



WHICH FOODS ARE CHAMETZ?



One part of cleaning the house for Pesach is to get all *chametz* out of the kitchen. Of course, the first things to be removed are those that are obviously *chametz* – bread, pasta, cookies, crackers, pretzels, etc. Other foods can be identified by simply reading the ingredient panel, which shows that breakfast cereal, soy sauce, fish sticks, licorice, candy, and many other foods often have wheat or flour (*chametz*) listed prominently. Only the most astute readers realize that the vinegar in their ketchup, the vitamins in the rice or milk, and the flavor in their favorite snack may in fact contain *chametz*. The goal of this article is to educate the reader about the many foods which potentially contain *chametz*, beginning with the more obvious and progressing to the more obscure.



KITNIOS

In addition to not eating *chametz*, *Ashkenazim* do not eat *kitnios* – a group of foods which includes (among other things) rice, beans, peas, corn, lentils, soy, millet, sesame seeds, mustard, snow peas, soybean, sugar-snap peas, sunflower seeds, and peanuts. Not only may one not eat these items as-is, but it is also forbidden to eat derivatives of these. For that reason, corn syrup and peanut oil are not allowed on *Pesach*. That said, it is permitted to own and have benefit from *kitnios*. Therefore, for example, beans do not have to be sold for *Pesach*, and one may feed millet to a pet. For more details on *kitnios*, see the article on our website, www.cRcweb.org.



FLOUR, OATS, AND BARLEY

If one of the five grains – wheat, barley, rye, oats and spelt – sits in water for more than 18 minutes it becomes *chametz*, and one may not eat, derive benefit from, or own it on *Pesach*. It is common practice that before wheat is ground into flour, the wheat kernels are tempered with water for many hours; therefore, flour should be treated as *chametz*.¹ [In fact, *matzah* which is not baked especially for *Pesach* is made from tempered wheat and should also be treated as *chametz*!]

Similarly, all oats are heat-treated to prevent them from becoming rancid; if this heating is done with “wet” steam, the oats/oatmeal may be *chametz*. On the other hand, barley (a.k.a. pearled barley) is processed without water, and therefore a standard bag of barley is not *chametz*. Some barley is steeped in water until the barley begins to sprout; this creates a product known as barley malt (a.k.a. malted barley, malt) which is definitely *chametz*.



YEAST

The *Torah* says that one may not own *se'or* on *Pesach*. What exactly is *se'or*? Are *se'or* and yeast the same thing? A quick lesson in bread baking will surprisingly show that *se'or* is yeast, but yeast is not necessarily *se'or*!

Although a grain which soaks in water for 18 minutes is *chametz*, in order to make good bread, one needs yeast. Yeast is the living microorganism which converts some of the flour into the carbon dioxide, which fluffs-up the batter and causes it to “rise”. The air we breathe contains yeast. Therefore if one makes a batter of flour and water it will eventually rise, even if no yeast is added, because yeast from the atmosphere will find its way into the batter. But most bakers do not have the patience to wait all day for their bread to rise, so they add their own yeast into the batter to speed things up a bit.

The traditional method of collecting/creating yeast was as follows: Every day the baker would take one handful of dough out of the batter and not bake it. As the day went on the yeast in that dough would multiply (and be joined

by other yeast found in the air) to such an extent that that the batter would turn sour and inedible. This ball of concentrated yeast would be thrown into the next day's batter to help that batter rise (and a handful of that batter would be taken out to be saved for the next day, etc.). In English this concentrated yeast-ball is called "sourdough" due to its awfully sour taste; this is what the *Torah* calls *se'or* and forbids one from owning on Pesach.

However, one can also collect yeast from plant sources and produce it via fermentation. If yeast does not contain any ingredients from the five primary grains (as it often does not) it is not *chametz* even though it has the same characteristics as *se'or*,² and one may own it on Pesach. [The process of "fermentation" and the possible *chametz* concerns it raises will be discussed below.] Thus, *se'or* is concentrated yeast, but the yeast which is commonly sold in stores is not *se'or*.

