NMR Measurement Report

Sample name: AC-15 10-9-2023

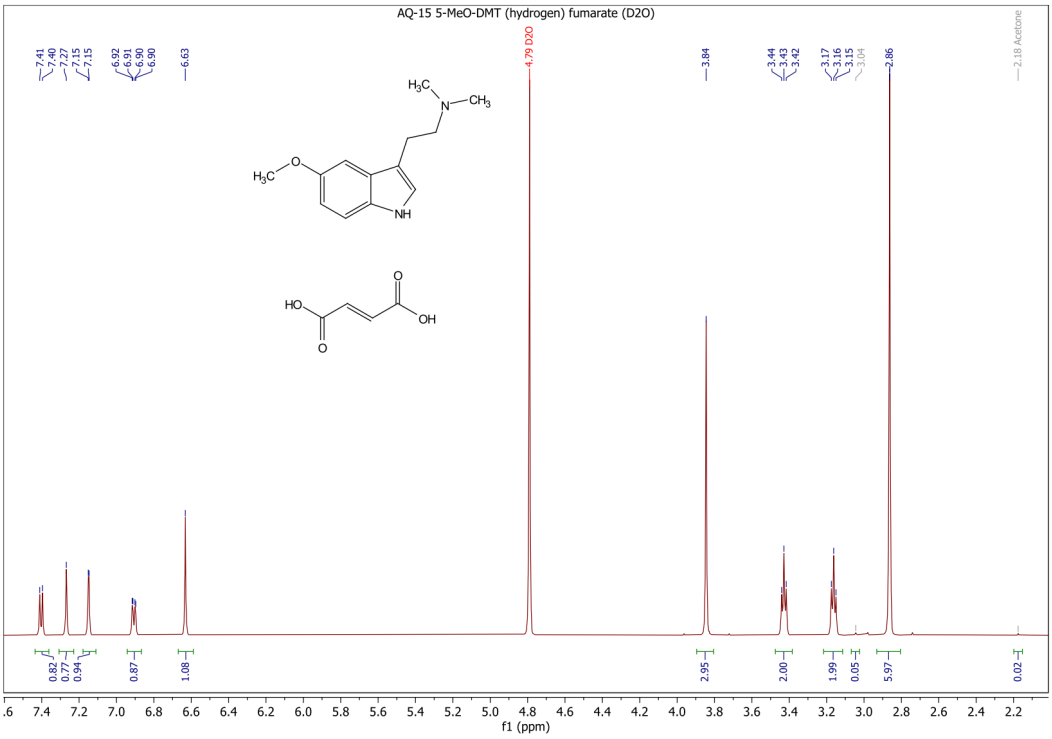
Spectrometer: Bruker 600 MHz **Solvent**: DMSO-*d*6 & D_2O

