

Title Absorption of food simulants in polyolephinic packaging materials
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Abstract

Absorption of 3% acetic acid and 15% ethanol solutions in polymeric material: low density polyethylene (PE-LD) and biaxially oriented co-extruded polypropylene (BOPPcoex) was investigated. The polymer materials were subjected to food simulants (acetic acid and ethanol aqueous solutions) during 34 days at three different temperatures (40°C, +4°C and room temperature 20±2°C). At regular time intervals the conductivity and pH of solutions were measured. Solvent absorption and moisture transmission rate through polymeric materials, at different temperatures, were determined. Both, PE-LD and BOPPcoex showed steady-state transmission rate after 11 days of exposure. Unlike PE-LD film, BOPPcoex showed linear change with time after 11 days of exposure in both solutions.