

Tyrosinase enzyme mediated: Synthesis and larvicidal activity of 1,5-diphenyl pent-4-en-1-one derivatives against *Culex quinquefasciatus* and investigation of Ichthyotoxicity against *O. mossambicus*

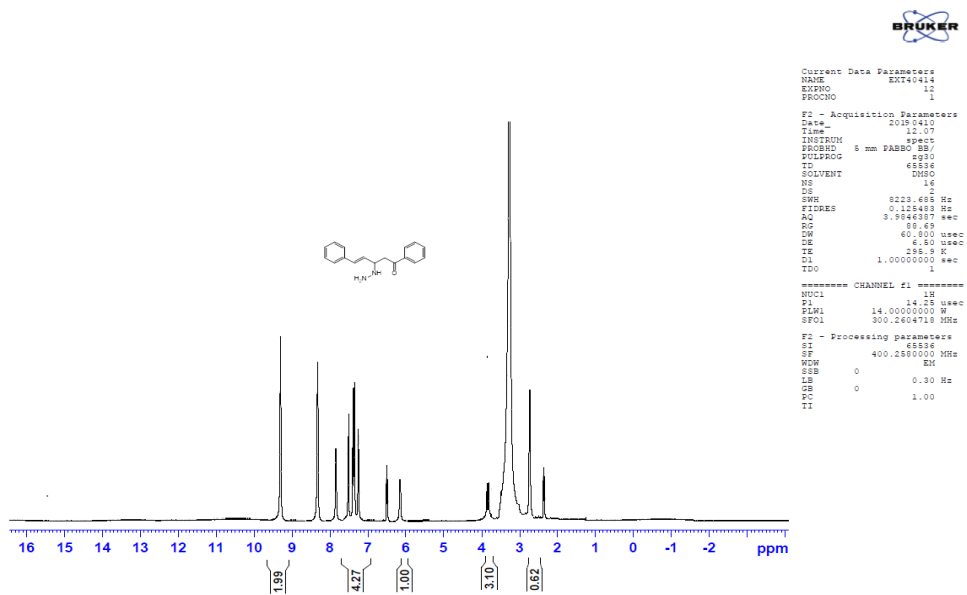
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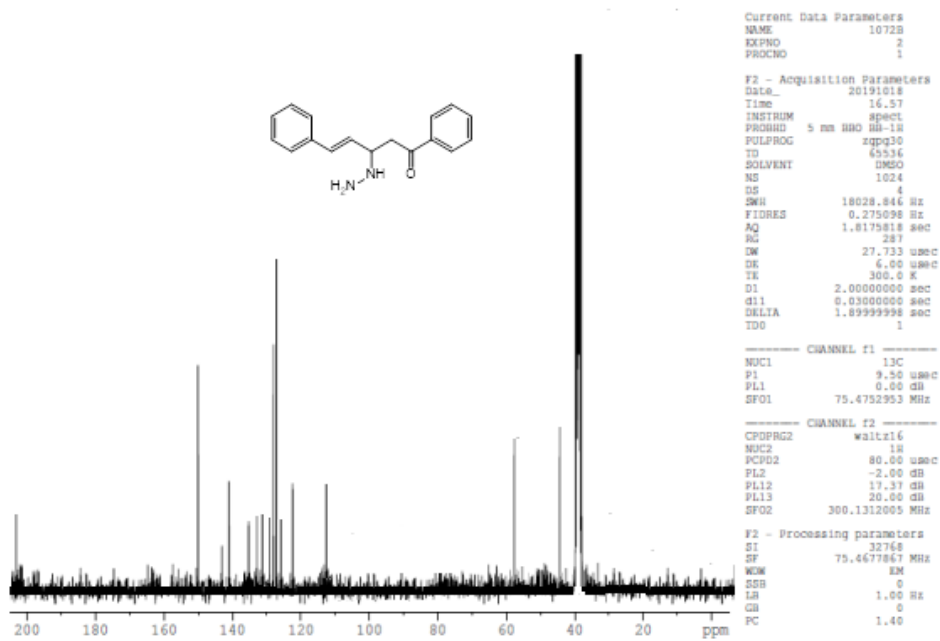
² Department of Zoology, College of Sciences, King Saud University (KSU), Riyadh, Saudi Arabia.

* Correspondence: a.idhayadhulla@gmail.com, idhayadhulla@nmc.ac.in

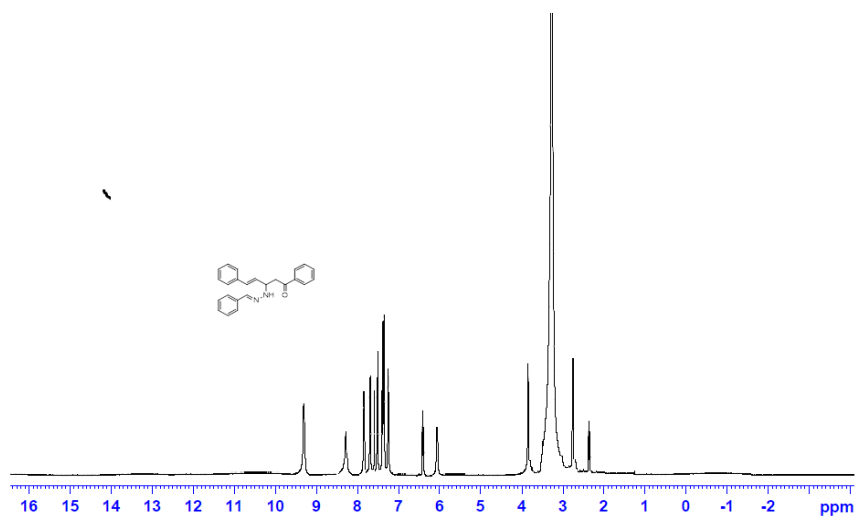
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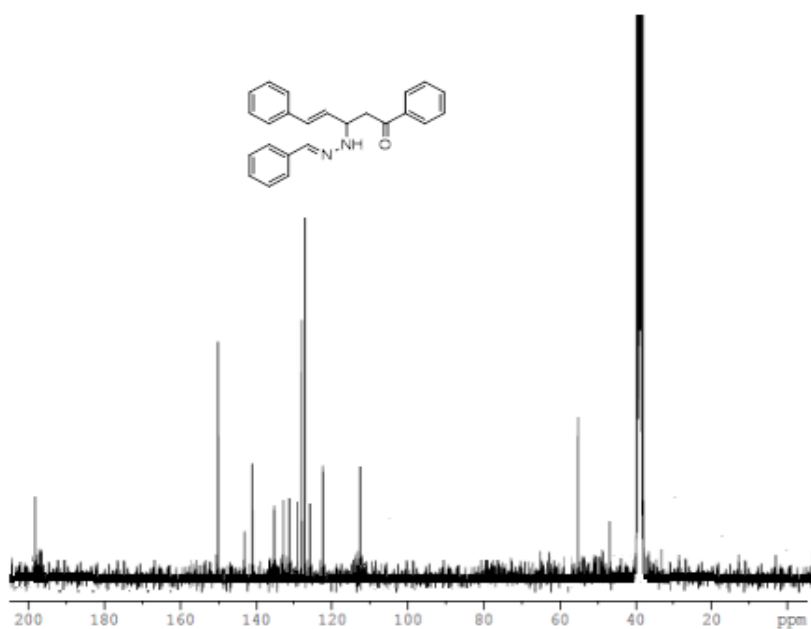
¹H NMR of the compound 1a