Expected compound: 5-MeO-DMT (hydrogen) fumarate

Identified compound: 5-MeO-DMT (hydrogen) fumarate

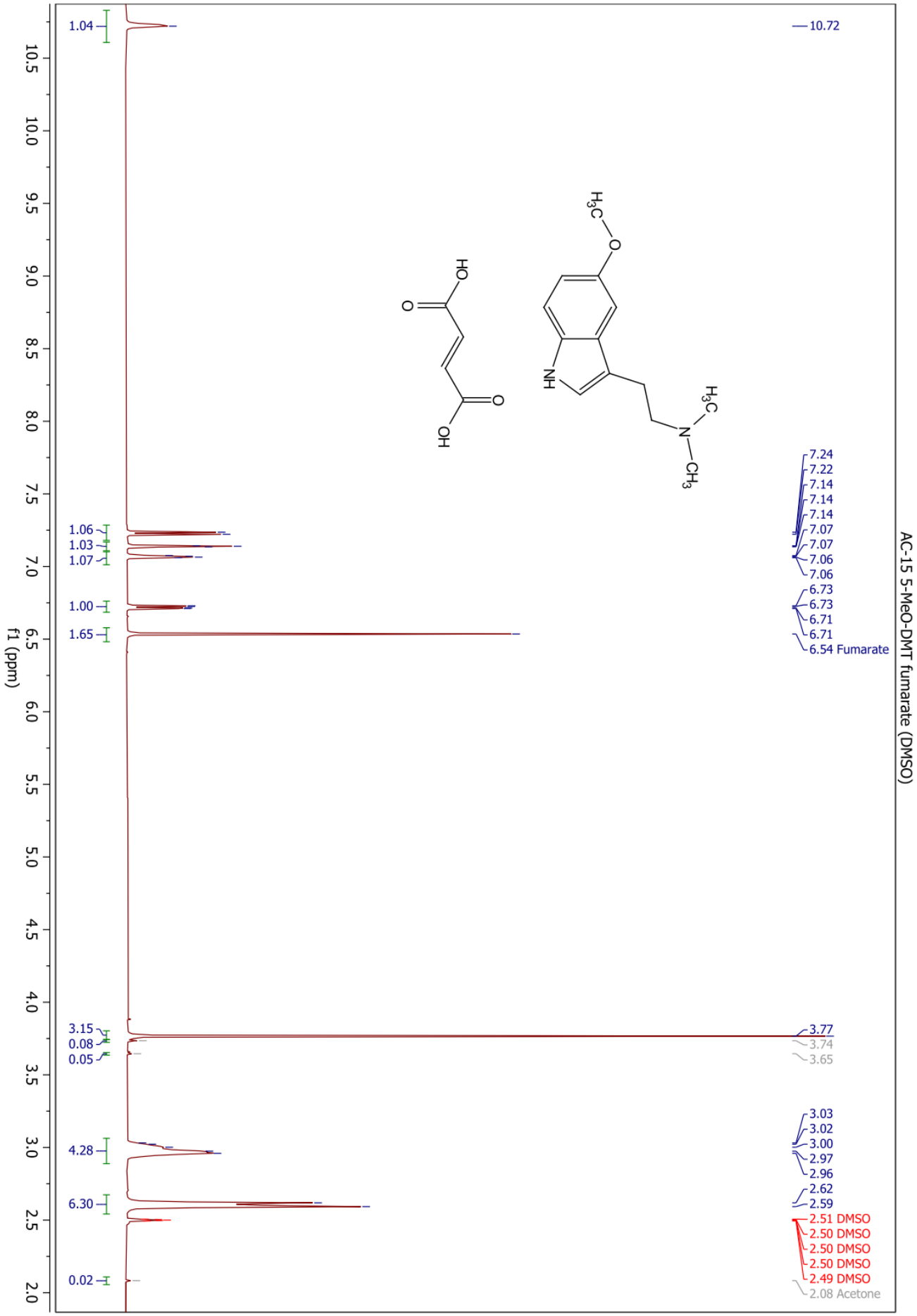
2-(5-methoxy-1*H*-indol-3-yl)-*N*,*N*-dimethylethan-1-amine

