

**BUKTI KORESPONDENSI PROSIDING JOURNAL OF
PHYSICS (IOP Conf. Series)**
"THE EFFECT OF ALOE VERA ADDITION ON ELECTROSPUN PVA-ALOE VERA-BASED
NANOFIBER MEMBRANE"

Dyah Hikmawati^{1,*}, Ari Risqi Rohmadanik¹, Alfian Pramudita Putra², Siswanto¹

1. BUKTI PENERIMAAN ABSTRACT DAN REGISTRASI

Abstract

**THE EFFECT OF VISCOSITY ON ELECTROSPUN NANOFIBER
MEMBRANE OF PVA-ALOE VERA**

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ABSTRACT

Electrospinning technique is a method to produce nanofiber with high potential difference. Several main parameters in the electrospinning process are solution parameter, such as viscosity, surface tension and conductivity. Those parameters affect the morphology of nanofiber membrane produced by the electrospinning process. This study used 10% PVA in aquadest with several *Aloe vera* concentration (0, 2.5, 5, 7.5 and 10 % w/v). The viscosity of the solution increased when the concentration of the *Aloe vera* increased. SEM image of the nanofiber membrane showed that the diameter of the nanofiber increased with the increase of the *Aloe vera* concentration, with the highest diameter of 379.80 nm on the membrane with *Aloe vera* concentration of 10% w/v. The result of DSC test showed that there were shifts on the glass transition (T_g) and melting point (T_m) value along with the addition of *Aloe vera* in the PVA solution. This results was also emphasized with the result of FTIR test which showed the shift on the wavenumber absorbance due to the crosslinking between PVA and *Aloe vera*. The degradation test indicated that the presence of crosslinking could maintain the nanofiber structure, thus the membrane was not easily degraded.

Kata kunci : electrospining, PVA, *Aloe vera*, nanofiber, viscosity

Fw: Register ICTAP 2018

1 message

Dyah Hikmawati, S.Si., M.Si <dyah.hikmawati@yahoo.co.id>
Reply-to: dyah.hikmawati@yahoo.co.id <dyah.hikmawati@yahoo.co.id>
To: Alfian Pramudita <pramuditaalfian@gmail.com>

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Kepada: ictap2018@gmail.com

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