Brewer's yeast is yeast recovered from beer production (discussed below). It is similar to *se'or*, and one may not own it (derive benefit from it, or eat it) on Pesach.



BEER AND WHISKY

If barley is soaked in water under proper conditions, it ferments into beer; since the barley sat in water for more than 18 minutes, beer is *chametz*.³ Beer contains approximately 5% alcohol, and people who want a drink with a higher alcohol content do the following: The grain is allowed to ferment until it reaches about 12-13% alcohol, and then the alcohol is separated from (some of) the water using a process called "distillation" to produce whisky, which contains 30-95% alcohol. The consensus of the *Poskim* is that whisky produced from one of the five primary grains is considered *chametz*, even though it went through the process of distillation.⁴ In fact, most whisky contains a minimum of 10-30% of those grains, but even if the whisky is made exclusively from corn or another *kitnios* grain, there are a number of other reasons why it may be *chametz*:

1. The watery liquid that remains after distillation is called "backset" and is often used in creating another batch of whisky. Thus, even if the grain used in creating the whisky is *kitnios*, the water may be from a *chametz* whisky.
2. Before the yeast ferments the grain, the grain's starch must be broken-down into individual glucose molecules, and this is traditionally done with barley

malt (discussed above). Since the *chametz* barley malt plays such a crucial role in the creation of the whisky (and also dramatically changes the taste of the grain before it is fermented), the barley malt is considered a *davar hama'amid*, and one may not own such whisky on Pesach.⁵

As such, all types of whisky should be treated as *chametz* unless they are specifically certified as kosher for Pesach.



VINEGAR

Vinegar is created when alcohol is (re)fermented, and the primary concern with vinegar is the source of the alcohol. As the name implies, malt vinegar is made from malt or beer, which we have seen is *chametz*, and therefore malt vinegar is definitely *chametz*. In contrast, wine vinegar and apple cider vinegar are made from wine and apple cider, which are not inherently *chametz*. However, due to the possibility that the equipment used and/or the processing aids are *chametz*, it is prudent to only consume wine or apple cider vinegar which is certified as kosher for Pesach.

The more difficult question is the Pesach status of white distilled vinegar, as follows: White distilled vinegar is made from distilled alcohol (described above), and the most serious concern is whether the grain used was *chametz* (e.g. wheat), *kitnios* (e.g. corn), or something innocuous (e.g. potatoes). Additional concerns stem from questions about the equipment, enzymes, yeasts, and nutrients used in creating the alcohol and vinegar.⁶ Lastly, the fermentation of vinegar always begins with a "starter" taken from a previous batch of vinegar (similar to the way *se'or* is used), and if that starter is *chametz*, the entire batch will be forbidden.

The question of whether grain-based/distilled vinegar is *chametz* has far-reaching implications. This is because many foods are preserved with vinegar (e.g. pickles, olives), and vinegar is a prime ingredient in many condiments (e.g. ketchup, mustard, mayonnaise, salad dressing); in general it is distilled vinegar which is used in these applications. Certainly, any food containing vinegar should not be consumed on Pesach unless the food is specifically certified for Pesach use. But do the concerns with vinegar mean that we must destroy or sell all of the products in our pantries which contain vinegar?

As a result of the concerns outlined above, many *Rabbonim* recommend that people whose *minhag* is to not sell *chametz gamur*, should not sell (or retain possession of) vinegar-containing products on Pesach. However others

with knowledge of the food industry argue that due to the abundance of corn in the United States, the overwhelming majority of the vinegar sold and used in the United States does not contain *chametz* (although it does contain *kitnios*). Therefore, since there is no reasonable way for the average consumer to determine whether the vinegar in a specific ketchup (for example) is *chametz*, they may rely on the *rov* (majority) and assume that the vinegar is not *chametz*, at least to the extent that it may/should be sold to a non-Jew. As with all matters of *halacha*, one should consult with a local Rav. It is noteworthy that the aforementioned leniency does not necessarily apply to (a) vinegar or vinegar-containing products from other countries or (b) organic vinegar (even if it is produced in the United States, due to the difficulty in obtaining organic corn).

