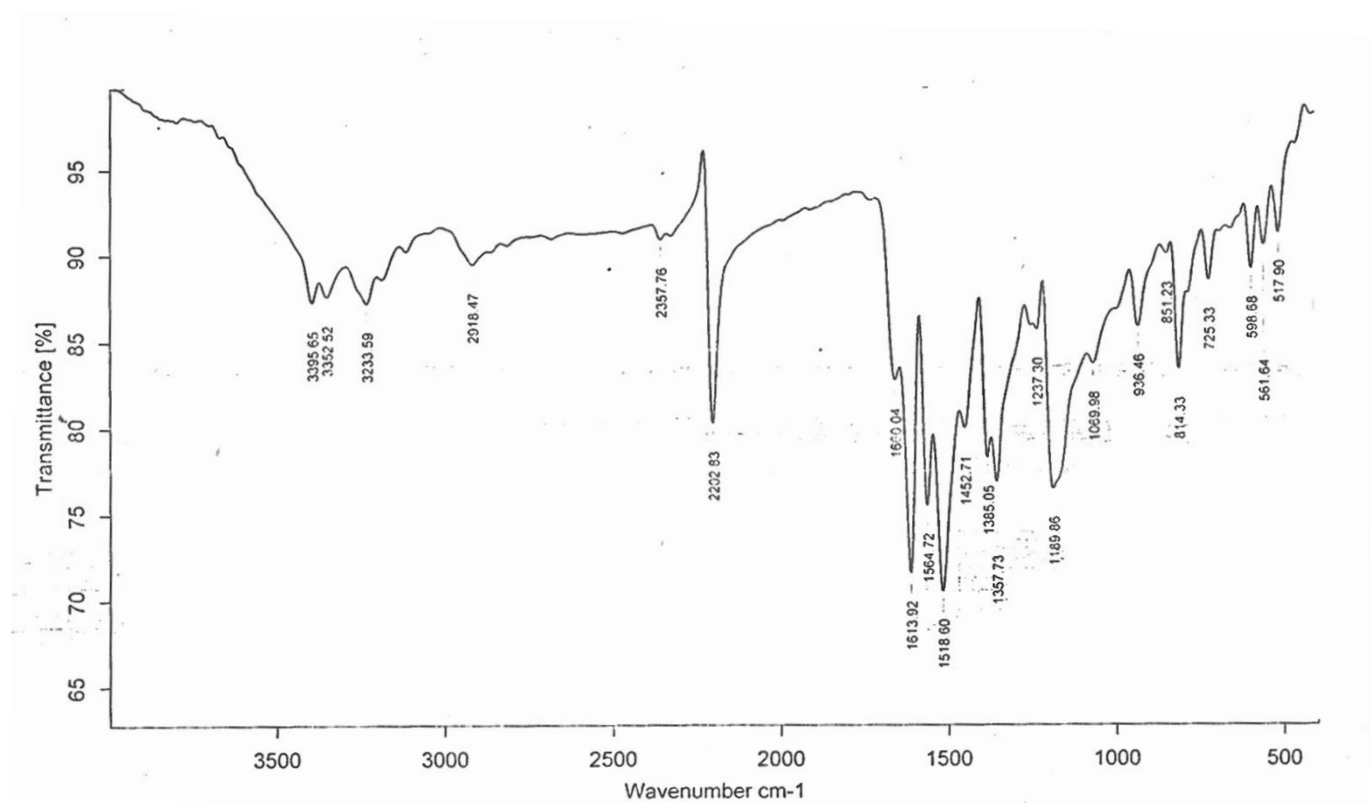
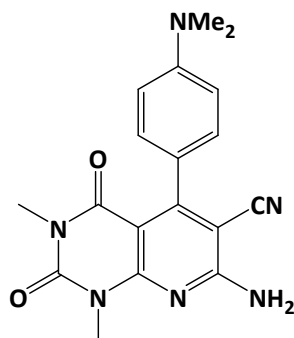


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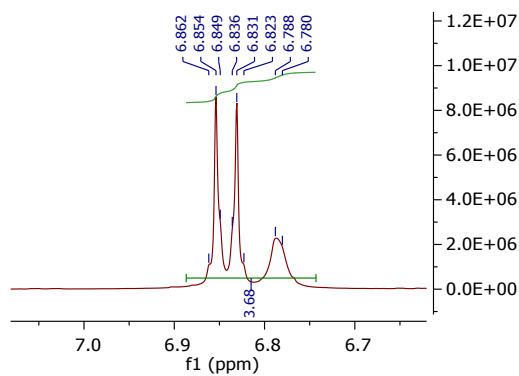
