



## OFFICE OF ENGINEERING SAFETY

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# 20 TIPS FOR SAFE MICROWAVE OVEN OPERATION

Practically everyone uses the microwave these days. Its speed fits perfectly with today's busy life-styles. Correctly used, microwave ovens offer a convenient and safe method of food preparation, without detrimental effects on consumer safety or nutrition.

The following safety guidelines should be followed when using microwave ovens in Engineering facilities:

1. Do not operate a microwave oven unattended.
2. Do not set oven for excessive cook times. Cook for four (4) minutes, and then restart for any additional cooking that may be needed. Run the microwave for a short time for several cycles to reach the desired temperature. Several short periods are preferable to one long period. Open the oven periodically and stir, turn, and/or check the contents for even cooking and container integrity.
3. Use caution and follow directions when popping popcorn in the microwave. The vapor produced in the bag may exceed 180 degrees F. Do not cook microwave popcorn for more than four (4) minutes; remove bag immediately when rate of popping slows. Attempting to pop all the kernels invariably results in scorched popcorn, smoke, and, possibly, fire.
4. Follow the manufacturer's instruction manual for recommended operating procedures and safety precautions for your oven model. Be aware of whether your microwave oven has a longer or shorter cooking time than average.
5. Don't operate an oven if the door does not close firmly or is bent, warped, or otherwise damaged. Never operate an oven if you have reason to believe it will continue to operate with the door open. Modifications to microwave ovens are not permitted. If a microwave oven has a damaged door, hinge, latch or sealing surface, the oven must be removed from service until it has been repaired and determined to be safe.
6. Do not stand directly against an oven for long periods of time while it is operating.
7. Do not operate an oven when empty. Refer to the instruction manual for your oven.
8. Ovens used for food preparation must be cleaned on a regular basis to prevent biological contamination, fire potential, and door seal damage. Keep your microwave oven clean, since any drip accumulation may affect the efficient operation of microwave energy. A messy oven will cook more slowly and unevenly. Clean the oven cavity, the outer edge of the cavity, and the door with water and a mild detergent. A special microwave oven cleaner is not necessary. Do not use scouring pads, steel wool, or other abrasives. Always unplug the oven while cleaning.
9. Let food cool for 60 seconds or more in the oven before removing it. Food hot enough to burn will cool down while remaining warm enough to enjoy. Be careful when removing a wrapper or cover from a hot item. Hot steam escaping from the container as the covering is lifted can cause a burn. Food can heat unevenly in a microwave oven. Sample the food before you eat it.

10. Only utensils designed for the purpose should be used in a microwave oven. Don't use plastic wrappings from purchased refrigerated foods in a microwave oven since they may melt.
11. Additives used in the manufacture of plastics, particularly those that make it pliable, may migrate into food, especially at high temperatures. Use only those plastic containers specifically designed for microwave cooking, and discard when the surface shows signs of breaking down.
12. Container shape may also influence the way food reacts to microwave heating. Circular or oval containers help prevent the edges of food from burning because energy absorption occurs evenly around the edges. Square containers tend to encourage burning on the edge of the product.
13. Ovens used for laboratory applications CANNOT be used for food preparation. Conversely, food preparation ovens should never be used for other applications. Microwave ovens in laboratories should be appropriately labeled for food or non-food use.
14. Do not use aluminum foil or any metal containers, metal utensils, metal objects, or objects with metal or foil trim in the oven. Such items can cause arcing, damaging the oven and creating a fire or burn hazard. Consult your microwave's directions for any limitations on heating TV dinners in metal trays.
15. Do not heat sealed objects as they may explode, damaging the oven and/or door. Do not heat eggs with shell intact; punch a hole in the shell or break the egg into a container. Containers have been known to explode after tightening the lid following removal from a microwave oven.
16. Place cooking bags on a microwave-safe plate and cut a slit in the bag's center, or pressure will build-up and the bag may burst.
17. Don't add an extension cord to the oven's own cord. Microwave ovens should use a separate 110-volt grounded circuit. Don't connect other appliances to the same circuit. Reduced electrical energy affects cooking and may harm the microwave. Electrical overloads trip circuit breakers, and increase risk of fire.
18. Never heat flammable or combustible liquids in the oven. A fire and/or explosion may result.
19. Fire extinguishers should be available where any cooking is done. Contact TAMU Fire safety Coordination at 845-2132 for fire extinguisher installation and training.
20. If a fire should start inside the oven, leave the door closed, disconnect the power cord, if safe to do so. **Call TAMU Emergency Services at 9-911 or 845-4311.**