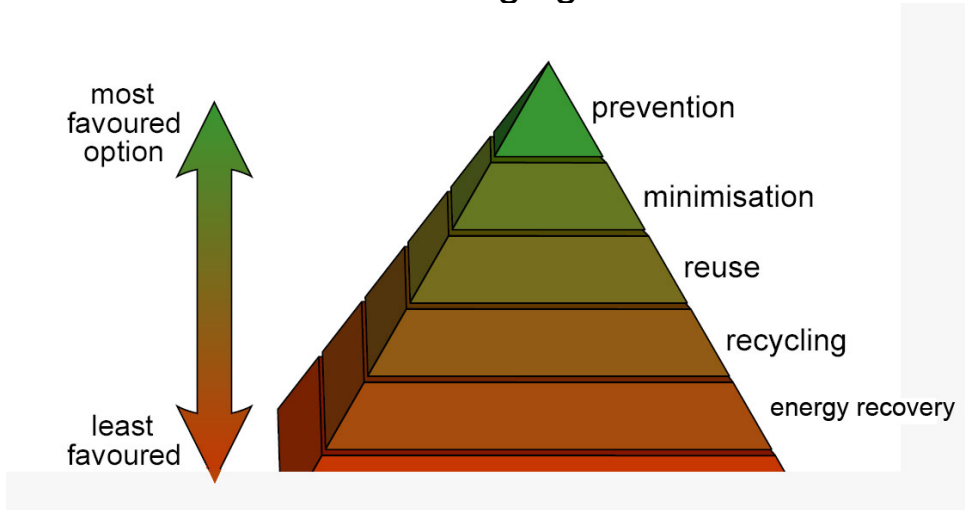


Whole Foods Markets' Recommended Packaging Standards for Whole Body



“Zero Waste” from packaging is the goal.

In nature there is no waste, what appears as ‘waste’ is actually ‘food’ for another organism.

(graphic: http://en.wikipedia.org/wiki/Waste_hierarchy)

Waste minimization is the process and the policy of reducing the amount of waste produced by a person or a society. It is part of the wider aim of **waste reduction** which is often described as a component of the waste hierarchy.

In the waste hierarchy, the most effective policies and processes are at the top. Waste minimization is also strongly related to efforts to minimize resource and energy use. For the same commercial output, usually the fewer materials are used, the less waste is produced. Waste minimization usually requires knowledge of the production process, cradle-to-grave analysis (the tracking of materials from their extraction to their return to earth) and detailed knowledge of the composition of the waste.

Top: Prevention
Then, Minimization (source reduction)
Followed by, Reuse-able
Then, Recycle-able or Compost-able

Whole Foods Markets' Packaging Standards for Whole Body

An aim of these packaging standards is to make landfilling, disposal into nature (whether by accident or not), and incineration, obsolete, by placing recycling and/or composting as the minimum goals.

There are three legs to the dialogue concerning Packaging Standards:

- 1) **Transparency** of content and process in determining these standards, and which materials and inputs are preferred.
- 2) **Extended Producer Responsibility (EPR)** -- a strategy designed to promote the integration of environmental costs associated with products throughout their life cycles into the market price of the products
- 3) **Ecological Principles** drive the definition of “what is”. e.g. either recyclable as a **technical nutrient**, or compostable as a **biological nutrient**.

NUTRIENT CYCLES

(graphic: http://www.epea.com/english/cradle_methodology/nutrientcycles.htm)

Cradle to Cradle Design distinguishes between two types of products depending on their behavior during use:

- . Products of Consumption
- . Products of Service

Products of Consumption are Biological Nutrients in the Biological Cycle

Products of consumption typically dissipate into the environment through the course of their use. They are designed so their degradation products (which result from digestion, abrasion, dilution in air, water or soil, etc.) can support the biological systems they reach. As defined biological nutrients, they are absorbed by and further nourish organisms and ecosystems.

Designing products of consumption to function as biological nutrients requires a detailed assessment of the constituent materials. These assessments review properties like toxicity to potentially exposed organisms, toxicity to food chains, and effects on the succession of generations. In general, they evaluate the extent to which the materials function as nutrients by the renewing biological resources (via agriculture, forestry or gardening) for the next generations of products of consumption.

Typical products of consumption are detergents, fabrics, food, cosmetics, biodegradable fibres, brake pads and tires.