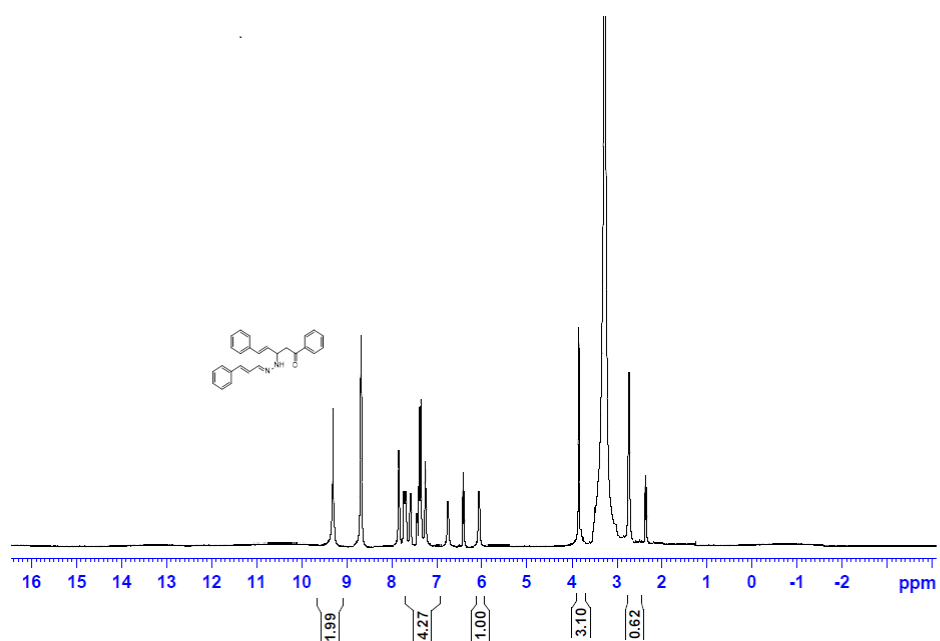
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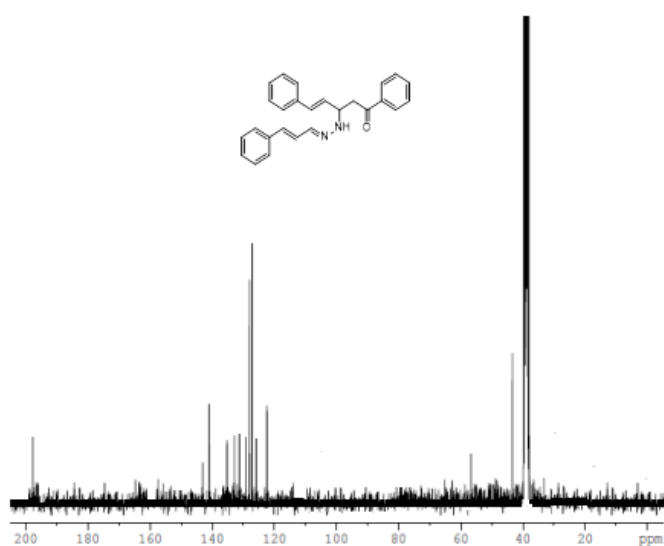
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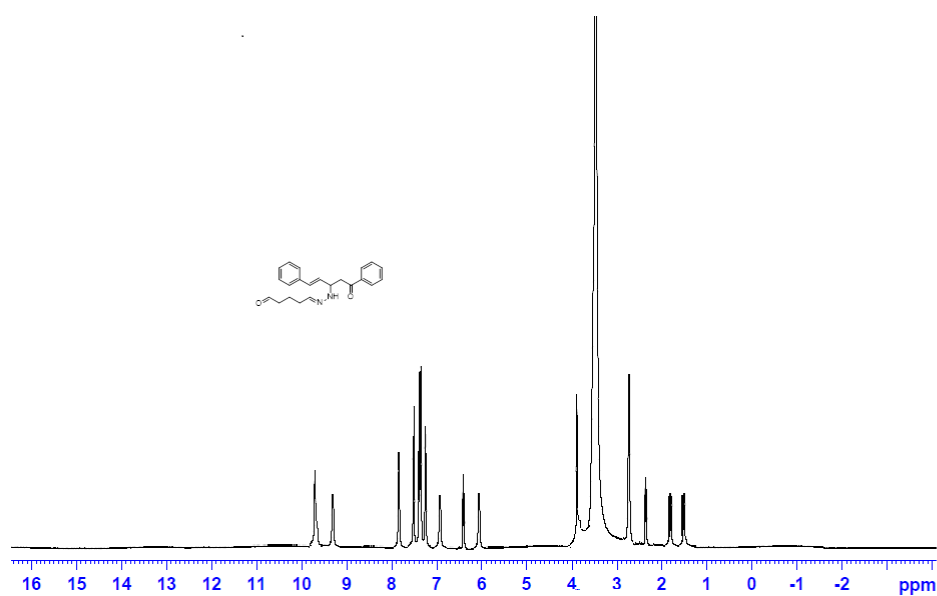
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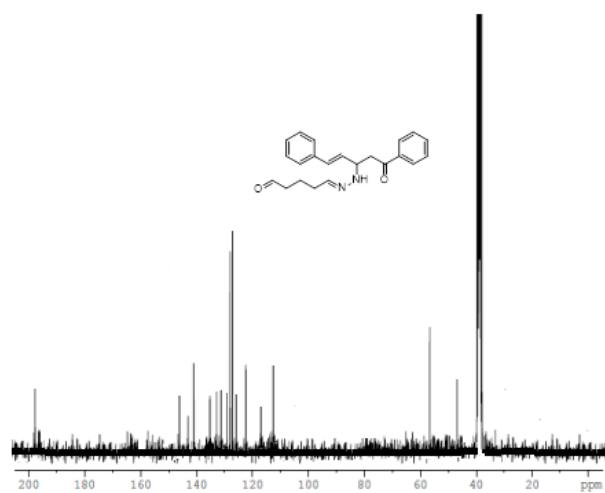
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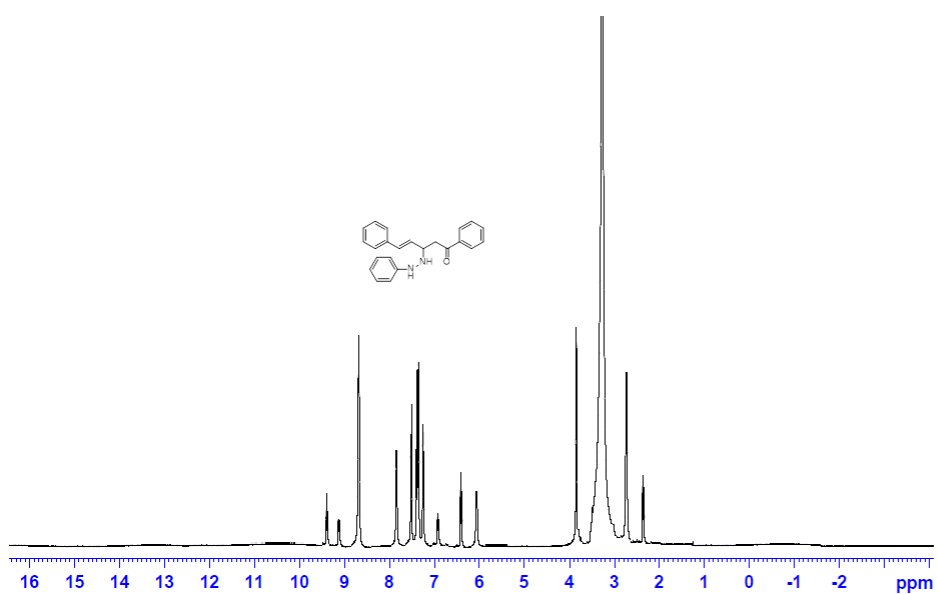
