Electronic Supplementary Material (ESI) for New Journal of Chemistry.

$Pd(OAc)_2$ and $(DHQD)_2PHAL$ as simple, efficient and recyclable/ reusable catalyst system for Suzuki–Miyaura cross–coupling reactions in H_2O at room temperature

Bishwajit Saikia*[a], Abdul Aziz Ali[a], Preeti Rekha Boruah[a], Diganta Sarma[a] and Nabin Chandra Barua[b]

[a] Department of Chemistry, Dibrugarh University, Dibrugarh–786004, Assam, INDIA.

[b] Natural Products Chemistry Division, CSIR–North East Institute of Science and Technology, Jorhat–785006, Assam, INDIA.

E–mail: bishwajitsaikia@gmail.com (B. Saikia)

Supporting Information

Contents

General: Starting materials and solvents were purchased from common commercial sources and were used without additional purification. ^{1}H NMR and ^{13}C NMR spectra were recorded at 500 MHz or 300 MHz using TMS as internal standard. Mass spectroscopy data of the product of Suzuki reaction was collected on a MS-EI instrument. Infrared spectra were obtained from a FTIR spectrometer.

General experimental procedure for Suzuki–Miyaura cross–coupling reaction: In a 50 mL round bottomed flask, a mixture of aryl halide (1 mmol), arylboronic acid (1.2 mmol), $Pd(OAc)_2$ (0.01 mmol), $(DHQD)_2PHAL$ (0.01 mmol) and K_2CO_3 (1.2 mmol) in H_2O (3 mL) and the mixture was stirred at room temperature for a time period of 2–3 h. The progress of the reaction was monitored by TLC. After completion of the reaction it was extracted with diethyl ether (3 x 10 mL) and washed with water. The combined ether extract was dried over anhydrous Na_2SO_4. The filtrate was concentrated under reduced pressure. The product was purified by column chromatography over silica gel using hexane/ethyl acetate (9:1 v/v) to get the desired coupling product. The products were characterized by IR and NMR.

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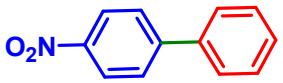

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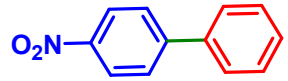

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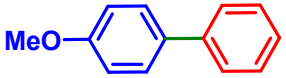

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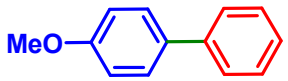

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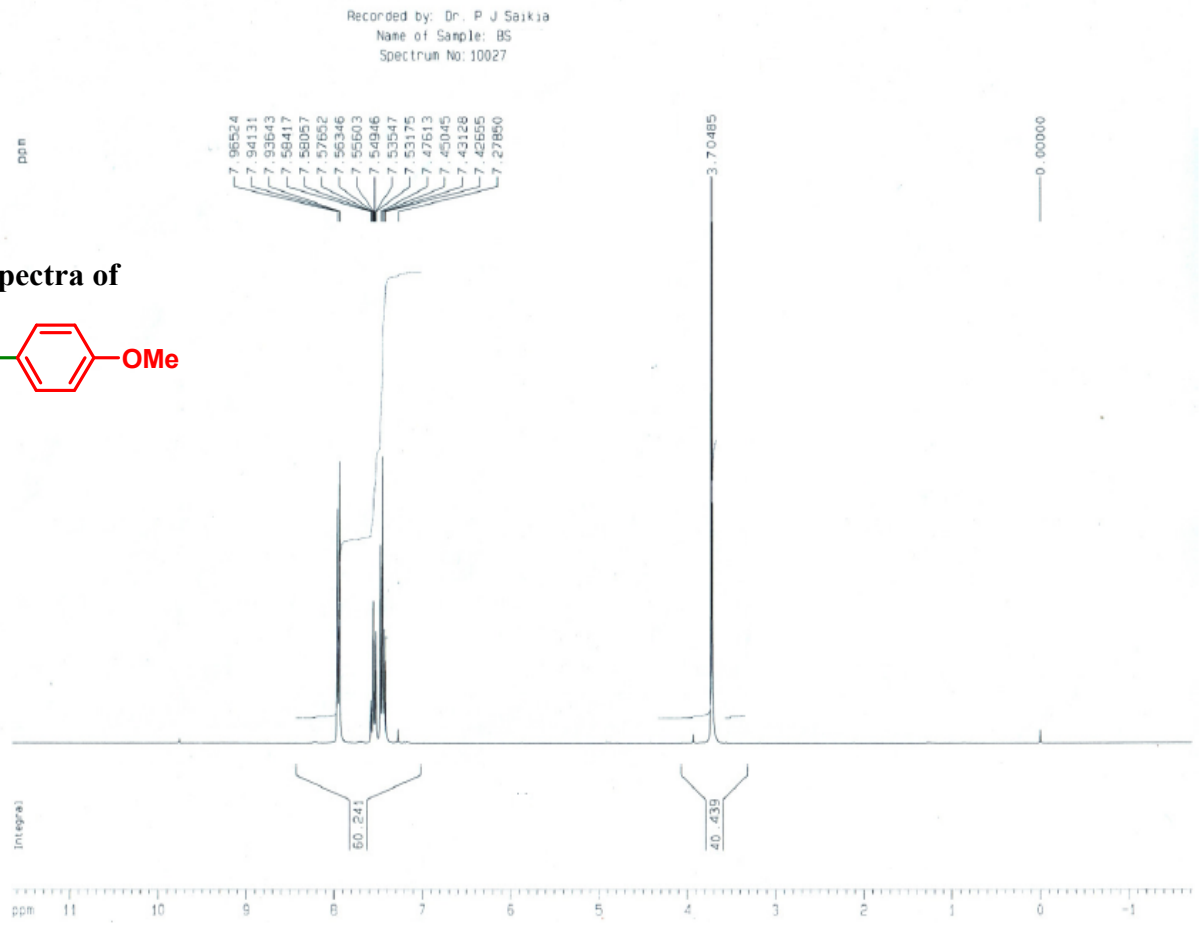

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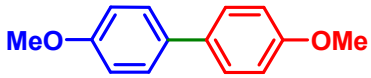

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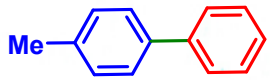

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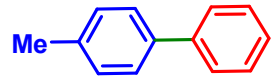

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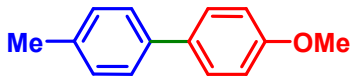

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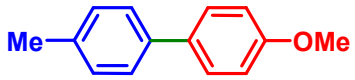

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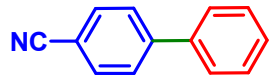

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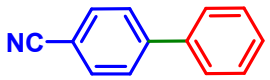

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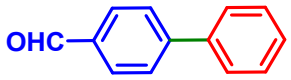