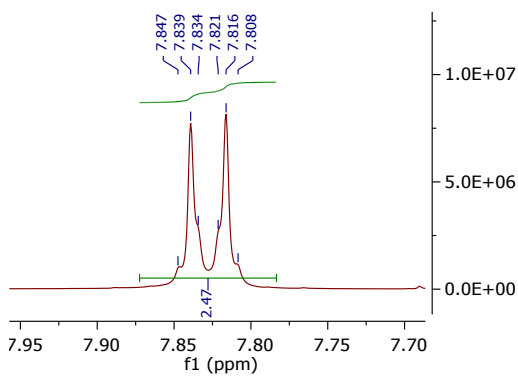
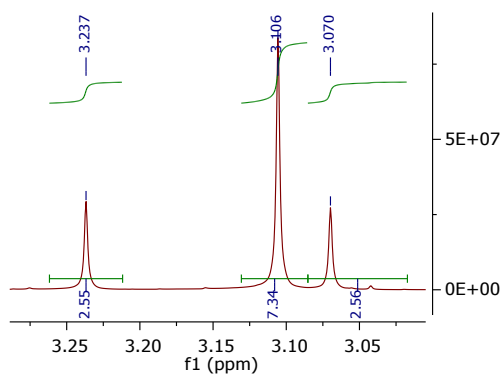
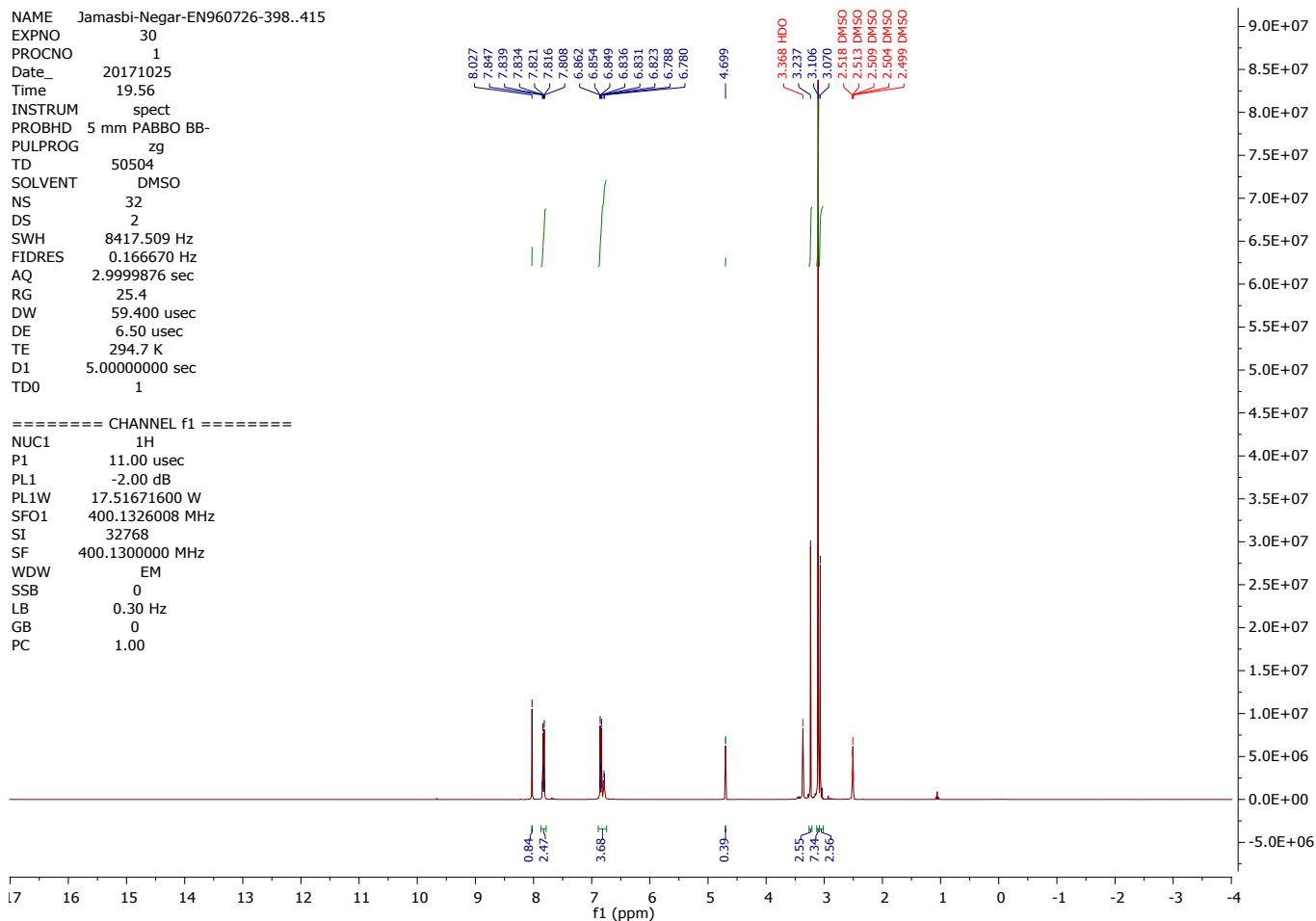




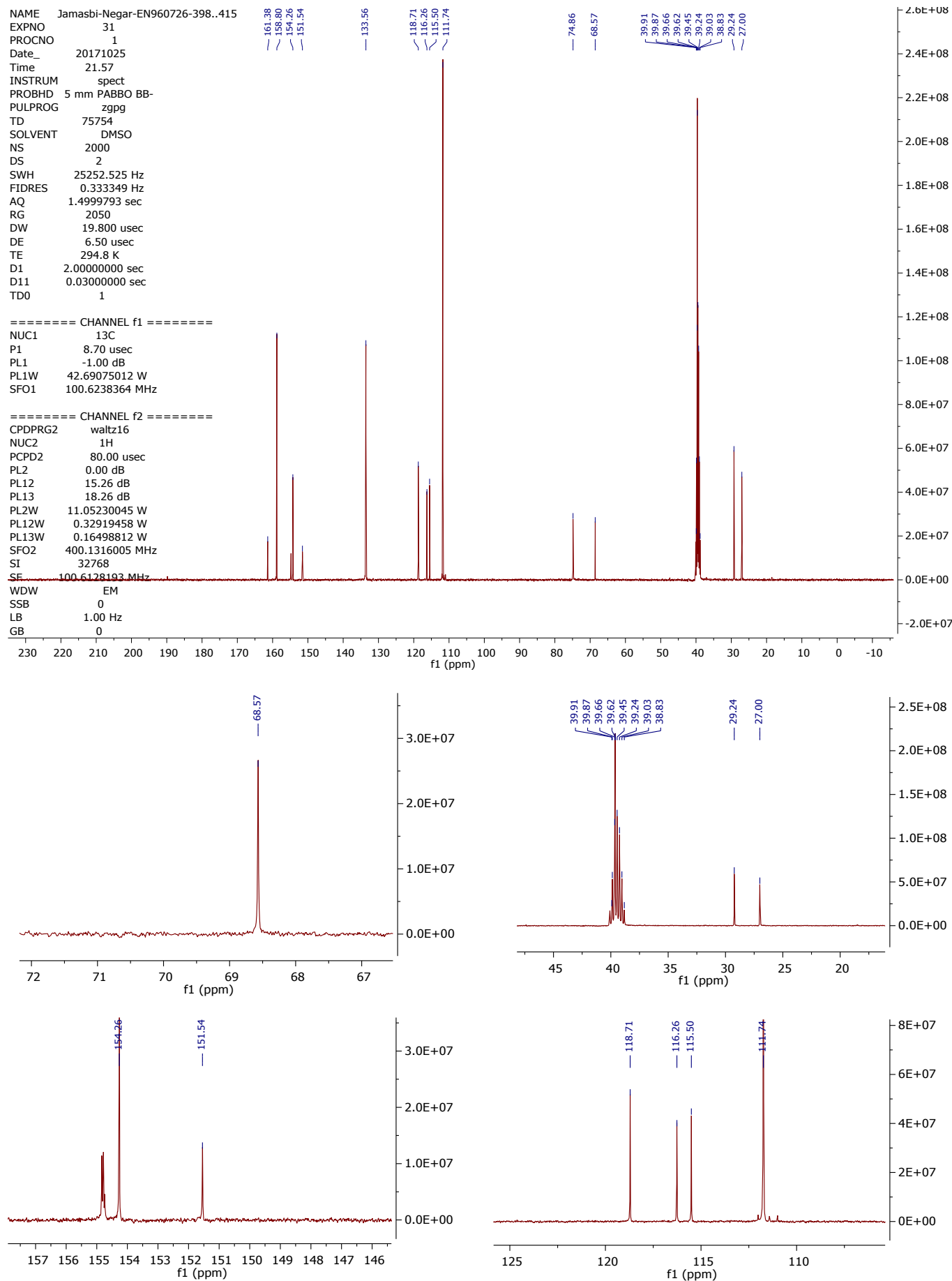
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## References

1. F. Shirini, M. S. N. Langarudi, N. Daneshvar, *J. Mol. Liq.*, 2017, **234**, 268.