

Supplementary Material

Practical approach to *N*-benzyl derivatives of 2-amino-8-methoxy-4*H*-chromene-3-carbonitrile by reductive amination: exploration of their effects against protein kinases and *in silico* ADME profiling

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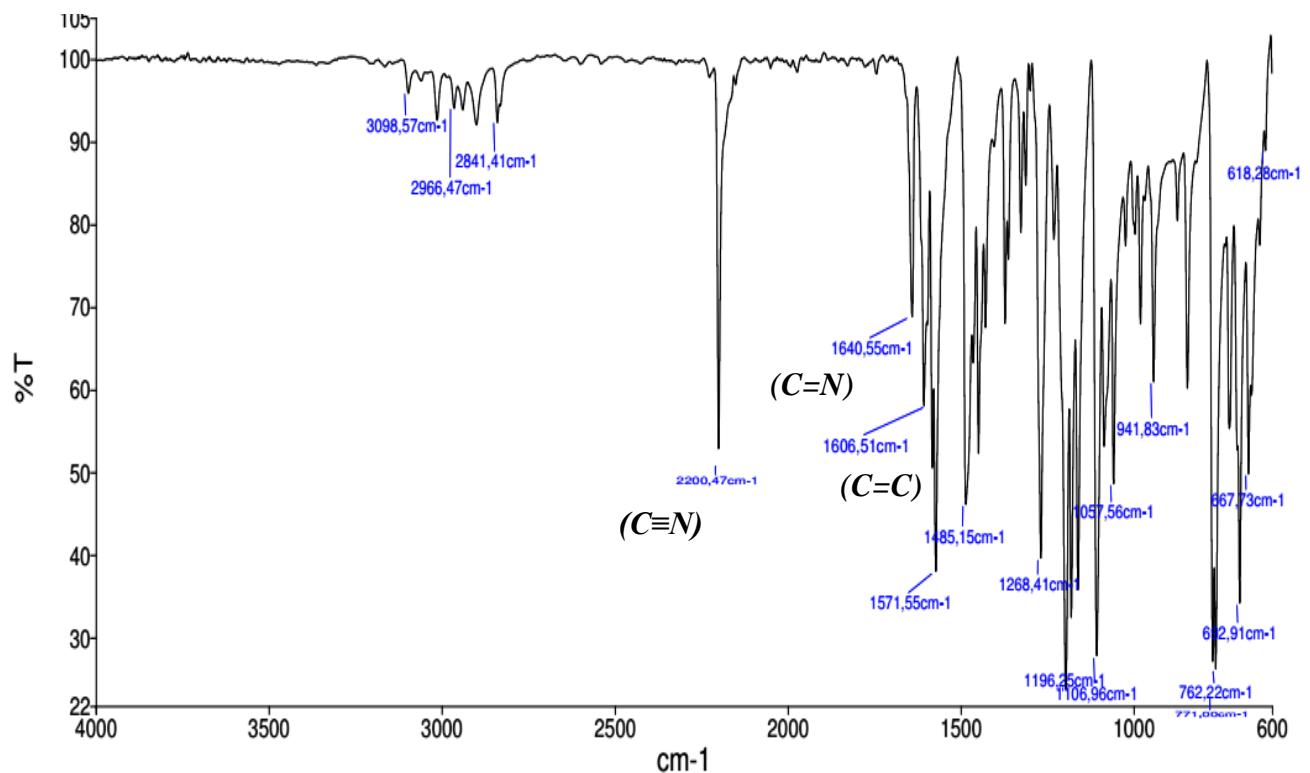
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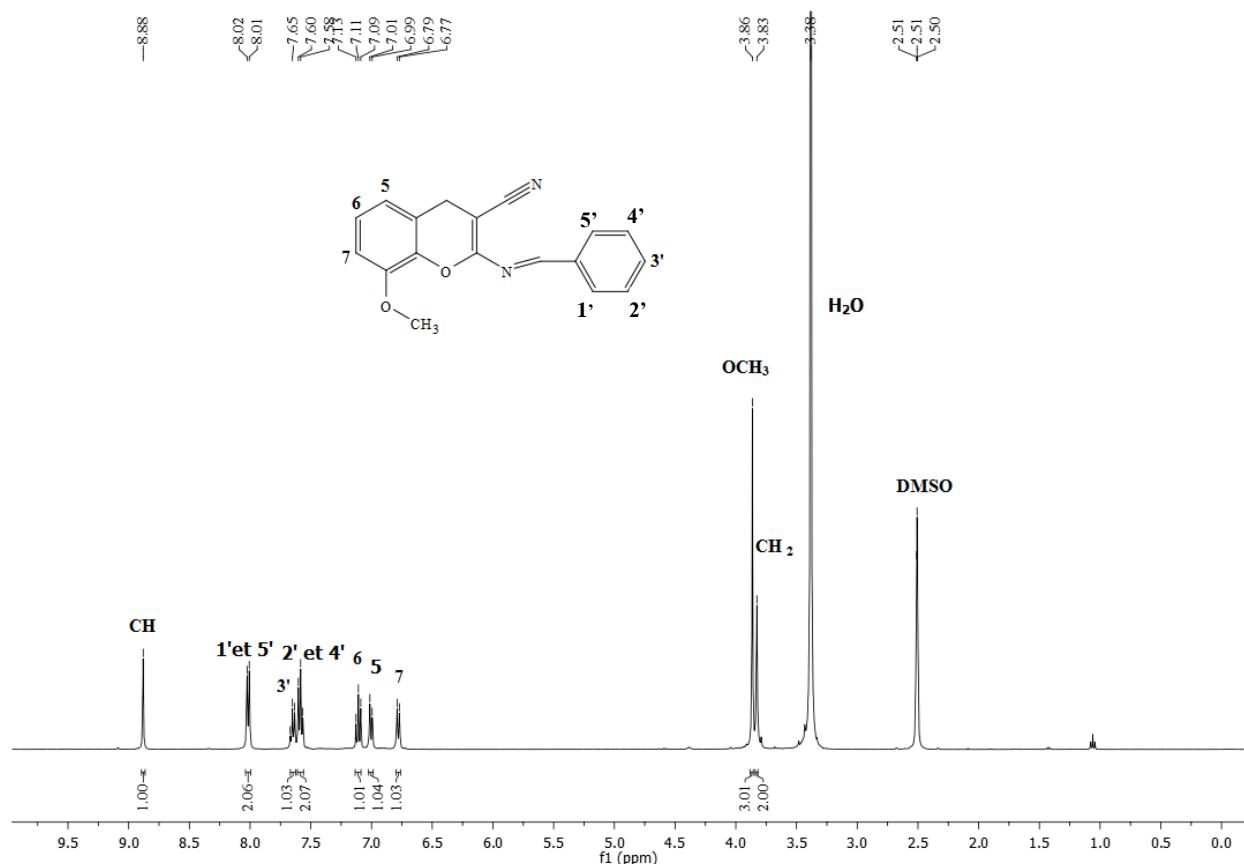
Corresponding author : jean-pierre.bazureau@univ-rennes1.fr

- IR spectra (ν in cm^{-1}) of 2-(phenylmethylene)amino-8-methoxy-4*H*-chromene-3-carbonitrile **6(a-e)** and 2-(phenylmethyl)amino-8-methoxy-4*H*-chromene-3-carbonitrile **7(a-e)**.
- ^1H NMR spectra of compounds 2-(phenylmethylene)amino-8-methoxy-4*H*-chromene-3-carbonitrile **6(a-e)** and 2-(phenylmethyl)amino-8-methoxy-4*H*-chromene-3-carbonitrile **7(a-e)** in $\text{DMSO}-d_6$ or CDCl_3 solution.
- ^{13}C NMR spectra of 2-(phenylmethylene)amino-8-methoxy-4*H*-chromene-3-carbonitrile **6(a-e)** and 2-(phenylmethyl)amino-8-methoxy-4*H*-chromene-3-carbonitrile **7(a-e)** in $\text{DMSO}-d_6$ or CDCl_3 solution.
- HRMS spectra of 2-(phenylmethylene)amino-8-methoxy-4*H*-chromene-3-carbonitrile **6(a-e)** and 2-(phenylmethyl)amino-8-methoxy-4*H*-chromene-3-carbonitrile **7(a-e)**.

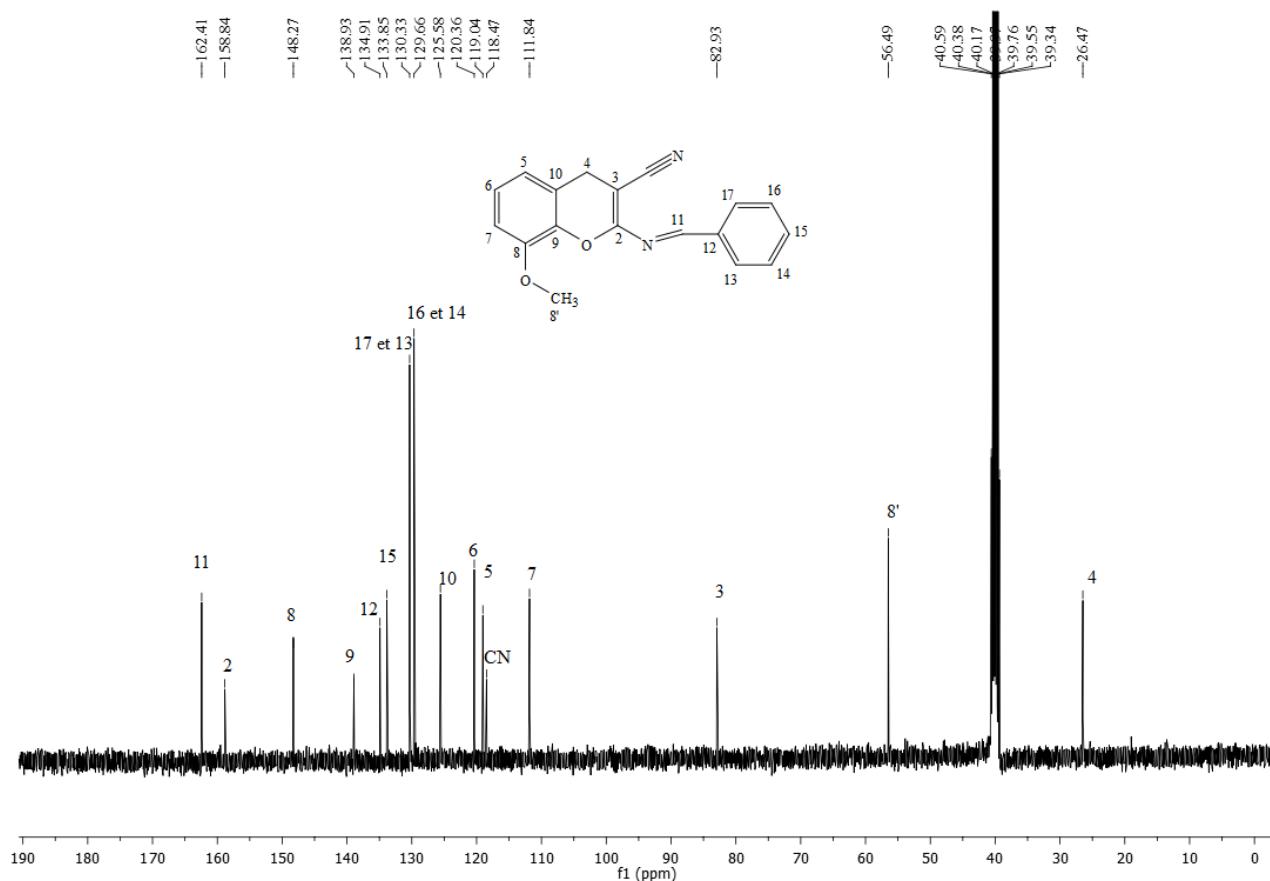
- FTIR spectrum of 2-[*(E*)-(phenylmethylene)amino]-8-methoxy-4*H*-chromene-3-carbonitrile (**6a**).



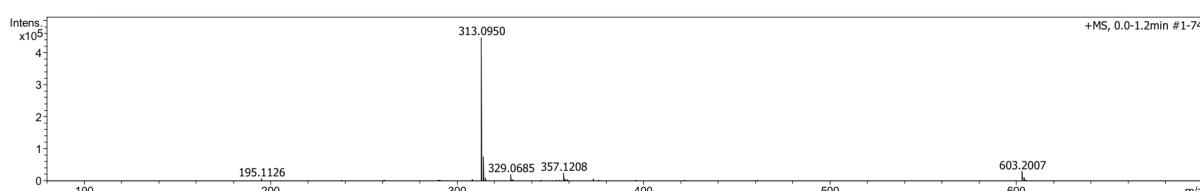
- ¹H NMR spectrum of 2-[*(E*)-(phenylmethylene)amino]-8-methoxy-4*H*-chromene-3-carbonitrile (**6a**) in DMSO-d₆ solution.



