

HALOCHOSCOPE ^{TOI}

Pizza was heated in a microwave oven on a glazed china meaty plate. What is the *Kashrus* status of the pizza, the microwave oven and the plate?

The issues:

- (A) *Basar Bechalav*, mixing meat and dairy, especially through *Blia*, flavor
- (B) *Kashering*, cleansing a utensil that absorbed forbidden taste
- (C) Microwave cooking
- (D) Glazed china plates; their relevance to absorbing forbidden flavor

(A) *Basar Bechalav*, *Blia*

The Torah forbids a cooked mixture of meat and milk. Scripturally, only meat and milk cooked together in the way prescribed by the Torah is included in the prohibition. This means that it must be either actually cooked together or either is cooked in pots that have absorbed the flavor of the other. If they are mixed together in any other way, they are still forbidden, Rabbinically. Additional Rabbinical prohibitions apply, including eating them together, eating dairy products after eating meat (within the customary waiting period) and serving them at the same table to different people.

The Torah not only forbids ingesting certain foods, but includes in its prohibition the flavor imparted by those foods. Thus, neutral foods that absorb this flavor when they are cooked together with the forbidden foods are likewise forbidden. This is known as *Ta'am*, the flavor, *Ke'ikar*, is like the principal food. Pots and utensils that absorb the flavor are also forbidden to use for other permissible neutral foods. This is because the pots absorb the same flavor and impart it to the foods cooked in them afterwards. This is known as *Blia*, absorbing, or *Balua*, absorbed flavor.

To neutralize the forbidden flavor, one must be certain that it can not be detected in the neutral kosher food. Rather than tasting it in each case, which involves the possibility of violating the prohibition, the Rabbis determined that sixty times the flavor neutralizes it. This means that sixty of the permissible parts of the mixture must be present for each of the forbidden parts. With regard to meat and dairy mixtures, both are originally permissible. It is only after they are mixed that they forbid each other. To do so they must mix in the same aforementioned proportions. If these proportions are not present, they never become forbidden in the first place. The same applies to a dairy pot used to cook meat and a meat pot used for milk. Also, in the

case of forbidden food, one may not intentionally add a small amount that will be neutralized. There is a question on whether this applies to meat added to a large amount of milk or vice-versa. In any event, once the two have been mixed they attain the status of any other forbidden food. Foods cooked with the forbidden mixture are forbidden unless they neutralize it. Pots that were used to cook the forbidden mixture have the *Blios*.

One important consideration is when the *Blia* entered the utensil in relation to its present use. Imparting a flavor must be deemed complimentary. If the flavor is not beneficial it does not add anything to the mixture. Therefore, it does not cause the neutral kosher food to become forbidden. This is known as *Nosain Taam Lifgam*, giving detrimental flavor. It is assumed that flavor turns detrimental after being inside the walls of a utensil for twenty four hours. This is known as *Aino Ben Yomo*.

Another consideration is whether the process by which the flavor is imparted is sufficient to create a true mixture. While actual foods can be mixed at any temperature, flavor can only be imparted through heat, pickling or soaking. Pickling and salting are considered a type of heat medium, and soaking for a twenty four hour period is considered the same as pickling. For *Basar Bechalav* purposes, only real heat is considered sufficient to forbid it Scripturally. Other methods forbid it Rabbinically. Cooking *per se* is only considered such if the foods are contained in a *Kli Rishon*, that is, it was on the fire long enough to have absorbed heat that could scald the most sensitive skin. If the container is a *Kli Sheini*, i.e., was never on the fire, but had hot food poured into it, it is assumed to have no power to heat the mixture to the level that would mix flavors. If there is no liquid medium to cook the food, the utensil or container plays a reduced role. The solid itself can be considered hot enough to mix flavors.

In our case, the first issue is whether the plate contained *Balua* of meat. If it did, the next issue to consider is whether the meaty plate then imparted flavor to the pizza, forbidding it, and vice-versa. The next issue would be whether the plate then absorbed the newly forbidden flavor of the mixture in the process. There is an independent issue regarding the oven. Assuming the oven is neutral at the outset, the issue is whether it also becomes forbidden as a result of having been used for the cooking process.

(B) *Kashering*

The method used for cleansing a utensil is consistent with its normal use. *Kebol'o*, the way it absorbs, *Kach Polto*, this is the way it ejects the flavor. For most utensils, used in cooking with a liquid medium, this simply means suspending them in boiling water for long enough to loosen and remove the *Blia*. Since any forbidden flavor would automatically be transferred to the water, and back to the utensil, it must be perfectly clean and *Aino Ben Yomo*. Thus, the detrimental flavor does not forbid anything.

