Electronic Supplementary Material (ESI) for RSC Advances.

Enhanced insect-resistance, UV protection, antibacterial, and antistatic properties exhibiting by wool fabric treated with polyphenols extracted from mango seed kernel and feijoa peel

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Supplementary Information

Contents

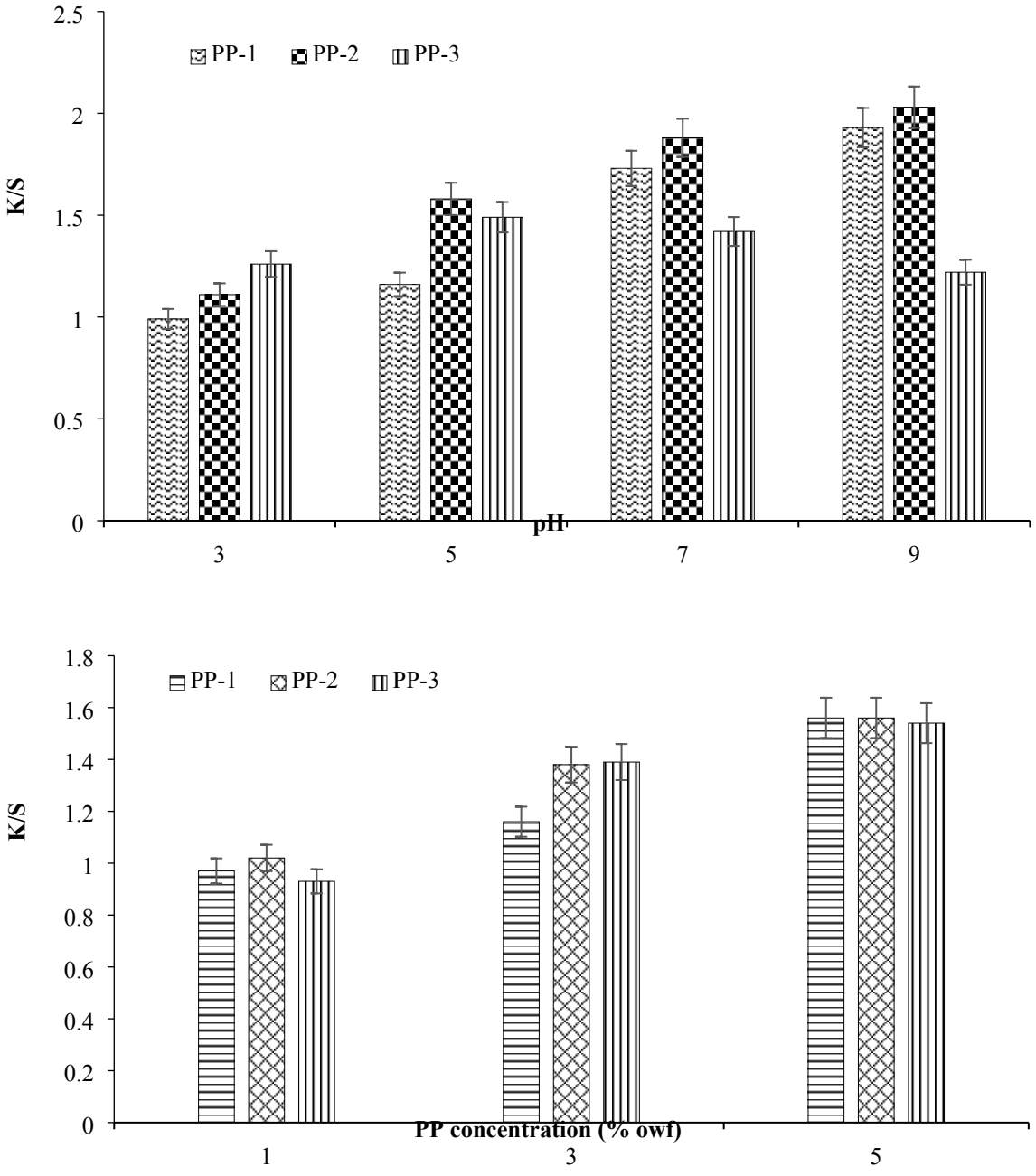
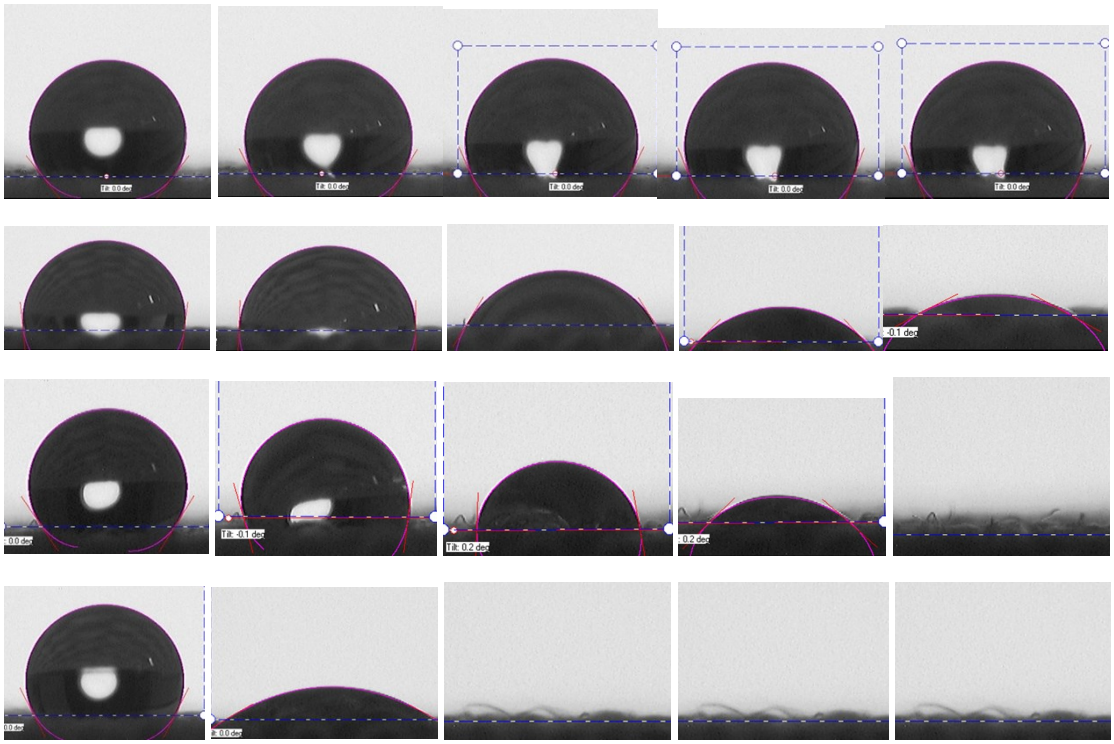