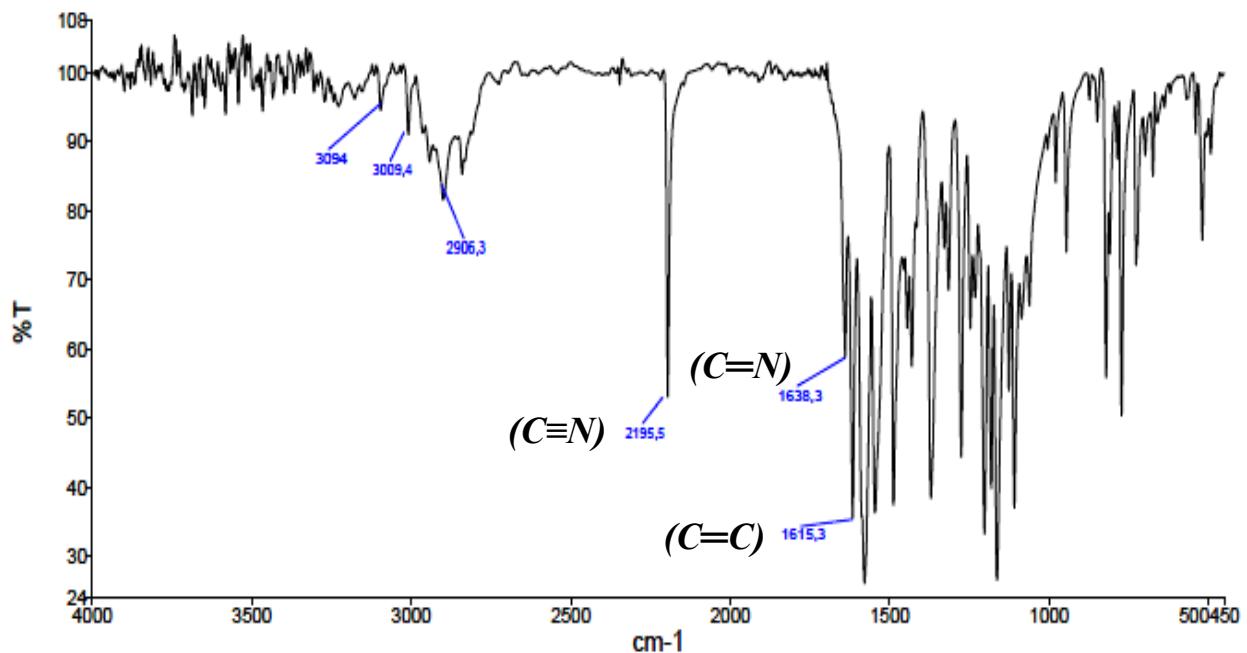
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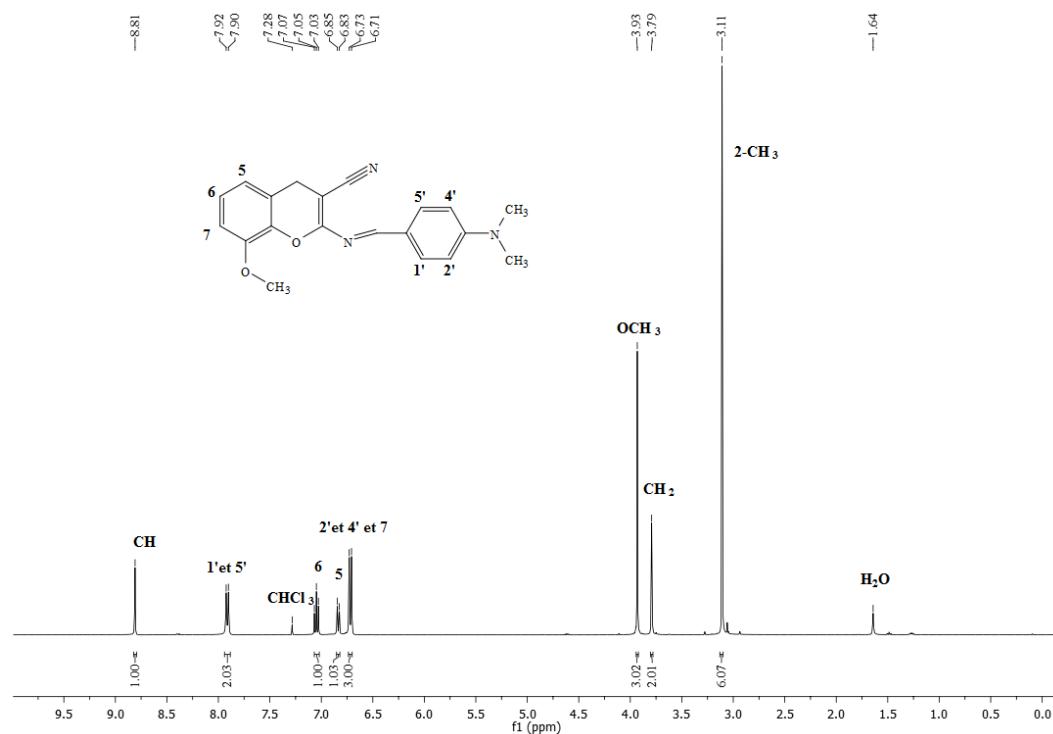
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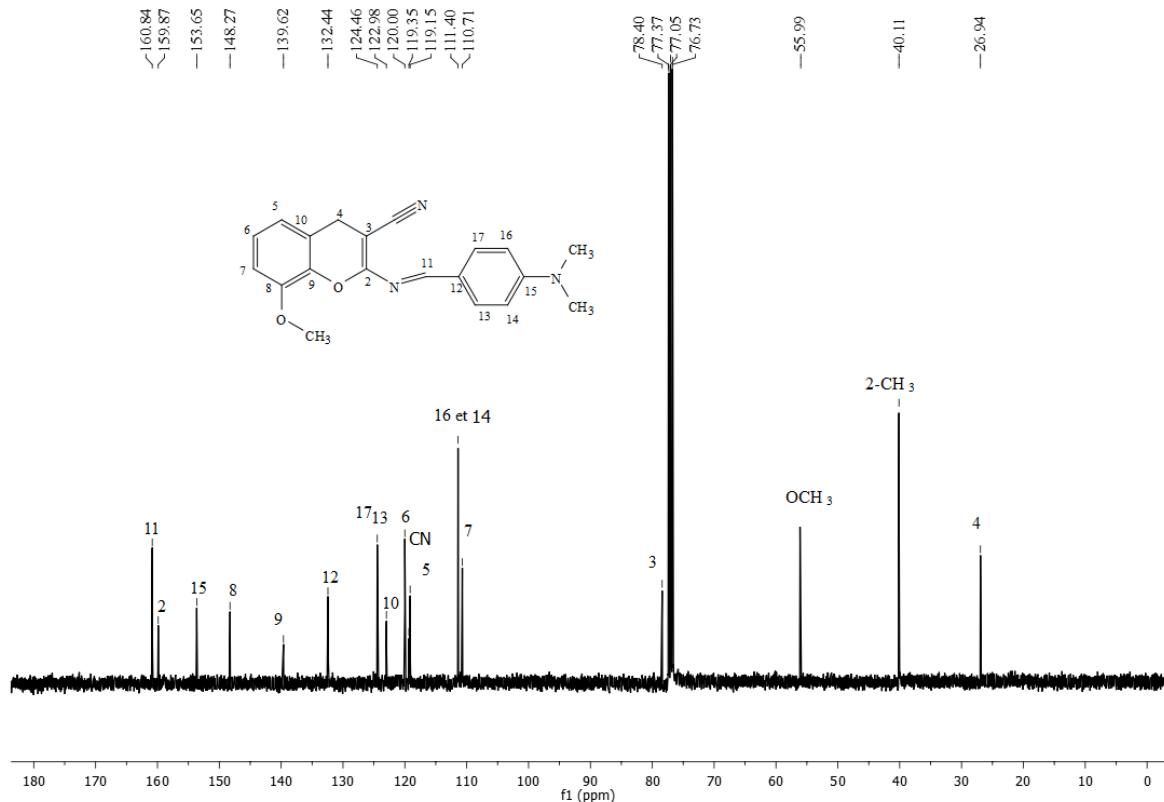
- FTIR spectrum of 2-[*(E*)-(4-diethylaminophenyl)methylene]amino]-8-methoxy-4*H*-chromene-3-carbonitrile (**6b**).



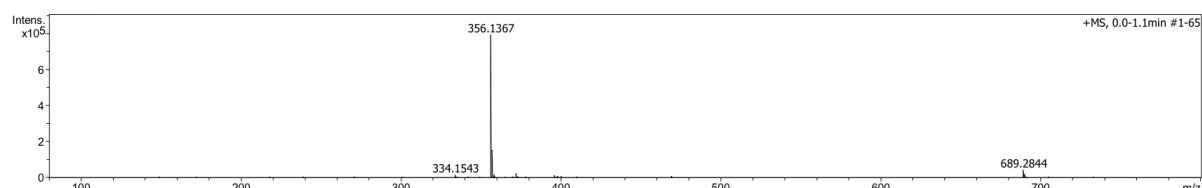
- ^1H NMR spectrum of 2-[*(E*)-(4-diethylaminophenyl)methylene]amino]-8-methoxy-4*H*-chromene-3-carbonitrile (**6b**) in CDCl_3 solution.



