The influence of O/S exchange on the biocatalytical activity of benzisoselenazol-3(2H)-ones

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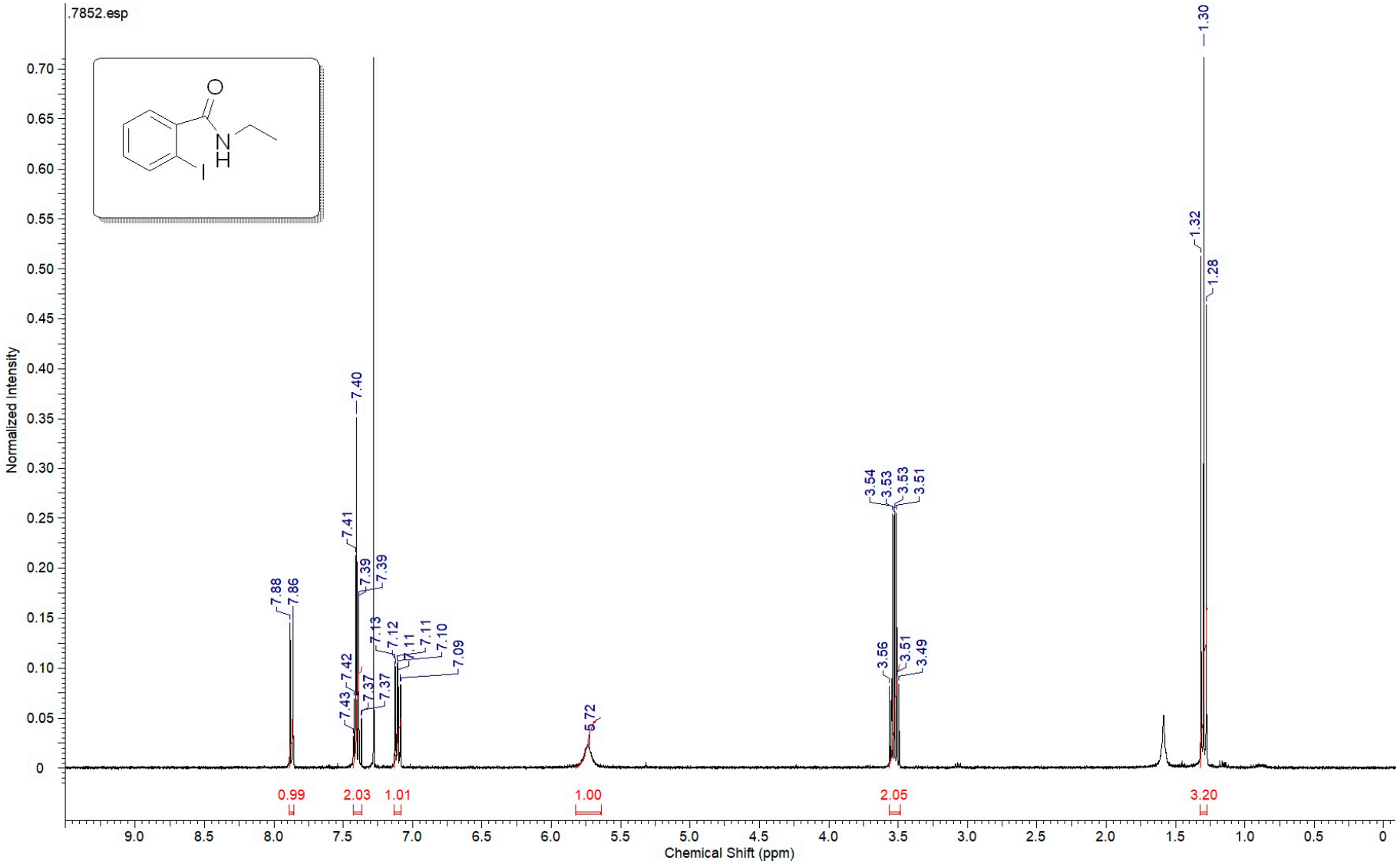
N-ethyl-*o*-iodobenzamide **4a**



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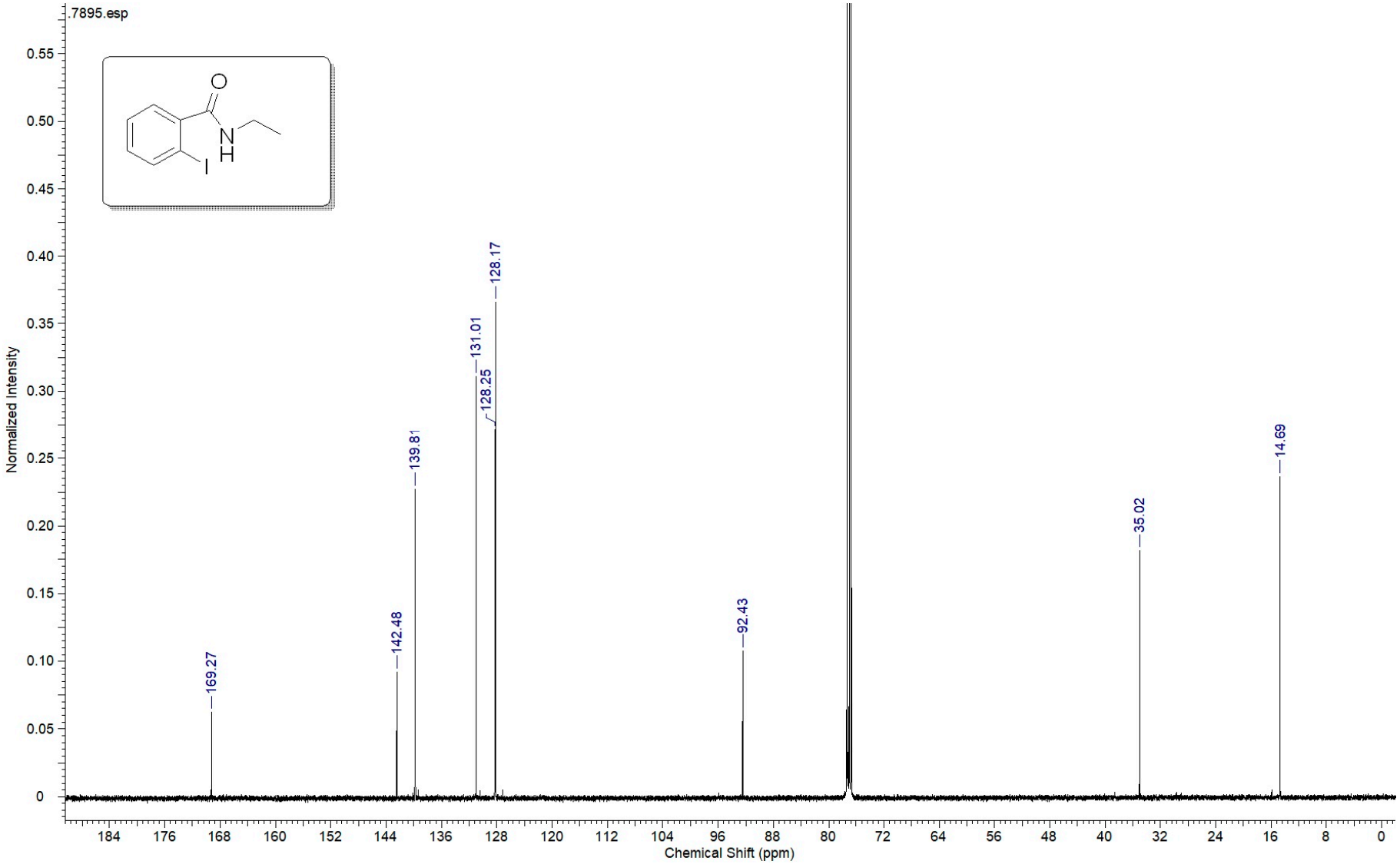

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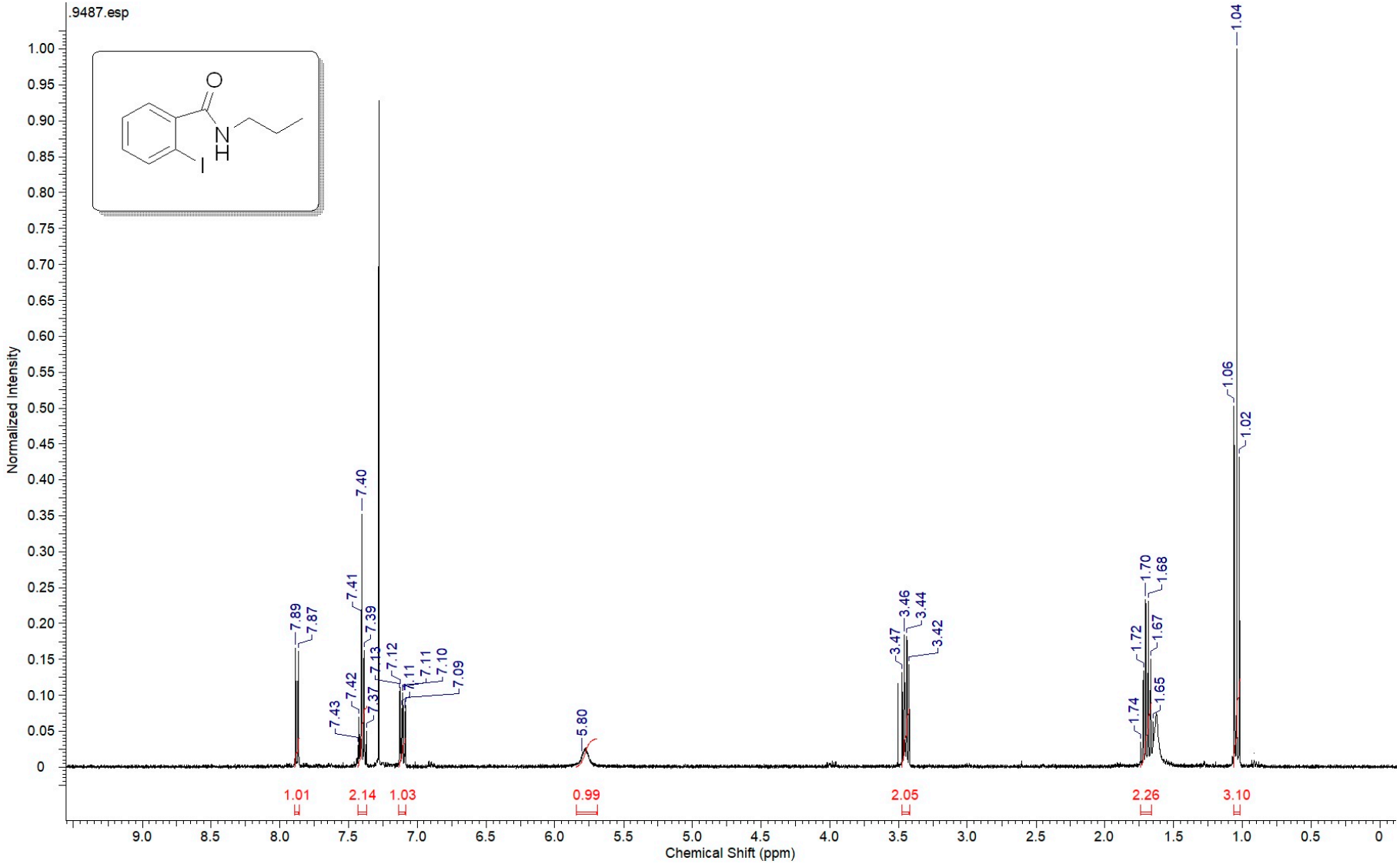

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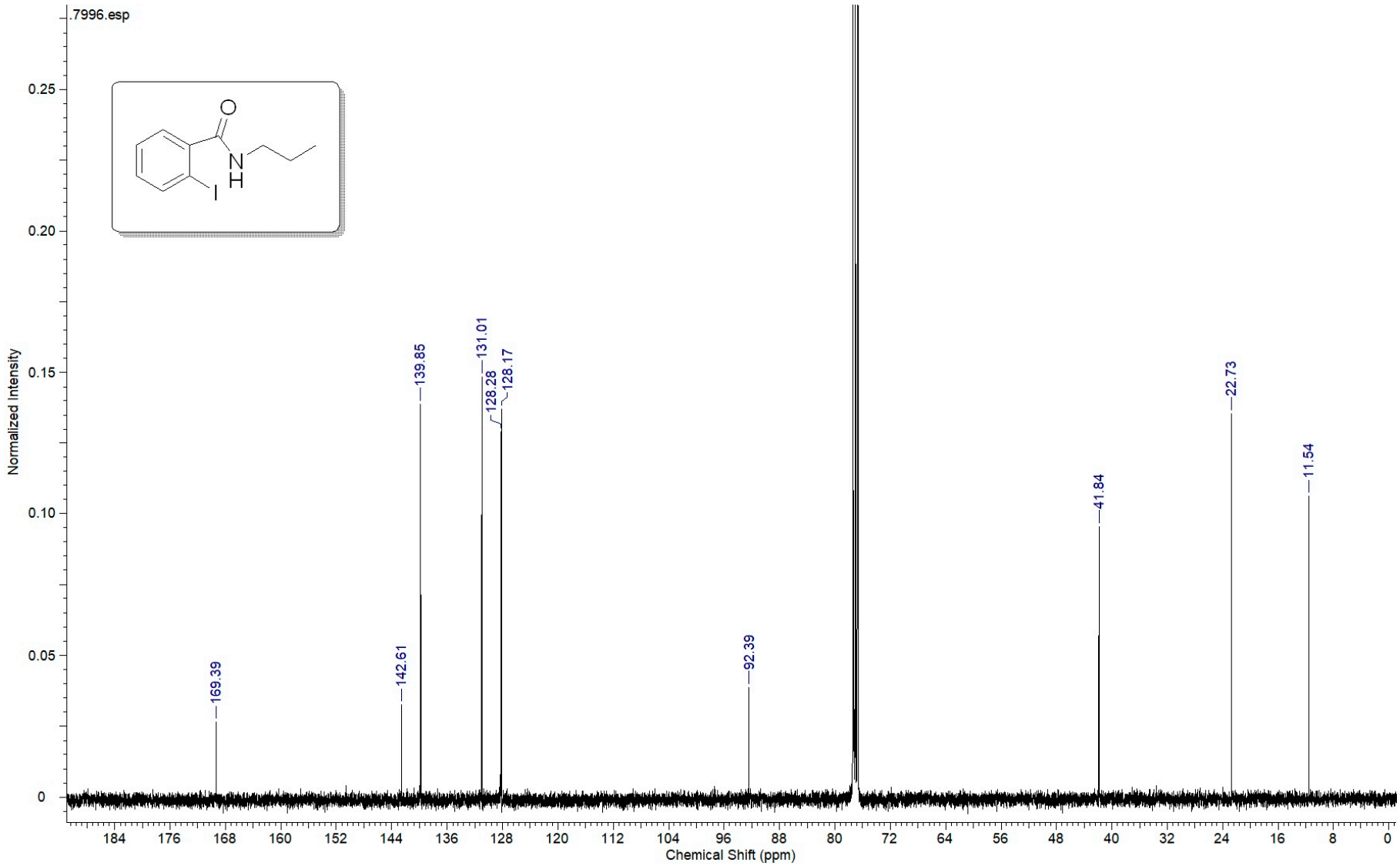

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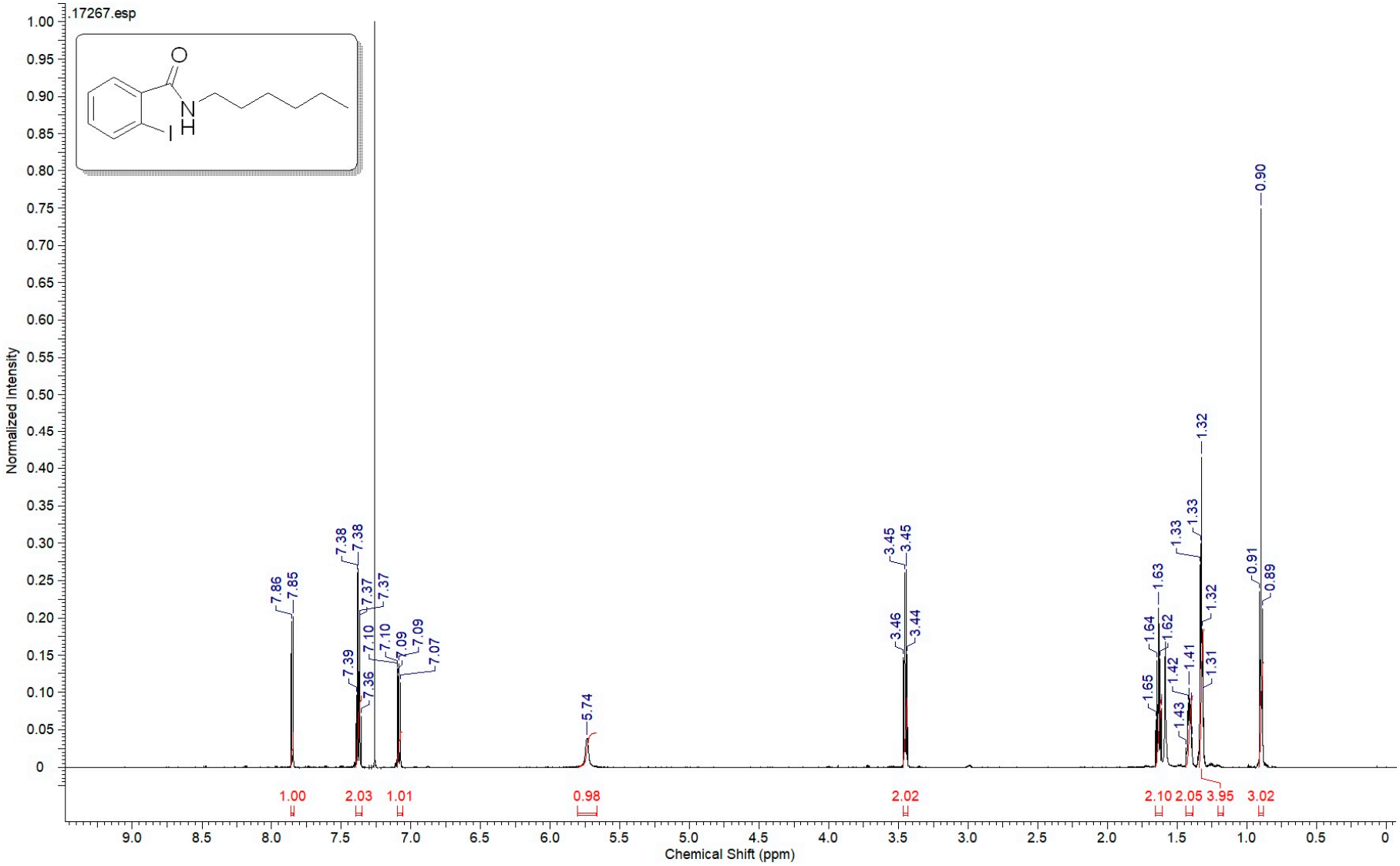

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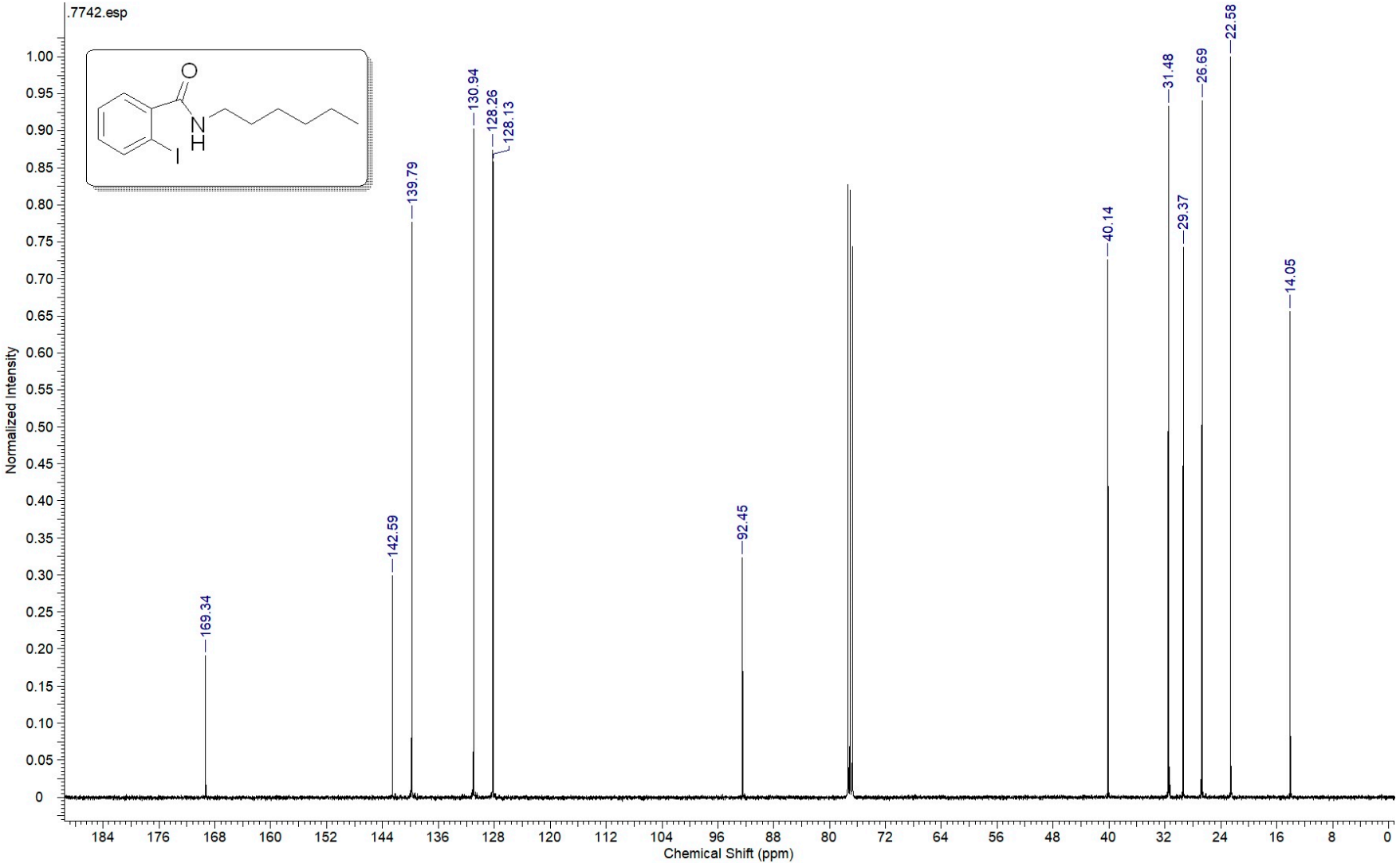

