Science Talk

with Spence Masson B.Sc., Director of Science and Technology

Are The Plastics Used By Nature's Sunshine Safe?

The topic of plastics in general is an interesting one—while plastics have many useful applications and have undeniably improved certain aspects of modern life, they remain stuck with a generally negative image. The words "cheap" and "imitation" are often used in the same sentence as "plastic," and to describe someone as having "a plastic soul" would certainly not be a compliment. Environmentalists love to get on the plastics criticizing bandwagon, and it's hard not to sympathize when all you need to do is walk down your street or across a parking lot to find an empty plastic grocery bag blowing past your face, or to trip on an empty plastic water bottle. However, we should realize in those cases it's not the fault of the plastic—it's the fault of the person who carelessly discarded the item in question. And the environmental impact of plastics is not all negative—for example, every ton of plastic bottles recycled saves about 3.8 barrels of oil, and while some people prefer glass containers, many don't stop to realize that it actually takes much more energy to produce a glass bottle than a plastic one. Glass is also heavier, so it costs more in fuel, energy and automobile pollution to ship product in glass containers than it does to ship product in plastic.

Be that as it may, some Nature's Sunshine Distributors have raised concern in recent months on the subject of plastics. The basic concern is

information indicating that with some plastics, compounds or chemicals used in their manufacture will leach into the food that is stored in them. Of course there are two sides to every story, and a little research will quickly turn up opinions from the plastics industry that this is an urban myth. On the other hand are the environmental activists and health advocates insisting this is true.

Hormone Disruptors

The real issue here is that some chemicals used in plastics production are structurally very similar to the human hormone estrogen. These chemicals are known as xenoestrogens (literally, "foreign estrogens"). Because of their structural similarity to estrogen, they can disrupt the action of regular hormones and have the possibility of causing cancer or other diseases. The most well-known of these chemicals is Bisphenol A, and whether or not it leaches from plastic, there is irrefutable evidence that it does harm health. In fact, Canada is the first country in the world to take regulatory action on Bisphenol A, announcing on October 17, 2008, it will immediately proceed with drafting regulations to prohibit the importation, sale and advertising of polycarbonate baby bottles that contain Bisphenol A (BPA).

Recycling Codes

In an attempt to easily identify what plastics should be of concern, some people have started looking at the numbers on the bottom of plastic bottles as a guide to their safety. This is a mistake—those numbers were never meant to indicate the plastic's use or safety. They are strictly for the purposes of recycling. The Society of the Plastics Institute introduced its resin coding system in 1988 at the urging of recyclers around the country. A growing number of communities were implementing recycling programs, and the code was developed to meet recyclers' needs while providing manufac-

turers a consistent, uniform system that could apply nationwide to identify the resin content of bottles and containers commonly found in the residential waste stream.

The overwhelming majority of plastic packaging is made with one of six resins:

Code 1: polyethylene terephthalate (PETE)
Code 2: high density polyethylene (HDPE)
Code 3: polyvinyl chloride (PVC or vinyl)
Code 4: low density polyethylene (LDPE)
Code 5: polypropylene (PP)
Code 6: polystyrene (PS)

The coding system also includes a seventh code, identified as "other." Use of this code indicates that the product in question is made with a resin other than the six listed above, or is made of more than one resin used in combination. The "other" code was developed to address legislative demands in some municipalities.

What to avoid?

Despite the fact that these codes are meant strictly as an aid to recyclers, information can readily be found from various environmental and health organizations advising which plastics to avoid and which are considered safe. Although this is a misuse of the codes, the information offered by the various organizations is in general agreement, advising for the most part to "Look for #1, 2, 4 and 5," and to "Avoid #3, 6 and 7." Because Code 7 does not indicate any one particular plastic, it would be a mistake to avoid a container just because it has that number on it.

Plastics at Nature's Sunshine

The recycling codes on the plastics Nature's Sunshine uses in its bottles are as follows:

Code 1: Capsicum Bulk, Crystal Clear Deodorant, Zambroza
Code 2: all brown and white supplement and food containers, including all liquid herbal extracts; Natria packaging; Nature's Fresh and NSP Concentrate
Code 7: Black Ointment, Golden Salve

The above should alleviate any concerns about the plastics that Nature's Sunshine uses to package its foods and supplements. Our scientists have performed extensive tests to ensure the safety of our containers. In the specific case of Zambroza, it was tested over several months and it was found no leaching had taken place. They also found that the ORAC value (measurement of antioxidant potential) remained the same and was not negatively affected by the plastic.

As you can see, the type of plastics Nature's Sunshine Products uses is very stable, approved by the US FDA and considered completely safe. We at Nature's Sunshine pride ourselves in producing high-quality supplements that meet or exceed all regulations for safety. We take the safety of our products seriously because we and our families use the products ourselves.

Source: Nature's Sunshine Products of Canada Technical Services

References:
1. Bond, A.B., *Which Plastics Are Safe?*, healthy & green living, website, 2003, http://www.care2.com/greenliving/which-plastics-are-safe.html#solution_comments
2. David Suzuki Foundation, website, http://www.davidsuzuki.org/
3. Health Canada News Release, Government of Canada Protects Families With Bisphenol A Regulations, http://www.hc-sc.gc.ca/ahc-asc/media/nr-cp/_2008/2008_167-eng.php
4. National Institute of Environmental Health Sciences – National Institutes of Health, *Since You Asked - Bisphenol A*, web page, http://www.niehs.nih.gov/news/media/questions/sya-bpa.cfm
5. SPI – The Plastics Industry Trade Association, website, http://www.plasticsindustry.org/

ASK SUNNY!

Got a question or a comment? Submit your questions or comments to ASK SUNNY and we'll answer them. They might even end up in *Sunshine Today*!

Find Sunny

Win your way to a FREE gift.

This issue of the *SUNSHINE TODAY* contains a hidden picture of Sunny, the *Sunshine Today* mascot!

When you spot Sunny, fill out the ballot and return it to Nature's Sunshine. Each correct ballot will be placed in a draw where 20 winners will receive free shipping of one order. The draw will take place on Feb 15th, 2009.

Don't miss your chance to WIN!

I Found Sunny

Name: _____

Address: _____

City: _____

Province: _____ Postal Code: _____

Telephone: _____

Account #: _____

email: _____

Fax#: _____

I found Sunny on page: _____

Jan/Feb 2009