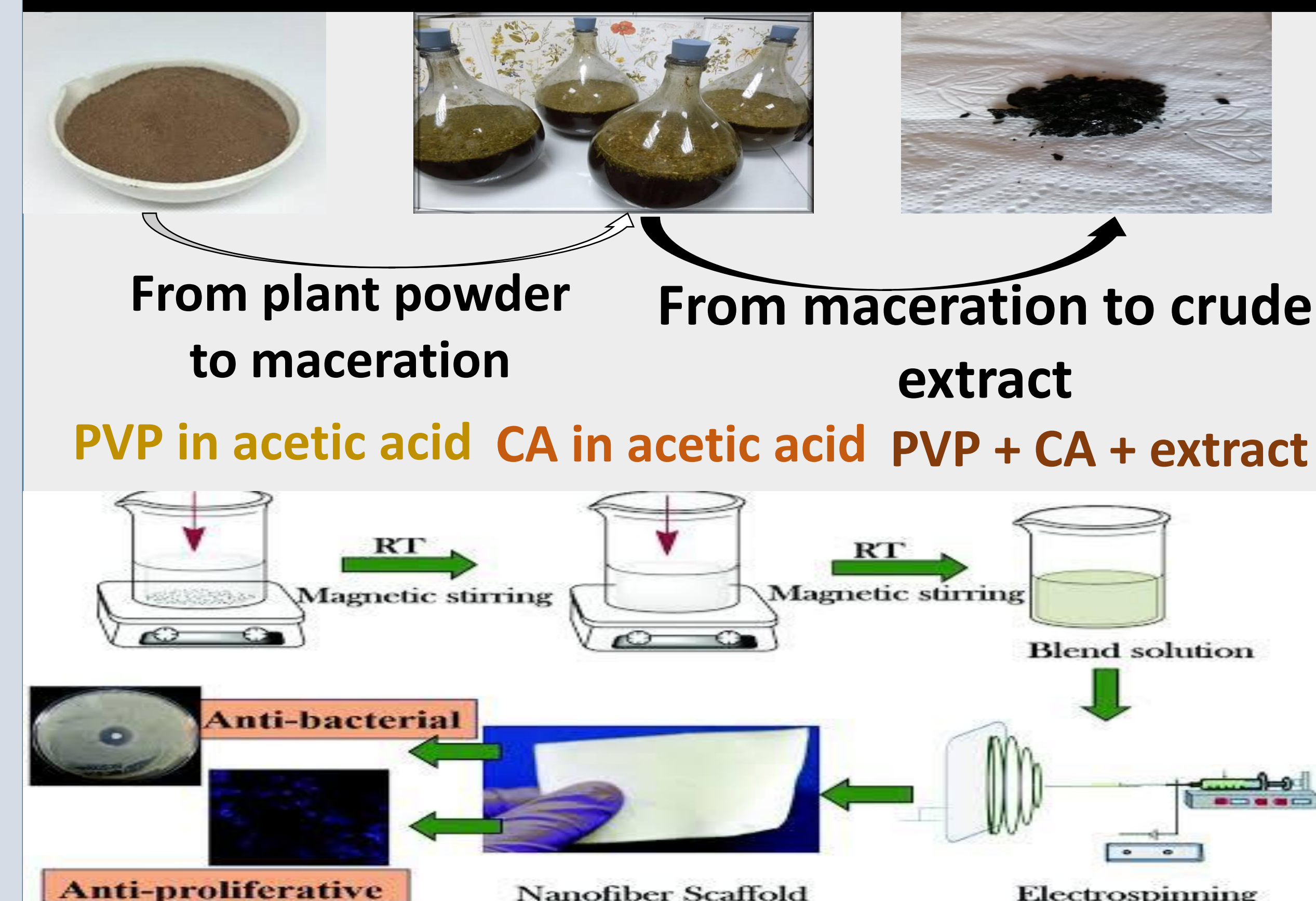


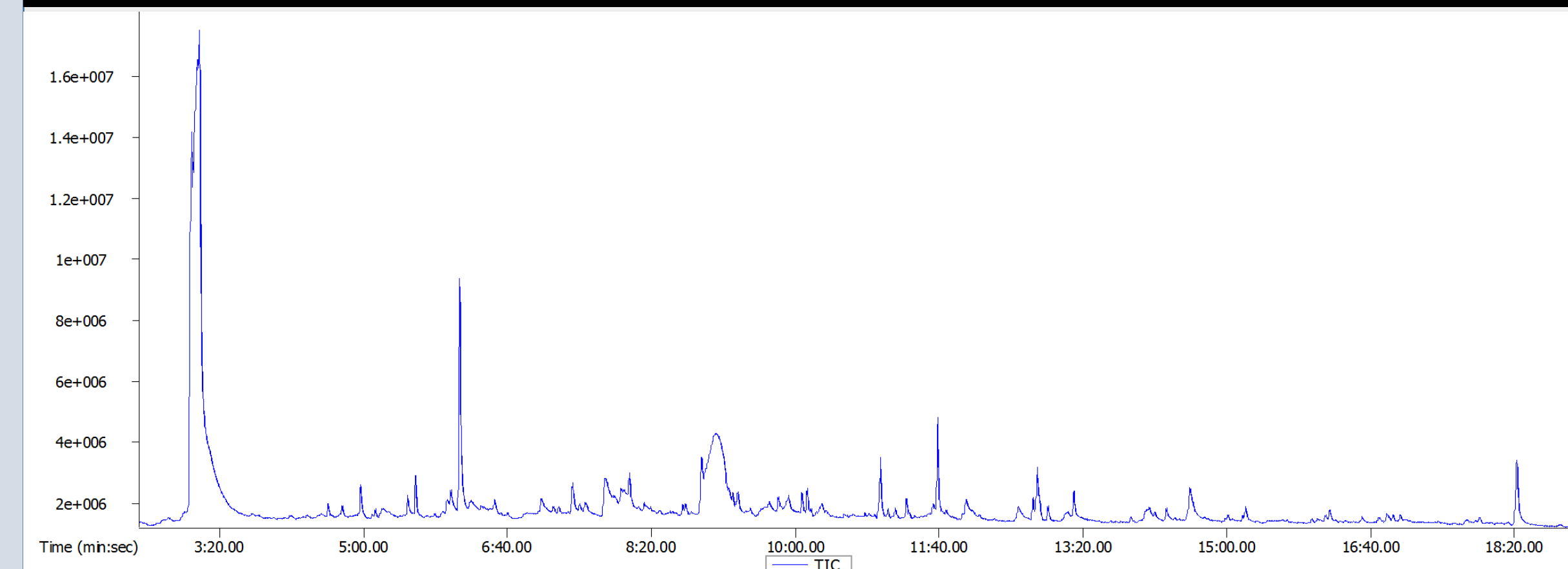
Abstract

Pelargonium alchemilloides (L). *L'herit* (PA) is an ancient medicinal plant especially known for its beneficial properties for human health, due to its bioactive compounds. This work reported the use of electrospinning to incorporate PA extract in nanofibrous mats. PVP and CA were the building blocks of the composite fibers that served as the hydrophilic matrix to incorporate the extract mainly to improve the mechanical properties of the composite fibers. The produced fibers were uniform, bead-free with a size ranging from 306 to 1001 nm. FTIR proved the blending of PVP and CA as well as the presence of the PA extract in the fibers. GC-MS confirms the presence of bioactive compounds within the extracts.

