



Packaging and Food Safety

Thinking Inside the Box
September 10, 2008

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Food Safety

Packaging Materials have Direct or
Incidental Contact with Foods

Think ***Inside*** the Box



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What Packaging?



Packaging?

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Food Packaging Regulations (Health Canada)

- Safety of all food packaging materials controlled under Division 23 of the Food and Drugs Act and Regulations Section B.23.0001 (http://www.hc-sc.gc.ca/fn-an/securit/packag-emball/index_e.html) .
- Prohibit sale of foods in packages that may impart harmful substances to their contents.
- The onus is on the food seller to meet that requirement.
- Premarket assessment of chemical safety of food packaging materials may be submitted **voluntarily** to the Health Products and Food Branch (HPFB).
- Applies to:
 - finished product (i.e. laminated film, container, etc.)
 - formulated product (i.e. plastic resin, colour concentrate, etc.)
 - single additives (i.e. anti-oxidants, UV absorbers, etc).
- Recycled plastics for food packaging foods subject to same regulations as virgin plastic but there are additional guidelines.

Health Protection and Promotion Act – R.R.O. 1990, Reg. 562

- 1. (1) "multi-service article" means any container or eating utensil that is intended for repeated use in the service or sale of food;
- "multi-service article" means any container or eating utensil that is intended for repeated use in the service or sale of food;
- "sanitizing" means antimicrobial treatment, and "sanitize" has a corresponding meaning;
- Legal requirements for multiservice articles.
- 29. Food containers that are multi-service articles shall,
 - (a) be constructed of such materials and in such a manner as to be readily cleaned and sanitized; and
 - (b) not be used for any purpose other than the packaging of food. R.R.O. 1990, Reg. 562, s. 29.
- 71. (1) Multi-service articles shall be cleaned and sanitized after each use. R.R.O. 1990, Reg. 562, s. 71 (1).
- 80. The standard plate count from a multi-service article shall not exceed 100 bacterial colonies after cleaning and sanitizing and prior to re-use when tested by an official method in accordance with the standard plate test, utilizing the swab technique. R.R.O. 1990, Reg. 562, s. 80.

Food Packaging Chemical Safety Alerts



Chemical: Bisphenol A (BPA)

Health Risk:

- Hormone disrupting effect on animal and human cells
- Links to breast cancer

Use:

- Building block of epoxy resins (protective coatings on food and beverage cans) and polycarbonate (baby bottles, water bottles, plates, microwave oven ware, storage containers)

Government Policy:

- On April 18, 2008, the Canadian government announced a ban on the import and sale of polycarbonate baby bottles containing BPA, making Canada the first country in the world to limit exposure to the chemical.
- Health Canada's assessment show that negative health effects occur at levels much greater than exposure concentrations. Early development is sensitive to the effects of BPA and therefore the safety margin needs to be higher.
- Canadian retailers (Wal-Mart, Canadian Tire, Hudson's Bay Co, Forzani, Sears Canada) have responded by pulling polycarbonate containers from the shelves.

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Exposure Precautions

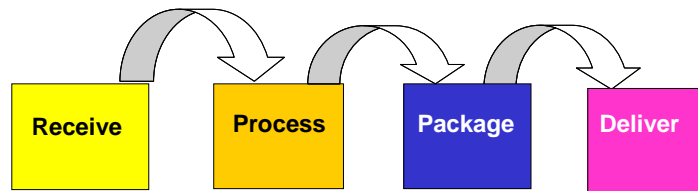
- Scientist suggest the limiting one's exposure to these chemicals is proactive.
- Heating is known to enhance migration of chemicals from packaging into foods.
- Many animal studies have been conducted.
- There are no definitive studies pinpointing the exact threat these compounds may pose to human health or what levels in the body are safe over long term use.

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What is HACCP?

- Hazard Analysis Critical Control Points
- A systematic approach to controlling site specific food safety risks during the manufacture and delivery of packaging materials



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Why is HACCP a Priority?

Customer Focus – The Food Industry is driving HACCP with its packaging suppliers.

Value Proposition – Grow business and reduce costs.

Canada is a large exporter of foods – Food exports must be high quality and internationally accepted.

Canada is a large importer of foods – We must protect the integrity of food in Canada and ensure a level playing field.

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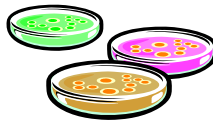
Potential Packaging Risks



- **Incorrect label applied to container results in presence of non-declared allergen after filling.**
- **Broken glass / hard plastic pieces embedded in containers.**
- **Transportation mode for pests.**
- **Insufficient biocide application.**
- **Too much solvent retention during coating application**

Types of Hazards

Biological



Chemical
(including allergens)

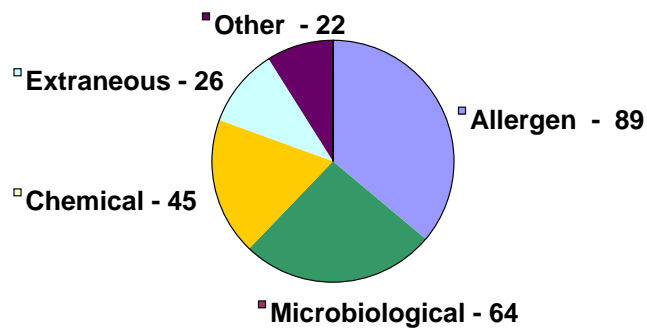


Physical



Canadian Recall Incidents by Hazard Type*

April 1, 2006 to March 31, 2007



*Information provided by CFIA

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Post Processing Contamination

- Residue left on package from home
- People blame food, not package
- Can contaminate store, next customer or employee

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What does HACCP do?

HACCP ensures that preventative food safety controls, based on science, will be applied in a systematic and consistent manner

Why HACCP for Packaging?

HACCP Fits!!



Packaging ... or Food?

If you make packaging directly for
food, or indirectly for the food
industry,



you are in the food industry!