

Pyrolysis of Triacylglycerols and Fatty Acids

Jan Šmidrka, Zdeněk Bělohav, Vladimír Filip, Petr Zámotný, Bierhanzl Václav

Institute of Chemical Technology Prague, Czech Republic

Triacylglycerols and are used as a raw material for production of number chemical materials, mainly fatty acids, fatty acid methylesters, surfactants and others. The other way for utilization of triacylglycerols is high-pressure hydrogenation to higher hydrocarbons. The another possibility is pyrolysis of triacylglycerols leading to low hydrocarbons, predominantly alkenes.

Triacylglycerols and fatty acids were pyrolyzed in tubular reactor and resulting mixture of products was immediately analyzed by GSC. The composition of product of pyrolysis depended on the type of triacylglycerol (Fig. 1.). Composition of hydrocarbons is similar to composition of product obtained by pyrolysis of oil (e.g. straight run gasoline).

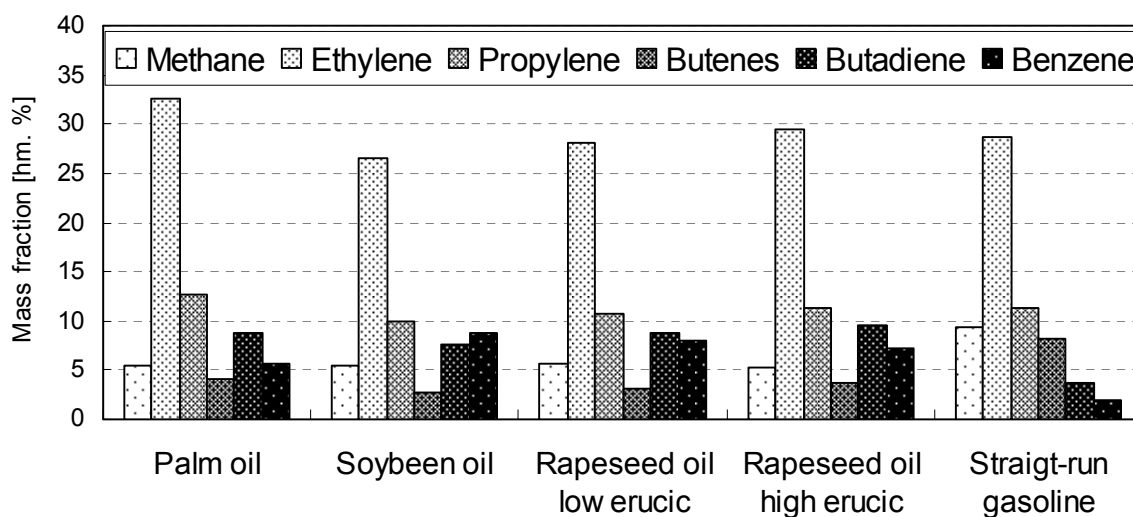


Figure 1 Composition of products of pyrolysis