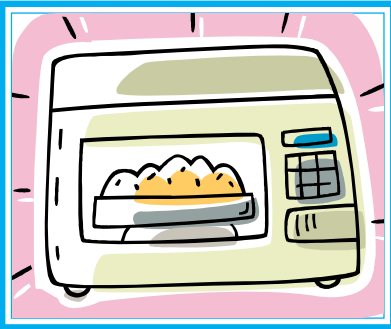




## To Zap or Not to Zap - That is the Question!



Plastics now play a major role in the food packaging industry. Their amazing properties led to plastics replacing glass or even metal in food containers. The explosion in packaging technology has produced a myriad of new plastics enhanced with such additives as antioxidants, stabilizers, anti-statics, and plasticizers to improve their functional

qualities. At the same time, people depend more and more on microwave ovens for meals and are in the habit of zapping food in whatever comes to hand! Is this risky? Of particular concern are the softer, more flexible plastics known as thermoplastics. These include polyester, polystyrene (Styrofoam), nylon, Teflon, and polyvinyl chloride (PVC). The bottom line is that not all plastics are created equal and there are risks in indiscriminately microwaving plastics.

### Chemical migration

When food is wrapped in plastic or placed in a plastic container and microwaved, substances used in manufacturing the plastic may leak into the food. In particular, fatty foods such as meats and cheeses cause a softening agent called diethylhexyl adipate to leak out.

The FDA conducts tests to ensure such plastics don't leak *unsafe* levels of any substance into the food. They estimate the extent of plastic-food contact, the heating time, the temperature reached, and how often someone is likely to eat from the container. Microwave ovens heat the *water* in food, so the maximum temperature reached for most foods is 212° F. Popcorn packages include a trace of metal to create a "frying-pan" effect, so they reach a higher temperature. The maximum allowable amount of each foreign substance is 100 - 1000 times less per pound of body weight than the amount shown to harm lab animals over a lifetime of use. Only containers that pass this test may state they are microwave safe. Containers without a microwave safe icon or notation may be safe but have not been tested. They could warp or melt. The recycling symbol, no matter what the number, does not indicate safety to microwave or reuse.<sup>1</sup>

### Hormone disrupters

Some plasticizers emit hormone-mimicking substances called endocrine disrupters which may cause birth defects, cancer, or fertility problems. Research is ongoing.<sup>2</sup> In 1998 Consumer reports tested plastic cookware and food wraps for plasticizers. They found none in Rubbermaid or Tupperware microwavable bowls, and traces of plasticizers not known to be endocrine disrupters in household wrap. However, they did find potentially hazardous plasticizers in deli cheeses in commercial cling wrap even at cold temperatures.<sup>3</sup> An FDA science policy analyst suggested it's a good idea to keep the plastic wrap from touching the food; others working in environmental health go further - they will simply not microwave plastic at all. Safer alternatives are microwavable glass or ceramic dishes with lids.

### Royals nuke dinner; Chef walks out!

Takashi Konda, longtime chef to the Danish royal court quit in disgust in June as the royal family prefers microwaved dinners to fine food. Konda worked at Amalienborg Palace for 24 years, but said he

could no longer bear to watch the royals eat reheated leftovers. In addition, the royal menu budget has been slashed. "Soon," griped Konda, "they will get rid of the silver and eat off monogrammed plastic plates!"

*Maclean's* Jun.12, 2006.

### Protect yourself and your family

1. Cook only in containers specifically labeled for use in the microwave
2. Prefer wax paper, kitchen parchment paper or white paper towels over plastic wrap
3. Don't allow plastic wrap to touch food in the microwave
4. Remove meat, poultry and fish from butcher trays and cling wraps before defrosting
5. Don't microwave takeout containers, water bottles, or plastic tubs and tubs
6. Don't reuse microwaveable dinner trays - they are made for one use only!
7. Don't microwave plastic storage or grocery store bags.
8. Always vent containers before microwaving food; leave lid ajar or lift the edge of the lid.
9. Trust your nose and your taste! Don't eat food that tastes odd!

### Resources

1. "Microwaving food in plastic: Dangerous or not?" *Harvard Women's Health Watch* Jul, 2006:6. Full text available on Academic Search Premier at <http://sled.alaska.edu/databases/home.html> In Alaska call 1-800-440-2929 for access codes.
2. "The endocrine disrupters: a major medical challenge." Amaral Mendees, J.J. *Food and Chemical Toxicology* v. 40(6), 2002. 781-8. <http://tinyurl.com/h9tcc>
3. "Hormone mimics." *Consumer Reports* 63(6): 52. Jun, 1998. Full text available on Academic Search Premier (See above for details).
4. "Does plastic in microwave pose health problems?" *Wall Street Journal*, Oct.12, 1998. <http://tinyurl.com/cmadr9>
5. *Endocrine disrupters*. National Inst. of Environmental Health Sciences. <http://tinyurl.com/f5kvo>

### Meet Connie Thomas, our new office manager



Connie is a new UAA grad in history, and keen to explore library science. She has an associate degree in occupational health & safety so will be a real asset to us! All the best to our former OM, Tracy, now a full-fledged librarian at the Anchorage Museum Library.