Whole Foods Markets' Packaging Standards for Whole Body

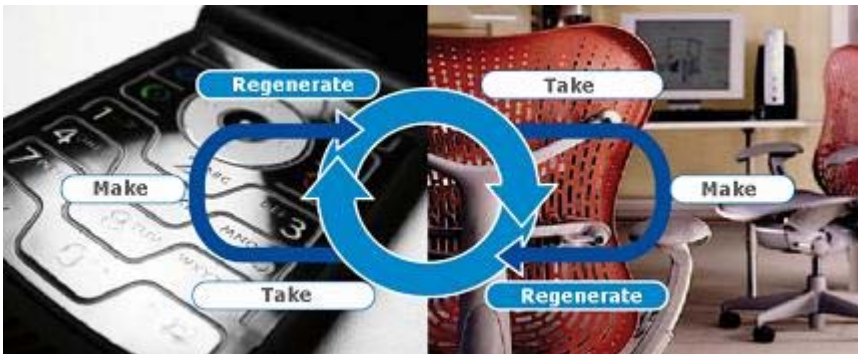


Products of Service are Technical Nutrients in the Technical Cycle

Products of service are typically stable during their use. They are made of defined technical nutrients. After use, they are available again as defined technical nutrients after mechanical or chemical dismantling. Tracking and collecting products of service for technical nutrient recovery is assured by their inclusion in a service concept sales model. Under this model, the retailer of the product of service sells only the service the product provides and leases the materials which provide that service to the customer.

The assessment of these materials includes the stability of the materials (off-gassing, oxidation, etc.) during use and their suitability for continuous use and recovery as defined technical nutrients.

Typical products of service include office furniture, carpets, electric and electronic appliances, materially stable parts of automobiles and energy supply devices.



Material Standards by type:

Wood / Paper Fiber (biological nutrients)

- no GMO crop source for bio-based (green cell) anything

Preferred Materials:

- Highest recycled content without compromising required strength and quality
- Virgin-wood fibers certified by an independent, third-party sustainable forestry organization.
- Corrugated constructed with wax replacement materials
- When these materials are used in packaging they should be composed of high recycled content.

Whole Foods Markets' Packaging Standards for Whole Body

Transition away from Materials:

- Reduce usage of hazardous chlorine compounds
- Wax Impregnated Medium, Curtain Coated Corrugated, Cascade Boxes

Obsolete Materials: (no new packaging allowed that contain any % of these materials; these materials must be eliminated from your packaging and ingredient supply chain by March 1, 2010)

- No ancient or protected forested materials
- No Chemicals / Heavy Metals / Toxins or Pesticides (but not limited to) that are known to have negative impact to life or the environment

Aluminum, Steel and Glass (technical nutrients)

Highest recycled content without compromising required strength and quality

Fossil-based Plastics (technical nutrients)

Preferred Materials: (Highest recycled content without compromising required strength and quality) (BPA free)

- High-Density Polyethylene (HDPE) #2 rigid & film
Recycled (rHDPE) #2
- Low-Density Polyethylene (LDPE) #4 film
Recycled (rLDPE) #4 film
- Polyethylene Terephthalate (PET) #1 rigid
Recycled (rPET) #1
- Polypropylene (PP) #5 rigid
Recycled (rPP) #5

Obsolete Materials/Additives: (no new packaging allowed that contain any % of these materials; these materials must be eliminated from your packaging and ingredient supply chain by March 1, 2010)

- Polyvinyl Chloride (PVC) #3 film and rigid
- Polyurethanes (PU)
- Polystyrene (PS) #6 film and rigid
- Acrylonitrile Butadiene Styrene (ABS)
- Polycarbonates (PC) #7 film and rigid
- Acrylic
- Ethylene Vinyl Acetate (EVA)
- BPA (Bisphenol A)

BioBased Materials, such as non-tree fiber or green-cell-based plastics:
(biological nutrients)

- no GMO crop source for bio-based (green cell) anything
- Biobased material(s) are organic material(s) in which the carbon comes from contemporary (non-fossil) biological sources.

Biobased content is the amount of biobased carbon in the material or product as a fraction weight (mass) or percent weight (mass) of the total organic carbon in the material or product. ASTM Method D6866-05 is the US government approved method for determining the renewable/biobased content of biobased products.

Bioplastics are plastics in which 100% of the carbon is derived from renewable agricultural and forestry resources such as corn starch, soybean protein, and cellulose. Bioplastics are not a single class of polymers but rather a family of products which can vary significantly from one another. They differ from traditional plastics, which are derived from fossil fuels or non-renewable carbon.

