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A lab-scale method for developing antimicrobial paper coating application on food packaging

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Paper and paperboard materials are important for their suitability for food contact applications because of their structural advantage. The paper surface imparts antimicrobial properties to the nutrients. Coatings applications of paper surface in food packaging are important with respect to bestow antimicrobial features. In order to determine suitable coating material and substrates, there is a need for a lab-scale design. For this application, #0 and #3 drawdown bar and 3 kinds of paper were chosen. Wrapping paper, paper board and test liner were the base papers. Starch used as a binder. Distilled water was used for cooking the starch. Antimicrobial coat color is added the starch solution 10% (w/w). Paper surfaces were coated with the prepared coating color using a # 0 drawdown bar. It was paid attention that the maximum amount of coating applied on one side, was 4.5 g/m^2. According to obtained results, coating application is changed depending on the paper. While paperboard absorbed more antimicrobial emulsion, wrapping paper absorbed almost half of coating color at the same coating surface thickness. Similarly; # 0 drawdown bar was suitable for coating wrapping paper, # 3 drawdown bars was more suitable for test liner paper and paperboard

Biography

Ahsen Ezel Bildik has completed her PhD from Istanbul University and Postdoctoral studies from Istanbul University, Department of Forest Product Chemistry and Technology, Turkey.

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