POSSIBILITY OF USING NEW BIOPOLYMER/POLYETHYLENE BILAYER FILM FOR PACKING COFFEE

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ABSTRACT

EU Legislation in Progress shows strong orientation towards usage of packaging materials suitable for recycling. In the domain of polymers, this would mean monolayer materials primarily. In some areas of packaging, this can represent serious challenge. In the present research, two-layer material was developed and tested for coffee packaging. The new material was designed using two rather different layers: hydrophilic biopolymer layer based on wild flax *(Camellina Sativa)* oilseed cake and polyethylene, non-polar layer. Two layers can be separated based on their different nature and directed to waste streams to be recycled (polyethylene) and disposed/composed (biopolymer).

Using new material, pouches were formed, filled with 10g of black coffee (90% Arabica and 10% Robusta) and sealed. As a control, pouches were also made of PET/AL/PE, filled and sealed. After 30 and 60 days of storage, sensory analysis of coffee was performed. After 30 days of storage, sensory score of coffee packed in the new material was minimally lower comparing to control (no statistical difference), but after 60 days of storage, difference in sensory score was considerable. For shorter period, new material could be interesting solution, but with prolonged contact time, sensory attributes of coffee were influenced by sensory properties of the packaging material.

Keywords: biopolymer, wild flax, packaging, coffee

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