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The qualitative evaluation of cost effective one test-run determination of aromatic hydrocarbons and fatty acid methyl esters content in fossil diesel fuels by high performance liquid chromatography

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A high performance liquid chromatography method was developed for quantifying blends of biodiesel (fatty acid methyl esters) in fossil diesel fuel. The qualitative evaluation of a one test-run determination for aromatic hydrocarbons and fatty acid methyl esters content shows that the developed test method gives accurate and reliable test results in the range from 0.3%(m/m) to 30%(m/m) for fatty acid methyl esters content. The uncertainty for the determination of biodiesel (fatty acid methyl esters) content is comparable to the evaluated uncertainty for the standardized test procedure using infrared spectroscopy prescribed in the European norm for fossil diesel fuel.

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