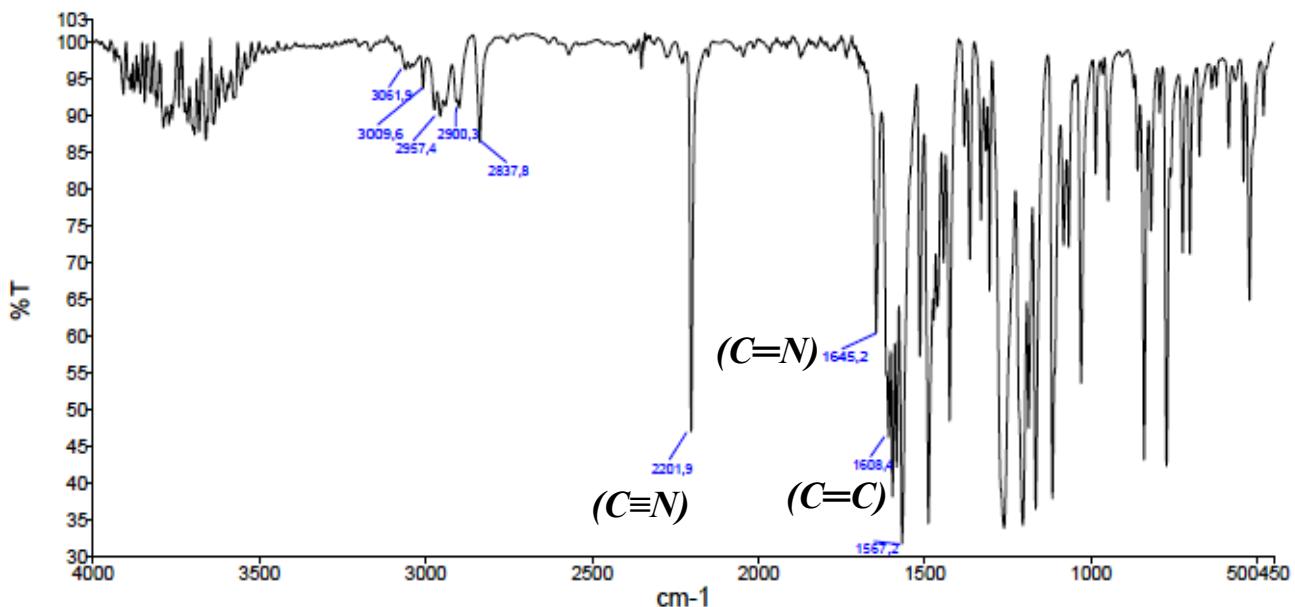
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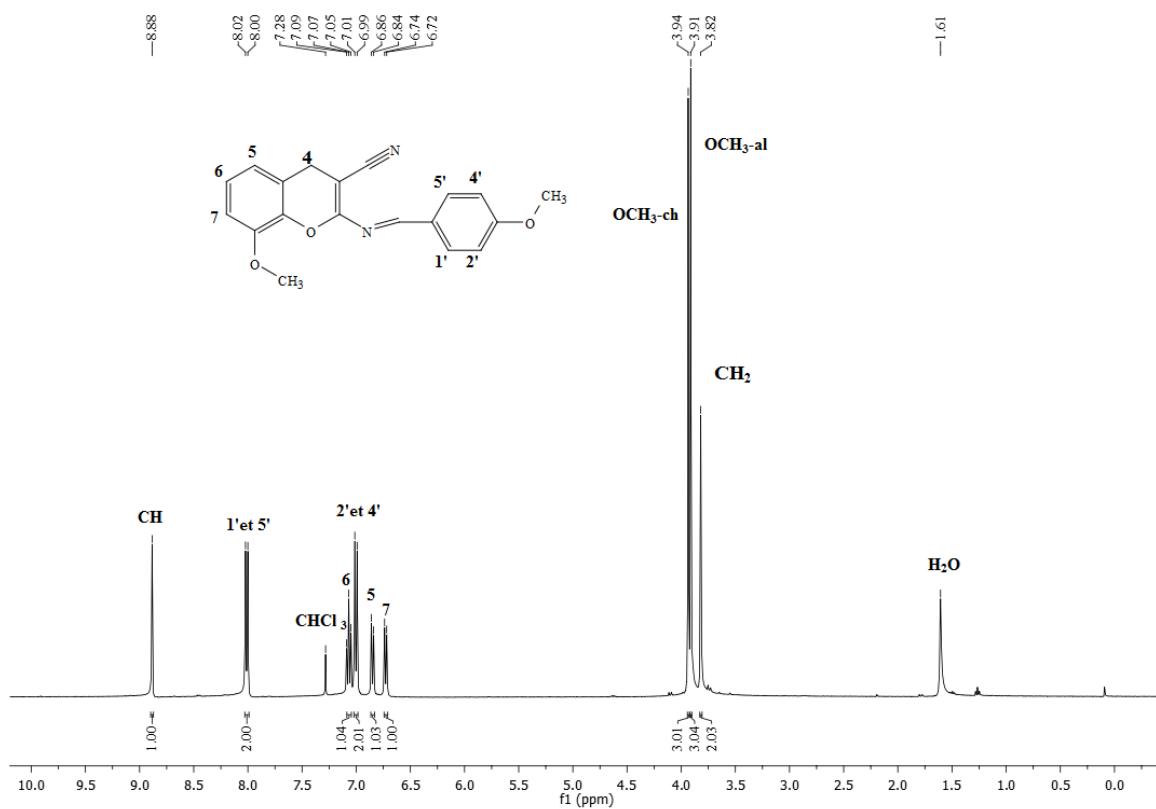
- HRMS spectrum of 2-[*(E*)-(4-dimethylaminophenyl)methylene]amino]-8-methoxy-4*H*-chromene-3-carbonitrile (**6b**).



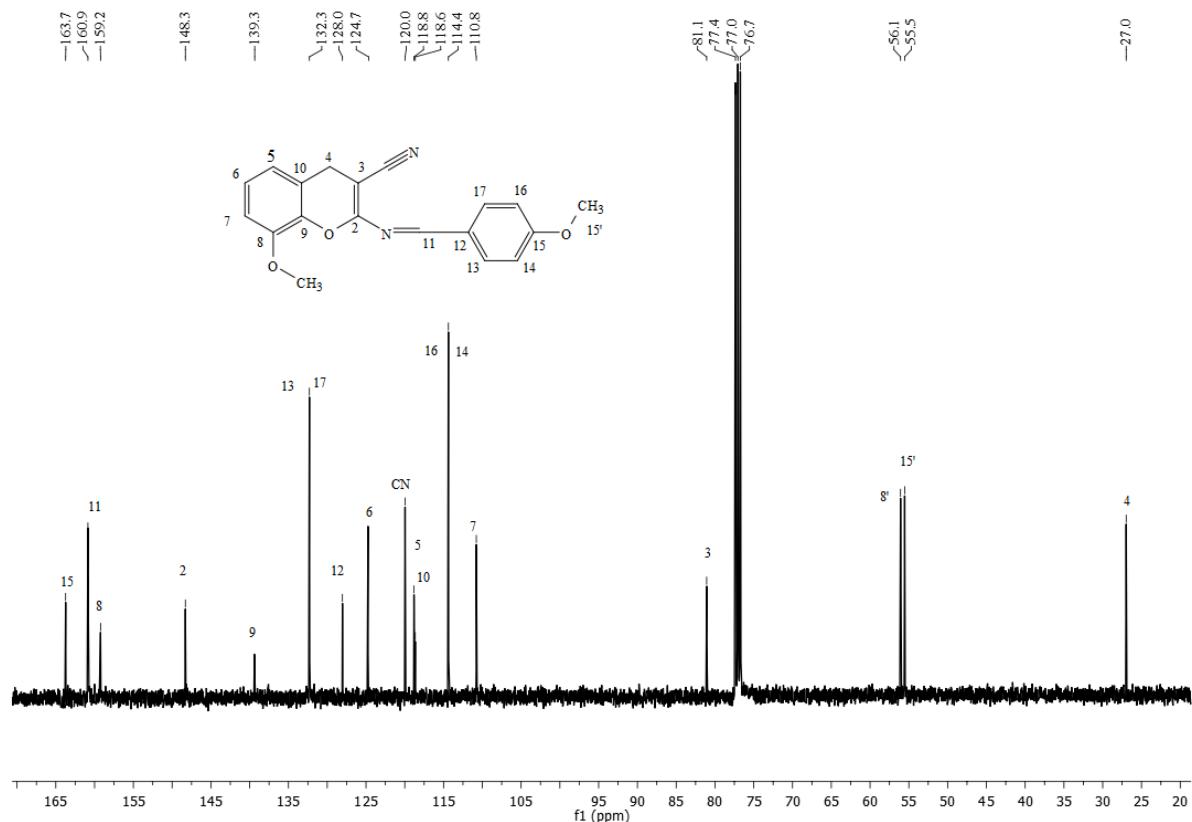
- FTIR spectrum of 2-[(*E*)-(4-methoxyphenyl)methylene]amino]-8-methoxy-4*H*-chromene-3-carbonitrile (**6c**).



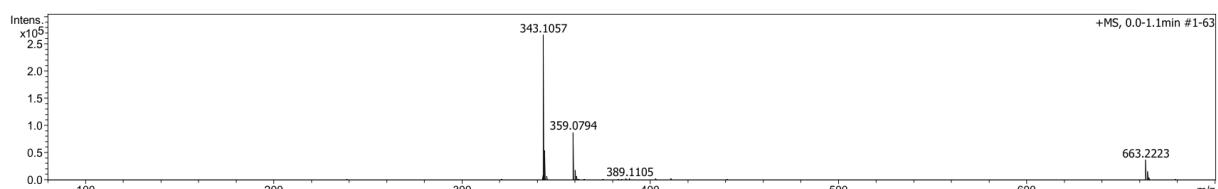
- ¹H NMR spectrum of 2-[(*E*)-(4-methoxyphenyl)methylene]amino]-8-methoxy-4*H*-chromene-3-carbonitrile (**6c**) in CDCl₃ solution.



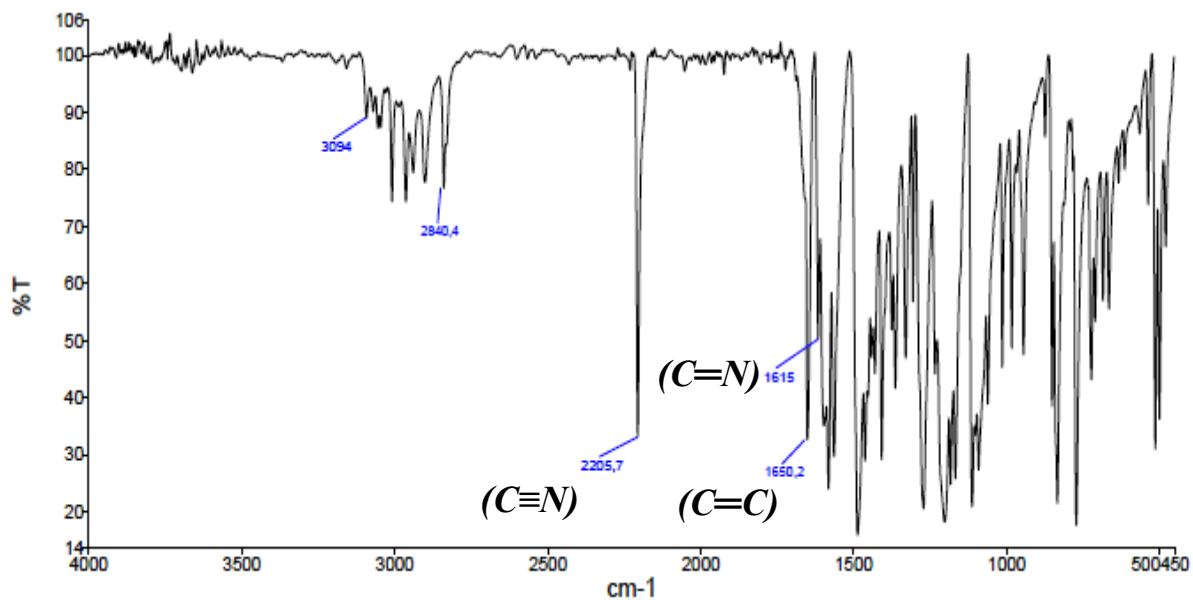
- ^{13}C NMR spectrum of 2-[[(E)-(4-methoxyphenyl)methylene]amino]-8-methoxy-4*H*-chromene-3-carbonitrile (**6c**) in CDCl_3 solution.



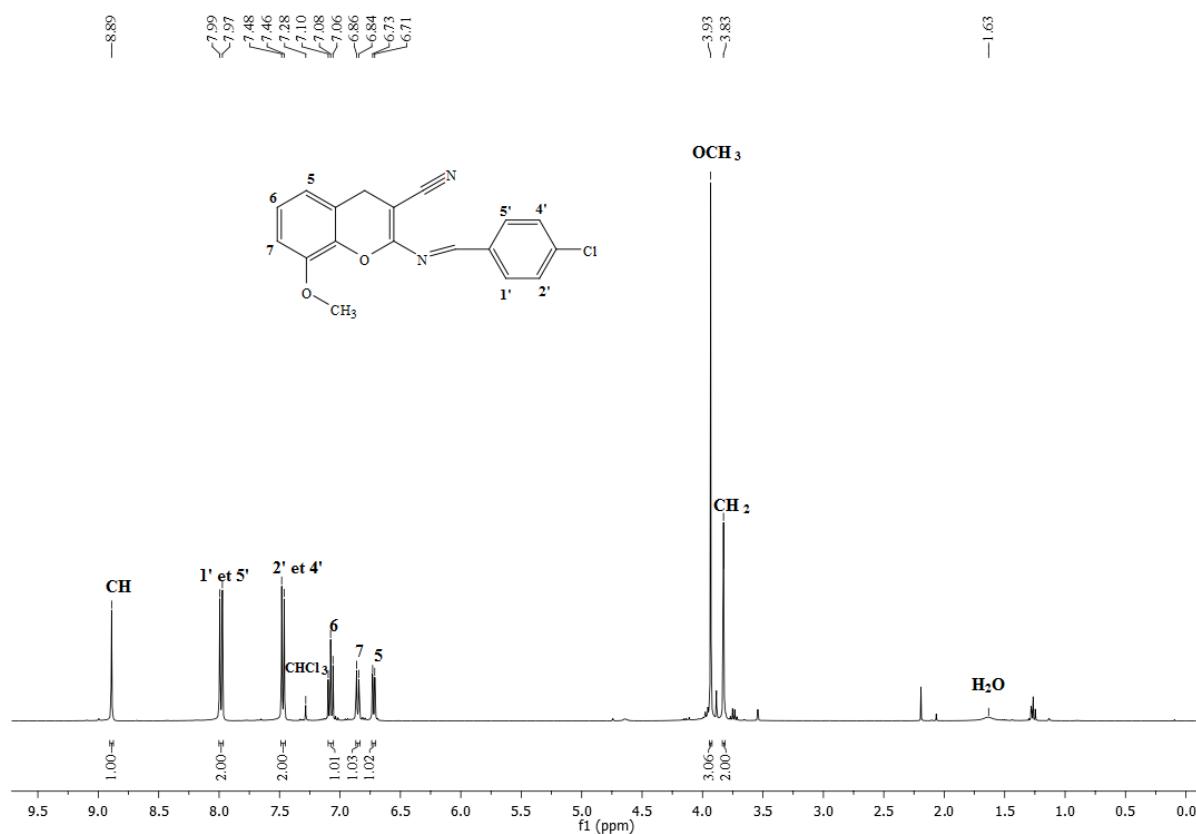
- HRMS spectrum of 2-[[(E)-(4-methoxyphenyl)methylene]amino]-8-methoxy-4*H*-chromene-3-carbonitrile (**6c**).



