

The Green Movement and How It Affects the Candle Industry

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What is Green?

- § Green living is most simply defined as a lifestyle that minimizes negative impact, and wherever possible, increases positive impact on the environment.
- § The green marketplace is more than organic, natural and recycled products. It includes a wide range of consumer goods, appliances, automobiles and even new homes, as well as industrial supplies and services, and raw materials.
- § Green products are defined as goods and services that minimize the impact to the environment in one or more of the following ways:
 - § The use of recycled materials
 - § The absence or reduction of harmful chemicals and solvents
 - § The use of organic/pesticide-free farming methods
 - § The use of reduced energy and water
 - § The use of forestry products from sustainable woods
 - § Products that create less waste/pollution

~The Green Movement™

§ The Green Movement

- › The term ~green movement™ is not yet defined
- › ~Green™ does not always mean natural or organic
 - § Takes into account a variety of factors
 - › Renewable source
 - › Processing energy
 - › Waste products/Recycling potential
 - › Transportation
 - › Regulatory
 - Á Biodegradable/Bioaccumulation
 - Á Worker safety

History of the Green Movement

- § **The Green Movement has three main roots:**
 - § Conservation and natural resource regeneration.
 - § Wild life preservation.
 - § Reduce pollution and improve urban life.
- § **The Green Movement was most passionately expressed during the climax of the industrial era: close to the last quarter of the twentieth century.**
- § **In the United States, during the 1970—s, laws such as the Clean Water Act, Endangered Species Act and National Environmental Act were passed, and have since, laid the foundation for environmental standards.**

Organic

~"Organic" represents a superior level of purity, wellness, and overall health and well-being to the consumer.

š Organic

- › *Definition:* method of growing and processing natural ingredients under controlled conditions that must meet stringent purity standards. It is a system of crop cultivation employing biological methods of fertilization and pest control as substitutes for chemical fertilizers and pesticides.
- › Prohibits the use of genetic engineering, ionizing radiation and sewage sludge.

Organic, cont—d.

š PC will follow food regulations for labeling (National Organic Program (NOP) under USDA)

- › 100% Organic (sticker)
- › 95% or high Organic (sticker)
- › 70% or higher ~Made with organic ingredients™
- › Less than 70% (asterisk organic ingredients)

š **Most natural ingredients are not organic but market is growing**

š Will have the same consistency and regulatory concerns as naturals

Natural

š Natural

- › Not synthetically derived or processed.
- › **Definition:** Fragrance Industry is reluctant to define
 - š Misused as marketing, labeling and packaging tool
- › Not defined in personal care or food
 - š Except beef and dairy

An Observation

The average consumer likely associates the adjectives "synthetic" or "harmful" with the term "chemical," as opposed to the true definition‡.

"A chemical substance is any material with a definite chemical composition, no matter where it comes from."

J.W. Hill et al.'s

What Corporations are Doing

š Corporations may enter the green marketplace in one of three ways:

- › Purchase an existing green company
 - š i.e. Burt—s Bees purchased by Clorox Company
- › Create a new line (brand) of green products
 - š i.e. new line of natural wax candles by known paraffin candle mfg.
- › Green the image of existing products
 - š i.e. Wal-Mart has started initiative to rate sustainability of products

What Intercontinental Fragrances is Doing

§ Increased energy efficiency

- › All light fixtures converted to high-efficiency T-8
- › Air-conditioning units have been replaced and modified for more efficiency

§ Decreased water consumption

- › Restrictors have been placed on all washing stations
- › Updated irrigation system

§ Increased recycling efforts

- › All office paper is recycled
- › All metal drums are recycled
- › All aluminum cans from cafeteria are recycled
- › All fragrances waste is recycled

Trending of the Green Movement

š The green movement affects virtually all areas:

- › Natural/organic food and drink
- › Natural/organic personal care products
 - š Growing at 20% per year in North America
- › Household paper and cleaning products
- › Pet foods and Supplies
- › Organic clothing: cotton and bamboo
- › Building/Home improvement supplies
 - š Green certification
 - š Solar power
 - š Green building materials
- › Electronics
- › Automobile industry: hybrids

Consumer Habits

The groups of green shoppers

š Super Green

- › Those who report ~almost always™ buying ~green™ products.

