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Process intensification of transesterification for biodiesel production from palm oil:
Microwave irradiation on transesterification reaction catalyzed by acidic imidazolium
ionic liquids

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1 **Process Intensification of Transesterification for Biodiesel Production from Palm**
2 **Oil: Microwave Irradiation on Transesterification Reaction Catalyzed by Acidic**
3 **Imidazolium Ionic liquids**

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14 **Abstract**

15 In the study, to improve the efficiency of acid-catalyzed biodiesel production
16 process, three acidic imidazolium ionic liquids were synthesized and employed to the
17 production of biodiesel from palm oil under microwave irradiation. The prepared
18 ionic liquids were characterized by NMR, FT-IR and TG-DTG. Among the three ionic
19 liquids, ([HSO₃-BMIM]HSO₄) was proved to be the most suitable catalyst because of

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