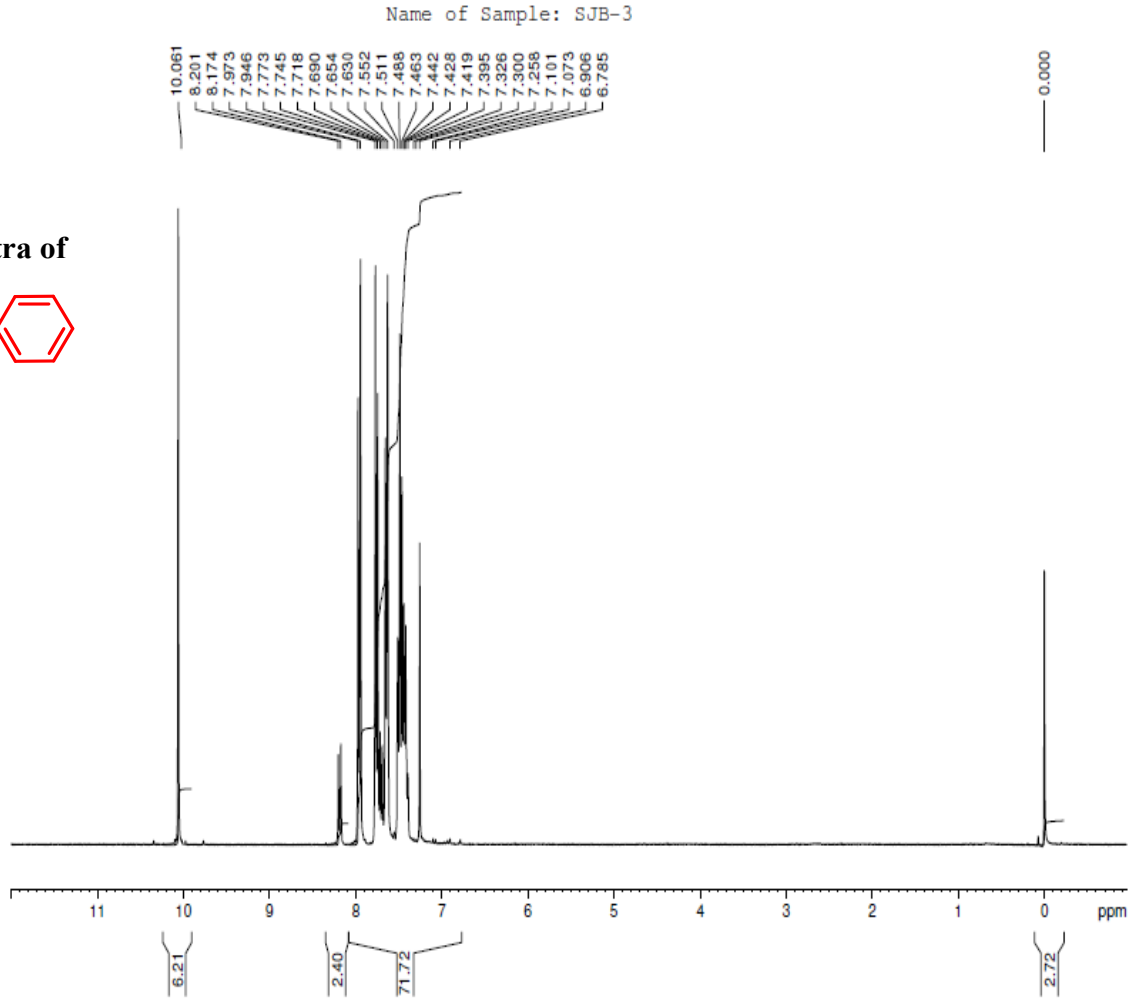

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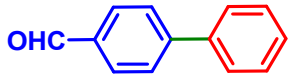

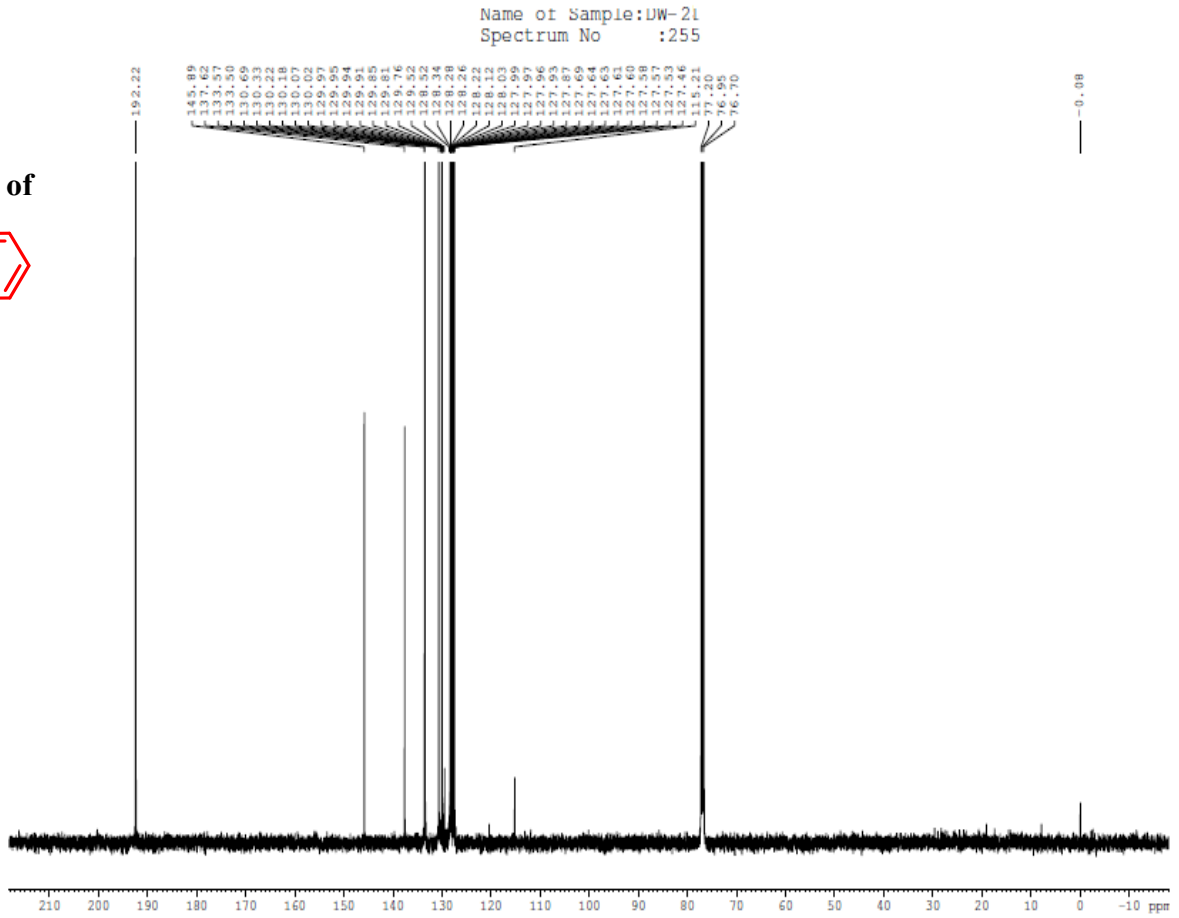

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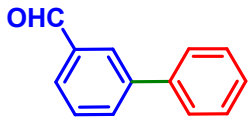

