

Supporting Information

Total Synthesis of Calothrixin B via Sequential Sonogashira

Coupling/Copper-Catalyzed Oxidative Cyclization

Nagarajan Ramkumar and Rajagopal Nagarajan*

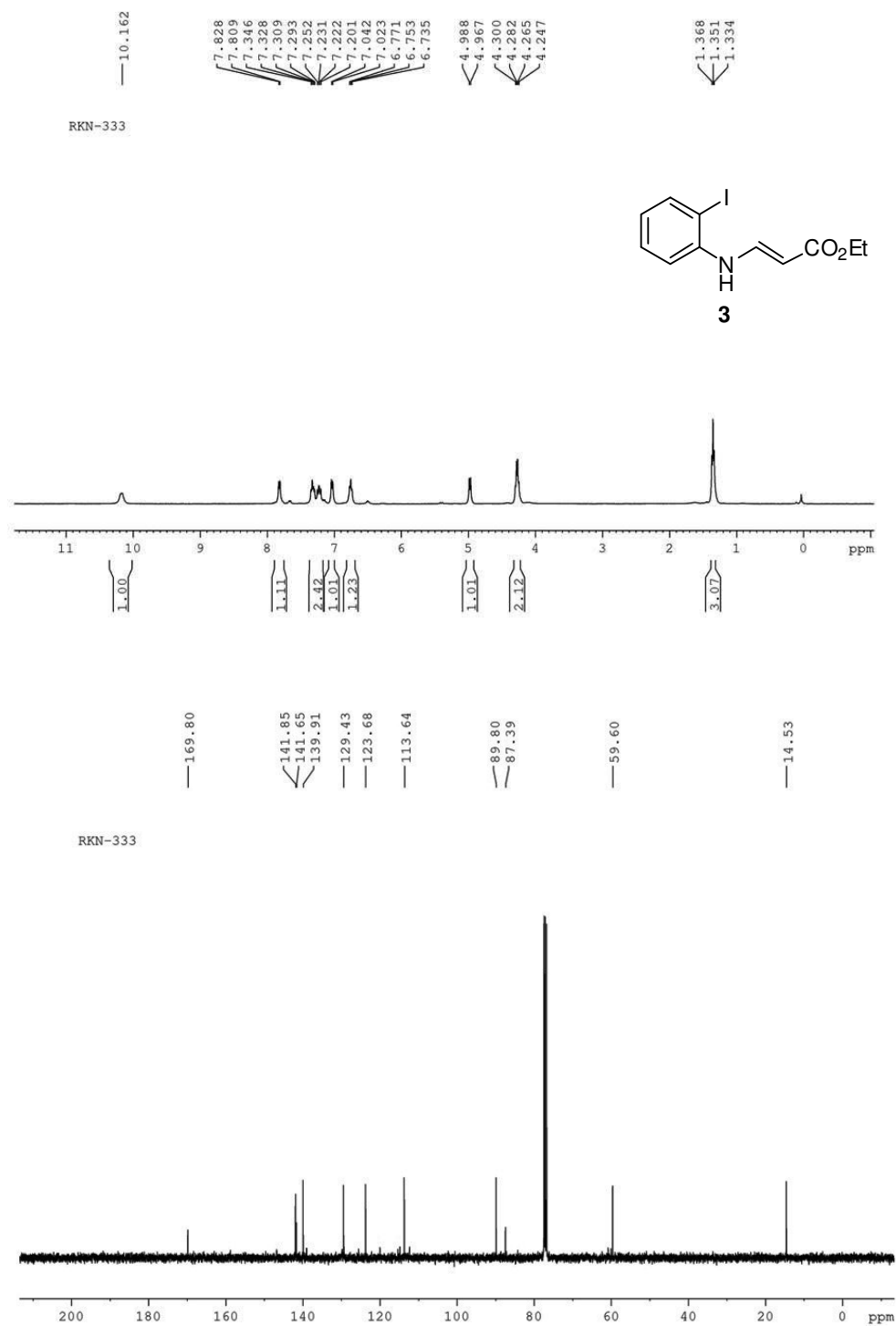
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¹H and ¹³C NMR of (*E*)-ethyl 3-((2-iodophenyl)amino)acrylate (**3**)



HRMS of (E)-ethyl 3-((2-iodophenyl)amino)acrylate (3)

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Analysis Info

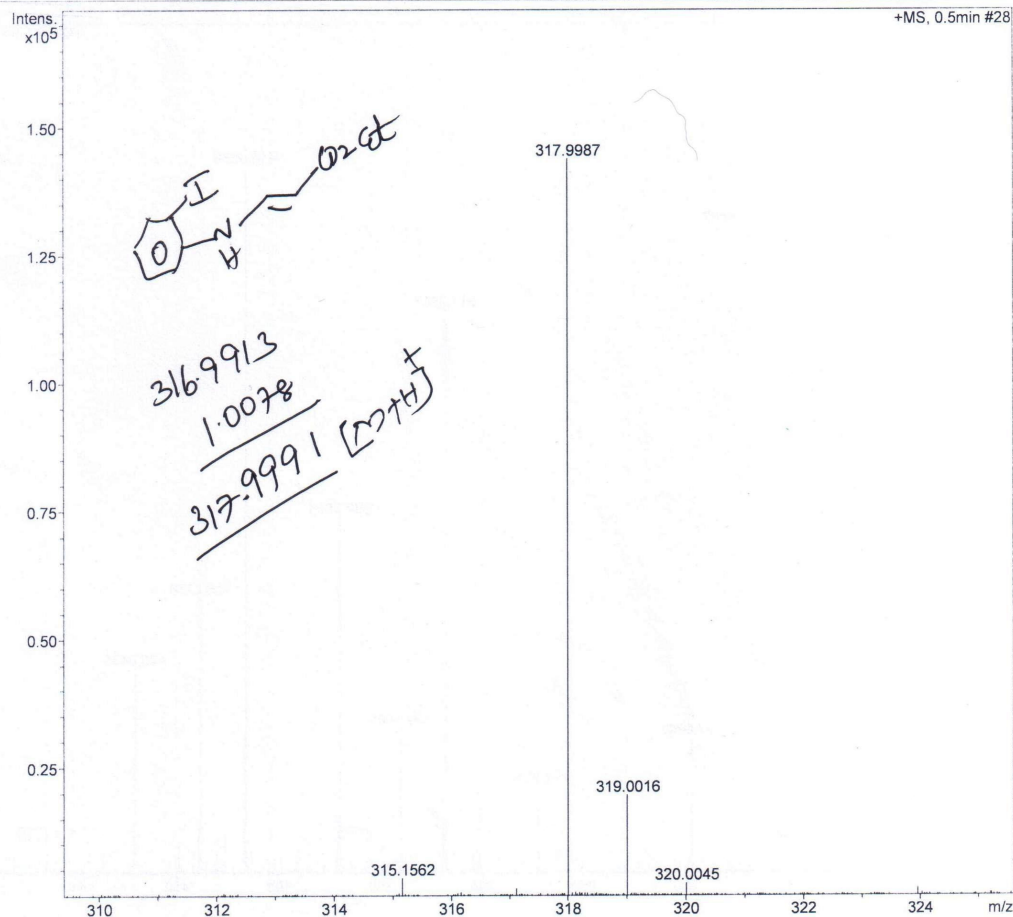
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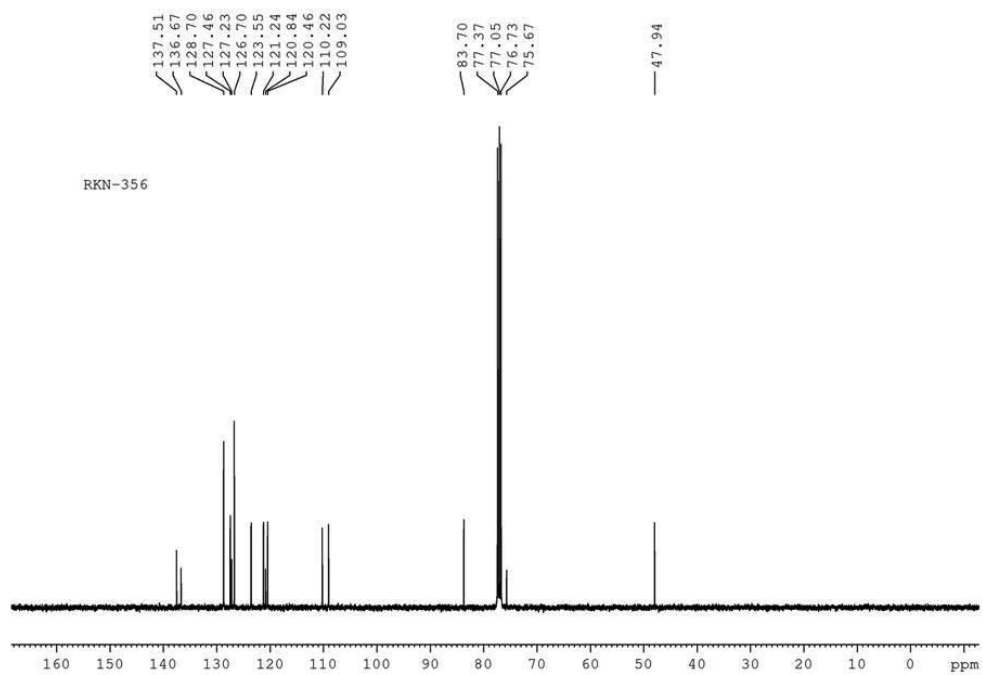
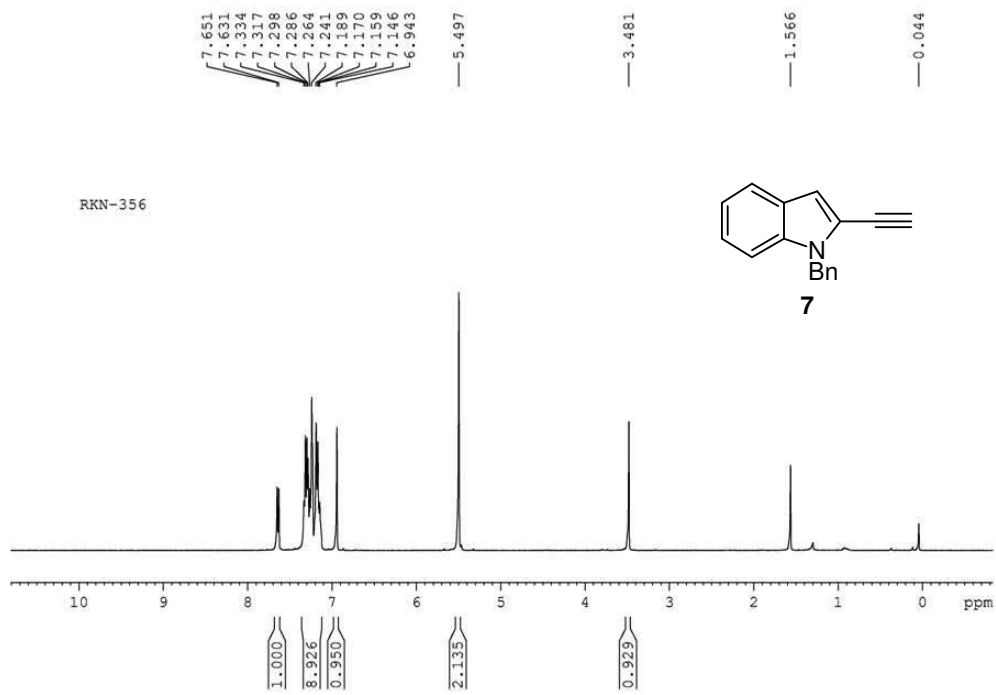
Operator Ramu Sridhar
Instrument maXis 10138

