

Kashrus of a Microwave

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I. **Introduction.** As modern technology continues to develop, and to shape our daily lives, the פוסקים of our generation have risen to the challenge of applying הלכה to each innovation. There is certainly no greater example of this than the response of contemporary פוסקים to the common use of a microwave in a kosher kitchen. Certainly, the הלכה has dealt with כשרות of ovens for many centuries. However, due to the completely different way in which a microwave cooks food, each element of הלכה must be reinterpreted as it applies to a microwave. In this essay we will outline the fundamental issues of classical הלכה that one must understand in order to fully comprehend our approach to microwave ovens. We will also outline the differences between our halachic approach to conventional ovens and to microwave ovens. Finally, we will survey the opinions of the leading פוסקים relating to how to keep a kosher microwave for both meat and dairy use.

II. **The Issues of כשרות in Ovens.**

A. **ריחא.** The גמרא פסחים דף עו: records a dispute whether the aroma emitted by foods that are baking in an oven can affect the כשרות of other foods in the oven. For instance if one cooks non kosher meat (uncovered) in an oven together with kosher meat (uncovered) does the kosher status of the latter change. The שולחן ערוך (יו"ד סימן קח סעיף א') rules that initially we do concern ourselves with the aroma of foods, but after the fact we do not assume the aroma has caused another food to lose its כשרות. The רמ"א (שם) helps to define the parameters of what we consider לכתחילה and בדיעבד. He states that bread baked simultaneously in an oven with meat should not be eaten with dairy foods unless no other bread is available. Also, one may not purchase a food that was baked simultaneously in an oven with non-kosher food, as each of these cases is considered לכתחילה. If, however, one already owns a food that had been cooked in the same oven as non kosher food, or a dairy food cooked in the same oven as meat food, he may eat the foods. Although technically only fatty foods can produce a significant amount of aroma, our custom is to avoid the ריחא of even leaner foods. If either of the foods in the oven are covered at the time that they were cooked together, the ריחא cannot transfer from one food to the other, and the foods may be cooked together in this way.

1. The issue of ריחא is only relevant in small and enclosed areas. It is difficult to define exactly what is considered "small" for the purposes of ריחא. Based on the measurements suggested by בינת אדם (כלל סב) ריחא. Virtually all פוסקים assume that ריחא is an issue that we

must contend with in our standard kitchen ovens. The ש"ך points out that even vented ovens can pose a problem of ריחא (שם ס"ק ח').

2. Although we generally don't cook meat foods together simultaneously with dairy foods, or kosher foods with non-kosher foods, the issue of ריחא is certainly relevant to our normal kitchen activities as any spillage in the oven (or microwave) that remains behind from previous cooking will pose a problem of ריחא.

B. **זיעה**. In addition to the aroma emitted by foods, the כלל תשובות הרא"ש (כלל) points out that the rabbis were also concerned with steam emitted by foods that may transfer from one food to the other. Unlike ריחא, steam can pose a problem even when the two foods are not in an oven at the same time. If one cooks a dairy food in an oven, we are concerned that the steam will rise to the top of the oven, and become absorbed in the oven ceiling. When one subsequently cooks meat in the same oven, droplets of steam will condense on the oven ceiling and fall back into the meat dish, causing the food to become prohibited. There are many details and discussions about זיעה that are relevant to cooking meat and dairy in the same oven, but we will only cite those issues that have particular significance in a microwave oven:

1. The פתחי תשובה (סימן צב אות ו') writes that the concern of זיעה only applies to liquids, but not to solids. Others disagree, but Rav Moshe Feinstein (שו"ת אגרות משה יו"ד חלק א' סימן מ') limits the application of זיעה in solid foods to circumstances that you can visually detect steam rising from the food.
2. If steam is cold by the time it reaches the oven ceiling, it is rendered ineffective in causing any change to the status of the oven (רמ"א סימן רמ"א) (צב סעיף ח').
3. רמ"א (סימן צב סעיף ח') adds that if a pot is covered, steam cannot escape, and therefore foods of different types may be cooked in the same oven so long as one type is always covered.