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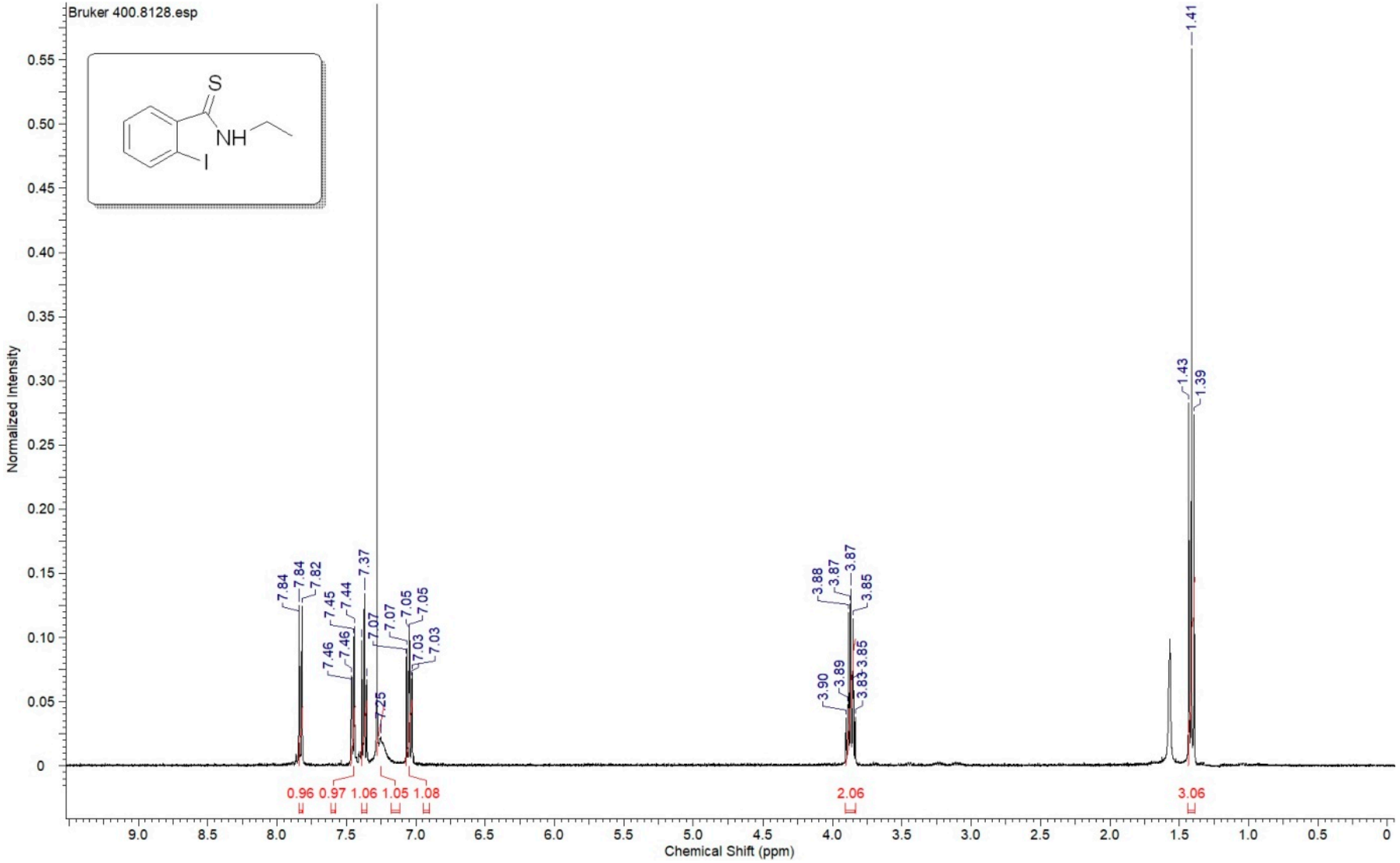

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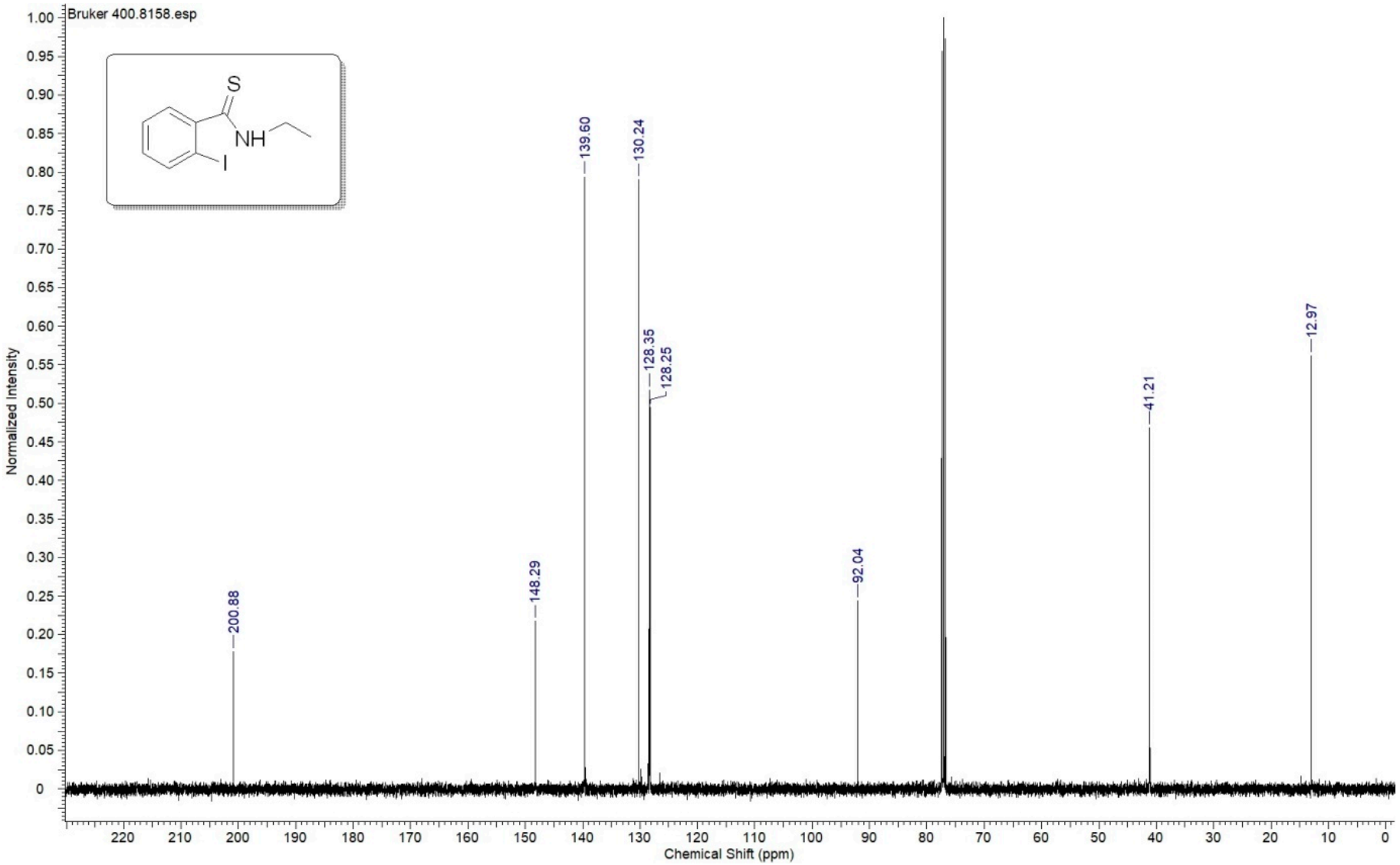

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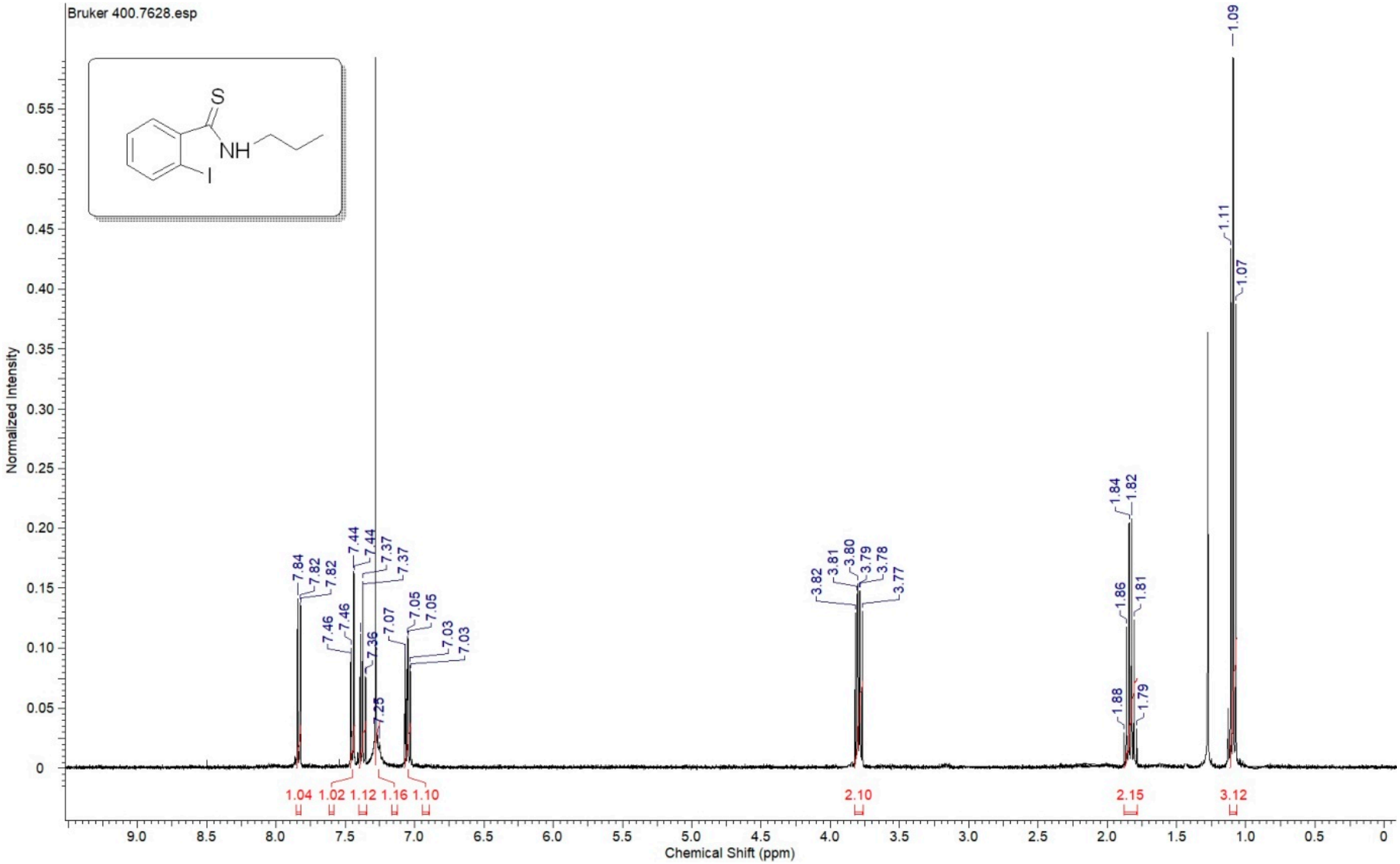

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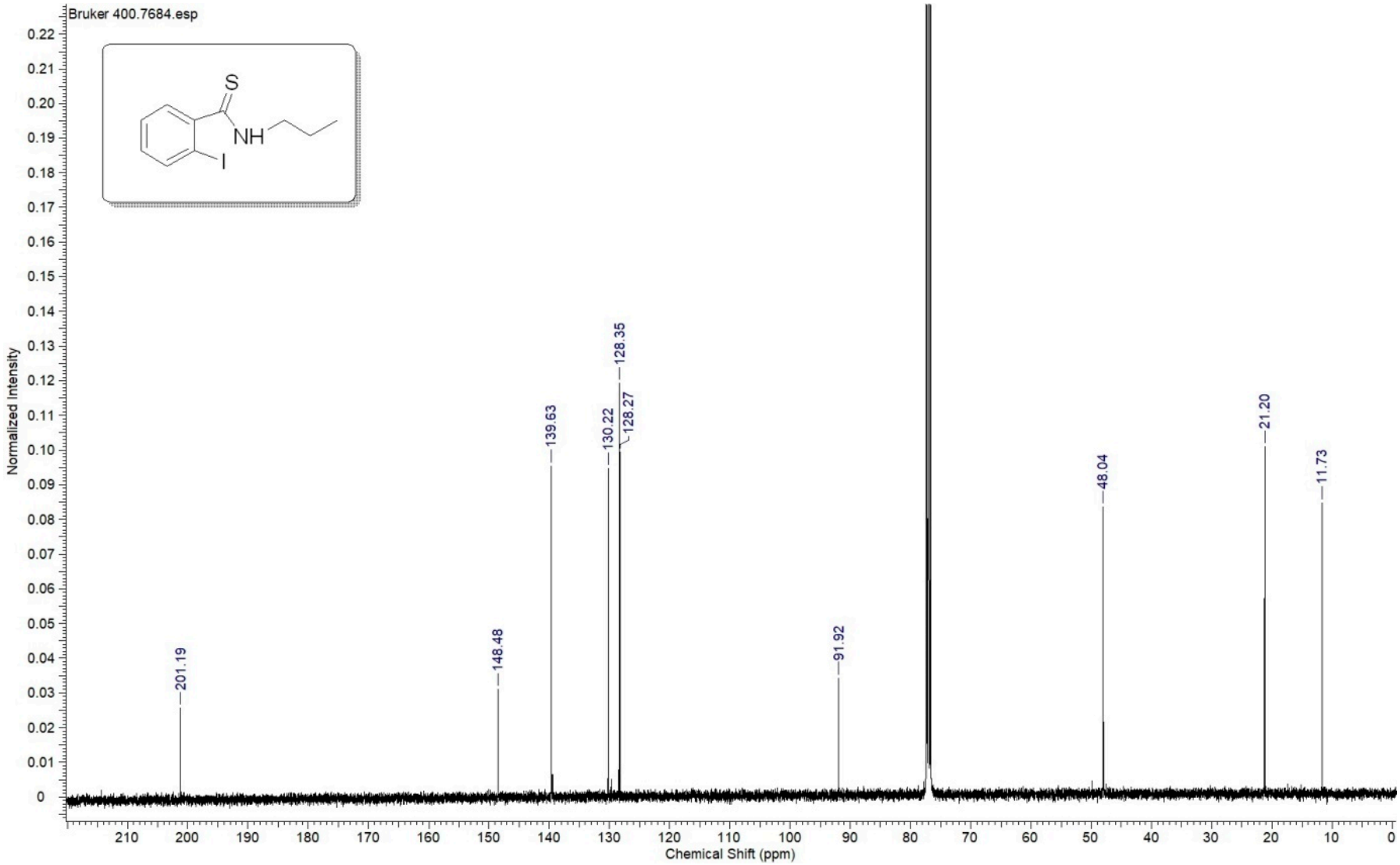

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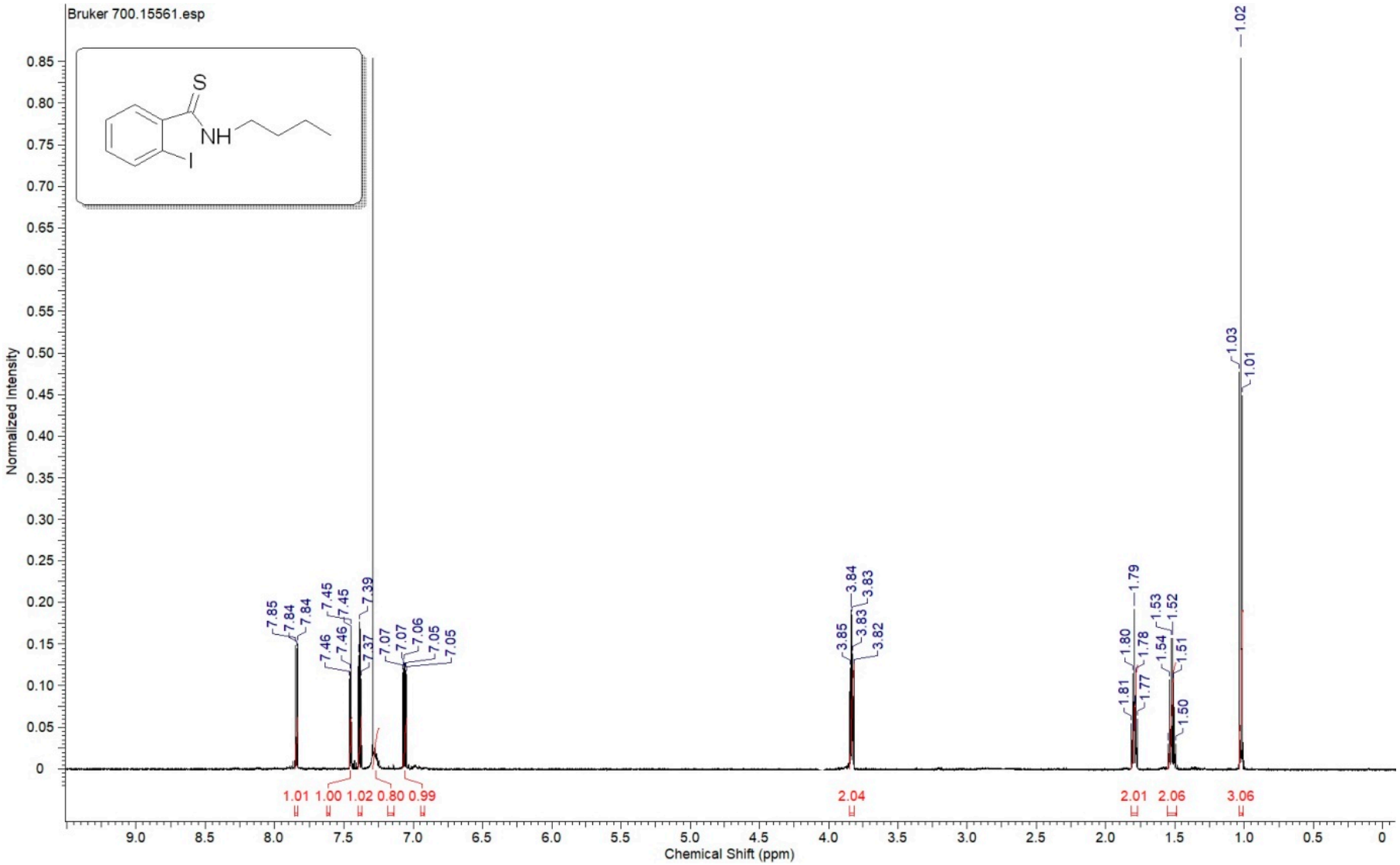