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¹H and ¹³C NMR of 1-benzyl-2-ethynyl-1*H*-indole (7)



HRMS of 1-benzyl-2-ethynyl-1*H*-indole (7)

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Analysis Info

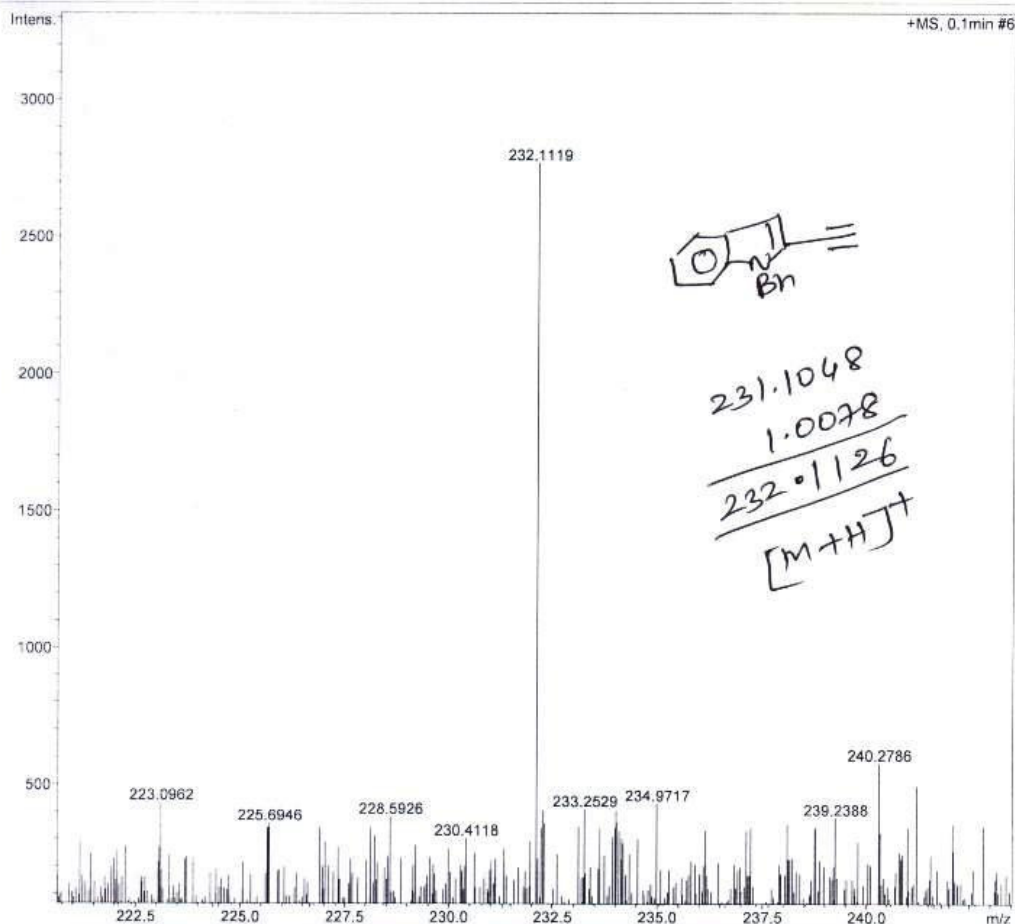
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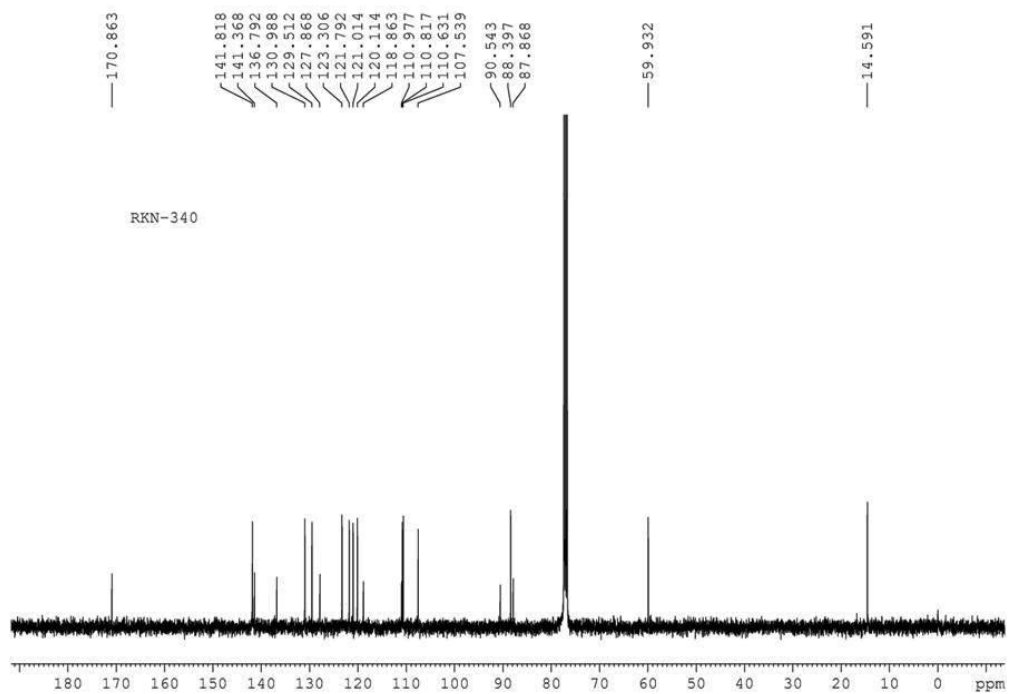
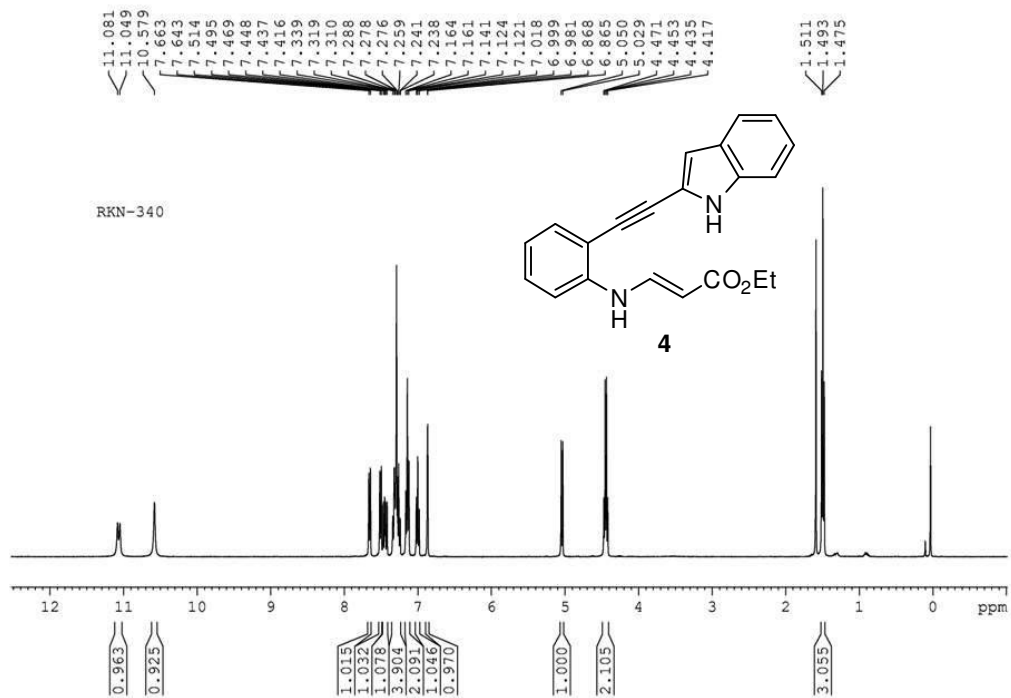
Operator Ramu Sridhar
Instrument maXis 10138