Fig. S1. Effect of treatment pH (top) and PP concentrations bottom) on the absorption of wool fabric treated with PP-1, PP-2, and PP-3.



0 s 30 s 60 s 90 s 120 s

Fig. S2. Optical images of shape of droplets of water at various times.

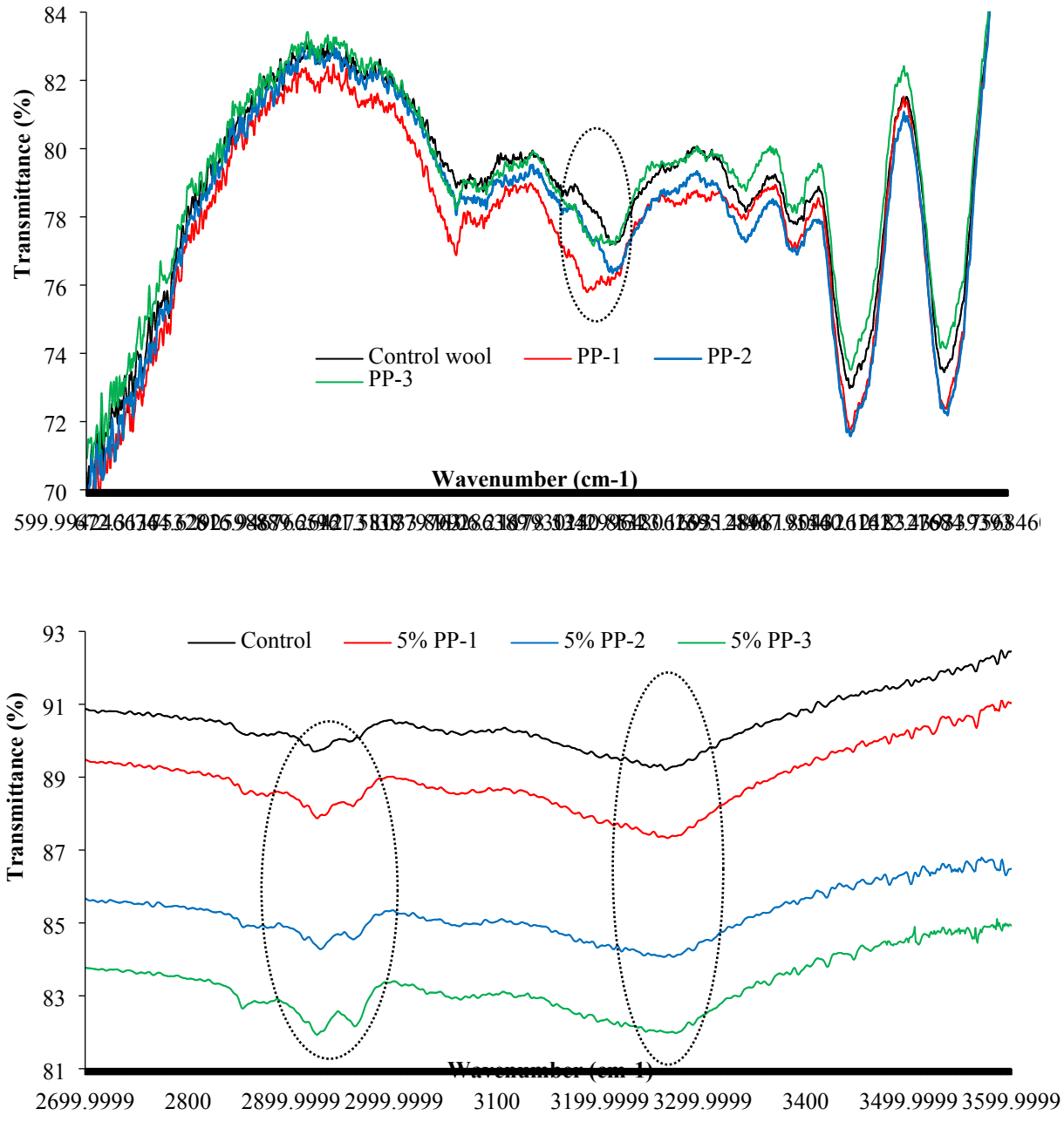


Fig. S3. ATR-FTIR spectra of wool fabric treated with various PPs at 5% owf at pH 5.