š True Green

- › Those who report buying ~green™ products ~regularly.™

š Light Green

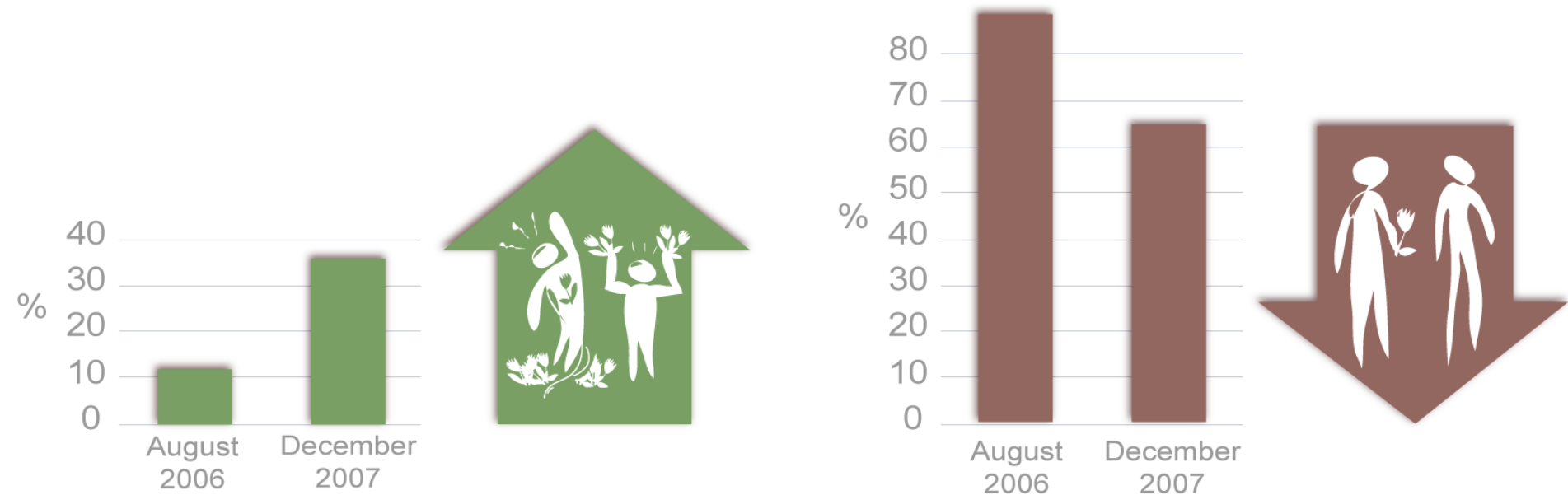
- › Those who report buying ~green™ products ~sometimes.™

š Never Green

- › Those who report ~never™ buying ~green™ products.