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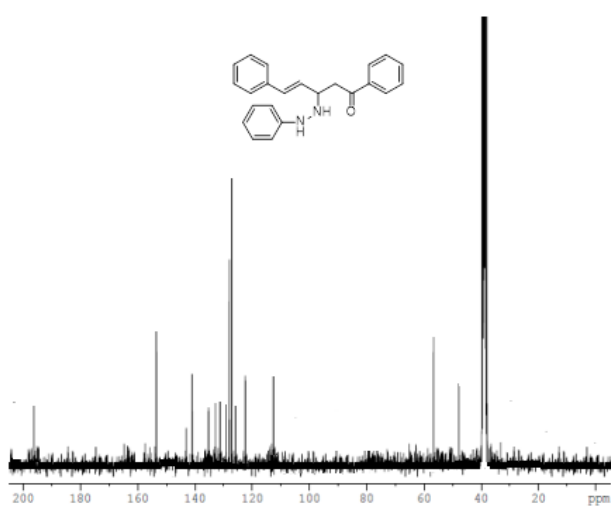
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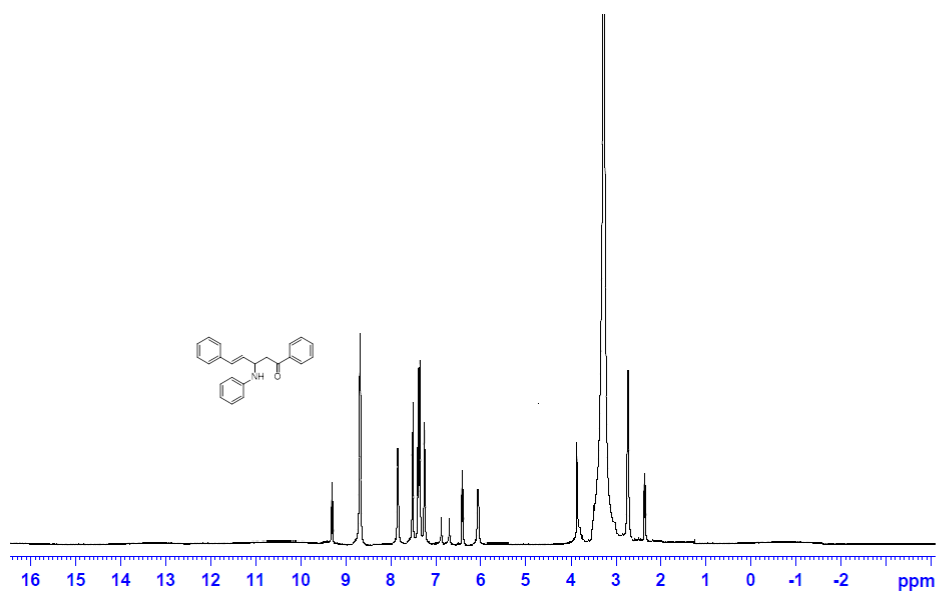
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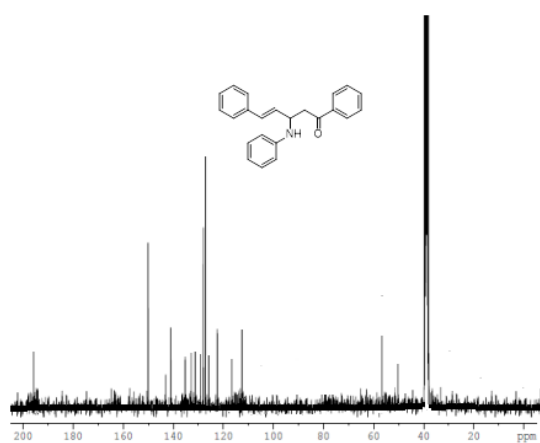
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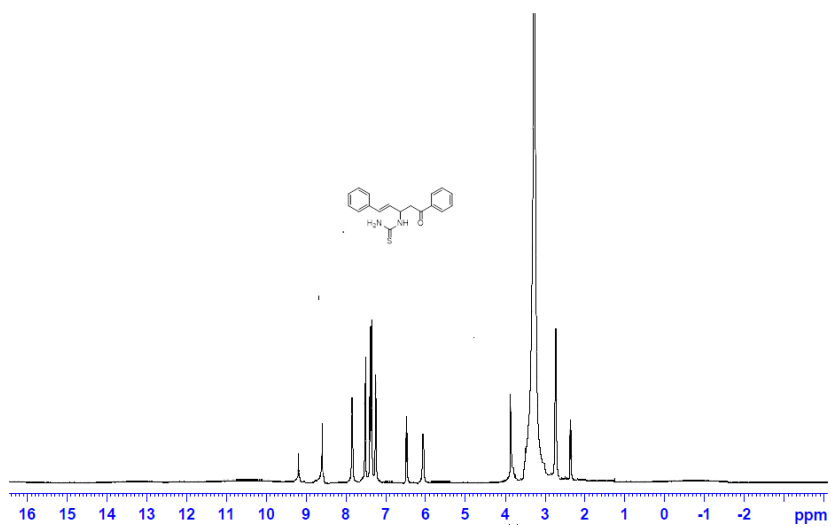
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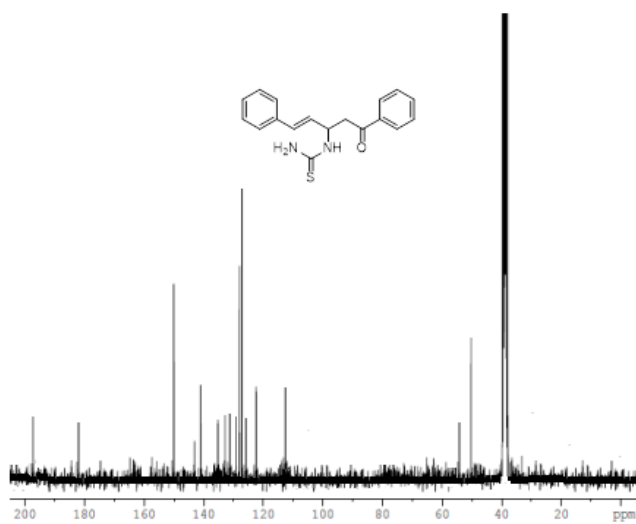
¹H NMR of the compound 1f