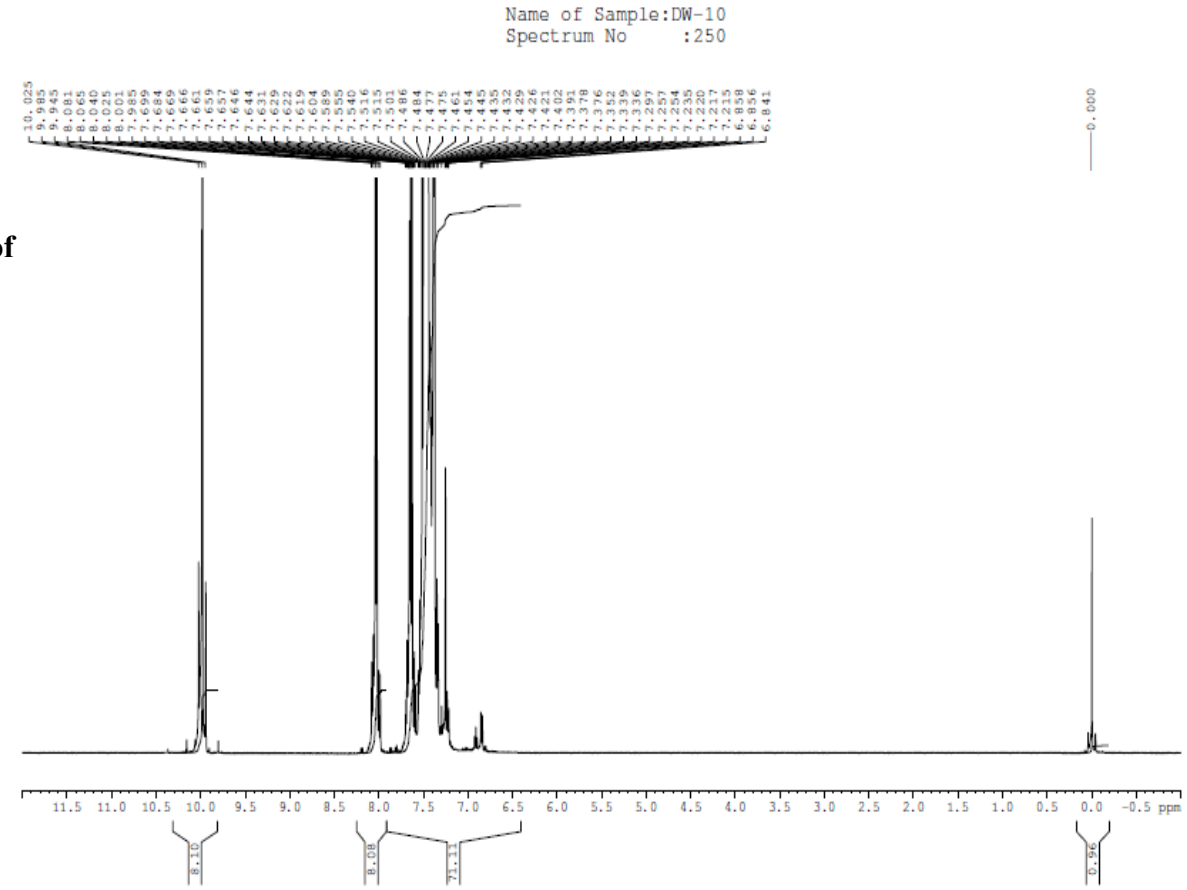

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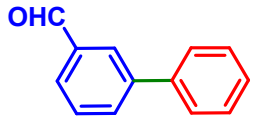

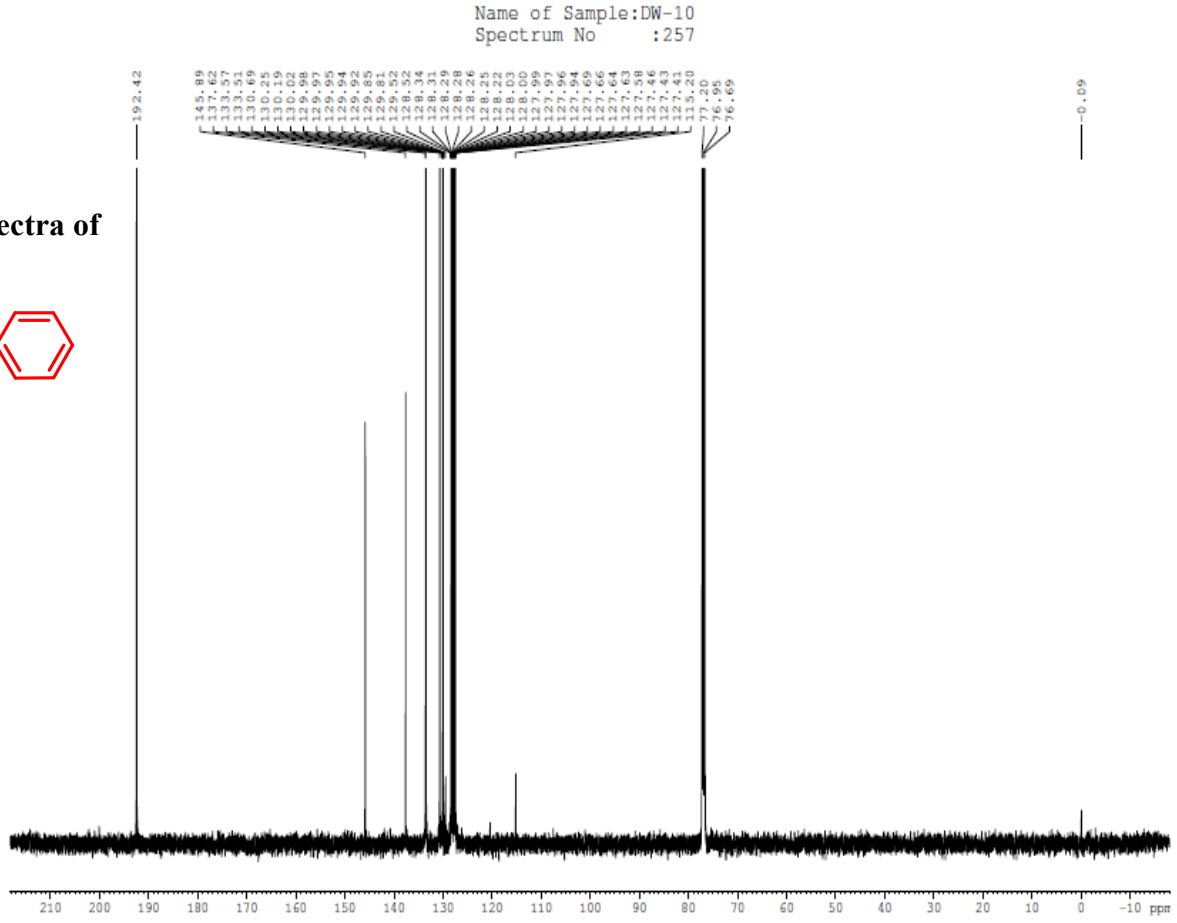

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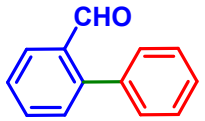

