Short Communication

Acetylation of glycerol over heteropolyacids supported on activated carbon

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ARTICLE INFO

Article history:
Received 4 October 2010
Received in revised form 22 November 2010
Accepted 27 November 2010
Available online 13 December 2010

Keywords:
Glycerol
Esterification
Heteropolyacids
Activated carbon

ABSTRACT

The acetylation of glycerol was carried out over dodecylammonium phosphoric acid (PW) supported on activated carbon, being the monoaacate, diacetate and triacetate the reaction products.

A series of catalysts, with different heteropolyacid loading (from 3.5 to 6.5 wt%), were prepared. It was observed that the catalytic activity increases with the amount of PW immobilized on the activated carbon, being the PW2_6.5 the most active sample. However, at high loading of heteropolyacid on the activated carbon, a decrease in the catalytic activity was observed, which can be probably explained due to some hindrance in the activated carbon porous system.

All catalysts exhibited good values of selectivity to the diacetate.

Catalytic stability of the PW2_6.5 was also studied by performing consecutive batch runs with the same catalyst sample. After the third batch it was observed that the catalytic activity stabilized.

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