



The Synthesis and Characterization of 1-phenylpropan-2-amine (amphetamine) derivative.

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Introduction

Amphetamine is a potent central nervous system (CNS) stimulant drug under the law. However, we interested in the synthesis of amphetamine derivatives for the study as sample drugs in our laboratory.

Total synthesis

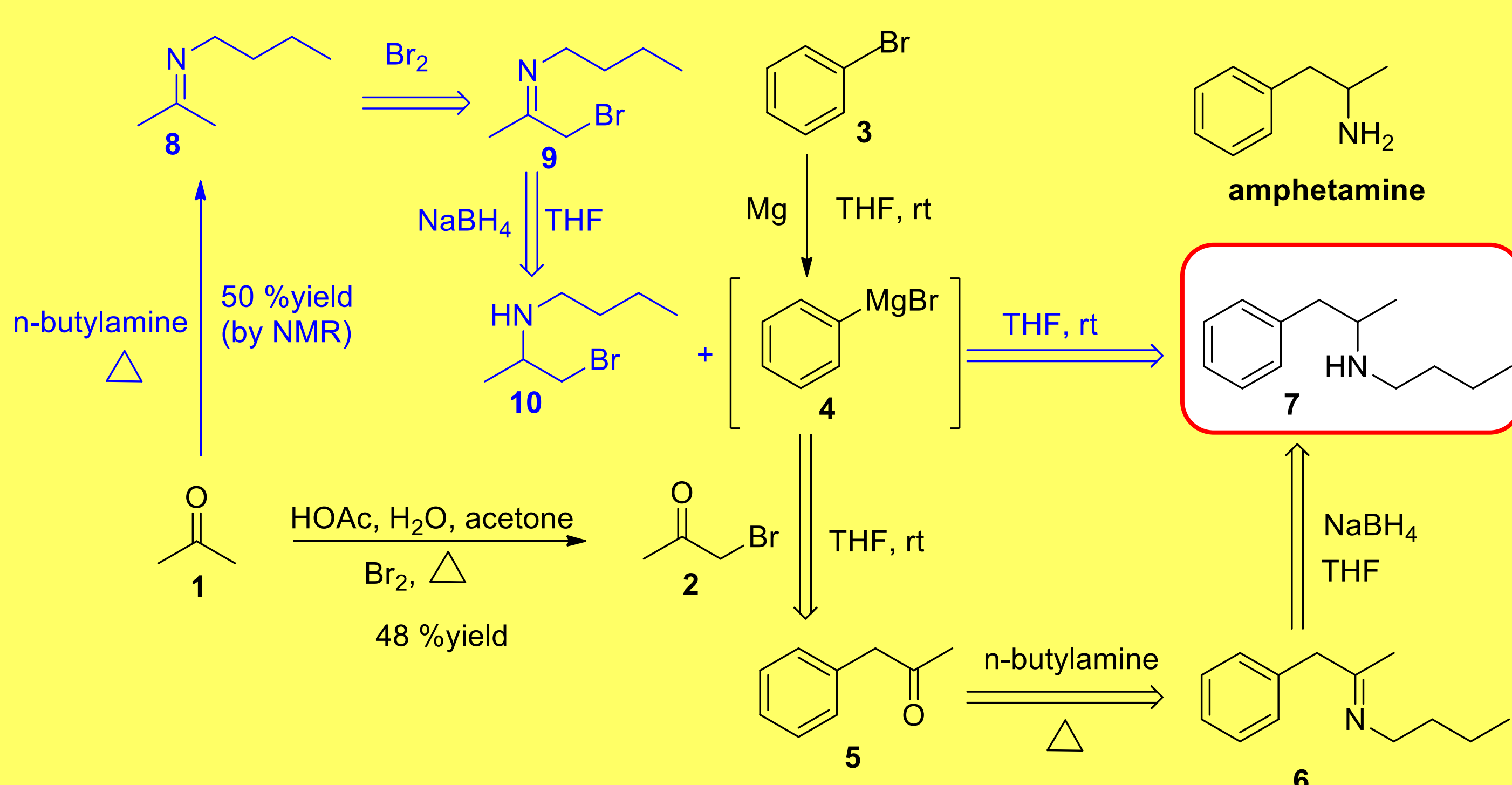
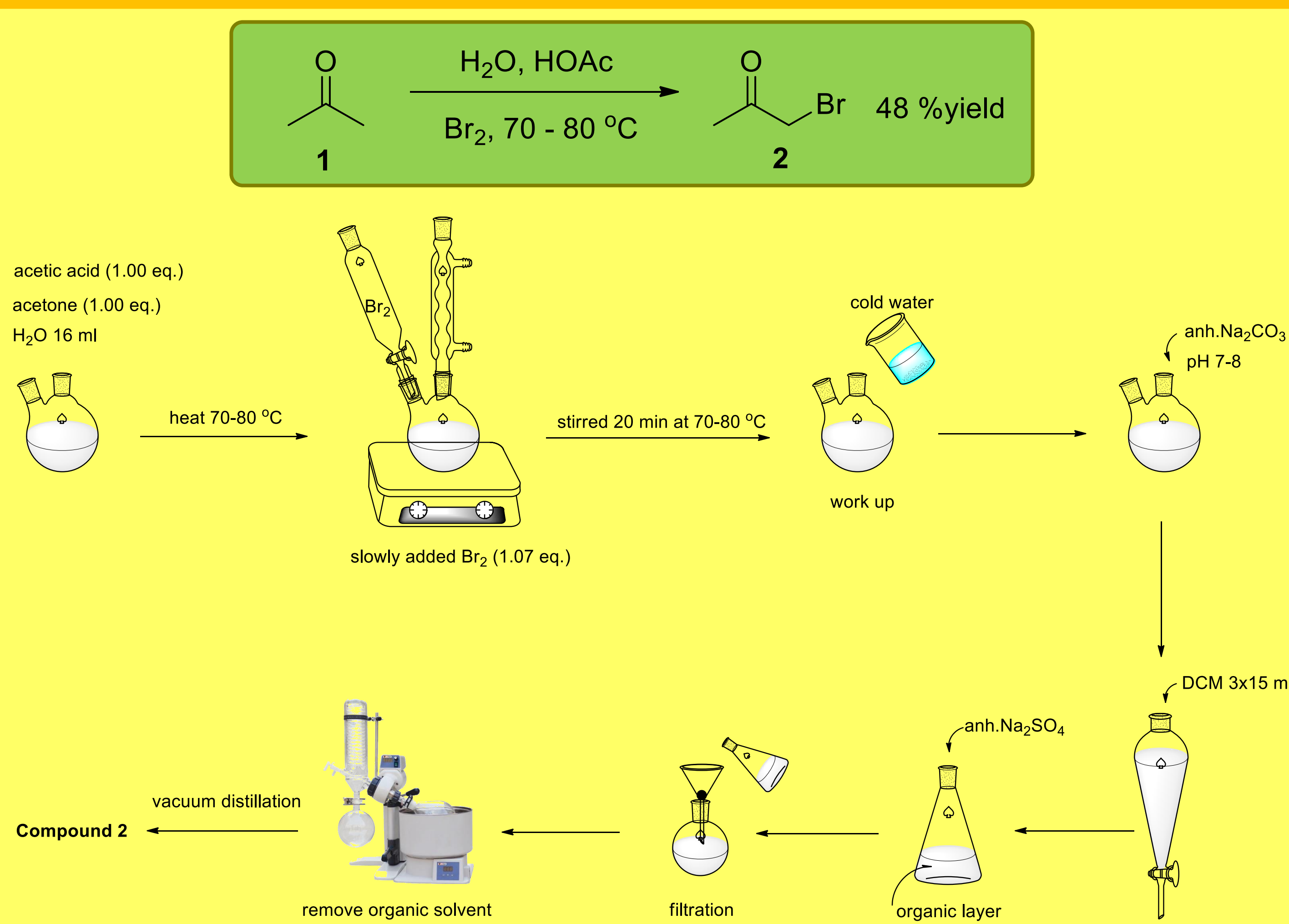


