Is It Safe to Heat Food in Plastic?

By Florence Williams

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We all do it: Pop a plate of leftovers covered with plastic wrap in the microwave or warm up extra tomato sauce in a plastic container. But news reports have suggested that this may not be perfectly safe, that if there are chemicals — phthalates and BPA — in the plastic, they might migrate into our food. How likely is this? To find out, we shopped at supermarkets and mass merchandisers for leading brands of microwave-safe containers, wraps, and bags, and at a dollar store for some so-called value brands. We also tossed into our shopping cart packages of best-selling frozen dinners for both children and adults and plastic liners designed to be used in a slow cooker. In short, we gathered together a potpourri of the kind of plastic items most of us use for heating foods.

We shipped several samples of each item off to an independent lab, where they were shredded into bits, then analyzed to see if any detectable amounts of BPA and phthalates were present in the products. The good news: Twenty-seven of the products tested contained no phthalates or BPA. Three, however, did contain low levels of BPA: the containers (or bottom sections) of Rubbermaid Easy Find Lids, Rubbermaid Premier containers, and Glad Storage Zipper Bags; Glad Press'n Seal wrap had low levels of both phthalates and BPA. Next, the lab tested these four items with "food simulants" — chemicals designed to stand in for real food in a lab. (Our federal health agencies, like the FDA, allow the use of food simulants in testing.) Results: No detectable BPA or phthalates migrated from the products into the simulants.

For a real-life test, we microwaved Old World Style Ragú Traditional Smooth Pasta Sauce and Heinz Home Style Gravy Savory Beef in the two Rubbermaid containers and in a glass bowl covered with Press'n Seal. As you're unlikely to heat up tomato sauce or gravy in a plastic bag, we eliminated the Glad Storage Zipper Bags from this part of the testing. The lab first evaluated the foods straight from the jars to ensure that there were no phthalates or BPA present in the sauces before they were transferred to the test containers. In addition to testing foods heated in brand-new containers, we used ones that we had put through 30 rounds of microwaving and cleaning in the dishwasher, to see if wear and tear made a difference.

Clearly good news: None of the samples of sauce or gravy had detectable levels of either BPA or phthalates.

Products tested that contained no phthalates or BPA:

1. Tupperware CrystalWave container
2. Tupperware CrystalWave lid
3. Tupperware Rock 'N Serve container
4. Tupperware Rock 'N Serve lid
5. Rubbermaid EasyFind Lids lid
6. Rubbermaid Premier lid
7. Glad SimplyCooking Microwave Steaming Bags
8. Ziploc Brand Zip 'n Steam Microwave Steam Cooking Bags
9. GladWare Containers with Interlocking Lids container
10. GladWare Containers with Interlocking Lids lid
11. Ziploc Brand Containers with Snap 'N Seal Lids container
12. Ziploc Brand Containers with Snap 'N Seal Lids lid
13. Webster Industries Good Sense storage container
14. Webster Industries Good Sense storage container lid
15. United Plastics 21 oz Bowl
16. Saran Premium wrap
17. Saran Cling Plus Clear Plastic Wrap
18. Glad Cling Wrap Clear Plastic Wrap
20. Ziploc Brand Storage Bags with Double Zipper
21. Ziploc Brand Freezer Bags with Double Zipper
22. Glad Freezer Storage Bags
23. Reynolds SlowCooker Liners
24. Kid Cuisine All Star Chicken Breast Nuggets container
25. Kid Cuisine All Star Chicken Breast Nuggets film cover
26. Stouffer's frozen Homestyle Classics Lasagna with Meat & Sauce tray
27. Stouffer's frozen Homestyle Classics Lasagna with Meat & Sauce film covering

The following items contained low levels of phthalates or PBA but the chemicals did not leach into food during microwave heating:

1. Rubbermaid EasyFind Lids container
2. Rubbermaid Premier container
3. Glad Press'n Seal Multipurpose Sealing Wrap
4. Glad Food Storage Bags*

*Tested with simulants but not food.