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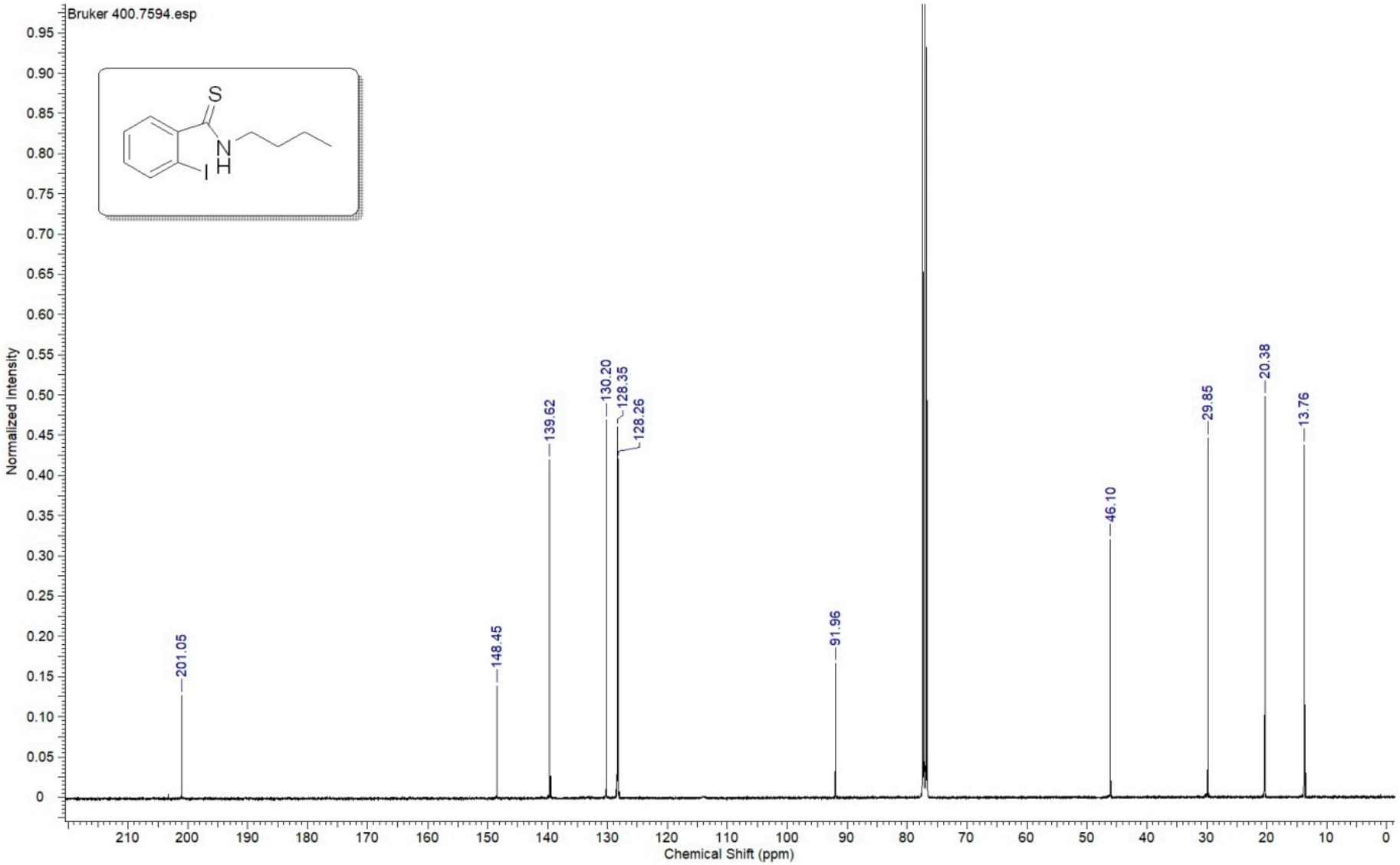

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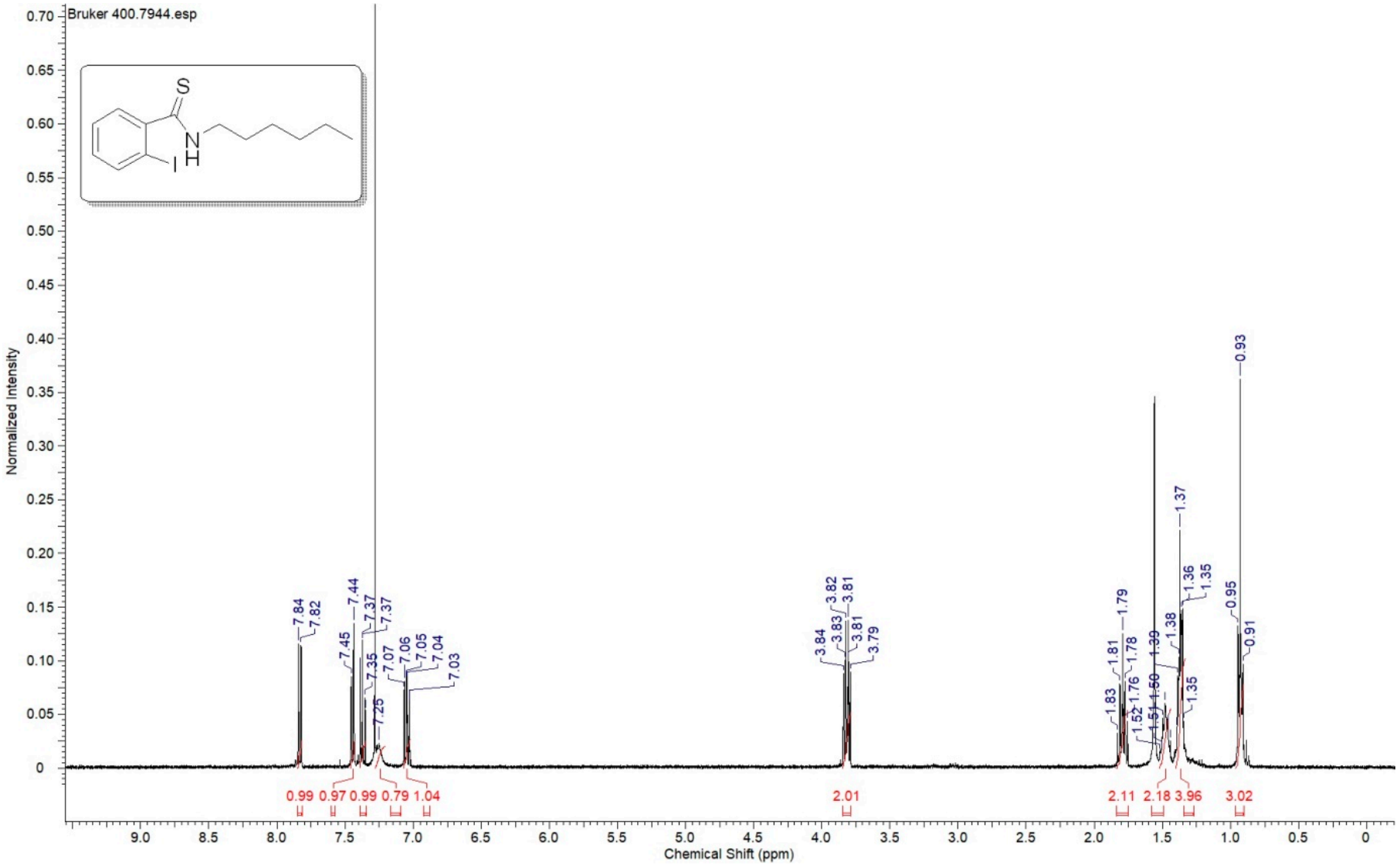

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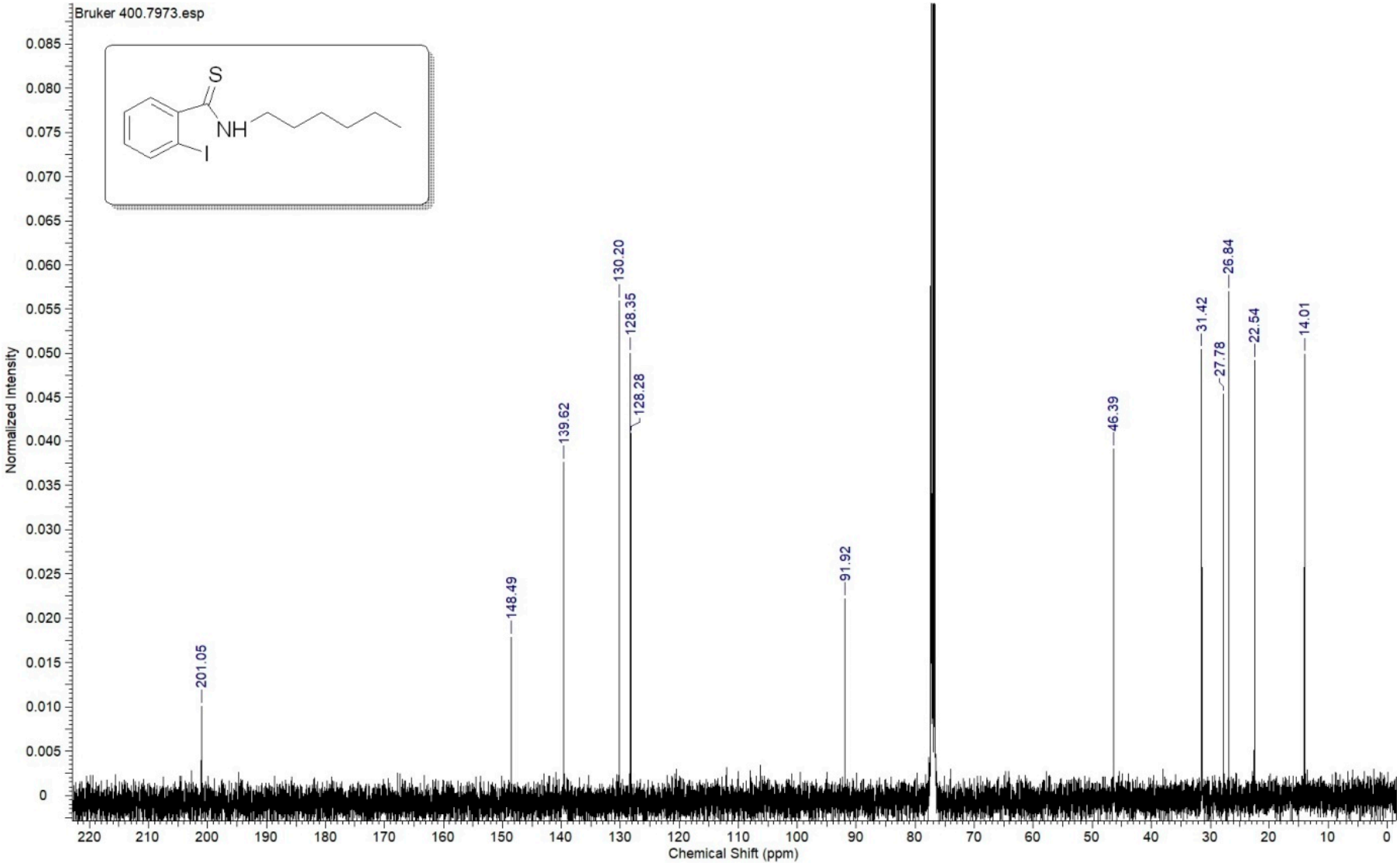

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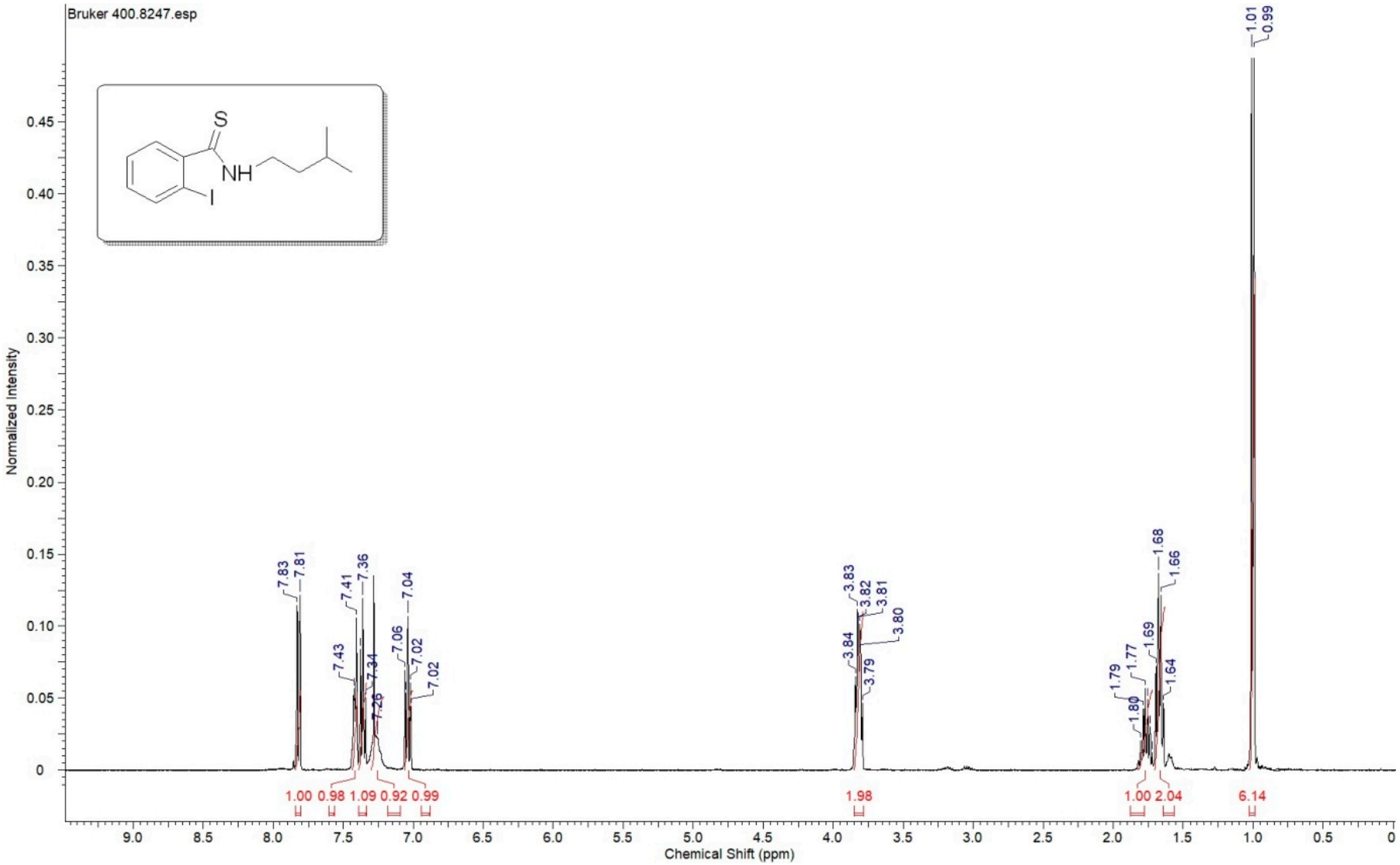

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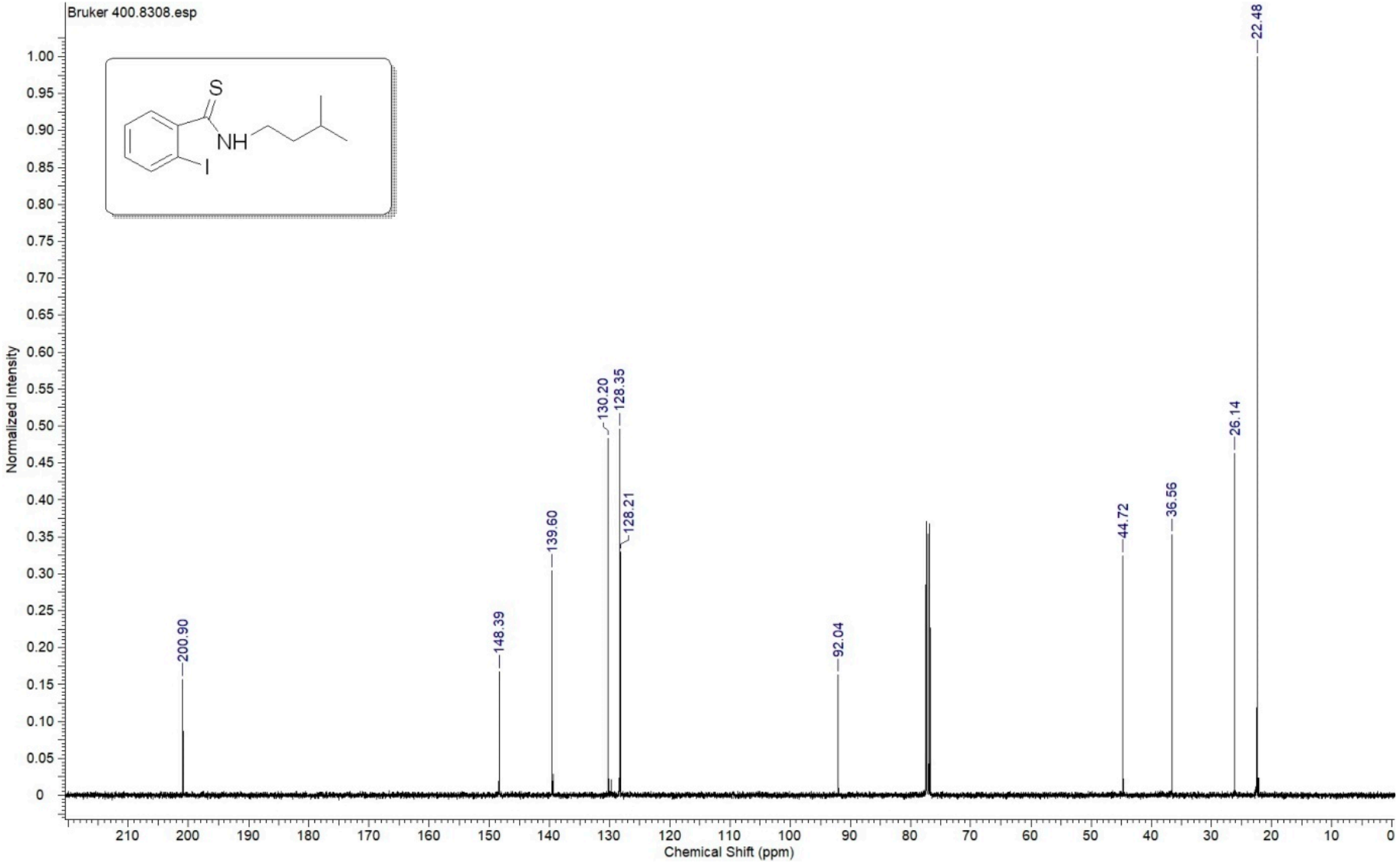

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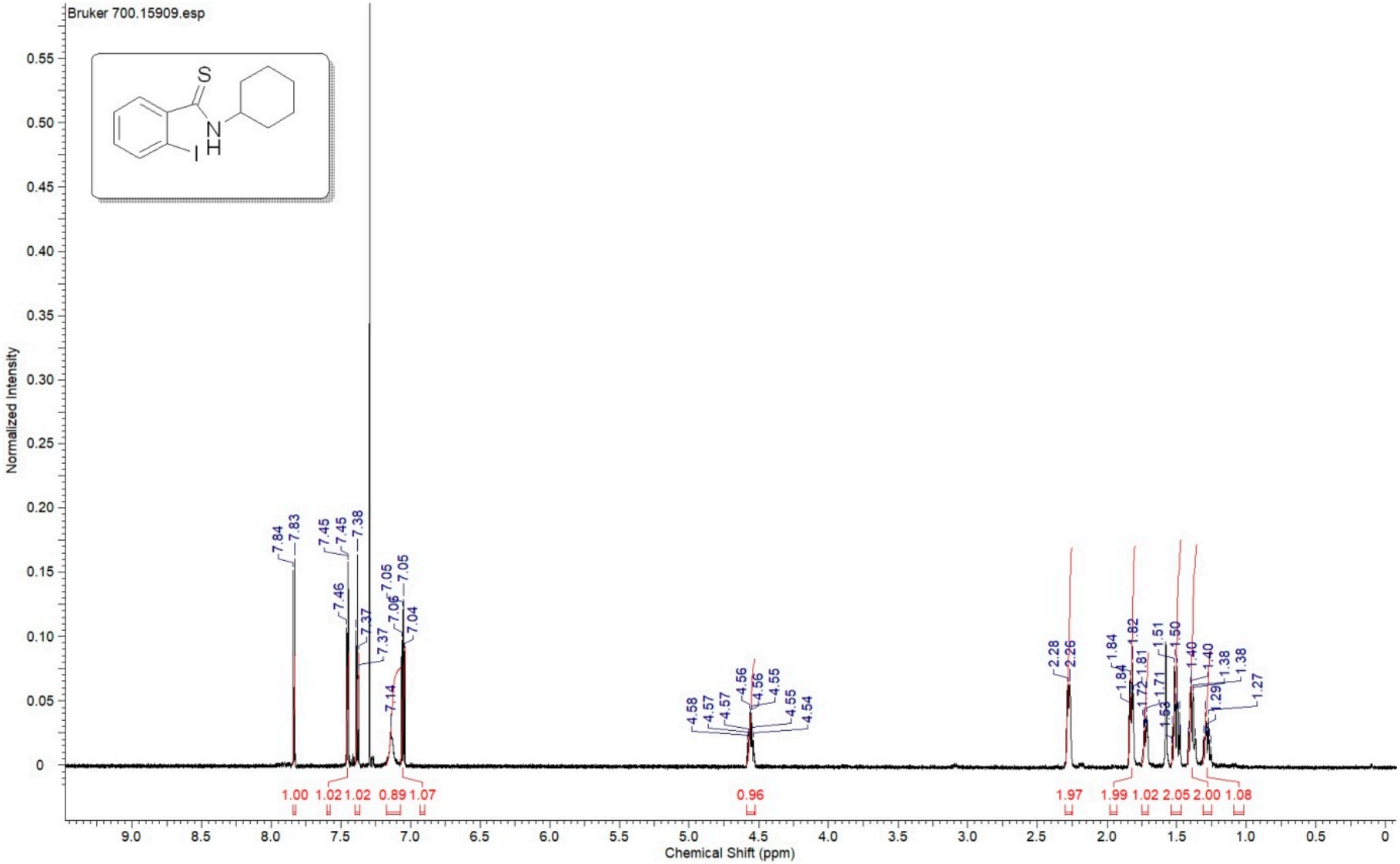