Estimated purity: >98%



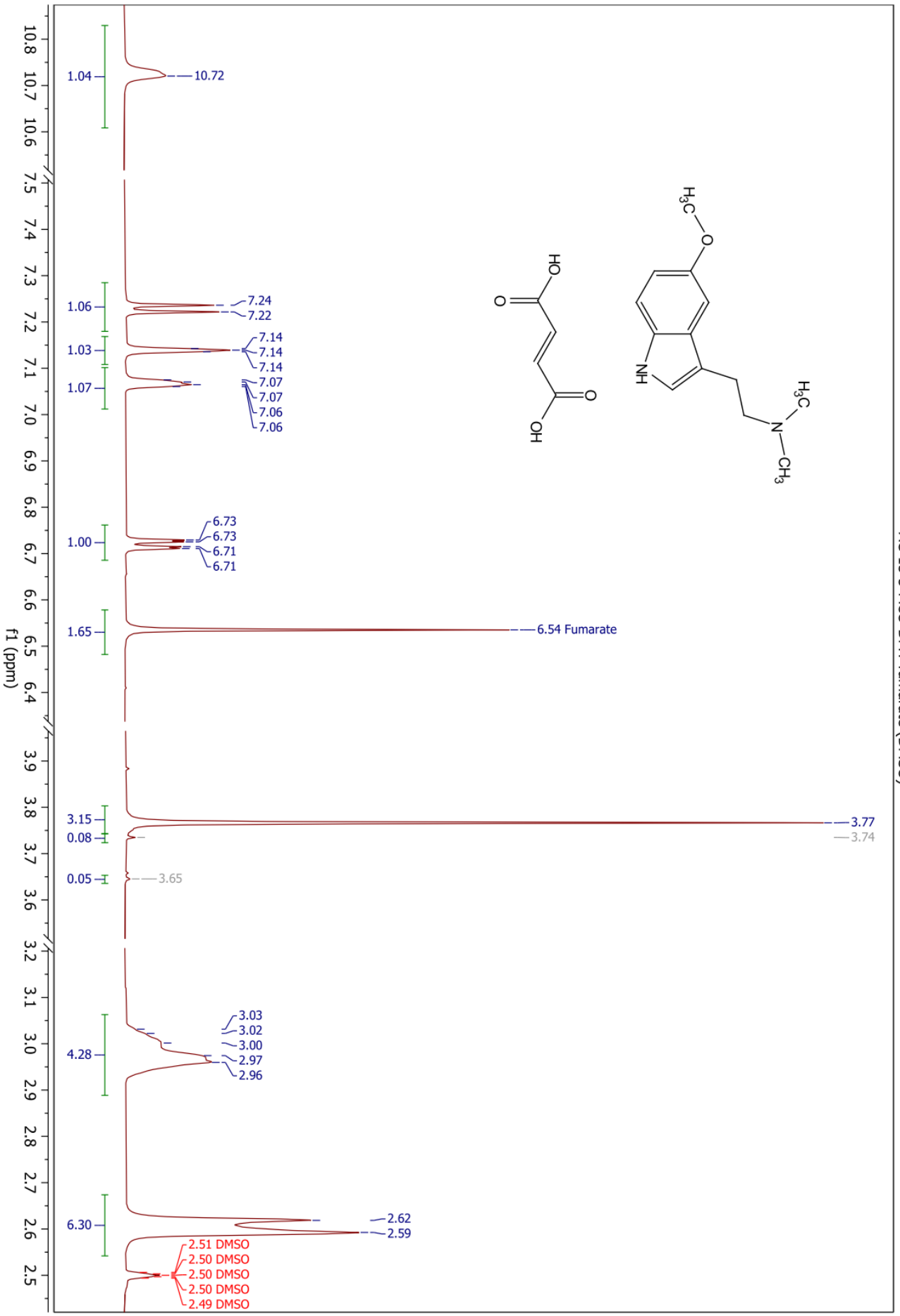
Lab Notes: The sample contained the expected product 5-MeO-DMT as a mixture of the fumarate (FM) and hydrogen fumarate (HFM) salts (1 to 0.65 ratio). The sample also contained a minor unidentified impurity and minimal traces of acetone. The difference in appearance and chemical shifts of the aliphatic proton peaks (CH_2 and N-CH_3) was due to formation of fumarate adducts in solution, leading in turn to an increase of the rotational energy barrier around the CH_2-N bond. As expected, this effect was not observed D_2O where the ions dissociate in solution. This confirmed the initial conclusions and identity of the product. For the measurement in D_2O, the sample was homogenized by grinding, whereafter a considerably higher FM to HFM ratio (1 to 0.05) was found.