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^1H and ^{13}C NMR of (*E*)-ethyl 3-((2-((1*H*-indol-2-yl)ethynyl)phenyl)amino)acrylate (**4**)



HRMS of (E)-ethyl 3-((2-((1H-indol-2-yl)ethynyl)phenyl)amino)acrylate (4)

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Analysis Info

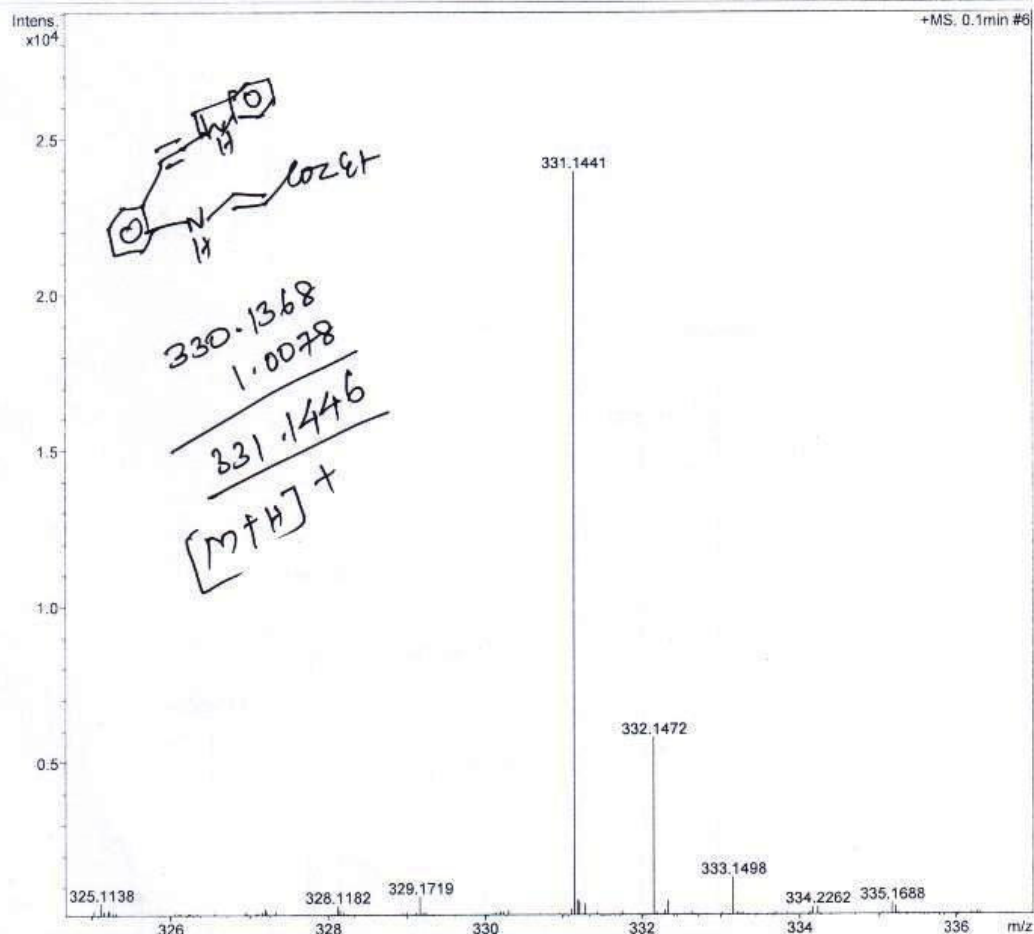
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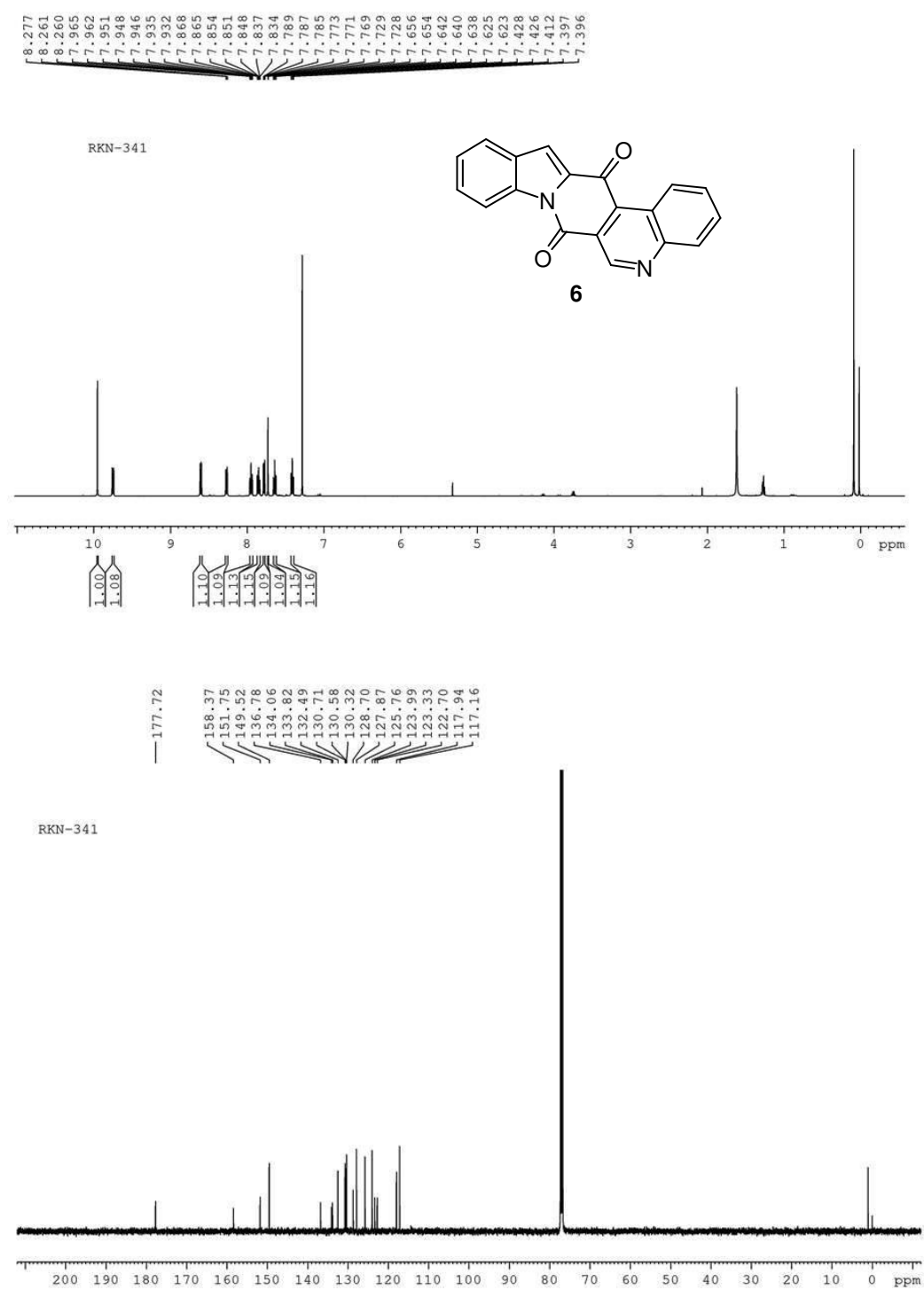
Operator Ramu Sridhar
Instrument maXis 10138

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^1H and ^{13}C NMR of benzo[*f*]indolo[1,2-*b*][2,7]naphthyridine-7,14-dione (6)



HRMS of benzo[f]indolo[1,2-b][2,7]naphthyridine-7,14-dione (6)

