

Bisphenol A from Plastic Containers

Does it Represent a Hazard to Humans?

PO Box 76 378

Manukau City

New Zealand

Phone: +64-9-262-3773

Fax: +64-9-262-3850

Email: info@plastics.org.nz

Trade: www.plasticsnz.com

Info: www.plastics.org.nz

BY PETER N. PLIMMER PH.D., PLIMMER ASSOCIATES

This writer is a polymer chemist, not a toxicologist¹, who is keenly interested in the debate on whether or not bisphenol A is a carcinogen. He concludes that from a personal and scientific point of view:

- There is *not* a significant enough hazard to deter him from drinking liquid from containers made using polycarbonate or eating food from an epoxy-coated metal can.
- The writer would not hesitate to use a polycarbonate baby bottle to feed his children. However, it is understandable that the reader might elect not to expose a baby to any risk, however small.
- It is very important to remember that most hand-held water bottles are made from polyester (polyethylene terephthalate – PET – resin code 1) which does *not* use bisphenol A in its manufacture!
- The levels of bisphenol A in question are so low that they challenge the analytical ability of the testing laboratory.



Background

The focus of this note is to explore the safety aspects of food and drink containers which are either moulded directly from polycarbonate, or fabricated from thin sheet metal which has been coated with an epoxy resin.



Bisphenol A is the basic “building block” for the manufacture of the polycarbonate plastic used to make baby bottles. It is also a basic ingredient of the epoxy resin systems used for coating the inner surface of metal food containers such as baked bean tins¹.

Polycarbonate has the ISO International Standard letters “PC” and the resin code 7. Resin Code 7 means “other” resins. It applies to a wide range of plastics including polycarbonate, polyurethane and nylon and the new bio-based plastics made from corn, potato starch and sugar cane, as well as multi-layer plastics.

Highly emotional news reports have surfaced at regular intervals over the past ten to twenty years which link the ingestion of bisphenol A, extracted from polycarbonate containers, with cancer promoters. For instance, it is suggested that bisphenol A is a ‘xenoestrogen’ which can attack human foetuses leading to reproductive organ, prostate and breast problems.

These reports have led to a prolific number of excellent unbiased scientific studies of the safety of bisphenol A in humans. It is now possible, based on these studies, to make an intelligent decision regarding the safety concerns which appear in the Press.

For a toxicologist’s vision of the BPA debate, see the University of Canterbury’s Professor Ian Shaw’s article in the ‘Christchurch Press’, Thursday May 29, 2008