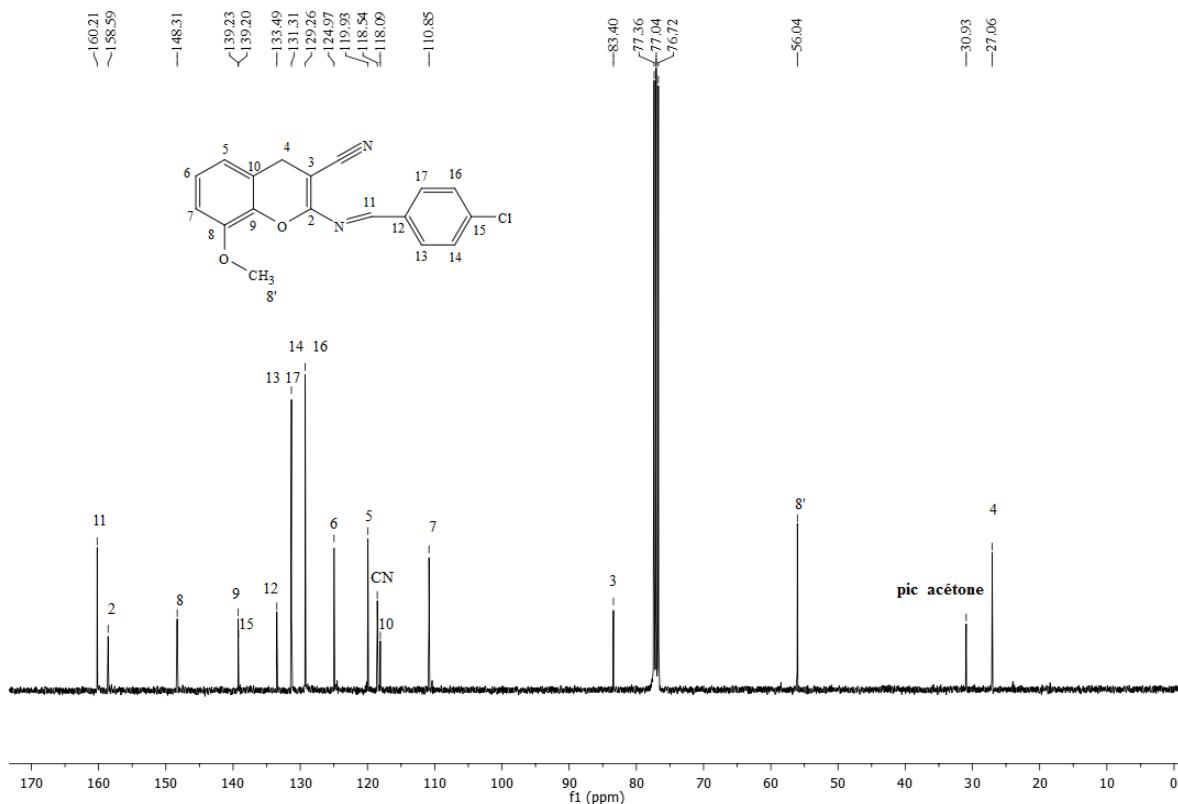
- FTIR spectrum of 2-[(*E*)-(4-chlorophenyl)methylene]amino]-8-methoxy-4*H*-chromene-3-carbonitrile (**6d**).



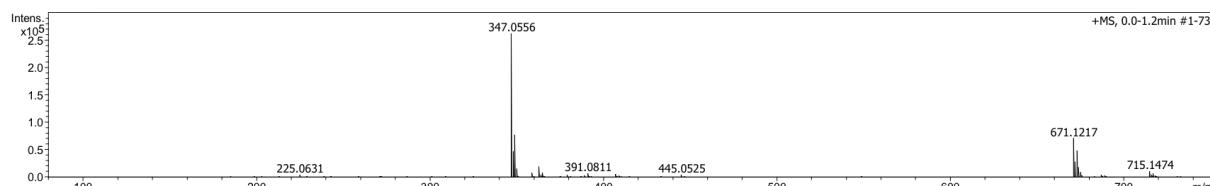
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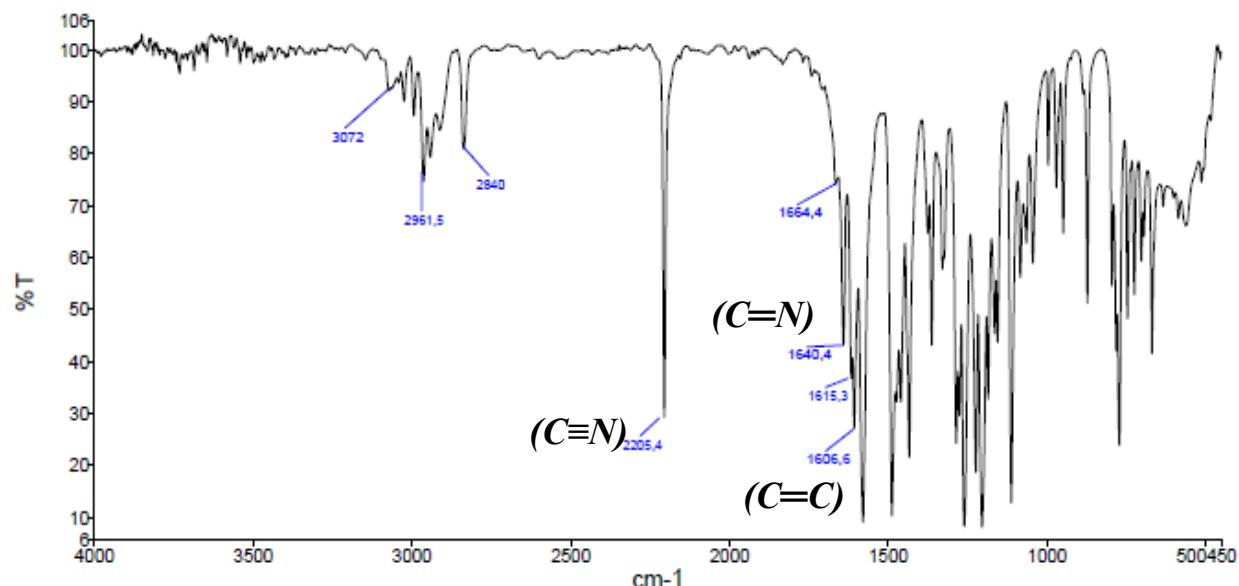
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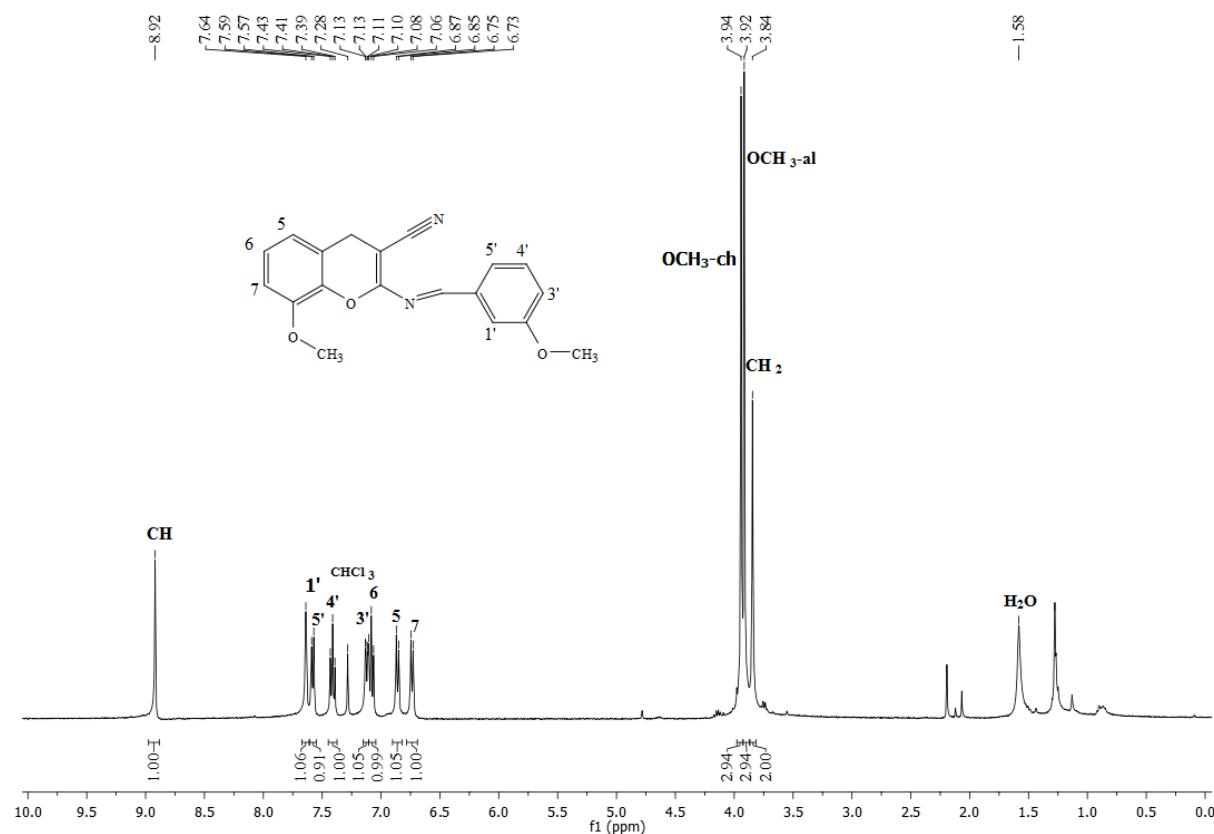
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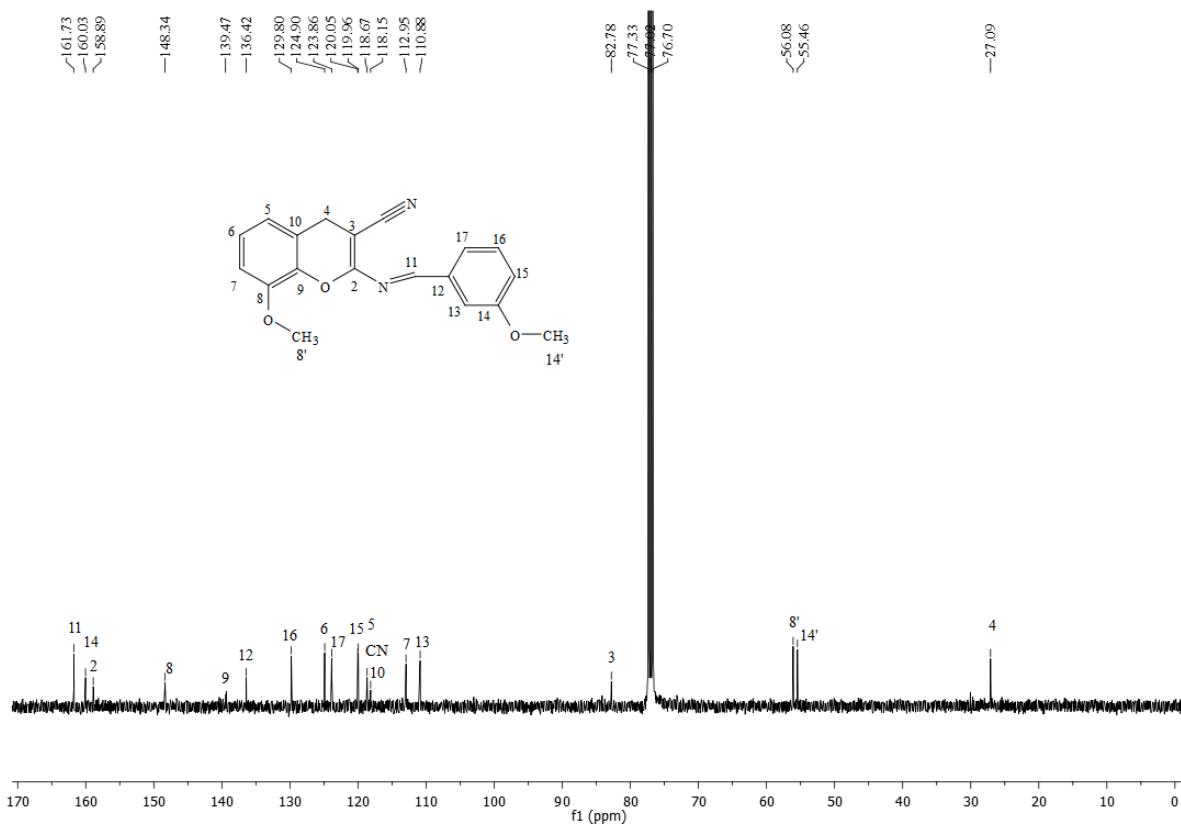
- FTIR spectrum of 2-[(*E*)-(3-methoxyphenyl)methylene]amino]-8-methoxy-4*H*-chromene-3-carbonitrile (**6e**).