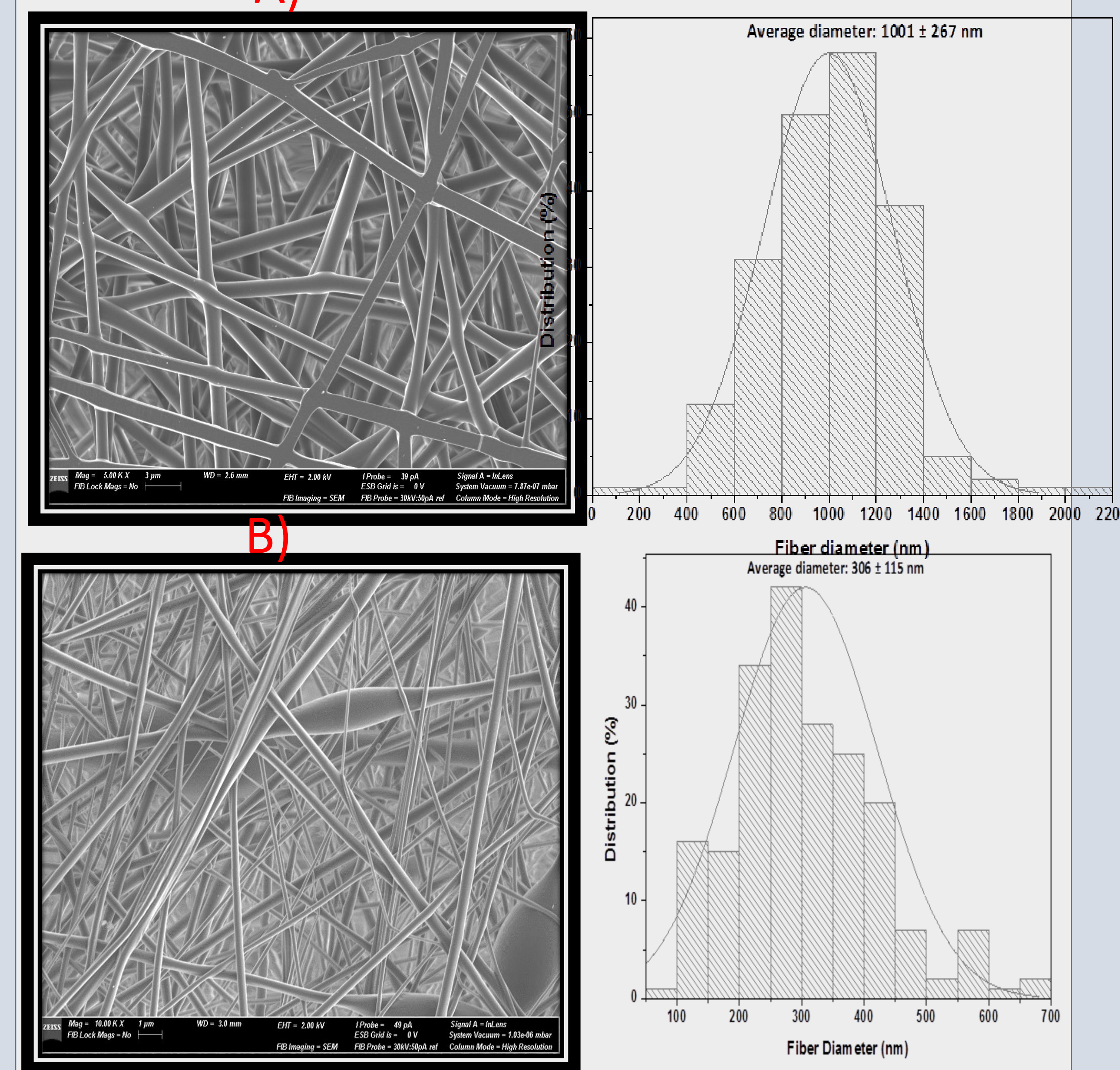
Methodology



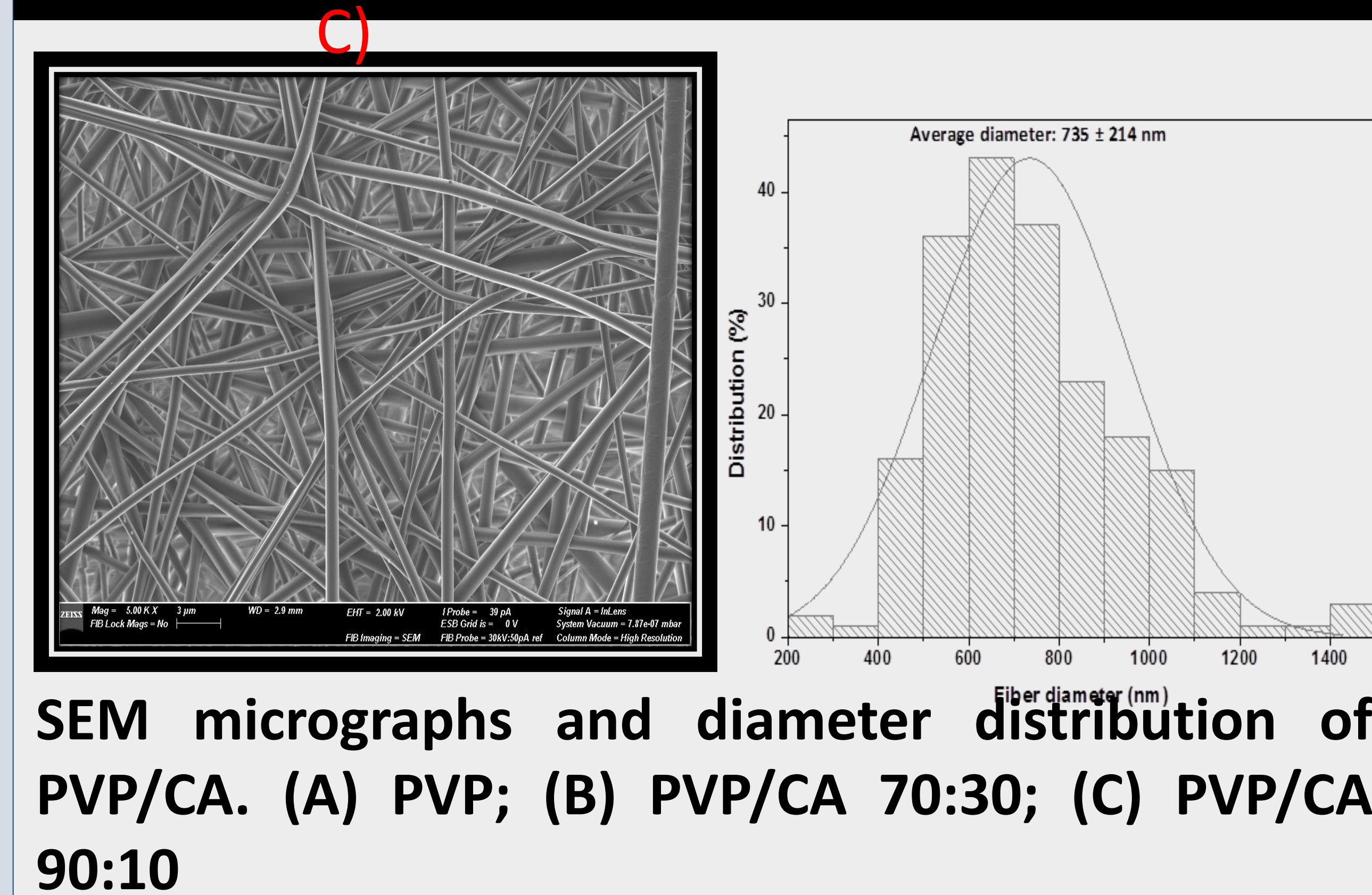
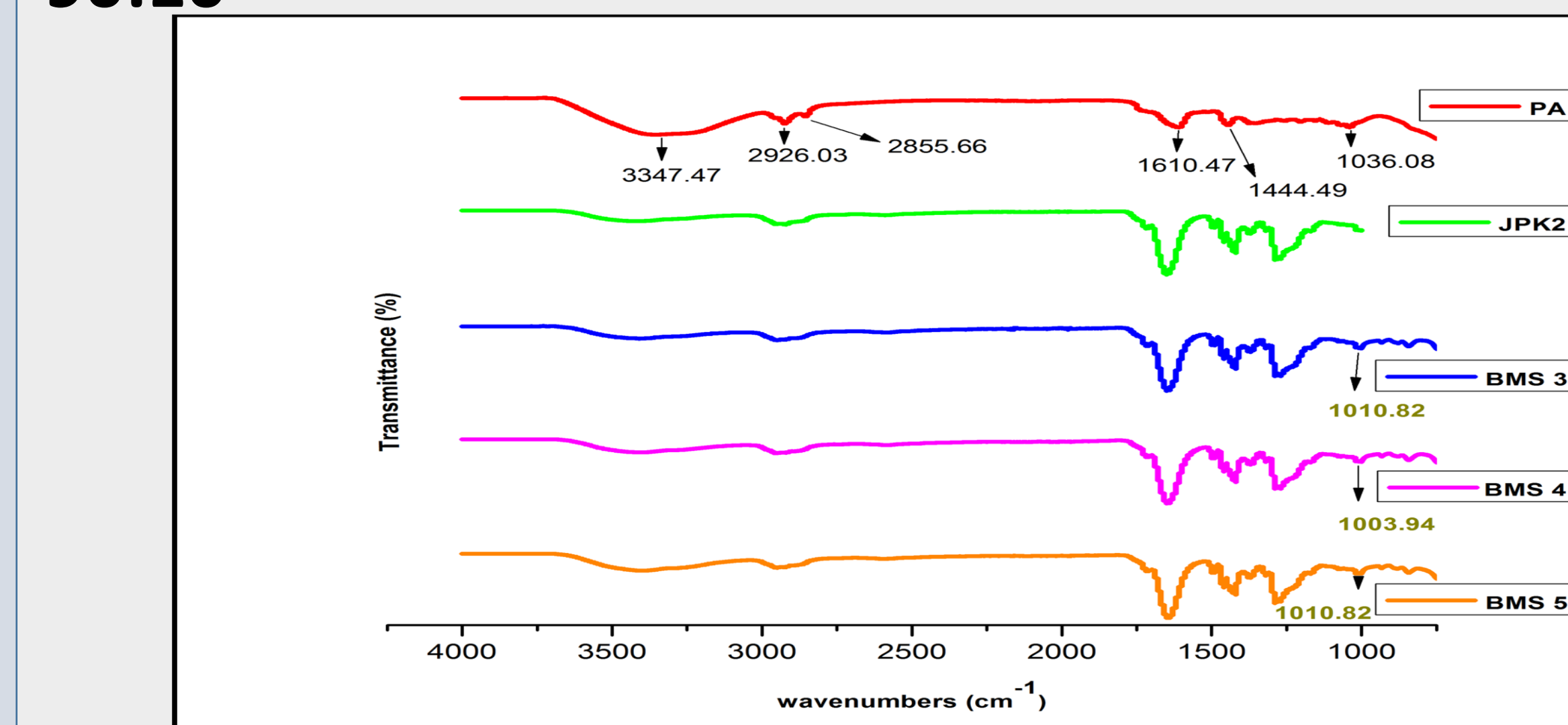
Results



GC-MS chromatogram of the methanolic leaf extract of *Pelargonium alchemilloides* (L). *L'herit*



Results...



FTIR spectra of extract, PVP/CA, and PVP/CA-Ex nanofibrous membranes

BMS3: PVP/CA-Extract (3 wt%)
BMS4: PVP/CA-Extract (4 wt%)
BMS5: PVP/CA-Extract (5 wt%)

Work in progress

1. Characterization of PVP/CA-Extracts using Scanning electron microscopy (SEM).
2. Characterization of PVP/CA and plant extracts/PVP/CA using x-ray diffraction (XRD) and thermogravimetric analyzer (TGA).
3. To investigate the in-vitro bioactivity of the prepared nanofibers against *Escherichia coli* (*E. coli*) and *Staphylococcus aureus* (*S. aureus*) using the quantitative AATCC Test Method 100:2004 protocols with slight modifications.

References

Abrigo, M., McArthur, S & Kingshott, P., 2014. Electrospun Nanofibers As Dressings for chronic wound care: Advances, Challenges, and Future prospects. *Macromol. Biosci*, 14 (6), pp. 772-796.

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