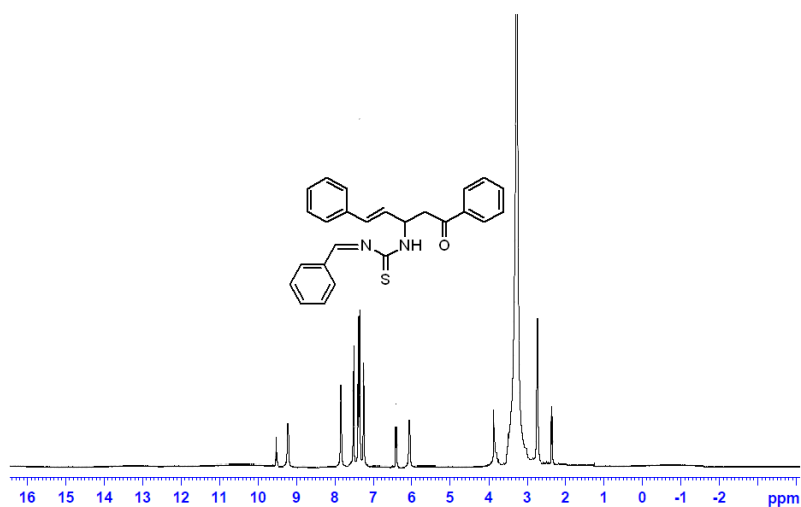
¹³C NMR of the compound 1f



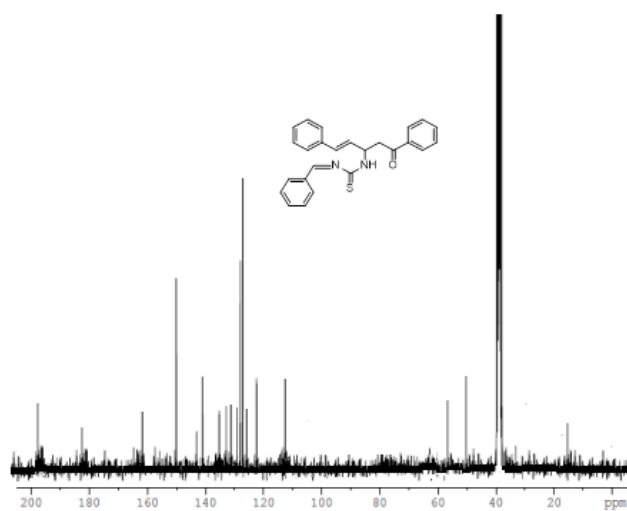
¹H NMR of the compound 1g



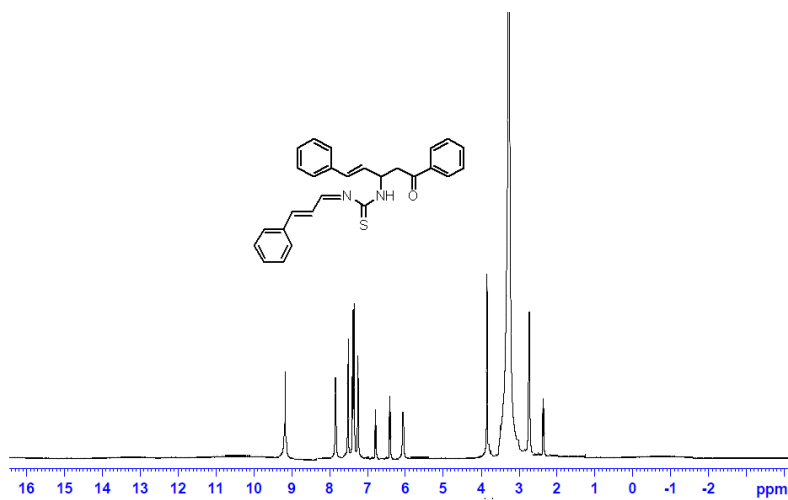
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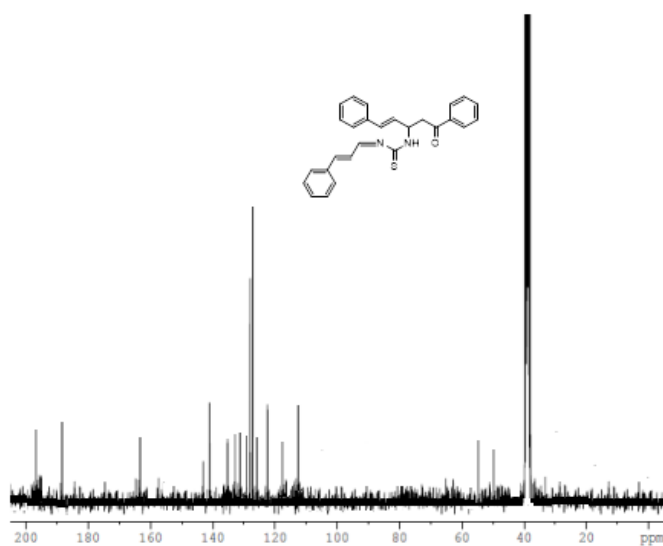
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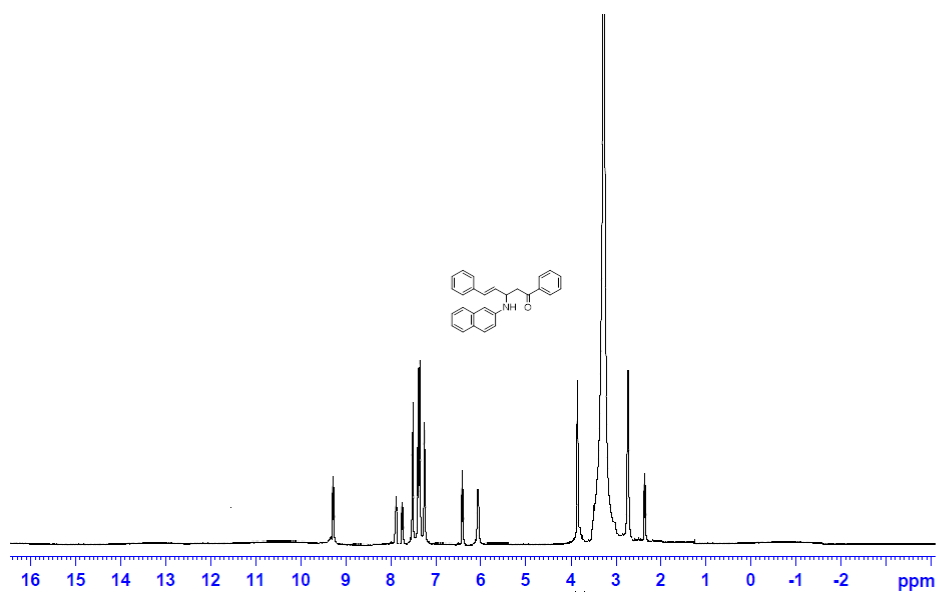
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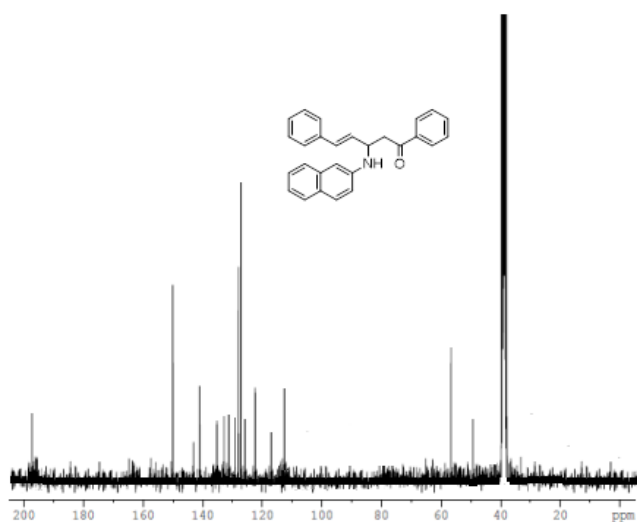
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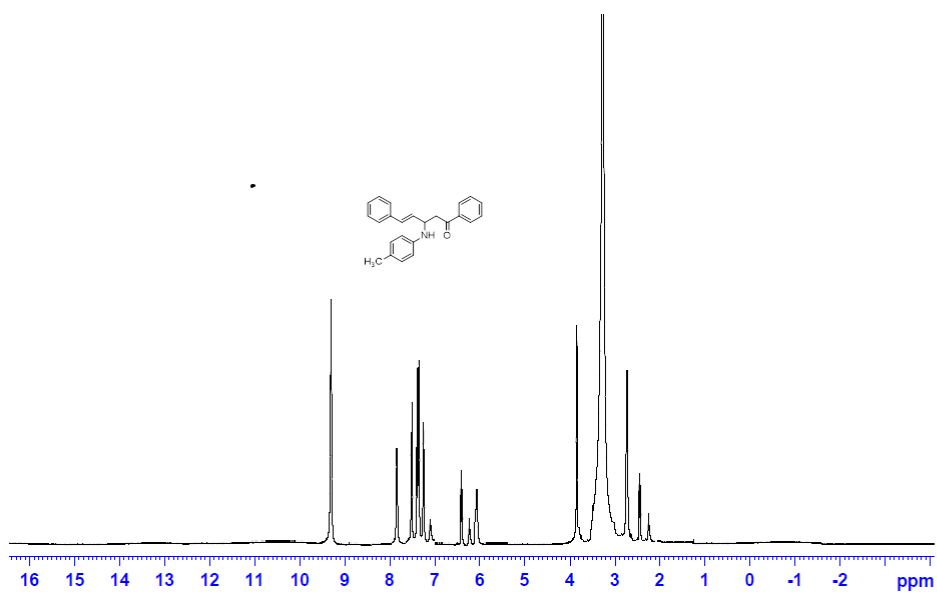