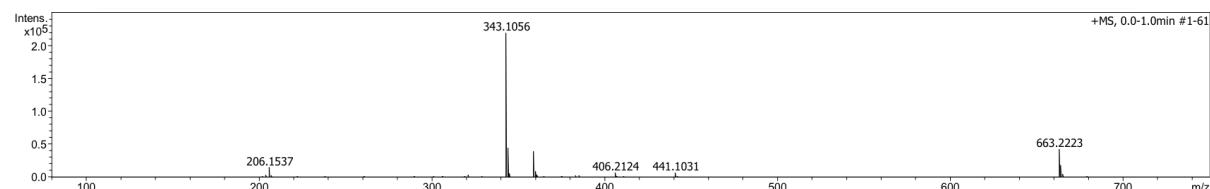
- 1H NMR spectrum of 2-[(*E*)-(3-methoxyphenyl)methylene]amino]-8-methoxy-4*H*-chromene-3-carbonitrile (**6e**) in $CDCl_3$ solution.



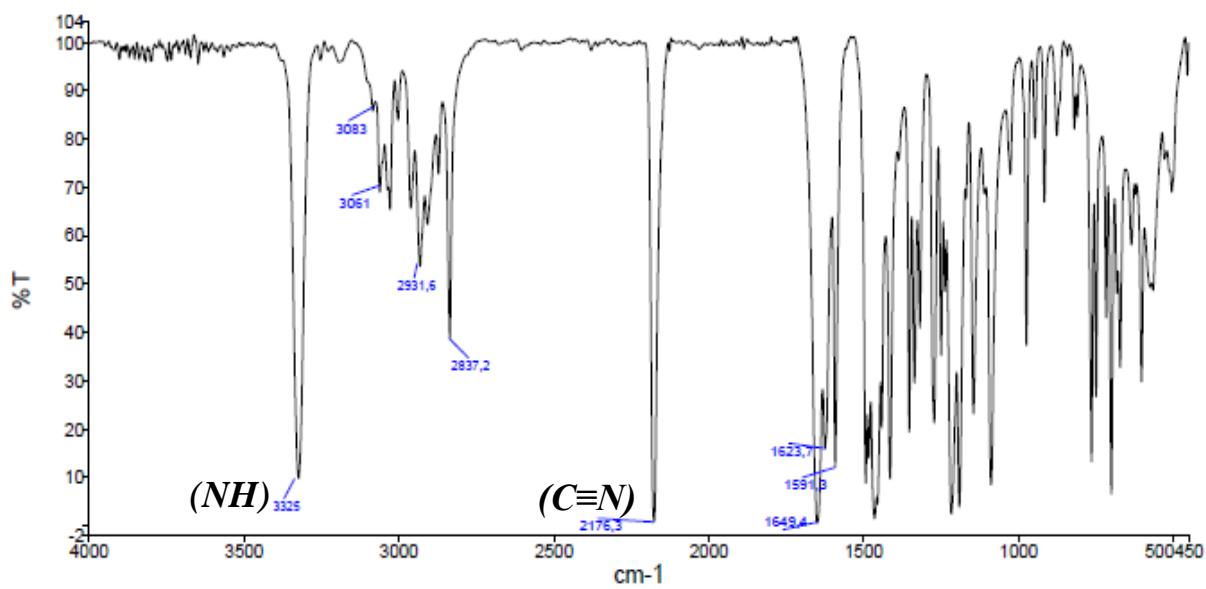
- ^{13}C NMR spectrum of 2-[[(E)-(3-methoxyphenyl)methylene]amino]-8-methoxy-4*H*-chromene-3-carbonitrile (**6e**) in CDCl_3 solution.



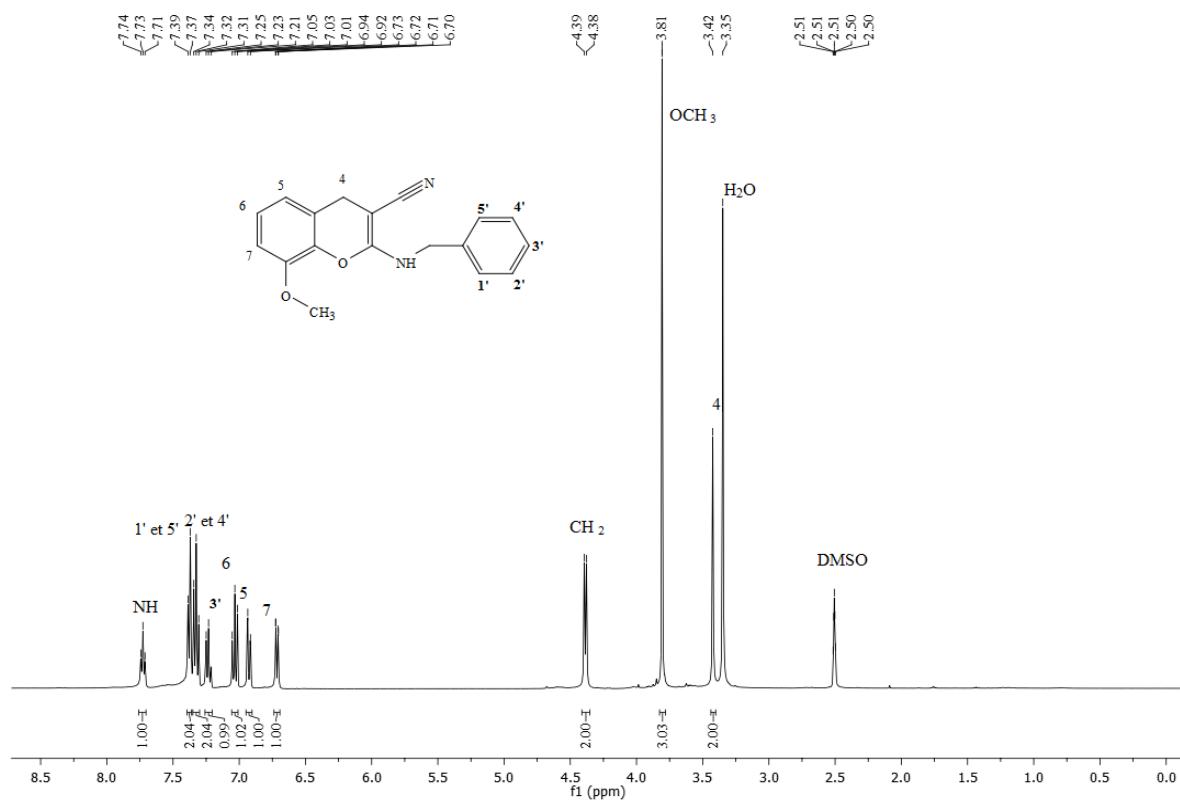
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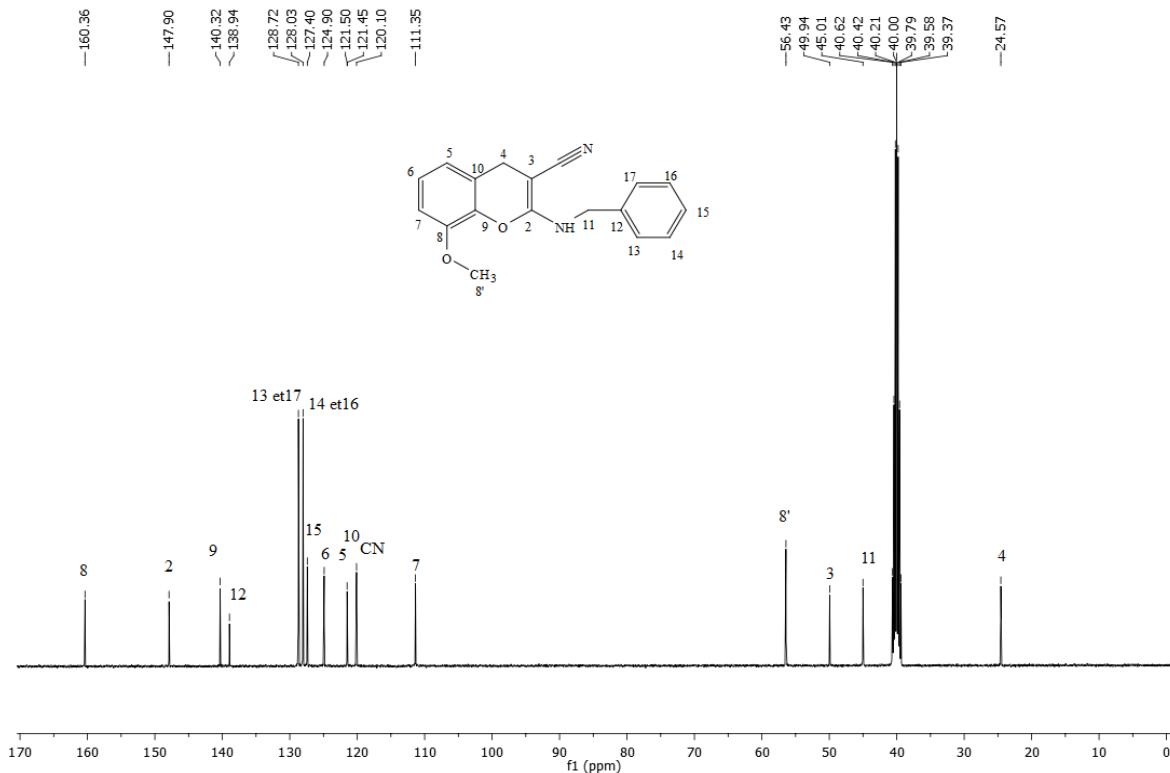
- FTIR spectrum of 2-(phenylmethylamino)-8-methoxy-4H-chromene-3-carbonitrile (**7a**).



