Cellulose Magnetic Membrane

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Cellulose could be found mostly in Kenaf and Empty Fruit Bunch (EFB) in Malaysia. For the purpose of this study, cellulose is used as a source to produce magnetic membrane. This research used the cellulose in the core of the wasted Kenaf to reach a more innovative approach in the preparation of the membrane rather than using synthetic polymer. Cellulose membrane is more biodegradable than the synthetic membrane. The aim of this research is to apply magnetic properties into the cellulose membrane by using ferrous oxide solution. Magnetic membrane can also be prepared using in-situ synthesis of ferrite in the presence of cellulose. Cellulose Magnetic Membrane has been successfully produced by used up to 30% ferrite. The finding of this research shows that the cellulose membrane still show magnetic properties after adding ferrous oxide solution into a cellulose membrane. Therefore, the Cellulose Magnetic Membranes have significant potential as a negative catalyst in the ripening process of fruits which is beneficial in the food import export industry. It can also be used to produce the black strip used for data storage behind credit cards and debit cards. Lastly, our membrane can replace the diaphragm in speakers to produce better sound quality.

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