



Tendencias en tecnologías de envase
para responder a las demandas
“convenience” de los consumidores
Trends on packaging technology to
fulfil consumer convenience demands

José Ángel Garde (AINIA)

31st May 2017

SESSION 6: End users: Packaging trends (shelf-life, convenience, sustainability, Industry 4.0 ...)

Trends on packaging technology to fulfil consumer convenience demands

José-Angel Garde · AINIA



Convenience

"Any fully or partially prepared foods in which significant preparation time, culinary skills, or energy inputs have been transferred from home kitchen to the food processor or distributor" (Traub and Odland, 1979)

Comfort
and easy of
use

Saving of
time and
effort

Shifting and
storing of
time

Easy-opening
Easy preparation
Easy consume
Waste sorting

Easy cooking:
dual ovenable
Ingredient mix
Whole meal:
nutrition issues

Longer shelf-life
Better stock
management at
home

"Convenience Packaging"

meetingPACK 2017

3rd
EDITION

Saving time for
preparation:
Microwave and Conventional



Less times to go to buy
- Shopping on-line
- Extended shelf-life



Superior gourmet at home:
Greater variety of tastes



Easy to carry, easy consuming, addressed to specific social groups (children, seniors, sportmen/sportswomen...)



Better sustainability and less
food waste



Keys of convenience food for seniors consumers



CONVIPACK: *Nuevos desarrollos de envases funcionalizados para alimentos: hacia la generación de envases "convenience".*



1. *Traditional recipes.* Traditional preparations using healthy products and good quality ingredients. No additives, natural preservation processes. They seek quality.
2. *Easy to handle and with visibility.* Age, limitation movility. Easy handle, easy-open and easy identification of the product (seen through package).
3. *Microwave cooking/heating.* Traditional and home made recipes, without getting dirty. Just heat and ready to eat.
4. *Appealing presentation.* Single whole meal or with one garnish at most are preferred. They do not like multi-compartment packagings (hospital's meals).
5. *Information/communication in the packaging.* Direct and clear messages. Easy to read and easy to follow indications. Realistic messages.
6. *Way to prepare.* They like to have information about the process, as well as information related to nutricionists, physicians an/or well-known chefs.
7. *Product's benefits.* Messages of their interest should be highlighted: low salt content, helps to control cholesterol, strengthen your defenses...
8. *Packaging cost.* They are not willing to pay extra cost, if they do not show clear benefits.

EASY: preparation, consume, cooking.

1. Ready-to-eat (RTE): take-away main courses, chilled sandwiches, salads, pies, etc. Consumed on the way.
2. Ready to heat (RTH): chilled and frozen main courses (e.g. pizza), as well as dehydrated and canned food. Up to 15 min heating before consumption.
3. Ready to end-cook (RTEC): chilled and frozen (lasagne). More than 15 min heating before consumption.
4. Ready to cook (RTC): minimally prepared food. Full cooking of some or all of its components before consumption.

Social drivers for convenience demand

1. Ageing population
2. Changing household structure
3. Equitable distribution of tasks in household and longer working hours
4. Consumer prosperity and technology ownership
5. Declining cooking skills
6. Desire for new or remember experiences
7. Individualism
8. Healthy eating
9. Breakdown of traditional mealtimes
10. Value for money

EASY: preparation, consume, cooking.

1. Cooking in microwave

- Minimum food handling, no transfer from pack to tray/dish.
- Shorten cook times.
- Meat, fish, vegetables and fruit
- Counter bags.
- If skin package, better “dish” presentation, messy ingredients. Improve consumer appeal.
- Stand-up bags: view and space economy.
- Steam cooking valves.
- Enable uniform steam cooking with microwave vent system
- Dual compartment steam cooking bags: Food and sauces are kept separate.

Counter bag
www.sirane.com

MicVac®, special label as valve
www.schur.com, www.sealpac.com

Better presentation
www.sealedair.com

Microwave cooking
www.schur.com

Valves design
www.bemis.com

ProtectValve
www.amcor.com

Sira-Cook™ Sira-Vent™
www.sirane.com

EASY: preparation, consume, cooking.