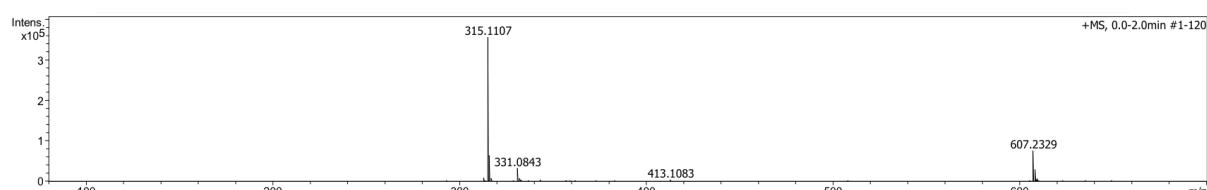
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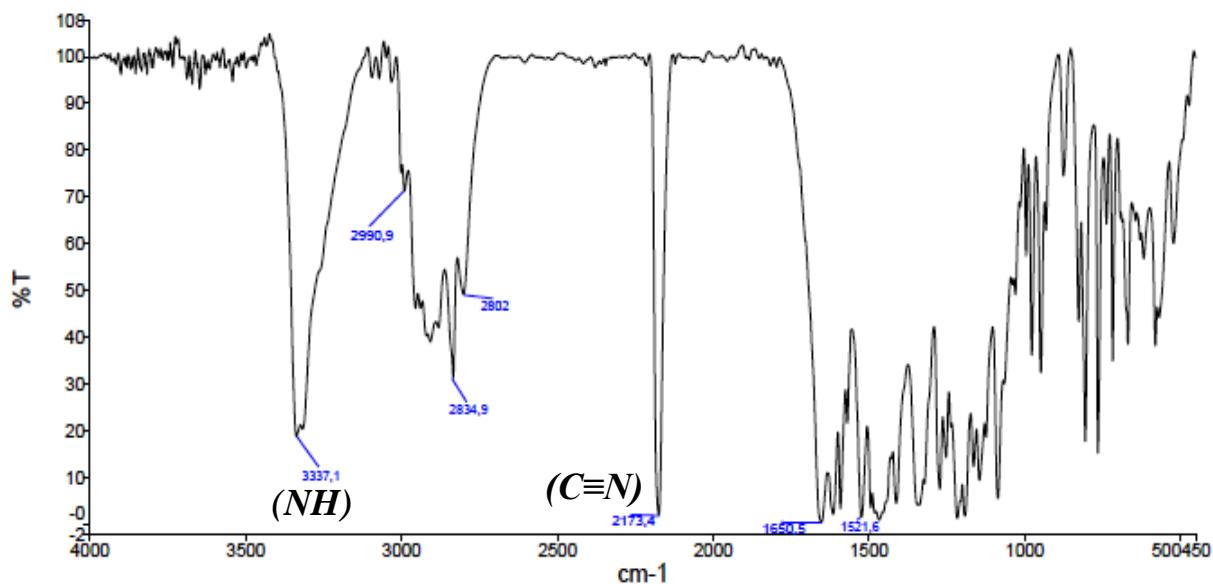
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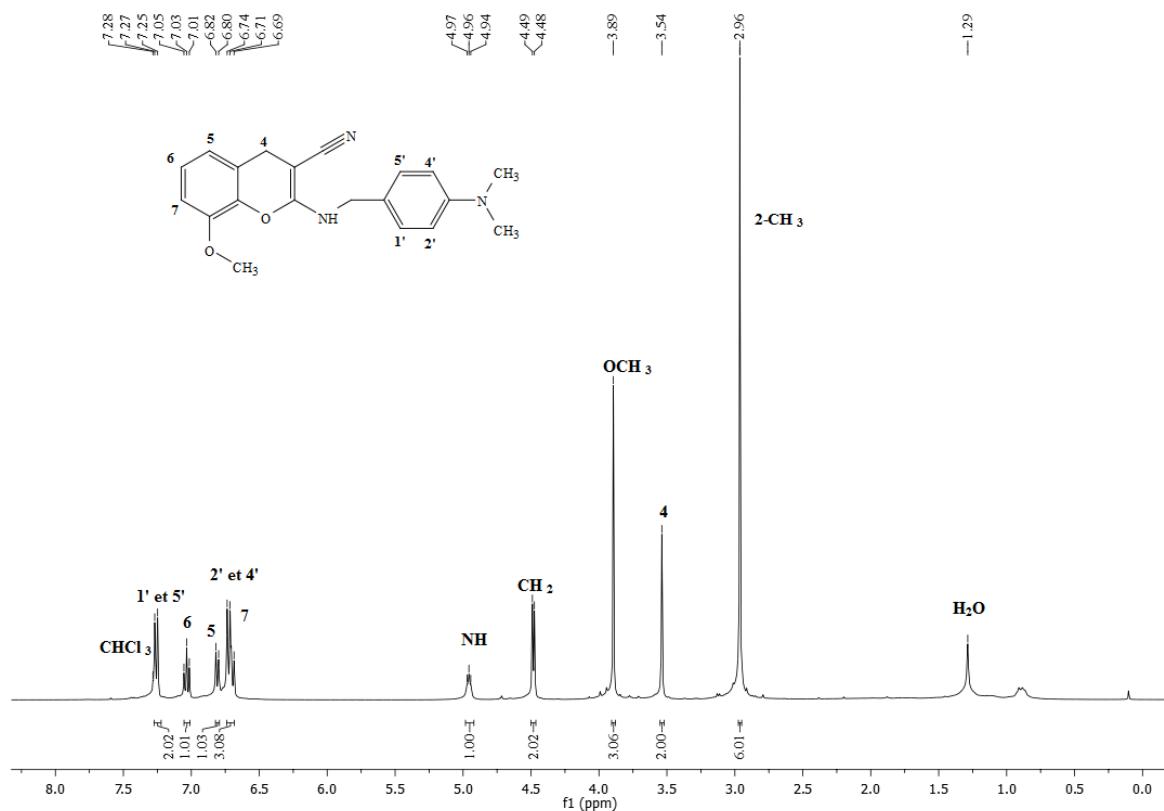
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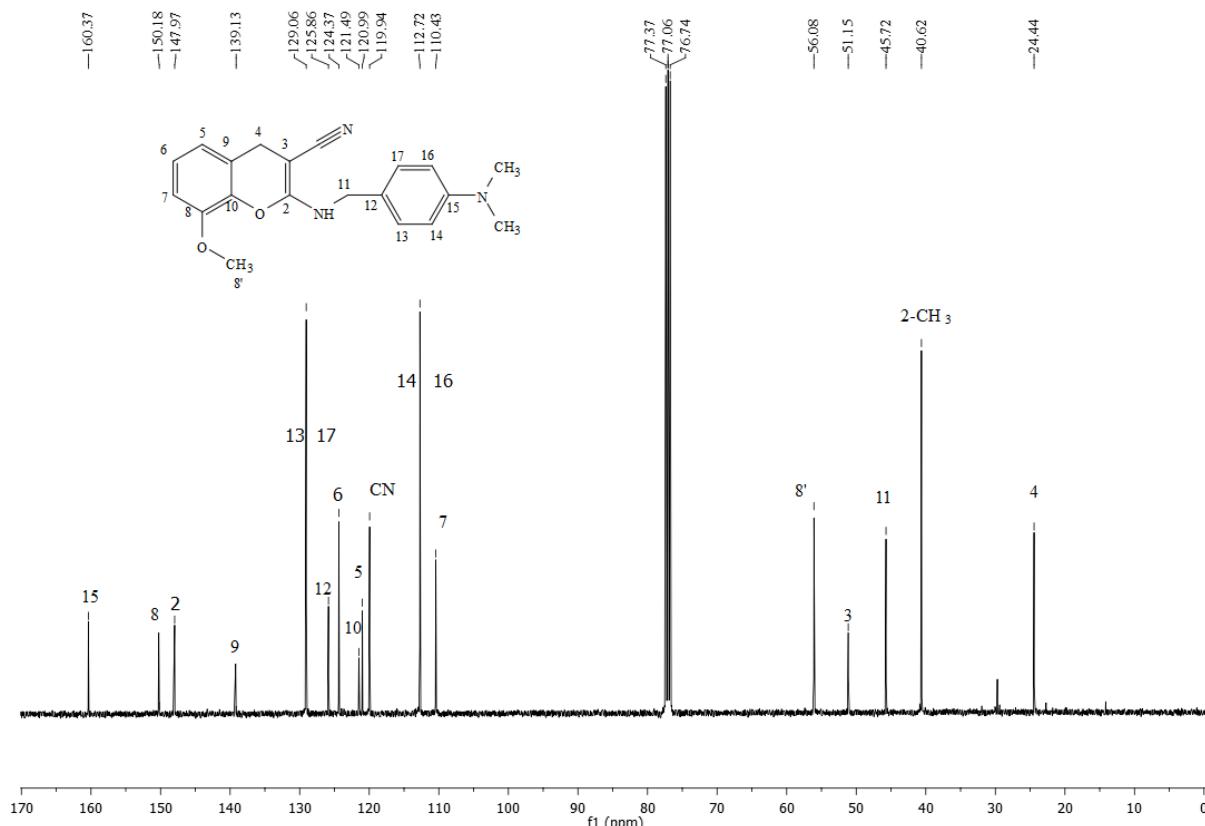
- FTIR spectrum of 2-(4-dimethylaminophenylmethyl)amino-8-methoxy-4H-chromene-3-carbonitrile (**7b**) .



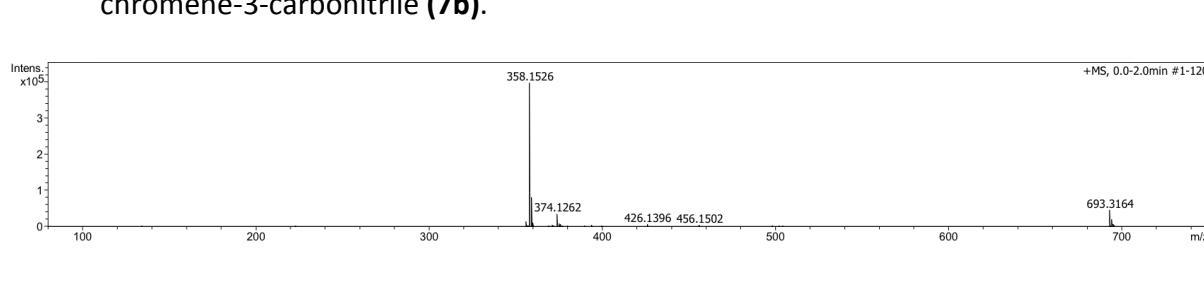
- ^1H NMR spectrum of 2-(4-dimethylaminophenylmethyl)amino-8-methoxy-4H-chromene-3-carbonitrile (**7b**) in CDCl_3 solution.