Super/True Green Population Tripled over 16 Months

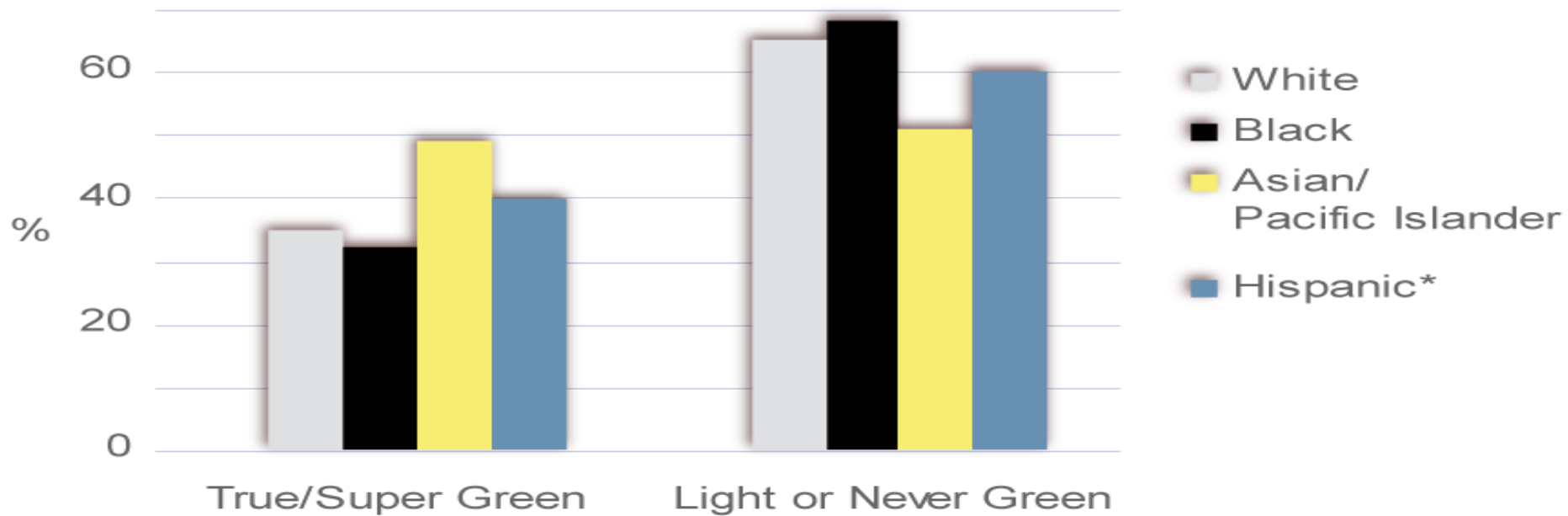


š The general trend is clear

- › respondents are moving to the greener end of the consumption spectrum

Race and Ethnicity

- š Hispanics and Asians are the ~most green™
- š Blacks are more likely to be ~never green™



Green Candles Packaging

- š ~The future of green packaging is to realize that we need more future and less packaging™ Joshua Onysko.
- š Making packaging healthy for the environment is not a new concept.
- š The most obvious and perhaps most critical step is designing and using materials that the consumer can recycle.
- š Some companies have replaced regular plastic with bioplastic originating from corn or other biopolymer derived from tapioca starch, wheat and potatoes.
- š The use of recycled cardboard.
- š High quality recyclable paper bags that can be re-used by the customer.
- š Reusable, decorative packaging.
- A widely accepted definition of sustainability is “meeting the needs of the present without compromising the ability of future generations to meet their own needs.”

Green Candles Packaging

- § Making packaging healthy for the environment is not a new concept.
- § There are a variety of ways to make your packaging more sustainable:
 - § Is it beneficial, safe, and healthy for individuals and communities throughout its life cycle?
 - § Does it meet market criteria for performance and cost?
 - § Is it sourced, manufactured, transported, and recycled using renewable energy?
 - § Does it maximize the use of renewable or recycled-source materials?
 - § Is it manufactured using clean production technologies and best practices?
 - § Are the materials used healthy in all probable end-of-life scenarios?
 - § Is it physically designed to optimize materials and energy?
 - § Is it effectively recovered and utilized in biological and/or industrial cradle-to-cradle cycles?
- § Keep in mind, there is no perfect solution. One must just begin.