2. Dual ovenable: conventional/microwave/BBQ

- Conventional oven or on a griddle, hot-plate or barbecue/BBQ
- Polyester or Nylon roasting bags: 190-210°C. Good barrier and suitable for vacuum packed.
- Thickness, 50-75 µm.
- Meat (ribs, tenderloins), fish, poultry (even whole), seafood or vegetables.
- Food is cooked with its own juices: tender and retained moisture.
- Prevent drying-out and burning the product.
- Hygienic: avoid contamination of the product, work surfaces and the consumer, with a straight to oven, fresh or frozen, prepared product.
- Meets consumers' needs for hassle-free meal preparation and unattended cooking.
- Eliminates pre-cook preparation (from 60 mins in 1993 to 20 min in 2023), just place the product in the oven and cook while doing other things.

Nylon oven/microwave bag/BBQ
www.sirane.com

OvenRite®
www.bemis.com

Oven Ease®
sealedair.com

EASY: preparation, consume, cooking.

3. Cooking bags: "sous-vide"

- Vacuum packaging.
- Slow, low temperature.
- Cooked slowly in a temperature-controlled 'water bath'. Up to 120°C.
- If roasting, PA (180-210°C).
- Meat, fish, vegetables and fruit.
- Food retains moisture and nutrients.
- Extends shelf-life as the bag remains air-tight.
- No re-packaged.

Water bath for sous-vide
www.sirane.com

"Sous-vide" bag
www.schur.com

EASY: preparation, consume, cooking.

4. Susceptors (microwave).

- Crispy food.
- Hot-plates for bases of pizzas.
- Multilayer structure designed for absorbing excess moisture and fat, whilst crisping up the food.
- Films (pouches, sleeves, bags and wrap): paninis, pizzas, sausage rolls and pasties, as well as potato wedges, chips and popcorn.
- Boxes, boards, sleeves and liners: paninis, meat slices, quiches, sausage rolls, molletes.
- Potato baker: the liner crisps up the potato skin. Jacket potatoes, roast potatoes and croquettes

EASY: preparation, consume, cooking.

4. Susceptors (microwave).

- Sira-Crisp™, Susceptor film, Patato-Bakers
- Spanish market examples: pizzas and popcorns.

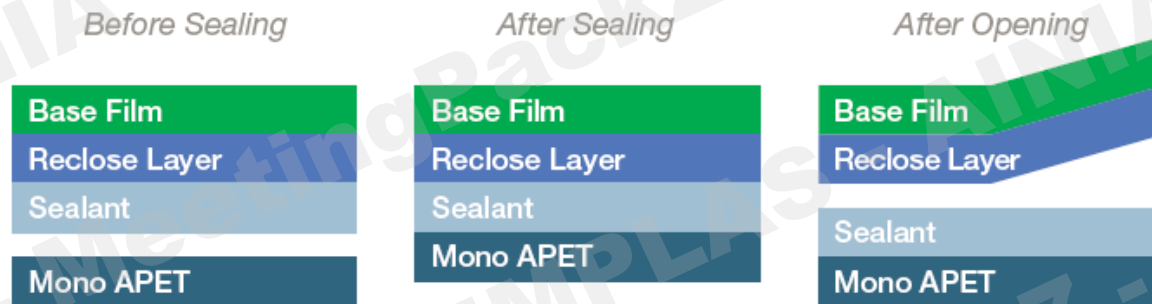
www.sirane.com



EASY: use, open.

5. Easy open and reseal:

- Performance more demanded by consumer.
- Different mechanisms: Adhesive peel (contamination), cohesive peel, delamination peel.
- Example: BEMIS (PET EZ Peel™ Reseal™).



www.bemis.com

- Easy open without compromising barrier integrity. PushPop de AMCOR.

EASY: assorted ingredients with different characteristics.

5. Multi-compartment packages.

- Packages for salads.



- Packages for ready-meals.

Schur® Star Squeeze 'n' Mix
www.schur.com



- Other examples: package for powder milk (DUPONT), package with spoon included (SCHUR).

CONSUMER ATTRACTION:

6. Masking exudates.

- Dual compartment vacuum package (PA/PE) with hygienic separation of meat and drip-loss.
- Porous seam between both compartments.
- Optimized maturation process.



www.sealpac.com

EASY: dose.

5. Dispenser packages.

- Individual dose.



www.sealpac.com

- Accurate amount



www.superfos.com



www.ainia.es

Parque Tecnológico de Valencia
c/ Benjamin Franklin, 5-11
46980 Paterna
informacion@ainia.es
Tel. 96 136 60 90

www.aimplas.es

Parque Tecnológico de Valencia
c/ Gustave Eiffel, 4
46980 Paterna
info@aimplas.es
Tel. 96 136 60 40