

Supplementary Material

# Characterization of Food Packaging Films with Blackcurrant Fruit Waste as a Source of Antioxidant and Color Sensing Intelligent Material

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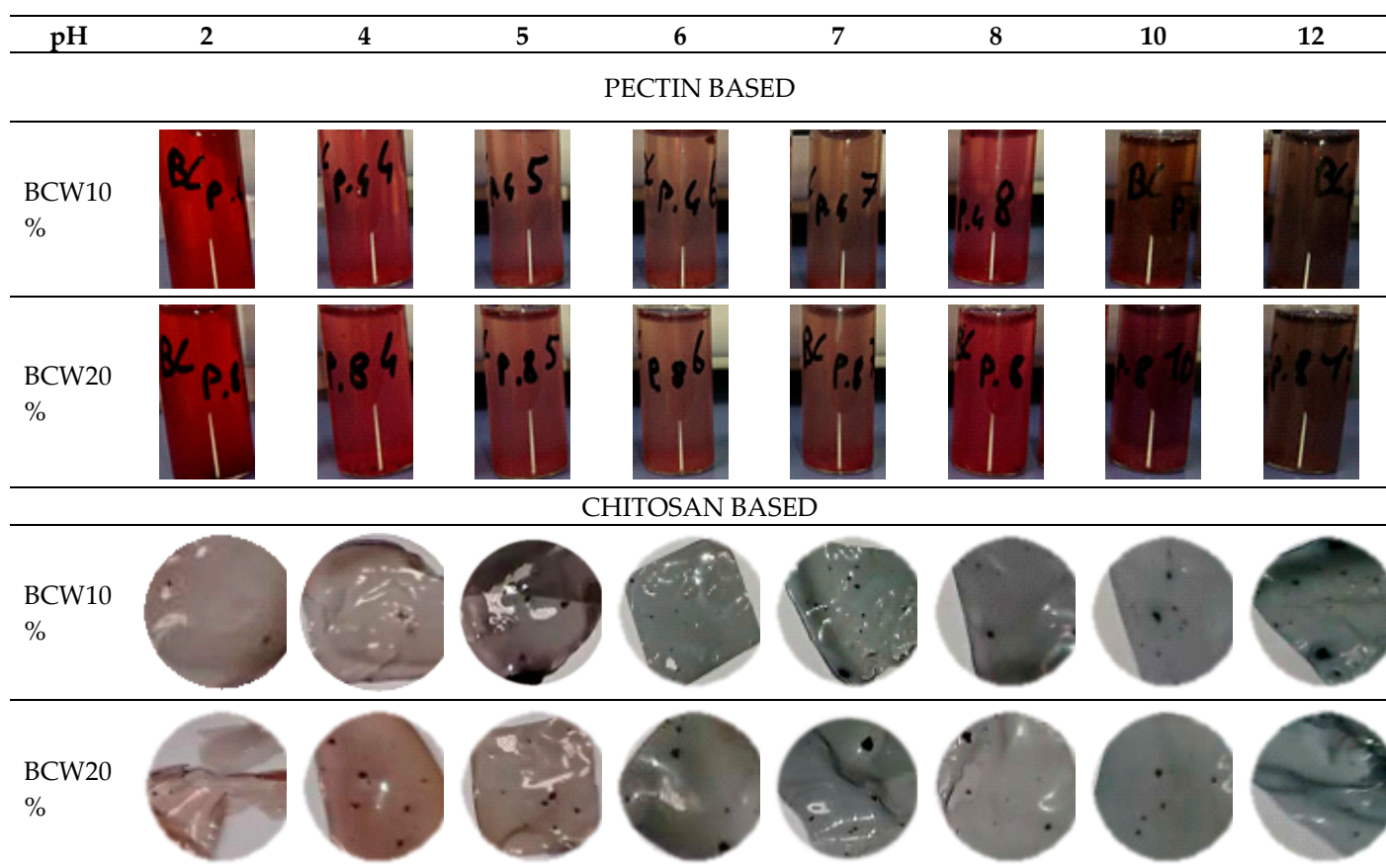
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**Figure S1.** Photos of chitosan and pectin films with blackcurrant powder (BCW) (10 and 20%).

**Table S1.** FTIR spectral data ( $\nu$  –stretching; as-asymmetrical, s-symmetrical,  $\delta$  -deformation) of chitosan (CS) and pectin (PEC) without or with blackcurrant powder (BCW).

Film	$\nu$ O-H, $\nu$ NH <sub>2</sub>	$\nu_{as}$ C-H	$\nu_s$ C-H	$\nu$ C=O (amide I)	$\delta$ NH (amide II)	$\delta$ C-H	$\nu_s$ C-O-C	$\nu$ C-O	$\nu$ C-O
CHITOSAN									
CS	3647-2968	2929	2879	1651	1546	1406	1151	1063	1019
CS10BCW	3688-2981	2929	2881	1650	1543	1406	1151	1064	1019
CS20BCW	3676-2975	2930	2881	1650	1543	1406	1151	1064	1019
PECTIN	$\nu$ O-H	$\nu$ C-H	$\nu$ COOH		$\nu$ C=C	$\nu$ C-O			
PEC	3689-2993	2934	1744		1638	1014			
PEC10BCW	3674-2979	2937	1740		1638	1015			
PEC20BCW	3689-3000	2937	1735		1638	1014			

CS-chitosan, CS10BCW and CS20BCW-chitosan with 10 and 20% (*w/w*) blackcurrant powder, PEC-pectin. PEC10BCW and PEC20BCW-pectin with 10 and 20% (*w/w*) blackcurrant powder.