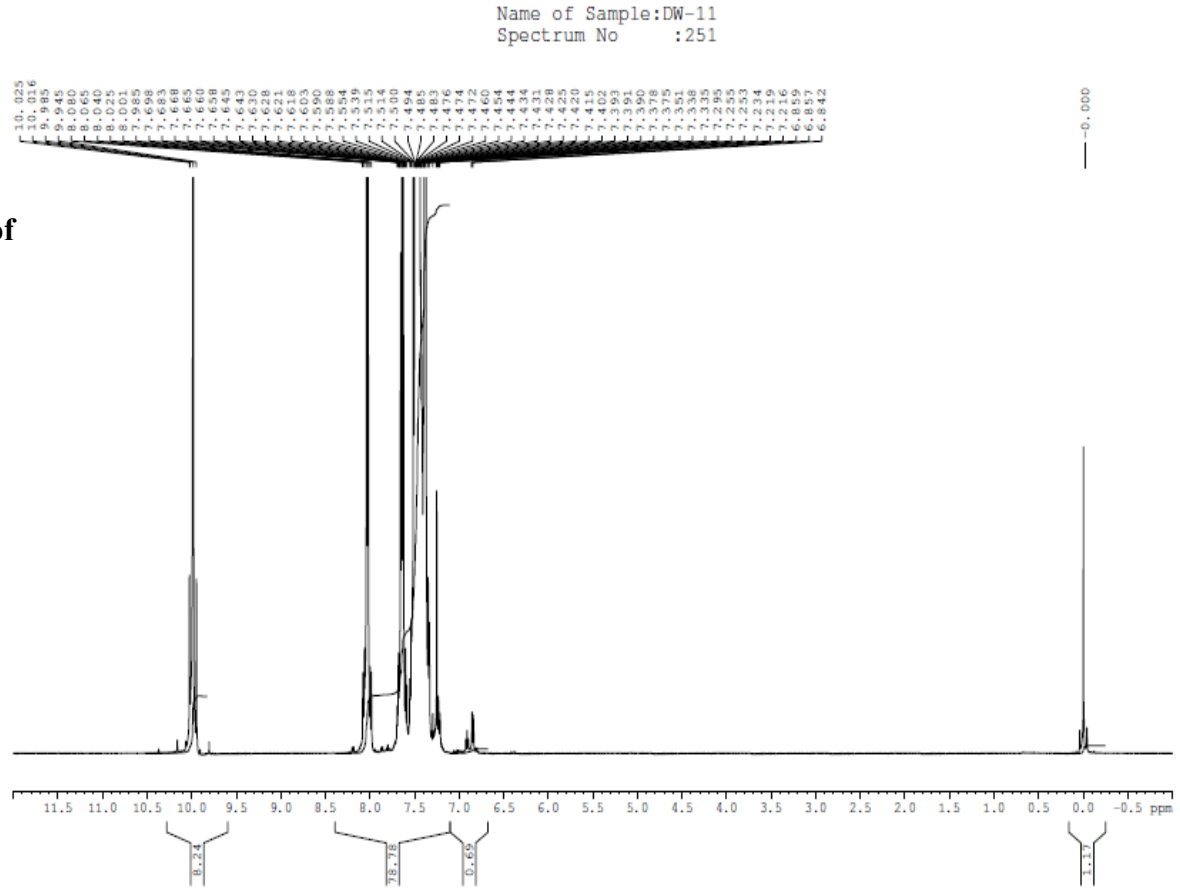

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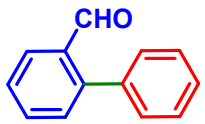