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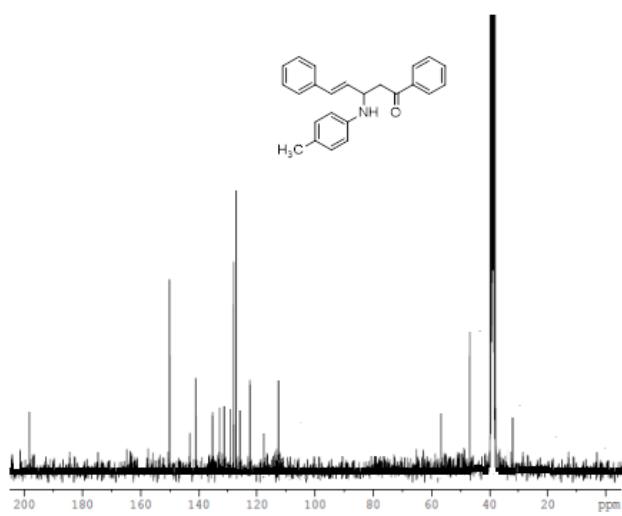
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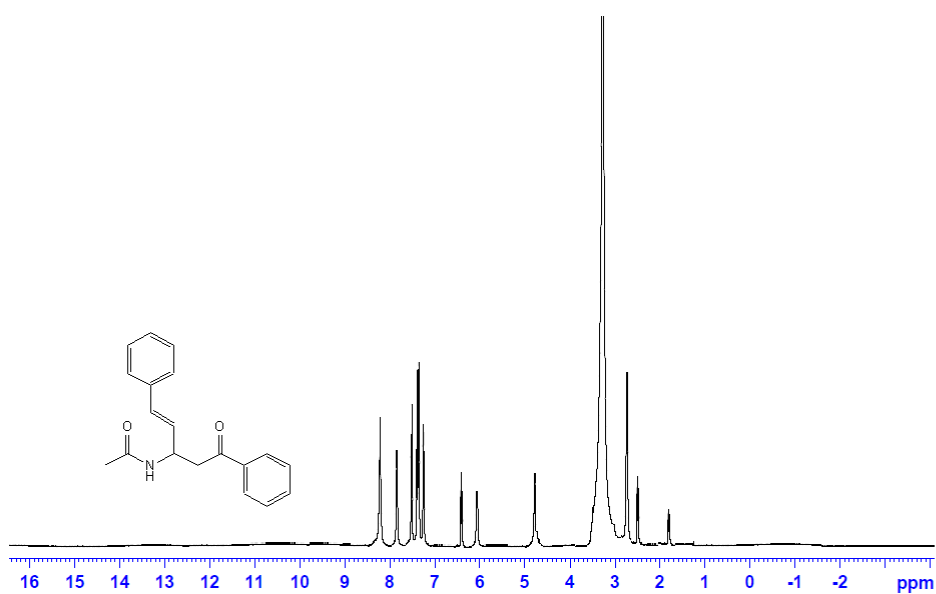
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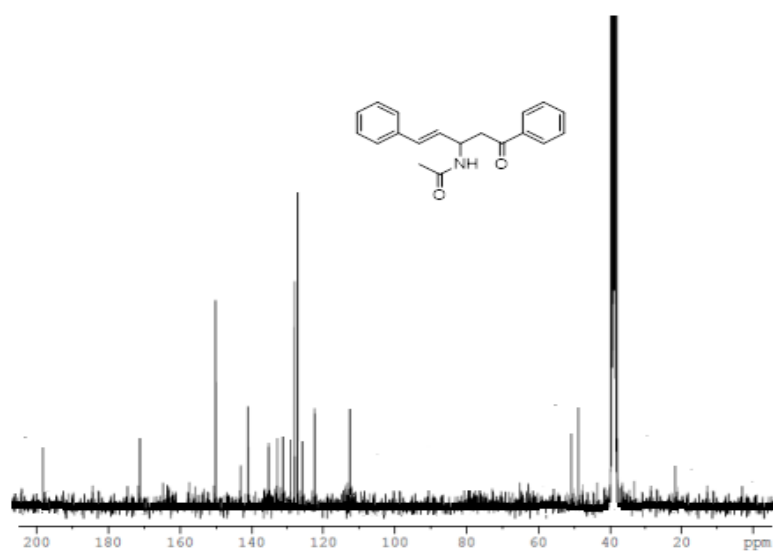
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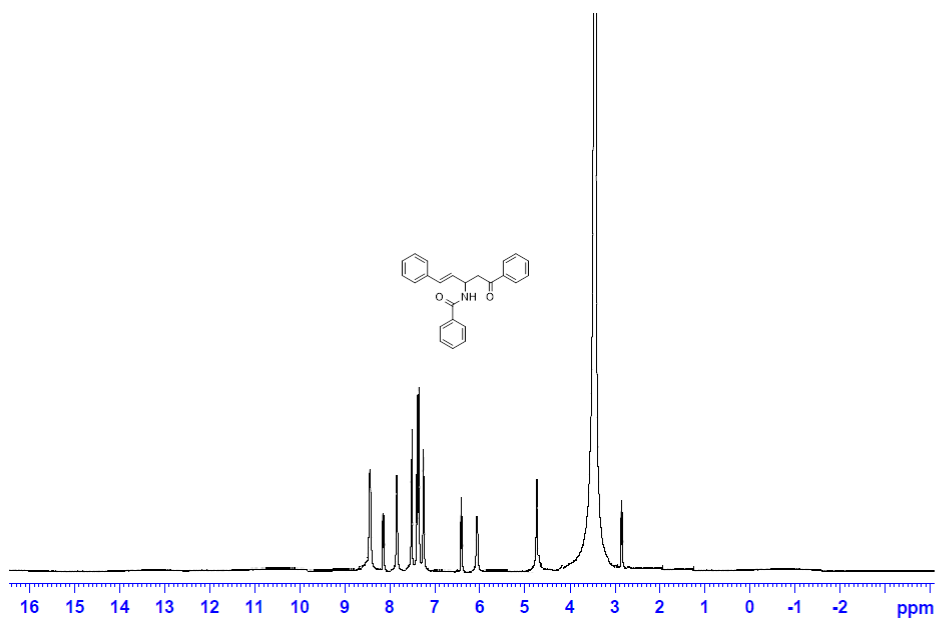
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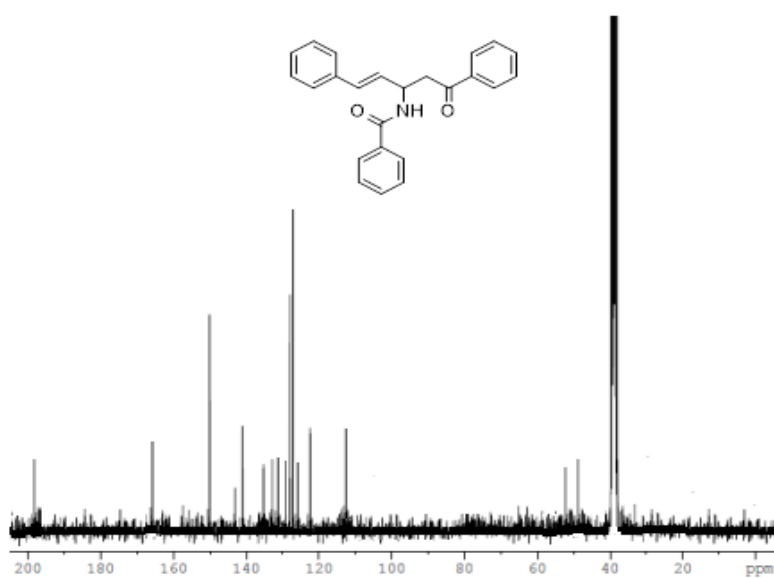
¹H NMR of the compound 11