C. **Cooking meat and dairy in the same oven**. Although a thorough explanation of each opinion is well beyond the scope of this essay, it bears mentioning that the leading פוסקים differ on the issue of how to keep an oven kosher for both meat and dairy use. Some permit cooking meat and dairy consecutively in our ovens so long as the oven is clean (ערור השולחן) (סימן צב אות נה), others suggest waiting for the oven to cool down in between meat and dairy use (Rav Herschel Schachter). Some require a wait of 24 hours or koshering the oven between meat and dairy use (Rav Ahron Lichtenstien). Rav Moshe Feinstein required that one type of food (meat or dairy) always be covered when used in that oven. Yet others strongly

recommend that we purchase two ovens, one for exclusively dairy use and one to be used exclusively for meat.

III. **The differences between microwave ovens and conventional ovens.** While there is a significant range of opinions relating to use of an oven for both meat and dairy, the microwave oven is a completely different matter, as there are many considerations that are unique to the specific way that a microwave operates:

A. **Reasons to be stricter with a microwave than with a conventional oven.**

1. The (ערור השולחן) (שם) suggests that זיעה is only a problem in small confined areas. While our ovens are normally large enough to avoid this problem (in the view of the ערור השולחן), microwave ovens are almost certainly not large enough to avoid problems of זיעה. Indeed, we can easily see that microwave oven chambers often fill with steam.
2. While food that spills in an oven often slips between the grates and burns immediately, the same cannot be said of a microwave oven. Food that spills often sits on the oven floor and remains there until the oven is thoroughly cleaned. This obviously causes a major concern for ריחא when we cook other food together with the spilled substances.
3. Unlike in conventional ovens, where the liquid is the last part of the food to become heated, microwave ovens heat the liquid molecules within the food first, and those molecules cause the rest of the food to become warm. As a result, a microwave oven produces significantly more זיעה than a conventional oven.

B. **Reasons to be more lenient in a microwave oven than in a conventional oven.**

1. While the chamber of a conventional oven is extremely hot, which allows for an easier transfer of taste, the cooking chamber of a microwave oven does not become hot, which may inhibit the transfer of taste from the food to the oven and vice versa.
2. In terms of the halachic definition of בישול, the leading פוסקים of the previous generation developed two basic approaches. In the view of Rav Shlomo Zalman Auerbach זצ"ל, any method of cooking that does not employ a normal heat source would be considered an unconventional method of cooking, and would therefore not be defined as בישול. Rav Moshe Feinstein (in a תשובה dated א"תשל"א), on the other hand, ruled that since it is very normal in our times to cook with a microwave oven, and people use it more frequently than they use their normal ovens, it would certainly fit within the definition of בישול. This dispute has great relevance to many issues of הלכה, most notably to בישול עכו"ם. According to רב שלמה זלמן אועירבך a

gentile may cook food for a Jew in a microwave, as this is not considered to be בישול. According to רב משה פיינשטיין, however, a gentile may not cook for a Jew in a microwave oven. While the large majority of ראשונים generally assume that the exact parameters of בישול are irrelevant when it comes to issues of כשרות (because our concern relates to the taste transferred through the medium of heat, and not to the act of cooking itself), a minority opinion of ראשונים maintains that when one does not do an act of cooking he cannot effect the transfer of taste in the realm of כשרות. If this opinion were to be accepted, and we were to accept the opinion of רב שלמה זלמן רב אועירבך that microwave cooking is not called בישול, one may suggest that there are no issues of בישול whatsoever in a microwave.

