

Biodiesel: Tomorrow's Fuel, Today's Solution

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32.064

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18.9984

33

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74.9126

92

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238.03

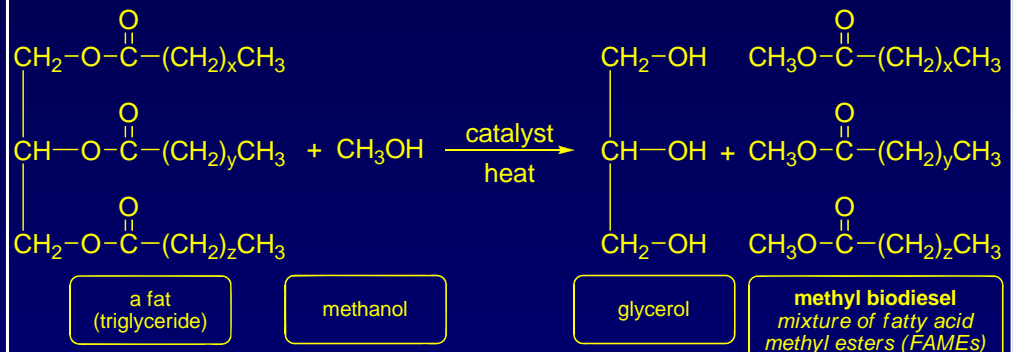
Department of Chemistry

Objective: Study of physical & chemical properties of biodiesel fuels derived from poultry & plant fats

Experimental methods:

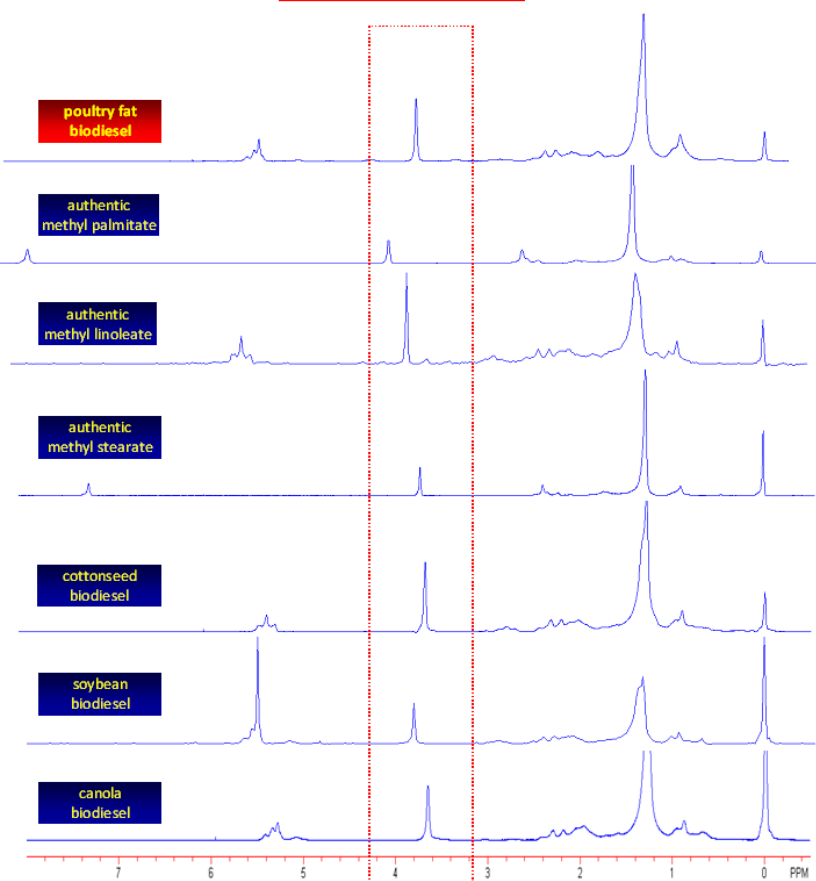
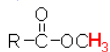
- Synthesize FAMES (transesterification)
- Extract FAME mixture
- Analyze pdt mixture (IR & $^1\text{H-NMR}$ spectroscopy)

Synthesis of biodiesel (FAMES) from triglycerides



$^1\text{H-NMR}$ spectra of FAMES

Methyl ester signal is used to confirm presence of FAME



Conclusion:

- We have been successful in making biodiesel mixtures
- We are now studying the properties of these mixtures
- We will study combustion energy, viscosity, and cloud point of biodiesel mixtures
- Biodiesel has much potential as an alternative to diesel fuel
- Biodiesel is cleaner burning than diesel fuel

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