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Analysis Info

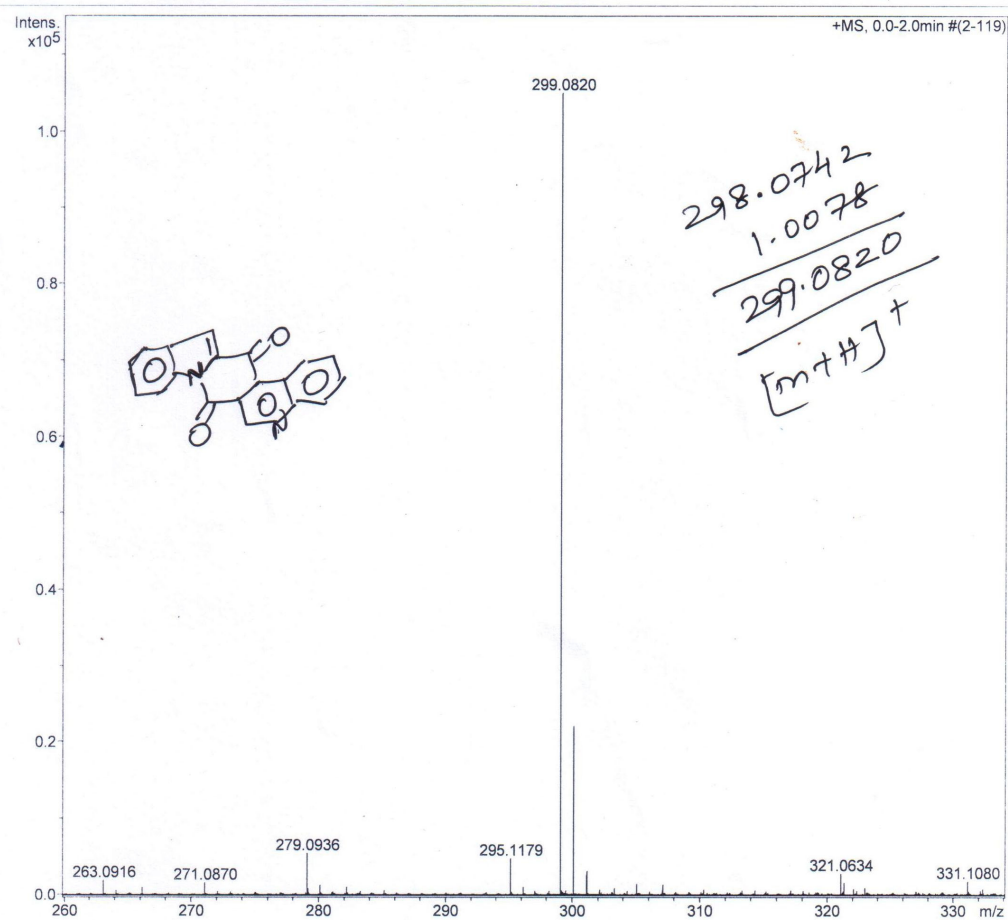
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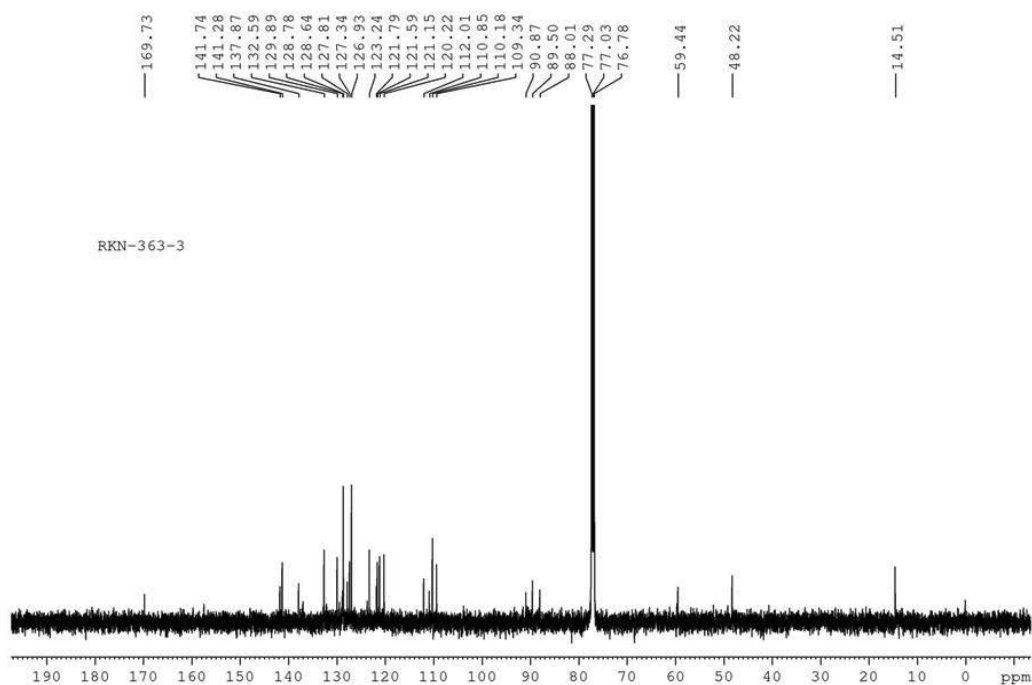
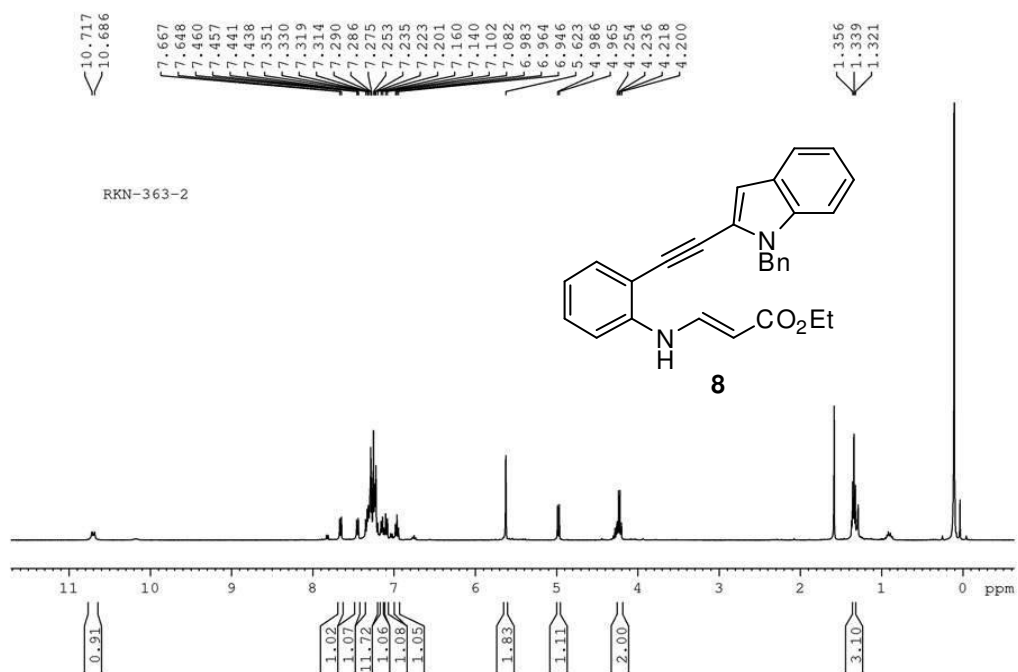
Operator Ramu Sridhar
Instrument maXis 10138

Acquisition Parameter

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¹H and ¹³C NMR of (E)-ethyl 3-((2-((1-benzyl-1*H*-indol-2-yl)ethynyl)phenyl)amino)acrylate (8)



HRMS of (E)-ethyl 3-((2-((1-benzyl-1H-indol-2-yl)ethynyl)phenyl)amino)acrylate (8)