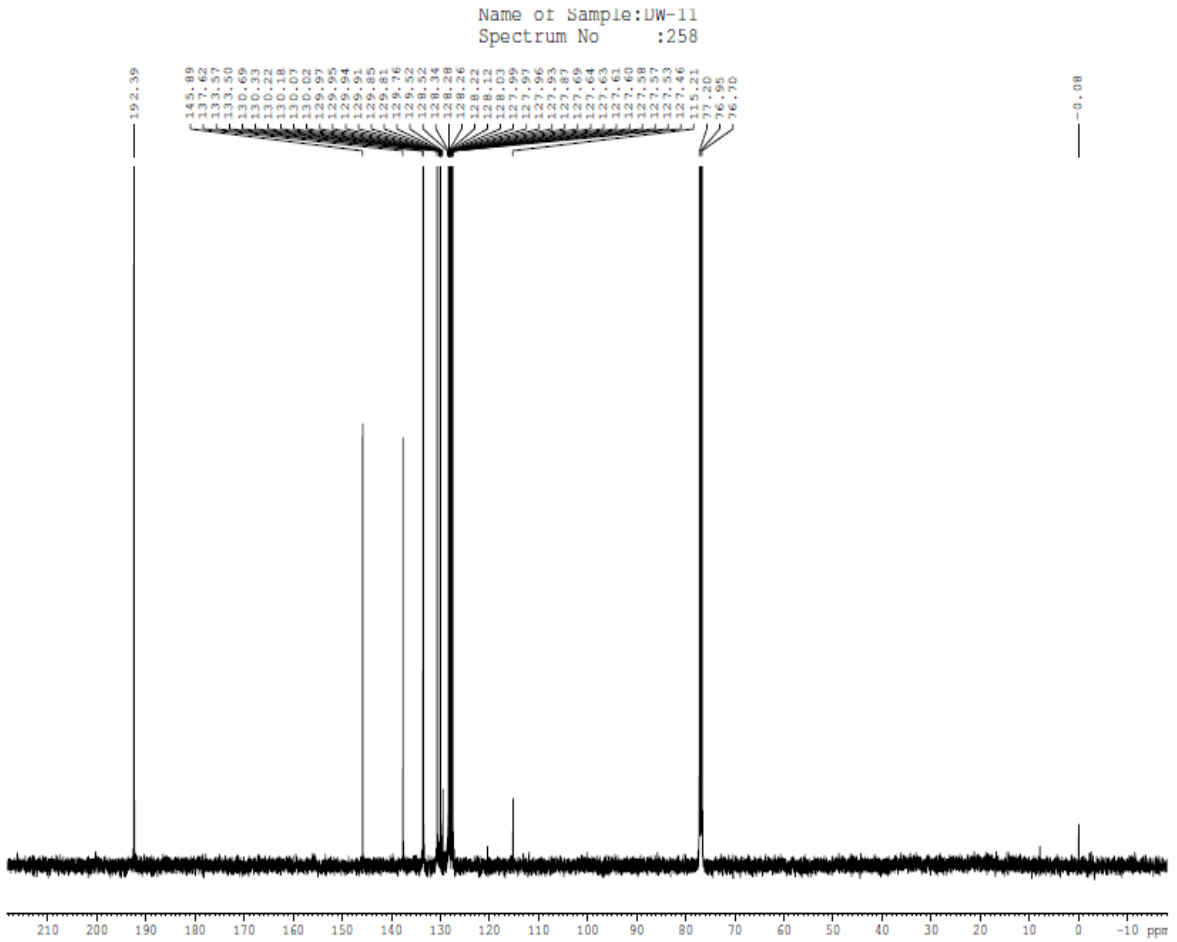

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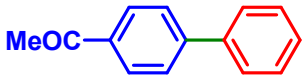

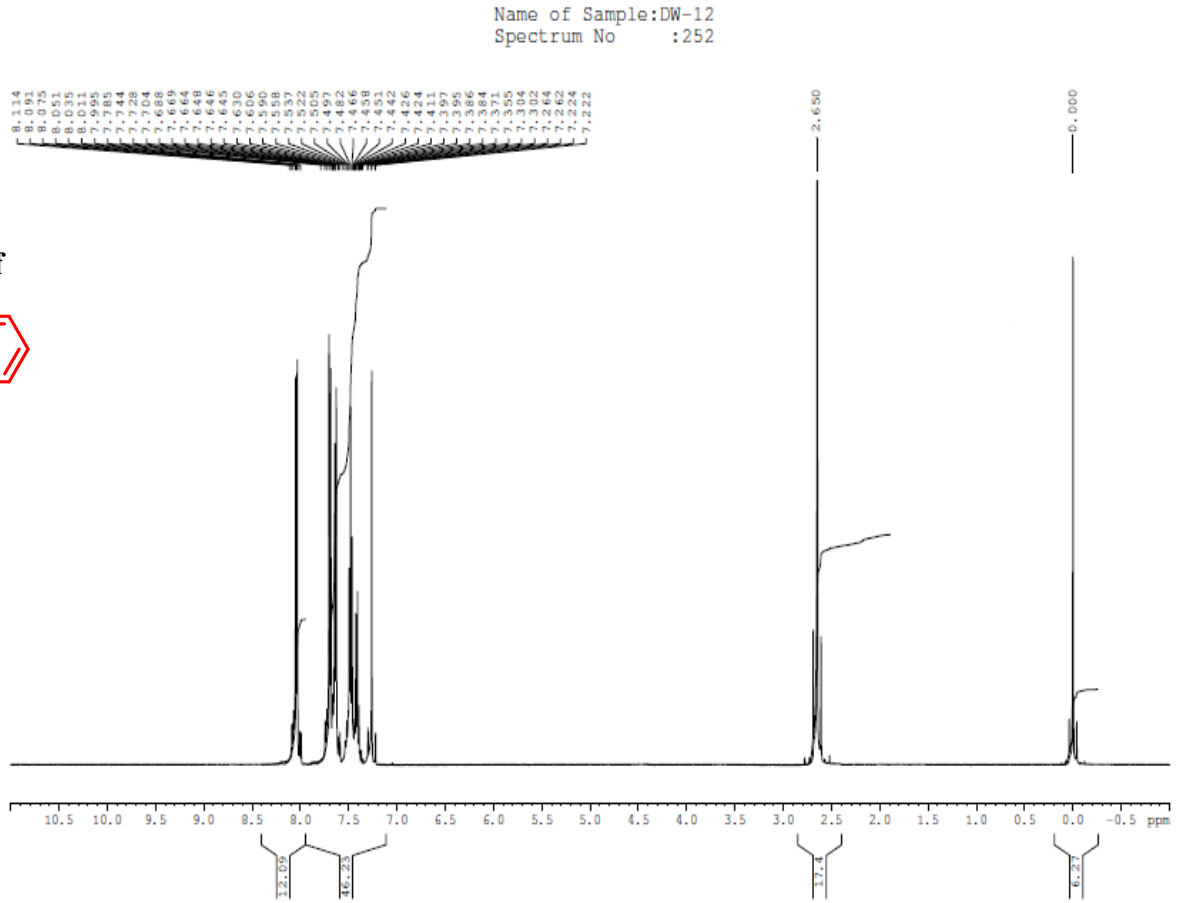

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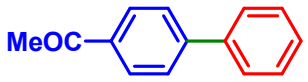

