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Bioactive films of arrowroot starch and blackberry pulp: Physical, mechanical and barrier properties and stability to pH and sterilization

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Abstract: The influence of the incorporation of blackberry pulp on properties of arrowroot starch films has been studied. The blackberry pulp transferred bioactive compounds, antioxidant capacity and color to arrowroot starch films. Increasing the concentration of blackberry pulp (from 0 to 40%, mass / mass of dry starch) in the film resulted in increased thickness (from 0.065 to 0.133 mm), increased elongation (from 3.18 to 13.59%), decreased tensile strength (from 22.71 to 3.97 MPa), increased water vapor permeability (from 3.62 to 4.60 gmm/m²daykPa) and solubility in water (from 14.18 to 25.46%). The films were stable to different media, maintaining the same initial diameter dimensions after immersion in acidic, neutral and alkaline solutions, but their color

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