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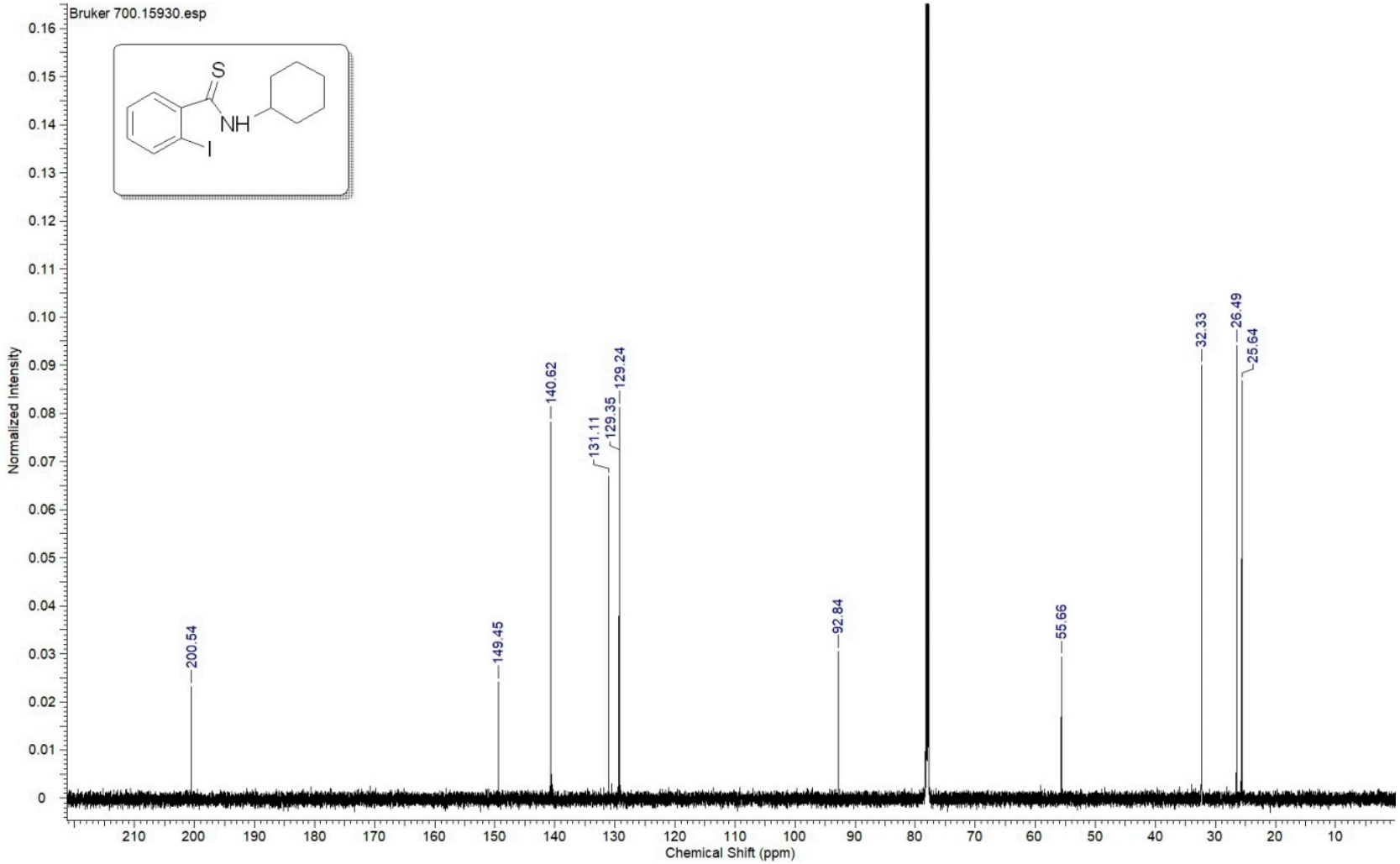
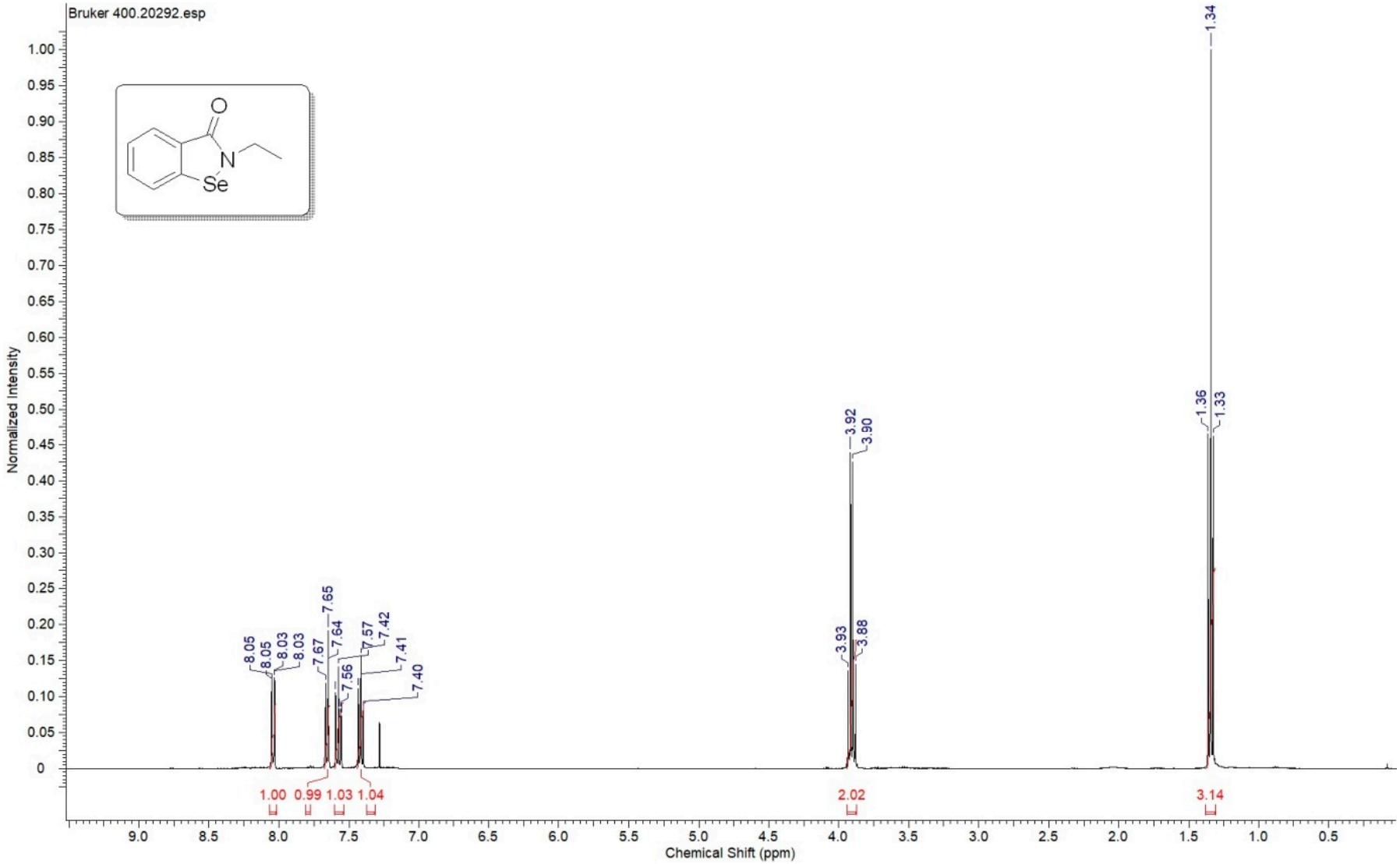


N-ethyl-1,2-benzisoselenazol-3(2*H*)-one **6a** [4]



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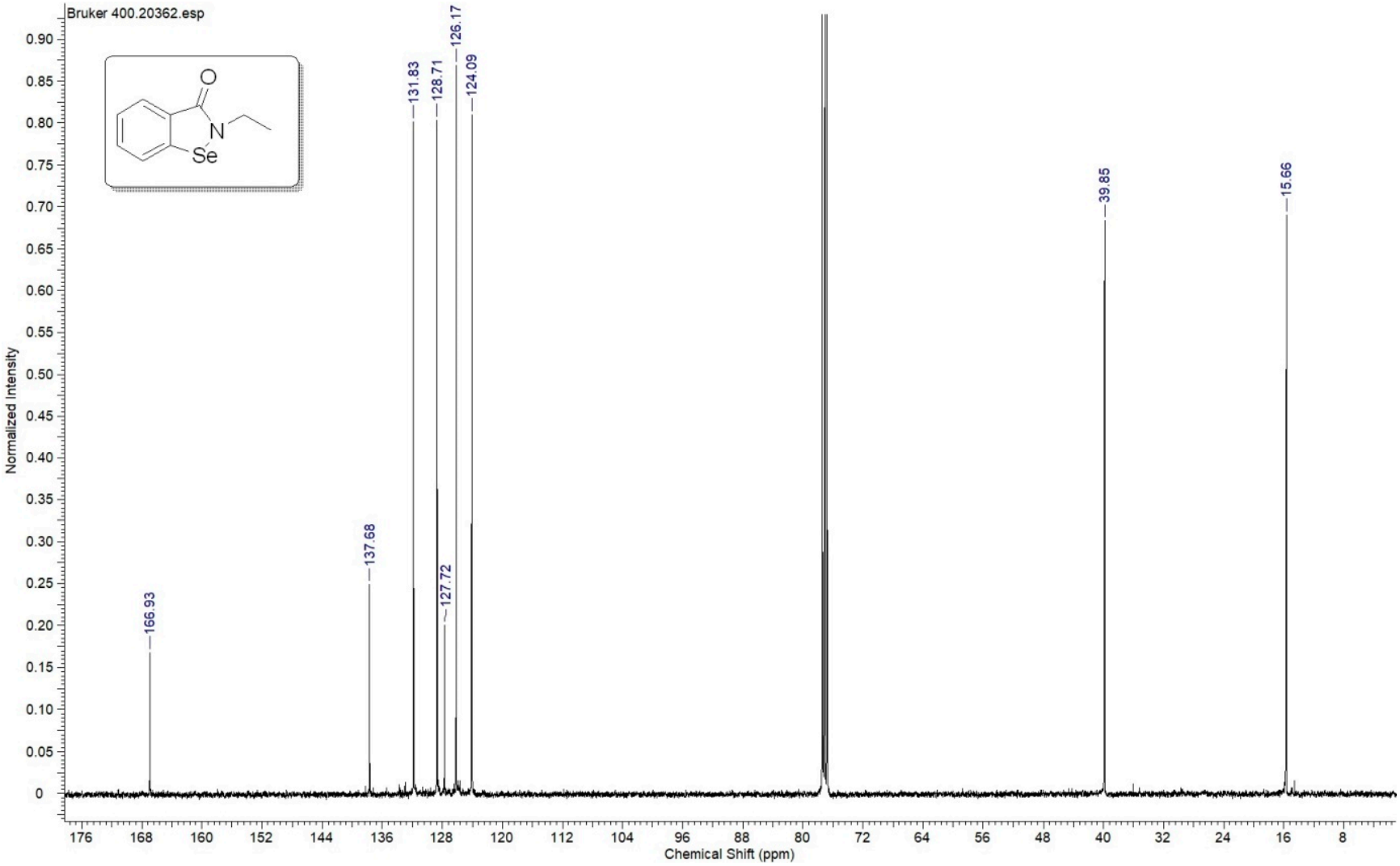

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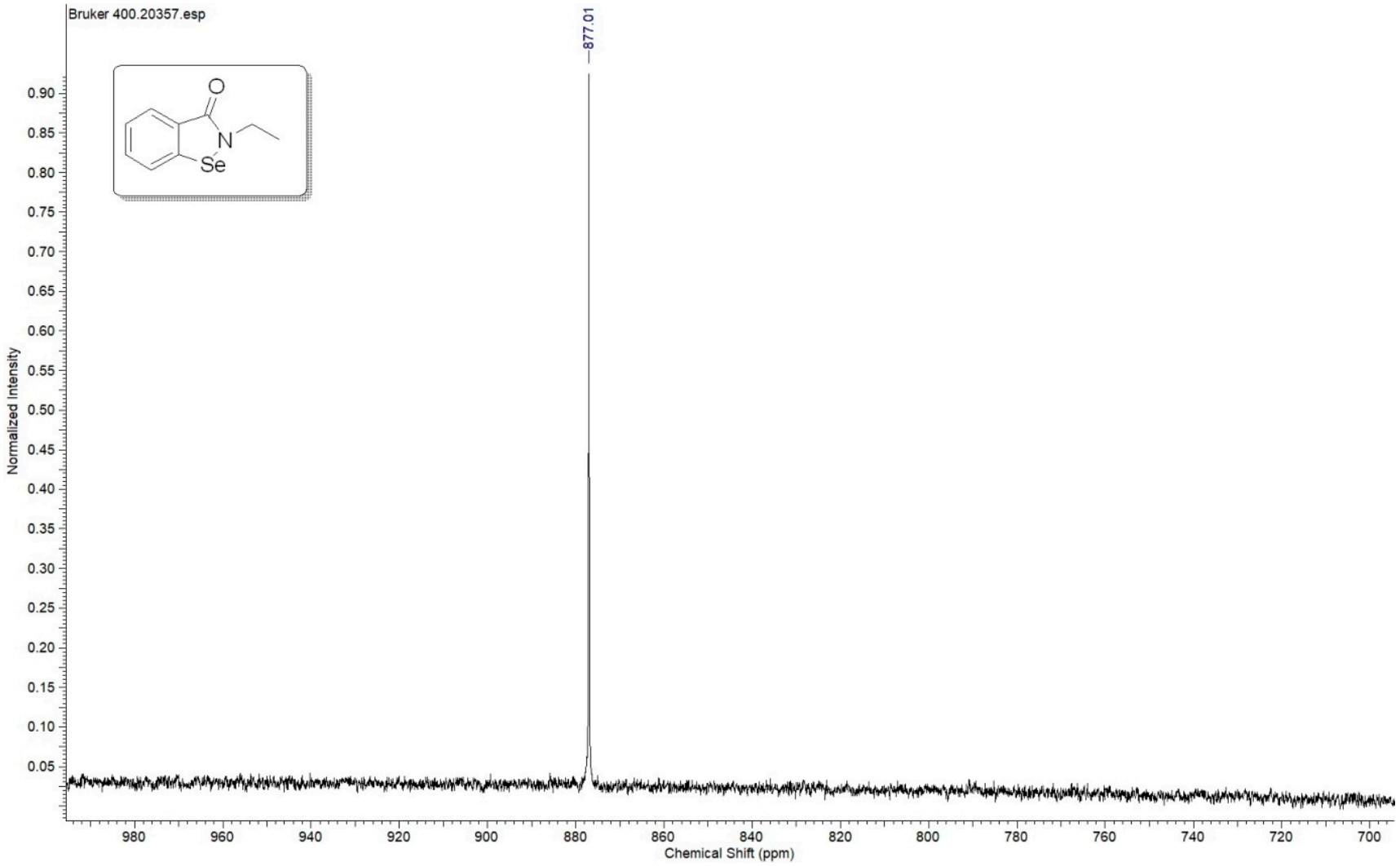

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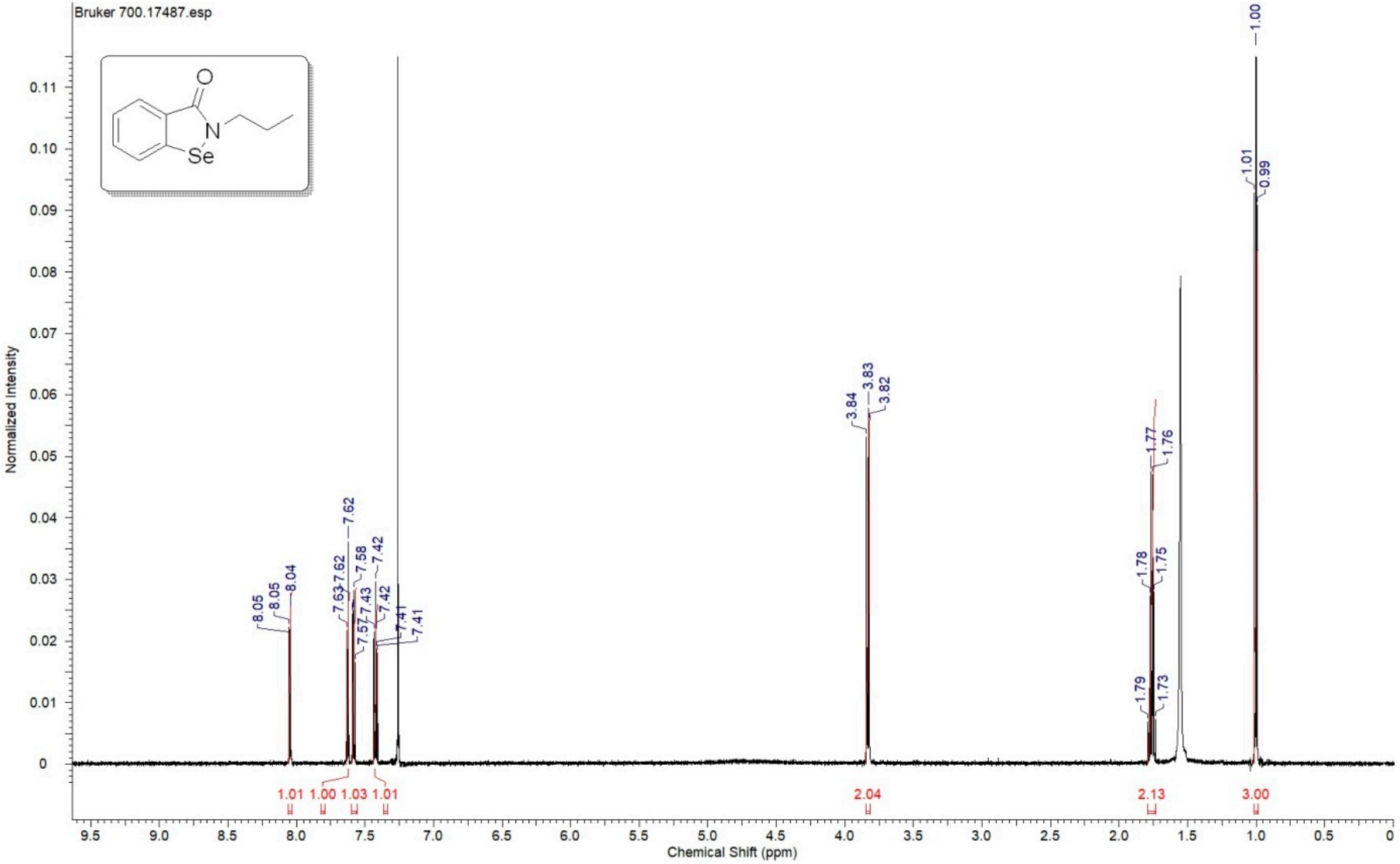

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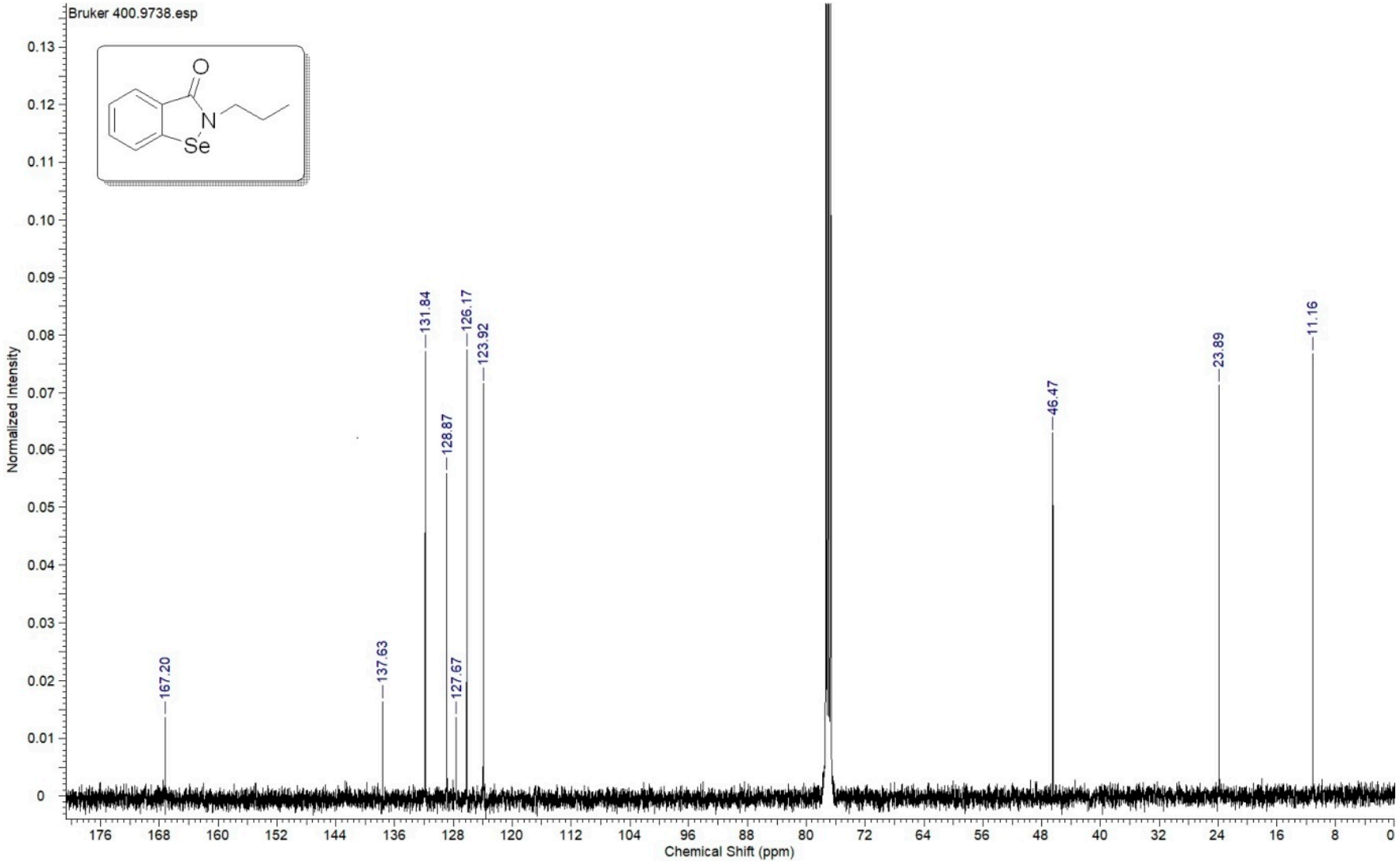