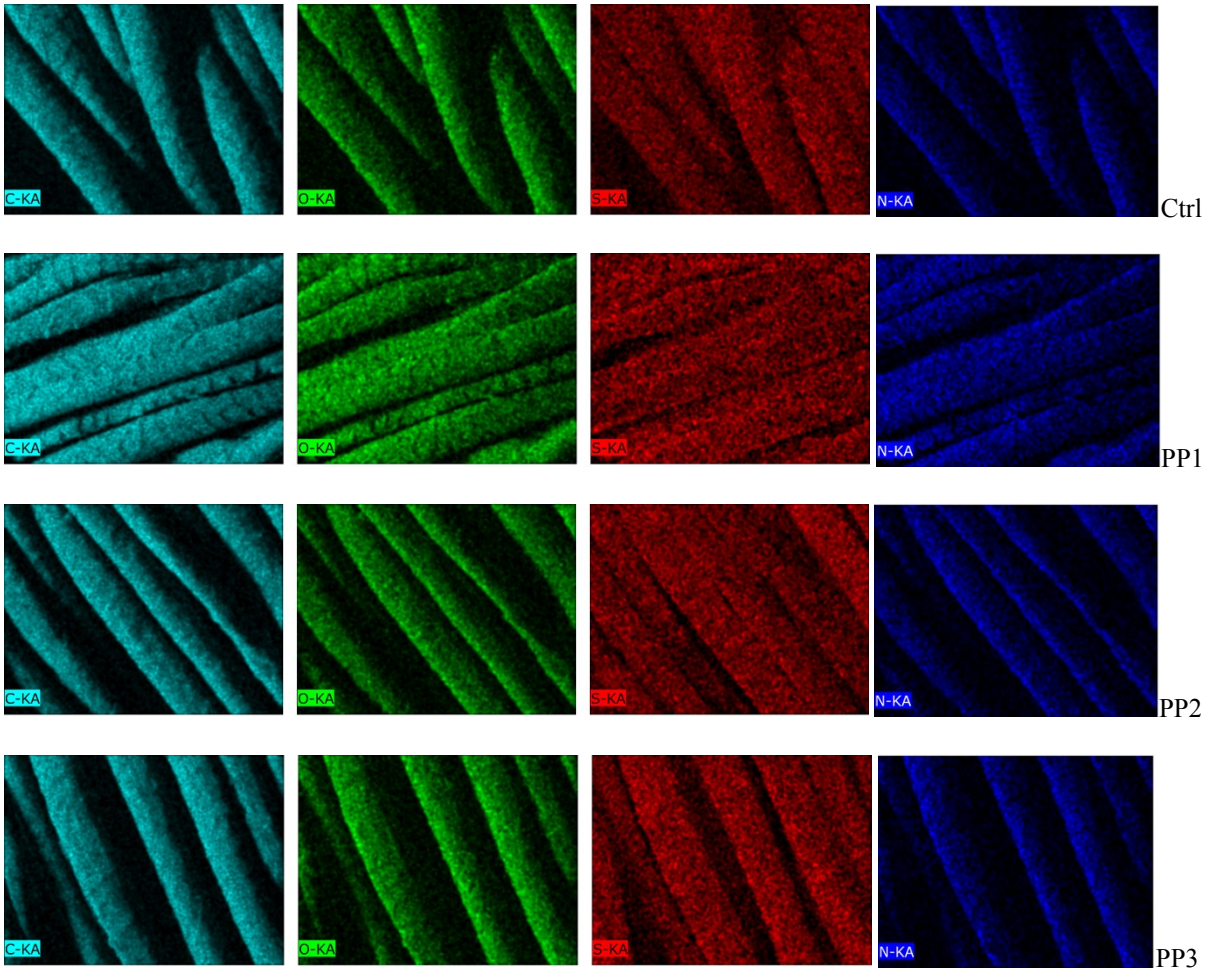


Fig. S4. Elemental distribution of C, O, N, and S in untreated (a) and wool fabrics treated with 5% owf PP-1, PP-2, and PP-3.

