

Biokomponenstartalmú sugárhajtómű üzemanyag előállítása

Production of biocomponent containing jet fuel

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Summary

Recent demands for low aromatic content jet fuels have shown significant increase in the last 20 years. This was generated by the growing of aviation. Further than quality requirements were more aggravated in front of jet fuels. This was generated by the more severe environmental regulations and the increasing requirements. Nowadays reduced aromatic hydrocarbon fractions are necessary for the production of the jet fuels with good burning properties, what is contributing to the less harmful material emission.

In the nearly past the continuously severed properties of gasolines and diesel gas oils, they will severe the properties of jet fuels too. So now some people study the possibilities of produce low aromatic and low sulphur content in heterogen catalytic way. There is only a few publication, that handle with investigation of biocomponent containing jet fuel production.

So we studied during our experimental work hydrogenation of sunflower oil containing kerosene fraction on a CoMo/Al₂O₃ heteroatom remover and Pt/HZSM-22/Al₂O₃ isomerizer and partially cracking catalyst system. We studied the yield, analytical and application properties of the jet fuel boiling point range hydrocarbons. At the joint application of the chosen catalysts, we found process parameter combinations, that resulted jet fuel boiling point range products, that have excellent flaming properties (smoke point: 37 mm) and good low temperature properties (crystallization point: <-53°C). This contains clear burning iso-and n-paraffins in high concentration, that are not limited for quantity by standards.