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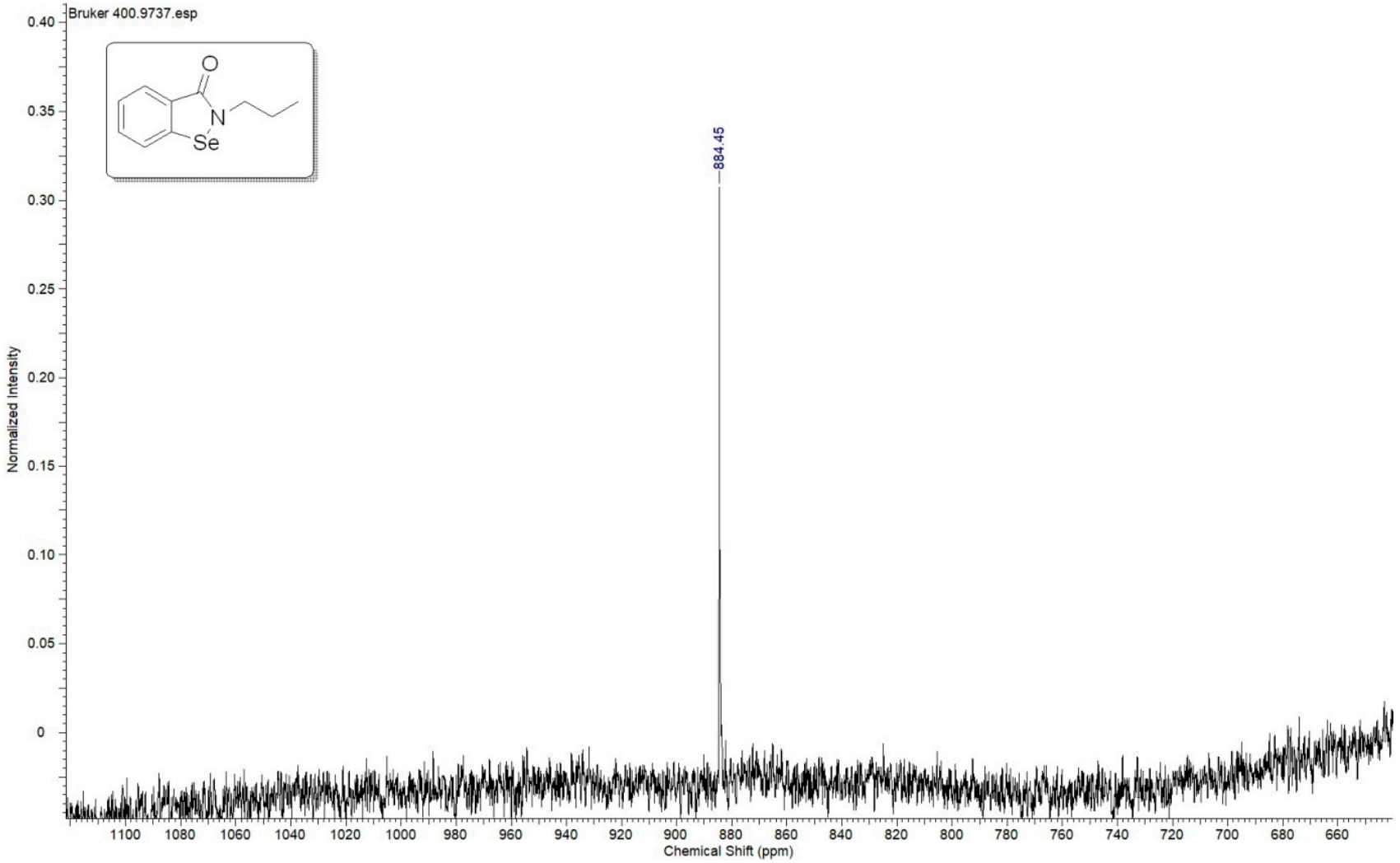

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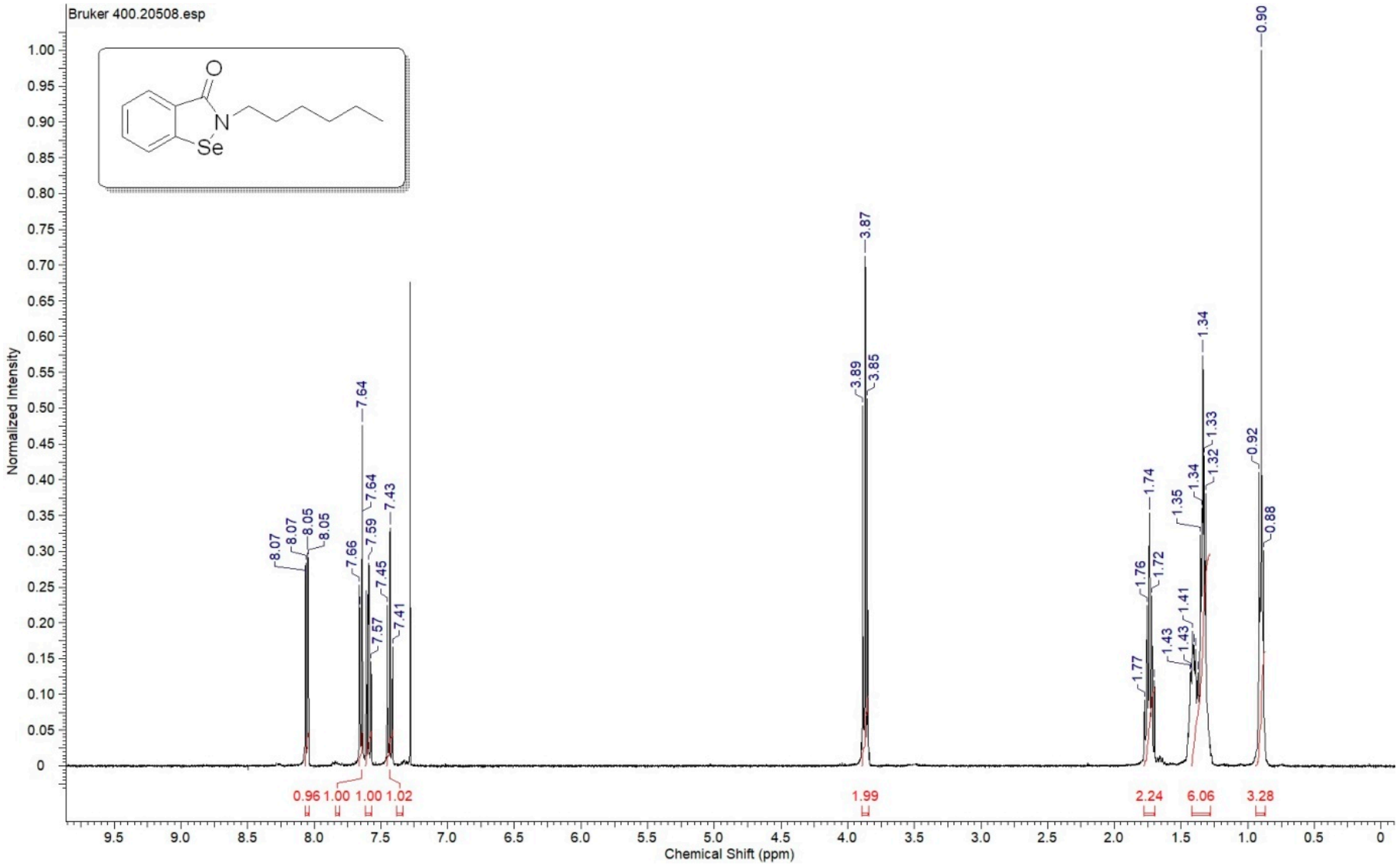

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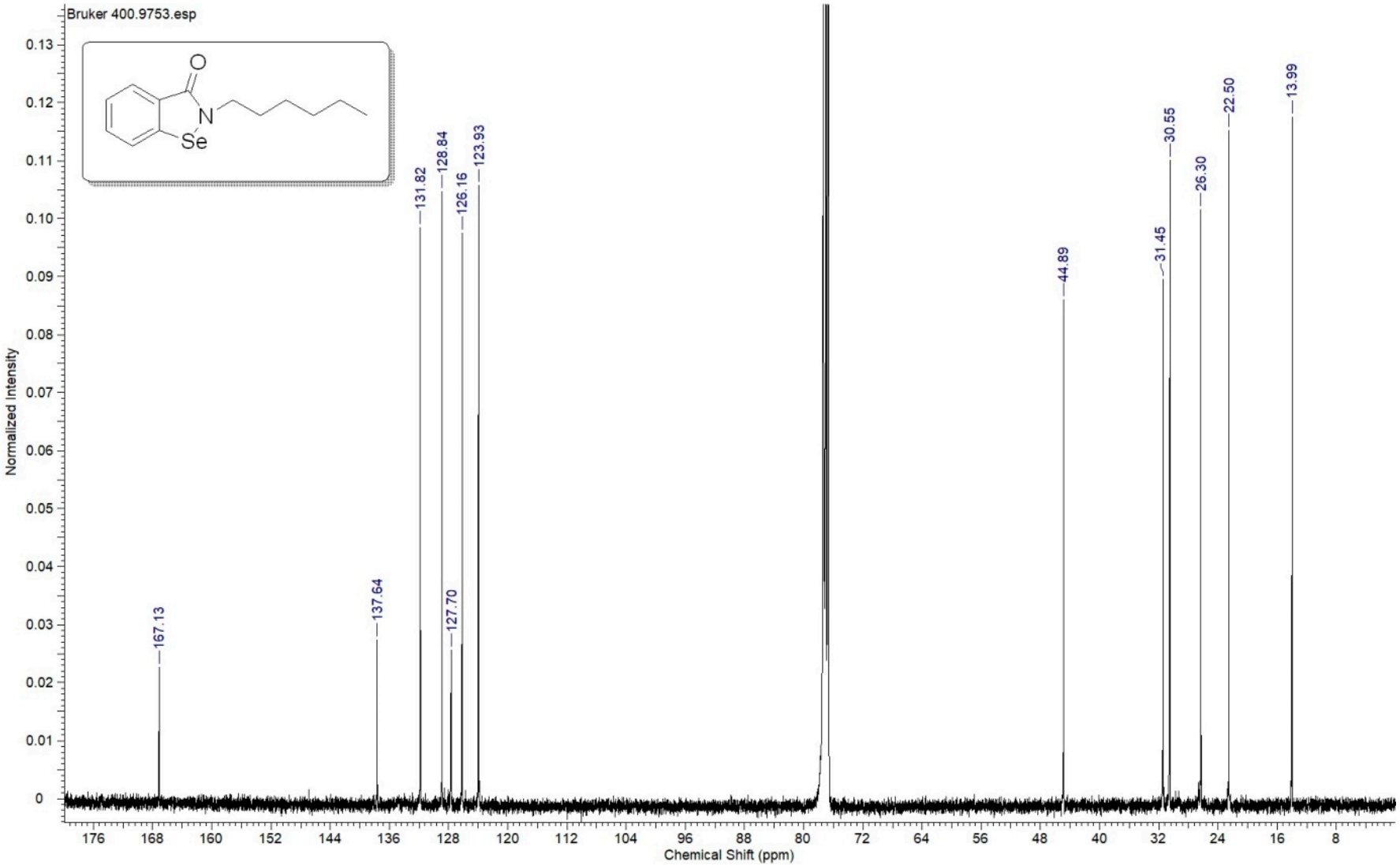

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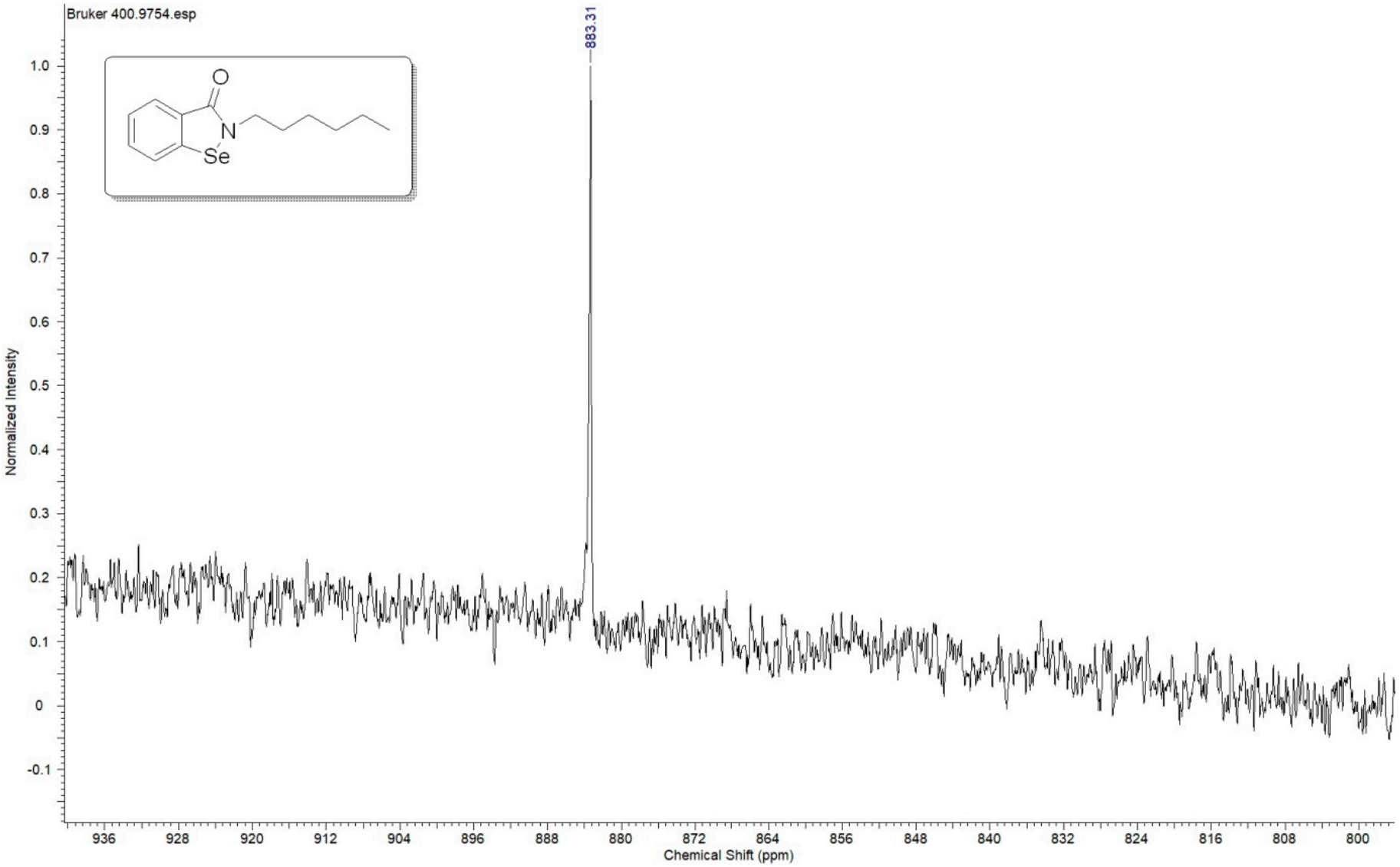

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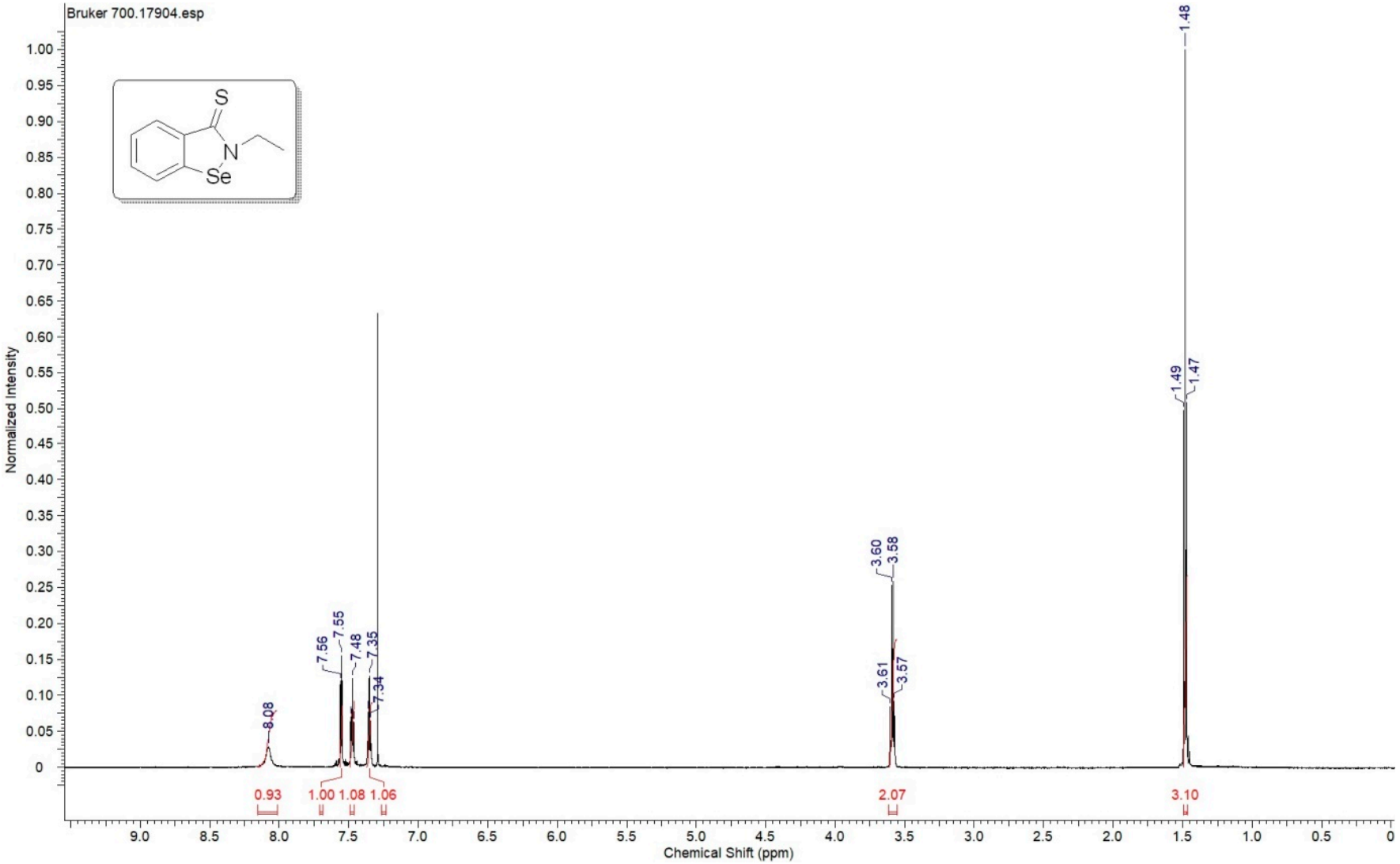