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Analysis Info

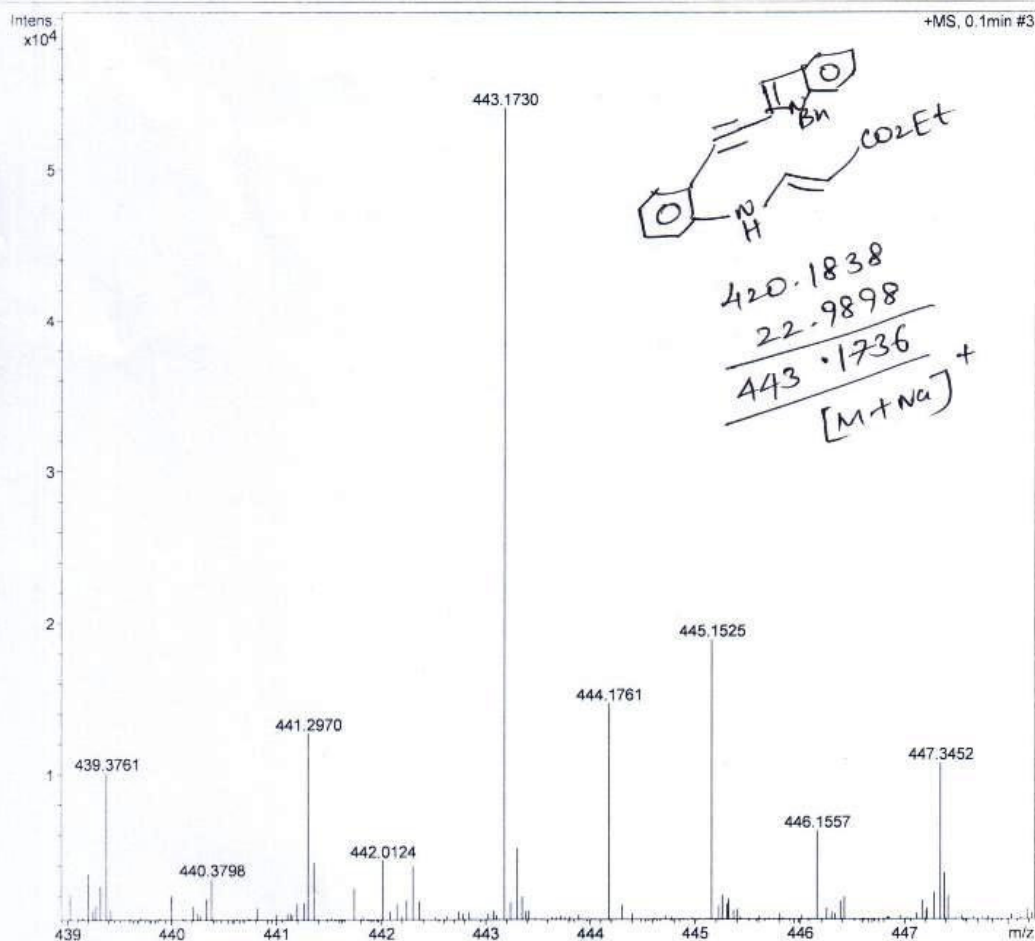
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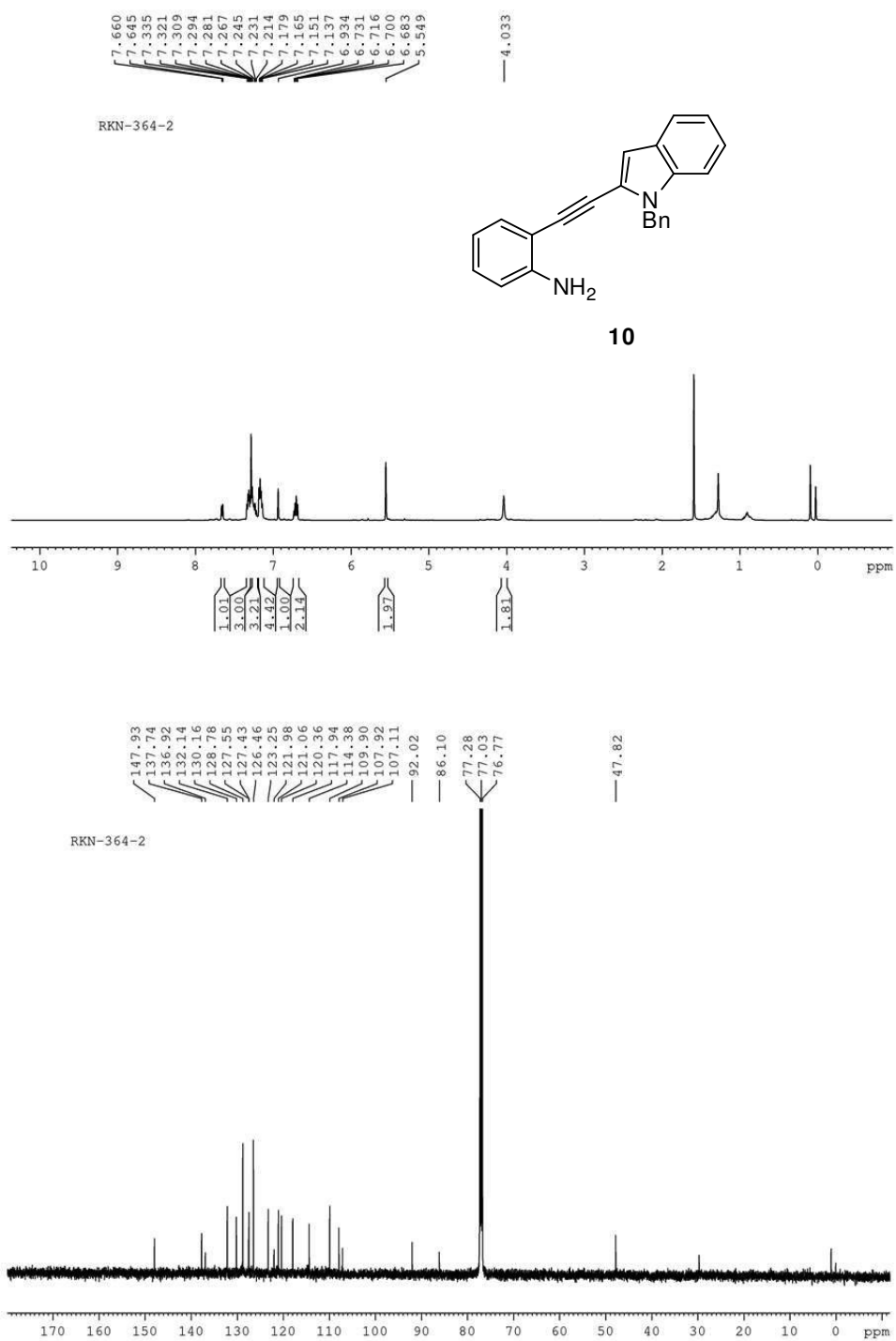
Operator Ramu Sridhar
Instrument maXis 10138

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^1H and ^{13}C NMR of 2-((1-benzyl-1*H*-indol-2-yl)ethynyl)aniline (10)



HRMS of 2-((1-benzyl-1H-indol-2-yl)ethynyl)aniline (10)

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Analysis Info

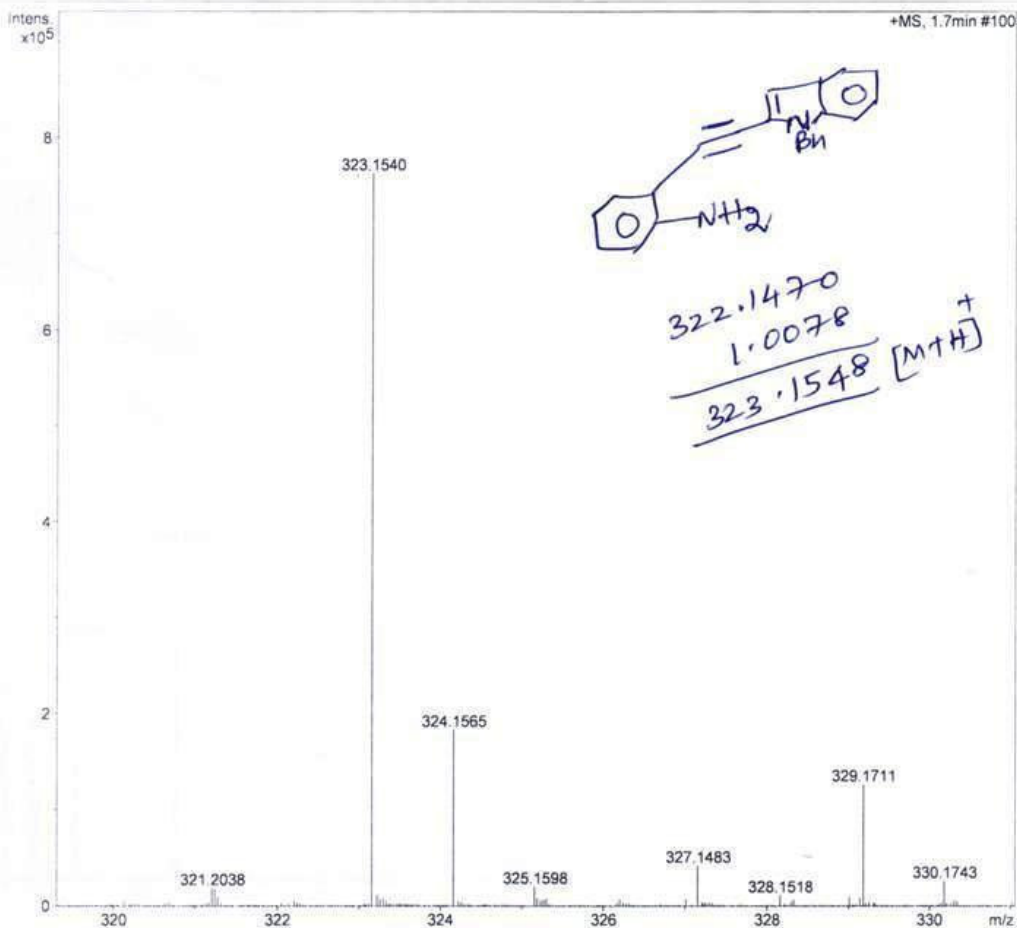
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Operator Ramu Sridhar
Instrument maXis 10138

