

## **EVALUATION OF THE RESIDUAL FRACTION BY HOT FILTRATION**

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High-viscosity residual fractions obtained during the secondary crude oil processing are widely used as a component of final marine fuels. Because it is a material with high viscosity, it is necessary to mix it with suitable cutter stock to meet the prescribed qualitative parameters according to the ISO 8217. The final mixture may not always be compatible one. Therefore, it is necessary to monitor the stability of the resulting mixture, in order to preserve the required properties during transport, storage as well as final processing. For this purpose, the method for determining the stability of residual fractions by hot filtration (ISO 10307 1 and 2) is commonly used. However, from an economic point of view, it is also important to prevent potential incompatibilities during the production. In this case the hot filtration is a limitation for the very viscous residual fractions, which are impossible to be filtered. For the reasons described above, it is necessary to have an analytical method that could be used to quickly and efficiently evaluate the stability of residual fractions

First of all the possibility of filtering highly viscous residual fractions under higher temperature was verified. In the second step, a suitable diluent for the residual fractions was investigated to decrease the viscosity under required level for standard filtration. The mixtures of residual fractions with fatty acid methyl esters (FAME) were prepared in suitable ratio so as not to affect the colloidal stability of the residual fractions and at the same time it was possible to use the method for determining the total sediment content. Based on the comparison of the obtained results, a method for determining the stability of high-viscosity residual fractions was designed and optimized. It can be used to compare the residual fractions and possibly predict the stability of the produced marine fuel.