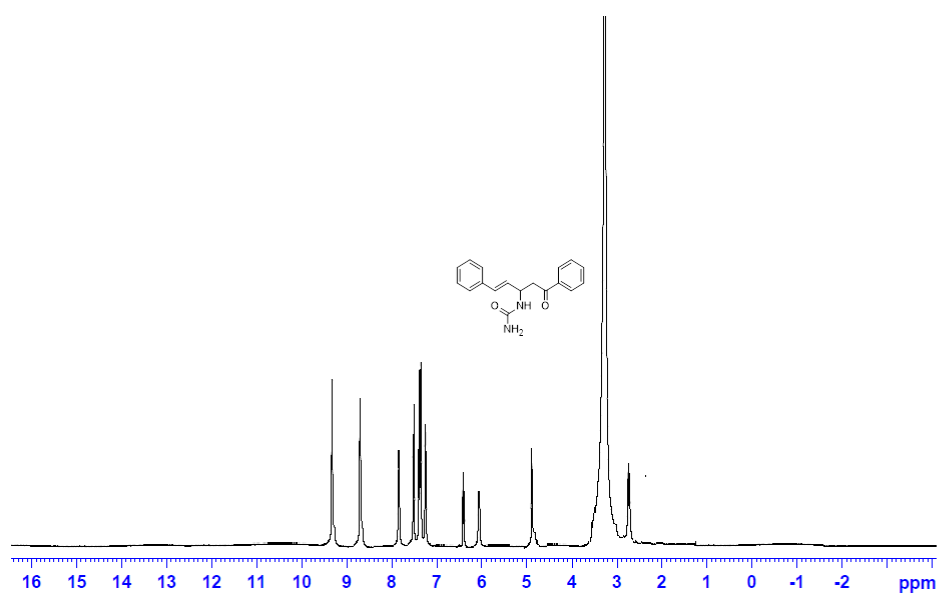
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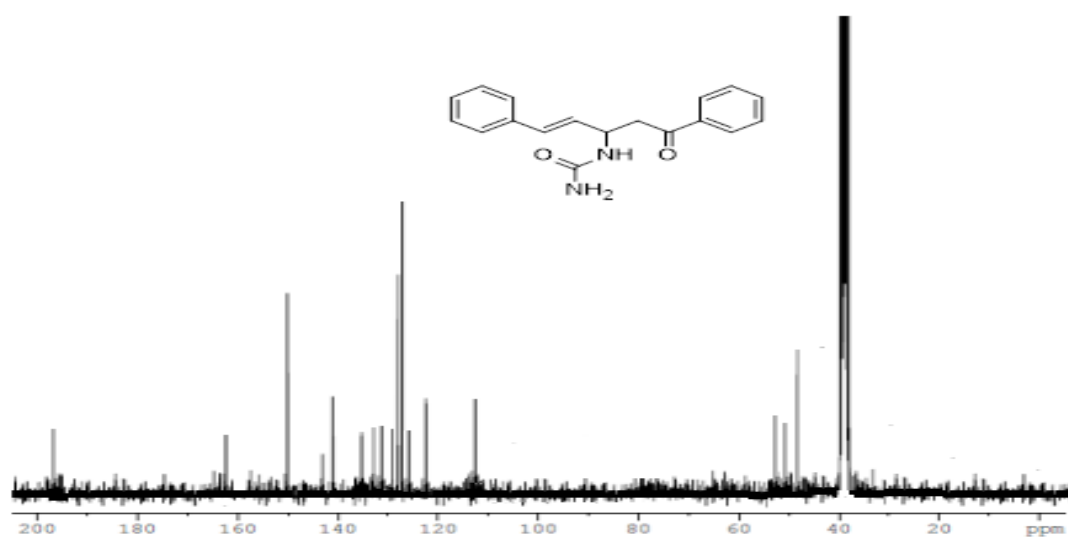
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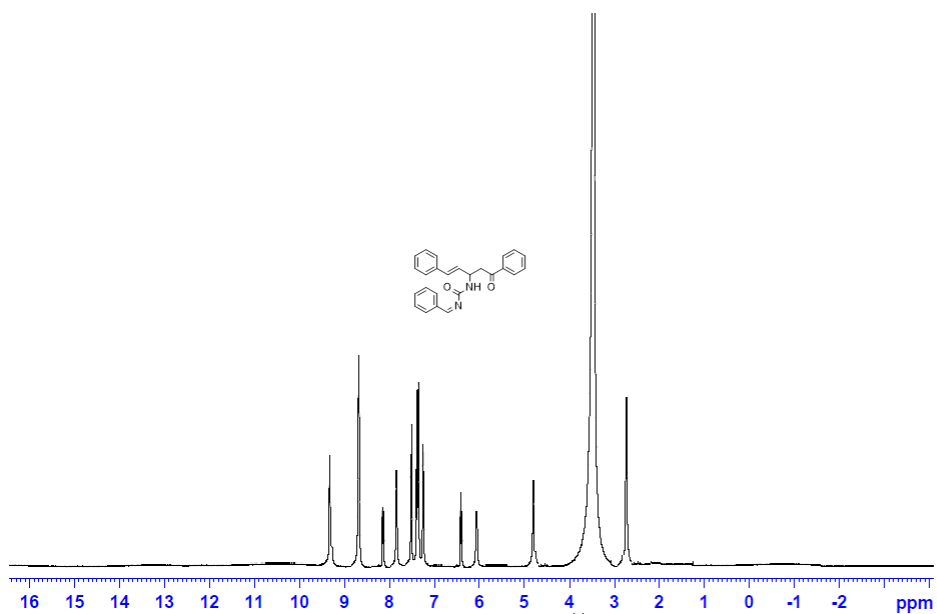
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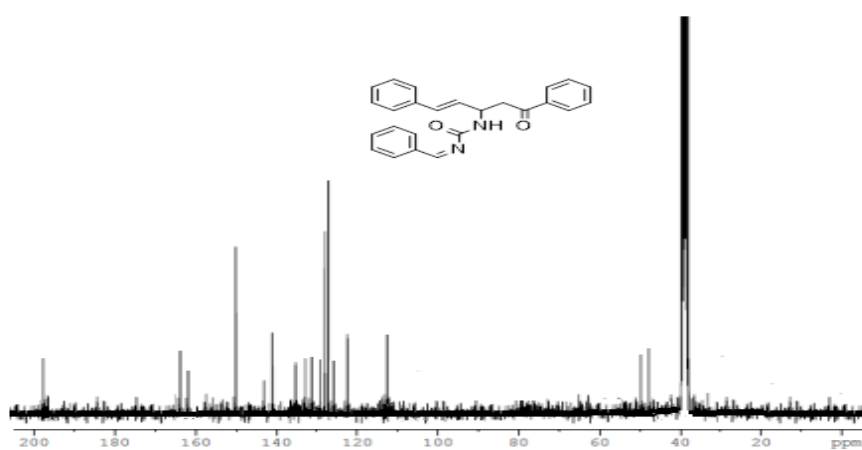
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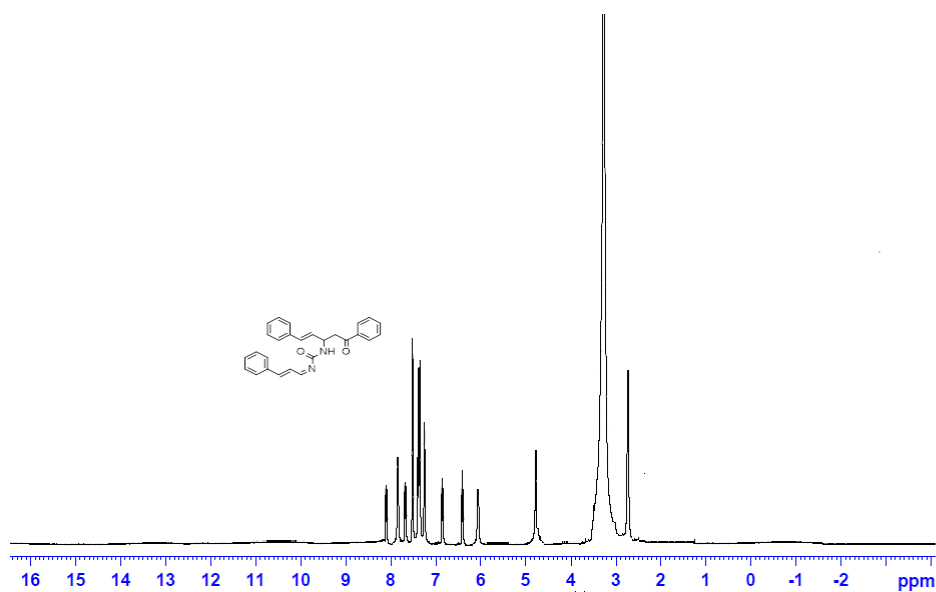
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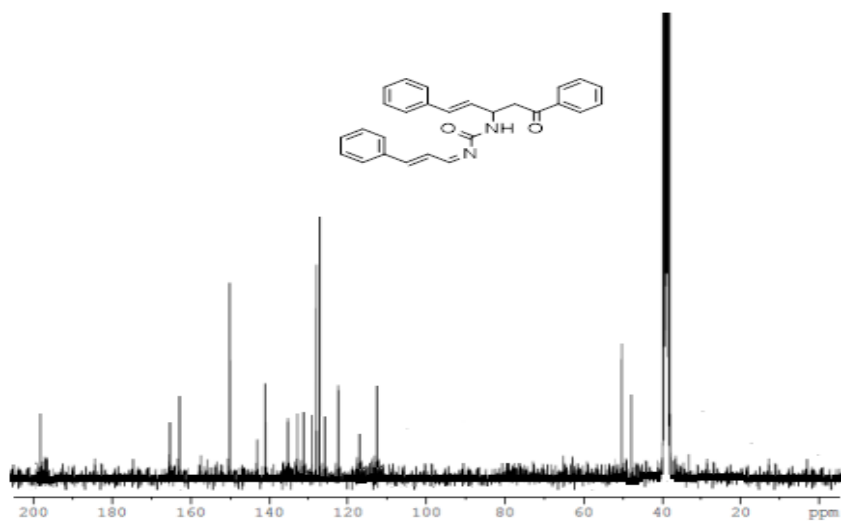
¹H NMR of the compound 1o