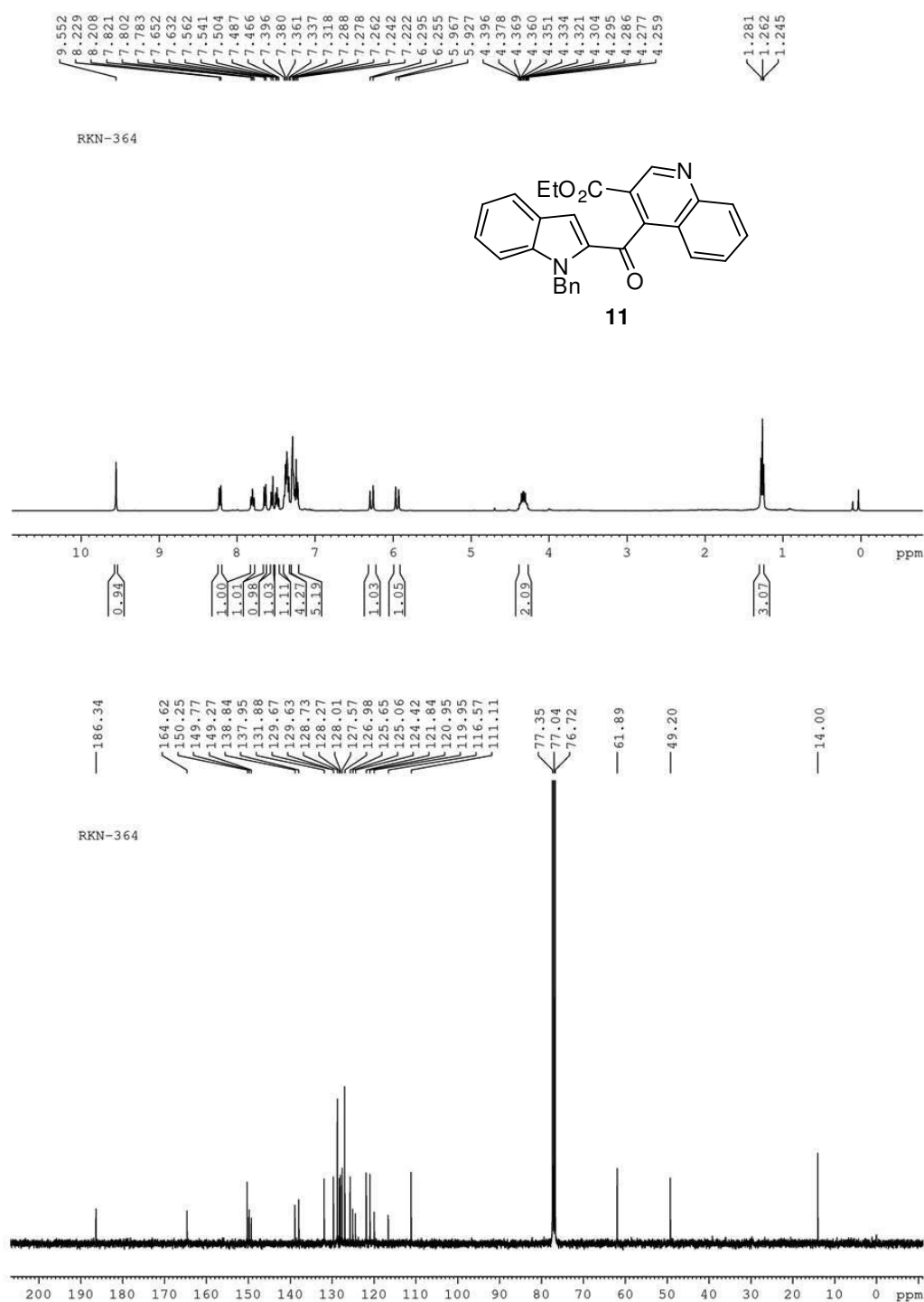
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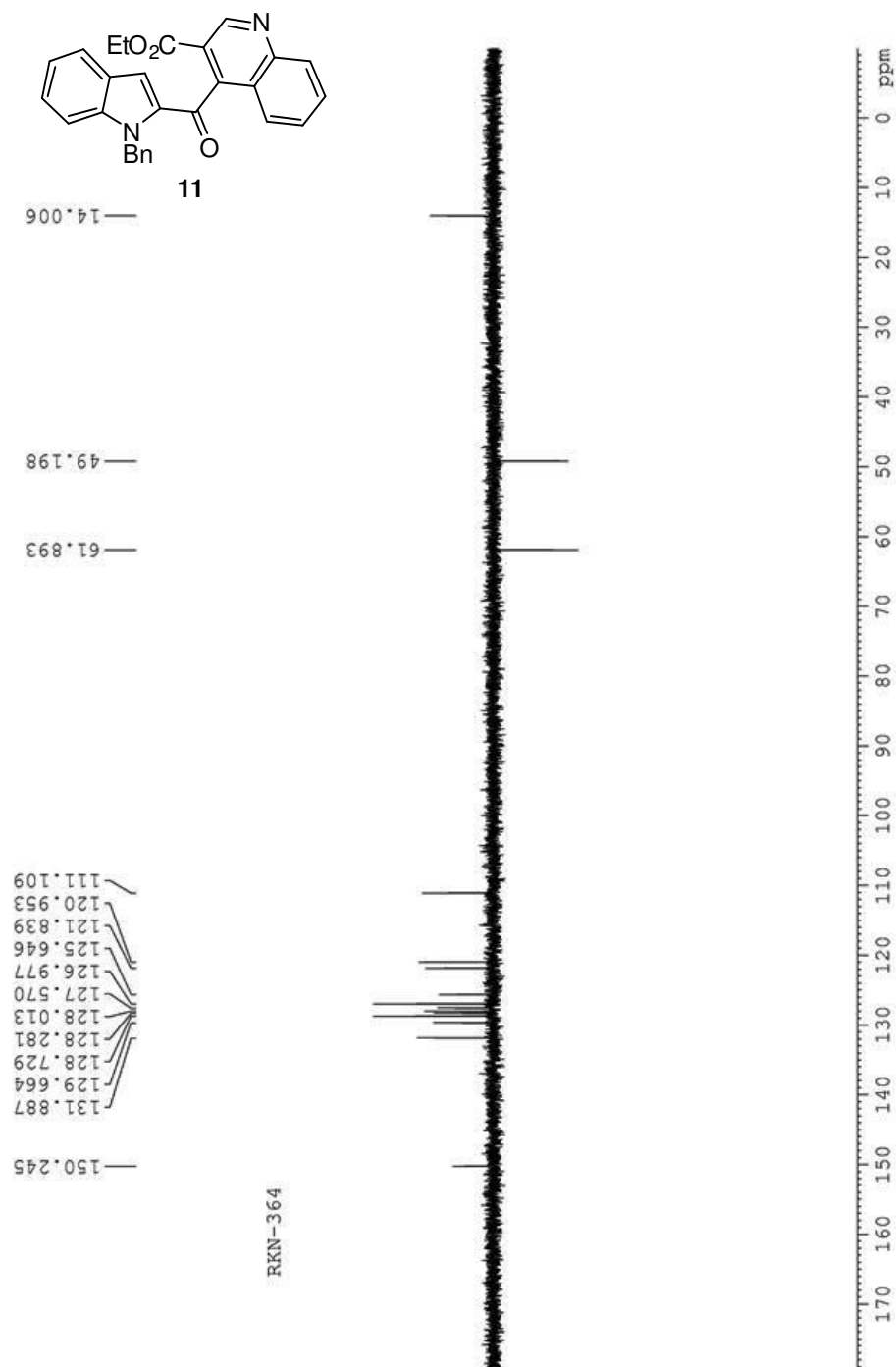


¹H and ¹³C NMR of ethyl 4-(1-benzyl-1*H*-indole-2-carbonyl)quinoline-3-carboxylate

(11)



DEPT of ethyl 4-(1-benzyl-1*H*-indole-2-carbonyl)quinoline-3-carboxylate (**11**)



HRMS of ethyl 4-(1-benzyl-1H-indole-2-carbonyl)quinoline-3-carboxylate (11)