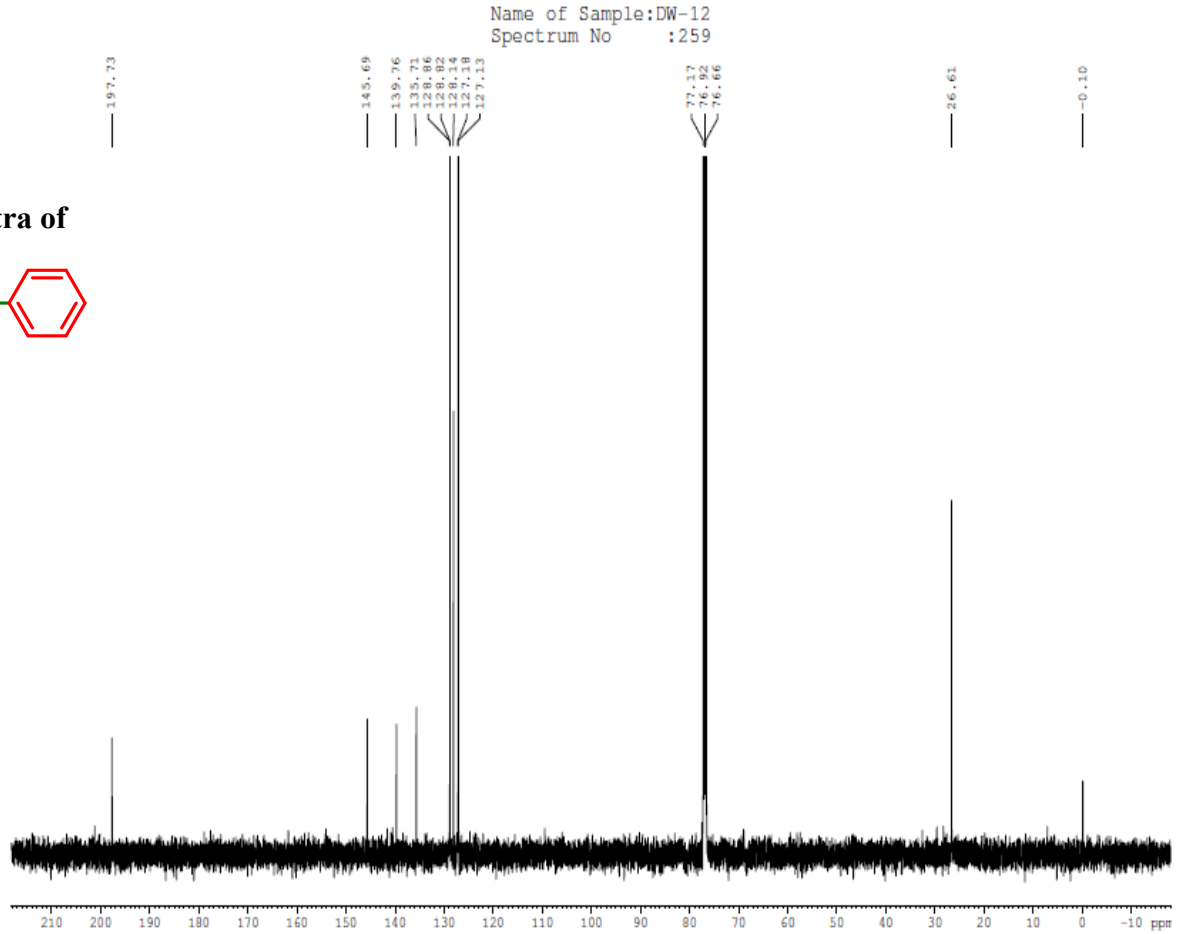

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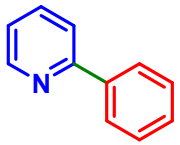

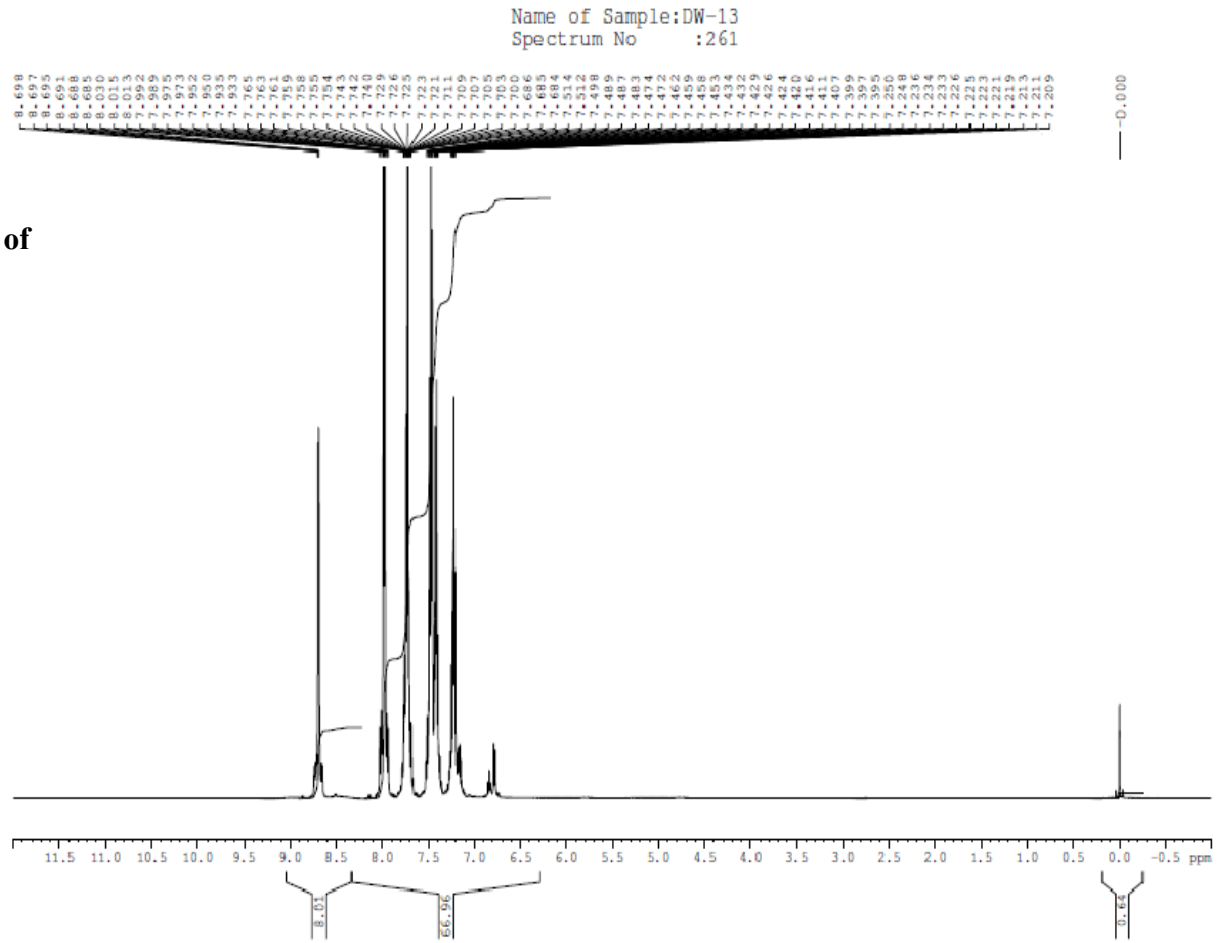

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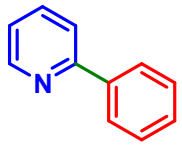