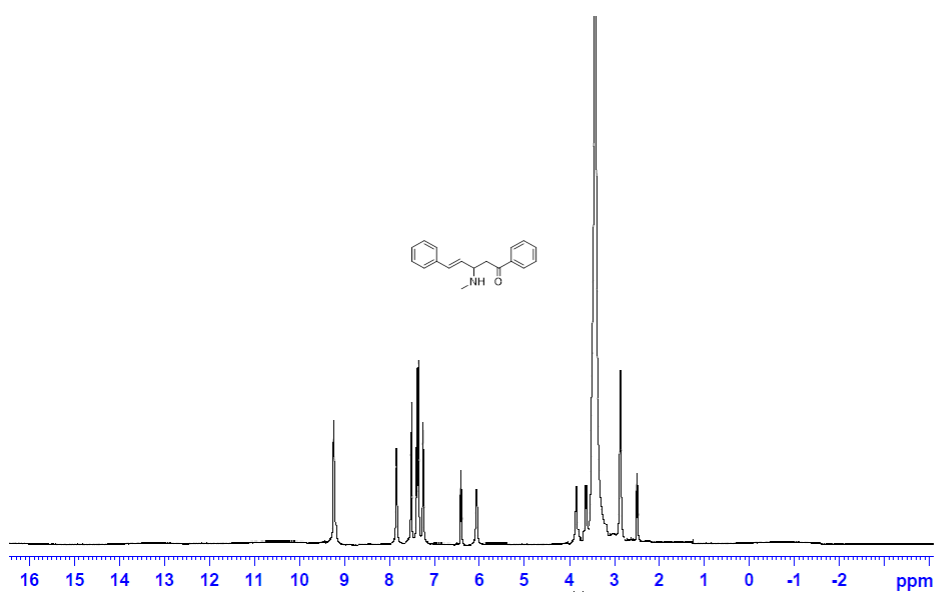
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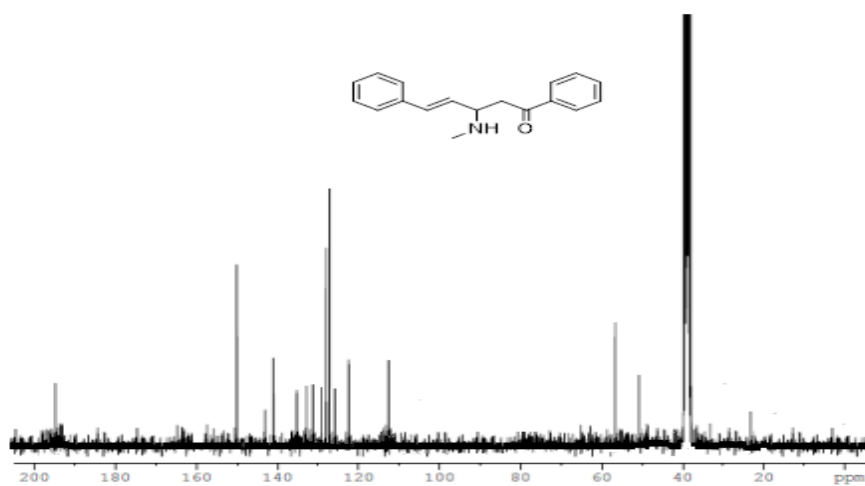
¹H NMR of the compound 1p



¹H NMR of the compound 1p

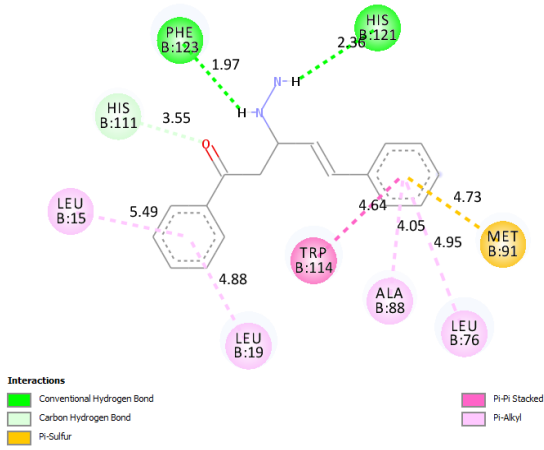
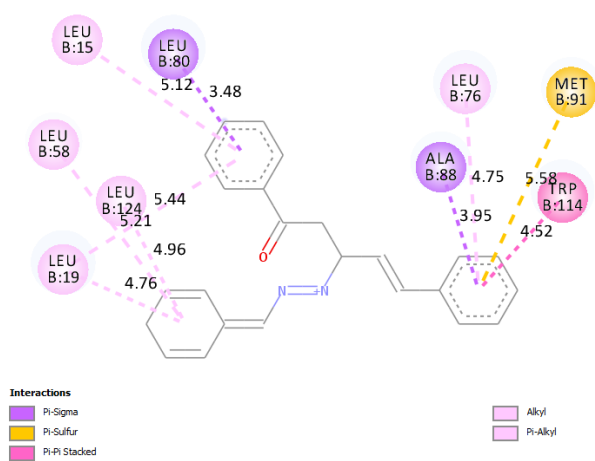
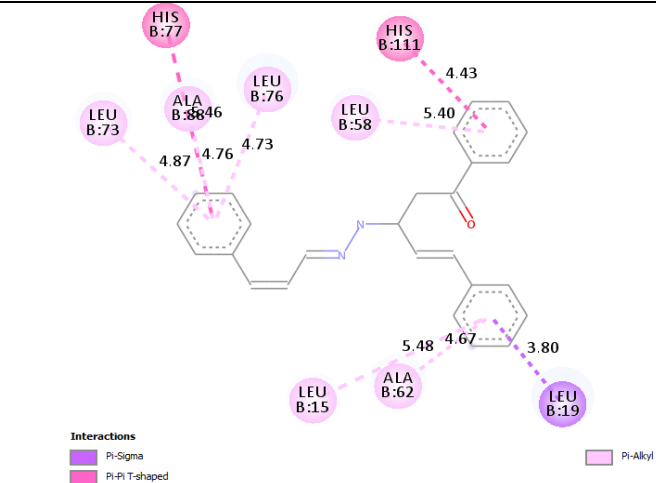