Figure 1. Total synthesis of amphetamine derivative (7)

Experimental



Acknowledgements

The authors would like to acknowledge the financial support from the National Research Council of Thailand (NRCT) under research grant NRCT-165264 and Science Achievement Scholarship of Thailand (SAST).

References

- [1] <http://en.wikipedia.org/wiki/Amphetamine> (access 09/02/2015)
- [2] <http://www.orgsyn.org/demo.aspx?prep=cv2p0088> (access 09/02/2015)

Results and discussion

The products of bromination reaction were fully characterized by ^1H , ^{13}C NMR and IR spectroscopy. The ^1H NMR spectra of compound 2 shows in Figure 2. The result shows that the methyl proton ($-\text{CH}_3$) was observed at 2.31 ppm and the methylene proton ($-\text{CH}_2$) was found at 3.86 ppm, respectively.

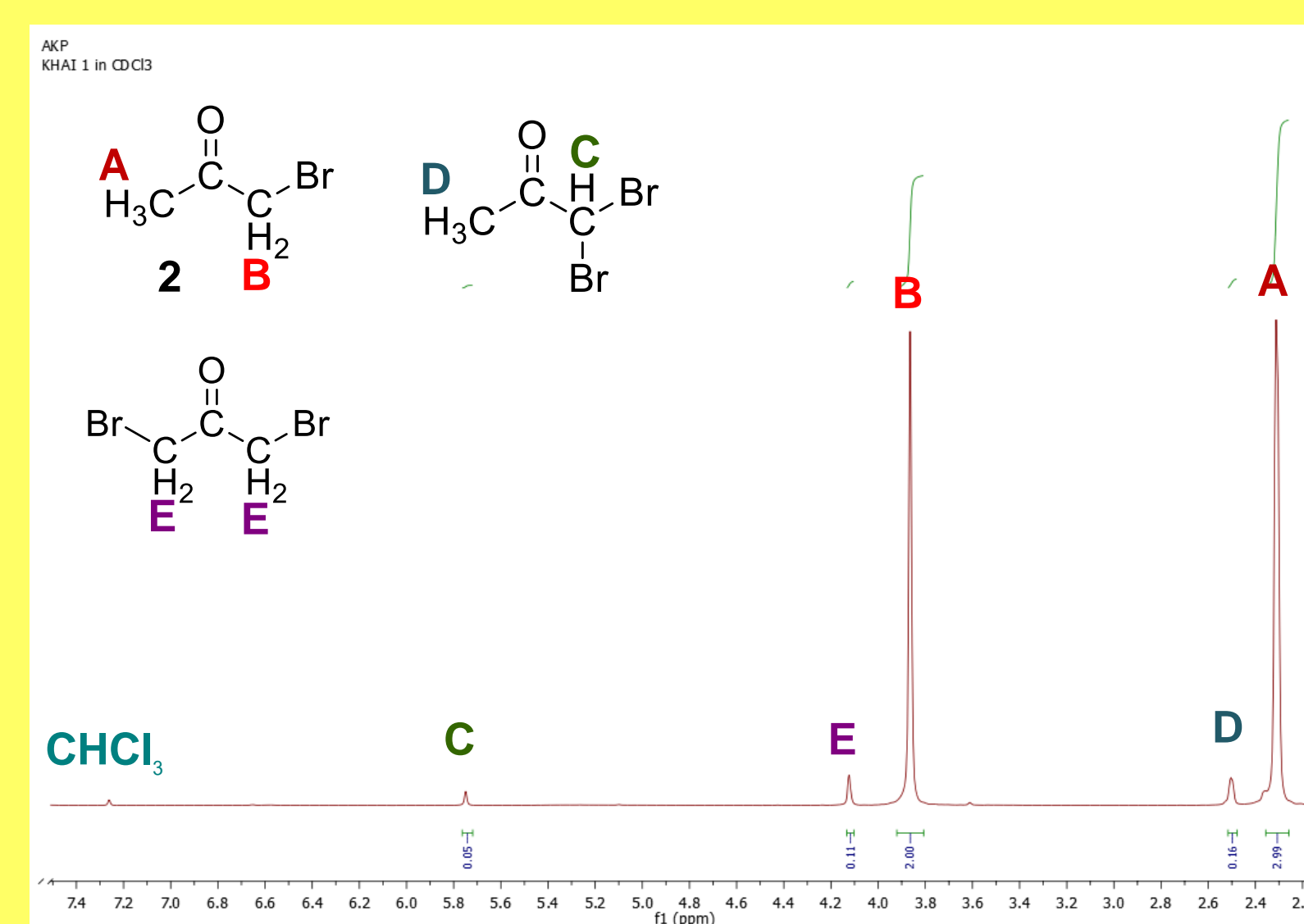


Figure 2. ^1H NMR spectra of the bromination products

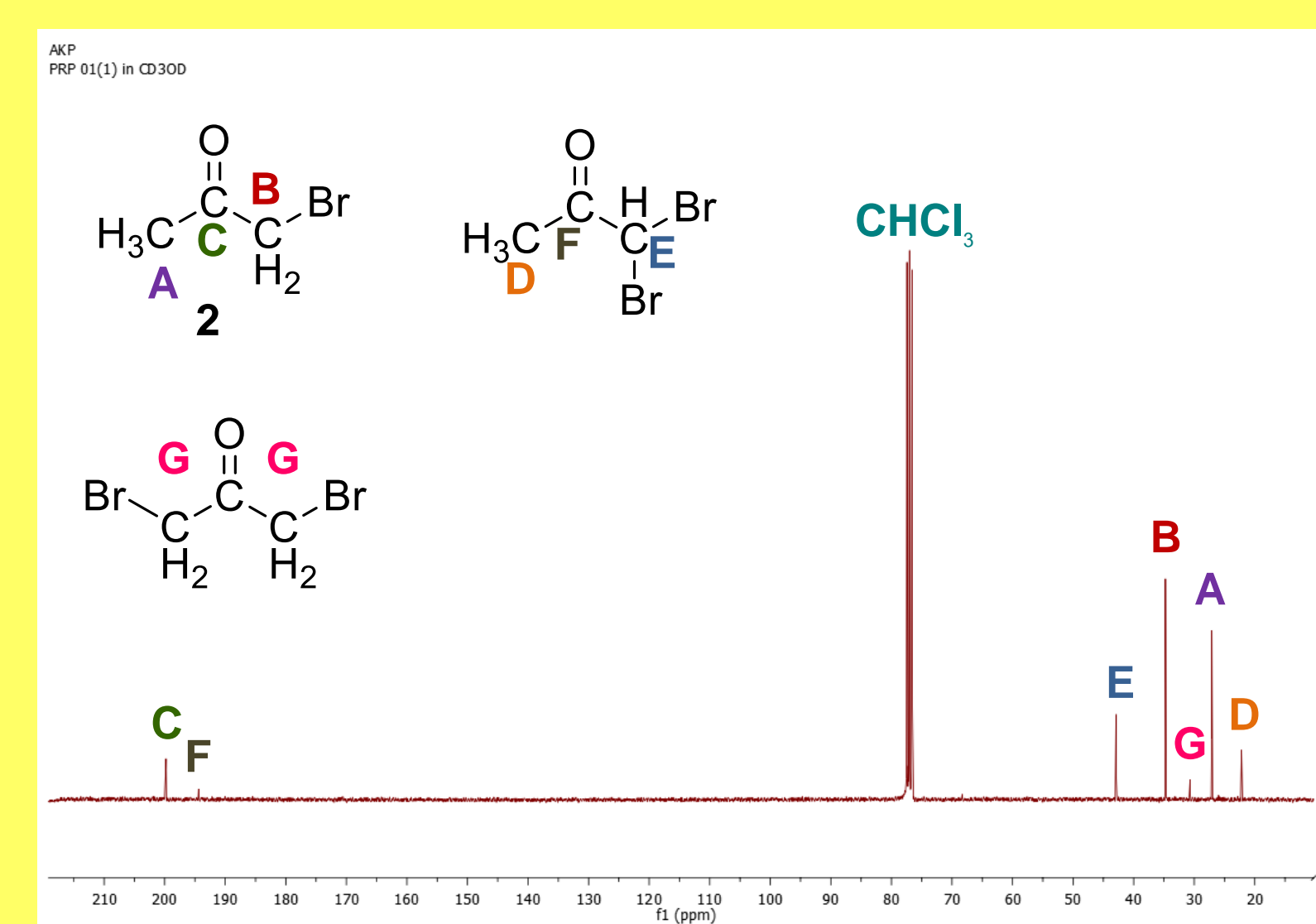


Figure 3. ^{13}C NMR spectra of the bromination products

The ^1H NMR spectra of imine formation shows that is a mixture products in Figure 4. The reaction affords compound 8: acetone: n-butylamine with the ratio 1.00: 1.42: 0.31 by NMR.

