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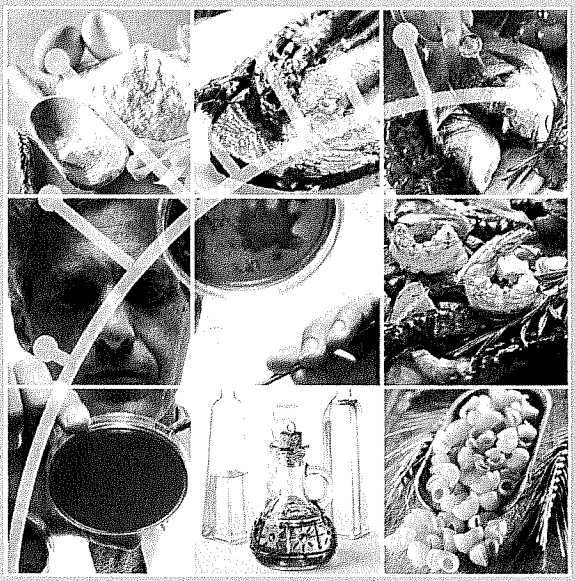

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BOOK OF ABSTRACTS

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#134: EFFECT OF OZONOLYSIS OF SUNFLOWER OIL ON BIODIESEL PROPERTIES

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Biodiesel is produced from vegetable oils by transesterification with alcohols. Biodiesel is an alternative fuel for diesel engines, but some of its properties such as density and viscosity have higher values than those of diesel fuel. Ozonized vegetable oils and ozonides of methyl esters of fatty acids may be able to change advantageously the cloud and pour point of biodiesel, and enhance the combustion performance of biodiesel. In this work the biodiesel produced from sunflower oil by transesterification with methanol blended with ozonized sunflower oil used as fuel additive and biodiesel produced from ozonized sunflower oil by transesterification with methanol were investigated and compared. Acid value, iodine value, cloud point and pour point, flash point, density and viscosity at lower temperatures (-10 – 15°C) were measured and compared. It was found that the ozonolysis of neat oil enhanced the properties of biodiesel; while in some aspects, like viscosity and viscosity index biodiesel blending with ozonated oil resulted in more advantageous properties.

Keywords: ozonolysis, biodiesel, sunflower oil, flash point

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