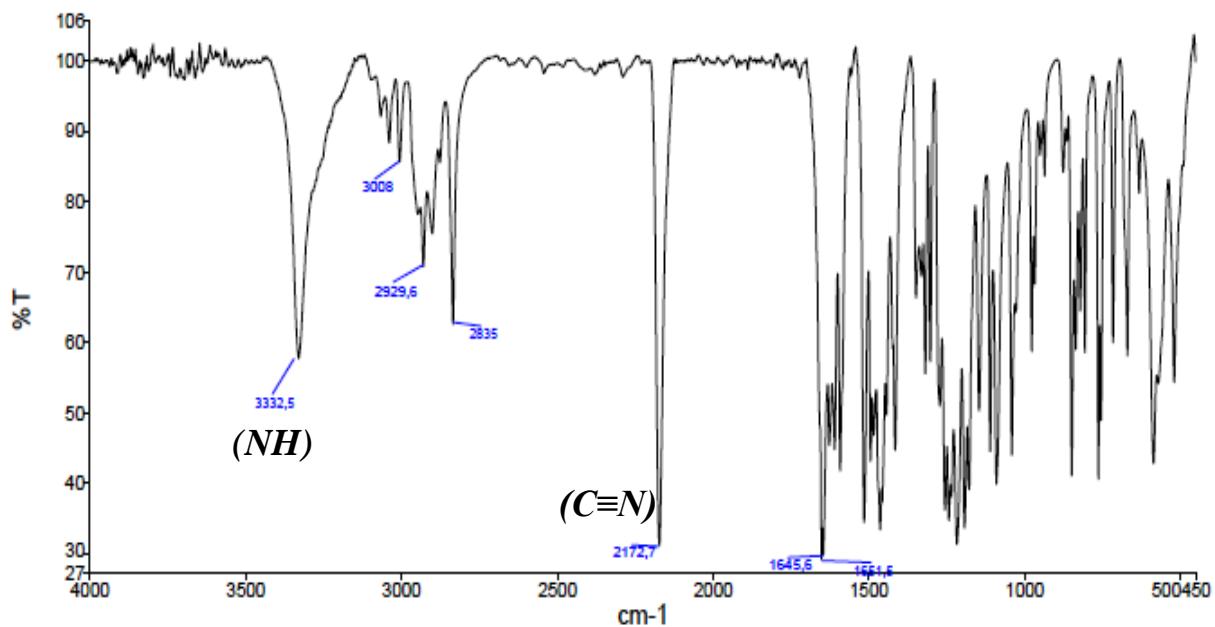
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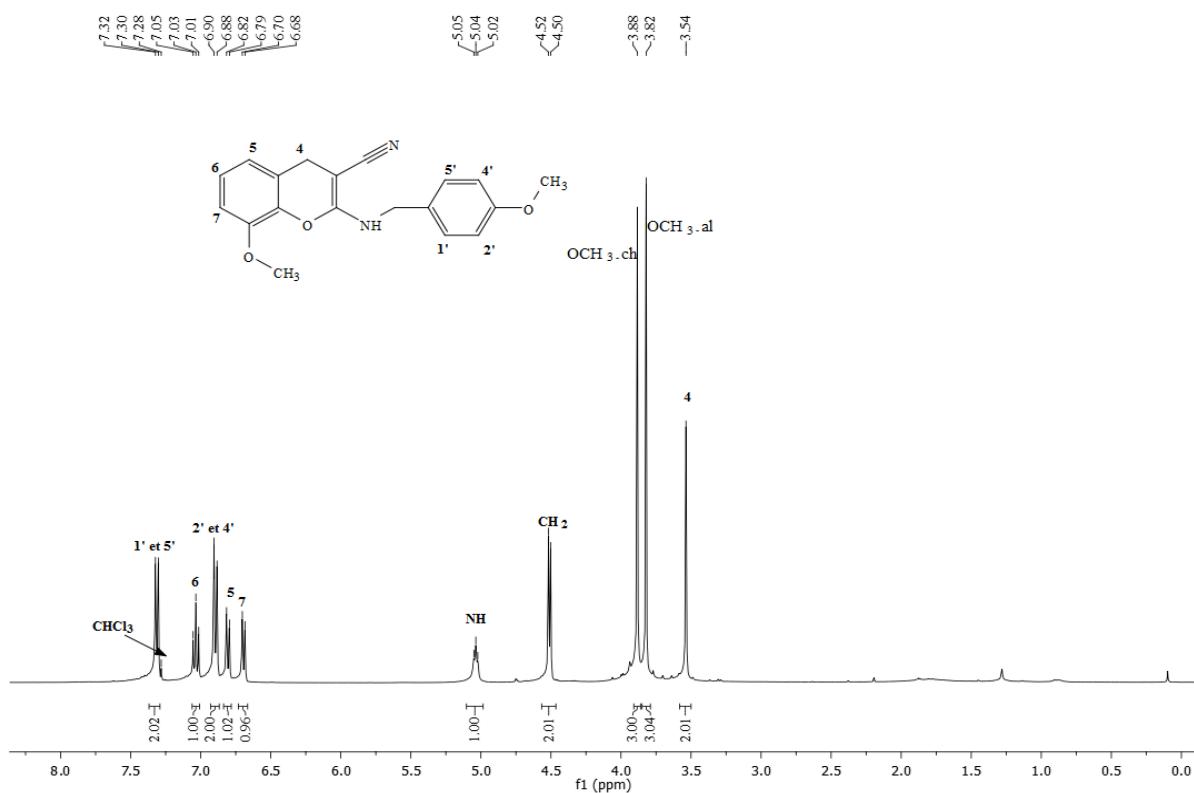
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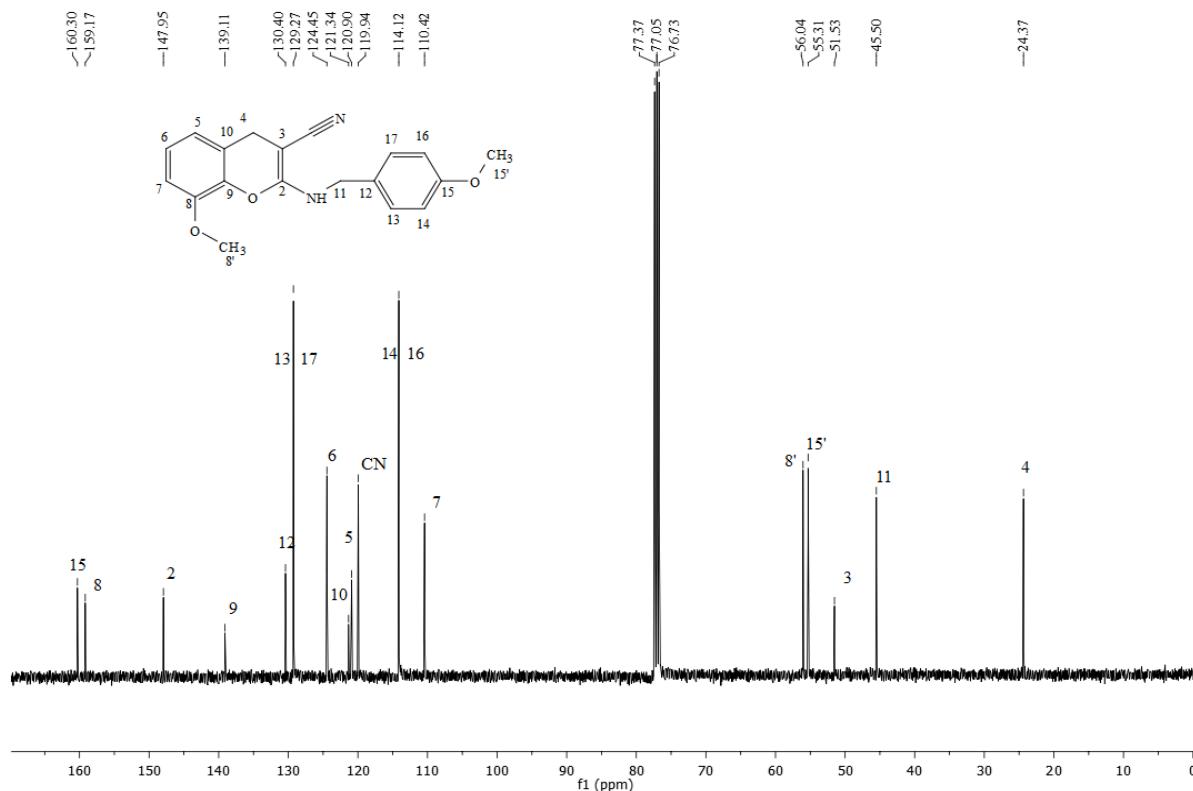
- FTIR spectrum of 2-(4-methoxyphenylmethyl)amino-8-methoxy-4*H*-chromene-3-carbonitrile (**7c**).



