ABSTRACT

SYNYHESIS AND CHARACTERIZATION OF ZnO-Fe(II)ACETONITRILE CHLORIDE BLENDING AND PRELIMINARY TEST THE ACTVITY OF CATALYTIC IN TRANSESTERIFICATION REACTION

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Catalyst is one of important material in a reaction. The catalyst activity can be improved by combining with another substance. In this work, an iron(II) chloride blended on ZnO in a solvent ligand has been carried out. The blend obtained process was identified by XRD, FTIR, SEM and AAS. XRD analysis showed that the availability of metal transition salt does not significantly affect the crystallinity of ZnO. FTIR analyst showed that blending product occur in the form of Fe(II) acetonitrile on the surface of ZnO. SEM analysis showed that the blending material is in the form of particle aggregate. AAS measurement proved that the blending material was stable, the leaching value less than 10%. For preliminary catalytic activity test, measurement of GC-MS showed that ZnO-Fe(II)acetonitrile chloride with Fe : Zn 1 : 100 have good activity, in which total of methyl ester produced as 81.35% by area percentage.

Key word : ZnO-Fe(II)Acetonitrile Chloride, ZnO, Blending, Transeterification