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Analysis Info

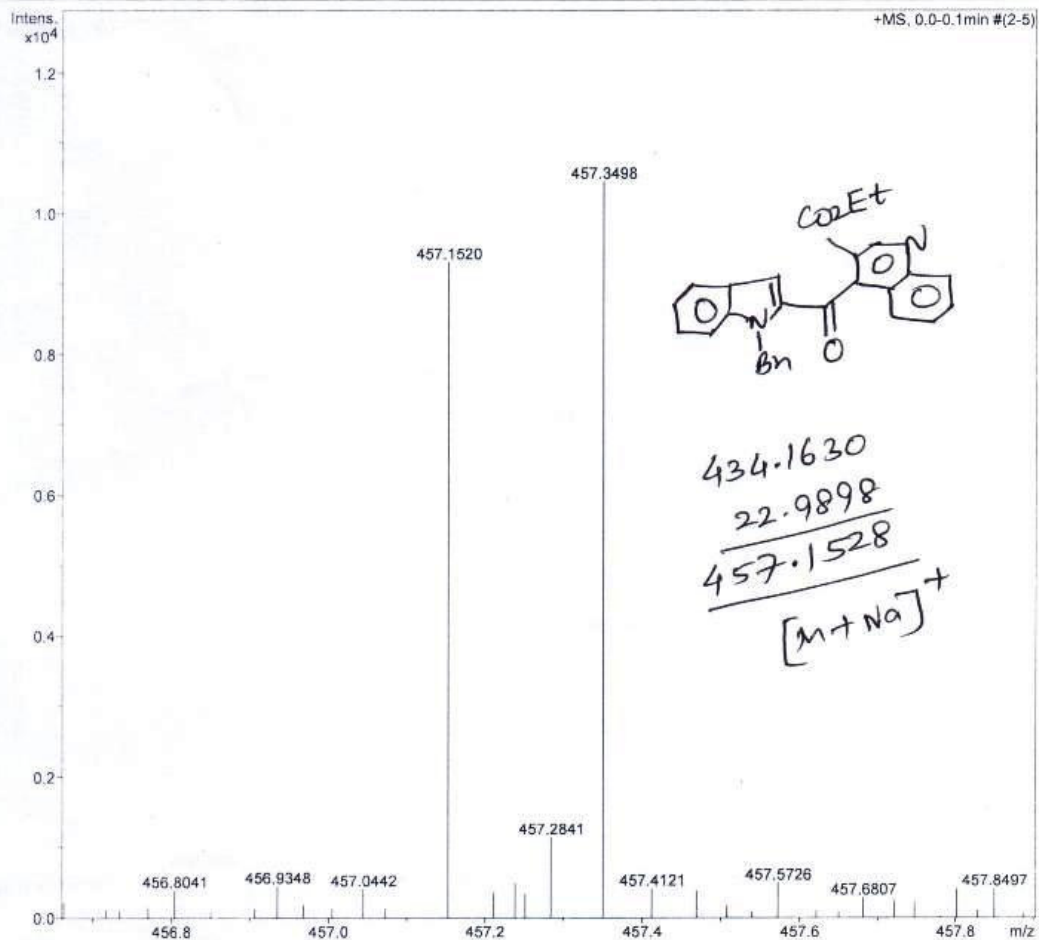
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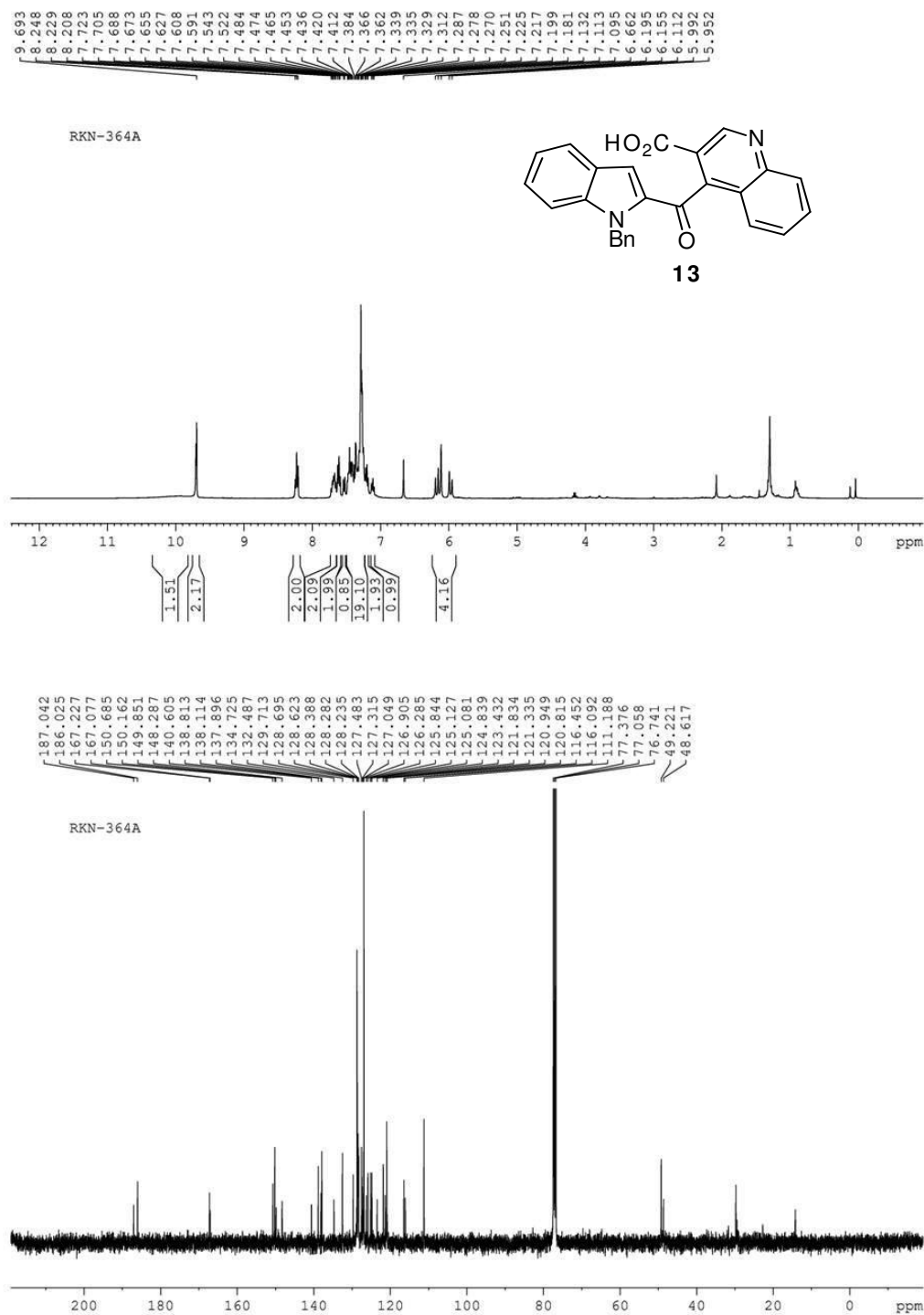
Operator Ramu Sridhar
Instrument maXis 10138

Acquisition Parameter

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¹H and ¹³C NMR of 4-(1-benzyl-1*H*-indole-2-carbonyl)quinoline-3-carboxylic acid (**13**)



HRMS of 4-(1-benzyl-1*H*-indole-2-carbonyl)quinoline-3-carboxylic acid (13)

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Analysis Info

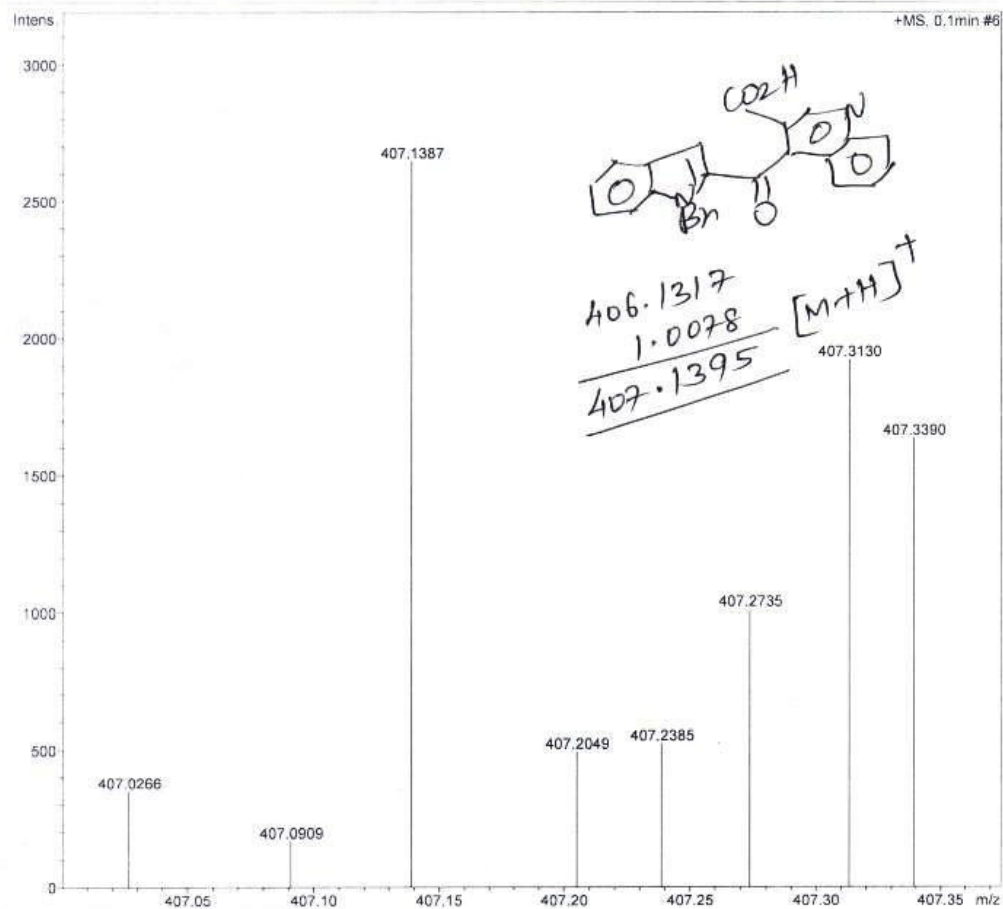
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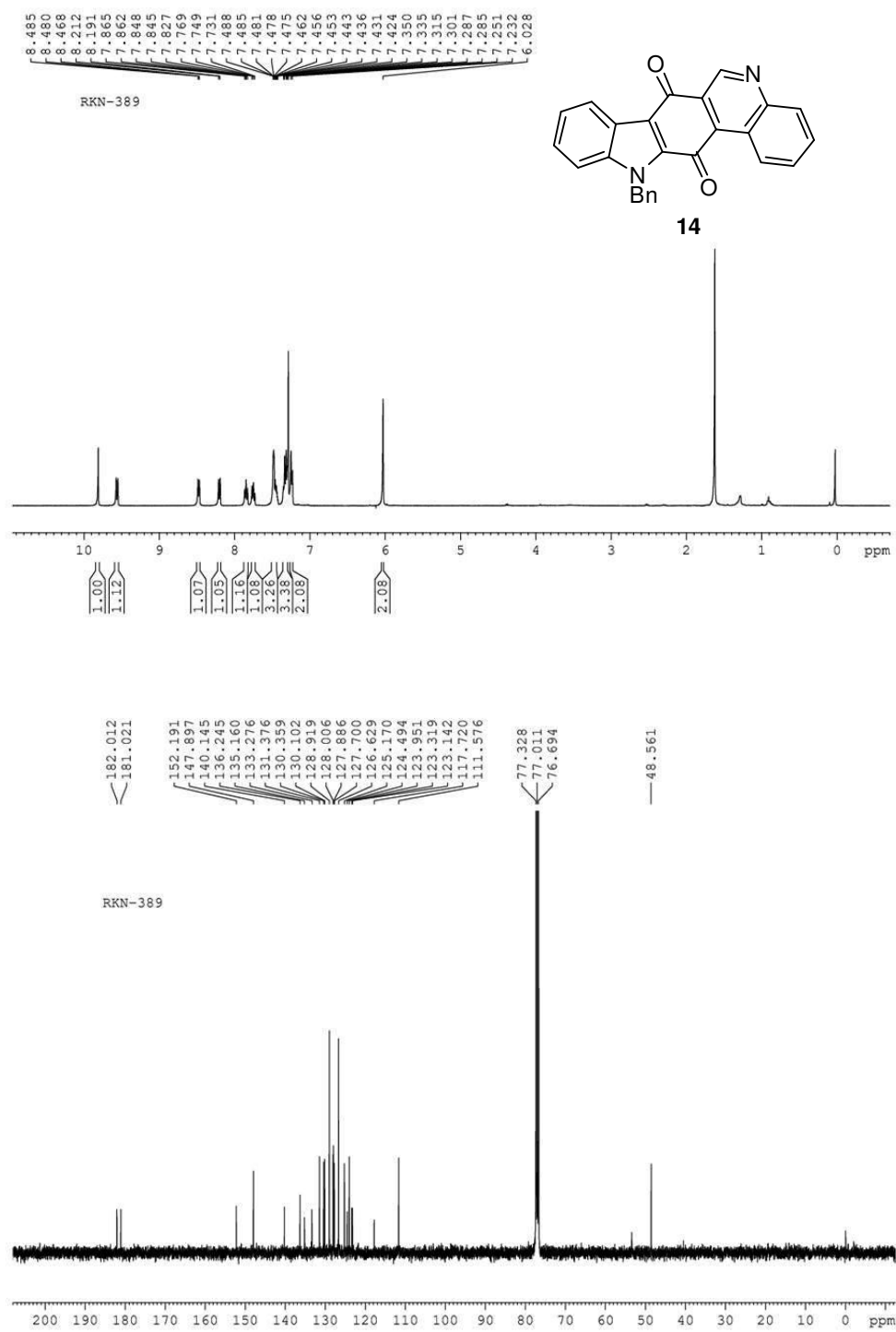
Operator Ramu Sridhar
Instrument maXis 10138

