Iodine Value and Biodiesel – A Critical Evaluation

Sigurd Schober, Martin Mittelbach, Institute for Chemistry University of Graz
8010 Graz, Austria

The Iodine Value (IV) is currently one of the most discussed parameter of the European FAME specifications EN 14214. The reason is that due to the limitation of IV ≤ 120gI_2/100g several potential feedstocks are excluded for biodiesel production in Europe. Especially soybean oil as the worlds most produced vegetable oil cannot be used as 100% for biodiesel production in Europe. On the other hand the increasing feedstock demand due to the tremendously increased production capacities in Europe could be covered by such feedstocks. Therefore a critical (re-)evaluation or adjustment of IV would help to expand the feedstock source and to fulfill the production and blending quotas given by the European Fuel's Directive. Within this presentation the following aspects will be discussed:

- Basic considerations on IV (chemical background, determination)
- Potential of feedstocks with higher IV
- Comparison of IV in the context of standardization world-wide and Europe
- Influence of higher IV feedstocks on other EN 14214 quality parameters
- IV and biodiesel stability: General aspects on stability and degradation
- Correlations between oxidation stability and IV
- Experience with biodiesel from higher IV feedstocks
- Summary and outlook