7th World Congress on

Petrochemistry and Chemical Engineering

November 13-14, 2017 Atlanta, USA

Prominent parameters in biodiesel production systems

Andrew C Eloka-Eboka and **Victoria Malachy Inyang**
University of KwaZulu-Natal, South Africa

In the search for eco-friendly carbon neutral and minimal pollutant emission generating fuels to combat global climate change in addition to issues of the energy security, biodiesel is at the front among the options available for potential bio-renewable fuels. The increasing interest in biodiesel and blends amongst production systems opens up new vistas of research from selection of appropriate raw materials and feed stocks to the desired end product quality and quantity. Biodiesel primarily obtained from the trans-esterification of the fatty acids or by pyrolysis/thermal cracking, however, to achieve the higher quality of biodiesel with higher conversion efficiency from the fatty acids demands exclusive optimum operational and solvent/reagents conditions in terms of their affordability and physico-chemical conditions. There are extensive efforts taken up on the optimization of feedstock oils but yet paradigm shift in the research can be visualized through the use of alternative efficient green solvents/ reagents/enzymes/catalysts and viable advanced low cost technologies. The measure of these qualities and performances after conversion are determined by prominent biodiesel parameters which may be chemo-physical, thermal, gaseous emissions, gravimetric/instrumental and engine performance. The utmost scope to work on the alternative green and sustainable energy is the addition to the use of modern nanotechnologies to biotechnologies for achieving the efficient process as well as optimum production parameters of biodiesel which complies with the US, European, South African and Indian biodiesel standards which are of essence. This paper explores these and their relationships in the biodiesel production systems and highlights their overall significance.

fatherfounder@yahoo.com

J Pet Environ Biotechnol, an open access journal
ISSN: 2157-7463

Petrochemistry 2017
November 13-14, 2017

Volume 8, Issue 5 (Suppl)

Page 57