For Bio-based Materials Guidelines, see:

<http://www.sustainablebiomaterials.org/docs/SBCGuidelines%20070625-2.pdf>

At the end of the product's life, the product/package must be: certified and labeled compostable by an acceptable certification organization or program:

- Biodegradable Products Institute (North America);
- AIB Vincotte Inter (Belgium);
- Japan Bioplastics Association (Japan);
- DIN CERTCO (European Union); or
- any other third-party certification program that meets at a minimum the ASTM D6400 criteria or equivalent . The product must meet all aspects of D6400

Bioplastics examples

- Starch based plastics
- Polylactide acid (PLA) plastics
- Poly-3-hydroxybutyrate (PHB)
- Polyamide 11 (PA 11)



Packaging claims standard : FTC Guidelines are the baseline minimum

How can one be sure that stated environmental claims are actually true? Manufacturers have been known to make misleading, trivial, irrelevant and false statements on packaging. Statements like "biodegradable" or "contains recycled content" or "earth friendly" are so vague as to have no practical meaning. The more specific a claim, the easier it is to verify. Non-authentic (vague), or non-third-party-verified, claims are to be avoided. This is true whether the claims are on the package, or used in marketing collateral, or advertising.

Several prominent independent certification laboratories exist to verify environmental claims.

Only products meeting the standards of the organization may display their logos, e.g. See Consumer Reports "Greener Choices" website:

<http://www.greenerchoices.org/eco-labels/productArea.cfm?ProductCategoryID=179&ProductAreaID=-1&showAll=1>

For the federal government perspective, try the FTC Environmental Guidelines

<<http://www.ftc.gov/bcp/conline/edcams/eande/index.html>> .

CONSUMER EDUCATION & BUSINESS GUIDANCE

- . Complying with the Environmental Marketing Guides
<<http://www.ftc.gov/bcp/edu/pubs/business/energy/bus42.shtm>> [PDF
<<http://www.ftc.gov/bcp/edu/pubs/business/energy/bus42.pdf>>]
- . Information about complying with the FTC's Green Guides
<<http://www.ftc.gov/bcp/gnrule/guides980427.htm>> . The Green Guides indicate how the FTC will apply Section 5 of the FTC Act, which prohibits unfair or deceptive acts or practices, to environmental marketing claims.
- . Sorting Out 'Green' Advertising Claims
<<http://www.ftc.gov/bcp/edu/pubs/consumer/general/gen02.shtm>> [PDF
<<http://www.ftc.gov/bcp/edu/pubs/consumer/general/gen02.pdf>>]
- . The FTC, in cooperation with the EPA, has developed guidelines for advertisers to ensure that their environmental marketing claims don't mislead consumers. Contains six tips to help you sort through environmental claims.

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The FTC seeks to prevent false or misleading marketing claims, including environmental or "green claims." The FTC's Environmental Marketing Guides, also called the "Green Guides," apply to all forms of marketing for products and services: advertisements, labels, package inserts, promotional materials, words, symbols, logos, product brand names and marketing on the Internet or via email. These web pages are designed to help consumers and businesses understand the FTC's Environmental Marketing Guides, and learn about other environmental and energy areas of concern to the FTC.

FTC Green Guides Review

http://www.ftc.gov/bcp/edu/microsites/energy/about_guides.shtml

"Less bad" packaging claims are likely to be under greater consumer scrutiny:

for example, a non-Whole Body branded product says this about its packaging:

"New Environmentally Friendly package:

- less energy required to produce plastic and less waste from reuse of . . .
- equivalent to paper in landfill accumulation"

the film plastic package displays a 'chasing-arrows' #1.

Reality check:

- Film plastic #1 is rarely recycled (under 1%), and if so, is downcycled into a #7, for one last use.
- "Less energy" for plastic is specific to a particular use only, and does not include energy that may be used for clean-up of externalities; as a generality it's very debate-able, and is at best a 'less-bad' argument started -
- where does that get us?
- "Equivalent . . . in landfill" ==>> this basically reaffirms point 1 made above in this list. So landfill is the goal of the package?
- That's a 'green' claim ? Why make it at all then ?
- Consumers can figure these claims out, would Whole Foods Markets want a brand association with any 'slippery slope' claims?
- See: **[Are You Sure That's Recyclable?](http://alliansanswers.com/going-green/wait-are-you-sure-that's-recyclable/2038)**

<http://alliansanswers.com/going-green/wait-are-you-sure-that's-recyclable/2038>

51% bar for any recovery, next-life, claim:

With the claim of "recyclable" or "compostable": is that true 51% of time the consumer has to "recycle" or "compost" that package?

Do they have reasonable (easy) access to a system of recovery and reprocess for that claim to be actualized?

Claims of "recyclable" and/or "compostable" should be true, at minimum, 51% of time to be claimed, this will be enforced starting March 1, 2010.

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