Pesach products are generally made with white distilled vinegar which is specially-made without any *chametz* or *kitnios* concerns. However, some companies choose to substitute glacial acetic acid for the vinegar in their Pesach products. Glacial acetic acid is chemically identical to vinegar but is made from petroleum feedstock, as opposed to being fermented, and poses little Pesach concern.



ENZYMES, VITAMINS, FLAVORS, AND OTHER COMPLEX ISSUES

Microbiology has played a great role in the advances in food technology in the past few decades. Food scientists have identified numerous microorganisms which can either serve as or help to create enzymes (see below), vitamins (e.g. Riboflavin, Vitamin B12), flavorful chemicals (e.g. MSG), and other items (e.g. xanthan gum, citric acid, yeast). In addition, scientists have learned new ways to react chemicals with one another (and use other methods) to create emulsifiers, acidulants, sweeteners, flavors, and other chemicals (e.g. polysorbates, ascorbic acid, aspartame, esters, magnesium citrate). This technology has allowed food scientists both to create an array of foods which were inconceivable 50 years ago and to improve on the way that they produce “older” foods.

Of all these items, enzymes have arguably had the most far-reaching affect. Enzymes are chemicals which act as a catalyst for change in other items. A common example is rennet, which causes milk to coagulate into cheese, but the range of uses goes well beyond cheese. For example, one enzyme liquefies and sweetens corn into corn syrup, so that another enzyme can make it even sweeter and become the high fructose corn syrup used to sweeten soft drinks. Another enzyme is used to create the “right” kind

of sugar molecule so that hard-candies will not stick to the wrapper, and yet another one ensures that beer does not get cloudy when it is refrigerated.

The *kashrus* issues raised by all of this technology are beyond the scope of this article, but one issue is quite relevant to our discussion. One of the prime ingredients used in making just about all of the items discussed above is “glucose” (a.k.a. sugar). Glucose can be created from any starch, which means that these items may be wheat (*chametz*), corn, or rice (*kitnios*), sweet potatoes (kosher for Pesach), or something else, depending on what is available in the country where the glucose is being produced. This issue is further complicated by the emergence of the “global marketplace”, where it may be cheaper to buy xanthan gum from France or China than from the local producer. Additionally, many of the ingredients listed above are used in tiny proportions, which would theoretically be *batel b’shishim*, and *Poskim* have taken different positions as to which of these serve as a *davar hama’amid* and/or a *milsah d’avidah lit’amah*, which cannot be *batel*.

In light of the seriousness of eating *chametz* on Pesach, it is obvious that no one would consider eating any food on Pesach which contains (or may contain) any of these ingredients, unless the food is certified as kosher for Pesach. [Many children and adults must consume baby formula, soy/rice beverages, or nutritional supplements (which cannot be certified for Pesach since they contain *kitnios*) and require information as to whether those items contain *chametz*. That issue is beyond the scope of this article but see listings elsewhere in this Guide for more information on specific items.] Some *Rabbonim* say that for the same reason one should not own any of these items on Pesach, but as noted above regarding vinegar, others argue that one may rely on the fact that the overwhelming majority of these items sold and used in the United States do not contain *chametz* (although they contain *kitnios*). As with all matters of *halacha*, one should consult with a local Rav.

ENDNOTES

- 1 *Mishnah Berurah* 453:24.
- 2 See *Mechiltah* 9:19 on *Shemos* 12:19.
- 3 *Shulchan Aruch* 442:5.
- 4 See *Shulchan Aruch* Y.D. 92:8 & 123:24, and *Mishnah Berurah* 442:4.
- 5 See *Shulchan Aruch* 442:5 and *Mishnah Berurah* 442:25.
- 6 The nutrients are generally *batel b’shishim*, but some *Poskim* hold that since they are intentionally added to the vinegar they are not *batel*. This issue, discussed in *Magen Avraham* 442:1, *Nodah B’yehudah* Y.D. 2:56, *Mishnah Berurah* 447:14 and others, is beyond the scope of this article.

An earlier version of this article first appeared in Hamodia and the OU website and is reprinted here with permission.