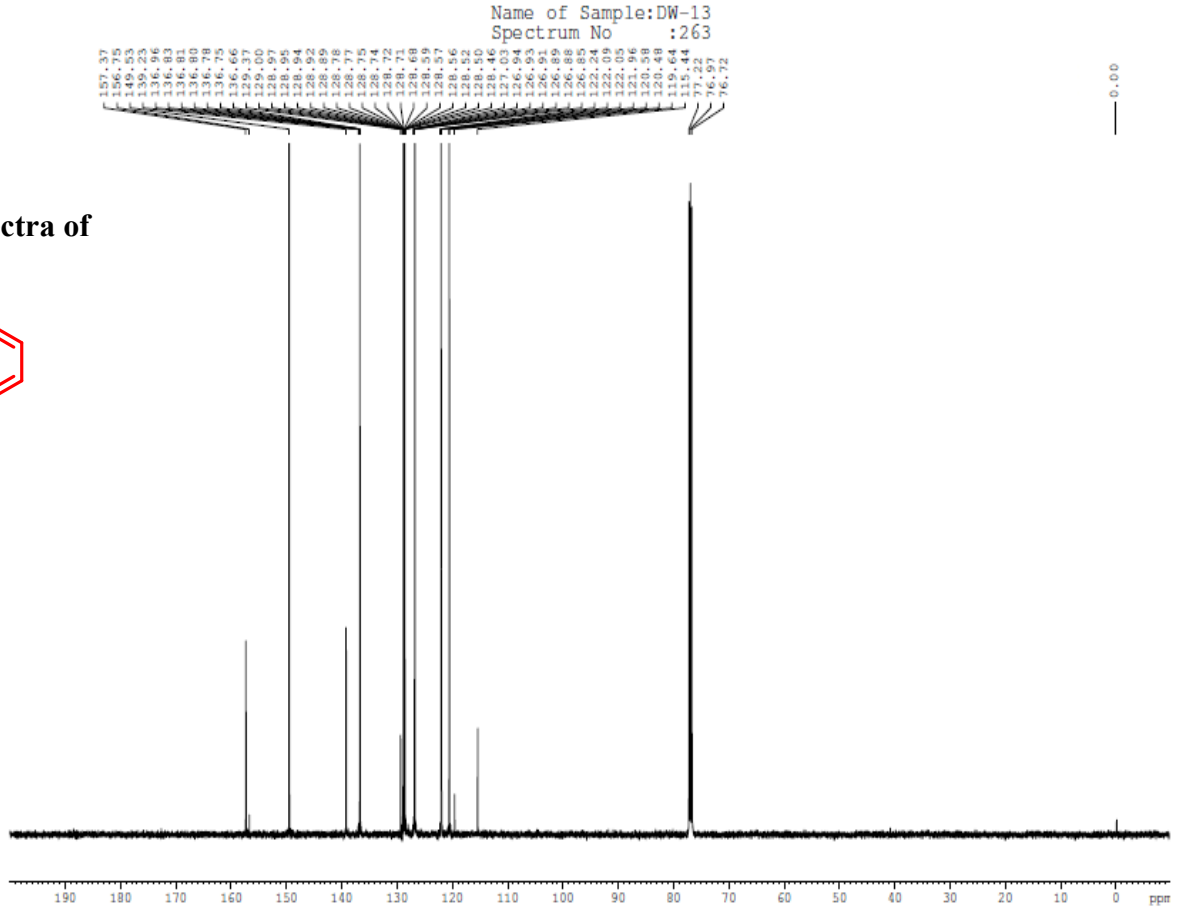

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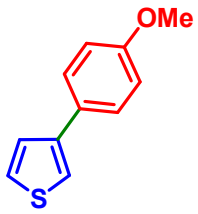

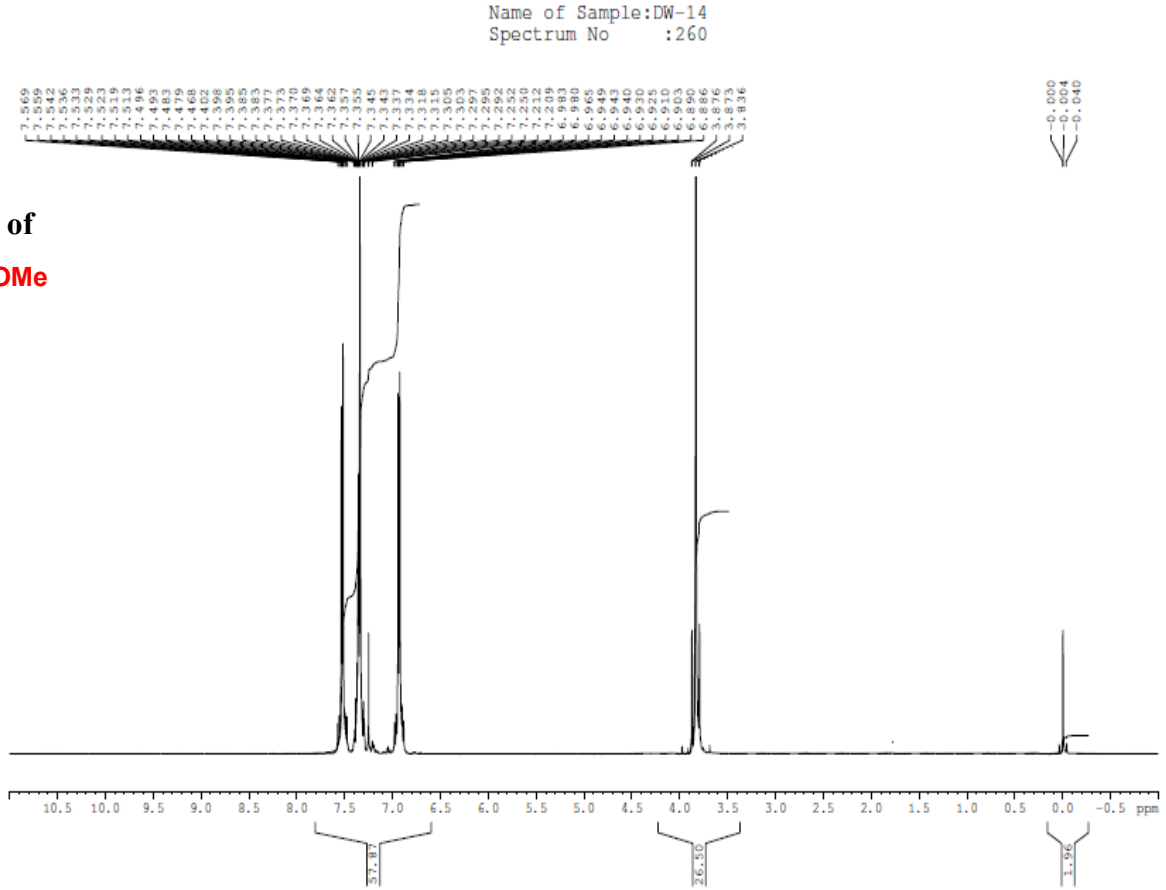

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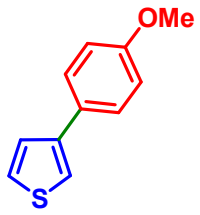