^{1}H NMR: full non-empty spectrum



Analysis performed by Dr. Leonid Pevzner

^{1}H NMR: cut and zoomed spectrum



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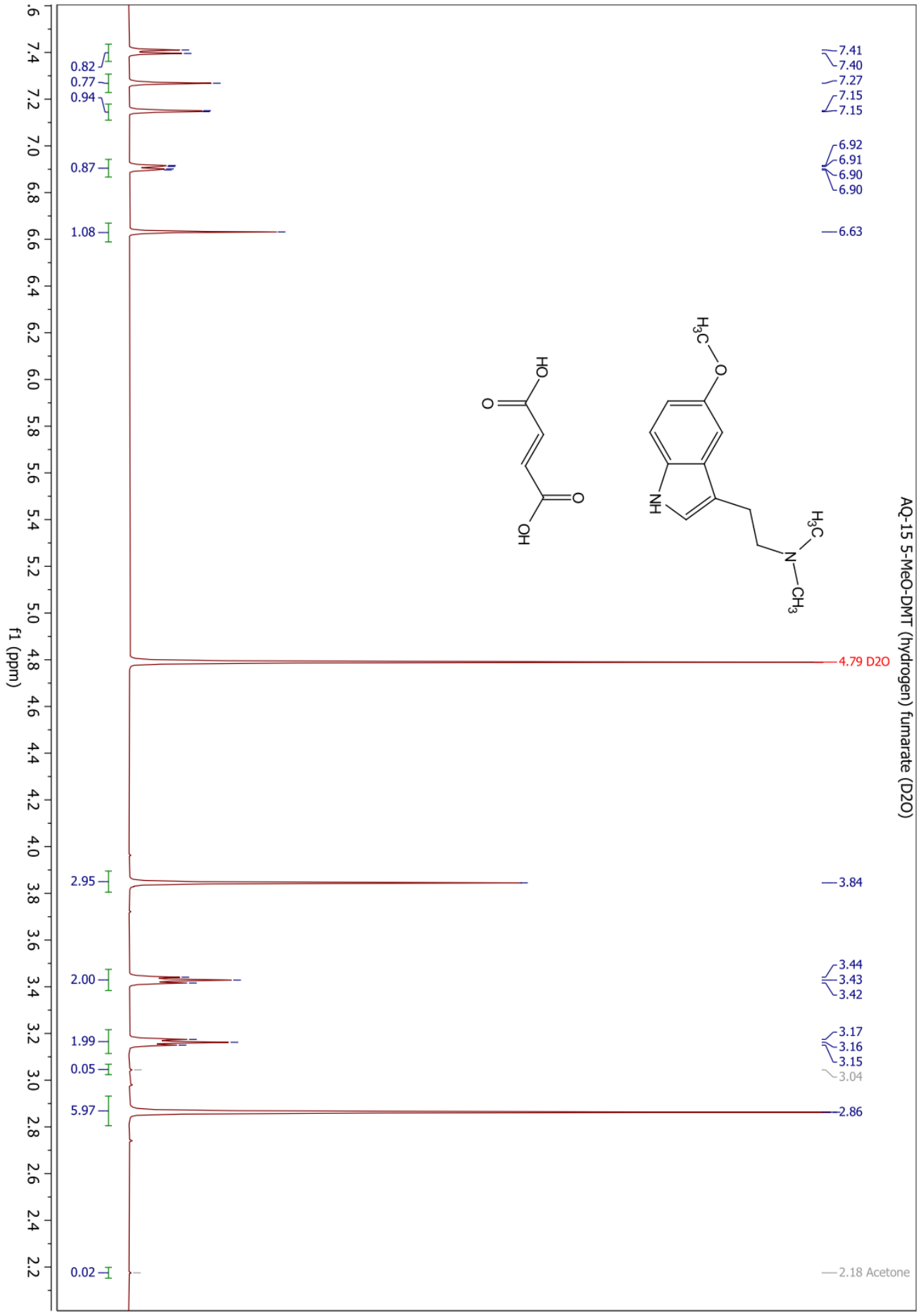
^{1}H NMR: full non-empty spectrum