Acquisition Parameter

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¹H and ¹³C NMR of 12-benzyl-7*H*-indolo[3,2-*j*]phenanthridine-7,13(12*H*)-dione (14)



HRMS of 12-benzyl-7H-indolo[3,2-j]phenanthridine-7,13(12H)-dione (14)

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University of Hyderabad

Analysis Info

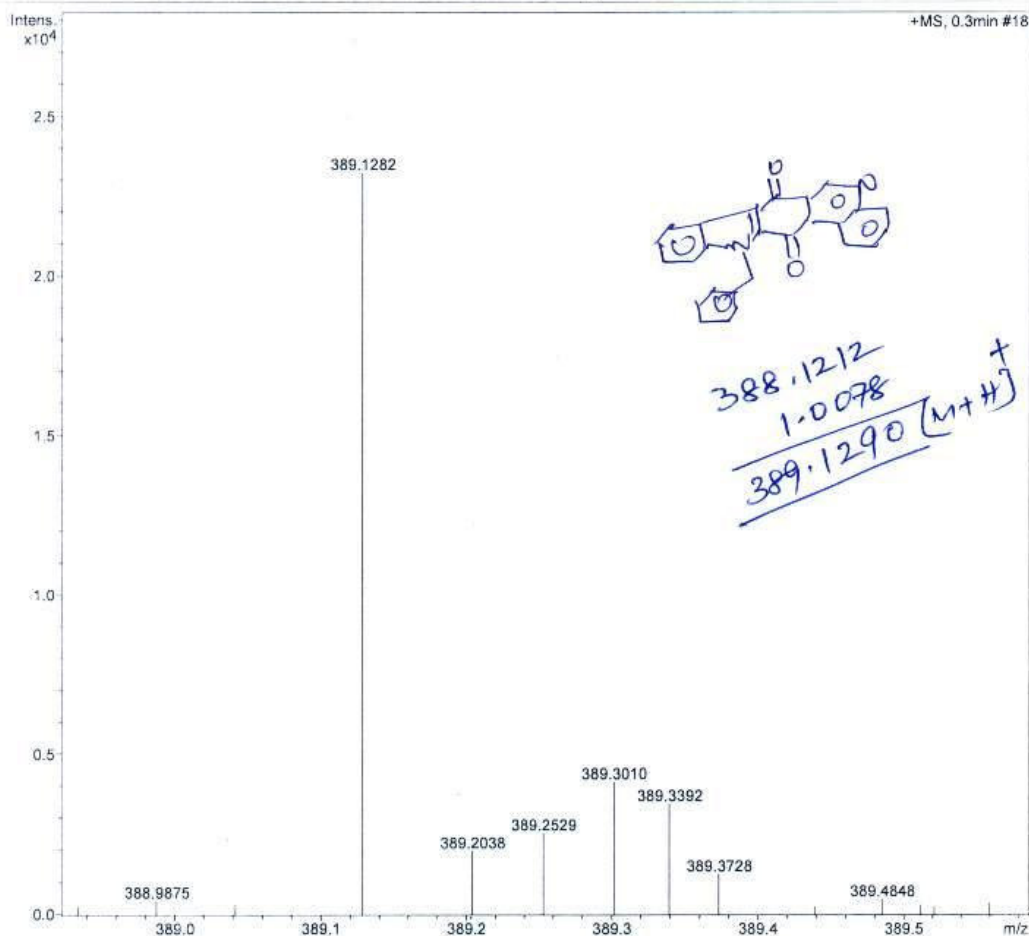
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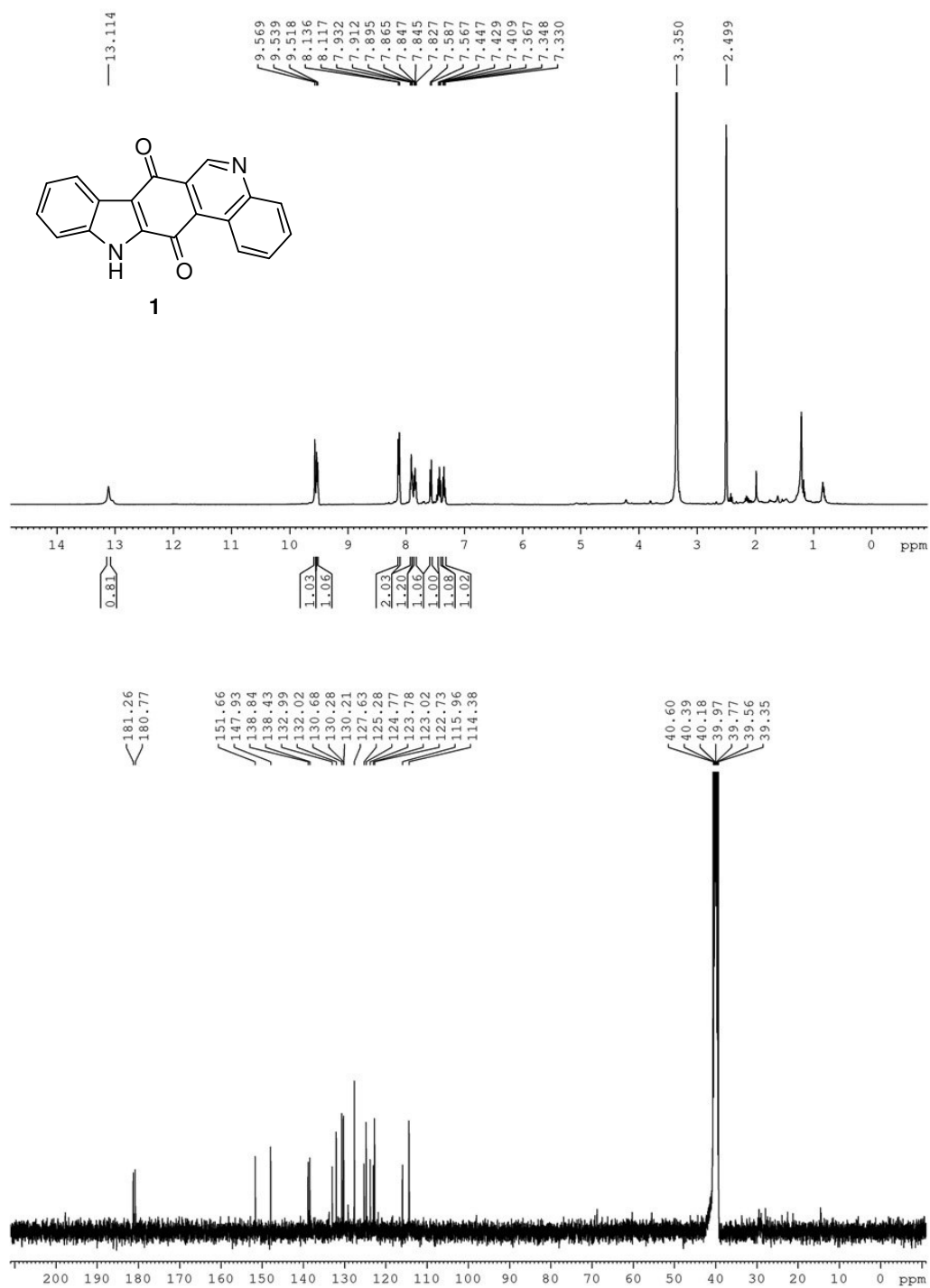
Operator Ramu Sridhar
Instrument maXis 10138

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Scan End	1700 m/z	Set Collision Cell RF	150.0 Vpp	Set Divert Valve	Waste



^1H and ^{13}C NMR of 7*H*-indolo[3,2-*j*]phenanthridine-7,13(12*H*)-dione (1)



HRMS of 7H-indolo[3,2-j]phenanthridine-7,13(12H)-dione (1)

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Analysis Info

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Method tune_low_Pos.m
Sample Name RKN-298
Comment

Acquisition Date 6/22/2015 4:56:47 PM

Operator Ramu Sridhar
Instrument maXis 10138

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