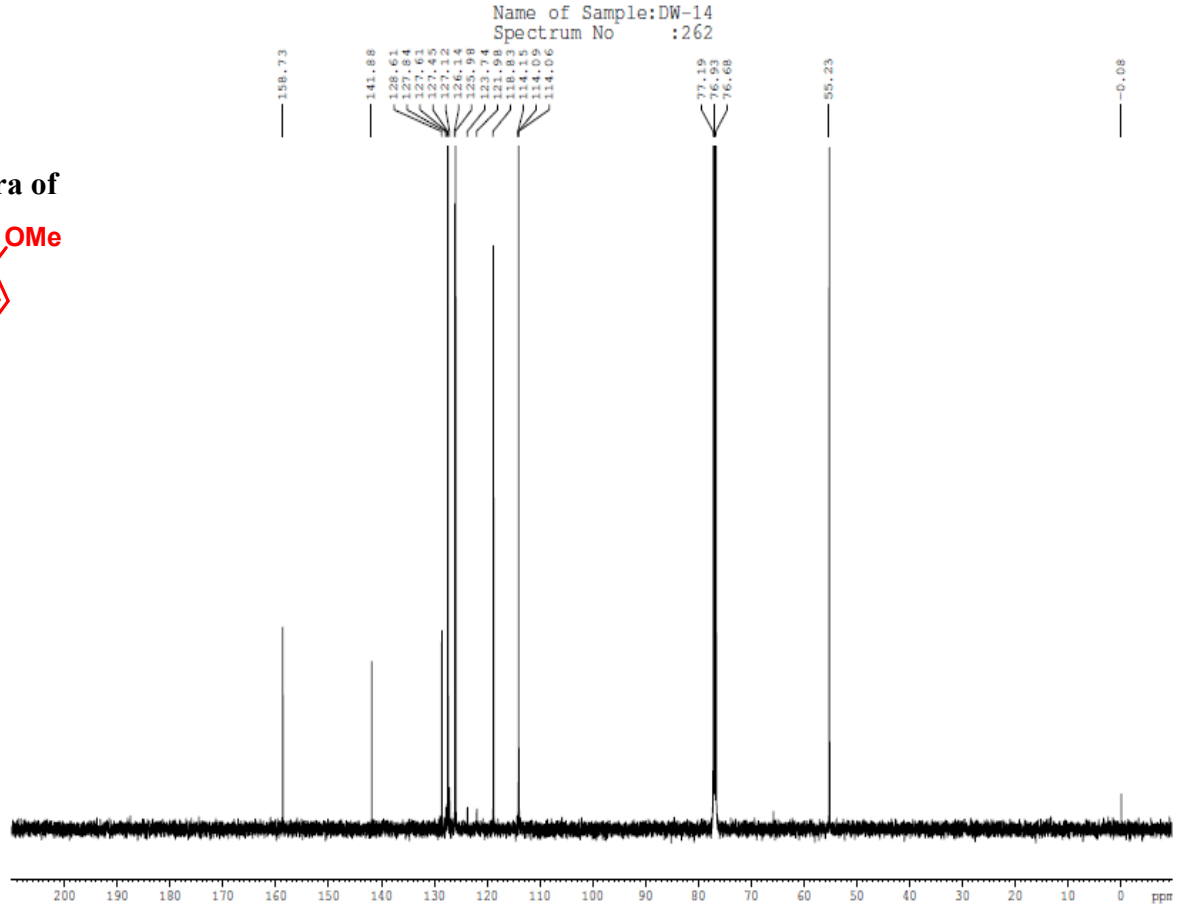

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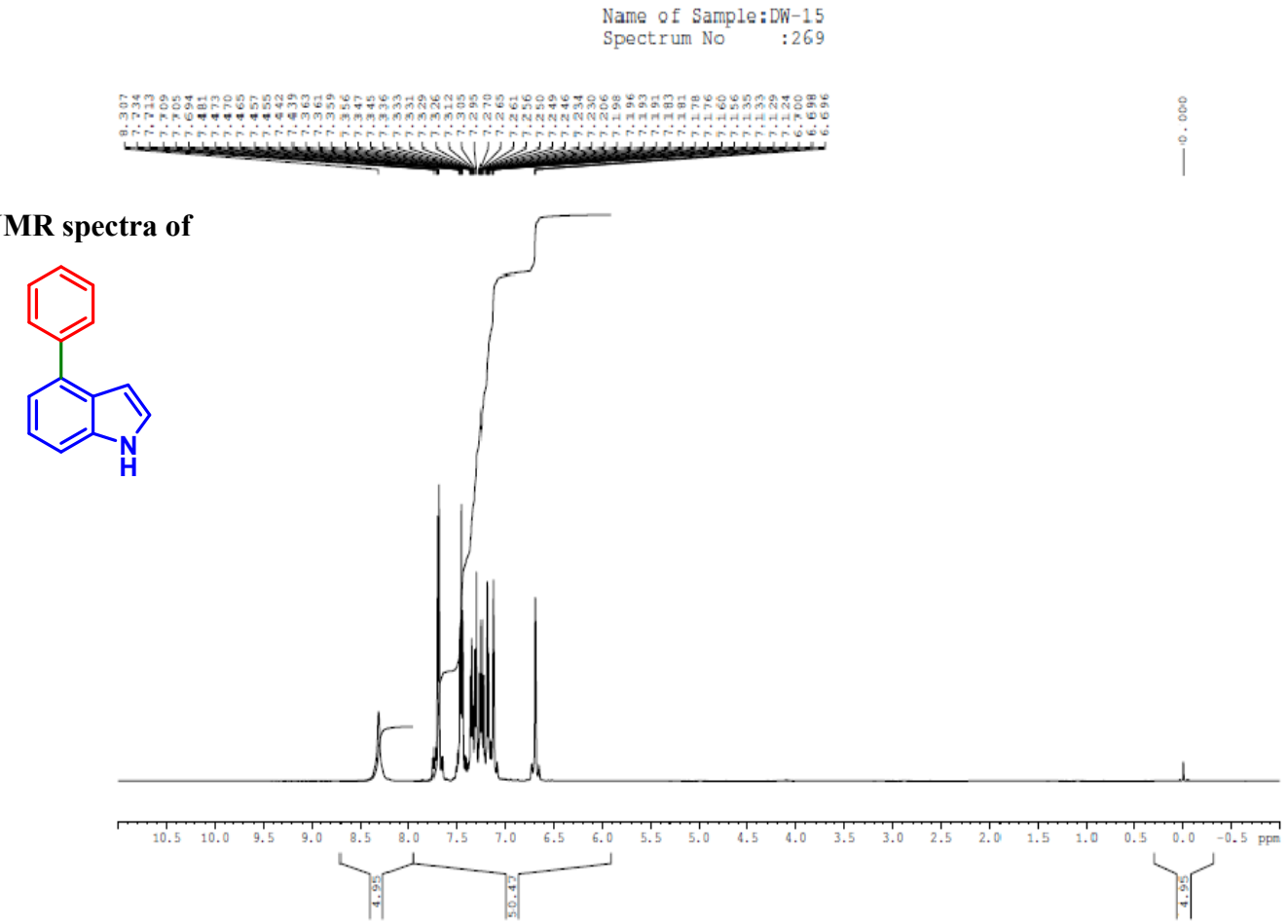

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