Tailorpack: active tailor made and eco-friendly packaging for fresh fruit and vegetable preservation
Barbara Gouble, Thibault Cagnon, Patrice Reling, Carole Guillaume

To cite this version:
Barbara Gouble, Thibault Cagnon, Patrice Reling, Carole Guillaume. Tailorpack: active tailor made and eco-friendly packaging for fresh fruit and vegetable preservation. 1st Euro-Mediterranean Symposium on Fruit and Vegetable Processing, Apr 2011, Avignon, France. 2011. hal-02811096

HAL Id: hal-02811096
https://hal.inrae.fr/hal-02811096
Submitted on 6 Jun 2020

HAL is a multi-disciplinary open access archive for the deposit and dissemination of scientific research documents, whether they are published or not. The documents may come from teaching and research institutions in France or abroad, or from public or private research centers. L’archive ouverte pluridisciplinaire HAL, est destinée au dépôt et à la diffusion de documents scientifiques de niveau recherche, publiés ou non, émanant des établissements d’enseignement et de recherche français ou étrangers, des laboratoires publics ou privés.
Tailorpack: Active tailor made and eco-friendly packaging for fresh fruit and vegetable preservation

Barbara Gouble¹, Thibaut Cagnon², Patrice Reling¹, Carole Guillaume²

¹INRA, Université d’Avignon, UMR408 Sécurité et Qualité des Produits d’Origine Végétale, 84000 Avignon, France
²Université Montpellier2, INRA, Montpellier SupAgro, CIRAD, UMR1208 IATE < Agropolymers Engineering & Emerging Technologies, F-34000 Montpellier

Through a global and trans-disciplinary approach based on modelling tools, the Tailorpack project aims to design and dimension multilayered composite materials at a nanometric scale constituted by a fibres based support, protein and nanoparticles based layers for controlling mass transfer: gas, water vapour and active compounds. We present here the results concerning O₂ and CO₂.

Product knowledge

Through a global and trans-disciplinary approach based on modelling tools, the Tailorpack project aims to design and dimension multilayered composite materials at a nanometric scale constituted by a fibres based support, protein and nanoparticles based layers for controlling mass transfer: gas, water vapour and active compounds. We present here the results concerning O₂ and CO₂.

Modelisation

- Availability of packaging requirements according to virtual MAP
- Identification of O₂ and CO₂ permeability windows by using physiological parameters and optimal atmosphere

Validation

- At laboratory and pre-industrial levels, some packaging material have been elaborated and tested for their permeability characteristics.
- Transfer to industrial scale is under going and validation with F&V trials is planned in few weeks.

During 3 years, the Tailorpack project had led to collect a lot of data, to develop an internet website and to elaborate gluten/paper packaging.

Studies continue on layers by layers deposit, ethylene absorption and aroma compounds effects, with validations this year.

Tailorpack partners:

INRA
Université d'Avignon
iAte
Ctifl
SADRON

* corresponding author: barbara.gouble@avignon.inra.fr