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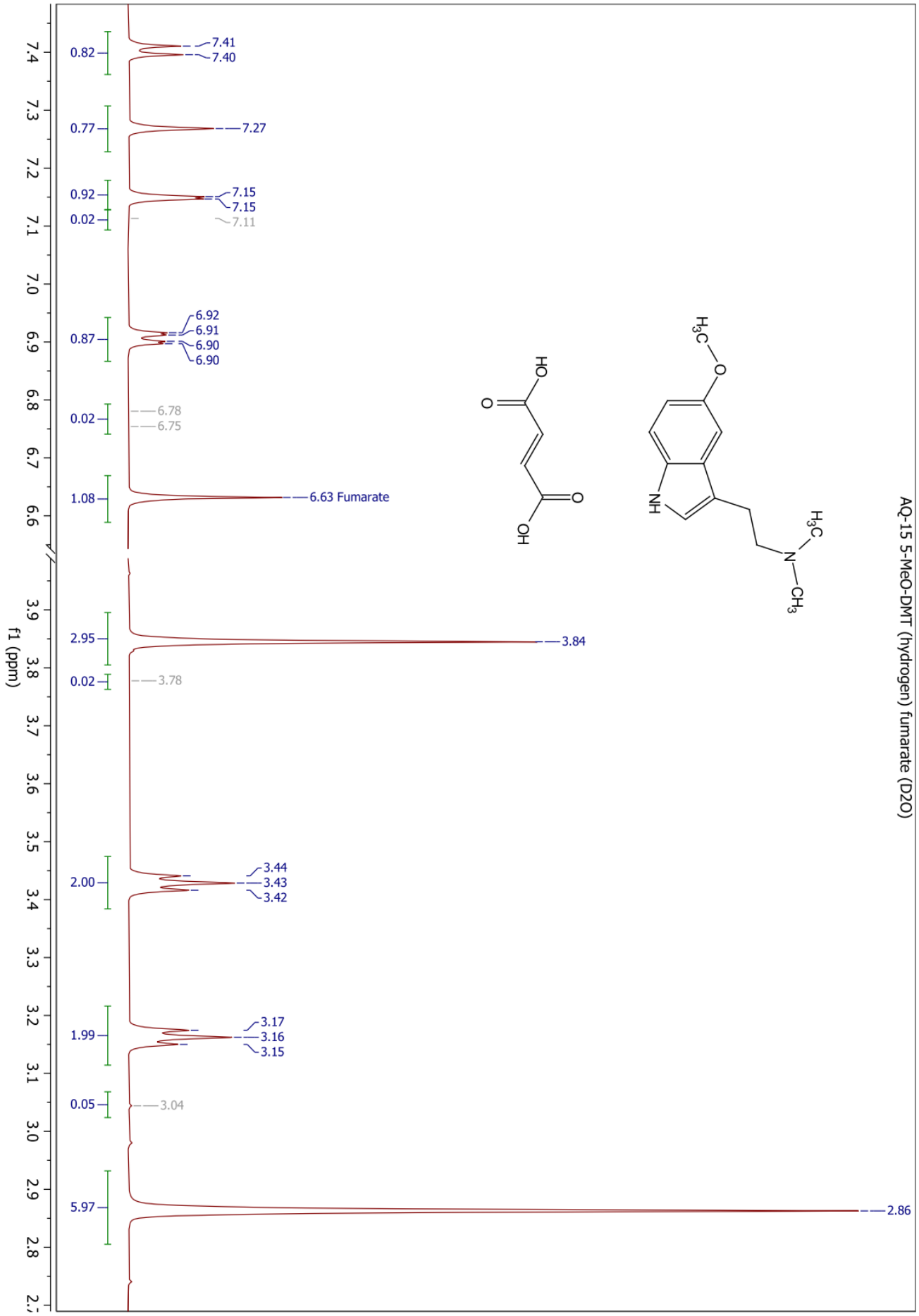
^{1}H NMR: cut and zoomed spectrum



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