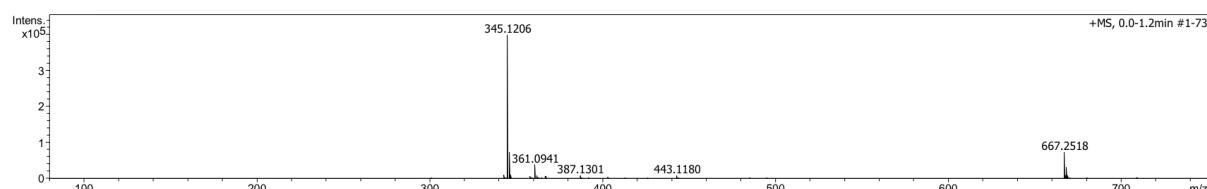
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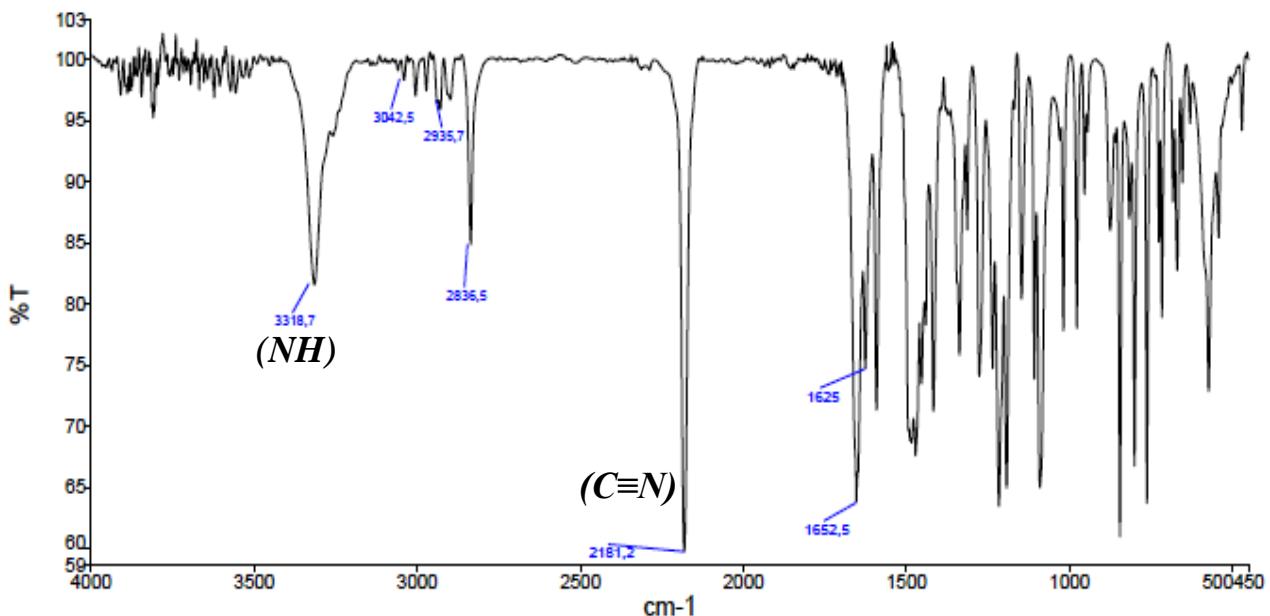
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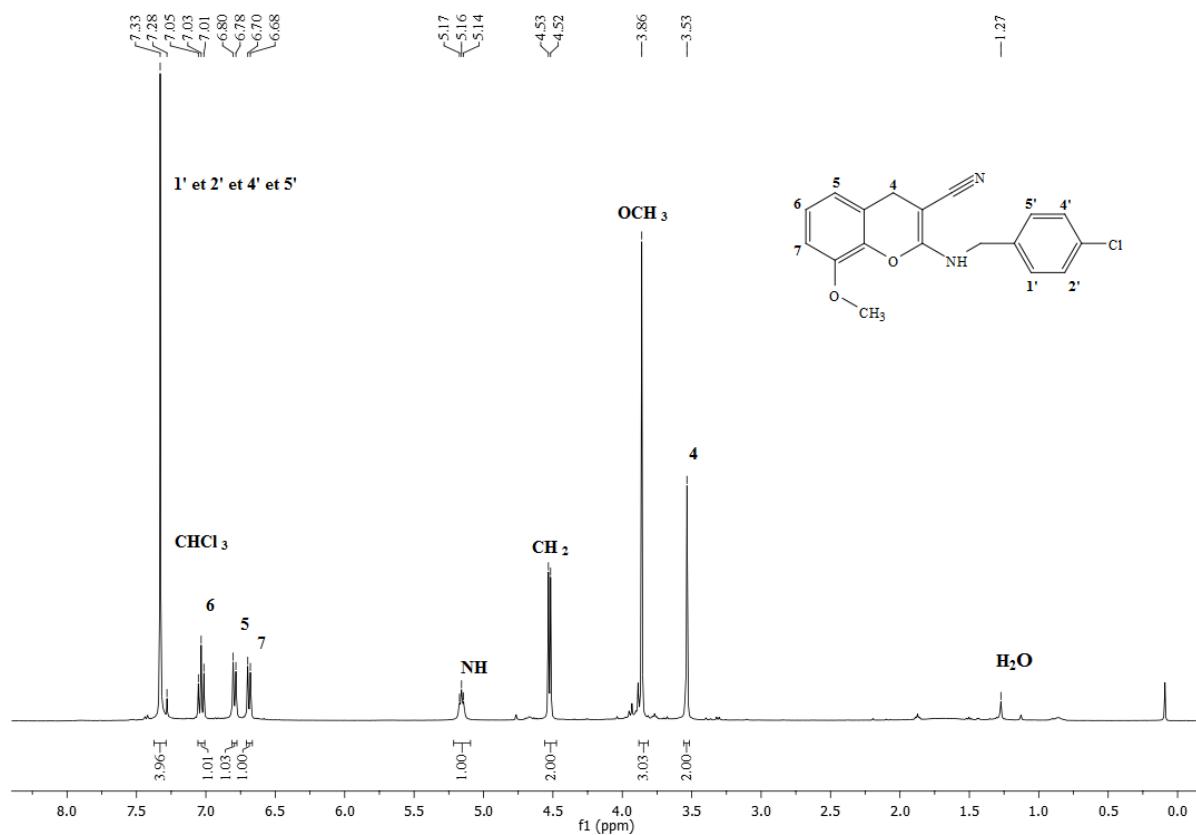
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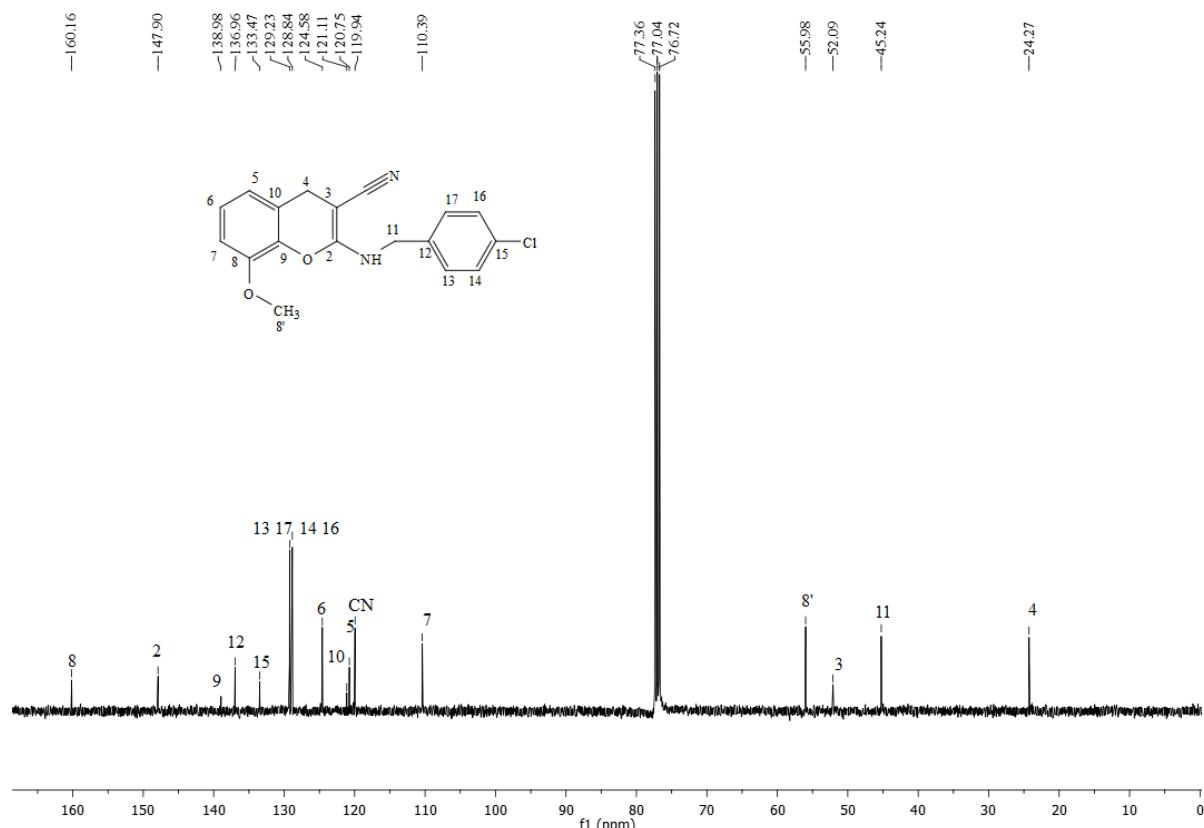
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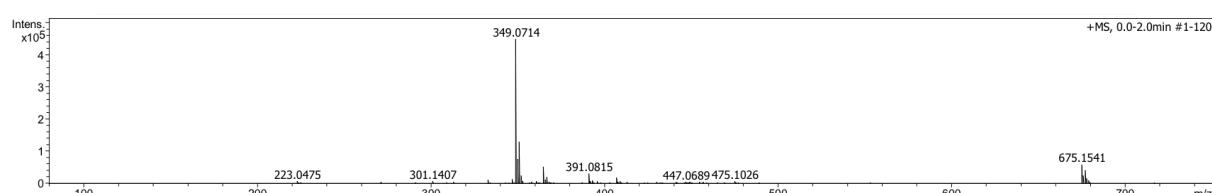
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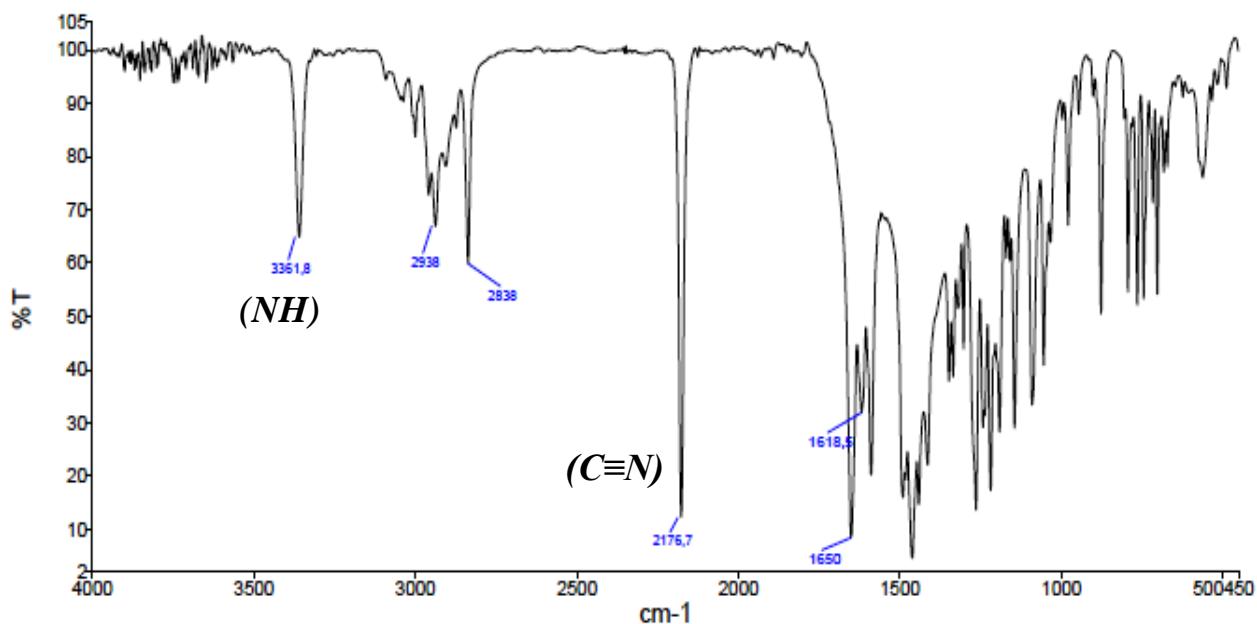
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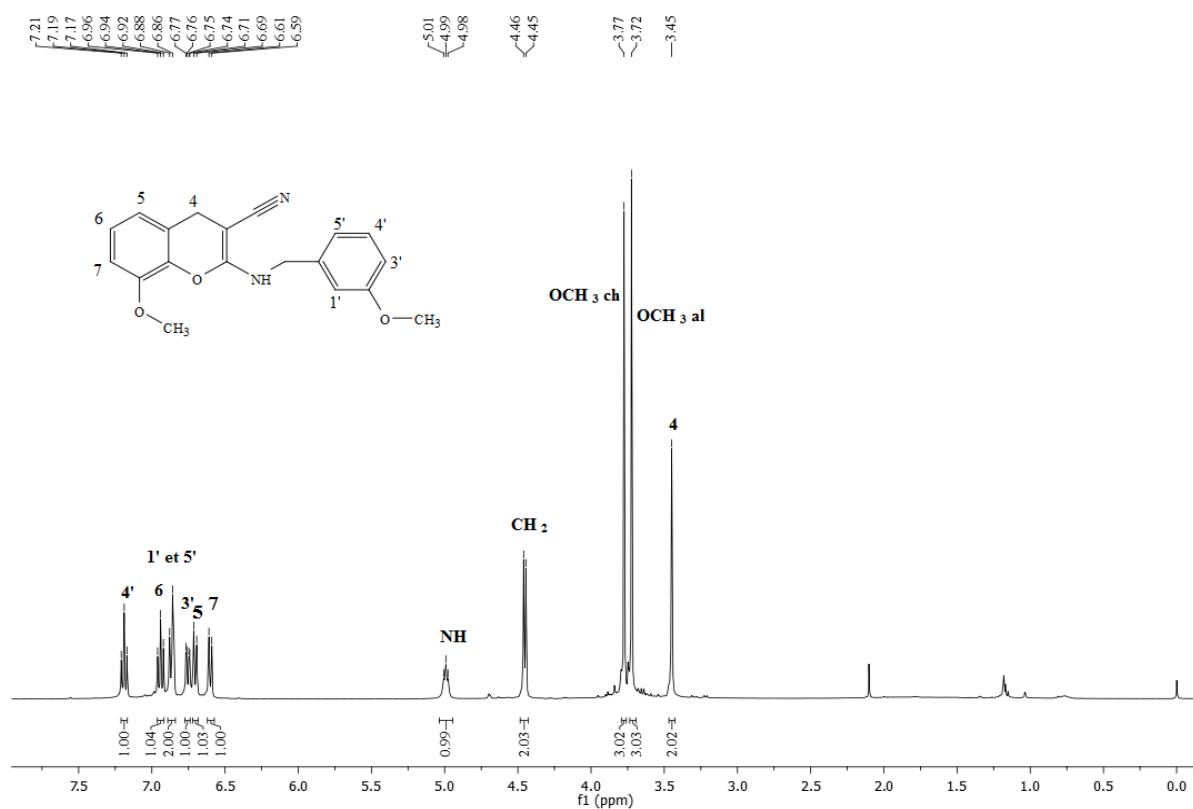
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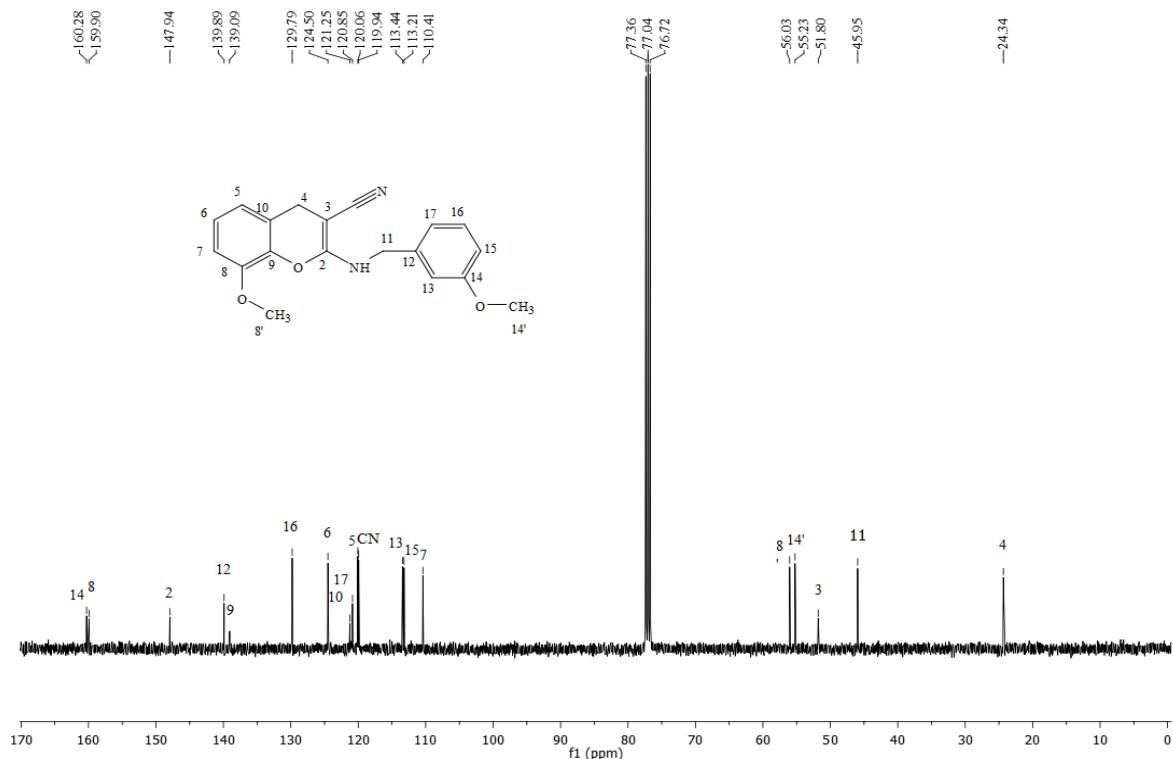
- FTIR spectrum of 8-methoxy-2-(3-methoxyphenylmethyl)amino-4*H*-chromene-3-carbonitrile (**7e**).



- ^1H NMR spectrum of 8-methoxy-2-(3-methoxyphenylmethyl)amino-4*H*-chromene-3-carbonitrile (**7e**) in CDCl_3 solution.



- ^{13}C NMR spectrum of 8-methoxy-2-(3-methoxyphenylmethyl)amino-4*H*-chromene-3-carbonitrile (**7e**) in CDCl_3 solution.



- HRMS spectrum of 8-methoxy-2-(3-methoxyphenylmethyl)amino-4*H*-chromene-3-carbonitrile (**7e**).