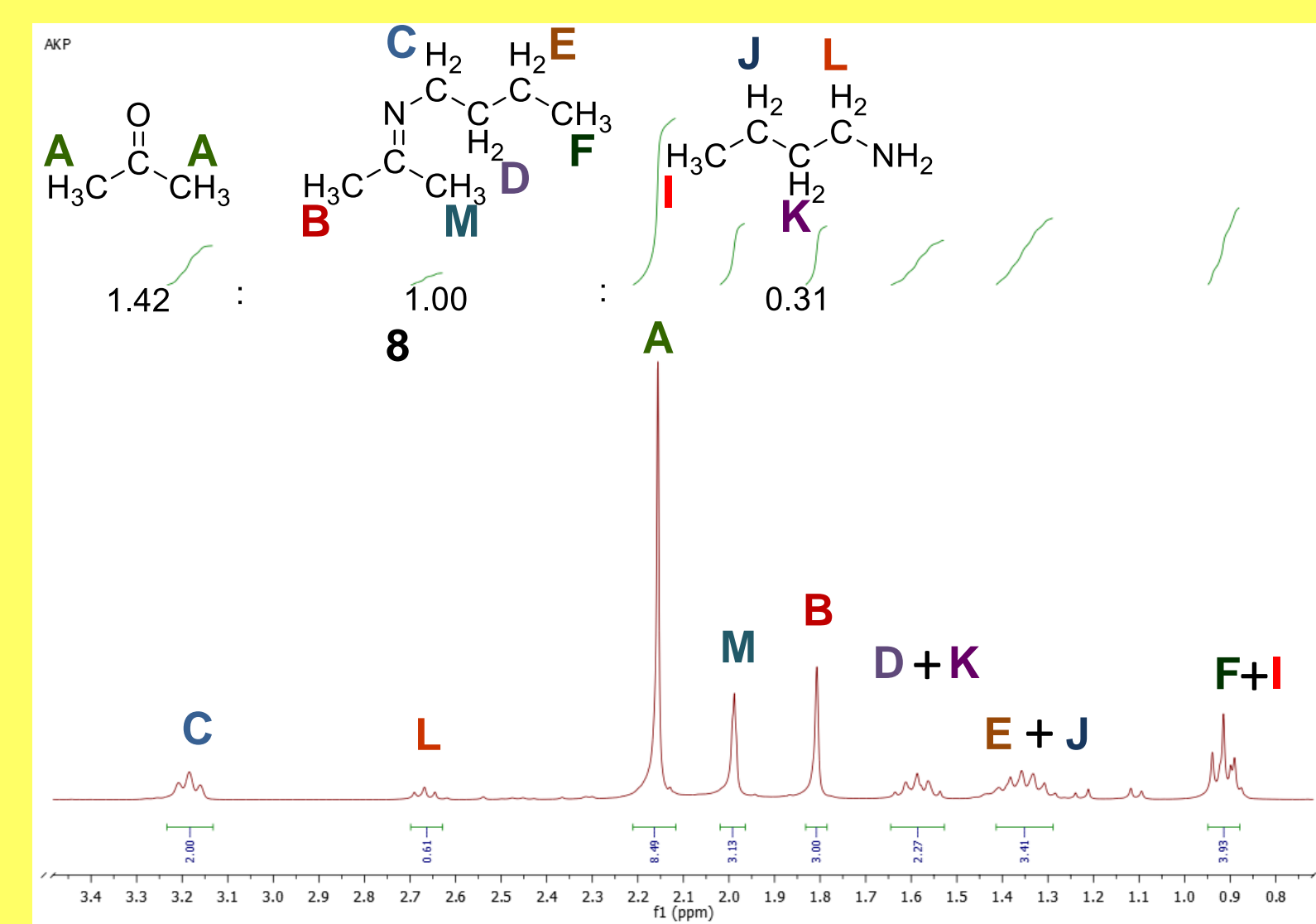


Figure 4. ^1H NMR spectra of the mixture products from imine formation

Conclusions

We achieved to synthesis and characterization compounds 2 and 8. These compounds will be used as starting material for synthesis of compound 7.