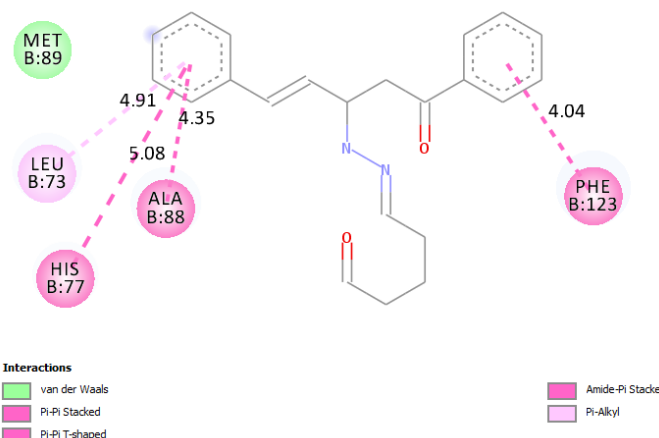
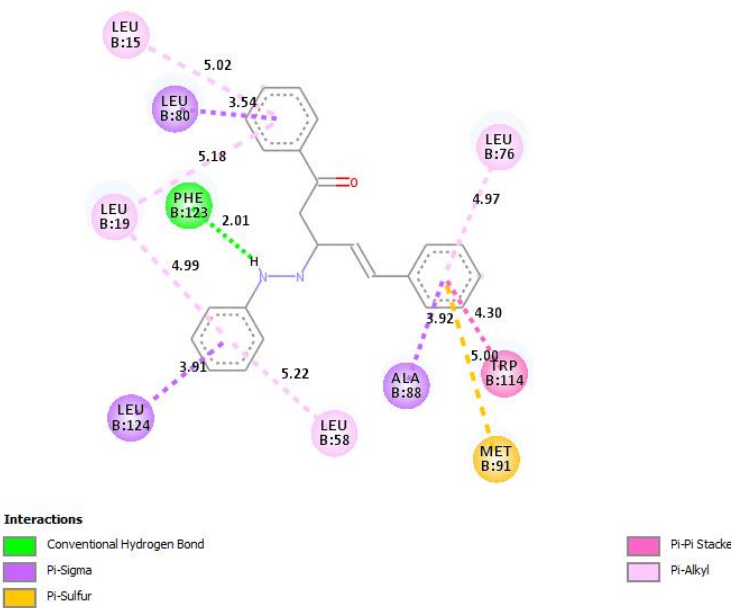
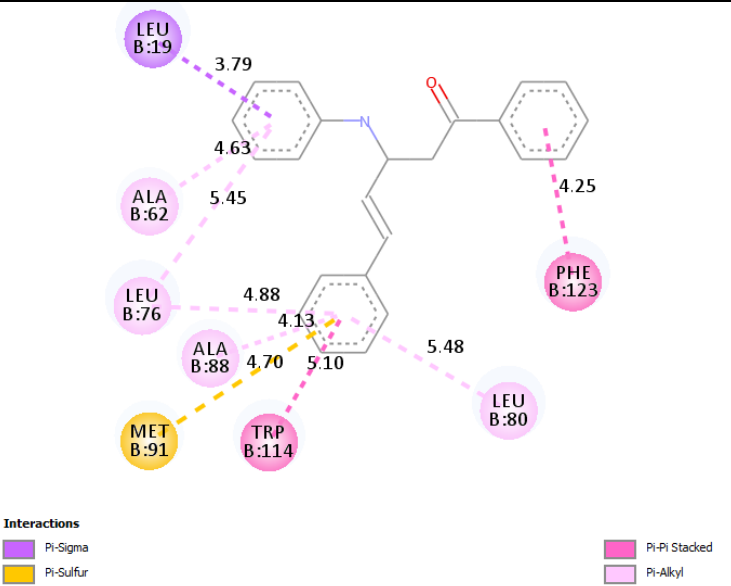
¹H NMR of the compound 1q



¹³C NMR of the compound 1q

Table S1. Molecular docking interaction of compounds (**1a-1q**) and controls **Temephos**, **Permethrin**

Compounds	Mosquito odorant-binding protein 3OGN			
	Binding affinity (kcal/mol)	No. of H-bonds	H-bonding residues	Interaction
1a	-9.0	2	His121, Phe123	
1b	-9.7	0	-	
1c	-9.0	0	-	

1d	-8.8	0	-	 Interactions - van der Waals - Pi-Pi Stacked - Pi-Pi T-shaped - Amide-Pi Stacked - Pi-Alkyl
1e	-9.7	1	Phe123	 Interactions - Conventional Hydrogen Bond - Pi-Sigma - Pi-Sulfur - Pi-Pi Stacked - Pi-Alkyl
1f	-9.6	0	-	 Interactions - Pi-Sigma - Pi-Sulfur - Pi-Pi Stacked - Pi-Alkyl

1g	-8.3	0	-	Interactions - Pi-Sulfur - Pi-Pi Stacked - Pi-Alkyl
1h	-9.3	0	-	Interactions - Carbon Hydrogen Bond - Pi-Cation - Pi-Sigma - Pi-Pi Stacked - Pi-Pi T-shaped - Pi-Alkyl
1i	-10.0	0	-	Interactions - Pi-Cation - Pi-Sigma - Pi-Pi T-shaped - Alkyl - Pi-Alkyl

1j	-9.8	0	-	Interactions - van der Waals - Pi-Pi Stacked - Amide-Pi Stacked - Pi-Alkyl
1k	-9.8	0	-	Interactions - Pi-Sigma - Pi-Sulfur - Pi-Pi Stacked - Alkyl - Pi-Alkyl
1l	-8.9	0	-	Interactions - Pi-Sulfur - Pi-Pi Stacked - Pi-Alkyl

1m	-9.8	0	-	Interactions ■ Pi-Pi Stacked ■ Pi-Alkyl
1n	-8.8	0	-	Interactions ■ Pi-Sulfur ■ Pi-Pi Stacked ■ Pi-Alkyl
1o	-9.5	0	-	Interactions ■ van der Waals ■ Pi-Cation ■ Pi-Donor Hydrogen Bond ■ Pi-Sigma ■ Pi-Pi Stacked ■ Amide-Pi Stacked ■ Pi-Alkyl

1p	-9.2	0	-	Interactions - Pi-Cation - Pi-Donor Hydrogen Bond - Pi-Pi T-shaped - Pi-Alkyl
1q	-8.3	0	-	Interactions - Pi-Sulfur - Pi-Pi Stacked
Temephos	-7.6	3	Ser79, Ala88	Interactions - Conventional Hydrogen Bond - Pi-Donor Hydrogen Bond - Pi-Sigma - Pi-Pi Stacked - Alkyl - Pi-Alkyl

Permethrin	-9.7	0	-	Interactions - Carbon Hydrogen Bond - Pi-Sulfur - Pi-Pi Stacked - Alkyl - Pi-Alkyl
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