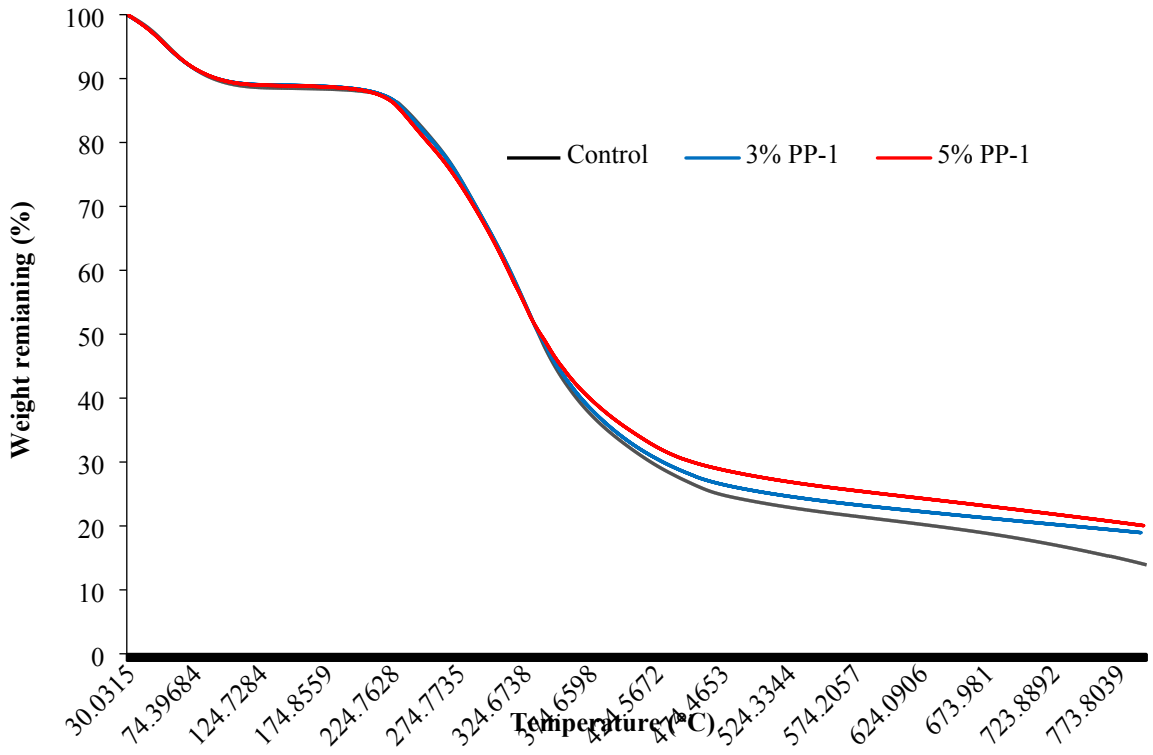
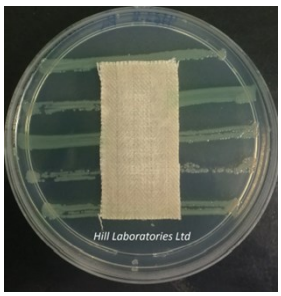
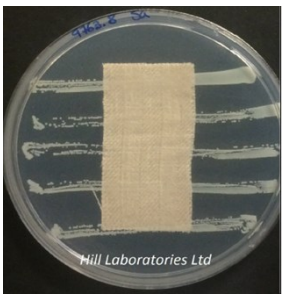
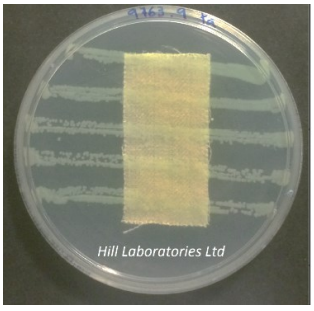
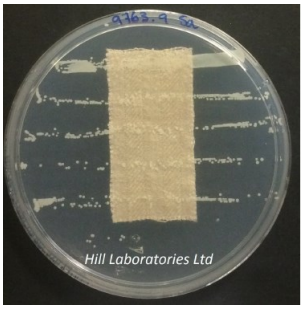


Fig. S5. Weight loss of wool fabric treated with PP-1 over room temperature to 800 °C under nitrogen.

Table S1. Antibacterial performance of wool fabric treated with polyphenols before and after 5 washing against various plants against various bacteria.

Treatments	Antibacterial activity against		
	Pseudomonas aeruginosa	*Staphylococcus aureus*	*Klebsiella pneumoniae*
Wool fabric treated with PP-3 before washing	No zone of inhibition was seen around the fabric. No growth of bacteria under the fabric. 	No zone of inhibition was seen around the fabric. No growth of bacteria under the fabric. 	No zone of inhibition was seen around the fabric. No growth of bacteria under the fabric. 
Wool fabric treated with PP-3 after 5 washing	No zone of inhibition was seen around the fabric. No growth of bacteria under the fabric. 	No zone of inhibition was seen around the fabric. Weak growth of bacteria under the fabric. 	No zone of inhibition was seen around the fabric. No growth of bacteria under the fabric.