For utensils used with heat but no liquid medium, it is often impossible to remove

the flavor. Instead, it is purged through fire. If direct heat was used to cook the food in the utensil it is so ingrained that it must be burned to the point it turns red. If it was used with indirect heat, the purging process must reach the level that the metal of the utensil could burn paper or straw. Ovens do not cook by heating the food with a fire underneath, but by warming the air inside them. Nonetheless, the heat either cooks with a liquid medium or dry. Therefore, some *Poskim* require a thorough purging as though it is used directly with the heat, while others require the lighter form of purging. In addition, the steam of the foods reached the oven walls and ceiling, much as it would a lid. Therefore, consideration must be given to the mingling of this steam and its flavors.

If the utensil was only used as a *Kli Sheini* it does not require *Kashering*. It was never forbidden. However, if forbidden food was poured into it directly from a *Kli Rishon*, the top layer of the surface of the *Kli Sheini* does absorb, and may be *Kashered* in the same way. Hot water may be poured over its surface. If the liquid is only placed in the *Kli Sheini* indirectly, such as poured in drip like fashion where the flow is interrupted, the utensil does not require *Kashering*. If a solid food from a *Kli Rishon* is placed in a *Kli Sheini* it can sometimes have the status of a *Kli Rishon* in its own right due to its bulk. However, this applies primarily to other foods mixed with the hot bulky solid. Regarding the utensil, some consider it only hot enough to render the surface of the plate a *Kli Rishon*, though it can penetrate deeper into another food. The reason a *Kli Sheini* loses its heat is due to the cold walls of the utensil cooling the food down. In addition, the Heat of a bulky solid might only work like a *Kli Rishon* for actual food, but not for flavor. Therefore, a plate is treated like a bowl that had hot liquid poured directly into it, and its surface is *Kashered* by pouring hot water on it. [See e.g. *Chulin* 108a-b, etc., *Poskim*. references *Halochoscope* I:31 II:3 39 IV:15 VIII:10 29.]

(C) *Microwave cooking*

Unlike conventional cooking, microwave cooking does not heat the food from the outside in, but agitates the molecules of the food so that it produces its own heat. Though the utensil gets hot from the food, it would appear that it is no better than a *Kli Sheini* that had hot food placed directly in it from a *Kli Rishon*. However, even a conventional *Kli Rishon* gets no hotter than its food. Some *Poskim* indicate that the heat is transferred mainly to the food, reaching the pot indirectly. The food does not get hotter than it needs to for its cooking process. Others hold that the heat reaches both, but the temperature of the food tempers the heat of the pot. Thus, some would consider a utensil in a Microwave oven a *Kli Rishon*. In terms of *Basar Bechalav*, microwaves are not considered cooking by the *Poskim*. They are not what the Torah calls *Derech Bishul*, or conventional cooking methods. They are similar to using solar heat. Even indirect solar heat, which has the advantage of being more predictable or controllable, is not

Derech Bishul. However, Rabbinical prohibitions apply even if the meat and milk were never cooked together. [See references to Halochoscope IV:15 VIII:2.]

(D) The china plate

The Talmud says that earthen utensils can not be Kashered by using water in the way they were rendered forbidden. The Balua never leaves them fully. It must be destroyed. Since purging it could crack it, people are not trusted to do it properly. Therefore, the only true way to Kasher them is by firing them in the kiln they were first baked in. Glass utensils are the matter of debate. Some consider them the same as metal, which can absorb and can be Kashered in the same way. Some consider them even better than metal. They are impenetrable by flavor. Others consider them earthenware. The consensus is to Kasher them from forbidden flavor, except for from *Chameitz*. Glazing on china is considered a thin coating on the surface. Initially glazing had a high lead content, and was considered primarily a metal coating. This means that a glazed earthenware Kli Rishon can not be Kashered. However, modern glazing has a much higher glass content. Therefore, assuming that in most cases a Kli Sheini either does not absorb, or only absorbs on its surface, this surface layer of glass could be Kashered by pouring hot water on it. However, this is only relied on in special circumstances, since the glaze is also adulterated. There is an opinion that earthenware may be Kashered by repeating the process three times. This is only invoked when the forbidden absorbed flavor has no Scriptural basis.

In our case, it must first be determined whether the plate was Aino Ben Yomo. This would save the pizza. Since the only way the oven would be forbidden is through the pizza, it would save the oven as well. The plate could be used for neither meat, since it is now dairy, nor milk, since an Aino Ben Yomo of one may not be used for the other. However, if its glazing is intact, its very top layer could be Kashered like glass. It is like a Kli Sheini exposed to direct surface heat. If the glaze is scratched, some might permit Kashering it three times in the same way. If the plate is Ben Yomo from hot direct meat use, assuming that microwave cooking is not sufficient to forbid Basar Bechalav Scripturally, the pizza, plate and oven would be forbidden Rabbinically. The pizza is solid. It could absorb all the flavor in the surface layer of the plate. Scraping its surface would be insufficient. The plate might be permitted through three times Kashering by pouring. [See Psachim 30a-b, Poskim. Tur Shulchan Aruch Orach Chaim 451:1 22 23 26, Yoreh Deah 121:5, commentaries. As for the oven, the matter has been dealt with in another issue, Vol. IV:15.]