- a. Rabbi Zvi Sobolofsky שליט"א, while obviously unwilling to rely on this assessment (because most פוסקים maintain that the parameters of בישול do not relate to the laws of כשרות), concedes that this point may be combined with other lenient considerations to perhaps form a more lenient approach to microwave usage.
- b. Rabbi Binyamin Forst, however, strongly objects to any analysis that attempts to equate the parameters of בישול with the laws of taste transfer in the area of כשרות. (The Laws of Kashrus page 233)

IV. Practical approach to microwave use.

- A. **Consistent use for both meat and dairy.** As we have mentioned there are three potential problems to be aware of when cooking in a microwave.
 1. **Spills.** The most stringent issue relates to food that spills onto the floor or splatters onto the walls of the microwave. If meat juice has spilled on the floor of the microwave and has not been adequately cleaned when one cooks dairy (or with a dairy dish) on that same floor, the meat juice will certainly become absorbed in that which is directly above it. As such, it is certainly advisable to have two separate plates (preferable glass but not necessarily so), one for dairy and one for meat, on which to place all plates of food. This way, anything that may have spilled will remain contained on that plate or will only cause the taste to become absorbed in that plate, leaving the food and dish completely unaffected.
 2. **Splattering.** If food has splattered onto the wall of the microwave or remains near, but not directly touching, a dairy food that is being cooked in the microwave, a serious issue of ריחא can apply. As noted earlier, any issue of ריחא can easily be avoided by simply covering the food that you are cooking in the oven.

3. **זיעה**. The final problem associated with microwaves can even apply in a perfectly clean oven. If one cooks dairy in the oven and the steam rises to the ceiling of the microwave oven, and then subsequently cooks meat in the microwave with the steam again rising to the ceiling of the oven, the oven has become non kosher, which raises the risk of any food cooked in the microwave to have droplets that are not kosher fall into it. As noted earlier, this concern can also be addressed by simply covering each food.

a. Based on all that we have explained it seems that if one places a separate plate for dairy and meat under each food AND covers all foods in the microwave, he can effectively avoid any כשרות problems in the microwave. It should be noted that the covering does not have to be airtight. Indeed, an airtight cover will just pop off in the microwave. The cover must only be secure enough not to fall off as it rotates in the microwave, and cover the food in a way that will inhibit the passage of ריחא and זיעה. A paper towel wrapped tightly around the plate would seem to satisfy these requirements. However, Rabbi Yisroel Belsky has recommended the people use a double covering to further inhibit the passage of ריחא and זיעה through the covering.

B. **Kashering a microwave**. The generally accepted method of kashering a microwave oven relies on the principle of כבולעו כך פולטו, which suggests that flavor absorbed in a utensil can be expelled from the utensil in the same manner with which it was absorbed. Since the primary absorption of non kosher flavor in a microwave comes through steam, one can expel those flavors through steam. Therefore if one were to boil a cup of water in a microwave to the point that the entire microwave fills with steam (usually assumed to be about five minutes), he has effectively koshered the microwave. A few points should be noted when kashering the microwave in this way:

1. Rabbi Binyamin Forst points out that although most tastes do get absorbed in the microwave through steam, foods do often spill as well causing the tastes to be absorbed more strongly through *irui kli rishon*, which cannot be koshered by simply steaming up a cup of water. Rabbi Forst leaves it as an open ended question how we can rely on steaming up the microwave to rid the oven of all non-kosher tastes absorbed in it.

2. When kashering through steaming up a cup of water, it is important to note that the spot on which the cup rests is not koshered and the cup must therefore be moved to a different location and steamed up again in order to kosher the entire microwave.

3. Any microwave that can also be used as a convection oven can certainly not be koshered with the normal method of koshering a microwave. Rather, it must be koshered the same way one would kosher a regular oven (a topic that is far too broad to discuss in this essay).

V. **Conclusion.** We have outlined the issues that arise when attempting to keep a microwave kosher. Unfortunately, there are many people who neglect to take the necessary precautions when using their microwave and may therefore cause serious כשרות problems. The problem becomes particularly acute when children frequently use a microwave causing spills that are not immediately cleaned up. It is imperative that we take the few simple steps necessary to ensure that all food we put into our microwaves remain kosher.