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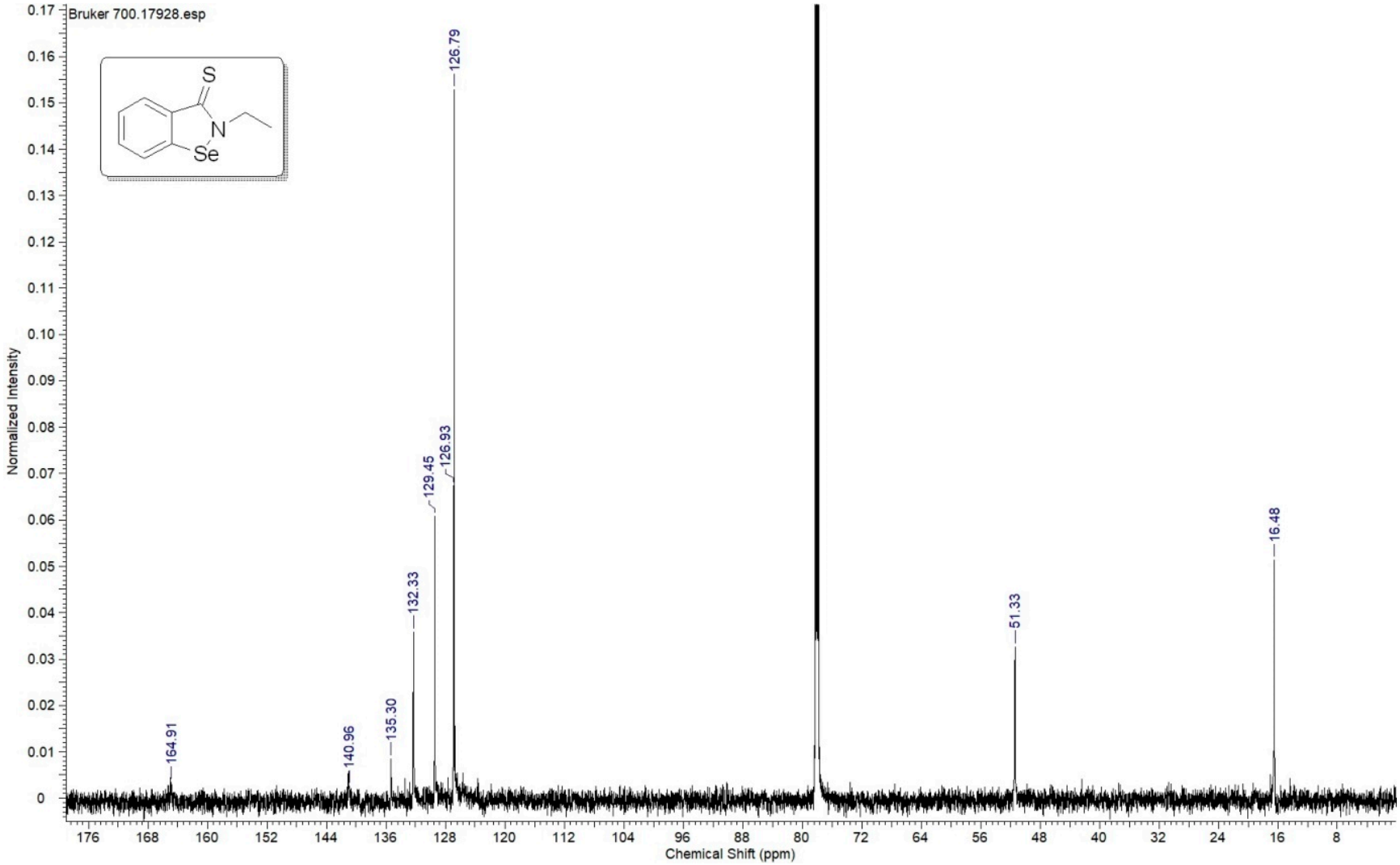
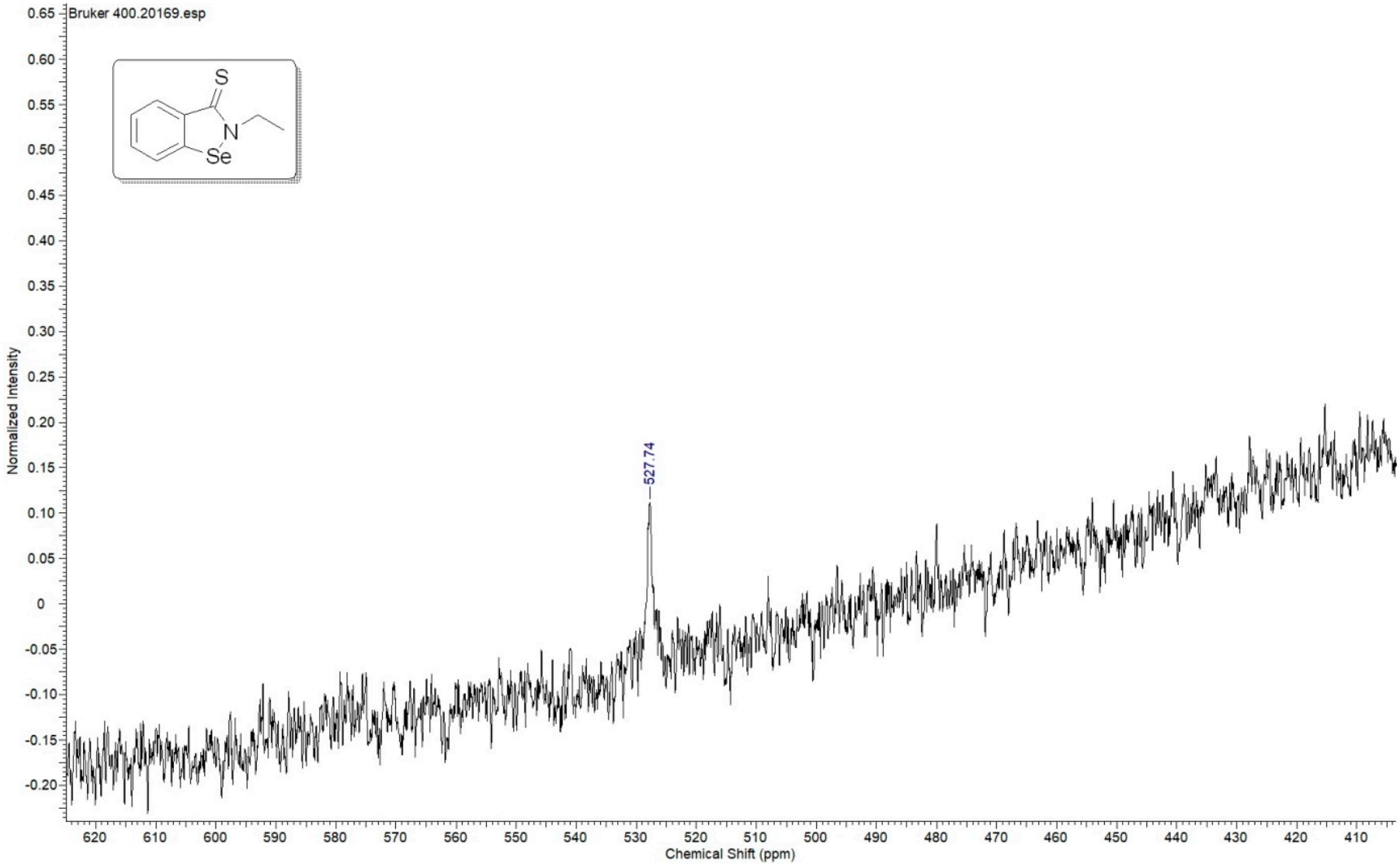


N-ethyl-1,2-benzisoselenazol-3(2*H*)-thione **7a** [6]



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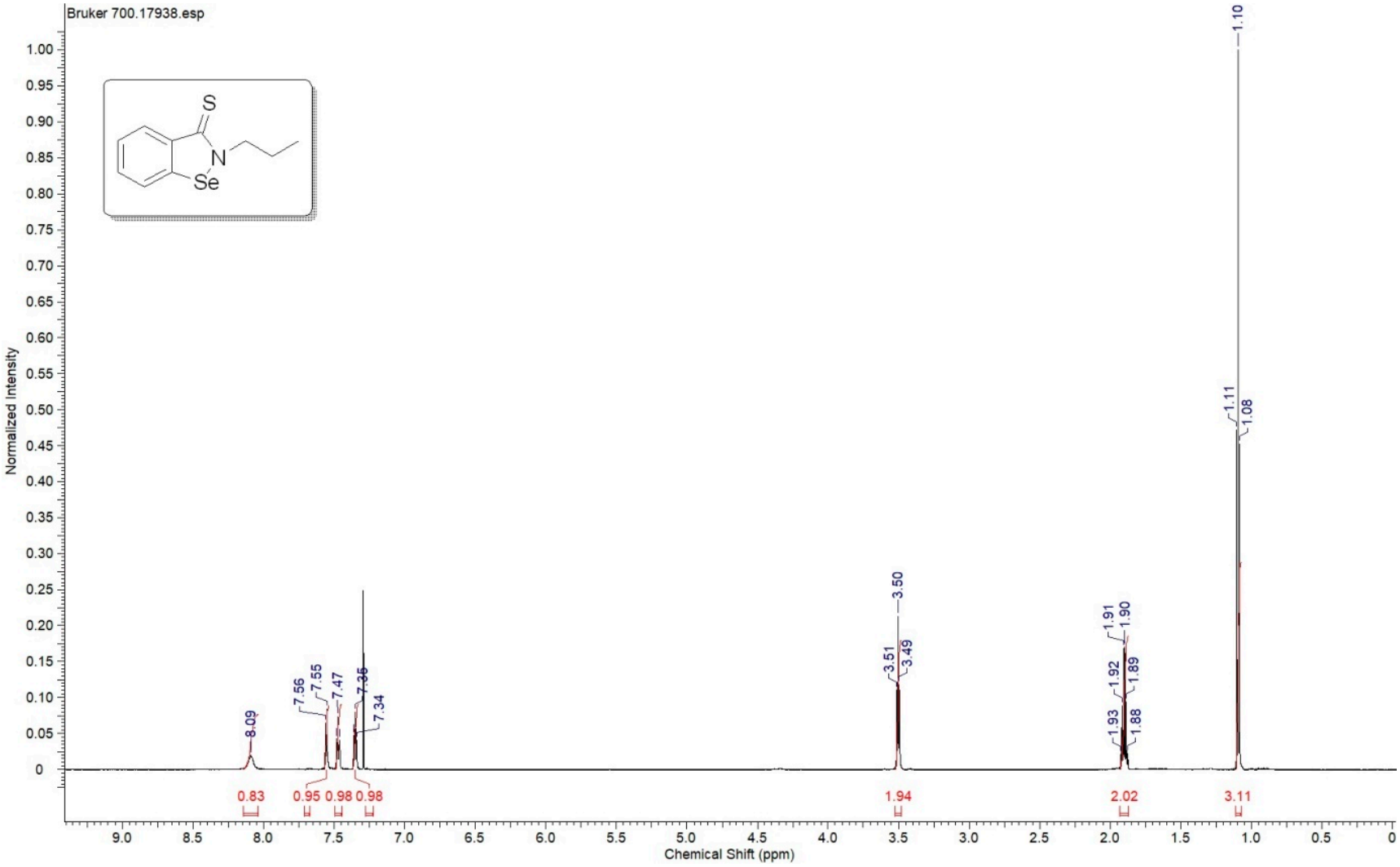

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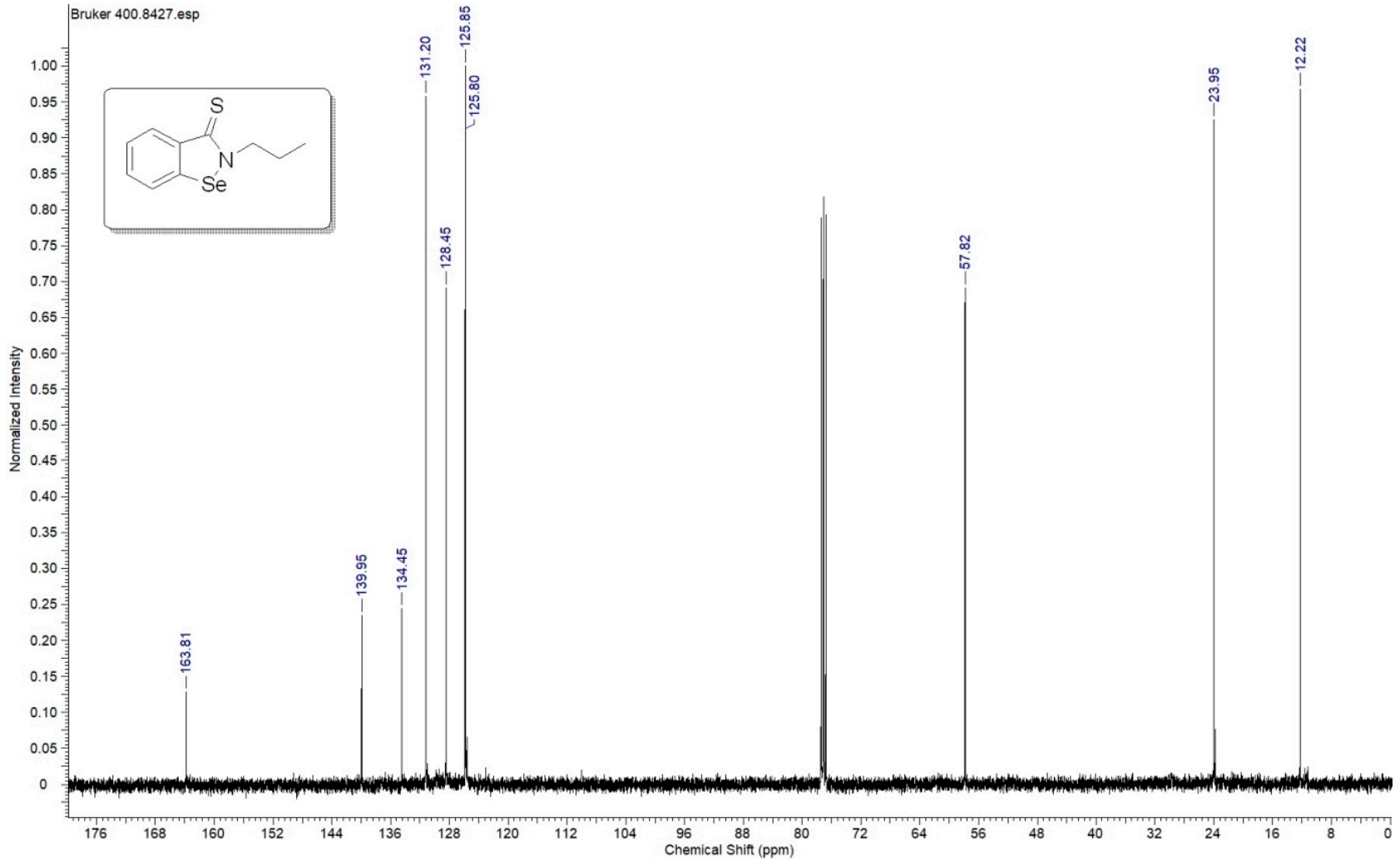

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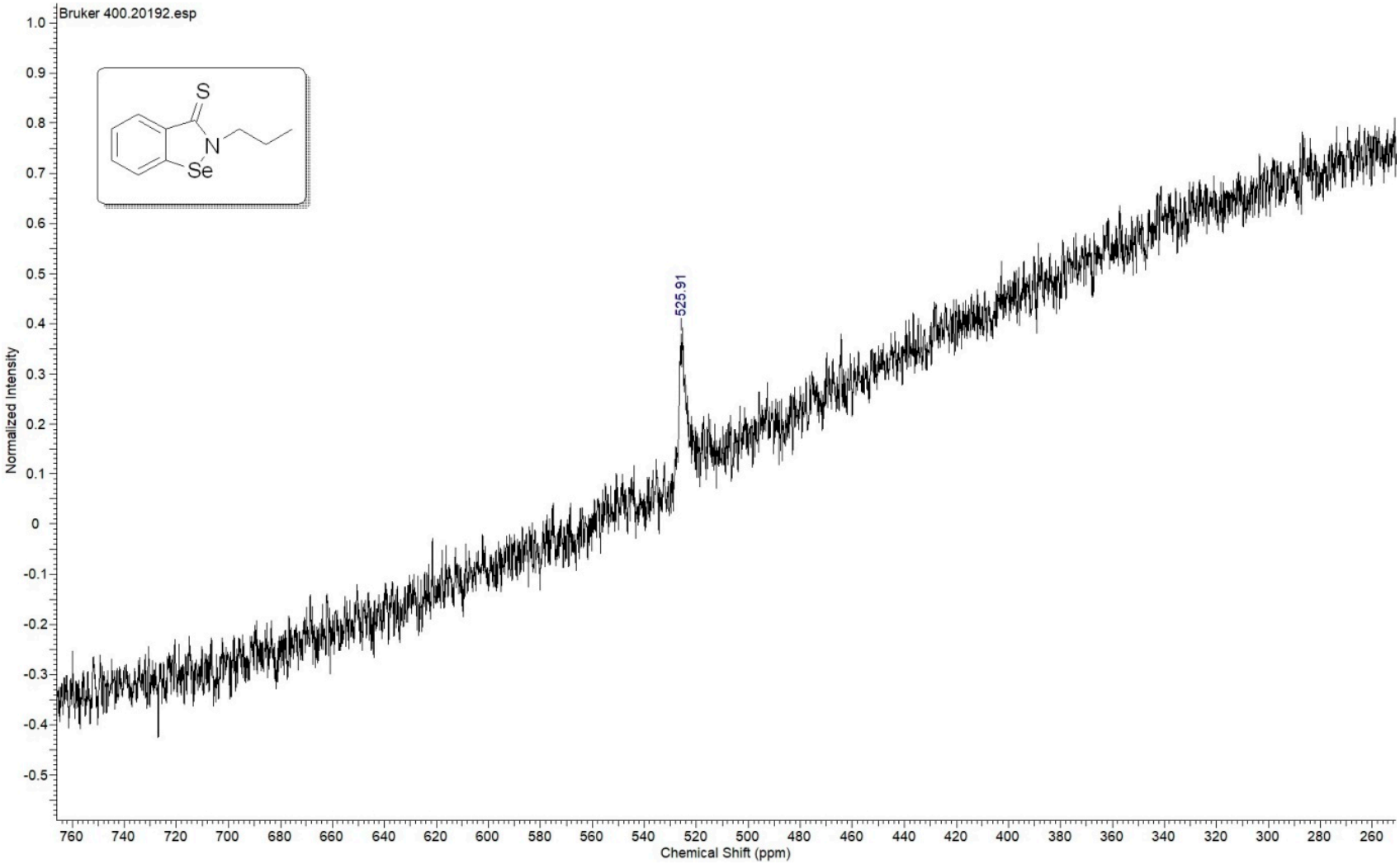

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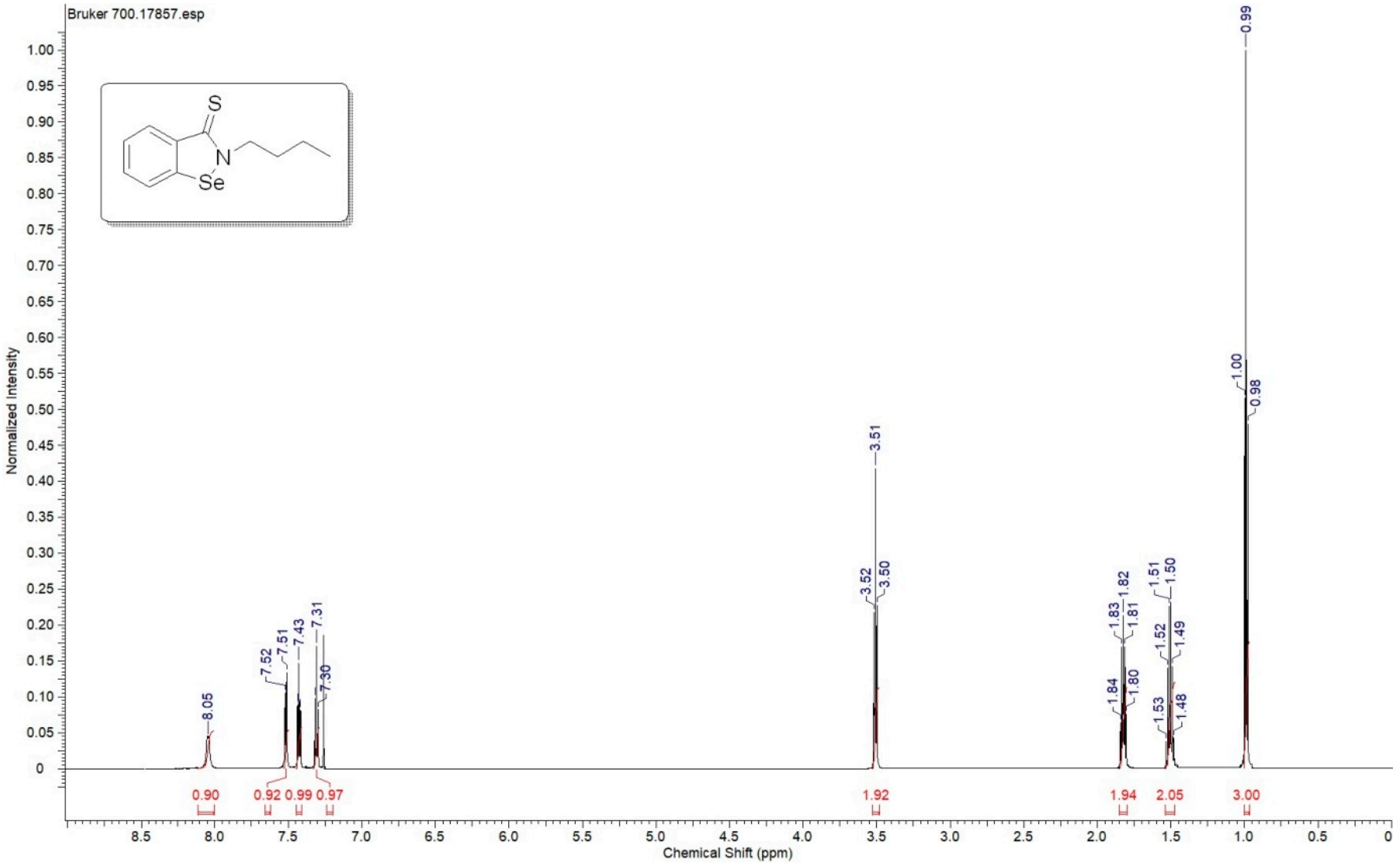