Source: Green Packaging Magazine, Spring 2008

Green Candles

Wax

š Soy wax

- › Biodegradable, natural resource
- › Clean burning, less soot
- › Easy clean up
- › Lower processing temperature, reduces energy costs

š Palm wax

- › Biodegradable, natural resource
- › Resists melting in hot months
- › High contraction for easier de-molding
- › Takes color and fragrance well

š Beeswax

- › Biodegradable, natural resource
- › Pleasant natural aroma
- › Harder wax
- › Good burn character

Green Candles

Fragrances - “Organic”

- › Currently there are no organic specifications for fragrances to certify that a fragrance is organic.
- › It is speculated that fragrances would follow flavor guidelines but it will take about 3-5 years.
- › Organic regulations do pertain to personal care but not fragrances in personal care.

Green Candles

Fragrances - “Naturals”

§ In the fragrance industry, natural materials originate from two sources:

- › **Plants:** Flowers and buds, stems, leaves, seeds, roots, fruits, wood, bark and resins.
- › **Animal:** Taken from deer, beaver, civet, and sperm whale, these materials have been replaced by synthetic molecules for the most part due to availability, ecological and human reasons.

Besides Naturals

§ Nature Identical

- › *These are obtained from essential oils or other natural materials, with the help of physical or chemical separation methods.*
- › May contain some natural material with synthetics added.

§ Semi-Synthetic

- › These are produced from isolates through chemical reactions.

§ Synthetic

- › Are created through organic synthesis from various chemical compounds that are obtained from petroleum distillates, pine resins, or other relatively cheap organic feedstock.

Green Candles – Fragrances: Natural vs. Synthetic

š Natural

- › Natural ingredients have aromas that are highly complex and are difficult or have been impossible to obtain through modern-day synthetics.
 - š *Examples: Rose Turque, Patchouli, Carrot Seed Oil*
- › Natural ingredients availability varies by the times and locations where they are harvested.
 - š Crop production, political climate, natural disasters
- › Not all natural products produce economically viable essential oils.
 - š *Example: Carnation, gardenia, coconut, strawberry, pineapple, etc.*
- › Most fragrances composed only of natural materials are more expensive.
 - š Makes them uncompetitive in most home fragrance markets

Green Candles – Fragrances: Natural vs. Synthetic

š Natural, cont—d

› Consistency problems

- š More difficult to produce an equivalent odor (color) over years.
- š The perfumer has to equalize the natural variations of the ingredients while the user wants a steady product.
- š Depending upon the customer this could be a beauty mark or flaw.

› Some naturals contain allergens or even carcinogenic compounds making them harmful or restricted.

- š The public has the misleading notion that natural is better
- š Example: Tarragon oil contains Estragole a Prop 65 material (a potential carcinogen).

› The use of some natural materials, like sandalwood or musk, can lead to species endangerment and illegal trafficking.

› Limitations in the odor profile

- š Examples: Vanilla cookie and fruits.

Green Candles – Fragrances: Natural vs. Synthetic

§ Synthetic

- › Synthetic materials are more consistent than naturals.
- › Unlimited fragrance palette; only limited by imagination.
- › Use of synthetic materials can make some perfumes available at widely-affordable prices.
 - § Examples: Phenyl Ethyl Alcohol, Aldehyde C-16.
 - § Synthetic materials are not necessarily cheaper than naturals
- › There have been many newly-created synthetic aromas that bear no olfactory relationship to any natural material.
 - § *Example:* ozonic, fresh linen, clean cotton, etc.



essence®

- § SoyEssence´ and PalmEssence´ are specially designed liquid fragrance of high performance, perfectly adapted to overcome current technical limitations associated with the production of soy and palm candles.
- § SoyEssence´ and PalmEssence´ Fragrance Technology offers a superior competitive advantage by providing a high Equivalent Scent Load (ESL) in candles.
- § The ability of SoyEssence´ and PalmEssence´ to achieve an ideal ESL in comparison to standard fragrances provides an opportunity to grow market share and maximize profits within the soy and palm candle industries.

Conclusion

There is no denying the desire for socially responsible products that are environmentally-friendly and there are more choices today of eco-friendly products and materials. As manufacturers, we must take advantage of what is available and create the best product that we are able to for the consumers and for the earth.

Thank you



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