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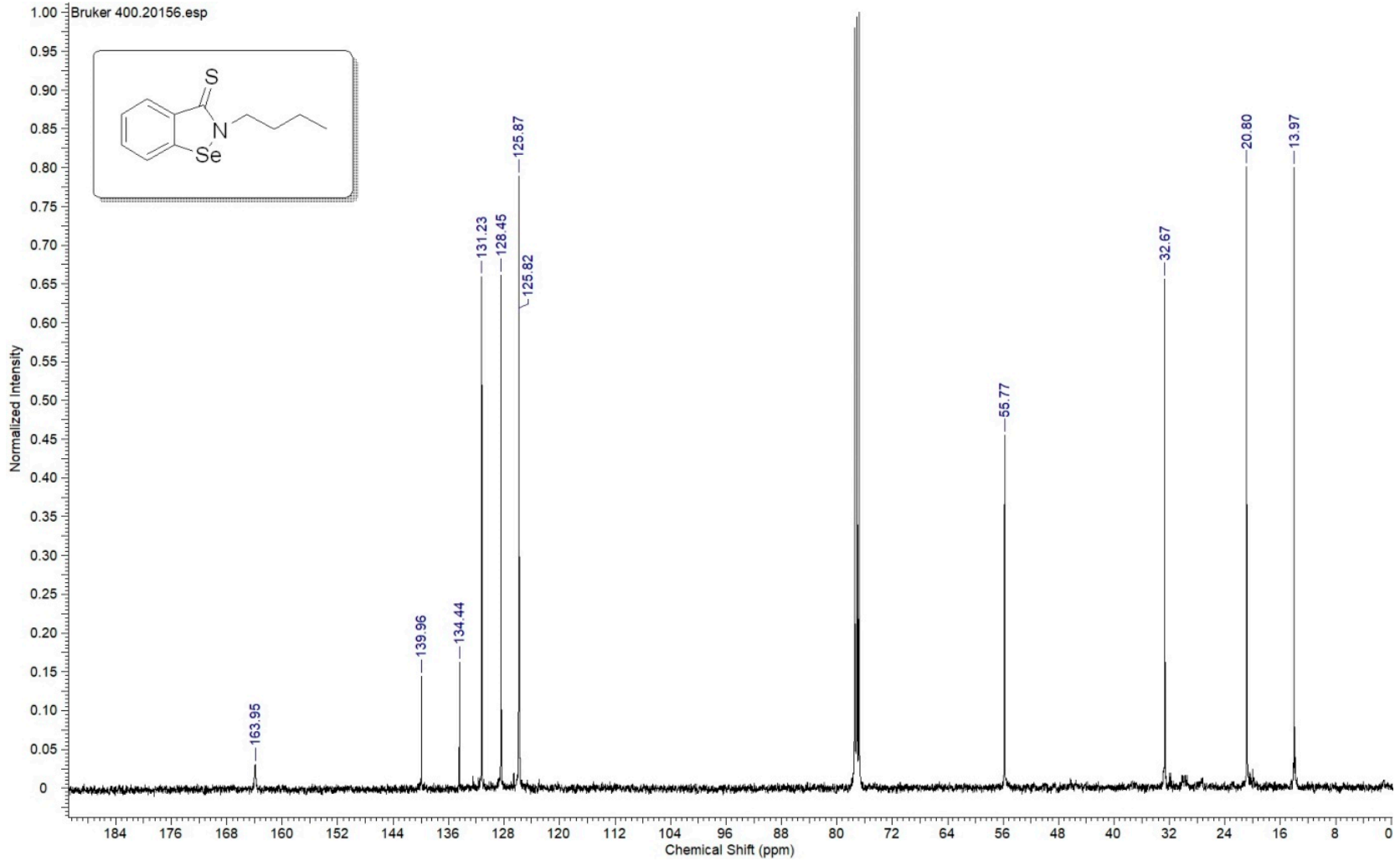

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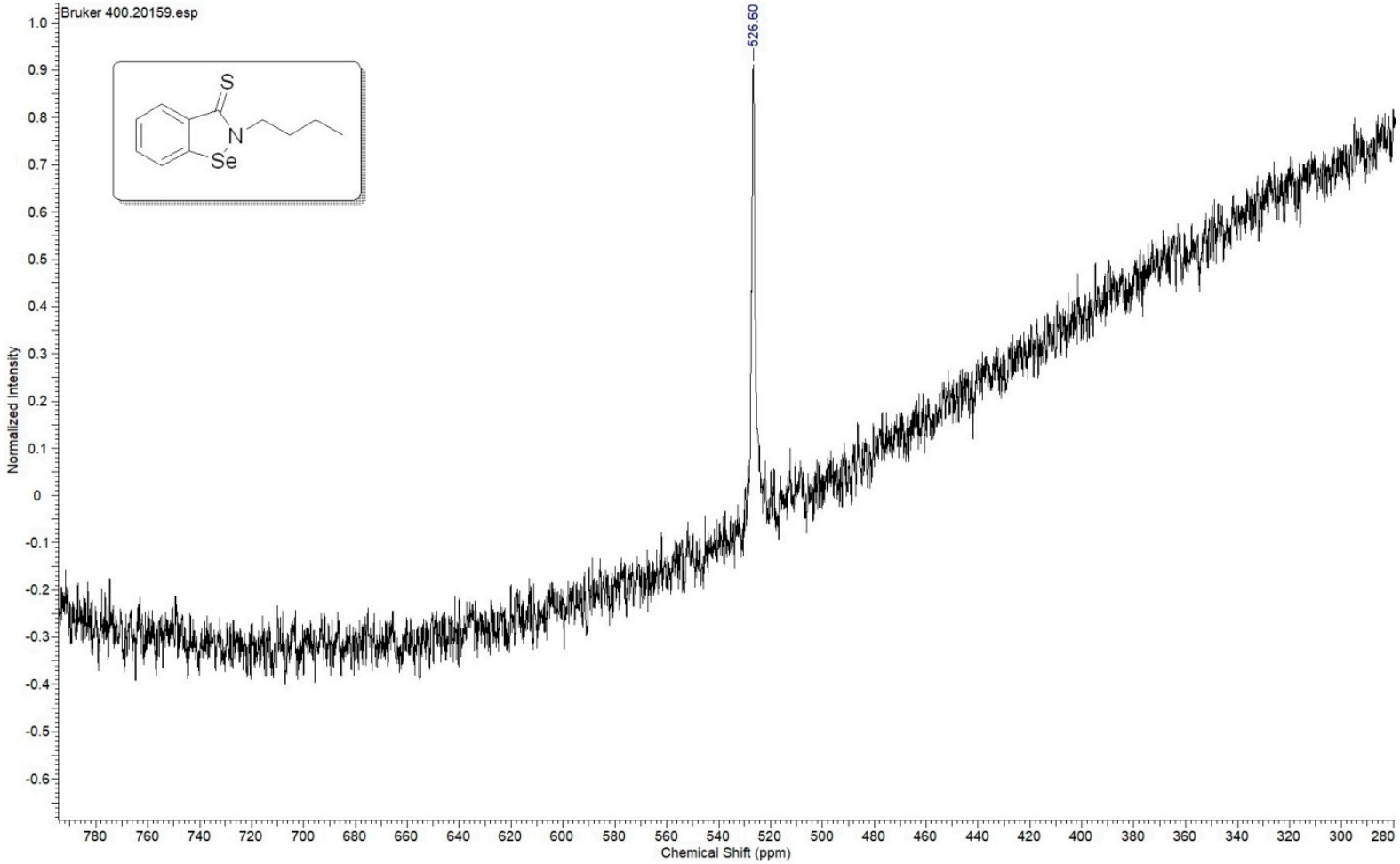

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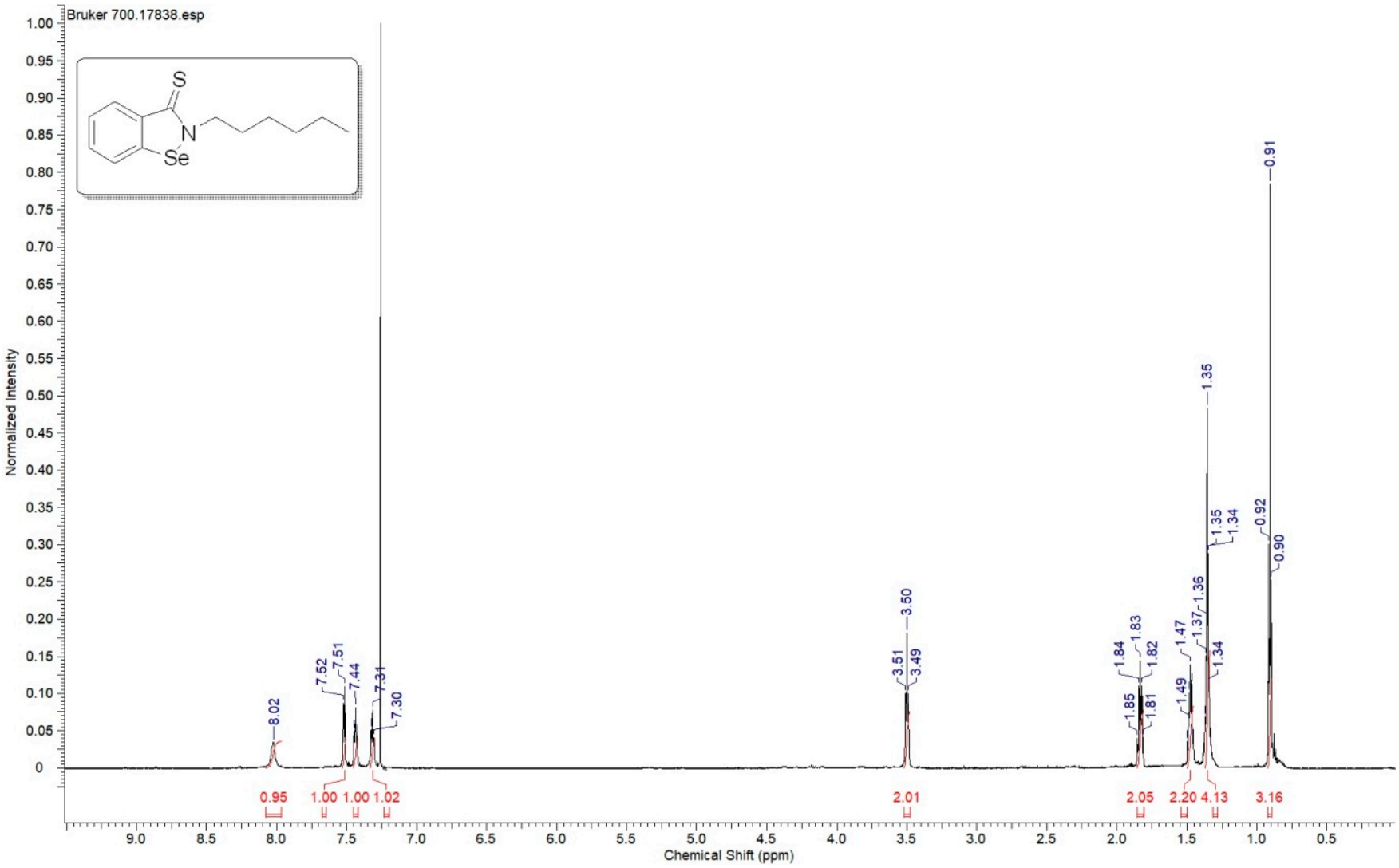

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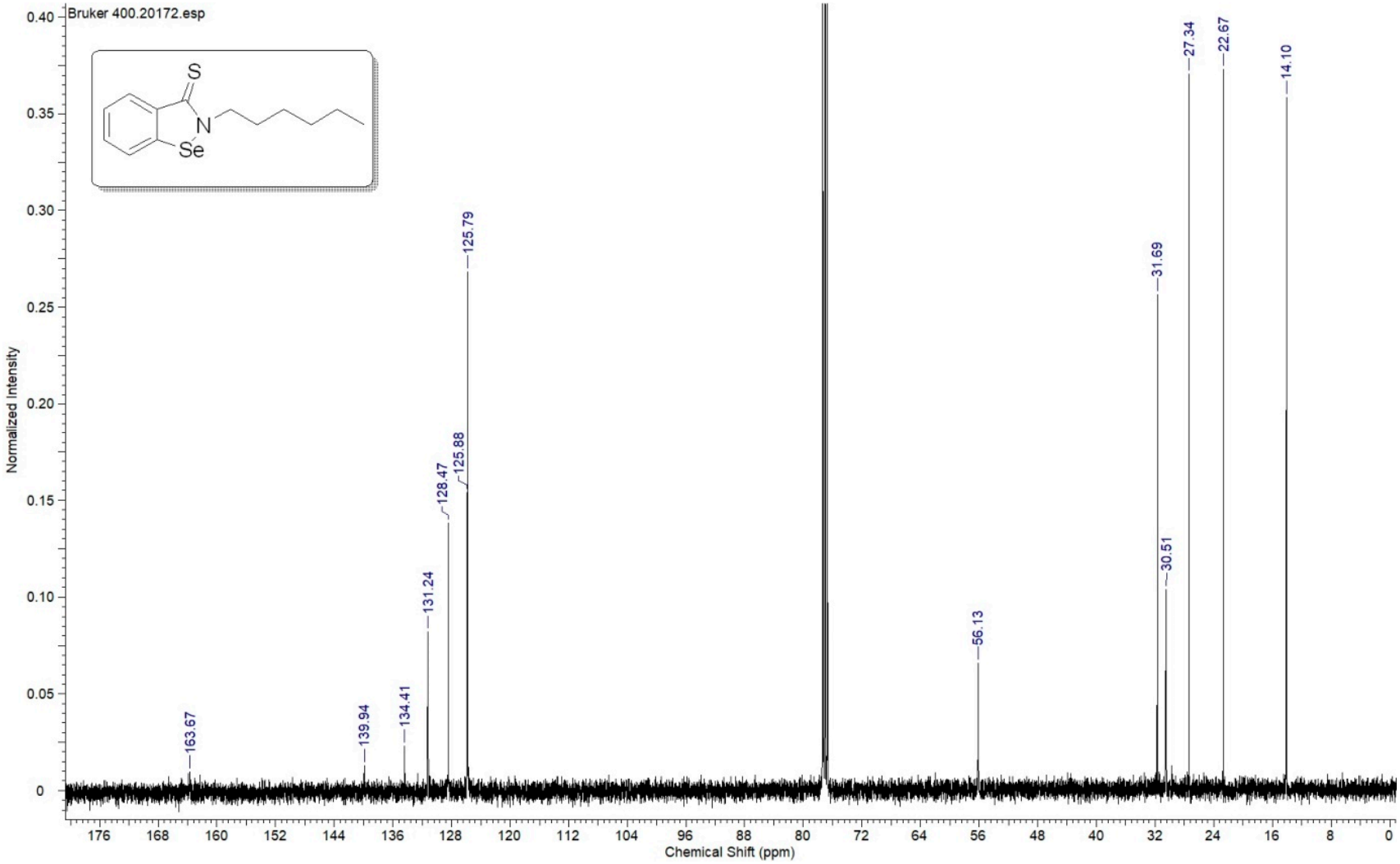

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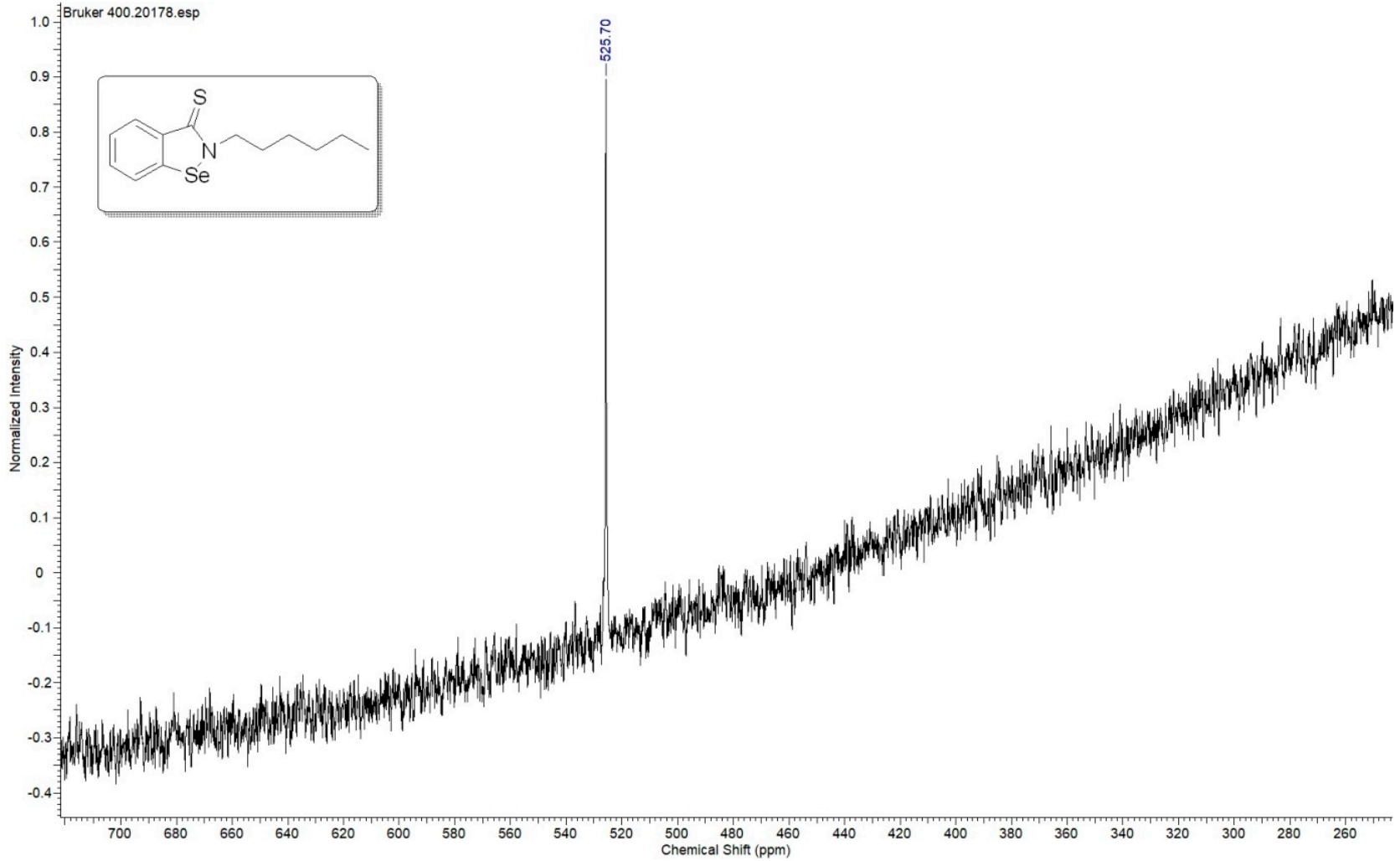

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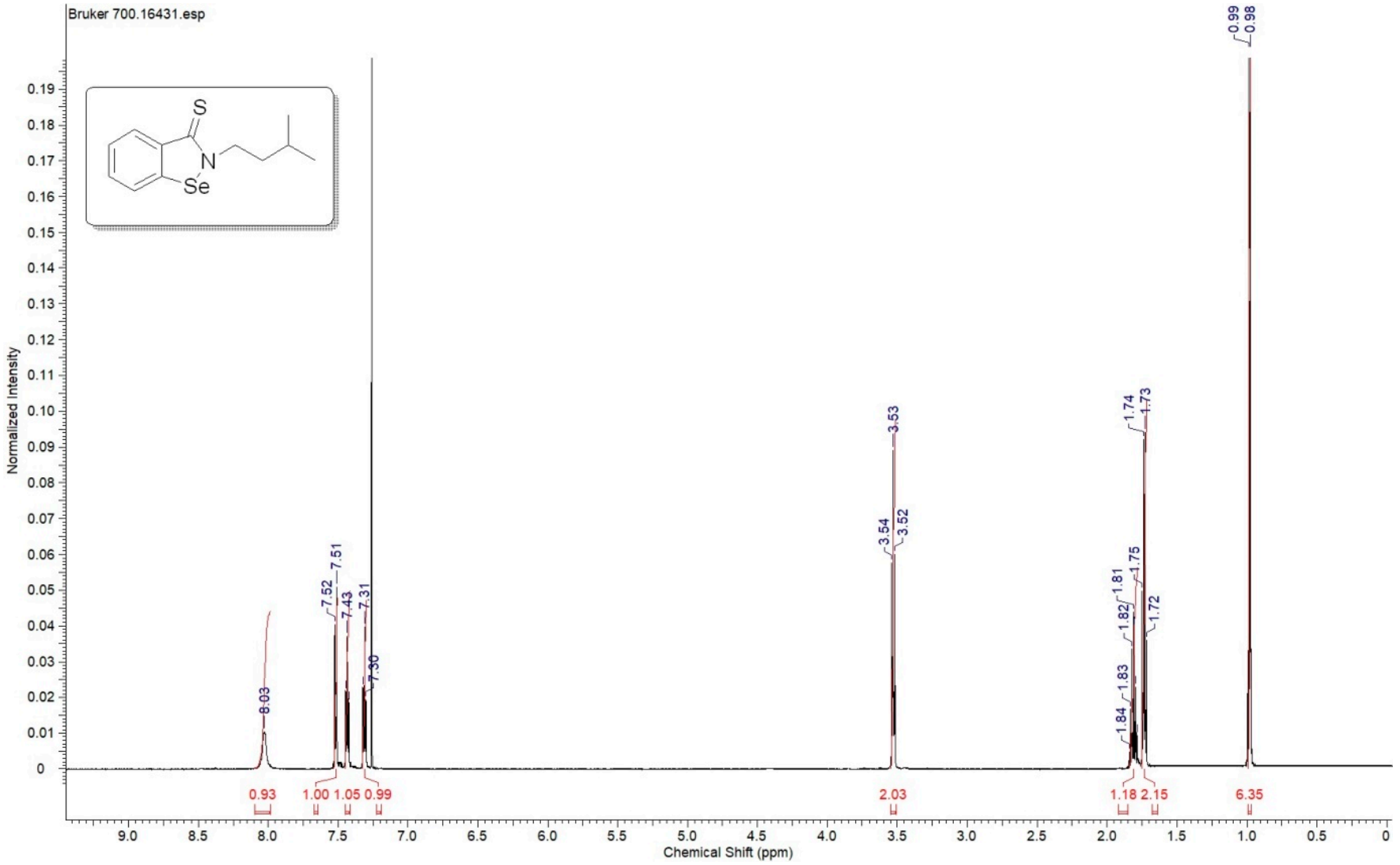

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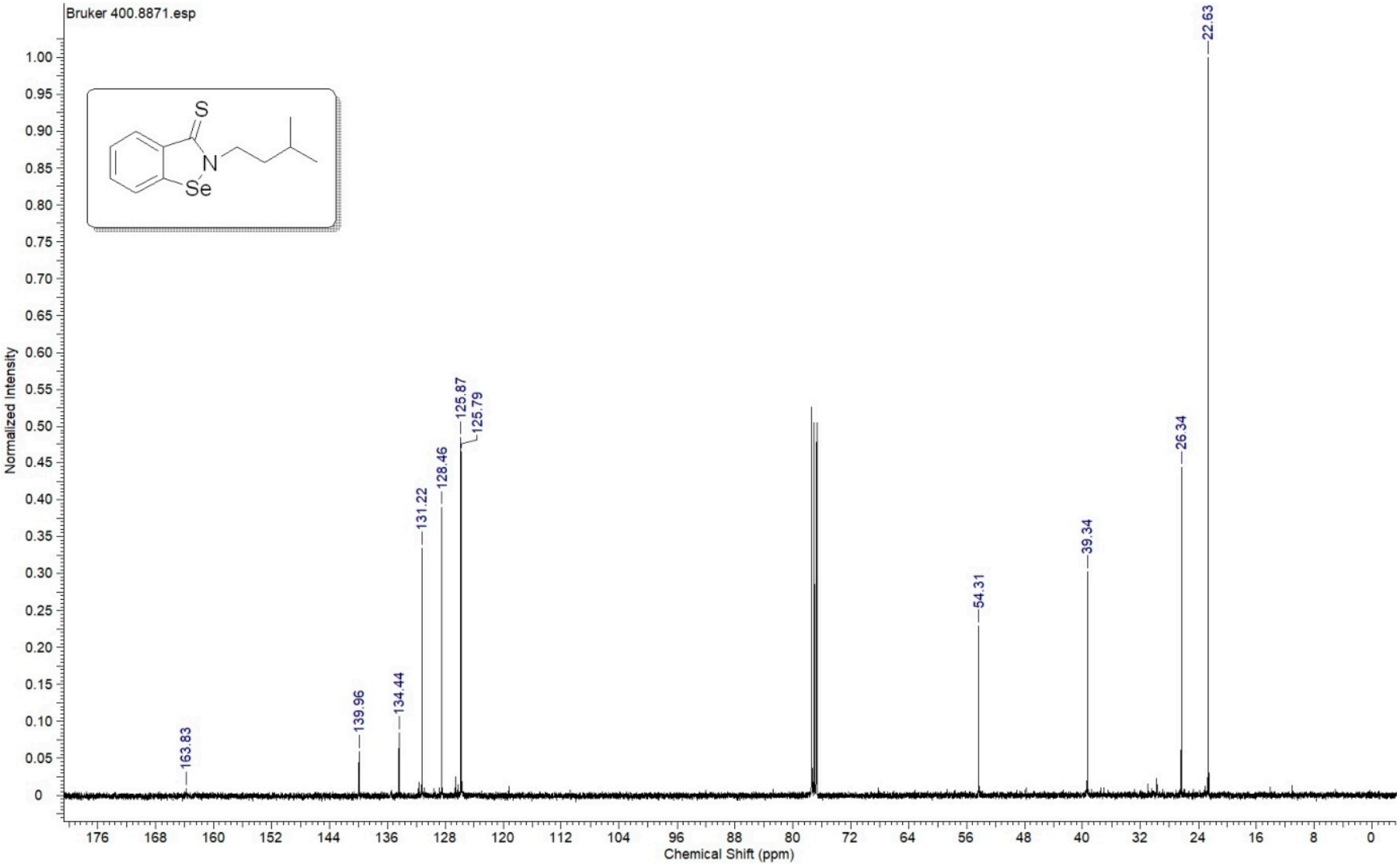

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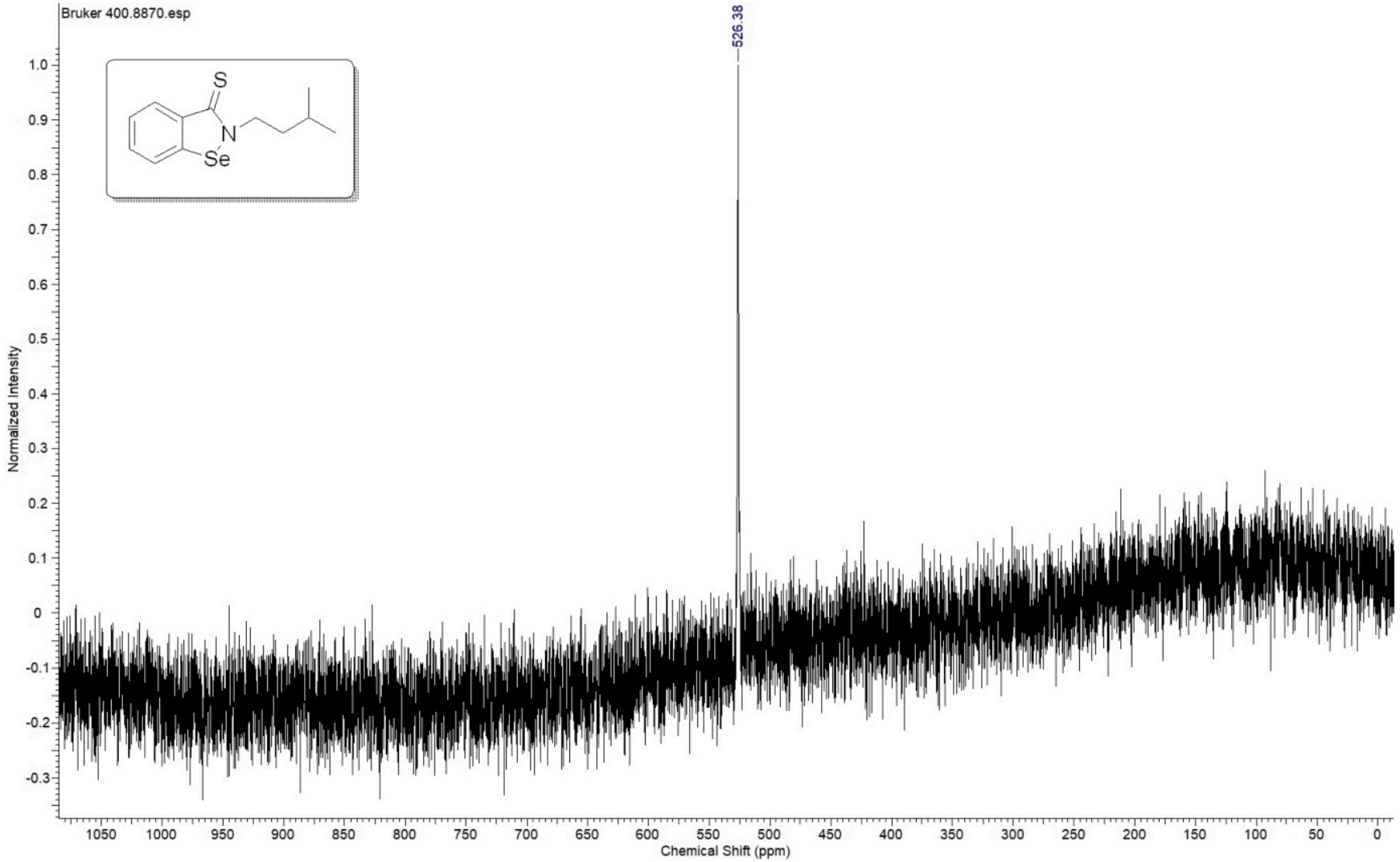

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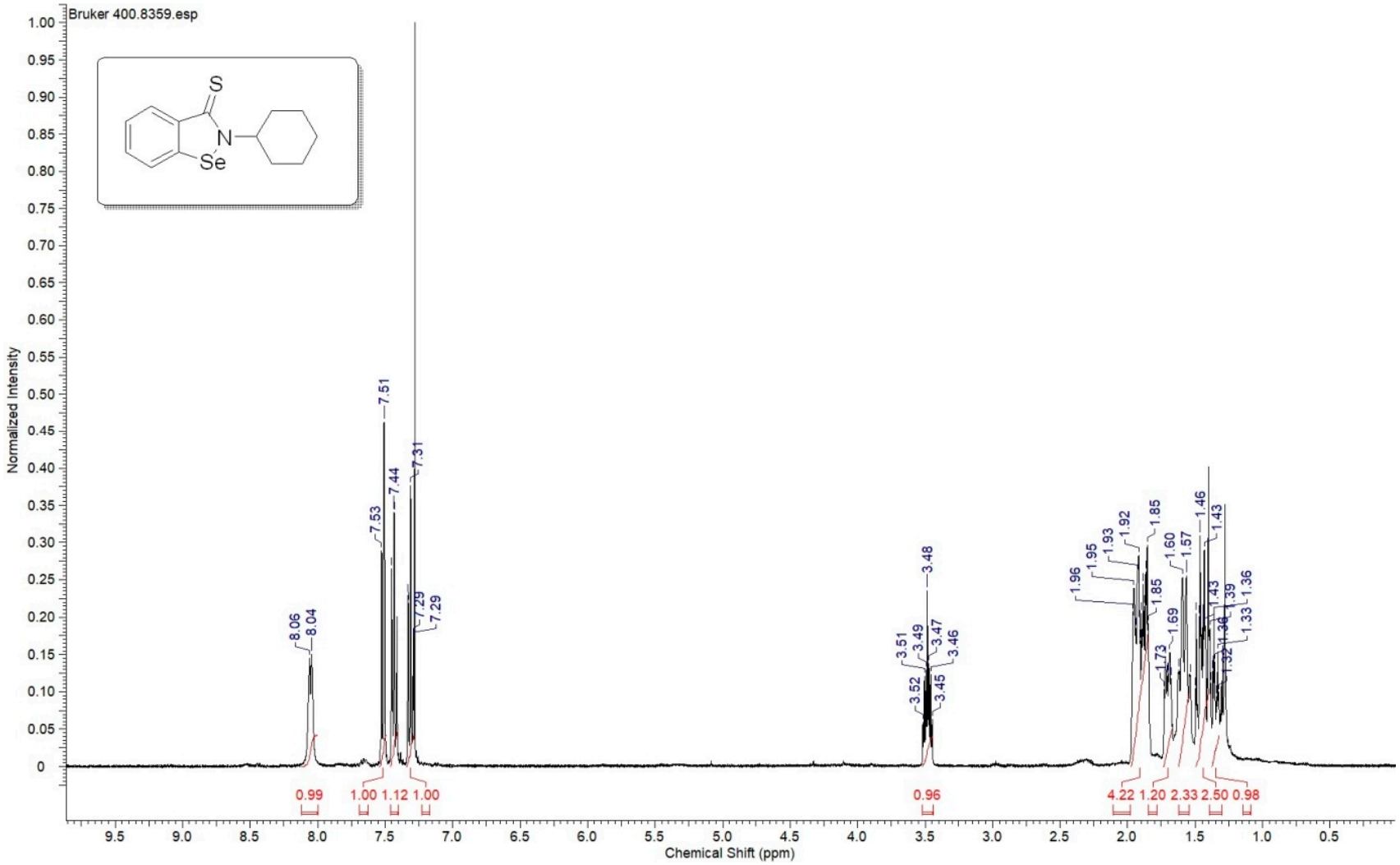

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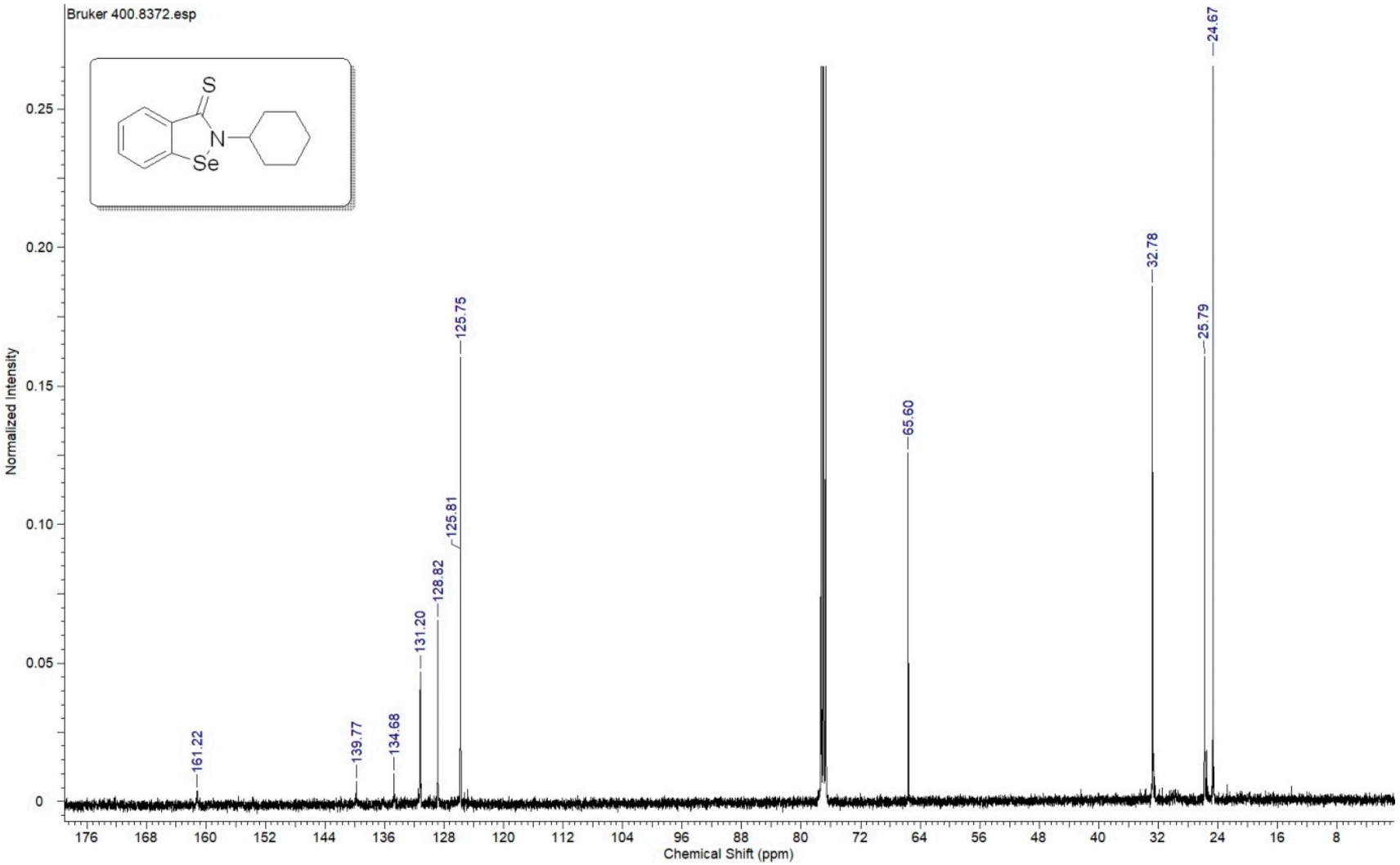

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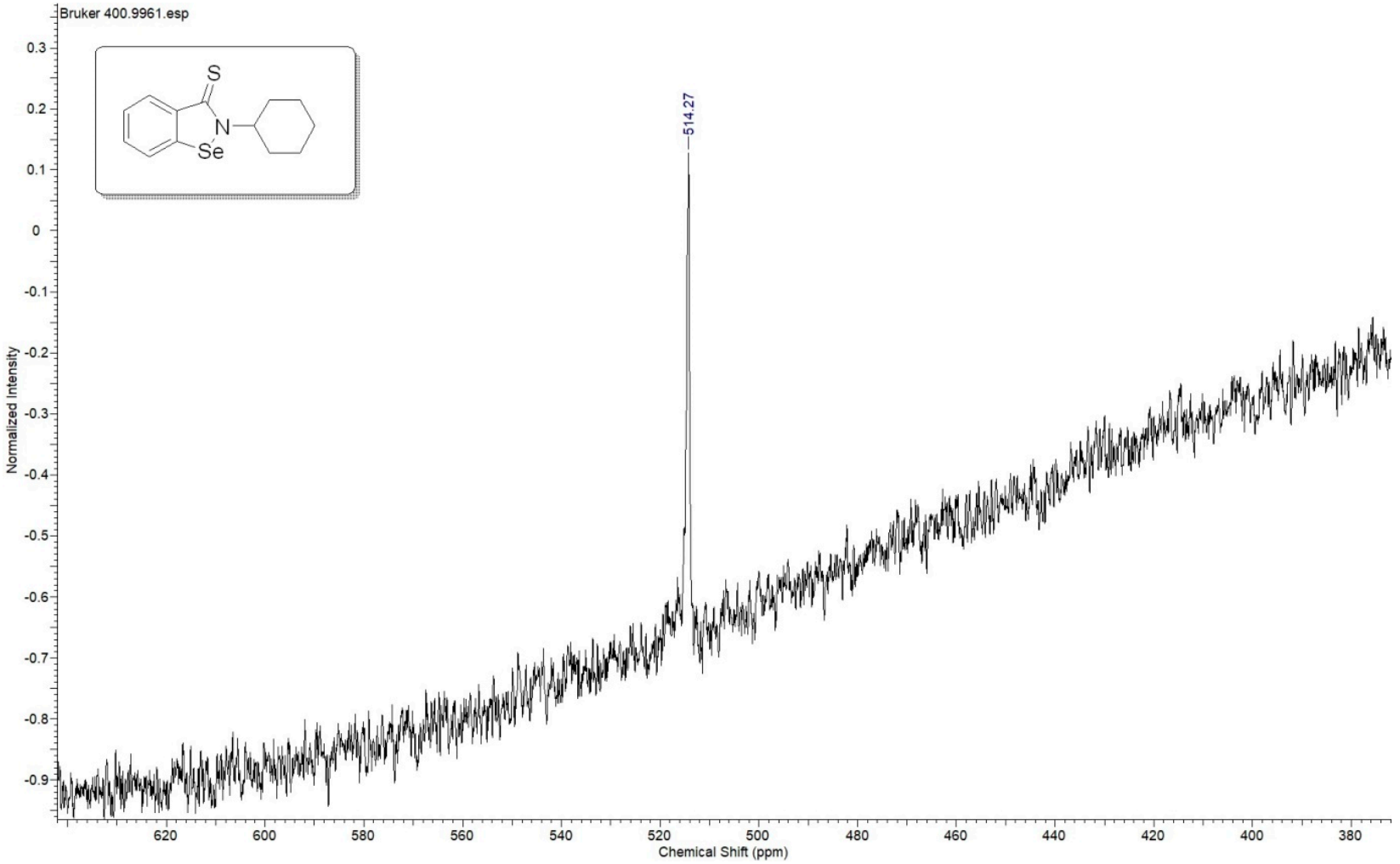

References:

1. J. Blum, A. Fisher, E. Greener, *Tetrahedron*, The catalytic decomposition of secondary carboxamides by transition-metal complexes, **1973**, *29*, 1073-1081.
2. B. Yao, Q, Wang, J. Zhu, *Angew. Chem. - International Edition*, Palladium(II)-Catalyzed Cyclizative Cross-Coupling of ortho-Alkynylanilines with ortho-Alkynylbenzamides under Aerobic Conditions, **2013**, *52*, 12992-12996.
3. R. M. Baldwin, T. Lin, H.S. Winchell, Medi-Physics, Inc., Amides useful as brain imaging agents, **1981**, US Patent 4279887.
4. M. Pietka-Ottlik, H, Wojtowicz-Mlochowska, K. Kolodziejczyk, E. Piasecki, J. Mlochowski, *Chemical and Pharmaceutical Bulletin*, New organoselenium compounds active against pathogenic bacteria, fungi and viruses, **2008**, *56*, 1423-1427.
5. A. Welter, C. Lambert, N. Dereu, A. Huther, E. Etschenberg, A. Nattermann and Cie GmbH, Benzisoselenazolonyl derivatives and processes for the treatment of rheumatic disease, **1988**, US Patent 4774252.
6. A. Welter, S. Leyck, E. Etschenberg, A. Nattermann and Cie GmbH, Benzisoselenazolethiones And Process For The Treatment Of Various Diseases In Humans, **1987**, US Patent 4711961.